Delta's Birds & Biodiversity Conservation Strategy

February 2018

Delta

Intentionally blank

Contents

Contents	3
1.0 Background	1
1.1The Strategy - Background	1
1.2 Why Birds?	2
2.0 Biodiversity	3
2.1 Ecosystems of Delta	4
2.2 Threats to Birds & Biodiversity	9
3.0 Strategy Process	10
4.0 Vision & Mission	11
5.0 Values	12
6.0 Goals & Objectives	13
7.0 Framework for Action	14
8.0 Targets & Metrics	21
9.0 Monitoring	22
10.0 Strategy Implementation	22

1.0 Background

The environmental assets within and surrounding Delta play an important role in both regional and international ecosystems. It is becoming increasingly important to protect and conserve Delta's remaining natural assets. On November 2, 2015, the Delta Naturalists' Society made a presentation to Council proposing that Delta staff develop a Birds and Biodiversity Strategy in cooperation with the Delta Naturalists' Society and other partners. Delta's Official Community Plan contains information on the natural environment (Section 2.4), including a number of policies that aim to support the preservation, protection, restoration and enhancement of the natural environment, its ecosystems and biological diversity through protection, planning, operations, restoration, and stewardship. The development of a Birds and Biodiversity Strategy was endorsed by Mayor and Council in January 2016. In consultation with stakeholders in the community, it was decided to add the word "conservation" to the title of the Strategy, to make it clear that conservation and protection of habitat is a key goal of the Strategy.

1.1The Strategy - Background

The purpose of the Strategy is to identify, protect, and enhance biodiversity in Delta to ensure that the necessary conditions exist for thriving and diverse native wildlife, with an emphasis on birds. Without a strategy, efforts to protect and enhance Delta's natural environment may occur in isolation and can result in the duplication of efforts and resources, and missed opportunities. The process of creating the *Birds and Biodiversity Conservation Strategy* presented an opportunity to review Delta's existing policies, programs, and bylaws for gaps and opportunities in conjunction with community partner initiatives. Having a single strategy that ties together current efforts and identifies new initiatives will provide focus and clarity for Delta and its partners moving forward.

Canada has developed national goals and targets for 2020 that support the global *Strategic Plan for Biodiversity 2011-2020* adopted by Canada and other Parties to the Convention on Biological Diversity in 2010. The targets also complement the

> "All Canadians depend on biodiversity and have a responsibility to contribute to biodiversity conservation and to use biological resources in a sustainable manner". Biodivcanada.ca

Canadian Biodiversity Strategy completed in 1994 after signing the United Nations Convention on Biological Diversity in 1992.

Metro Vancouver Regional District completed a *Regional Biodiversity Strategy* in 2006, the *Ecological Health Action Plan* in 2011 and has recently updated the Sensitive Ecosystem Inventory Mapping including Delta, which will provide information on these ecosystems and the area's ecological contribution to the region.

Other plans and strategies that support biodiversity in Delta are: *Burns Bog Ecological Conservancy Area Management Plan* (2007); *Invasive Species Management Strategy* (2016), *Climate Action Initiative – Natural Areas Management Plan* (2007); *Delta Tree Protection and Regulation Bylaw* (2015) which includes the 5 year Urban Reforestation Project; Green Growth Index (2009); *Streamside Protection and Enhancement Bylaw* (2005) and the *Pesticide Bylaw* (2009), in addition to various standard operating procedures, support of stewardship projects and integrated stormwater management plans. A comprehensive summary of plans and strategies can be found in Appendix A.

1.2 Why Birds?

Delta has large expanses of wetlands, estuarine, and upland habitats, which support the largest wintering populations of waterfowl, shorebirds, and birds of prey in Canada. Up to five million migratory birds use the Fraser River Estuary and Delta as a stopover on the Pacific Flyway, which is also designated as the #1 Important Bird Area in Canada. The emphasis on birds in the strategy reflects the important role that the Delta area has on the global scale for birds. Boundary Bay and its adjacent uplands and agricultural lands represent the most significant migratory waterfowl and shorebird habitat on Canada's Pacific Coast, playing an important role in both regional and international ecosystems with global significance. The Fraser River Delta was designated as a RAMSAR Wetland of International Importance in September 2012, recognizing the unique habitats that support a multitude of species. Delta is also home to Burns Bog, forested areas, and watercourse corridors that support a range of wildlife and ecosystem services[1] that benefit people and the environment.

[1] "Ecosystem services" can be broadly defined as the aspects of ecosystems that provide benefits to people.

2.0 Biodiversity

The term "biodiversity" refers to the variety of species and ecosystems and the ecological processes of which they are a part. The three components of biodiversity are ecosystem, species and genetic diversity. In British Columbia, the Lower Mainland is a biodiversity "hot spot", and the landscape of Delta contributes significantly to the region's biodiversity. Having good biodiversity across the landscape means that ecosystems are sufficiently intact, a range of native species exist, and that species population dynamics are healthy. While healthy natural environments support diversity, so can a backyard garden or a green roof. Ecosystem diversity contributions can be scaled from small urban backyard gardens up to a whole watershed. A biologically diverse landscape tends to be healthier because the diversity makes ecosystems more resilient to damaging changes. These damages can be natural, like a dry summer, and/or anthropogenic (man made) such as a spill of hazardous materials.

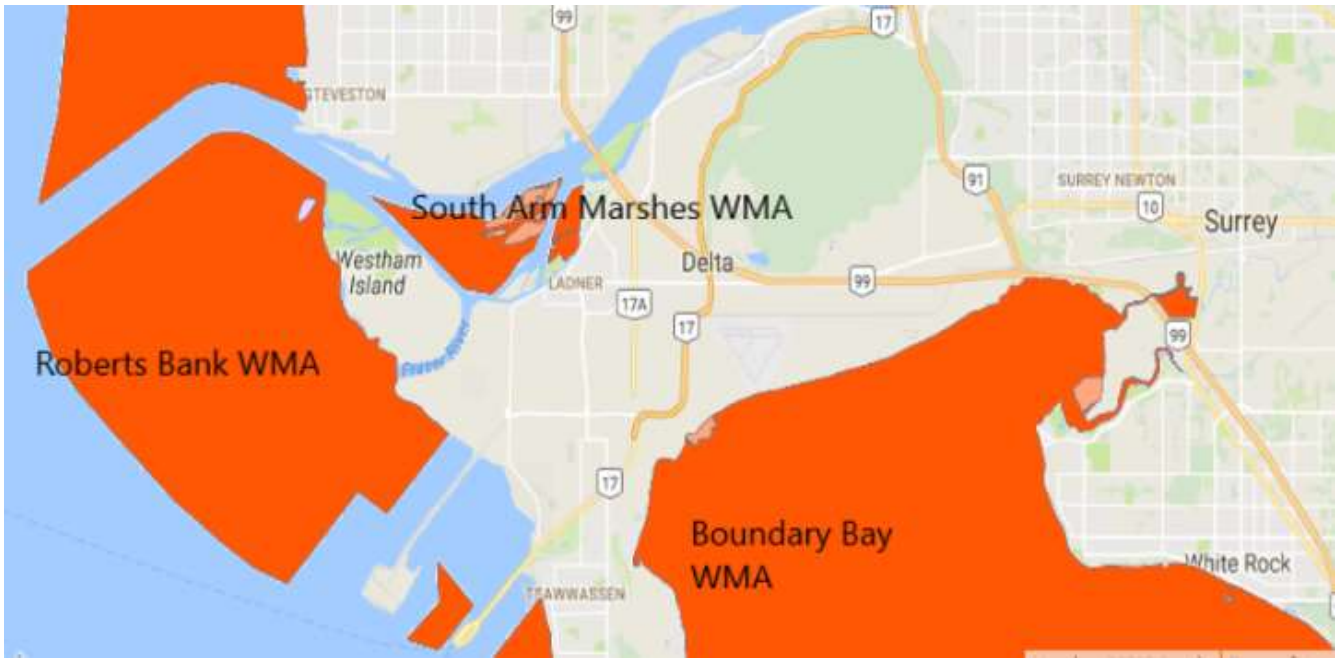
"Birds are important for keeping ecosystems healthy. The many different kinds, or species, of birds in B.C. live in all kinds of habitats, provide food for many other species, and eat many different kinds of plants and animals themselves. Birds are also important to the economy. Recreational hunters seek out wild birds like ducks, geese, pheasants and grouse. These and other birds provide food for many British Columbians. Bird-watching is an extremely popular recreational activity, and people are drawn to areas where birds congregate". Province of British Columbia

2.1 Ecosystems of Delta

Delta is home to a variety of ecosystems and landscapes. These habitats support diverse wildlife and contribute green space to Delta and the Metro Vancouver region.

Detla's *Official Community Plan*'s Future Land Use map is shown on the following page. Delta has three vibrant urban centres connected by agricultural lands and environmentally significant areas. Agriculture accounts for over 48% of Delta's land base and over 20% of Delta's land is zoned as an Environmentally Sensitive Area (including Burns Bog). Environmentally Sensitive Area Designations identify areas of high environmental values requiring protection or mitigation of environmental impacts for any proposed development.

Delta's extensive foreshore provides habitat as well as recreational opportunities that are part of our community identity. Boundary Bay, Roberts Bank and the South Arm Marshes including Ladner Marsh are provincial Wildlife Management Areas (see map below) and are home to a variety of wildlife.



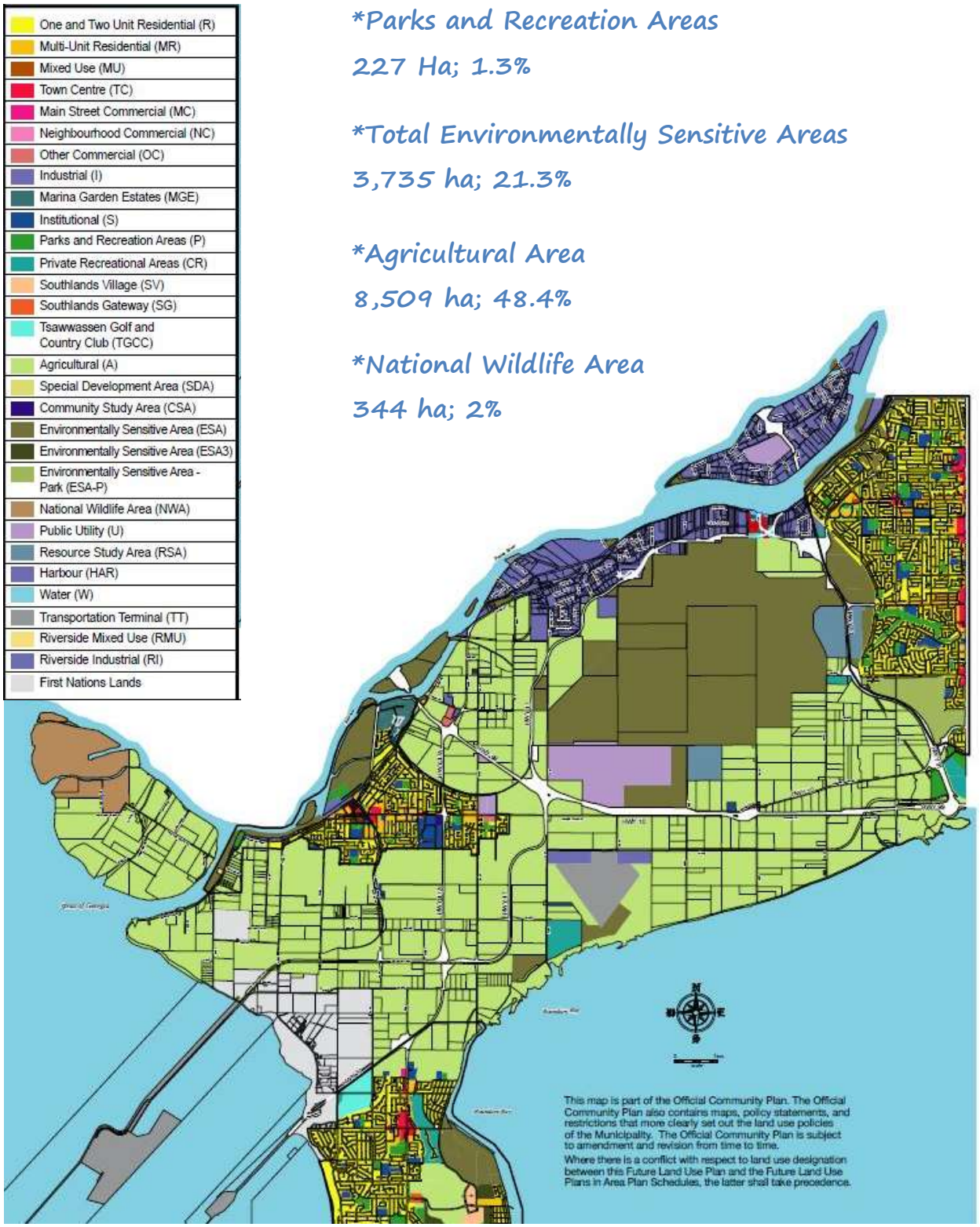
Delta Official Community Plan (Bylaw 3950, 2005)
Future Land Use Plan July 25, 2016

*Parks and Recreation Areas
227 Ha; 1.3%

*Total Environmentally Sensitive Areas
3,735 ha; 21.3%

*Agricultural Area
8,509 ha; 48.4%

*National Wildlife Area
344 ha; 2%



Agricultural: Agriculture is important to Delta's economic, environmental and social sustainability. Over 48% of Delta's land is agricultural with 8,465 hectares available and actively farmed. Agricultural fields and their edges provide valuable habitat for wildlife. For example, migrating waterfowl rely on foraging for leftover root vegetables in local fields throughout Delta.

Burns Bog: Burns Bog is a raised bog ecosystem covering approximately 3,000 hectares of the Fraser River delta between the south arm of the Fraser River and Boundary Bay. The largest undeveloped urban landmass in North America, Burns Bog is globally unique because of its chemistry, form, flora and large size.

Coastal Sand Dunes: Coastal sand ecosystems are rare because few sandy beaches exist now due to coastal development. Provincial biologists have identified the Boundary Bay Village coastal sand ecosystem as the largest and healthiest system of its kind in the Lower Mainland. Some of the rare and endangered plants that live in these ecosystems are large-headed sedge, beach pea, and dune wild rye. Coastal sand dunes are a nesting area for Savannah Sparrow and Killdeer and a regular seasonal stop for migrating passerines such as Mountain Bluebird, American Pipit, Western Meadowlark and Snow Bunting.

Hedgerows and Leave strips: Hedgerows and grass strips along farm fields provide year-round wildlife habitat. Over half of the bird species found on a typical piece of farmland can be attributed to hedgerows. Hedgerows provide a number of benefits, including habitat for a diversity of songbird and raptor species, as well as habitat and a food source for pollinators. They also act as wind barriers, preventing soil erosion. Along watercourses, hedgerows provide shade, which limits instream grass growth and keeps water cooler. They also provide food and nutrients to aquatic wildlife through overhanging vegetation.

Forest and Woodlands: Forest and woodlands in Delta can be found along the steeper slopes of North Delta and Tsawwassen in Environmentally Sensitive Areas and parks, and in smaller pockets throughout the Delta lowlands. Forest and woodlands provide integral links across Delta connecting habitats together.

Fraser Estuary, Roberts Bank, and Boundary Bay: In addition to mud flats, salt marshes and estuarine marshes, the area supports one of the most extensive and contiguous eelgrass communities globally. Boundary Bay also supports a number of invertebrates and microorganisms that are an important source of energy for migrating shorebirds. Boundary Bay and its foreshore are used for recreation by boaters, kite surfers, beach goers, hunters, bird watchers, and nature photographers, and there is a commercial and recreational crab fishery in the bay.

Lowland Watercourses and Ditches: Lowland watercourses and ditches make up a large part of Delta's drainage and irrigation system. Delta uses this system during the summer to move fresh water from the Fraser River to agricultural producers throughout Delta for irrigation use. During the winter months, flood boxes and pump stations are used to move rainwater out of the area to prevent flooding. The channels provide habitat for a variety of wildlife and are maintained by Delta on a rotational schedule. Some of the wildlife that can be found using or living in these ditches are Northwestern Salamanders, Brassy Minnows, Red Sided Shiners, Three-spined Stickleback, Great Blue Herons, and various ducks, frogs, and salmon in certain areas.

Delta manages an extensive system of drainage and irrigation channels and watercourses.

Old Field Habitat: Old field habitat is typically long-abandoned agricultural land where a range of grasses and shrub species have grown up. This habitat mimics the natural prairie, grassland and salt marsh habitats that used to exist in Delta prior to diking. Examples of old field habitat can be found in the North 40 Park Reserve, Boundary Bay Regional Park, and Boundary Bay Airport Old Field Conservation Area, which is the largest piece of continuous old field habitat in the Boundary Bay area. This environment provides habitat for a variety of birds particularly raptors (heron, owls, hawks, eagles, falcons), as well as mammals (voles, mice, rabbits, coyotes, deer).

Stream Corridors and Riparian Areas: Delta is home to several streams and creeks that flow into the Fraser River and Boundary Bay. Many creeks in North Delta provide year round salmon rearing and spawning habitat. Watercourses are protected by city plans and bylaws, as well as provincial and federal regulations. The transitional area between aquatic and upland environments, the riparian area, serves a variety of functions and provides a number of benefits. These green corridors also provide connectivity for small wildlife and birds to travel between natural areas.

Urban Areas (Parks/Urban Tree Canopy/Rain Gardens/Roadside Ditches/Gardens): Habitats can be small in scale, such as a pollinator garden, to larger linear features that provide connectivity between natural areas. Residential landscaping provides an essential role in sustaining birds and invertebrates such as butterflies and bees, as well as increasing access to nature in urban neighbourhoods. The urban tree canopy is an important feature and resource for birds and biodiversity within Delta. There are many opportunities to incorporate habitat features into parks, such as meadows (areas with longer grass), natural water features, native plantings and tree pockets.

Working with the Cougar Creek Streamkeepers and the Delta School District, Delta has installed rain gardens at all North Delta elementary schools.

2.2 Threats to Birds & Biodiversity

Habitat Loss & Fragmentation

- Development pressures, urban densification, transportation expansion
- Intensive agriculture, port expansion
- Tree removals in urban areas

Climate Change

- Sea level rise and coastal squeeze
- Ecosystem composition shifts
- Changing weather patterns (drought, floods, temperature)

Anthropogenic Impacts

- Bird strikes, drones, house cats, pollution
- Lack of public awareness towards birds and environment
- Disturbance by people and dogs (passive vs active park spaces)

Invasive Species

- Monocultures which reduce divserity of species present
- Competition with native species
- Change in habitat/food sources

Domestic cats are one of the leading causes of song bird deaths.

3.0 Strategy Process

Local community groups, government agencies, and organizations focused on various aspects related to birds, biodiversity and tourism in Delta provided input and collaborated on desired strategy outcomes.

Stakeholders were able to provide expertise, comments and suggestions on the document through facilitated workshops. Together a vision, mission, values, goals and objectives were created and action items proposed.

Workshop Participants

- Delta Naturalists Society
- Cougar Creek Streamkeepers
- Burns Bog Conservation Society
- Boundary Bay Conservation Committee
- Canadian Wildlife Service
- Earthwise Society
- George C. Reifel MIgratory Bird Sanctuary
- British Columbia Waterfowl Society
- Delta Chamber of Commerce and business associations
- Vancouver Landfill
- Delta Farmland and Wildlife Trust
- Delta Farmers' Institute
- Bird Studies Canada
- Ducks Unlimited
- Metro Vancouver Regional Parks
- BC Ministry of Forests, Lands and Natural Resource Operations

4.0 Vision & Mission

These are the Vision and Mission statements that were developed with the community to provide direction for the conservation of birds and biodiversity within Delta.

Vision

Delta's globally significant bird populations, unique biodiversity, and ecological functions are protected and enhanced for future generations.

Mission

Our community collaborates to identify, protect, promote, enhance and monitor habitat and biodiversity within urban, agricultural, industrial, and natural areas.

5.0 Values

These values will help guide Delta's Strategy management and implementation decisions.

Protective: Protect, conserve and restore habitats and species

Educational: Raise awareness and promote responsible land use and activities

Proactive: Take action

Innovative: Be open to new solutions and opportunities

Responsible: Take responsibility for future generations

Science-based: Base our goals, objective and actions on the best available science

Integrative: Leverage land uses for multiple benefits

Adaptable: Adapt to changing conditions, climate, and information

Collaborative: Work together, recognizing the importance of local knowledge and skills

6.0 Goals & Objectives

Goal 1: Delta's habitats are protected, enhanced and resilient

Objective 1: Reduce threats. Reduce current and future threats to urban and rural bird life and biodiversity.

Objective 2: Improve protection. Improve the protection of habitats and ecosystem processes.

Objective 3: Enhance and expand. Enhance and expand habitats and ecological function.

Goal 2: The community understands and values Delta's natural resources

Objective 4: Increase Awareness: Increase local awareness of Delta's birds and biodiversity, and the conditions necessary for them to thrive.

Objective 5: Balance Needs. Balance public's desire to have increased access to nature with the importance of habitat and species protection.

Goal 3: Collaborative partnerships are fostered with a shared vision for biodiversity protection and enhancement

Objective 6: Expand Partnerships. Expand partnership relationships with existing community partners and new community organizations.

Goal 4: Delta and the Fraser River Estuary are established as a world-class centre for birds and biodiversity

Objective 7: Showcase World-Class Assets. Increase regional and national awareness of the key elements that make Delta and the Fraser River Estuary a world-class centre for birds and biodiversity.

Goal 5: Delta works to conserve its heritage as a working landscape that is significant for birds and biodiversity.

Objective 8: Strategy Implementation. Implementation of the Strategy will be timely, transparent and meaningful.

7.0 Framework for Action

Goal 1: Delta's habitats are protected, enhanced and resilient

Objectives	Strategies		Actions		Timeline*	Lead Organization
1. Reduce Threats Reduce current and future threats to urban and rural wildlife and biodiversity	1	Reduce direct impacts to wildlife and birds.	a	Explore best available practices for bird friendly window designs and incorporate into design guidelines where possible.	Medium	CPD/CAE
			b	Develop and distribute best management practices for residents and businesses on living with wildlife and reducing human influenced impacts, highlighting benefits of biodiversity, and specifically addressing the prevention of window bird strikes and reducing impacts from domestic cats.	Short	CAE/Animal Shelter
			c	Review and update policies as needed regarding construction/vegetation clearing during bird nesting season, including consideration for barn owl nests.	Short	CAE/CPD/ENG
			d	Create code of conduct for park users in natural areas to prevent conflicts with wildlife. Be consistent with American Birding Association.	Short	CAE/PRC
	2	Review and reduce current threats from invasive species.	a	Use Delta's Invasive Plant Strategy to assist in addressing biodiversity loss due to invasive species.	Ongoing	CAE
			b	Educate the public on the impacts of rat poison use on raptors and other wildlife; explore alternative measures and methods for rat control and deterrents.	Short	CAE
	3	Review climate change impacts.	a	Incorporate climate change adaptation and mitigation into reviews of habitat impacts and management plans.	Ongoing	CAE/ENG/CPD
			b	Identify habitat and bird population changes that could occur as a result of climate change (sea level rise, coastal squeeze, plant community shifts).	Medium	CAE
	4	Create policy for development and construction to ensure they are bird and biodiversity sensitive.	a	Assess and implement available mechanisms to reduce or eliminate further habitat fragmentation in the built environment and rural areas. Incorporate/ensure connectivity to biodiversity hot spots and corridors into development plans. Include small scale biodiversity pockets where possible.	Medium	CPD
	5	Reduce disturbance of protected natural areas.	a	Review park use and identify measures that can be taken to educate users and reduce impacts on natural areas (fencing off or limiting use/activities in sensitive areas).	Medium	PRC/CAE
			b	Develop restoration plans for unauthorized trails and consider formalizing trails where needed to reduce vegetation impacts.	Medium	PRC

* Short<2 yrs, Medium 2-5 yrs, Long-term>5 yrs; Climate Action & Environment (CAE), Community Planning & Development (CPD), Engineering (ENG), Urban Forestry (UF), Corporate Services (CS), Parks Recreation & Culture (PRC)

Goal 1: Delta's habitats are protected, enhanced and resilient

Objectives	Strategies		Actions		Timeline*	Lead Organization
2. Improve Protection Improve the protection of habitats and ecosystem processes	1	Map, inventory, and identify natural areas within Delta.	a	Create green infrastructure network map identifying habitats, fragmentation, and connectivity. Include biodiversity considerations (hot spots, quality, key habitats for key species).	Medium	CAE
			b	Inventory wildlife stems (standing dead trees) on public lands as important habitat features and explore opportunities for protection on private lands.	Short to ongoing	UF
	2	Review and implement/improve biodiversity protection tools (acts, bylaws, education, incentives, etc).	a	Assess Delta's current protection tools and review their implementation successes and barriers; review tools used by other jurisdictions. Adapt Delta's tools accordingly.	Medium	CAE
			b	Create development permit areas focused on biodiversity conservation, habitat connectivity, and habitat enhancement.	Long	CPD
	3	Improve the protection of trees.	a	Review tree protection bylaw and boulevard maintenance bylaw regularly for effectiveness related to tree protection and amend as needed.	Long	UF/ENG
			b	Review development process to identify measures to retain large trees and ensure replacement trees. Adapt process as needed.	Medium	CPD/CAE
			c	Create education material for residents maintaining trees on their property and expand education on benefits of trees for residents.	Short	CAE/UF
			d	Review the urban tree canopy cover in urban areas every 6 years to determine rate of tree canopy loss/gain.	Long	CAE/ENG
			e	Develop an Urban Forestry Restoration Plan/Strategy that includes climate change adaptation measures.	Medium	UF/PRC
3. Enhance and Expand Enhance and expand habitats and ecological function	1	Enhance habitat quality of agricultural fields for wildlife.	a	Promote and support the maintenance and creation of hedgerows, set-asides, cover crops, and winter food production. Work with (and identify ways to increase support for) Delta Farmland and Wildlife Trust, Delta Farmers Institute, etc. and other organizations working in an agricultural context.	Ongoing	CAE
			b	Explore mechanisms to support the needs of agricultural producers and waterfowl via policies, incentives or funding.	Short	CAE
			c	Work with farming community to incorporate wildlife-compatible crops and farm practices.	Medium	CAE
	2	Enhance habitat and biodiversity on municipal land.	a	Review parks management plans for habitat protection and enhancement opportunities.	Medium	PRC
			b	Review maintenance guidelines for opportunities to improve biodiversity and ecosystems within parks.	Short	PRC
	3	Promote habitat enhancement on private land.	a	Develop and promote best management practices for private landowners (e.g. golf courses, ravines, streamside enhancement and protection areas) to incorporate habitat-friendly practices.	Short	CAE
			b	Look for opportunities to fund or promote environmental enhancement within urban and industrial developments. Add biodiversity considerations into the Green Growth Index.	Short	CPD
			c	Promote backyard birds and biodiversity enhancement programs.	Ongoing	CAE
	4	Prioritize highest impact enhancement opportunities for restoration.	a	Determine and prioritize the most important habitat restoration and enhancement project opportunities and apply for grants to carry out sustainability projects.	Medium	CAE

*** Short<2 yrs, Medium 2-5 yrs, Long-term>5 yrs; Climate Action & Environment (CAE), Community Planning & Development (CPD), Engineering (ENG), Urban Forestry (UF), Corporate Services (CS), Parks Recreation & Culture (PRC)**

Goal 2: The community understands and values Delta's natural resources

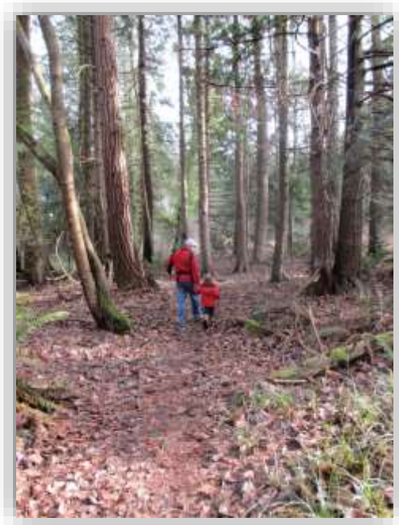
Objectives	Strategies		Actions		Timeline*	Lead Organization
4. Increase Awareness Increase awareness of Delta's birds and biodiversity and the conditions necessary for them to thrive.	1	Increase communications opportunities.	a	Create education campaign for the public, staff and Council on the global importance of biodiversity and birds within Delta and current threats and issues impacting them.	Short	CAE
			b	Work with community partners to create a cohesive message on birds and biodiversity. Continue supporting the Delta Naturalists Society's bird brochures.	Short	CAE/CS
			c	Increase the use of Delta's website and social media to highlight Delta's birds and biodiversity.	Short	CS
			d	Develop messaging on regulatory and voluntary aspects of birds and biodiversity conservation for industry and development groups.	Medium	CPD
			e	Provide web links to existing organizations with information supporting birds and biodiversity (Delta Naturalist Society, Bird Alert hotline, Delta Farmland and Wildlife Trust, Metro Vancouver Ecological Health Action Plan, etc).	Short	CAE/CS
	2	Enhance promotion of existing educational programs.	a	Improve promotion of Delta's free sustainable gardening workshops.	Short	ENG/CS
			b	Promote and support environmental educational programs and print materials done by others.	Ongoing	CS
			c	Promote Parks Recreation & Cultures current nature programs.	Ongoing	CS
			d	Promote Engineering department's educational programs (rain gardens, green waste & recycling, storm water management).	Ongoing	CS
	3	Identify opportunities for new education.	a	Explore parks programming opportunities to increase nature/bird focused activities and programs (nature scavenger hunt, bird walks, parks passport program).	Medium	PRC
			b	Create video tours of Burns Bog and promote online.	Short	CAE
			c	Expand sustainable gardening workshops to include topics related to birds and biodiversity.	Short	ENG/CAE
			d	Recognize and promote the connection the agricultural community has in providing habitat for waterfowl and migratory bird populations who utilize their land for overwintering.	Short	CS/CAE
			e	Explore creation of a birds and biodiversity supporter pledge program for business, residents, agricultural producers, etc.	Medium	CAE
	4	Increase print educational materials available.	a	Explore the creation of educational materials for kayakers, paddle boarders, boaters, photographers, and dog walkers that focus on educating locals on reducing their disturbance to birds and natural areas.	Medium	CAE
			b	Look at partnering on creation of local birding passport program.	Medium	CAE
			c	Create park-specific nature brochures.	Long	CAE/PRC
	5	Increase signage.	a	Increase dike access information (parking locations, directional signage, codes of practices, etc).	Medium	ENG/CAE
			b	Increase parks interpretation signage and associated tools.	Medium	PRC/CAE
			c	Create a program to provide environmental interpretation signs to be used when development projects contribute to biodiversity.	Short	CPD/CAE
			d	Install educational signage on designated wildlife stems (standing dead trees).	Medium	UF

*** Short<2 yrs. Medium 2-5 yrs. Long-term>5 yrs; Climate Action & Environment (CAE), Community Planning & Development (CPD), Engineering (ENG), Urban Forestry (UF), Corporate Services (CS), Parks Recreation & Culture (PRC)**

Goal 2: The community understands and values Delta's natural resources

Objectives	Strategies		Actions		Timeline*	Lead Organization
5. Balance Needs Balance public's desire to have increased access to nature with the importance of habitat and species protection.	1	Review barriers that exist to park use.	a	Identify parks where there are accessibility opportunities, availability of washrooms, parking.	Long	PRC
		Review current use of parks and identify conflicts between public use and habitat/species protection.	a	Develop park use criteria to promote the protection of habitat and natural areas and investigate opportunities for fenced off leash dog parks and non-dog areas for nature viewing.	Medium	PRC

* Short<2 yrs, Medium 2-5 yrs, Long-term>5 yrs; Climate Action & Environment (CAE), Community Planning & Development (CPD), Engineering (ENG), Urban Forestry (UF), Corporate Services (CS), Parks Recreation & Culture (PRC)



Goal 3: Collaborative partnerships are fostered with a shared vision for biodiversity protection and enhancement

Objectives	Strategies		Actions		Timeline*	Lead Organization
6. Expand Partnerships Expand partnership relationships with existing community partners and new community organizations	1	Identify new potential partners in the community and surrounding region.	a	Generate opportunities to integrate overlapping mandates and activities.	Ongoing	CAE
	2	Enhance working relationships with existing partners.	a	Work to leverage programs, activities, outreach and communication opportunities.	Ongoing	CS/CAE/CPD/ENG/PRC
	3	Continued support of related student studies and projects.	a	Compile a list of appropriate projects and studies available for students that promote birds and biodiversity.	Ongoing	CAE
	4	Work with Delta's Environmental Advisory Committee.	a	Review progress on implementation of the Strategy and receive ongoing feedback from Committee.	Ongoing	CAE

* Short<2 yrs, Medium 2-5 yrs, Long-term>5 yrs; Climate Action & Environment (CAE), Community Planning & Development (CPD), Engineering (ENG), Urban Forestry (UF), Corporate Services (CS), Parks Recreation & Culture (PRC)

Goal 4: Delta and the Fraser River Estuary are established as a world-class centre for birds and biodiversity

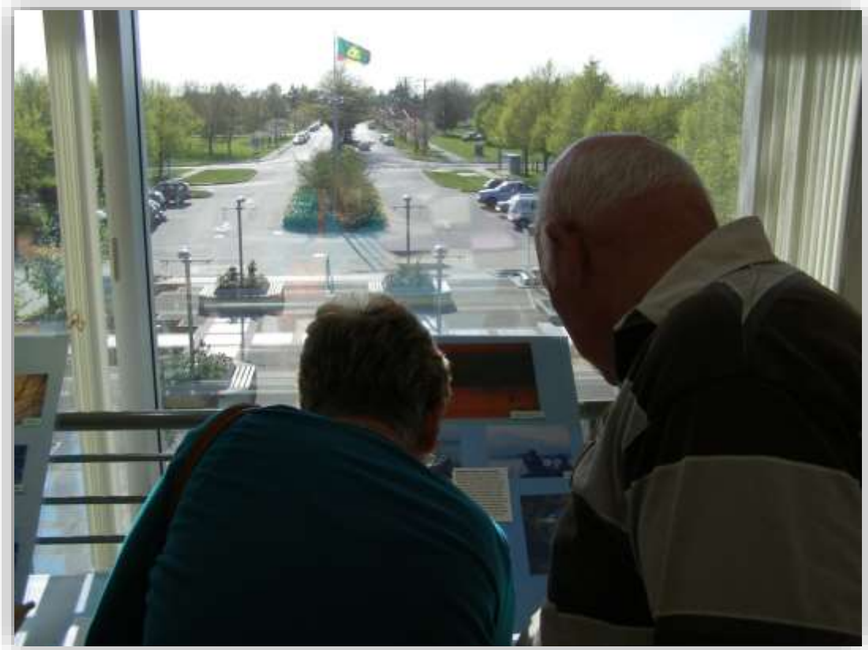
Objectives	Strategies		Actions		Timeline*	Lead Organization
7. Showcase World-Class Assets Increase local, regional and national awareness of the key elements that make Delta and the Fraser River Estuary a world-class centre for birds and biodiversity.	1	Work with Delta tourism industry.	a	Explore the bird tourism market and determine where Delta can assist.	Ongoing	CS/CAE
	2	Working with partners, explore a "world-class area for birds and biodiversity" brand and marketing campaign.	a	Integrate "world-class" messaging into existing programs and services, including birding tourism and brochures.	Ongoing	CS
	3	Support birds and biodiversity related events, conferences, or programs within Delta.	a	Continue to support Bird Week, Watershed Fish Release, Great Canadian Shoreline Cleanup, Day at the Farm, Earth Day, Heritage Week, and other events as appropriate.	Ongoing	CAE

* Short<2 yrs, Medium 2-5 yrs, Long-term>5 yrs; Climate Action & Environment (CAE), Community Planning & Development (CPD), Engineering (ENG), Urban Forestry (UF), Corporate Services (CS), Parks Recreation & Culture (PRC)

Goal 5: Delta works to conserve its heritage as a working landscape that is significant for birds and biodiversity.

Objectives	Strategies		Actions		Timeline*	Lead Organization
8. Strategy Implementation Implementation of the Strategy will be timely and transparent.	1	Align this Strategy with actions of other government organizations.	a	Review senior government policies to ensure that the Strategy actions are in alignment with them.	Short	CAE
			b	Align actions with strategies developed for Richmond and Surrey where possible.	Short	CAE
	2	Look at opportunities for innovative funding, policy implementation, partnerships, and programs.	a	Review alternative funding and conservation measures such as conservation covenants on farm practices, Federal Eco-gift potential, and/or a local conservation fund to be used for habitat protection and strategy implementation.	Short	CAE
			b	Explore alternative policies for development, industry and agriculture.	Medium	CPD/CAE
			c	Conduct a social science research study on what Delta residents think and do related to birds, biodiversity and conservation to help inform policy development and identify opportunities for conservation and education.	Short	CAE

*** Short<2 yrs, Medium 2-5 yrs, Long-term>5 yrs; Climate Action & Environment (CAE), Community Planning & Development (CPD), Engineering (ENG), Urban Forestry (UF), Corporate Services (CS), Parks Recreation & Culture (PRC)**



8.0 Targets & Metrics

In order to qualify the success of the Strategy and subsequent actions plans, some measurable results are needed.

Goal 1: Delta's habitats are protected, enhanced and resilient

Metrics:

- Hectares of habitat enhanced or created
- Tonnes of invasive species removed
- Area mapped/inventoried
- Number of trees removed and/or planted
- Number of plants installed
- Number of policies reviewed and/or amended
- Number of developments that adopt birds or biodiversity friendly guidelines

Goal 2: The community understands and values Delta's natural resources

Metrics:

- Amount of content developed
- Number of hits on social media content
- Amount of increased interpretation signage
- Number of users attending events or programs

Goal 3: Collaborative partnerships are fostered with a shared vision for biodiversity protection and enhancement

Metrics:

- Number of joint programs or ventures

Goal 4: Delta and the Fraser River Estuary are established as a world-class centre for birds and biodiversity

Metrics:

- The existence of birds and other wildlife and their habitat are counted as a valuable community assets
- Increase in bird related tourism
- Creation of world-class branding

Goal 5: Delta works to conserve its heritage as a working landscape that is significant for birds and biodiversity.

Metrics:

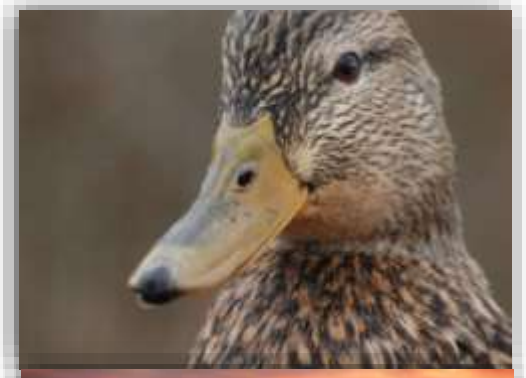
- Annual report on the Strategy implementation

9.0 Monitoring

Monitoring of our natural areas is critical to ensure that they remain in a healthy condition over time. The amount of quality natural areas is a good indication of biodiversity. The intention is to monitor biodiversity to track changes and measure success. Current monitoring activities include many programs run by Bird Studies Canada and their volunteers such as: BC Coastal Waterbird Survey, BC Beached Bird Survey, Christmas Bird Count, Project NestWatch, and Project FeederWatch.

Some opportunities for monitoring include:

- Changes in habitat amount and quality
- Species richness and abundance
- Environmental health of aquatic ecosystems
- Citizen science engagement
- Reduction in conflict between land uses and user
- Number of volunteer biodiversity projects



10.0 Strategy Implementation

Yearly actions plans will be developed for the Strategy and reported out to the public. This provides flexibility for actions to capitalize on synergies with other ongoing or concurrent projects. In addition, this will allow the flexibility for partnerships with organizations in relation to their work plans. The Strategy will be reviewed on a five year cycle to assess if Delta is achieving the goals and objectives presented.