

District of Saanich BIODIVERSITY CONSERVATION STRATEGY

May 2024 - **DRAFT**

TABLE OF CONTENTS

Table of Contents	2
Executive Summary	5
1. Introduction	10
2. Current Context	15
3. Looking Towards the Future	23
4. Biodiversity Habitat Network	31
5. Actions to Enhance and Protect Biodiversity in Saanich	39
6. Strategy Implementation	69
7. Assessing and Monitoring Progress	72
Acronyms.....	75
Glossary	76
Appendix 1: Saanich's Environmental Policies	78
Appendix 2: Biodiversity Habitat Network Components	84
Appendix 3: Staff implementation tables	86
Appendix 4: Priority Actions	91
Appendix 5: Biodiversity Strategy Engagement summary	92
References	93

Land Acknowledgment

The District of Saanich lies within the territories of the lək̓wəŋən peoples represented by the Songhees and Esquimalt Nations and the W̱SÁNEĆ peoples represented by the W̱JOŁEŁP (Tsartlip), BÓKEĆEN (Pauquachin), S̱ÁUTW (Tsawout), W̱SIKEM (Tseycum) and MÁLEXEŁ (Malahat) Nations. The First Peoples have been here since time immemorial and their history in this area is long and rich. The District of Saanich is proud that our name is derived from the W̱SÁNEĆ peoples. Saanich Council is committed to taking a leadership role in the process of healing wounds of the past and becoming a more just, fair, and caring society.

ACKNOWLEDGMENTS

The District of Saanich would like to thank all involved in the process of developing the Biodiversity Conservation Strategy. We would like to give special recognition to the indigenous community members who volunteered their time to inform and support this Strategy. We also appreciate the community members who volunteered their time to participate in the online surveys, in-person and virtual open houses, technical experts who reviewed preliminary mapping layers and provided policy input, and members of the Resilient Saanich Technical Committee (RSTC), who provided valuable advice throughout the process.

Current and former RSTC members and their specialties include:

Kevin Brown, Terrestrial Ecology

Brian Emmett, Marine Ecology

Tim Ennis, Conservation Planning and Management

Purnima Govindarajulu, Conservation and Restoration Ecology

Stewart Guy, Conservation Planning and Management

Jeremy Gye, Urban Forestry

Tiffany Joseph, WSÁNEĆ Steward

Chris Lowe, Marine Ecology

Kear Pottris, Indigenous Knowledge

Tory Stevens, Terrestrial Ecology

Brian Wilkes, Aquatic Ecology

Bev Windjack, Landscape Architecture

District staff & Council played an invaluable role in working with committee members and the project consultants. Council Liaisons included Rebecca Mersereau (2020-2022) and Zac De Vries (2023-2024).

The Biodiversity Conservation Strategy process was led by consultants from Diamond Head Consulting.

Alison Kwan, Biologist

Aubrey Butcher, Biologist

Nguyet-Anh Nguyen, GIS Technician

Alexandra Welch, Junior Biologist

Kevin Hutchins, Junior Biologist

Mike Coulthard, Biologist & Forester

Cassandra Cummings, Biologist & Planner

Vlad Romanescu, Senior GIS Technician

Austin Tahiliani, Junior Biologist & Arborist

Fiona Steele, Biologist

EXECUTIVE SUMMARY

1.1. Introduction

The District of Saanich is an urbanizing community located along the southeast edge of Vancouver Island, British Columbia. It is home to over 120,000 people, the largest population in the Capital Regional District. The majority of the population lives within the urban containment boundary (UCB), which was established to concentrate development in more urbanized parts of the District and away from sensitive environmental features and rural areas. The District of Saanich is home to expansive natural areas, including marine backshores, productive lakes and wetlands, meandering creek systems, and an array

of plant communities providing habitat for a diversity of wildlife.

Saanich is located within the threatened Coastal Douglas Fir (CDF) ecological zone, which is the smallest climatic zone in the province and also considered the most at-risk¹. In Saanich there are remnant patches of Garry Oak ecosystems, which are one of Canada's most endangered plant communities. The protection of this plant community, along with the many other sensitive species and ecosystems that are known to inhabit Saanich, requires support from the public, the District of Saanich, and all levels of government².



1.2. Policy Context

The Resilient Saanich program was initiated by Saanich Council in 2017 to develop a policy framework for environmental protection in Saanich. This program involves the development of an Environmental Policy Framework consisting of three pillars: the Biodiversity Conservation Strategy, the Climate Plan, and an Enhanced Stewardship Program. A State of Biodiversity Report (March 2023) was developed to provide an understanding of the current state of the District's biodiversity and the elements that threaten its integrity. Ongoing pressures from human activities such as urban development and overuse, along with the impacts of climate change, have caused significant damage to the ecosystems in Saanich and the life they support.

In late 2023, a Ministerial Order under the Housing Supply Act mandated the delivery of 4,610 new dwellings in the District over a 5-year period. Saanich will be focusing development and densification within the Primary Growth Areas (as defined in the 2024 Official Community Plan), however the new regulations will also increase housing density on single-family properties. This mandate will increase density, which could impact biodiversity. The District's response to this Ministerial Order needs to be balanced with other provincial initiatives that prioritize biodiversity and ecosystem health. This includes the Union of BC Municipalities (UBCM) resolutions calling for a Biodiversity Act in B.C. (2022), and the province of BC's Climate Preparedness and Adaptation Strategy (Actions for 2022-2025). The ongoing protection of natural assets as the District continues to grow will ensure livable, climate-resilient communities and support the health and well-being of its residents.



1.3. Future Vision for Biodiversity

A healthy, biodiverse environment is fundamental to the social, economic, and environmental resilience of Saanich, particularly when considering the impacts of climate change. The Biodiversity Conservation Strategy provides a roadmap to protect, connect, and enhance biodiversity through policy, operations, and enhanced public stewardship. It aims to enhance biodiversity across both public and private lands.

It recognizes the threats to biodiversity and provides actions that can help support more resilient ecosystems. This strategy is meant to enhance the livability of Saanich without compromising the ability of the District to provide homes and services for its residents.

This strategy aims to foster reconciliation with local Indigenous communities by acknowledging their deep connection to and stewardship of the lands in Saanich.

Vision

“Saanich is a community that values, protects, connects, and restores sensitive ecosystems, natural habitats, and biodiversity.”

Seven strategic themes have been adopted as a framework for this strategy:

- 1. Knowledge and Understanding:** Improve knowledge and mapping of natural features and functions to ensure decisions are based on credible data.
- 2. Connecting Ecosystems:** Prioritize the protection and enhancement of a Biodiversity Habitat Network.
- 3. Sustainable Development:** Enhance biodiversity during land use planning and development.
- 4. Restoring:** Enhance biodiversity on public lands.
- 5. Enhanced Public Stewardship:** Encourage biodiversity initiatives on private lands outside of the development process.
- 6. Community Engagement:** Improve public understanding of biodiversity and participation in biodiversity conservation and restoration.
- 7. Sustainable Agriculture:** Enhance biodiversity on agricultural lands.

1.4. Recommendation Actions

The District acknowledges that it has limited resources and cannot pursue all of the recommendations in this Strategy concurrently. The following are considered to be the highest priority actions which are expected to have the greatest immediate impact to protect and enhance biodiversity in the District:

Top Priority Actions

Regularly update ecosystem data (i.e., terrestrial, aquatic, marine, invasive species, and species at risk) as new information becomes available and make available on public GIS portal. Continue to refine the precision of terrestrial ecosystem polygon boundaries through ground-truthing and high-resolution ortho imagery.

Acquire and protect priority lands within the Biodiversity Habitat Network.

Identify and prioritize areas within the Biodiversity Habitat Network for restoration and enhancement.

Implement a development permit area (DPA) or zone for the marine environment to mitigate waterfront development impacts and restore degraded foreshore zones.

Implement a development permit area (DPA) or zone for the protection of the natural environment.

Develop park plans to help manage natural area parks in Saanich.

Review and update the Invasive Species Management Strategy.

Collaborate with Indigenous communities to incorporate their values and caring for lands and waters into Saanich's biodiversity management.

Continue to protect and restore Garry Oak ecosystems on public lands.

Prioritize, protect, and restore freshwater habitats in natural parks such as wetlands, riparian areas and ponds.

Develop an incentive program to support protection of natural features through development inside the UCB.

Promote and expand programs to encourage biodiversity stewardship and education on private and public lands.

Identify and remove barriers to fish migration. Coordinate these efforts with Indigenous, non-profit organizations and stewardship groups.

Complete a review of existing environmental and natural state covenants and their condition. Educate private landowners regarding their obligations with respect to natural state covenants.

The recommendations within this Strategy will be used to support a healthy and resilient Saanich as it continues to grow. The following performance objectives will be used to evaluate the effectiveness of this Strategy over time.

Performance Objective	
Theme 1	<p>Increase the accuracy and details of online mapping and make it available through SaanichMap.</p> <p>Improve the quality of freshwater streams in the urban containment boundary.</p> <p>Assess the accuracy of Species at Risk conservation mapping in Saanich</p>
Theme 2	<p>Increase the area within the District that is designated as protected for nature.</p> <p>Enhance the Biodiversity Habitat Network within the urban containment boundary.</p>
Theme 3	<p>Minimize the cover of new impervious surfaces and encourage green and blue infrastructure.</p> <p>Increase the tree canopy cover across the District by 2044. Refer to Urban Forest Strategy for the details.</p>
Theme 4	<p>Reduce the area of invasive plant infestations within protected parks.</p> <p>Restore ecosystems that have been degraded in District-owned parks.</p> <p>Improve ecological health in natural area parks.</p>
Theme 5	<p>Increased public participation in biodiversity conservation and enhancement on private land.</p> <p>Maintain native bird and pollinator presence.</p>
Theme 6	<p>Increase public awareness and understanding of local natural features and functions.</p>
Theme 7	<p>Increase the cover of trees and shrub communities on farmlands.</p> <p>Naturalize streams and wetlands on farmlands.</p>

The effectiveness of these measures will be evaluated through a monitoring program. Specific metrics and targets have been established to measure the success of its implementation. Some of the recommended actions may require substantial resources and may take place over longer timelines as resources become available. Adopting the Biodiversity Conservation Strategy and implementing its recommended actions will enable the District to protect, enhance, and connect the remaining natural park areas and improve biodiversity across its urban and rural landscapes.

1. INTRODUCTION

1.1. Background

The District of Saanich is an urbanizing community located along the southeast edge of Vancouver Island. It is framed by a dynamic coastline and contains productive lakes and wetlands, meandering streams, and an array of ecosystems providing habitat for a diversity of wildlife. It is also home to over 120,000 people, the largest population in the Capital Regional District. Most of these residents live within the urban containment boundary (UCB), which helps to concentrate development away from sensitive environmental features and rural areas. The residents of Saanich value the natural areas in Saanich and have expressed their willingness to safeguard these assets for future generations (Appendix 5).



Saanich is situated within the Coastal Douglas Fir (CDF) ecological zone, which is the smallest climatic zone in the province and also considered the most at-risk³. Of the 48 distinct plant communities found growing in the CDF zone, 45 are classified as being Red- or Blue- listed by the BC Conservation Data Centre (BCCDC). These plant communities are highly diverse and include Douglas-fir forests, Garry oak woodlands, rocky arbutus outcrops, herbaceous meadows, and coastal sand ecosystems. The variety of habitats provided by these ecosystems attracts thousands of wildlife species, making the CDF the most biodiverse biogeoclimatic zone in the province. Over 200 provincially listed species at risk are currently or historically found within the District⁴. A large part of the landbase within the CDF zone is privately owned making it difficult to protect. These ecosystems and species at risk, along with countless other species known to inhabit Saanich, seasonally or year-round, require support from the public, District of Saanich, and all levels of government for their protection and preservation.

1.2. Historical Context

The District of Saanich lies within the territory of the Lək̓ʷəŋən peoples, known today as Songhees and Esquimalt Nations, and the W̱SÁNEĆ peoples represented by the W̱JOŁEŁP (Tsartlip), BÓKEĆEN (Pauquachin), S̱ÁUTW (Tsawout), W̱SIKEM (Tseycum), and MÁLEXEŁ (Malahat) Nations. Collectively, these First Peoples have been caring for the land since time immemorial. Their role as land stewards continues to be essential for enhancing biodiversity.

The W̱SÁNEĆ people are Salt Water People, as the Sea was integral to their way of life. Traditionally, the W̱SÁNEĆ People had homes throughout the San Juan Islands and on the east and north coasts of the Saanich Peninsula⁵. Utilizing the rich diversity of

species within the region, they sustainably harvested food from the land and sea, created medicines and tools using elements of Garry Oak forests, and managed the landscape using small-scale fires⁶. Since the beginning of time, the W̱SÁNEĆ peoples have had a sacred obligation to take care of the land and waters. The story of the great flood underscores the importance of honouring the obligations given to them by X̱ALS (the creator). At one point, the W̱SÁNEĆ community strayed from the teachings of X̱ALS, leading to a rise in the waters. For survival, W̱SÁNEĆ ancestors embarked on their canoes, fastening themselves to an arbutus tree atop ŁÁU,WELNEW (Mount Newton) using a sturdy cedar rope. As the floodwaters receded, the summit of ŁÁU,WELNEW emerged,



allowing the survivors to safely return to solid ground. They then gathered around the cedar rope, expressing gratitude, before leaving the mountain. This event led the W̱SÁNEĆ ancestors to adopt the name W̱SÁNEĆ, signifying “The Emerging People”⁷. It is from this narrative, rooted in the history of the W̱SÁNEĆ people, that the District of Saanich derives its name.

The W̱SÁNEĆ and Ləḵʷəŋən peoples’ devotion to the protection and stewardship of the environment has been recognized through the ages. Biodiverse ecosystems such as old growth forests, grasslands, freshwater systems, and estuaries were interconnected and complimented one another. These productive lands would have supported lush forests of conifers such as Douglas-fir and western redcedar, and rich meadows shaded by Garry oak. Written history states that

colonial governor James Douglas sought to purchase the land from W̱SÁNEĆ people to construct a sawmill and harvest timber. Colonizers exploited the ability to harvest the land, taking more than the land could sustain. To avoid the threat of war, the South Saanich Douglas Treaty held that W̱SÁNEĆ people would be able to “hunt over the unoccupied lands, and to carry on our fisheries as formerly.”⁸ This obligation was not honoured, leading to further exploitation, the hindrance of Indigenous land stewardship, the transformation of natural environments, the introduction of foreign species, and the creation of urban environments that diverge significantly from the area’s historical context.

The District of Saanich acknowledges Indigenous peoples’ history, knowledge and cultural practices, and ancestral sites. The District will continue to build relationships with the Ləḵʷəŋən and W̱SÁNEĆ peoples through respectful collaboration, consent, and reconciliation. The Biodiversity Conservation Strategy includes key elements learned from engagement with the W̱SÁNEĆ Leadership Council and community members.

1.3. What is Biodiversity and why is it important?

Biodiversity describes the variety and variability of life on Earth. It encompasses all living organisms, from the smallest microorganisms to the largest mammals. It is typically interpreted as the abundance and number of species that inhabit an area and can be used as an indicator of ecosystem health and integrity. Natural areas with high levels of biodiversity provide ecosystem functions and services that are vital not only to living organisms but also to humans.

In Saanich, natural ecosystems play a crucial role to increase its resilience to climate change. They provide essential functions such

as air and water purification, cooling urbanized landscapes, acting as visual and noise buffers, and carbon sequestration (Figure 1). They also help to manage stormwater and reduce the risk of flooding by intercepting and storing rainfall.

Natural areas also provide residents with access to nature, which has been linked to improved mental and physical well-being. As the importance of natural areas in urban environments becomes more recognized, it is important to ensure equitable access to the District's natural parks to ensure that they benefit everyone.



Benefits of Biodiversity

- | | |
|--------------------------------------|--------------------------------|
| 1. Recreation & public education | 10. Shade & cooling |
| 2. Beautification & sense of place | 11. Noise & visual buffer |
| 3. Carbon sequestration | 12. Physical & mental health |
| 4. Aquatic habitat | 13. Building energy efficiency |
| 5. Air purification | 14. Stormwater management |
| 6. Wildlife habitat | |
| 7. Flood control | |
| 8. Healthy native soils | |
| 9. Water infiltration & purification | |

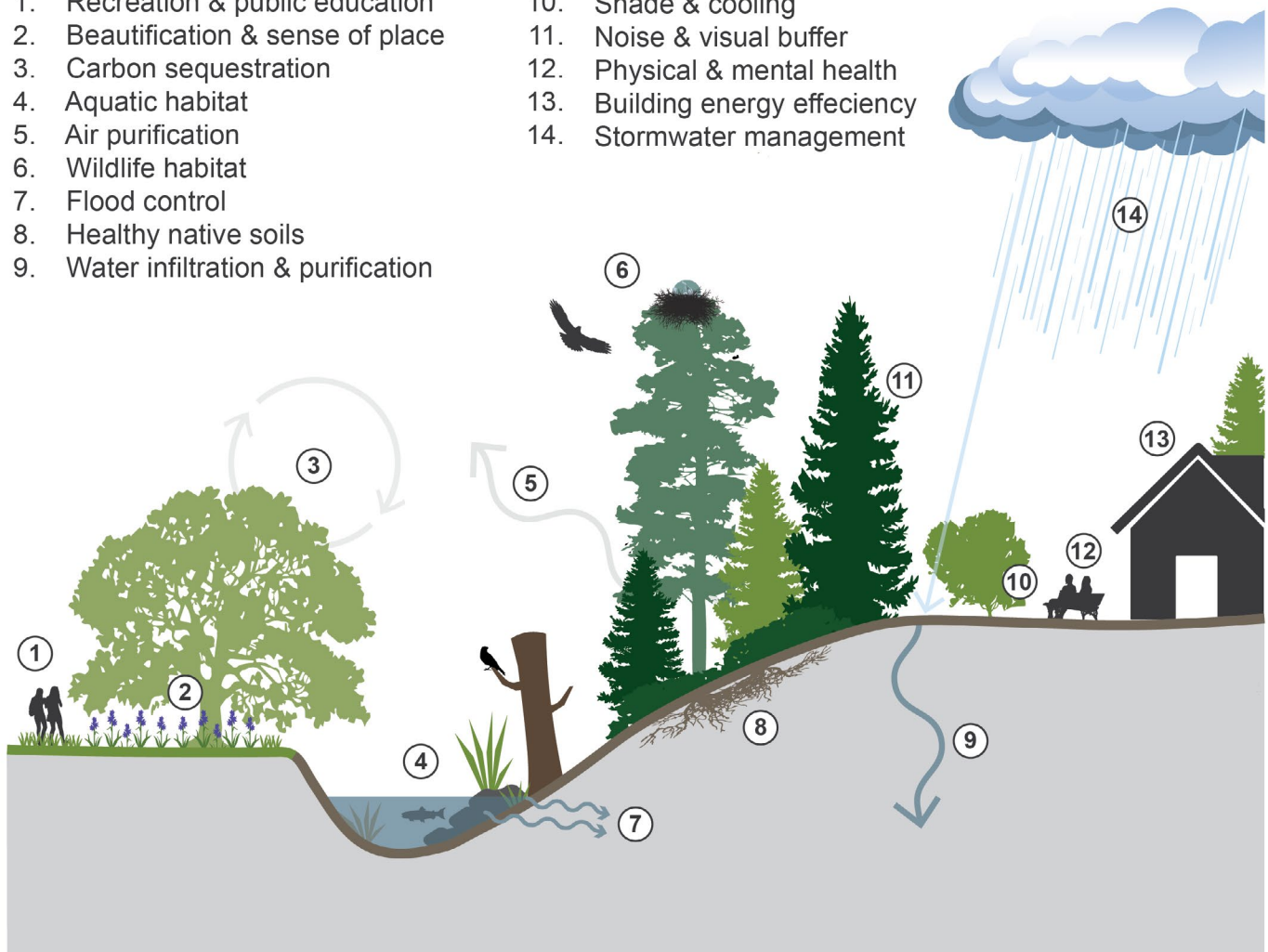


Figure 1. Ecosystem Services provided by natural areas.



2. CURRENT CONTEXT

2.1. How Does the District Currently Support Biodiversity?

Saanich recognizes the importance of biodiversity within the District and their role in ensuring that ecosystem functions are prioritized and biodiversity continues to be accessible for its residents for generations to come. The District has a number of different policies and programs which help to support biodiversity. There are bylaws that aim to help protect sensitive natural features such as watercourses and trees. District Parks protect natural ecosystems such as forest, streams, lakes, and wetlands that are essential for supporting the diversity of species that inhabit Saanich. The Pulling Together Program supports park stewardship and enhancement through invasive species removal and restoration projects.



2.1.1. Policy Context

The District's policies that protect the natural environment include the OCP, development permit areas (DPAs), guidelines, and management plans (Appendix 1). These existing approaches are not comprehensive, and there are opportunities to improve how the natural environment is managed. There are also some policies that should be updated as they no longer reflect current environmental standards and best practices. Opportunities for improvement are summarized in the draft Environmental Policy Framework report (EPF)⁹. To further improve policy alignment with the EPF, a Policy Evaluation Tool was developed by the RSTC to provide District staff with methods to evaluate new and existing policies and programs.

In 2012, Saanich established the Environmental Development Permit Area (EDPA) in response to resident's concerns regarding development related impacts on the environment. These included tree removals, the loss of valuable plant communities, and expanding invasive plant infestations. The objectives of the EDPA were to protect areas of high biodiversity, mitigate damage during development, and restore degraded ecosystems. The EDPA recognized Environmentally Significant Areas (ESAs) which included sensitive ecosystems, red and blue listed animals, plants, and ecological communities, wildlife trees, isolated wetlands and watercourses, and the marine backshore.

In 2017, public criticism and misunderstandings about the bylaw and its implementation prompted a third-party, independent review of the Environmental Development Permit Area (EDPA) Bylaw. This review included an extensive public engagement process conducted by the District of Saanich. Recommendations were provided to improve the EDPA Bylaw, however, it was ultimately rescinded by Council in 2018, with subsequent direction to develop a Biodiversity Conservation Strategy. Future DPA development must consider this history, establish community trust and understanding, and include a potential variance process.

In 2017, Saanich Council requested the creation of the Resilient Saanich program. The program was officially adopted in 2020 with the aim of developing an Environmental Policy Framework. This framework will be used to assess environmental policies that are either under review or in development. Its purpose is to identify gaps in environmental protection and establish a cohesive set of plans, policies, bylaws, and actions that promote a more resilient Saanich. (Figure 2). This Biodiversity Conservation Strategy is one supporting component of the Environmental Policy Framework.



Figure 2. The Biodiversity Conservation Strategy is one of many components in supporting a Resilient Saanich.

A State of Biodiversity Report was developed in March 2023 as a foundational document for this strategy. This report provides a summary of the condition of natural areas in the District and identifies some of the challenges that these areas face. An updated map of natural areas was created using existing datasets, Geographic Information Systems (GIS) technologies, and targeted field assessments. While this report focuses primarily on biodiversity in natural areas, it also highlights the importance of biodiversity provided within urbanized landscapes, such as private gardens and road right of ways.

The District is also developing an Urban Forest Strategy (UFS) concurrently with this Strategy. Joint public engagement open houses were hosted for both projects.

2.1.2. Saanich's Environmental Stewardship

The residents in the District are highly engaged and passionate about natural areas and the stewardship of its biodiversity. This is reflected in the number and breadth of stewardship activities that take place. There are over 60 stewardship groups in the District that actively support the management of natural areas and promote educational outreach. Most stewardship groups target the improvement of public lands and waters, however, some target private land. These include the Habitat Acquisition Trust Good Neighbours program and Naturescape BC, which is a provincial program that encourages the creation of wildlife habitat on private land.

These stewardship initiatives are centred around a variety of topics, including aquatic, marine and terrestrial ecosystems, birds,

pollinators, food security and agriculture, urban forests, environmental protection, and education and awareness. Approximately half of these stewardship groups focus on specific sites (e.g., Friends of Cedar Hill Park, Rithet's Bog Conservation Society, PKOLS (Mount Douglas Park) Conservancy, etc.), whereas others have broader scopes and function at a District-wide scale (e.g., Park Ambassadors Program, Pulling Together Program, Habitat Acquisition Trust, etc.).

The District of Saanich values and supports these programs that support environmental stewardship. It provides several outlets for communicating stewardship-related information to the community. These include its Natural Intelligence program and its quarterly publication, Our Backyard, along with social



media, webpages, community outreach, training opportunities, and public events. Saanich has created educational materials for residents to promote "Naturescaping", landscaping with nature, on their properties. It has also developed a Partnership Tree Program whereby residents can have a free tree planted on their property frontage and take part in helping to maintain it. Reimagining private gardens and lawns as dynamic

ecosystems not only benefits the environment but also creates more sustainable, livable, and vibrant urban spaces for both residents and local wildlife.

The Resilient Saanich Technical Committee has identified additional opportunities for the District to help support these initiatives in a memo titled "Enhanced Stewardship in Saanich".

Saanich's Pulling Together Program

Since 1999, Saanich's Pulling Together volunteer program has provided opportunities for community members to be actively involved in enhancing biodiversity and the urban forest through ecosystem restoration planning, removing invasive species, planting native trees and shrubs, and improving wildlife habitat. This hands-on, inclusive, ecological restoration program includes over 200 volunteers in 44 different parks and natural areas and takes place under the guidance of Saanich Parks staff. The goals of the Pulling Together program are to enhance biodiversity and the urban forest, share and learn about nature, help restore ecosystem services, improve climate resilience, and nurture community health and well-being.



2.2. The State of Biodiversity in Saanich

The State of Biodiversity Report (2023) summarizes natural features and their habitat and functions within the District as well as the pressures that threaten their integrity. It provides a baseline understanding of the state of the District's natural areas, public green spaces, backyard biodiversity, and private lands. The report documents terrestrial and freshwater ecosystems, the marine shoreline, wildlife species and ecosystems at risk, as well as modified ecosystems. The natural areas

in Saanich were mapped based on existing datasets and LiDAR. Limited ground-truthing on public lands helped to understand of the state of these natural areas. This information was analyzed to understand the levels of biodiversity that are expected to be found across the District. This information was used to identify a Habitat Network, which identifies a framework of important habitat hubs and linkages that will support biodiversity in the District.

Limitations of the State of Biodiversity Report: The State of Biodiversity report was developed using a combination of available District-wide datasets. Due to time and budget limitations, the field verification of characteristics was not comprehensive across the entire District. Field visits were restricted to public land only, with 8% of the total ecosystem polygons visited. The biodiversity analysis and accompanying datasets are considered a “living map” that will be continually updated as new information becomes available.



Forested ecosystems encompass 38.5% of the total land cover in Saanich. These are defined as contiguous tree stands with a minimum patch size of 0.5 ha. Most forest ecosystems in the District are relatively young (<150 years old). There are only ~2% of old-growth (>250 years) forests remaining. The District has a long marine shoreline that supports a variety of ecosystems ranging from coastal sand beaches, spits, and dunes, to sparsely vegetated rocky bluffs¹⁰.

Many of the ecosystems and species that inhabit the District are considered at risk and are listed federally under the Species at Risk Act (SARA) and recognized provincially through the BC Conservation Data Centre

(BCCDC). The BCCDC maintains a colour-coded list of species and ecosystems which are at risk of being lost (Red), of special concern (Blue), or secure or not at risk (Yellow). Saanich is situated within the Coastal Douglas Fir (CDF) ecological zone, the province's smallest climatic zone. Its ecosystems are considered the most at-risk.

Of the 48 distinct plant communities found growing in the CDF zone, 45 are classified as being Red- or Blue- listed by the BCCDC. These plant communities include Douglas-fir forests, Garry oak woodlands, rocky arbutus outcrops, herbaceous meadows, and coastal sand ecosystems. These ecosystems provide habitat for over 200 provincially listed species, 24 of which are imperilled worldwide.



2.3. Threats to Biodiversity

There are numerous threats to the integrity of the ecosystems found in Saanich. Some are being caused by the changes in our climate, while others are directly related to the impacts of urban development and the increased presence of humans. Eight critical threats to biodiversity have been identified¹¹.

Threat



Land development affects biodiversity through habitat loss, fragmentation, and increased disturbance. While habitat loss can be directly related to development, indirect effects can include habitat fragmentation and other impacts from buildings, roads, trails, and fencing.



Climate change is altering growing conditions across the world. This is expected to increase drought, storm frequency and intensity, temperatures, and change plant communities in Saanich. The species composition of CDF forests in Saanich is expected to change by 2040 due to climate change.



Sea level rise is expected to cause local flooding and coastal erosion in low-lying areas of Saanich. This will have profound impacts on Saanich's beaches, dunes and coastal wetlands.



Invasive species are plants and animals which have been introduced from other regions and have negative impacts on ecosystems. Invasive plants and animals have been identified as one of the greatest threats to biodiversity worldwide.



Pests and diseases can be natural parts of our ecosystems or can be introduced from other areas. The effects of these can range from small stand openings in forests to widescale loss of a species or understory in an area.



Many threats to biodiversity can be related to human activity, whether it be climate change, development, or the introduction of non-native species. The impacts of humans on biodiversity can include numerous other complex and interrelated changes such as vegetation trampling and pollution.



Impervious surfaces are surfaces which do not allow water to pass through. This includes buildings, roads, and parking lots, among others. These can influence how water moves through groundwater, streams, and Saanich's stormwater network. Impervious surfaces cover 29.5% of the land within the UCB and only 4.8% outside of the UCB.



The lək̓wəŋən peoples represented by the Songhees and Esquimalt Nations and the W̱SÁNEĆ peoples represented by the W̱JOLEŁP (Tsartlip), BOKÉĆEN (Pauquachin), S̱TÁUTW (Tsawout), W̱SIKEM (Tseycum) and MÁLEXEŁ (Malahat) Nations have had a profound effect on natural areas of Saanich. The loss of indigenous knowledge and practices since colonization is partially responsible for the decline of some of these ecosystems.

3. LOOKING TOWARDS THE FUTURE

Saanich has updated its Official Community Plan (OCP), (May 2024). As part of this process, a vision¹² was developed which highlights the importance of a healthy natural environment for its residents:

“Saanich is a sustainable and resilient community where a healthy natural environment is recognized as paramount for ensuring social well-being and economic vibrancy for current and future generations.”

This vision and its emphasis on a healthy natural environment is supported through the strategic update of the OCP (2024) as well as the Environmentally Policy Framework (ongoing). The OCP update and Environmental Policy Framework provide higher policy guidance for updating existing and developing future policies, plans, and programs. The Biodiversity Conservation Strategy falls under this framework and focuses on improving Saanich’s ability to protect its natural assets. The OCP update and surrounding legislative context has also identified the need for additional housing in the District^{13,14} to meet current and future growth targets.

In September 2023, a provincial Ministerial Order was issued under the Housing Supply Act mandating the delivery of 4,610 new dwellings in the District over a 5-year period. This order aims to help increase the rate that new housing is provided, thereby closing the gap between housing needs and supply. The mandated 4,610 new dwellings represent 75% of Saanich’s housing needs and equates to three times the current average number of new units that are being developed annually. To meet this Order, Saanich will require an accelerated, collaborative, and sustained approach to provide housing opportunities.

It is intended that most of these new dwellings will be concentrated in designated Primary Growth Areas (along transportation corridors and in town centres) and through well-integrated infill within Saanich Neighbourhoods within the Urban Containment Boundary (UCB). The implementation of this strategy is important to ensure the protection and enhancement of biodiversity while the District continues to grow.



How are things different inside and outside of the urban containment boundary?

The Urban Containment Boundary (UCB) defines areas within Saanich where land development for residences and commercial activities are concentrated. This designation does not exclude the protection of natural areas but can make it more challenging. Biodiversity planning within the UCB focuses on the protection of the remaining natural areas and the integration of smaller modified habitat features within the urban landscape.

3.1. Relationship with Indigenous Community

The District of Saanich engaged with the WSÁNEĆ community through connections with the WSÁNEĆ Leadership Council. While the District of Saanich acknowledges that it is also situated within the ancestral territories of the ləkʷəŋən peoples, consultation was only possible with the WSÁNEĆ community. In 2021, the signing of an ÁTOL,NEUEL ("Respecting One Another") Memorandum of Understanding (MOU) highlights the commitment to mutual respect and collaboration between the WSÁNEĆ Leadership Council and the District of Saanich. This idea was furthered through conversations with the community, which highlighted the need to walk together to create a better future for all. Through this Memorandum of Understanding, Saanich is dedicated to continuing and fostering this relationship with the WSÁNEĆ community.



3.2. Developing the Strategy

The development of the Biodiversity Conservation Strategy was informed by a background review of existing Saanich policies, municipal best management practices, the State of Biodiversity Report (2023), and input from the RSTC, staff and the public. To understand best practices in comparable jurisdictions, interviews were conducted with four municipalities and two regional

districts. The goal of these interviews was to understand the various ways environmental protection and biodiversity conservation strategies are administered across British Columbia. This exercise focused on the implementation of environmental development permit areas (EDPAs), connectivity networks, and biodiversity-related policies that these municipalities have adopted.



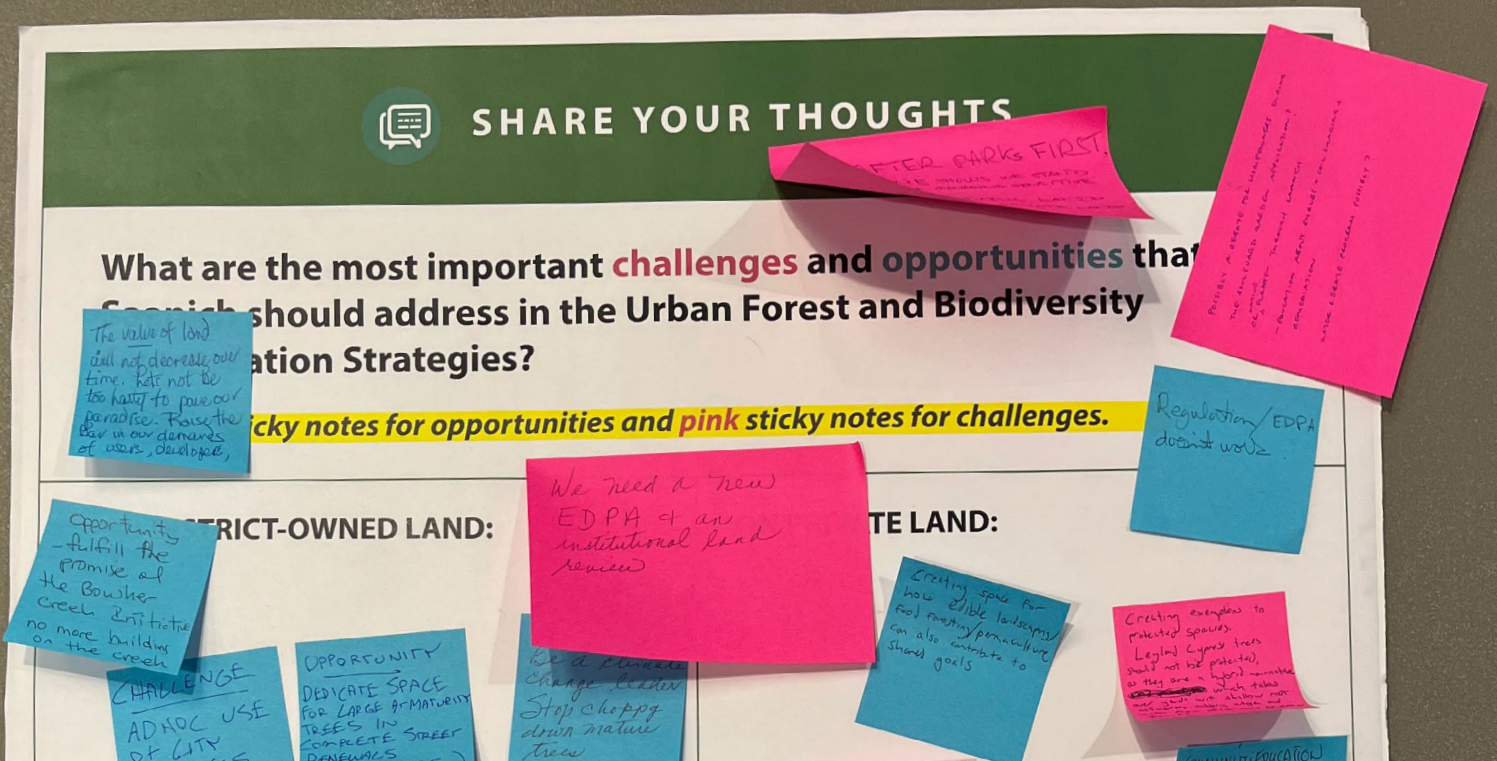
3.2.1. Engagement

The Biodiversity Conservation Strategy was developed following comprehensive public and community engagement. Engagement was completed through in-person and online sessions. An online interactive map (StoryMap) was created to allow Saanich community members to identify and share places in Saanich they value and/or need improvement. Engagement also took place through a statistically valid survey and a combination of online and in-person meetings and focus groups. Attendees at various meetings included:

- Community members and stakeholders
- Resilient Saanich Technical Committee
- Natural Areas Parks and Trails Committee
- Key staff from various District departments

Engagement with community members and

stakeholders played an important role in the development of the seven key themes and the recommended actions. Respondents of the public survey showed support for greater protection of sensitive ecosystems on private land. The survey results showed support for protecting biodiversity through private land regulation (65% of the random sample and 71% of online survey participants). Furthermore, the majority of respondents “fully support” or “can live with” the development of an Environmental Development Permit Area for sensitive ecosystems (83% of the random sample and 80% of the online survey participants)¹⁵. There was also support for increased efforts to restore degraded ecosystems, including the management of invasive plant species. A more detailed account of the engagement process is provided in Appendix 5 - Biodiversity Strategy Engagement Summary.



3.2.2. Indigenous Engagement

Engagement sessions were held with the WSÁNEĆ community to foster understanding and collaboration during the development of the State of Biodiversity Report and the Biodiversity Conservation Strategy.

During these workshops there was an emphasis placed on respecting the environment as well as each other and

preserving biodiversity for future generations. Both engagements emphasized the need for ongoing communication and collaboration between the District of Saanich and the WSÁNEĆ Leadership Council. The learnings reflected a shared commitment to respectful and sustainable management of the environment.



3.3. Purpose of the Biodiversity Conservation Strategy

A healthy, biodiverse environment is fundamental to the social, economic, and environmental resilience of Saanich, particularly when considering the impacts of climate change. The Biodiversity Conservation Strategy provides a roadmap to protect, connect, and enhance biodiversity through policy, operations, and enhanced public stewardship. It aims to enhance biodiversity across both public and private lands. It recognizes the threats to biodiversity and provides actions that can help support more resilient ecosystems. This strategy is meant to enhance the livability of Saanich without compromising the ability of the District to provide homes and services for its residents. The Strategy also identifies actions related to reconciliation efforts with local Indigenous communities, recognizing their profound connection to and caring for the land.

Community engagement informed the development of Saanich's Vision for biodiversity:

"Saanich is a resilient community that values, protects, connects, and restores sensitive ecosystems, natural habitats, and biodiversity."

Seven strategic themes have been adopted as a framework for this strategy. These include 1) knowledge and understanding, 2) connecting ecosystems, 3) sustainable development, 4) restoring ecosystems, 5) enhanced public stewardship, 6) community engagement, and 7) sustainable agriculture. These themes are anticipated to help guide District efforts to improve biodiversity.



Precautionary Principle

The precautionary principle is an approach for decision and policy making. While originally applied to human health policies, it has been increasingly used to guide environmental agreements and legislation. There are four central components to the precautionary principle¹⁷:

1. Taking preventative action in the face of uncertainty,
2. Shifting the burden of proof to the proponents of an activity,
3. Exploring a wide range of alternatives to possibly harmful actions, and
4. Increasing public participation in decision-making.

This principle supports precautionary measures that will anticipate, prevent, or minimize the causes of climate change and mitigate their adverse effects. When faced with serious threats that could cause irreversible damage, the lack of full scientific certainty should not be used as a reason for postponing mitigation measures¹⁸. This principle is particularly important in biodiversity conservation, as the loss of species is irreversible and ecosystems are not interchangeable. The loss of one biodiverse area cannot be compensated by the protection or restoration of another.



4. BIODIVERSITY HABITAT NETWORK

Biodiversity mapping has been completed that helps to understand which areas provide the greatest benefit for the greatest number of species. Protecting and enhancing these areas helps safeguard biodiversity, which in turn fosters climate resiliency and social well-being¹⁹. The Biodiversity Habitat Network is a baseline framework that identifies natural areas with high biodiversity conservation value. This network includes important habitat patches as well as linkages that connect them together. Connectivity across landscapes is important for wildlife to access habitat as well as for populations to interbreed with each other. Isolated populations can become

unhealthy at a genetic level, making them more susceptible to disease and growth defects^{20,21}. The isolation of certain habitats alters interspecies population dynamics and can cause the interrelationships between predators, prey, and forage to become unbalanced²². If predators become eradicated from an area, prey populations may increase. For example, there is a large population of deer in Saanich and on many of the Gulf Islands. This overpopulation of herbivores affects the plant communities they feed on, reducing biodiversity, and threatening the overall health of these ecosystems.



Smaller patches of habitat tend to have fewer natural features and support lower levels of biodiversity. Species that live in smaller and isolated areas are more at risk of becoming extinct²³. Larger natural areas tend to provide more diverse natural habitat features. These areas can provide interior habitat areas that can act as refuge areas for species that are less tolerant of urban influences²⁴.

The risk of population fragmentation also depends on a species' ability to move around the landscape and their tolerance to urban environments²⁵. Birds and flying insects move across urban landscapes more easily. Large mammals can move faster across a landscape than smaller species and are typically less impacted by barriers created by urban development. Some species are not able to move across urban landscapes and require natural corridors to move between habitat areas. Other species are able to survive in small habitat areas but may need to remain in or be close to water features.

Habitat pathways facilitate the movement of species between fragmented habitat patches. The most effective habitat pathways are wide corridors that provide safe cover for wildlife .



Habitat pathways that follow aquatic systems (e.g. streams and creeks) are effective as they provide a continuous water source, which is required by most species²⁷.

Habitat pathways that are narrow, do not provide water access, or are partially impacted by urban features such as roads and trails are less effective. Habitat pathways can also have the unintended consequence of influencing predatory behaviour. Predators can learn where prey are constrained within corridors, making them easier to catch²⁸. Without careful planning, these connections can also lead to habitat patches becoming habitat sinks, contributing to wildlife loss.

To preserve ecosystem function and biodiversity in urban areas, it is crucial to strike a balance between the needs for development and the natural environment. To help achieve this, Saanich has mapped a habitat network that could be used to safeguard a framework of natural areas while also promoting backyard biodiversity through urbanized areas. This will help prioritize resources towards the protection, enhancement, and restoration of natural areas while still allowing for growth and development to support residents.

4.1. Components of the Biodiversity Habitat Network

The Habitat Network consists of four components (Figure 3). The four Biodiversity Habitat Network (BHN) components identify a framework of habitats that should be prioritized for protection and enhancement. These components are summarized below, with more details provided in Appendix 2:

Core Habitat Hubs

These are large areas (approximately >10 ha) that provide protected interior habitat and are somewhat isolated from the influence of urban development and activity. These refuge areas are important habitat areas for wildlife less tolerant of urbanization.

Habitat Sites

These areas are smaller in size (approximately <10 ha) and generally do not provide protected refuge areas for wildlife which are intolerant of urban conditions. They act as important stepping-stone areas, often within urban landscapes that are likely to be used by species that can fly and terrestrial species that are more tolerant of disturbed habitats.

Regional Habitat Linkages

These include linear natural habitat areas that provide a connection between major habitat hubs. They are wide and continuous enough to support the movement of species that are intolerant of urban influences (at least 30 m but ideally 50 to 100 m). In urban environments they may be fragmented by barriers such as roads and development. Regional habitat linkages often follow streams and include riparian setbacks that are protected by District and Provincial policy.

Local Habitat Linkages

Preserving wide and continuous major corridors can be challenging in urbanized landscapes. Local corridors can be narrower and more fragmented but can still contribute to the movement of some species. These local corridors, though more limited in width (typically 10-30 metres), offer natural cover for mammals capable of tolerating urban activity, as well as birds and flying insects.

Wildlife also make use of the mosaic of altered habitat features found within the urban landscape. These include some habitat values associated with urban natural features (e.g. private gardens, boulevards, smaller parks) as well as agricultural lands. The biodiversity values in these areas are typically lower as a result of their altered landscapes and competing land uses.

Agricultural Land

Agricultural land plays a unique role across the landscape. These areas tend to be dominated by monocultures of plants that are regularly harvested. However, they may facilitate the travel of species between adjacent natural habitat areas through features such as hedgerows and irrigation ponds and ditches. They can also provide food sources for certain species, although the pesticides and herbicides used in conventional agriculture can pose toxicity risks to many species²⁹. Agricultural land can also benefit from increased use by wildlife through increased pollination of crops and natural pest control through predation³⁰.

Urban Matrix

The urban matrix includes small patches of native habitat, single or small groups of trees, gardens, shrubs and shrub thickets, drainage ditches, and ornamental ponds and water features within developed areas. They can also include rooftop plantings; however, these were not mapped as part of this project. Collectively these features within the urban matrix improve habitat quality and complexity to support species that are tolerant of human disturbances including certain birds, flying insects, amphibians and reptiles, and small mammals including bats^{32,33}.

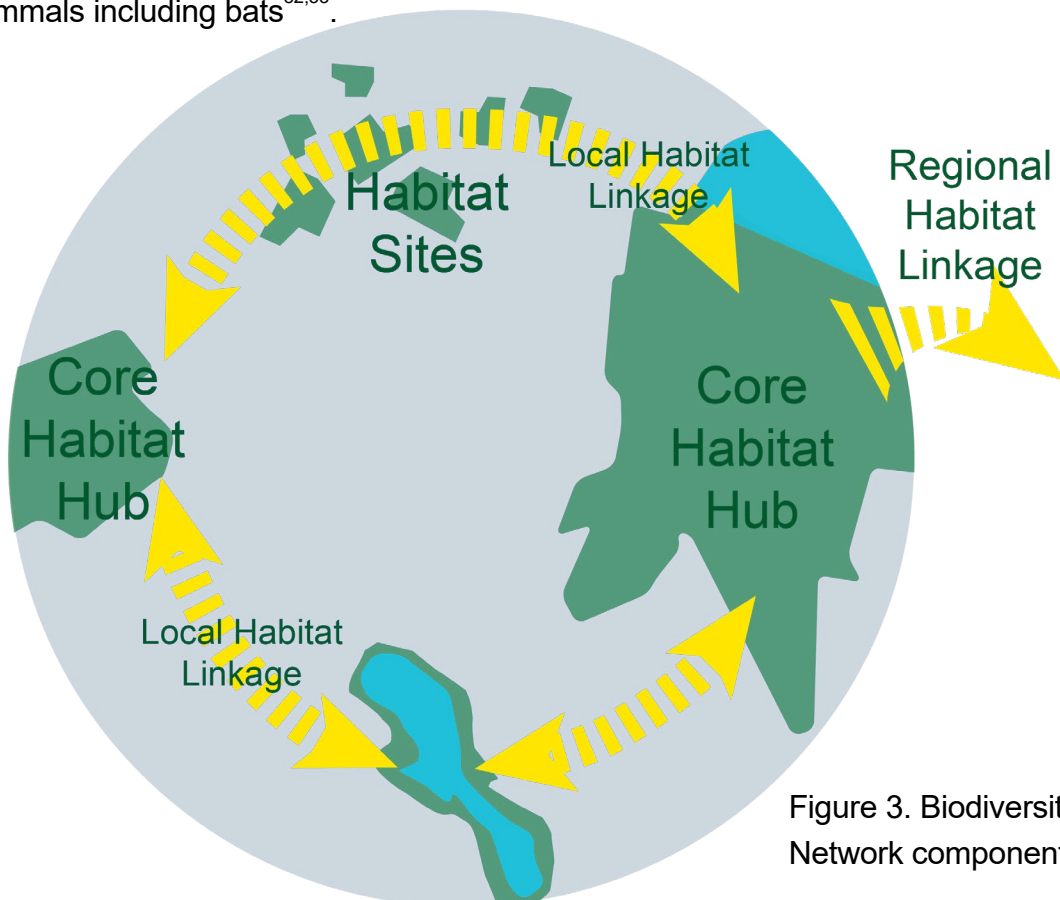


Figure 3. Biodiversity Habitat Network components.

The Biodiversity Habitat Network (BHN) focuses on the protection of important habitat areas for wildlife and promotes their movement across Saanich (Figure 4). While terrestrial species are the focus of the BHN, it includes streams and lakes and their associated protected areas as a foundational component. The network of aquatic habitats is protected by the Streamside Development Permit Area (SDPA) and stormwater management policy and regulated through the provincial *Water Sustainability Act*, the Riparian Areas Protection Regulation, and the federal *Fisheries Act*. Compared with aquatic systems and habitats, the protection of terrestrial habitats is less regulated.



Connecting the Biodiversity Habitat Network with OCP Land Use

Over the next five years, Saanich will focus on urban development and densification within the Primary Growth Areas, defined and mapped in the OCP 2024, in response to the Province's Housing Supply Act, Bill 43³⁴. With this housing mandate, the District will be required to triple their development and construct 4,610 units over five years. This will lead to increased densification in these areas through new development. Additionally, single-family residential properties will have the ability to redevelop into three, four, or six units, potentially expanding the impervious surfaces in these areas. **The Primary Growth Areas, as defined in the OCP, have minimal overlap with the proposed Biodiversity Habitat Network (Figure 5).**

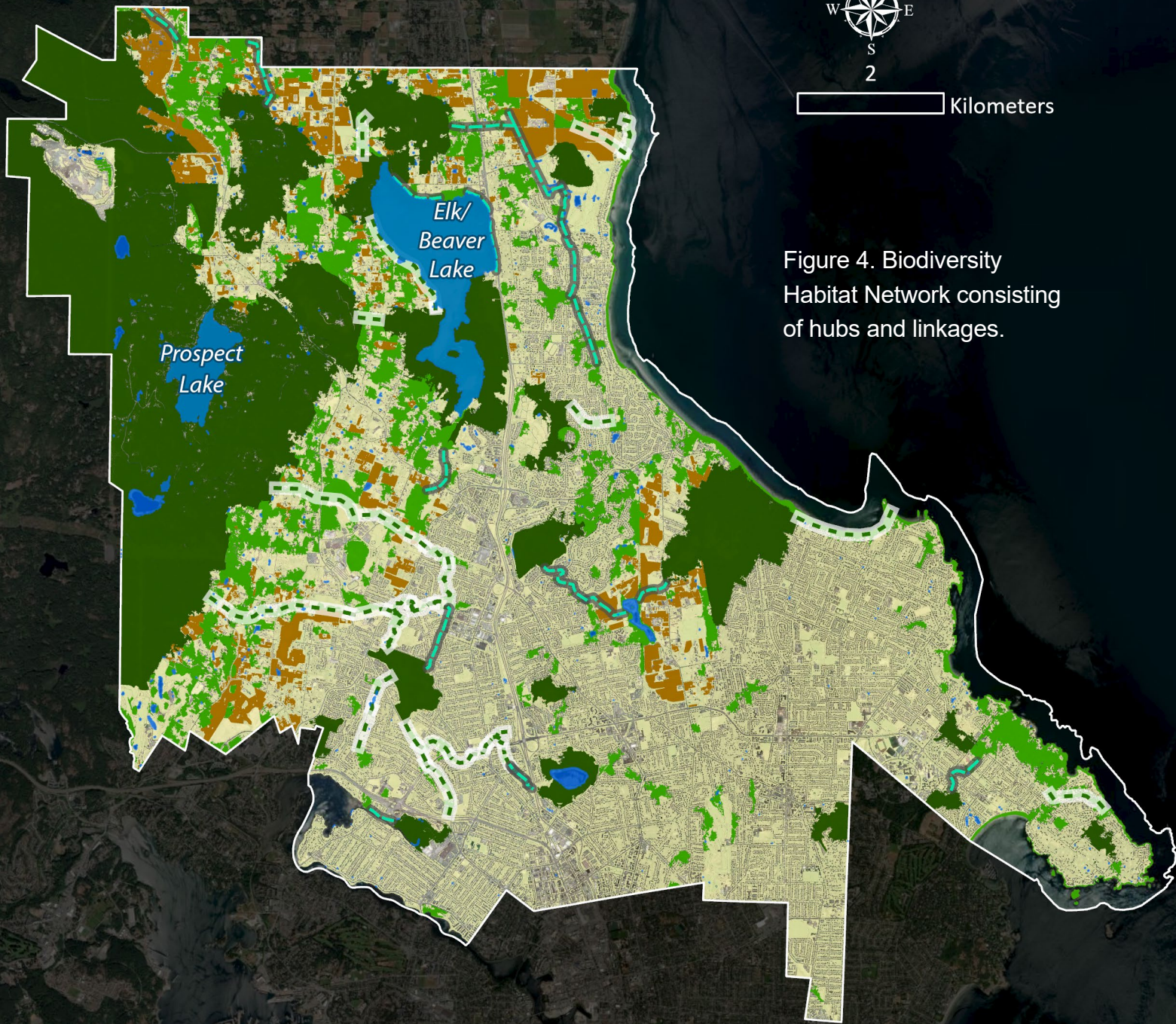
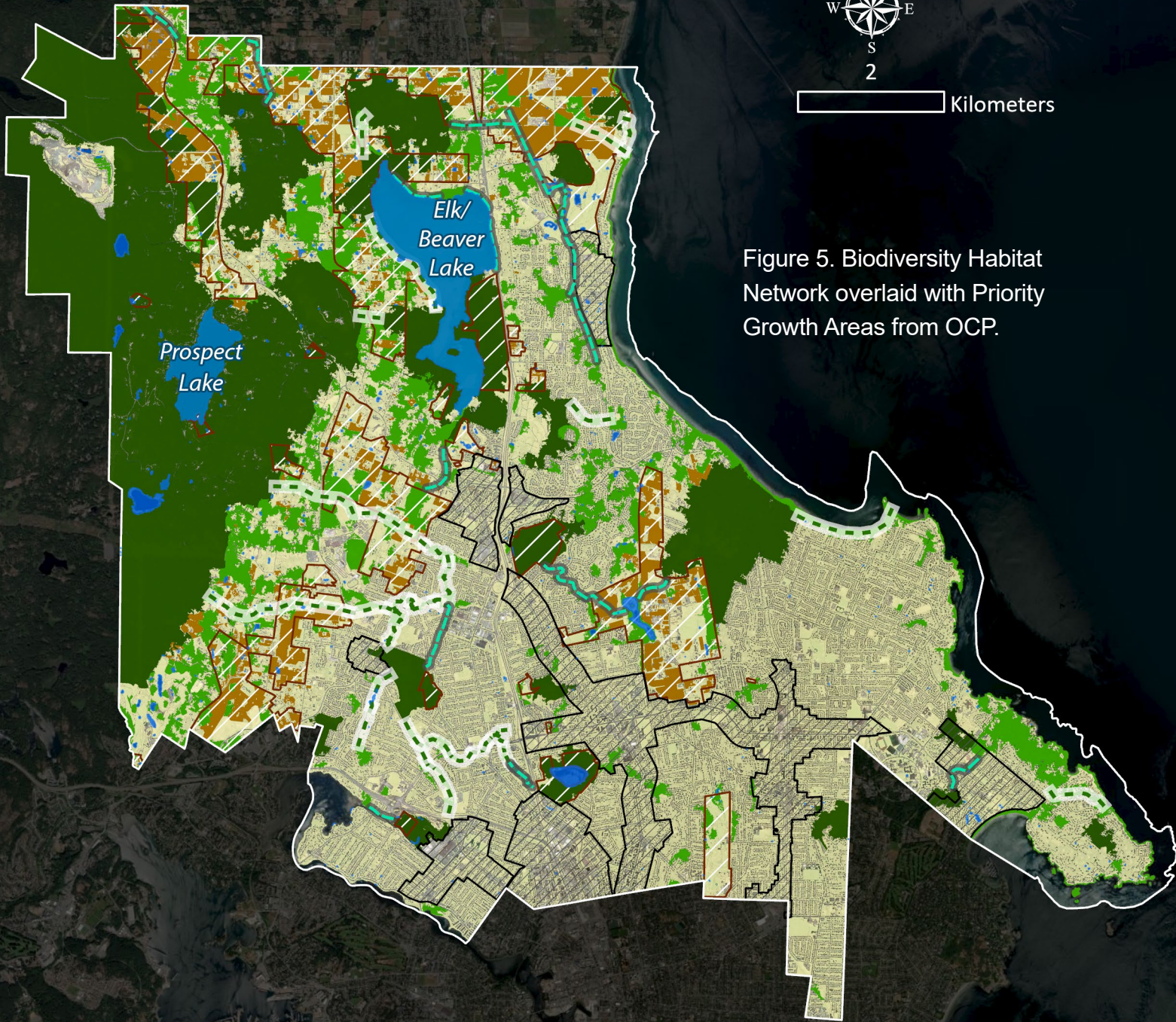


Figure 4. Biodiversity Habitat Network consisting of hubs and linkages.

Habitat Network

- Core Habitat Hubs
- Habitat Sites
- Urban Matrix
- Agriculture Land
- Local Habitat Linkages
- Regional Habitat Linkages
- Waterbodies
- Municipal Boundary





2 Kilometers

Figure 5. Biodiversity Habitat Network overlaid with Priority Growth Areas from OCP.

Habitat Network

- Core Habitat Hubs
- Habitat Sites
- Urban Matrix
- Agriculture Land
- Local Habitat Linkages
- Regional Habitat Linkages
- Primary Growth Area
- Agricultural Land Reserve
- Waterbodies
- Municipal Boundary



4.2. How to Use the Biodiversity Habitat Network

The Biodiversity Habitat Network can be used in a variety of ways to help support biodiversity conservation in Saanich. It identifies the largest and most biodiverse areas in Saanich and the natural corridors that link them together. As a planning tool, it can be used to:

- Prioritize areas to implement conservation actions.
- Establish a monitoring program to track the success of implementing the Strategy.
- Inform future land use planning by highlighting areas with no linkages.
- Coordinate with land developers near the network to increase density and protect more natural area.
- Establish an Environmental Development Permit Area to protect biodiverse and environmentally sensitive areas.

The Biodiversity Habitat Network was developed for the entire District of Saanich as part of this Strategy. Most of the Core Habitat Hubs and Sites are located outside of the Urban Containment Boundary and are less threatened by urban development. Within the UCB, missing habitat hubs and sites can be difficult to create due to limited available space, high land values, and the densification of development. Existing habitat hubs and sites within the UCB should be prioritized for protection and enhancement.



5. ACTIONS TO ENHANCE AND PROTECT BIODIVERSITY IN SAANICH

Seven strategic themes have been adopted as a framework for actions. The following list does not suggest an order of importance.

1. **Knowledge and Understanding:** Improve knowledge and mapping of natural features and functions to ensure decisions are based on credible data.
2. **Connecting Ecosystems:** Prioritize the protection and enhancement of a Biodiversity Habitat Network.
3. **Sustainable Development:** Enhance biodiversity during land use planning and development.
4. **Restoring Ecosystems:** Enhance biodiversity on public lands.
5. **Enhanced Public Stewardship:** Encourage biodiversity initiatives on private lands outside of the development process.
6. **Community Engagement:** Improve public understanding of biodiversity and participation in biodiversity conservation and restoration.
7. **Sustainable Agriculture:** Enhance biodiversity on agricultural lands.

A variety of actions have been identified under each theme. These are associated with planning, policy, operations, education, and stewardship. The actions that are considered to be the highest priority and are expected to have the greatest immediate impact for protecting and enhancing biodiversity in the District are discussed in Section 6.0 Strategy Implementation. The development of a monitoring plan is crucial for implementing these actions as it will evaluate the effectiveness of actions taken and will enable adaptive learning and improvement (Section 7).



How does the Urban Forest Strategy relate to the Biodiversity Conservation Strategy?

The Urban Forest Strategy (UFS) is currently being updated. Trees provide the framework for most of the ecosystems that exist in Saanich and biodiversity cannot be protected without addressing their importance. Protecting as many existing trees as possible and enhancing the canopy with a variety of tree species that are best adapted to the changing climate is crucial for protecting biodiversity. Recommendations to manage the urban forest are contained within the Urban Forest Strategy and are not repeated in this Strategy. For reference, UFS goals have been provided below:

Urban Forest Strategy Goals:

- **Goal 1.** Protect, connect and enhance the urban forest in harmony with built and natural systems.
- **Goal 2.** Manage the urban forest in alignment with best practices to support healthy and safe trees.
- **Goal 3.** Foster a culture of community care for the urban forest.
- **Goal 4.** Build on experience and relationships to manage adaptively.

5.1. How to Read the Action Table

Actions are categorized based on the seven themes. Each action has additional details, including implementation costs and target timelines (Table 1), biodiversity attributes (Table 2), and the area of impact. Timelines do not reflect projects that have started already; an “ongoing” timeline means that it is anticipated to require sustained efforts overtime to implement.









Table 1. Approximate cost ranges and minimum timelines to implement the actions.

Financial Commitment (Total Cost)		Implementation Timeline	
\$	<\$25,000	Short	1 - 3 years
\$\$	\$25,000 - \$100,000	Mid	3 - 7 years
\$\$\$	>\$100,000	Long	7+ years
Ongoing Costs		Ongoing Timeline	



The RSTC Biodiversity Working Group established the RSTC Target Categories while developing the State of Biodiversity Report (Figure 6). The action tables for biodiversity were created based on these categories. The action tables contain biodiversity attributes that indicate which habitat types are most relevant to each strategic action. It is important to note that while the top three attributes are used, many of them could be applicable in some cases.

Table 2. Biodiversity attributes

Biodiversity Attribute	RSTC Target Categories	Icon	Description
Terrestrial Ecosystems	Coastal Douglas-fir Forests		Intact natural terrestrial ecosystems including the at-risk Coastal Douglas-fir forests.
Marine Shorelines	Marine Shorelines		Intertidal areas that are influenced by the ocean, ranging from eelgrass communities and mud flats up to brackish wetlands.
Coastal Sand Ecosystems	Coastal Sand Ecosystems		Foreshore beaches and sand dunes.
Freshwater Wetlands, Lakes, and Hydroriparian Systems	Wetlands, Lakes and Hydroriparian Systems		Water quality and habitat to support aquatic species.
Garry Oak Ecosystems	Garry Oak Ecosystems		Plant communities supporting Garry Oak trees and native herbaceous understory communities.
Urban Matrix & Backyard Biodiversity	Greenspace Backyard Biodiversity Backyard Biodiversity - Urban		Naturalized backyards, streetscapes, public rights of way, manicured parks.
Culturally significant areas, plant and/or animal communities	N/A		Relating to Indigenous peoples and culturally significant species.
Wildlife	N/A		Native wildlife including bats, mammals, rodents, reptiles, amphibians, birds, invertebrates (such as pollinators), and species at risk or of conservation concern



2

Kilometers

Figure 6. Biodiversity Target Categories were applied to all pervious areas of the District.

RSTC Target Categories

-  Coastal Douglas-fir Forests
-  Garry Oak Ecosystems
-  Greenspace
-  Backyard Biodiversity
-  Backyard Biodiversity - Urban
-  Coastal Sand Ecosystems
-  Marine Shorelines
-  Wetlands, Lakes and Hydroriparian Systems
-  Urban Containment Boundary


















5.2. Strategic Actions










The following sections summarize the recommended actions developed as part of this Strategy. The recommended actions are organized around the seven themes. Related actions are organized together where relevant. Every individual action and sub action has an estimated implementation cost and timeline.





5.3. Knowledge and Understanding - Improve knowledge and mapping of natural features and functions to ensure biodiversity measures are based on credible data

Continually enhancing the understanding of terrestrial and aquatic ecosystems, species at risk, and their habitat requirements is important for all aspects of biodiversity planning including the monitoring of conservation efforts, and the assessment of restoration efforts. The information should remain dynamic, allowing the District to monitor changes to its natural areas. It should be made available to the public to build public awareness.

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
THEME 1 - Knowledge and Understanding					
Terrestrial Ecosystems					
1.1	Provide public access to the most recent terrestrial ecosystem mapping via the GIS portal, SaanichMap.		\$	Short	Information & Spatial Management
1.2	Establish a program to regularly update terrestrial ecosystem data.		\$\$	Ongoing	Programmatic
1.2.1	Continue to refine the precision of terrestrial ecosystem polygon boundaries through ground-truthing and high-resolution ortho imagery.		\$\$	Ongoing	Information & Spatial Management
1.2.2	Review and update existing data capture guidelines and develop a structured procedure for evaluating and submitting data to be included as part of terrestrial ecosystem mapping.		\$	Short	Policy, Regulatory, &/or Corporate
1.3	Review and update existing ESA polygons based on updated criteria and ground-truthing.		\$\$	Short	Information & Spatial Management






ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
1.3.1	Develop standards and guidelines for the delineation and classification of Environmentally Significant Areas (ESAs).		\$	Short	Policy, Regulatory, &/or Corporate
1.4	Review and update terrestrial ecosystem mapping with ground-truthed disturbance levels.		\$\$\$	Mid	Information & Spatial Management
1.5	Update the biodiversity rankings when new information is available. Consider incorporating additional information related to disturbance (i.e. areas with degraded understories).		\$	Mid	Information & Spatial Management
1.6	Develop a long-term monitoring program building on the field plot locations completed during the State of Biodiversity Report.		\$	Short	Programmatic
1.6.1	Regularly assess these field plots to identify changes in biodiversity.		\$\$	Ongoing	Programmatic
1.7	Support local Indigenous peoples in spatial knowledge acquisition and organization on their terms.		\$\$	Ongoing	Information & Spatial Management
1.8	Ensure vegetation removal aligns with current Federal and Provincial best management practices for protecting bird nests during the breeding season (March 1st – August 31st)	 	\$	Ongoing	Compliance & Enforcement








ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
Freshwater Ecosystems and Watercourses					
1.9	Update stream location and classification. This should include both connected and disconnected water features. Make this information available via the GIS portal, SaanichMap.		\$\$	Mid	Information & Spatial Management
1.9.1	Evaluate and confirm the presence and classification of watercourses identified by the LiDAR flow accumulation model.		\$	Short	Information & Spatial Management
1.9.2	Update the mapping used to identify the Streamside Development Permit Areas (SDPA).		\$	Mid	Information & Spatial Management
1.9.3	Identify barriers to fish migration, confirm stream presence and stream classification.		\$	Short	Information & Spatial Management
1.10	Accurately map the locations of connected and disconnected wetland systems and make this information available via the GIS portal, SaanichMap.		\$\$	Mid	Information & Spatial Management
Marine Ecosystems					
1.11	Update the mapping of marine-influenced ecosystems and make this available via the GIS portal, SaanichMap.	 	\$\$	Short	Information & Spatial Management
1.11.1	Show the current and modelled 50-year highest high tide lines from the CRD on the GIS portal, SaanichMap	 	\$	Short	Information & Spatial Management

ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
1.12 Update and map the known locations of species and ecological communities at risk and provide this information to the BC Conservation Data Centre.	★	\$\$	Long	Information & Spatial Management
1.13 Review and update the provincial Sensitive Ecosystems Inventory (SEI).	★	\$\$	Mid	Information & Spatial Management
Invasive Species				
1.14 Develop a spatial inventory of invasive plant species growing on public lands.	 	\$\$	Mid	Information & Spatial Management
1.14.1 Establish a priority list of species and locations to be mapped.	 	\$\$	Mid	Programmatic

5.4. Connecting Ecosystems - Prioritize the protection and enhancement of a Biodiversity Habitat Network





The Biodiversity Habitat Network is a baseline framework that identifies natural areas with high biodiversity conservation value. This network includes important habitat patches as well as linkages that connect them together. Areas identified in the Habitat Network should be prioritized for protection and enhancement. There are a variety of methods to establish and maintain the integrity of this network, including private land acquisition, park designations through development, zoning, private land regulation, and natural state covenants.











ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
THEME 2 - Connecting Ecosystems					
2.1	Protect and/or enhance land in the Biodiversity Habitat Network using a variety of tools.		\$\$\$	Ongoing	Planning & Design
2.1.1	Protect land in the Biodiversity Habitat Network through working with private landowners using a variety of existing tools such as covenants, etc.		\$	Ongoing	Partnerships & Relationships
2.1.2	Enhance land in the Biodiversity Habitat Network through naturalizing rights of way and boulevards.		\$\$	Mid	Operational
2.1.3	Protect land in the Biodiversity Habitat Network through priority invasive species removal and ecosystem restoration on public land.		\$\$\$	Ongoing	Operational
2.1.4	Protect land in the Biodiversity Habitat Network through land acquisition.		\$\$\$	Long	Fiscal








ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
2.2	Create different tools for inside and outside the UCB to protect and enhance biodiversity in the Biodiversity Habitat Network.		\$\$	Mid	Planning & Design
2.3	Identify missing components adjacent to Biodiversity Habitat Network that could be restored to improve the network.		\$\$	Short	Information & Spatial Management
2.4	Add the Biodiversity Habitat Network to the Park Acquisition Guide and identify priority lands for acquisition.		\$	Short	Planning & Design
2.5	Investigate financial mechanisms to acquire unprotected areas in the Biodiversity Habitat Network.		\$	Mid	Fiscal
2.6	Assess unused rights-of-way within the Urban Containment Boundary for restoration potential.		\$	Short	Planning & Design
2.7	Assess unused rights-of-way within the Urban Containment Boundary for the potential to rezone to natural parks.		\$	Short	Planning & Design
2.8	Establish communication with Crown Corporations to ensure the Biodiversity Habitat Network is considered when implementing and planning regional infrastructure projects.		Ongoing	Ongoing	Partnerships & Relationships








5.5. Sustainable Development - Enhance biodiversity during land use planning and development




Retaining natural areas and features as part of land development projects not only provides habitat for wildlife but also provides ecosystem services for people. The District’s OCP, policies, and land development planning process should ensure that projects take the necessary steps to minimize impacts on biodiversity. Where entirely avoiding impacts is not feasible, impacts should be minimized and mitigated through the development process. Restoration and enhancement of retained natural areas or features on site should be considered a minimum standard of care, with consideration for off-site restoration considered as a last resort. Areas within the Biodiversity Habitat Network should be prioritized for protection.

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
THEME 3 – Sustainable Development					
All Ecosystems					
3.1	Develop an inventory of Saanich’s natural assets and develop a Natural Asset Management Plan.		\$\$	Short	Planning & Design Information & Spatial Management
3.2	Allocate resources to identify and deal with encroachments into District owned natural lands, including naturalized right of ways and mandate their restoration.		\$\$	Mid	Compliance & Enforcement
3.3	Increase the penalties for encroachment into environmental setback areas, covenant areas, and parks.		\$	Short	Compliance & Enforcement
3.4	Update native plant lists to include a list of climate-adaptable species to be included in restoration projects for different types of ecosystems.		\$	Short	Operational

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
3.5	Require lighting reduction design to reduce artificial lighting impacts on biodiversity.		\$	Mid	Planning & Design
3.6	Enhance inter-departmental communication for coordinated land development and restoration.		\$\$	Short	Planning & Design
3.6.1	Create an inter-departmental review checklist for municipal projects to be used by the Development Review Committee.		\$\$	Short	Planning & Design
3.6.2	Implement an Environmental Review process for variances to environmental policies.		\$\$	Short	Policy, Regulatory, &/or Corporate
Terrestrial Ecosystems					
3.7	Adopt and implement the updated Urban Forest Strategy (2024).		\$\$\$	Ongoing	Policy, Regulatory, &/or Corporate Planning & Design
3.8	Restart the plant salvage programs to relocate native plants from approved development sites.	 	\$	Ongoing	Programmatic
3.9	Develop a list of restoration sites where plants can be transplanted.		\$	Ongoing	Operational
3.10	Increase public education to promote plant salvaging.	 	\$	Ongoing	Education & Outreach

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
3.11	Implement a development permit area or zone for the protection of the natural environment.		\$\$\$	Mid	Planning & Design
Freshwater Ecosystems and Watercourses					
3.12	Revise the Streamside Development Permit Area (SDPA) and its associated guidelines.		\$\$	Mid	Planning & Design
3.12.1	Consider options to display the Streamside Development Permit Area that best captures all streams in GIS. Consider if a map is necessary and if it should be included in the OCP.		\$\$	Short	Planning & Design
3.12.2	Clarify all watercourses that meet the definition are included in the SDPA, including unmapped watercourses.		\$	Short	Planning & Design
3.12.3	Update the Zoning Bylaw to be consistent with the Streamside Development Permit Area (SDPA) to better protect streams and the marine shoreline.		\$\$	Mid	Policy, Regulatory, &/or Corporate Information & Spatial Management
3.12.4	Increase the minimum riparian setback enforced in the Zoning Bylaw to 10 m for watercourses and 2 m for ditches to better align with minimum RAPR SPEA sizes. This should apply to both fish-bearing and non-fish-bearing streams.		\$	Short	Planning & Design
3.13	Review & update the Floodplain Development Permit Area and its associated guidelines to current BMPs.		\$\$	Mid	Planning & Design

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
3.14	Increase bonding securities for restoring natural ecosystems that are a condition of streamside Development Permits.		\$	Mid	Planning & Design
3.15	Require that QEPs assess and confirm the compliance of restoration sites.		Ongoing	Ongoing	Compliance & Enforcement
3.16	Make site inspections within 3-5 years of restoration a condition of streamside development permits. Collect bonding to enforce this inspection period. Update bonding timelines to match inspection timelines. restoration projects.		\$\$	Mid	Compliance & Enforcement
3.17	Develop an incentive program to support protection of natural features when land is developed inside the UCB.		\$\$	Short	Fiscal
3.18	Create report guidelines for QEP development permit reports and provide a table of contents with required topics. This may include compiling a resource guide of best practices with links and references for developers and QEPs.		\$	Short	Planning & Design
3.19	Adopt pervious surface site coverage targets.		\$	Mid	Planning & Design
3.19.1	Explore and implement incentives for landowners to create pervious surfaces. This could include a stormwater tax.		\$\$	Mid	Planning & Design

ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
<p>3.20 Provide guidelines for restoration and enhancement of natural areas to be protected and/or restored based on Society of Ecological Restoration (SER) principles and standards.</p>		\$	Short	Operational
<p>3.21 Encourage and provide incentives to land developers for incorporating green infrastructure to capture and clean stormwater (i.e., green roofs, bioswales, green walls and planters).</p>		\$\$	Mid	Planning & Design
<p>Marine Ecosystems</p>				
<p>3.22 Implement a Marine Shoreline Development Permit Area (DPA) or zone to mitigate waterfront development impacts and restore degraded foreshore zones.</p>		\$\$\$	Mid	Planning & Design


5.6. Restoring Ecosystems - Enhance biodiversity on public lands








Ecosystems in Saanich have been significantly degraded since pre-European contact with only about 2% of forests in Saanich still containing old growth trees (>250 years old). There are opportunities to enhance biodiversity on a variety of public lands in Saanich. By restoring degraded areas, efforts can be made to heal the land and foster better relationships with indigenous communities.








Opportunities for restoration exist on a variety of public lands including natural area parks, active recreational parks, streets and boulevards. Natural area parks such as PKOLS have opportunities to enhance and expand existing ecosystems. There, however, there are also opportunities to enhance public lands whose primary purpose is to support human uses such as active parks or streets and boulevards.








All lands in the District are within the traditional territories of Indigenous communities








Cooperating with Indigenous peoples to protect their lands is essential for fostering a sustainable and respectful relationship with the District. Recognizing and honouring the traditional knowledge and connection that Indigenous people have with their lands is critical for conserving biodiversity. Conservation efforts must be a collaborative initiative, where indigenous perspectives are integrated into the project objectives.







ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
THEME 4 - Restoring Ecosystems				
Indigenous Values				
<p>4.1 Collaborate with Indigenous communities to incorporate their values and caring for lands and waters into Saanich's biodiversity management.</p>		<p>\$\$\$</p>	<p>Ongoing</p>	<p>Partnerships & Relationships</p>

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
4.1.1	Compile a catalog of culturally significant plants for potential inclusion in restoration areas.		\$	Short	Partnerships & Relationships
4.1.2	Cooperate with the Provincial and Federal governments to monitor the health of and protect marine intertidal shellfish harvesting areas.		\$\$\$	Ongoing	Partnership & Relationships Operational
4.1.3	Allocate funding to support Indigenous role and partnerships with the District.		\$\$\$	Ongoing	Partnerships & Relationships
4.1.4	As per ÁTOL,NEUEL ("Respecting One Another") Memorandum of Understanding, implement the articles related to park management and cultural resource protection.		\$\$	Ongoing	Partnerships & Relationships
4.1.5	Continue to explore additional opportunities to expand Indigenous involvement in biodiversity management.		\$\$\$	Ongoing	Partnerships & Relationships
Natural Park Areas					
4.2	Develop park plans to help manage natural area parks in Saanich. Prioritize larger natural area parks that are within or adjacent to the Biodiversity Habitat Network.		\$\$	Mid	Planning & Design
4.2.1	Incorporate updated disturbance level information to inform restoration areas in parks		\$	Mid	Planning & Design Operational

ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
4.3 Install habitat elements such as nesting areas, wildlife trees and woody debris into young forests.		Ongoing	Ongoing	Operational
4.4 Increase the amount of natural habitat in parks by restoring infrequently used areas dominated by turf grass. Consider future site plans when selecting sites and plants.		\$\$	Ongoing	Operational
4.5 Protect active bird nests in parks. Enforce the Wildlife Act and Migratory Birds Act with signage and conduct nesting surveys prior to vegetation clearing and removal during the breeding season.		Ongoing	Ongoing	Operational
4.6 Prioritize, protect, and restore freshwater habitats such as wetlands, riparian areas, and ponds, in natural parks.		\$\$\$	Ongoing	Operational
4.7 Review and revise the Invasive Species Management Strategy.		\$\$	Short	Policy, Regulatory, &/or Corporate
4.8 Implement deer control measures to minimize their impact to restoration sites and sensitive ecosystems. Review and consider the recommendations within the CRD Deer Management Plan.		\$	Short	Operational
4.9 Explore opportunities to restore the periphery of park areas where they interface with forests. Restoring these edges creates buffer areas and provides a chance to introduce native shrubs and trees.		\$\$	Long	Planning & Design

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
Freshwater Ecosystems and Watercourses					
4.10	Identify and remove barriers to fish migration. Coordinate these efforts with Indigenous, non-profit organizations and stewardship groups.		\$\$\$	Ongoing	Operational Partnerships & Relationships
4.11	Identify opportunities to daylight and restore natural stream reaches that are culverted.		\$\$\$	Ongoing	Planning & Design
Trails and Recreation					
4.12	Reduce the environmental impacts associated with recreational trail use		\$\$\$	Ongoing	Operational
4.12.1	Design wetland and stream bridges with clear span, dog-friendly features, and low boards to prevent watercourse encroachment.		\$	Ongoing	Planning & Design
4.12.2	Install fencing or plant thorny native shrubs along trails and stream crossings within 10 m of all wetlands, streams, and lakes.		\$\$	Short	Operational
4.12.3	Relocate trails that are close to watercourses or install boardwalks with fencing.		\$\$\$	Mid	Operational
4.12.4	Establish access points such as wildlife viewing platforms, lookout points and towers in strategic locations to provide the public with opportunities to enjoy nature while reducing environmental impacts.		\$\$\$	Ongoing	Operational



ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
4.13	Close and rehabilitate unsanctioned trails.		\$\$\$	Ongoing	Operational
4.14	Continue to remove illegal encampments and restore areas impacted by encroachment on District-owned natural areas.		\$\$\$	Ongoing	Operational
Roads and Boulevards					
4.15	Implement actions to improve biodiversity and ecosystems adjacent to roadways, such as re-establishing natural features within road boulevards, parks, and public landscaped areas.		\$\$\$	Ongoing	Planning & Design
4.15.1	Install and maintain pollinator gardens and meadow habitat in low-pedestrian and low-traffic areas.		\$	Short	Operational
4.15.2	Incorporate green infrastructure features like bioswales and rain gardens along roads and parking for stormwater management.		\$\$\$	Mid	Planning & Design
4.16	Consider implementing traffic calming measures where the Biodiversity Habitat Network crosses roads to reduce vehicle-animal collisions.		\$\$\$	Ongoing	Planning & Design
4.16.1	Explore options to create wildlife crossings at high collision areas and/or at new roads adjacent natural areas. This could include using large culverts to allow crossings under roads.		\$\$	Mid	Planning & Design









ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
4.16.2	Explore funding avenues to create wildlife crossings at high collision areas.		\$\$	Mid	Fiscal
Restoration					
4.17	Identify and rehabilitate degraded natural areas on District-owned lands. Prioritize areas that are within or adjacent to the Biodiversity Habitat Network.		\$\$\$	Ongoing	Operational
4.17.1	Create demonstration native plant or nativescape gardens in publicly visible locations on District land to showcase native biodiversity.		\$	Short	Operational
4.18	Continue to protect and restore Garry Oak ecosystems on public lands.		\$\$\$	Ongoing	Operational
4.18.1	Explore opportunities to increase the local nursery stock of Garry Oaks and other native tree, shrub, and herbaceous species. Support organizations such as the Garry Oak Meadow Preservation Society. Consider establishing a District-run and operated nursery.		\$\$\$	Ongoing	Planning & Design Partnerships & Relationships
4.19	Continue to consider climate change impacts and shifting baselines of restoration goals when developing restoration plans.		Ongoing	Ongoing	Operational








5.7. Enhanced Public Stewardship - Encourage biodiversity initiatives on private lands outside of the development process

The majority of the land in Saanich is privately owned. Outside of land development regulations, enhancing these areas to support biodiversity requires voluntary stewardship efforts by property owners. Residential lands are often characterized by lawns which support low levels of biodiversity, demand substantial amounts of time, water, energy, and fertilizer, and are expensive to upkeep. Naturescaping, using gardening practices that prioritize the use of native plants and trees, helps to improve the habitat for native species, especially insects and birds.

Gardens that include a mix of native trees, shrubs, ferns, and herbs provide the most diverse habitat for species that are tolerant of urban areas. Smaller habitat elements that can be introduced include water sources, nesting sites for birds and bats, and pollinator-friendly plants. The successful establishment and maintenance of these wildlife-friendly features depends on the commitment and stewardship of property owners. Their commitment to preserving native flora, replenishing bird baths, and providing secure nesting opportunities can significantly improve the health of urban wildlife. The Resilient Saanich Technical Committee has identified additional opportunities for the District to help support these initiatives in a memo titled “Enhanced Stewardship in Saanich”³⁶.






ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
THEME 5 - Enhanced Public Stewardship					
Private Lands					
5.1	Develop incentives for installing green infrastructure on residential properties		\$\$\$	Ongoing	Fiscal
5.2	Promote the Naturescaping program and guidelines for residential properties. Develop hands on learning opportunities through Recreation Centres and other partner organizations.		\$	Ongoing	Education & Outreach










ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
5.2.1 Encourage the replacement of turf grass with low-maintenance herbs and pollinator-friendly vegetation through education and incentives.		\$\$	Ongoing	Education & Outreach
5.2.2 Partner with Environmental Non-Government Organizations to promote naturescaping on private lands.		\$\$	Ongoing	Partnerships & Relationships
5.3 Complete a review of existing environmental and natural state covenants and their condition. Educate landowners about their obligations.		\$\$	Short	Planning & Design
5.3.1 Develop a program to support landowners that have natural state covenants on their property.		\$\$	Ongoing	Programmatic
5.3.2 Develop guidelines for the use of covenants to safeguard ecologically valuable areas.		\$	Short	Policy, Regulatory, &/or Corporate
5.4 Explore incentives for larger landowners such as eco-gifting and develop a 'Leave a legacy' package for property owners to consider in estate planning.		Ongoing	Ongoing	Programmatic
5.5 Develop a program to support and promote the planting of Garry Oaks and other native tree species on private property.		Ongoing	Ongoing	Education & Outreach
5.6 Promote the use of products that help prevent bird collisions with windows.		Ongoing	Ongoing	Planning & Design

ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
5.7 Encourage artificial light reduction techniques to direct light away from natural areas.		Ongoing	Ongoing	Planning & Design
5.8 Amend the Pesticide Bylaw to include rodenticide and ban the use of pesticides on private property	 	\$\$	Mid	Policy, Regulatory, &/or Corporate
5.9 Implement and regularly update a Saanich Biodiversity Monitoring Report. This report will summarize the natural features in Saanich and highlight recent changes. It would specify environmental targets and indicators used to track progress.		\$\$	Ongoing	Operational
5.10 Promote the use of community-based tools such as i-Naturalist to share information about biodiversity		\$	Ongoing	Education & Outreach
5.11 Promote and expand programs to encourage biodiversity stewardship on private lands. This includes education from non-profit organizations such as the Swan Lake Christmas Hill Nature Sanctuary.	 	\$\$	Ongoing	Programmatic Partnerships & Relationships

5.8. Community Engagement - Improve public understanding of biodiversity and participation in biodiversity conservation and restoration





Investing in the education and engagement of residents will help to instill a lifelong appreciation for the natural areas of Saanich. Saanich-specific educational resources can be developed that recommend ways to reduce the impacts of urban development on wildlife, such as adopting bird-friendly windows and lighting, naturalizing private yards, and minimizing pesticide and herbicide usage. They can also be used to inform residents of the impacts they can have on public lands, such as spreading invasive species or the trampling of understory species.





ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
THEME 6 - Community Engagement					
6.1	Continue to expand and implement the Natural Intelligence Program.		\$\$	Ongoing	Education & Outreach
6.2	Continue to promote and support environmental stewardship events such as Earth Day, Stream Cleanup Day, and Beach Cleanup Day.		Ongoing	Ongoing	Education & Outreach
6.3	Develop a plan to expand the Pulling Together Program		Ongoing	Ongoing	Education & Outreach
6.4	Expand the Park Ambassadors Program to other parks		\$\$	Ongoing	Programmatic
6.5	Create educational signage to raise public awareness about endangered species in parks.		\$\$	Ongoing	Programmatic

ACTION DESCRIPTION		Biodiversity Attribute	Cost	Timeline	Area of Impact
6.6	Partner with institutions and non-governmental organizations to further study biodiversity in Saanich, and to carry out restoration projects.		\$	Mid	Education & Outreach
6.7	Collaborate with non-profits to run biodiversity programs in Saanich.		Ongoing	Ongoing	Partnerships & Relationships
6.8	Expand school programs to educate youth regarding biodiversity and the importance of natural areas.		Ongoing	Ongoing	Partnerships & Relationships
6.8.1	Partner with students to support park restoration projects. Bird and bat box construction could be promoted as part of high school woodworking programs. Post-secondary students could use restoration projects for their thesis projects or graduate studies.		Ongoing	Ongoing	Partnerships & Relationships
6.9	Distribute education materials on the presence and treatment options for invasive plants and animals.		\$	Ongoing	Education & Outreach
6.10	Organize and host an annual bioblitz event to inventory the range of species present in Saanich and support monitoring the state of biodiversity on a yearly basis.	 	\$	Ongoing	Education & Outreach
6.11	Implement the People, Pets & Parks strategy to reduce conflicts between pets and natural areas.	 	\$\$\$	Ongoing	Programmatic Policy, Regulatory, &/or Corporate

5.9. Sustainable Agriculture - Enhance biodiversity on agricultural lands

Agricultural lands include both lands that are zoned for agricultural use and lands designated as Agricultural Land Reserve. These areas play a unique role in supporting biodiversity. Biodiversity levels on these lands tend to be low due to their farming use and regular disturbance for crop harvesting. The crop cover type, tillage practices, and the presence of hedgerows, shelterbelts, native riparian areas, and agricultural ponds affect what species can use the land. While there are restrictions on what can be done on agricultural lands, there are various initiatives and programs that can be implemented to encourage the use of vegetated buffers, improvement of watercourses, naturalization of unused areas, and the adoption of sustainable farming practices.

ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
THEME 7 - Sustainable Agriculture				
7.1 Engage in and endorse provincial initiatives for riparian area naturalization on agricultural lands, such as the Environmental Farm Management Plan process.		Ongoing	Ongoing	Partnerships & Relationships
7.2 Support raptor enhancement programs on agricultural lands.		Ongoing	Ongoing	Partnerships & Relationships
7.3 Support the installation of owl and bat boxes in agricultural areas.		Ongoing	Ongoing	Partnerships & Relationships
7.4 Develop an agriculture biodiversity program in partnership with the Province and local environmental non-governmental organizations to enhance biodiversity on farmlands (e.g. hedgerows, agroforestry, no-till practices). Use Biodiversity Management Plan work from Environmental Farm Management Plan (BC Gov't).		\$\$	Ongoing	Partnerships & Relationships

ACTION DESCRIPTION	Biodiversity Attribute	Cost	Timeline	Area of Impact
7.5 Explore incentivizing the use of overwintering crops through partnership, a tax refund, or grant initiative.		\$\$	Ongoing	Fiscal
7.6 Advocate for and encourage environmentally friendly farm practices including participation in the provincial Environmental Farm Plan Program.	 	Ongoing	Ongoing	Education & Outreach
7.7 Discourage the use of herbicides, pesticides, and rodenticides		Ongoing	Ongoing	Partnerships & Relationships

6. STRATEGY IMPLEMENTATION

The District has set an ambitious vision for this Strategy that sees Saanich as “a resilient community that values, protects, connects, and restores sensitive ecosystems, natural habitats, and biodiversity.” This strategy provides a framework to achieve this vision; however, the District acknowledges that it has limited resources and recognizes that it is not possible to pursue all the actions outlined in this strategy concurrently.

Through a combination of RSTC consultation, professional judgment, and best management practices, a top priority action list was developed. The following are considered to be the highest priority actions which are expected to have the greatest immediate impact to protect and enhance biodiversity in the District. A list of RSTC chosen priority actions is provided in Appendix 4.



Top Priority Actions

Regularly update ecosystem data (i.e., terrestrial, aquatic, marine, invasive species, and species at risk) as new information becomes available and make available on public GIS portal. Continue to refine the precision of terrestrial ecosystem polygon boundaries through ground-truthing and high-resolution ortho imagery.

Acquire and protect priority lands within the Biodiversity Habitat Network.

Identify and prioritize areas within the Biodiversity Habitat Network for restoration and enhancement.

Implement a development permit area (DPA) or zone for the marine environment to mitigate waterfront development impacts and restore degraded foreshore zones.

Implement a development permit area (DPA) or zone for the protection of the natural environment.

Develop park plans to help manage natural area parks in Saanich.

Review and update the Invasive Species Management Strategy.

Collaborate with Indigenous communities to incorporate their values and caring for lands and waters into Saanich's biodiversity management.

Continue to protect and restore Garry Oak ecosystems on public lands.

Prioritize, protect, and restore freshwater habitats in natural parks such as wetlands, riparian areas and ponds.

Develop an incentive program to support protection of natural features through development inside the UCB.

Promote and expand programs to encourage biodiversity stewardship and education on private and public lands.

Identify and remove barriers to fish migration. Coordinate these efforts with Indigenous, non-profit organizations and stewardship groups.

Complete a review of existing environmental and natural state covenants and their condition. Educate private landowners regarding their obligations with respect to natural state covenants.

To implement the full list of action for each theme, as well as the top priority actions above, additional staffing resources and funding will be required. The following table provides additional actions that will support the Strategy implementation.

IMPLEMENTATION ACTIONS		Cost	Timeline	Area of Impact
8.1	Provide sufficient staffing resources to implement the recommendations within this Strategy.	\$\$\$	Short	Fiscal
8.1.1	Continue to support a staff position for a professional with expertise in biology and ecosystem restoration to focus on implementing this Strategy.	Ongoing	Mid	Fiscal
8.1.2	Create a staff position for a professional with expertise in biology to ground-truth ecosystem polygons and collect field data as needed.	\$\$\$ Ongoing	Short	Fiscal
8.1.3	Create a staff position for a professional with expertise in arboriculture to focus on the protection of trees and working around trees for municipal projects.	\$\$\$ Ongoing	Mid	Fiscal
8.1.4	Create a staff position to implement stewardship and public outreach initiatives outlined in this Strategy.	\$\$\$ Ongoing	Mid	Fiscal
8.1.5	Create a staff position for a geospatial analyst to focus on integrating new information and mapping updates to the GIS portal, SaanichMap.	\$\$\$ Ongoing	Mid	Fiscal
8.2	Commit funding to adopt high-priority recommendations within a 5-year span.	\$\$\$	Mid	Fiscal
8.3	Explore methods to fund this strategy such as adopting a Community Fund for natural area protection and restoration, expanding development cost charges to include habitat network acquisition, and/or an annual levy to go into a fund.	\$	Mid	Fiscal
8.4	Provide sufficient funding for key or priority land acquisitions purchases.	\$\$\$ Ongoing	Short	Fiscal

Through internal discussions, the District has also established a priority list for internal implementation. This list was developed after staff review and contains top staff implementation actions for each of the seven themes (Appendix 3).

7. ASSESSING AND MONITORING PROGRESS

As the District continues to grow and the climate changes, natural areas and the species that inhabit them will face ongoing threats. The response of these ecosystems to urban development, climate fluctuations, pests, diseases, and invasive species remains uncertain. Some of the recommended actions will require substantial resources and will take place over longer timelines as resources become available. By monitoring the state of the natural environment and the diversity of wildlife, the District can assess the effectiveness of conservation and restoration actions.

The residents of Saanich play an important role in helping to monitor the state of biodiversity. The District can host events and use community based tools to help supplement District led monitoring projects. Events such as annual BioBlitzs can be a useful resource to catalogue and document local native species.

A set of environmental objectives has been developed that can be monitored using indicators or performance measures. These have achievable metrics to measure the health and resilience of natural ecosystems. Performance measures are provided for each objective that will be used to track progress. Objectives define the overarching goals, while indicators provide the data needed to measure progress toward those goals. This approach facilitates informed decision-making and an adaptive response as the Strategy is implemented. It will help to track the health of the environment and inform future policy and planning decisions. The following are recommended environmental objectives and performance measures to be considered as part of the District's monitoring plan. They have been organized by the Strategy's themes. The listed performance measures are not intended to be in any particular order.



Table 11. Objectives, Performance Measures, and associated theme.

	Performance Objective	Performance Measure
Theme 1	Increase the accuracy and details of online mapping and make it available through SaanichMap.	Freshwater ecosystem quality measured by hydrology, water quality, benthic macroinvertebrates and fish populations
	Improve the quality of freshwater streams in the urban containment boundary.	Monitor continued persistence of SAR listed species in Saanich using targeted surveys and citizen science monitoring such as iNaturalist and Bioblitz surveys.
	Assess the accuracy of Species at Risk conservation mapping in Saanich	Percent increase in detail and resolution of spatial data and maps when compared with previous versions.
Theme 2	Increase the area within the District that is designated as protected for nature.	The percent of the Habitat Network inside the urban containment boundary that is protected using a variety of tools.
	Enhance the Biodiversity Habitat Network within the urban containment boundary.	The total area designated as protected.
Theme 3	Minimize the cover of new impervious surfaces and encourage green and blue infrastructure.	Tree canopy cover measured for the entire District, for each land use zone and for all area within the urban containment boundary
	Increase the tree canopy cover across the District by 2044. Refer to Urban Forest Strategy for specific details.	The area of pervious surfaces using LiDAR and orthophoto analysis
Theme 4	Reduce the area of invasive plant infestations within protected parks.	The extent of mapped invasive plants within natural parks.
	Restore ecosystems that have been degraded in District-owned parks.	Area of restoration projects that have been successful
	Improve ecological health in natural area parks.	Monitor for the presence of keystone wildlife species in District owned parks.

	Performance Objective	Performance Measure
Theme 5	Increased public participation in biodiversity conservation and enhancement on private land.	Number of public participants in stewardship programs on private land
	Maintain native bird and pollinator presence.	Community science: bird and pollinator counts
Theme 6	Assess condition of Natural State Covenant areas in Saanich.	Number of NSC areas in fair-good-excellent condition.
	Increase public awareness and understanding of local natural features and functions.	Evaluate the success of educational programs through surveys, community feedback, and participation rates.
Theme 7	Increase the cover of trees and shrub communities on farmlands.	Cover area of tree and shrubs on ALR lands and lands zoned for agriculture
	Naturalize streams and wetlands on farmlands.	The length of streams and area of wetlands with natural riparian buffers

This Biodiversity Conservation Strategy, along with other District plans and strategies, helps contribute to developing a Resilient Saanich. By endorsing the Strategy and pursuing the recommended actions, the District will take steps to protect, conserve, and enhance biodiversity in the District, ensuring that it is present and resilient for generations to come.



ACRONYMS

BCCDC – British Columbia Conservation Data Centre

BHN – Biodiversity Habitat Network

CDF – Coastal Douglas-Fir zone

CRD – Capital Regional District

DHC – Diamond Head Consulting

DPA – Development Permit Area

ESA – Environmentally Significant Areas

GIS – Geographic Information System

LiDAR – Light Detection and Ranging

OCP – Official Community Plan

QEP – Qualified Environmental Professional

RSTC – Resilient Saanich Technical Committee

SAR – Species at Risk

SARA – Species at Risk Act

SEI – Sensitive Ecosystem Inventory

TEM – Terrestrial Ecosystem Mapping

UCB – Urban Containment Boundary

UFS – Urban Forest Strategy

GLOSSARY

Backyard Biodiversity

The biodiversity and features which support biodiversity within developed or urban environments. These features generally benefit species which are tolerant of urban conditions.

Biodiversity

Biodiversity is a term used to describe the variety and variability of life on Earth. Biodiversity encompasses all living species and their relationships to each other. This includes the differences in genes, species, and ecosystems.

Ecosystem Services

The benefits to humans provided by the natural environment and healthy ecosystems. Carbon sequestration, recreation, shade, water filtration, and pollination are all examples of ecosystem services associated with biodiversity.

Endangered

Facing imminent extirpation or extinction.

Environmentally Significant Area

An area identified as having features of ecological or environmental significance which are vulnerable to disturbance or degradation by human activities or developments.

Invasive Species

A species that is not native or is outside of its natural range and is negatively impacting the environment.

LiDAR

Acronym for 'light detection and ranging'. An active remote sensing technology that can measure vegetation height and elevation using laser scanning.

Native Species

A species which is present without direct or indirect human intervention and can be present within its natural dispersal abilities.

Natural Area

Any physical area that contains native species, ecological communities, or habitat features to support native biodiversity.

Protected Areas

Lands which have legal protections or with limitations on use, specifically to safeguard the natural environment such as natural state covenants, conservation areas and parkland. For this assessment, all parkland was considered protected area, regardless of park use.

Primary Growth Areas

Refers to the areas of the District where most of its new housing and employment growth will be accommodated in vibrant walkable Centres and Villages linked by Corridors, frequent transit service, and All Ages and Abilities cycling infrastructure. These areas include a range of services, amenities, active transportation connections, and higher density housing and employment opportunities. More details on Primary Growth Areas can be found in the OCP 2024 draft.

<i>Resilient Saanich</i>	Saanich’s process to develop an environmental policy framework to address current policy gaps in natural environmental objectives by developing plans, policies, bylaws, and strategies to support the vision of an environmentally conscious future.
<i>Resilient Saanich Technical Committee</i>	A Council appointed committee of scientists and local environmental industry professionals advising District staff, council, and consultants.
<i>Sensitive Ecosystem Inventory (SEI)</i>	A standardized mapping approach and an associated dataset specifically designed for mapping sensitive ecosystems.
<i>Species and Ecosystems at Risk</i>	Species or ecosystems that have been identified as extirpated, endangered, threatened, or of special concern under the Federal Species at Risk (SARA) legislation or assessed as “Red” or “Blue” by the British Columbia Conservation Data Center (BCCDC).
<i>Terrestrial Ecosystem Mapping (TEM)</i>	A standardized mapping approach and an associated dataset providing site-specific classifications and descriptions of ecosystem units in BC.
<i>Threatened</i>	Likely to become endangered if limiting factors are not reversed.

APPENDIX 1: SAANICH'S ENVIRONMENTAL POLICIES

7.1. Boulevard Regulation Bylaw No. 9487 (2008)

The Boulevard Regulation Bylaw outlines the landowners or land occupiers' responsibility to maintain the boulevard abutting the parcel. Maintenance requirements include, but are not limited to, keeping grasses or weeds mowed or trimmed, and keeping the boulevard free of brush, noxious weeds or invasive plants, litter, and loose materials such as leaves and debris. This bylaw also regulates the activities allowed in a boulevard and requires a permit for installing landscaping and plants, placing any surfacing such as rocks, gravel, pavers, and installing any temporary or permanent structures.

7.2. Climate Plan: 100% Renewable & Resilient Saanich (2020)

The District of Saanich developed a Climate Plan in 2020 which outlines a roadmap for reducing emissions and increasing climate change resilience in Saanich. The plan addresses greenhouse gas targets and strategies for both climate change mitigation and adaptation. There are three primary goals for the climate plan:

1. Cut emissions in half by 2030 and to net zero by 2050;
2. Transition to 100% renewable energy by 2050; and
3. Prepare for a changing climate.

The plan identifies over 130 actions to meet these climate goals. The actions are focused on the first 10 years of the plan's implementation and, if necessary, will be reviewed and adjusted periodically to ensure that the most impactful actions are pursued.

7.3. Environmental Policy Framework (Draft)

The development of the Environmental Policy Framework (EPF) and Guiding Principles further supports Saanich's commitment to the environment by providing principles and goals to support the development of a Resilient Saanich. The EPF will be an overarching policy framework for existing and new environmental policies and programs. The EPF will be consistent with the District's OCP and ensure that new and revised environmental policies align with environmental protection and enhancement goals and objectives.

7.4. Floodplain Development Permit Area (2008)

The Floodplain DPA recognizes that many areas in the District are subject to seasonal and periodic flooding and also contain environmentally sensitive landscapes that should be protected from development. This DP provides guidelines for building locations and the extent of impervious cover and protects biological diversity within these areas. Stormwater planning in these areas must replicate existing conditions in order to maintain natural hydrological runoff regimes. Major or significantly wooded areas and native vegetation are retained wherever possible.

7.5. Integrated Pest Management Policy (2010)

The Integrated Pest Management (IPM) Policy emphasizes the prevention and management of pests through non-chemical methods whenever possible. It promotes the use of alternative pest control strategies such as biological controls, cultural practices, physical barriers, and mechanical methods. When chemical pesticides are necessary, the policy encourages the use of low-toxicity and least-hazardous options while minimizing their overall usage. The IPM policy emphasizes education, outreach, and collaboration with the community to raise awareness about the importance of responsible pest management practices.

7.6. Invasive Species Management Strategy (2013)

Saanich's Invasive Species Management Strategy aims to optimize municipal resources while minimizing the impacts of invasive species on Saanich's ecosystems. The strategy addresses management on both public and private land while identifying roles and responsibilities for invasive species management. The strategy emphasizes the District's role in managing invasive species but also highlights the importance of community stewardship and other partnerships. Specific measures and approaches are identified for species that are established in the area, emerging species, and early detection rapid response (EDRR) species. The Appendix contains groupings of species which the District aims to prevent, eradicate, contain, or control. Several species are also listed as unknown, meaning they are priority species, but their presence/extent is not known. The list was last updated on May 30, 2012.

7.7. Noxious Weed Bylaw No. 8080 (2000)

The Noxious Weed Bylaw is a regulatory framework aimed at controlling and managing the spread of invasive and harmful plant species within the municipality. The bylaw outlines specific guidelines and requirements for property owners and residents to identify, report, and control the presence of designated noxious weeds on their properties. It establishes a list of prohibited noxious weeds and defines the responsibilities of property owners in preventing their growth and spread. The bylaw also sets forth enforcement measures and penalties for non-compliance.

7.8. Park Management and Control Bylaw No. 7753 (1997)

The Park Management and Control Bylaw governs the management, use, and control of parks within the municipality. The bylaw establishes rules and regulations to ensure the proper maintenance, preservation, and enjoyment of public parks. It defines the responsibilities of park users, including restrictions on activities such as littering, damaging park property, and unauthorized removal of plants, soil or wildlife. The bylaw outlines regulations related to park permits, including rules for special events or commercial activities taking place in parks. It establishes penalties for non-compliance and provides a framework for enforcement to maintain the integrity and safety of Saanich's parks for the community's benefit.

7.9. People, Pets, and Parks Strategy (2023)

The People, Pets, and Parks Strategy was developed in response to growing concerns over the impacts a growing population is having on the environment and parks. The People, Pets, and Parks Strategy provides recommendations and a framework to guide sustainable park use for both increased visitors and pets in Saanich's parks. Key recommendations from the strategy include updates to the Animal Bylaw and the Park Management Bylaw to require all pets to be on-leash and under control unless in a designated leash-optional area. The strategy also identifies recommended locations for leash-optional opportunities in each neighbourhood and highlights the importance of communication, education, signage and enforcement.

7.10. Pesticide Bylaw No. 9054 (2010)

The Pesticide Bylaw is a regulatory framework governing the use and application of pesticides within the municipality. It prohibits the use of certain pesticides, including cosmetic pesticides, on residential properties. This bylaw includes a permitting process for cases where a non-exempt pesticide needs to be used to control invasive species or noxious weeds, or when the management of a pest infestation using an exempted pesticide is cost-prohibitive and excessive.

7.11. Saanich Official Community Plan Bylaw No. 8940 (2024)

The Saanich Official Community Plan emphasizes preserving and enhancing natural areas, promoting sustainable land use and development patterns to protect green spaces, biodiversity, and sensitive ecosystems. The plan incorporates strategies for managing urban growth, minimizing environmental impacts, and fostering active transportation options to reduce carbon emissions. The Natural Environment of the OCP highlights Saanich's commitment to protecting and enhancing natural areas and biodiversity while the District grows. The OCP recognizes the importance of healthy ecosystems for the well-being of the community and economy.

The OCP's Vision for Environmental Integrity is that Saanich be:

“a model steward working diligently to improve and balance the natural and built environments. Saanich restores and protects air, land, and water quality, the biodiversity of existing natural areas and ecosystems, the network of natural areas and open spaces, and urban forests. The challenges posed by climate change are responded to. Primary Growth Areas accommodate the majority of future growth in sustainable and resilient communities where housing and amenities are integrated with sustainable transportation systems and green infrastructure.”

Policies are specified for environmentally sensitive areas, urban forests, air quality, aquatic habitat and water quality, and environmental stewardship. These policies require the protection and restoration of habitats, emphasizing rare and endangered species and ecosystems. These environmentally sensitive areas are to be linked to maintain biodiversity.

The OCP recognizes the Regional Growth Strategy and its framework of ten objectives, including “Objective 3 – Protect, conserve and manage ecosystem health”. This is supported by the Urban Containment Boundary (UCB), a tool used by the District to protect rural properties, agricultural land and natural areas while condensing urban development within the designated areas. As the District increases its development to provide more housing, it will protect its biodiversity and ecosystems by focusing development in the Primary Growth Areas that are located within the UCB.

The OCP is being updated concurrently with the development of this Strategy. It is recommended that the OCP and this Strategy are reviewed together to ensure recommendations for ecosystem and biodiversity protection in this Strategy are embedded in the OCP.

7.12. Streamside Development Permit Area (2008) - Currently Under Review

The District has established Development Permit Areas for the protection of streams. The DP approval process protects streams and their riparian areas from impacts related to development. The Streamside DPA (SDPA) applies to all streams identified in an atlas of maps within the OCP (2008). These maps are used to identify and classify watercourses and specify required riparian setbacks. In addition to watercourses, seasonally flooded agricultural fields and wetlands have predetermined setbacks. Setbacks are determined by either the specifications included in the stream atlas or by following the standards of the provincial Riparian Areas Protection Regulation.

7.13. Tree Protection Bylaw No. 9272 (2014)

The Tree Protection Bylaw protects trees within the municipality. The bylaw establishes regulations and guidelines for the protection, preservation, and removal of trees in Saanich. It defines tree-related terms, outlines the permitting process for tree removal, and specifies tree replacement requirements and penalties for unauthorized tree cutting or damage. This bylaw aims to protect significant trees, preserve tree canopies, enhance biodiversity, and contribute to the overall environmental health and aesthetics of Saanich's landscape.

Protection requirements vary depending on tree size (determined by the diameter at breast height [DBH]), location and species. Any tree identified as a Significant Tree (Part 5, Schedule B), all trees on municipal property or trees that are located within the SDPA are protected.

This bylaw also protects all trees have “evidence of a nest used by raptors as defined in the Wildlife Act, R.S.B.C. 1996, c. 488, ospreys, or herons for nesting”.

7.14. Urban Forest Strategy (2010) - Undergoing Update

The District's Urban Forest Strategy (UFS) was adopted in 2010. The purpose of the UFS is to provide a long-term plan for achieving a sustainable urban forest in Saanich. The strategy guides the District's urban forest management over time and provides strategies and actions protection and enhancement. Specifically, the UFS identified a District-wide canopy cover of 36% and a policy of no net loss of trees. Seven strategies are outlined to achieve this goal and include tree planting, protection, inventory, public outreach, and investing in the District's urban forest program. The Urban Forest Strategy is undergoing an update which will identify the current state of Saanich's urban forest since the 2010 implementation of the Urban Forest Strategy and provide recommendations for improving the urban forest management program.

7.15. Watercourse and Drainage Regulation Bylaw No. 7501 (1996)

The Watercourse and Drainage Regulation Bylaw was established to prevent the obstruction, impediment, or enclosure of streams, ditches, and sewers. This bylaw intends to protect the District's stormwater management system and ensure there is adequate capacity to support the connection of new drainage systems.

7.16. Zoning Bylaw No. 8200 (2003)

Saanich's Zoning Bylaw governs land use and development within the District. The zoning bylaw establishes various zoning districts and outlines the permitted uses, building heights, setbacks, and other requirements. It addresses a wide range of considerations, including residential, commercial, and industrial activities, as well as parking, landscaping, and signage. The bylaw incorporates provisions for environmental protection, heritage preservation, and community design, aiming to promote sustainable development and maintain the character of Saanich's neighbourhoods. For environmental protection, the zoning bylaw regulates development adjacent to the ocean, including a minimum setback of 7.5 m from the natural boundary of the ocean. It also specifies a minimum setback of 7.5 m from all watercourses.

APPENDIX 2: BIODIVERSITY HABITAT NETWORK COMPONENTS

The Habitat Network consists of four components:

- Core Habitat Hubs
- Habitat Sites
- Regional Habitat Linkages
- Local Habitat Linkages

The characteristics of the four Habitat Network components and the two supplemental land types are described below.

Core Habitat Hubs

These are large areas (approximately >10 ha) that provide protected interior habitat and are somewhat isolated from the influence of urban development and activity. These refuge areas benefit wildlife less tolerant of urbanization. They are typically greater than 100 m away from urbanization. Core Habitat Hubs include some rural areas where residences are intermixed with forested landscapes. These areas are the most likely to maintain their native biodiversity because of their size and lower levels of disturbance. The larger natural area parks in the District, such as PKOLS (Mount Douglas Park) and Elk/Beaver Lake Regional Park are classified as Core Habitat Hubs.

Habitat Sites

These areas are smaller in size (approximately <10 ha) and generally do not provide protected refuge areas for wildlife which are intolerant of urban conditions. They do, however, act as important stepping-stones across an urban landscape. They can provide habitat features that are unique or important such as a wetland or Garry Oak plant community. These areas may or may not be connected by linkages. If they are isolated as islands, they may be used by species that can travel by flight and terrestrial species that are more tolerant of disturbed habitats.

Regional Habitat Linkages

These include linear natural habitat areas that provide a connection between major habitat hubs. Effective linkages must be wide and continuous enough to support the movement of species that are intolerant of urban influences. Species' behaviour, speed of travel and their ability to remain undetected by predators must be considered. In general, these linkages should aim to be greater than 30 m wide. The recommended width for effective

wildlife linkages is 50 to 100 m. As these regional linkages extend through the urbanized landscape, they are often not continuous and may be fragmented by barriers such as roads and development. Regional habitat linkages often follow streams and include riparian setbacks that are protected by Provincial regulations. Legal rights-of-way and linear infrastructure also provide opportunities to protect habitat linkages, though these often exist in a disturbed state.

Local Habitat Linkages

In urbanized landscapes, it is often not possible to protect wide and continuous natural linkages. However, narrow and fragmented linear natural linkages still support the movement of certain species. These minor linkages provide natural cover for smaller, mobile animals tolerant of urban activity as well as flying species such as birds and insects. They are typically 10 to 30 m wide and are often fragmented by urban barriers.

The four BHN components are meant to identify and prioritize the most important habitat areas for wildlife. The District also recognizing that wildlife make use of the mosaic of altered habitat features found within the urban landscape. These include there are some habitat values associated with urban natural features (e.g. private gardens and passive parks) as well as agricultural lands.

Agricultural Land

Agricultural land plays a unique role across the landscape. These areas tend to be dominated by monocultures of plants that are regularly harvested. However, these areas may facilitate the travel of species between adjacent natural habitat areas through features such as hedgerows and irrigation ponds and ditches. They can also provide food sources for certain species, although the pesticides and herbicides used in conventional agriculture can pose toxicity risks to many species. Agricultural land can also benefit from increased use by wildlife through increased pollination of crops and natural pest control through predation.

The Urban Matrix

The urban matrix includes the natural areas within an urbanized landscape and occurs mainly inside the Urban Containment Boundary. These include small patches of native habitat, single or small groups of trees, shrubs and shrub thickets, drainage ditches, gardens and ornamental ponds and water features. Collectively these features provide habitat for species that are tolerant of human disturbances including birds, flying insects, amphibians and reptiles, and small mammals including bats.

Some species require undisturbed natural habitats and movement routes detached from human presence, while others can adapt to urban areas. These adaptable species can make use of modified environments like planned landscapes, gardens, urban trees, stormwater structures, and rooftop plantings. These features improve habitat quality and complexity in urban areas that are otherwise void of habitat.

APPENDIX 3: STAFF IMPLEMENTATION TABLES

Responsibility	Symbol
Primary - Implementation	PI
Primary - Maintenance	PM
Secondary	S
Partner	P

THEME 1

	Actions	Responsibility
1.1	Provide public access to the most recent terrestrial ecosystem mapping via the GIS portal, SaanichMap.	PI:Parks Support from GIS
1.2	Establish a program to regularly update terrestrial ecosystem data.	Parks
1.7	Update and map the known locations of species and ecological communities at risk and provide this information to the BC Conservation Data Centre.	Parks Support from IT
1.10	Develop a spatial inventory of invasive plant species growing on public lands.	Parks
1.12	Establish a priority list of species and locations to be mapped.	GIS
	1.12.1 Establish a priority list of species and locations to be mapped.	Support from Parks

THEME 2:

	Actions	Responsibility
	Protect and/or enhance land in the Biodiversity Habitat Network using a variety of tools.	
2.1	2.1.1 Protect land in the Biodiversity Habitat Network through working with private landowners using a variety of existing tools such as covenants, etc.	PI: Parks S: Finance and Planning
2.2	Protect land in the Biodiversity Habitat Network through land acquisition.	PI: Parks S: Finance
2.2	Create different tools for inside and outside the UCB to protect and enhance biodiversity in the Biodiversity Habitat Network.	PI: Parks S: Planning
2.6	Assess unused rights-of-way within the Urban Containment Boundary for restoration potential.	PI: Engineering PM: Parks S: Parks

THEME 3:

	Actions	Responsibility
3.7	Adopt and implement the updated Urban Forest Strategy (2024).	PI: Parks S: Engineering/Planning
3.11	Implement a development permit area or zone for the protection of the natural environment.	PI: Parks PM: Parks S: Planning
3.19	Adopt pervious surface site coverage targets.	PI: Parks S: Planning
3.21	Encourage and provide incentives to land developers for incorporating green infrastructure to capture and clean stormwater (i.e., green roofs, bioswales, green walls and planters).	PI: Planning PM: Engineering S: Finance, Parks
3.22	Implement a Marine Shoreline Development Permit Area (DPA) or zone to mitigate waterfront development impacts and restore degraded foreshore zones.	PI: Parks PM: Parks S: Planning

THEME 4:

	Actions	Responsibility
4.1	Collaborate with Indigenous communities to incorporate their values and caring for lands and waters into Saanich’s biodiversity management. 4.1.3 Allocate funding to support Indigenous role and partnerships with the District.	PI: Parks, Community Services PM: Community Services, Parks S: Indigenous communities
4.2	Develop park plans to help manage natural area parks in Saanich. Prioritize larger natural area parks that are within or adjacent to the Biodiversity Habitat Network.	PI: Parks PM: Parks
4.4	Increase the amount of natural habitat in parks by restoring infrequently used areas dominated by turf grass. Consider future site plans when selecting sites and plants.	PI: Parks PM: Parks
4.6	Prioritize, protect, and restore freshwater habitats, such as wetlands, riparian areas, and ponds, in natural parks.	PI: Parks, Engineering PM: Parks, Engineering
4.7	Review and revise the Invasive Species Management Strategy.	PI: Parks PM: Park, Engineering
4.14.1	Install and maintain pollinator gardens and meadow habitat in low-pedestrian and low-traffic areas.	PI: Parks PM: Parks
4.14.2	Incorporate green infrastructure features like bioswales and rain gardens along roads and parking for stormwater management.	PI: Engineering PM: Parks
4.16	Identify and rehabilitate degraded natural areas on District-owned lands. Prioritize areas that are within or adjacent to the Biodiversity Habitat Network.	PI: Parks PM: Parks S: Engineering
4.17	Continue to protect and restore Garry Oak ecosystems on public lands. 4.17.1 Explore opportunities to increase the local nursery stock of Garry Oaks and other native tree, shrub, and herbaceous species. Support organizations such as the Garry Oak Meadow Preservation Society. Consider establishing a District-run and operated nursery.	PI: Parks PM: Parks

THEME 5:

	Actions	Responsibility
5.2	Promote the Naturescaping program and guidelines for residential properties. Develop hands on learning opportunities through Recreation Centres and other partner organizations. 2.1.1 Partner with Environmental Non-Government Organizations to promote naturescaping on private lands.	Parks Recreation
5.3	Complete a review of existing environmental and natural state covenants and their condition. Notify landowners of their obligations. 5.3.1 Develop a program to support landowners that have natural state covenants on their property	Parks Legal Services
5.5	Develop a program to support and promote the planting of Garry Oaks and other native tree species on private property.	Parks

THEME 6:

	Actions	Responsibility
6.2	Continue to promote and support environmental stewardship events such as Earth Day, Stream Cleanup Day, and Beach Cleanup Day.	Parks Community Services
6.3	Develop a plan to expand the Pulling Together Program	Parks
6.5	Promote and expand programs to encourage biodiversity stewardship on private lands. This includes education from non-profit organizations such as the Swan Lake Christmas Hill Nature Sanctuary.	Parks
6.6	Create educational signage to raise public awareness about endangered species in parks.	Parks
6.7	Partner with institutions and non-governmental organizations to further study biodiversity in Saanich, and to carry out restoration projects.	PI: Parks, Community Services PM: Parks, Community Services

THEME 6 CONTINUED:

	Actions	Responsibility
6.9	Expand school programs to educate youth regarding biodiversity and the importance of natural areas.	Parks

THEME 7:

	Actions	Responsibility
7.4	Develop an agriculture biodiversity program in partnership with the Province and local environmental non-governmental organizations to enhance biodiversity on farmlands (e.g. hedgerows, agroforestry, no-till practices). Use Biodiversity Management Plan work from Environmental Farm Management Plan (BC Gov't)	Province S: Parks

APPENDIX 4: PRIORITY ACTIONS

RSTC Priority Actions

Regularly update ecosystem data (i.e., terrestrial, aquatic, marine, invasive species, and species at risk) as new information becomes available and make available on public GIS portal. Continue to refine the precision of terrestrial ecosystem polygon boundaries through ground-truthing and high-resolution ortho imagery.

Acquire and protect priority lands within the Biodiversity Habitat Network.

Identify and prioritize areas within the Biodiversity Habitat Network for restoration and enhancement.

Implement a development permit area (DPA) or zone for the marine environment to mitigate waterfront development impacts and restore degraded foreshore zones.

Implement a development permit area (DPA) or zone for the protection of the natural environment.

Promote and expand programs to encourage biodiversity stewardship and education on private and public lands.

APPENDIX 5: BIODIVERSITY STRATEGY ENGAGEMENT SUMMARY

REFERENCES

- ¹ M.A. Austin et al., “Taking Nature’s Pulse: The Status of Biodiversity in British Columbia” (Biodiveristy BC, 2008), http://www.biodiversitybc.org/assets/pressReleases/BBC_StatusReport_Web_final.pdf.
- ² B.C. Conservation Data Centre. 2024. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <https://a100.gov.bc.ca/pub/eswp/> (accessed Jan 17, 2024)., “Search Results - BC Species and Ecosystems Explorer,” BC Ecosystem Explorer, January 17, 2024, <https://a100.gov.bc.ca/pub/eswp/search.do>.
- ³ M.A. Austin et al., “Taking Nature’s Pulse: The Status of Biodiversity in British Columbia” (Biodiveristy BC, 2008), http://www.biodiversitybc.org/assets/pressReleases/BBC_StatusReport_Web_final.pdf.
- ⁴ B.C. Conservation Data Centre. 2024. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: <https://a100.gov.bc.ca/pub/eswp/> (accessed Jan 17, 2024)., “Search Results - BC Species and Ecosystems Explorer.”
- ⁵ W̱SÁNEĆ Leadership Council Society, “History & Territory,” W̱SÁNEĆ Leadership Council (blog), accessed December 21, 2022, <https://wsanec.com/history-territory/>.
- ⁶ Jonathan D. Bakker, Ellen Jones, and Carson B. Sprenger, “Evidence of a Historical Frequent, Low-Severity Fire Regime in Western Washington, USA,” *Canadian Journal of Forest Research* 49, no. 6 (June 2019): 575–85, <https://doi.org/10.1139/cjfr-2018-0354>.
- ⁷ W̱SÁNEĆ Leadership Council Society, “History & Territory.”
- ⁸ R. Wolfenden, *Papers Connected with the Indian Land Question, 1850-1875* (Victoria, British Columbia, 1875), https://www.canadiana.ca/view/oocihm.9_00281/2.
- ⁹ Resilient Saanich Technical Committee and Judith Cullington, “Saanich Environmental Policy Framework - Draft” (District of Saanich, April 21, 2023).
- ¹⁰ Ministry of Forests, “GeoBC - Province of British Columbia” (Province of British Columbia), accessed March 2, 2023, <https://www2.gov.bc.ca/gov/content/data/about-data-management/geobc>.
- ¹¹ Michelle Molnar et al., “Chapter 5: Ecosystem Services,” *Canada in a Changing Climate: National Issues Report* (Government of Canada), accessed January 19, 2024, https://changingclimate.ca/site/assets/uploads/sites/3/2020/05/Chapter-5_Ecosystem-Services_Final_EN-1.pdf.
- ¹² District of Saanich, “District of Saanich OCP (2008)” (District of Saanich, 2008), <https://www.saanich.ca/assets/Local~Government/Documents/Corporate~and~Annual~Reports/2008%20OCP.pdf>
- ¹³ District of Saanich, “Housing Needs Report (2020)” (District of Saanich, 2020) <https://www.saanich.ca/assets/Local~Government/Documents/HousingNeedsReport2020.pdf>

saanich.ca/assets/Community/Documents/Planning/Housing-Needs-Report.pdf

- ¹⁴ District of Saanich, “Housing Strategy” (2021) <https://www.saanich.ca/assets/Community/Documents/Planning/housing-strategy-web.pdf>
- ¹⁵ Mustel Group Market Research, Diamond Head Consulting Ltd., and District of Saanich, “District of Saanich Biodiversity Conservation Community Survey,” Detailed Findings, April 2023.
- ¹⁷ D Kriebel et al., “The Precautionary Principle in Environmental Science.,” *Environmental Health Perspectives* 109, no. 9 (September 2001): 871–76.
- ¹⁸ International Union for Conservation of Nature, “Guidelines for Applying the Precautionary Principle to Biodiversity Conservation and Natural Resource Management,” May 16, 2007, <https://www.monachus-guardian.org/library/iucn07a.pdf>.
- ¹⁹ Lori Hennings and Jonathan Soll, “Wildlife Corridors and Permeability: A Literature Review” (Metro Sustainability Center, April 2010), <https://www.oregonmetro.gov/sites/default/files/2019/08/22/wildlife-corridors-and-permeability-report-April-2010.pdf>.
- ²⁰ Canada, ed., *Canadian Biodiversity Strategy: Canada’s Response to the Convention on Biological Diversity* (Hull, Quebec, Canada: Biodiversity Convention Office, Environment Canada, 1995).
- ²¹ Hennings and Soll, “Wildlife Corridors and Permeability: A Literature Review.”
- ²² Hennings and Soll.
- ²³ Hennings and Soll.
- ²⁴ Hennings and Soll.
- ²⁵ Metro, “Wildlife Crossings: Providing Safe Passage for Urban Wildlife” (Metro Sustainability Center, December 19, 2018), <https://www.oregonmetro.gov/wildlife-crossings-providing-safe-passage-urban-wildlife>.
- ²⁶ Andrew B. Carey and Murray L. Johnson, “Small Mammals in Managed, Naturally Young, and Old-Growth Forests,” *Ecological Applications* 5, no. 2 (1995): 336–52, <https://doi.org/10.2307/1942026>.
- ²⁷ Hennings and Soll, “Wildlife Corridors and Permeability: A Literature Review.”
- ²⁹ Don Gayton Forrex, “Major Impacts to Biodiversity in British Columbia (Excluding Climate Change),” Technical Subcommittee Component Report (Biodiversity BC, Conserving the Vairety of Life, 2007), <http://www.biodiversitybc.org/assets/Default/BBC%20Major%20Impacts%20Other.pdf>.
- ³⁰ Denis Vasiliev and Sarah Greenwood, “Pollinator Biodiversity and Crop Pollination in Temperate Ecosystems, Implications for National Pollinator Conservation Strategies: Mini Review,” *Science of The Total Environment* 744 (November 20, 2020): 140880, <https://doi.org/10.1016/j.scitotenv.2020.140880>.

- ³¹ Hillary Rudd, Jamie Vala, and Valentin Schaefer, “Importance of Backyard Habitat in a Comprehensive Biodiversity Conservation Strategy: A Connectivity Analysis of Urban Green Spaces,” *Restoration Ecology* 10 (June 1, 2002): 368–75, <https://doi.org/10.1046/j.1526-100X.2002.02041.x>.
- ³² P Angold et al., “Biodiversity in Urban Habitat Patches,” *Science of The Total Environment* 360 (May 1, 2006): 196–204, <https://doi.org/10.1016/j.scitotenv.2005.08.035>.
- ³³ Mark A. Goddard, Andrew J. Dougill, and Tim G. Benton, “Scaling up from Gardens: Biodiversity Conservation in Urban Environments,” *Trends in Ecology & Evolution* 25, no. 2 (February 1, 2010): 90–98, <https://doi.org/10.1016/j.tree.2009.07.016>.
- ³⁴ District of Saanich, “District of Saanich OCP (2008).”
- ³⁵ “ÁTOL,NEUEL MOU.Pdf,” accessed December 14, 2023, <https://www.saanich.ca/assets/News~and~Events/Documents/%C3%81TOL,NEUEL%20MOU.pdf>.
- ³⁶ Resilient Saanich Technical Committee. Considerations and Recommendations for Enhanced Stewardship in Saanich (2023). <https://www.saanich.ca/assets/Community/Documents/2023-July-01%20-%20RSTC%20Enhanced%20Stewardship%20Brief%20v11%20FINAL.pdf>

