



Delta's Climate Change Initiative

A Corporate Framework for Action 2010

Climate Change Initiative

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The United Nations' Intergovernmental Panel on Climate Change released a portion of their 4th *Assessment Report* in February 2007. The report concludes that "unequivocal warming of the climate system" has, and will continue to occur because of human activities – primarily from the burning of fossil fuels and the resulting release of harmful greenhouse gases (GHGs)¹. It is estimated that up to half of Canada's GHG emissions are under the direct or indirect control or influence of municipal governments. Consequently, municipalities have become a focal point of both the Government of Canada's and Province of British Columbia's climate change action planning.

Delta Council has long understood the important role municipal leadership plays with regard to climate change initiatives/actions and has progressively pursued various environmental stewardship initiatives that have effectively reduced the municipalities' ecological footprint. To further this environmental stewardship movement, Delta has developed a unique and progressive Climate Change Initiative (Initiative) aimed at reducing Delta's vulnerability and contribution to climate change.

To ensure the success of the Initiative, staff has formed an interdepartmental Climate Change Working Group (CCWG) that will ensure that each action plan is developed, implemented, monitored and results reported back to Council. In addition, the CCWG will build upon the Initiative by revising action plans annually and adding new action plans as required. This process of development, implementation and feedback will ensure that action plans are regularly updated to reflect leading edge technologies and strategies currently being developed for municipalities in Canada and around the world.

The action plans contained within Delta's Climate Change Initiative focus on reducing the energy consumed and solid waste generated during the delivery of municipal services and the operation of civic facilities. Delta's Climate Change Initiative is not only comprehensive, but is also intended to reflect both corporate and community needs and values.

Tackling climate change with individual, focused action plans is unique amongst municipalities. It will allow Delta to focus efforts where they belong and bring about the best opportunities for successful GHG emission reductions.

¹ There are primarily six major GHGs, targeted by the Kyoto protocol as contributing to global warming. The top contributors are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride.

The Corporation of Delta's 2007 Greenhouse Gas Baseline Inventory

(Revised December 2008)

The municipality has created a list or "inventory" of all of the municipal buildings, vehicles, and utilities that produced greenhouse gas (GHG) emissions in 2007. Once this was complete, Delta hired a consultant to calculate the amount of CO₂e (GHG emissions) produced by each item on the inventory. The calculations considered the amount of natural gas used to heat or cool Delta's recreational facilities (arenas and pools), the amount of electricity needed to provide street and traffic lighting, heat and light for municipal buildings, parks and other recreational/cultural facilities, the amount of electricity required to operate Delta's water, sewer and drainage utilities, and the amount of gasoline and biodiesel fuel needed to operate Delta's municipal fleet vehicles and equipment. Cumulatively, these represent the total GHG emissions produced by the Corporation of Delta in 2007. The table below outlines the GHG emission totals in nine subcategories. This information was revised in December 2008.

Corporate Fixed Infrastructure	Tonnes of CO ₂ e
Aquatic and Arena Facilities	4586
Other Community Facilities	287
Municipal Hall & Works Yard	273
Utilities	99
Lighting	84
Police and Fire Buildings	522
Parks	39
Other	9
Corporate Vehicle Fuels	
Fleet Vehicles	2295
Total Corporate Inventory	8194

Delta used the 2007 baseline inventory to set a GHG reduction target for the Climate Change Initiative. The goal is to reduce Delta's corporate GHG emissions by 20% of 2007 levels by 2015. In order to track the success of the Initiative, Delta will conduct a baseline inventory review in February 2011. This inventory will allow the municipality to celebrate successes, identify areas that require more attention and to harmonize and set interim emission reduction target goals.

DELTA'S CLIMATE CHANGE INITIATIVE ACTION PLANS

1. Building Efficiency Plan
2. Green Fleet Management Plan
3. Infrastructure Improvement Plan
4. Education and Training Plan
5. Flood Management Plan
6. Sustainable Development Plan
7. Community Outreach and Education Plan
8. Urban Forestry Management Plan
9. Natural Areas Management Plan

Building Efficiency Plan

Building Efficiency Plan Goals:

Delta's civic buildings emit approximately 65% of our corporate GHG emissions, 80% of which can be attributed to major recreational facilities. Improving the efficiency of the major recreational facilities is the principle goal of the Building Efficiency Plan for 2010 through the retro-commissioning of existing building systems.

Building Efficiency Plan Summary:

Improving the energy efficiency of the civic building stock is the primary goal of the Building Efficiency Plan. Facility energy audits completed at Delta's five major recreation facilities has provided the basis for the development and implementation of large scale retro-commissioning projects over time based upon design/build identification and implementation strategies. An example of such a project is the Sungod expansion and energy retrofit project.

Energy efficiency projects are also being pursued within other civic buildings. Examples of initiatives already underway include:

- Energy efficient lighting retrofits
- Enhanced metering and continuous optimization programs
- Low E Ceilings
- Building envelope replacement
- Sewer discharge and solar energy heat recovery feasibility study for the Ladner civic precinct



Future Building Efficiency Actions:

Energy efficiency and management:

- Continue to plan, implement and assess energy saving initiatives throughout the Corporation for all civic buildings, e.g. demand side management and training programs.
- Prepare and present quarterly progress reports and annual Strategic Energy Management Plan (SEMP) to BC Hydro.

Retrofit inefficient civic buildings:

- Continue to assess the civic building stock and incorporate feedback into lifecycle and retrofit plans as appropriate.
- Identify and program improved efficiency system component replacements under the Corporate Building Life Cycle Management Program.
- Initiate planning exercises for the 2011 Ladner Leisure Centre energy retrofit project.

Financial Implications:

Energy efficiency and management:

- Energy efficiency initiatives *Existing budget*
- Energy Manager (subsidized by BC Hydro) *\$50,000*
(Delta's committed portion)

Retrofit inefficient civic buildings:

- Sungod energy retrofit *\$1,000,000*
- Civic building energy assessment and system component replacements *Existing budget*

Potential Funding Opportunities:

- FCM's Green Municipal Fund (Community Energy System)
- Ministry of EMPR's Community Action on Energy Efficiency
- NRCan's ecoEnergy Retrofits for Buildings
- Power Smart Partners
- Canada Strategic Infrastructure Fund
- BC Local Infrastructure Planning Grant Program

Department:

PR&C (Rec. Facilities), CP&D (all other buildings),
Climate Action & Environment, Engineering (support).

Green Fleet Management Plan

Green Fleet Management Plan Goals:

To reduce Delta's fleet vehicle GHG emissions levels to 20% below 2007 levels by 2015 Delta will reduce its fleet-related emissions by 459 tonnes of CO₂e. In 2007, the corporate fleet vehicles emitted 28% of all of Delta's Corporate GHG emissions. This equates to 2295 tonnes of the total 8194 tonnes of CO₂e emitted through the delivery and operation of municipal services. In 2010, staff will work towards maintaining Delta's Gold level E3 Green Fleet accreditation.

Green Fleet Management Plan Summary:

The Green Fleet Management Plan is a major component of Delta's Corporate Climate Change Initiative. The plan is based on a program of actions that aim to reduce GHG emissions and improve the overall efficiency of Delta's corporate fleet. The plan includes fleet accreditation through the Fraser Basin Council's E3 Fleet Accreditation Program, an Energy Efficient Vehicle and Component Purchasing Strategy, and a transportation demand management program for Delta employees. Delta has already implemented or participated in several successful programs that have reduced fleet emissions, including:

- Achieved E3 Green Fleet Gold level accreditation
- Purchase of Hybrid-electric vehicles
- Off-Road Pollution Prevention Program
- Diesel Oxidation Catalyst Conversions
- ECM (Electronic Control Module) Adjustments



Future Green Fleet Management Actions:

E3 Green Fleet accreditation:

Delta achieved gold level accreditation and will make efforts to maintain this level by implementing actions within the following best management practice categories:

- | | |
|--------------------------|---------------------------|
| ▪ training and awareness | ▪ operations/maintenance |
| ▪ idling reduction | ▪ trip and route planning |
| ▪ vehicle purchasing | ▪ utilization management |
| ▪ fuel data management | ▪ GHG performance |
| ▪ vehicle right-sizing | ▪ light weight components |

Energy efficient purchasing strategy:

The Energy Efficient Purchasing Strategy includes:

1. Hybrid vehicle purchasing (2011)
2. Fuel efficient conventional vehicle purchasing and right sizing
3. Fuel efficient heavy duty and off-road vehicle purchasing
4. Electric vehicle purchase and construction of supporting plug in infrastructure

Transportation demand management:

In its fourth year, continue to support the TDM program, which includes the Go Home Green (GHG) Corporate Carpooling Program. Delta is also offering a 25% bus pass subsidy for employees to encourage the use of public transit.

Financial Implications:

E3 Green Fleet accreditation:

- Maintain Gold Rating

Existing Budget

Energy efficient purchasing strategy:

- Purchase & install more GPS units to monitor idling (previously approved by Council) \$10,000

Transportation demand management:

- 25% 3-zone bus pass subsidy for 40 \$15,000
- Increase promotion of bus pass subsidy
- Maintenance cost for fleet carpool vehicles

Existing Budget

Potential Funding Opportunities:

- FCM's Green Municipal Fund (Sustainable Transportation)
- FCM's Municipal Relations Program
- The Government of BC's Local Grants Program
- Transport Canada's Moving On Sustainable Transportation
- Government of Canada's Ecotrust Fund

Department:

Engineering (lead), All Departments (support)

Infrastructure Improvement Plan

Infrastructure Improvement Plan Goals:

According to Delta's greenhouse gas (GHG) 2007 baseline study, water, sewer, drainage infrastructure and corporate solid waste collection processes emitted 9% of all of Delta's Corporate GHG emissions - 7% from solid waste, 1% from utilities, and 1% from street lighting. This equates to approximately 763 tonnes of CO₂e. Delta will reduce emissions generated through the provision of corporate solid waste, utilities and lighting as technology permits. This will represent a 2% to 15% emission reduction amongst water, sewer, drainage and solid waste services.

Infrastructure Improvement Plan Summary:

The Infrastructure Improvement Plan aims to reduce GHG emissions and consider the susceptibility of infrastructure servicing to related climate change impacts. To do both, the plan has been broken into two components: the Utility Service Improvement Plan and the Transportation Improvement Plan.

1. The Utility Service Improvement Plan proposes to identify ways to improve the energy efficiency of Delta's utility services. This will include further efficiency reviews and improvements to Delta's sanitary and water pump stations, flood boxes and street lighting. Staff will continue to promote water conservation through the WaterWise team, water meter program and recycling by providing additional recycling options for staff and the community. In addition, staff will continue to implement drainage best management practices (infiltration swales, permeable surfaces, etc).
2. The Transportation Improvement Plan proposes to look at our transportation infrastructure and develop ways to enhance transportation choices while also considering best management practices. The plan will include cycling and walking improvements (corridors, facilities and bike lanes), as well as improved and fully accessible bus stops and bus shelters.



Financial Implications:

The Utility Service Improvement Plan:

▪ Pump station upgrades	\$200,000
▪ Implement street light pilot program	\$50,000
▪ Voluntary water meter program	\$500,000
▪ PRV station upgrade	\$460,000
▪ Sewer heat recovery study 2011	\$100,000

The Transportation Improvement Plan:

▪ Walking/cycling implementation plan	\$30,000
▪ Walking/cycling infrastructure	\$400,000
▪ Transit and road space infrastructure (South Delta community shuttle)	\$250,000
▪ Construct Nordel Way bus shelters & bays 2010	\$300,000

Potential Funding Opportunities:

- FCM's Green Municipal Fund (Transportation) Ministry of EMPR's Community Action on Energy Efficiency
- Government of Canada's Ecotrust Fund
- Canada Strategic Infrastructure Fund
- BC Ministry of T's Cycling Infrastructure Program
- BC Ministry of CS's Local Motion Fund
- ICBC - Road Sense
- BC Local Infrastructure Planning Grant Program
- BC Hydro

Future Infrastructure Improvement Plan Actions:

The Utility Service Improvement Plan:

- **Pump Stations/Flood boxes** - A sanitary/water pump site will be upgraded with a variable speed drive to improve energy efficiency.
- **Street Lighting** - Investigate new energy efficient street lighting technologies.
- **Water Metering Program** - Continue with voluntary residential water metering.
- **Energy Recovery** - It is proposed to construct a Pressure Reducing Valve (PRV) station with capability to add power generation; commission a sewer heat recovery options review.
- **Recycling** - Review opportunities for installing recycling bins to reduce solid waste generated by Delta.
- **Best Management Practices** - Continue to implement drainage BMPs and the installation of rain gardens.

The Transportation Improvement Plan:

- **Walking/Biking** - Continue to improve bicycle facilities, guidance signs, maps, and a strengthened sidewalk network. Review cycling infrastructure implementation plan.
- **Transit and Road Space Infrastructure** - Review pedestrian options, bike lanes/corridors (rather than just shared vehicles/bike lanes - may require street parking reductions), and improved transit service.

Department:

Engineering (lead)

Education and Training Plan

Education and Training Plan Goal:

The goal of the Education and Training Plan is to educate approximately 1000 full time, part time and temporary staff about the impacts of climate change and how staff may reduce emissions or adapt. This training will assist the reduction of Delta's ecological footprint and will save money on energy costs. These actions will have a positive impact on the environment, as well as enable staff to affect change in the workplace and the community. In 2010 staff will provide education opportunities for staff through special events and specific training programs such as fuel efficiency training under the E3 Green Fleet program.

Education and Training Plan Summary:

The Education and Training Plan is intended to train and educate Delta employees about the opportunities for and benefits of reducing GHG emissions. The Plan will include training (e.g. fuel efficient driving techniques). This plan will build upon existing educational and training initiatives, including:

- Workshops and education sessions
- Anti-Idling Campaign, Efficient Driving Techniques workshop (Hall)
- BEST Commuter Challenge
- Turn it Off Challenge



Future Education and Training Actions:

Lunch and learns:

Throughout the year all staff will be invited to participate in related lunch and learns or events that highlight climate change, sustainability, transportation and energy conservation.

- Fall Harvest—Fall 2010
- Earth Week—April 2010

Fuel efficient fleet training:

- Deliver extended driving fuel efficiency training sessions to staff at the Worksyard.

Education/training opportunities for staff:

Where funding is available, staff will be offered the opportunity to attend environmental workshops and conferences that are related to their position. These may include:

- Climate change, sustainability, planning and other related seminars.

Reporting success to staff:

All successes will be reported to staff, Mayor and Council.

Financial Implications:

Lunch and Learns:

- Materials and fees

\$2000 (CAE & Eng)

Fuel Efficient Fleet Training:

See Fleet Management Plan

Education/Training Opportunities for Staff:

Existing budget

Reporting Success to Staff

Existing staff time

Potential Funding Opportunities:

- Corporate department budgets & staff time
- Stewardship Canada

Department:

Human Resources, Climate Action & Environment and Engineering (lead), All other departments (support)

Flood Management Plan

Flood Management Plan Goals:

Most of the Corporation of Delta is located on the lowlands of the Fraser River delta, and is protected by an extensive dike system along the Fraser River, the Strait of Georgia, and Boundary Bay. While the dike system provides a substantial degree of flood protection, it does not completely eliminate the potential for flooding in the protected areas. The goal of the Flood Management Plan is to identify ways to reduce the risks associated with climate induced flooding, whether it be from sea level rise, spring freshet events, or extreme precipitation events.

Flood Management Plan Summary:

Delta's Flood Management Plan is addressing the necessary adaptive strategies needed to reduce the risk of inland and coastal flooding. The Plan will include a seawall/dike improvement strategy to cope with sea level rise, a flood box and pump upgrade program to reduce the impacts of flood events. This plan will build on initiatives that Delta has already taken to reduce flood risk in the community. Some of the initiatives that have been undertaken include:

- Constructing a sand berm along the Beach Grove shoreline
- Seawall/dike inspections
- Storm surge data collection
- Delta storm surge prediction model for winter storm monitoring of flood risk
- Present findings of Flood Risk and Consequence Study
- Upgrade the Oliver Pump station
- Supporting national studies such as UBC's Climate Change Visualization
- Participation on the national committee on infrastructure climate change impacts



Future Flood Management Actions:

Seawall/dike improvements:

Climate change is contributing to sea level rise. The Intergovernmental Panel on Climate Change has estimated that sea level between 1993 and 2003 rose at a rate of 3.1mm/year. It is likely that the rate of observed sea level rise in the year 2100 will be higher than current levels. Delta will plan sea level/dike improvements and seek senior government funding to address these long term projections.

Improving flood infrastructure:

Much of Delta is built on a floodplain that is protected by a series of 9 dikes totaling 61.5km in length. It is also protected by floodboxes, pump stations and inland drainage culverts that are normally capable of protecting the community from flooding. As sea level rises, this infrastructure may not be able to handle the load. Delta is commencing to implement improvements to the system to reflect sea level rise projections and to work to continue to provide a reasonable level of protection against flooding.

Floodplain strategy:

Delta is currently evaluating flood construction levels and future dike elevations for the lowland areas. This is being done to review how risk is changing over time. Delta is also partnering with UBC-CALP to investigate potential adaptation options and related impacts.

Financial Implications:

Seawall/Dike Improvements:

- Ongoing evaluation of dike upgrade options.
- Selected dike improvements.

\$300,000

Improve Flood Protection Infrastructure:

- Report on the Flood Risk & Consequence Study findings

Existing Budget

Floodplain strategy

- Flood construction level and dike elevation evaluation.
- UBC-CALP partnership

Existing Budget

Potential Funding Opportunities:

- Canada Strategic Infrastructure Fund
- BC Local Infrastructure Planning Grant Program
- Flood Protection Program Funding

Department:

Engineering (lead), CP&D (support)

Sustainable Development Plan

Sustainable Development Plan Goal:

Although Delta is not growing rapidly at present, our community is changing as a result of steady re-development of existing areas and several major external projects. Delta's Official Community Plan (OCP) helps us plan for and manage these changes and requires that we do so in a sustainable way. The Sustainable Development Plan will address how the municipality will direct, influence and promote climate change mitigation and adaptation in new development projects for all types of land uses. Specific targets for 2010 include the completion of development permit guidelines for the River Road East Eco-Industrial Community Zone C and development of a community energy and emissions plan.

Sustainable Development Plan Summary:

Large and small developments can have an impact on the environment and on our community's social fabric and quality of life. While Delta has been successful in working with developers of larger projects to employ high environmental standards, including those that can mitigate the effects of climate change, the intent of this plan is to better integrate these elements into all development projects. The plan will identify ways to reduce greenhouse gas (GHG) emissions from new development while ensuring other objectives continue to be met such as livability and affordability in residential areas, business viability and community integration in commercial and mixed use areas, and employment and efficient movement of goods in industrial areas. Adaptation to changing climate is also a key consideration in land use planning. In 2009, Delta completed an update of OCP policies to incorporate community scale greenhouse gas emission reduction targets. Implementation of these policies to achieve Delta's targets will guide much of the Sustainable Development Plan in 2010.



Financial Implications:

Most of the actions identified in this plan are closely tied with ongoing efforts to improve development standards and procedures. In this respect, much of the costs of implementation will be funded through existing departmental budgets. New initiatives that may require funding include those that involve outside consulting services, preparation and publication of materials, coordination of events, or advertising of new requirements. Budgets for such initiatives are presently undetermined and will be subject to consideration in the 2009-2013 Financial Plan.

Future Sustainable Development Actions:

Many aspects of this plan are already in use, while others are new. Future actions will build upon the tools and programs in place while at the same time developing and implementing new initiatives.

Existing or Under Development:

- Continue to encourage the implementation of solar hot water heating systems.
- Development permit guidelines for the River Road East Eco Industrial Community Zone C.
- Participation in the Pembina Institute's Municipal Green Building Leaders Program.

To be Developed:

- Updates to subdivision, development and landscaping standards.
- Updates to Building and Plumbing Bylaw.
- Parking space reduction study.
- Educational materials and rewards programs for innovative, green developments.
- Develop a community energy and emissions plan.
- Participation in the Build to Zero working group.

Potential Funding Opportunities:

- Community Action on Energy Efficiency Program
- FCM's Green Municipal Fund (Sustainable Community Plans)
- BC Green City Awards
- BC Smart Development Partnership Program
- Brownfields funding programs

Department:

Community Planning and Development (lead), all other Departments (support).

Community Outreach and Education Plan

Community Outreach and Education Plan Goals:

One of the primary goals of the Initiative is to reduce Delta’s corporate ecological footprint. This effort will be communicated to the public. The public are also invited to become informed and to participate in related climate action events. Staff will connect with residents and businesses through a series of public education and outreach programs.

Community Outreach and Education Plan Summary:

To mitigate the effects of climate change, staff will work towards transforming everyday behaviour of residents, business owners and children through education and outreach programs. A suite of interactive and informative education programs, media and activities will be explored that captures the public’s attention and provides practical solutions. The plan will build upon the education and outreach initiatives already being undertaken in Delta. Examples of these initiatives include:

- Water Wise Education Team
- Curbside Recycling Education
- Corporate Climate Change webpage



Future Community Outreach and Education Actions:

Web based outreach:

The climate change webpage describes the Initiative and educates residents about global warming and its implications for Delta. Future action will be taken to:

- Reflect new information and climate action initiatives.
- Partner with Earth Day Canada to be part of the ecoAction Team program

Public Outreach and Programs:

A series of outreach programs will be implemented to connect with the public, gauge their perceptions about climate change and give residents opportunities to learn new behaviours. Some examples are:

- Deliver Sustainable Gardening workshops as part of the Pesticide Bylaw
- Deliver the Climate Smart program for small-medium businesses (2010)
- Earth Week 2010
- Host UBC-CALP Adaptation Visualization Working Group
- Deliver environmental education in PRC summer camp programs
- Design best management practice guidelines for small businesses

Educational School Programs:

- In partnership with Engineering, provide funding for “Keep Cool!” a climate change themed play for elementary school children.
- Deliver B.C. Sustainable Energy Association “Climate Change Show down” to Delta elementary school children.
- Deliver the Rain Gardener program in collaboration with Engineering to schools with new rain gardens.

Financial Implications:

Climate Change Website:

- Website update and maintenance *Existing staff time*

Public Outreach and Programs:

- Sustainable Gardening workshops; Earth Week; UBC-CALP working group; environmental education; BMP guide *Existing staff time & budget*
- Climate Smart program (2010) *\$8,750*

Educational School Programs:

- Various educational opportunities; Keep Cool! Play; Climate Change Showdown *Existing staff time; \$9750*

Potential Funding Opportunities:

- Green Streets Canada – Tree Canada Foundation
- Power Smart for Business Program
- EcoACTION Community Funding
- Pembina Institute for Appropriate Development

Department:

Climate Action & Environment (Lead),
Engineering and PR&C (Support)

Urban Forestry Management Plan

Urban Forestry Management Goal:

Our urban forests filter water, provide habitat, and improve local air quality. These forests include all trees growing individually, along streets, in groves, forests and woods as well as shrubs and ground cover. Staff will work towards regularly monitoring urban forest composition and health. Establishing this knowledge base will assist in the management and succession of current and future urban tree stock. 2010 efforts include the completion of the 20,100 trees by 2010 program and reviewing the Trees for Tomorrow program.

Urban Forestry Management Plan Summary:

The Urban Forestry Management Plan proposes initiatives focused on the enhancement and maintenance of urban forested spaces in Delta. The Plan will take inventory of Delta's tree stocks, monitor change, and develop specific recommendations and plans that utilize existing and future urban tree stocks. The emphasis of the Plan will be on public lands while recognizing the important role private lands also play in urban forest ecology. Examples of efforts related to the Plan and already implemented include:

- Trees for Tomorrow planting program
- Working towards a 40% urban canopy cover goal in all three Delta communities
- Bylaw No. 6336 Delta Tree Cutting Regulation Bylaw



Future Urban Forestry Management Actions:

Delta Tree Inventory:

Staff will continue to enhance urban tree canopy by planting trees. This will be done via:

- Planning to updating canopy coverage and tree & understory information.
- The completion of 20,100 trees by 2010 program.
- Planting more diverse and native tree species where appropriate throughout the municipality.

Tree Planting and Preservation:

- Work with CP&D to promote tree planting and preservation on private property.
- Collaborate with CP&D, CAE and Engineering to create planting plans for Delta parks and natural areas.

Promoting the Urban Forestry Benefits:

Educating the public about the benefits of urban trees is a key component to maintaining urban forest integrity. In 2010, staff will:

- Update information about the benefits of trees on the Corporate website.

Financial Implications:

Delta Tree Inventory:

- Inventory upkeep and reporting
Existing budget

Tree Planting and Preservation:

- Tree planting and preservation (including matching funds for grants)
Existing budget

Promoting the Urban Forestry Benefits:

- Development of on-line & print material
Existing budget

Potential Funding Opportunities:

- Green Streets Canada (Tree Canada Foundation)
- FCM's Green Municipal Funds (Enabling Fund, Investment Fund & Infrastructure Fund)
- Sustainable Enterprise Fund (MV), BC Hydro
- Trees for Tomorrow: BC 150 Groves

Department:

Parks, Recreation & Culture (lead),
CP&D and CAE (support), Engineering
(operational role).

Natural Areas Management Plan

Natural Areas Management Plan Goal:

Delta is one of the most ecologically diverse municipalities in the Lower Mainland. From Burns Bog to Cougar Creek to Boundary Bay, the Municipality of Delta is home to a wide range of birds, amphibians, fish, small mammals and plant species. It is imperative that this biodiversity is monitored and protected over time.

Natural Areas Management Plan Summary:

The Natural Areas Management Plan is intended to protect and preserve the ecological integrity of designated ecologically sensitive areas (ESA) as well as other natural areas like riparian areas found along major irrigation corridors and park land. Climate change will exert pressure on these areas that regulate ecosystem health and provide habitat for wildlife. The Plan will consider water and soil quality, vegetation and wildlife. Public education will also be a component of this plan. Examples of efforts already made include:

- Burns Bog ditch blocking program.
- Installation of water quality monitoring equipment at Cougar Creek.
- Invasive plant mapping in major Delta parks



Future Natural Areas Management Actions:

Watershed Management:

- Complete Year 2 and 3 of the Boundary Bay Ambient Monitoring Program
- Implement the Cosmetic Pesticide Bylaw
- Support ongoing efforts in the ecological restoration of Burns Bog
- Digitize environmental information onto DeltaMap, e.g. stream code classifications
- Perform a watershed assessment; identify/describe land use, physical attributes (i.e. landform), basic hydrology, connectivity, pollution point sources/non-point sources, habitat values, restoration/enhancement opportunities and stakeholders for all watersheds in Delta.
- Continue to participate in the ISMP process

Invasive Plant Management Strategy

- Complete a management framework for the top six emerging invasive plants in Delta.
- Continue to be involved with the Greater Vancouver Invasive Plant Council in the capacity of a Director to the Board.
- Complete a baseline invasive survey and mapping inventory

Environmental Stewardship

- Create a working stewardship model for the public, business community and staff to access for volunteer opportunities and other environmental related stewardship activities through Climate Action & Environment.

Staff BMP Training Program

- Work with Worksyd staff to draft and implement a 2010 training program for operation staff in the areas of instream works, spill response and erosion and sediment control.

Financial Implications:

Watershed Management:

- Digitize environmental information
- Needs assessment, ISMP and Burns Bog support
Existing staff time

Invasive Plant Management Strategy:

- Management framework & mapping
Existing budget

Environmental Stewardship:

- Support material
Existing staff time

Staff BMP Training Program

- Retain a consultant & CAE staff support
\$3,000 & existing staff time

Potential Funding Opportunities:

- MoE's Public Conservation Assistance Fund
- Real Estate Foundation of BC
- BC Agricultural Environmental Partnership Initiative
- Stewardship Canada
- Pacific Salmon Foundation

Department:

Climate Action & Environment and
Engineering (lead), CP&D (support)