

# Overview of Climate Action & Environmental Management in the City of Nanaimo



# Overview of Session

- Legislative Framework
- Environmental Management
- Storm Water Management
- Operations
- Environmental Stewardship & Community Involvement
- Climate Change
- Conclusion





# Legislative Framework

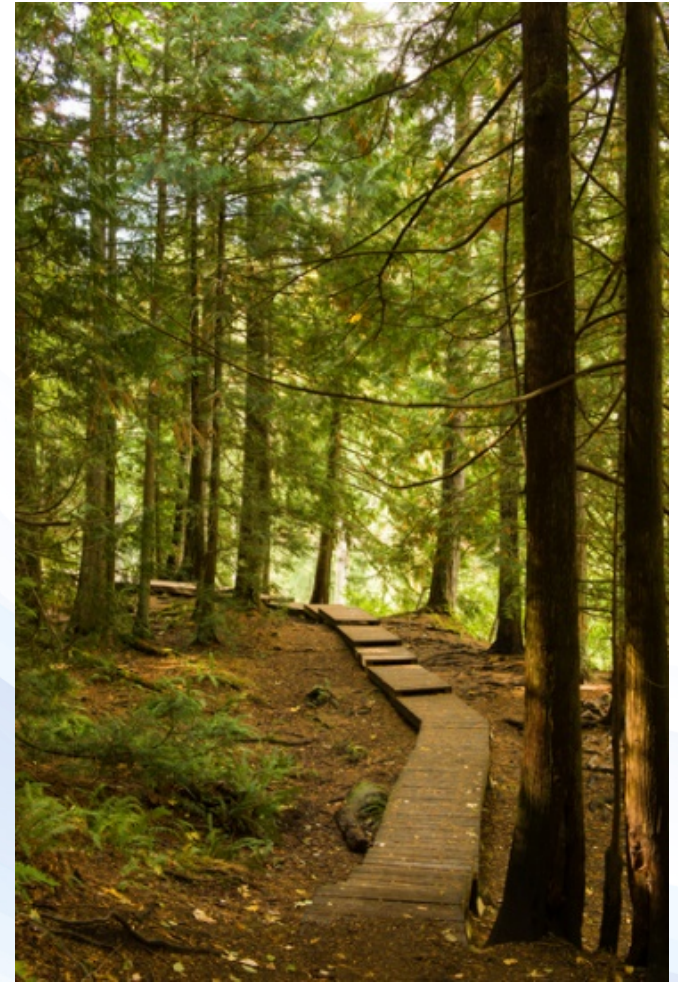
## Federal & Provincial Legislation

### Federal Legislation

- Fisheries Act
- Species at Risk Act

### Provincial Legislation

- Wildlife Act
- Riparian Areas Regulation Act
- Water Sustainability Act
- Contaminated Site Regulation



# Legislative Framework

## Plans / Bylaws / Policies

### Regional District

- Regional Growth Strategy

### City of Nanaimo

- Strategic Plan
- Official Community Plan
- Water Conservation Strategy
- Water Supply Strategic Plan
- Parks Master Plan
- Transportation Master Plan
- Neighbourhood Plans



### Bylaws

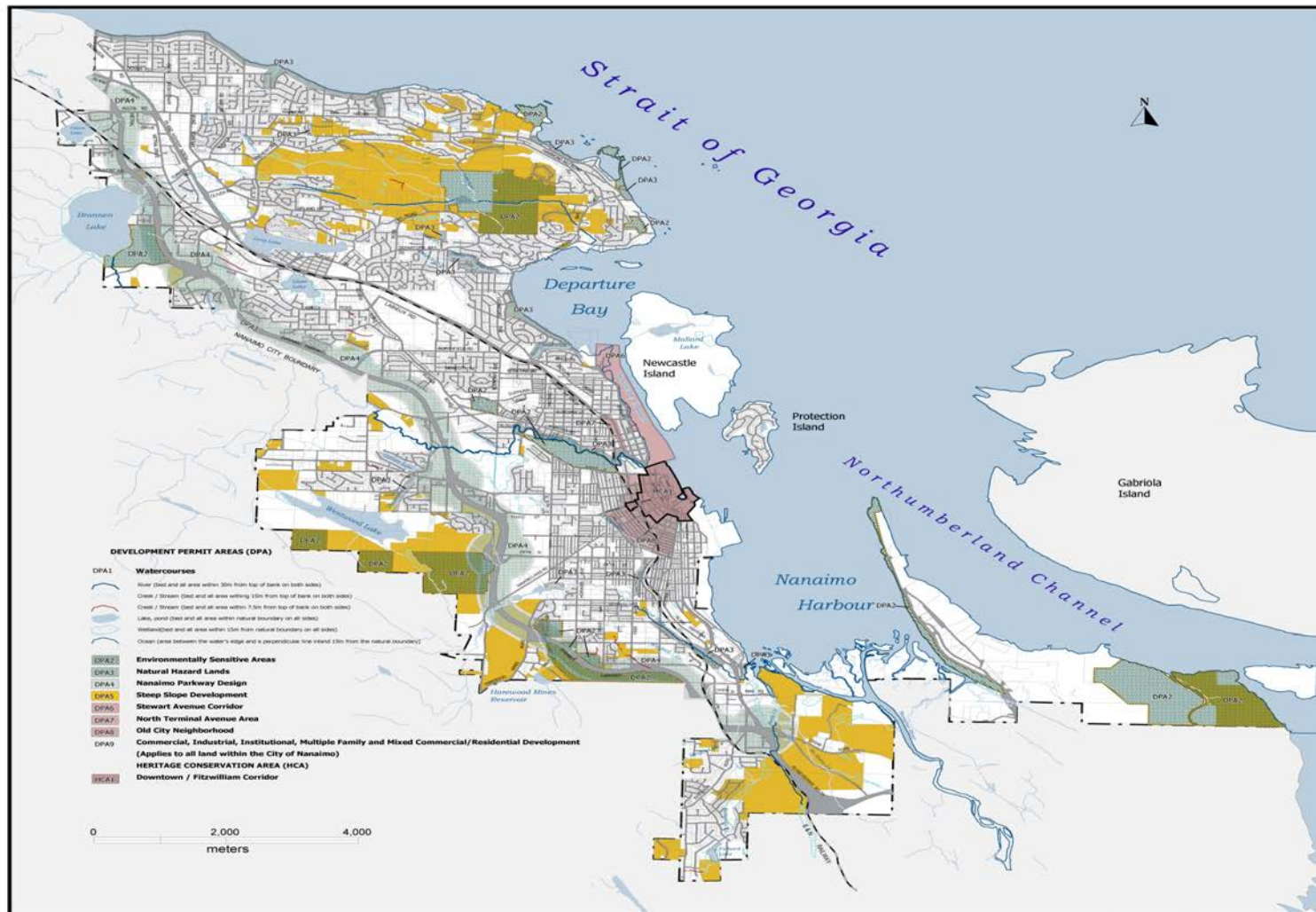
- Zoning Bylaw 4500
- Tree Management and Protection Bylaw No. 7126
- Pesticide Use Bylaw No. 7102
- Regional Emissions Reduction Reserve Fund Bylaw No. 7184
- Soil Removal and Depositing Bylaw 1976 No. 1747

### Council Policy

- Energy Conservation and Management Policy
- Purchasing Policy
- Green Building Strategy
- Anti-Idling Policy







City of Nanaimo Official Community Plan

MAP 3: DEVELOPMENT PERMIT &  
HERITAGE CONSERVATION AREAS










**CITY OF NANAIMO**  
**Zoning Bylaw No. 4500**  
**Schedule 'C' - Watercourses**



Printed: 2011-June

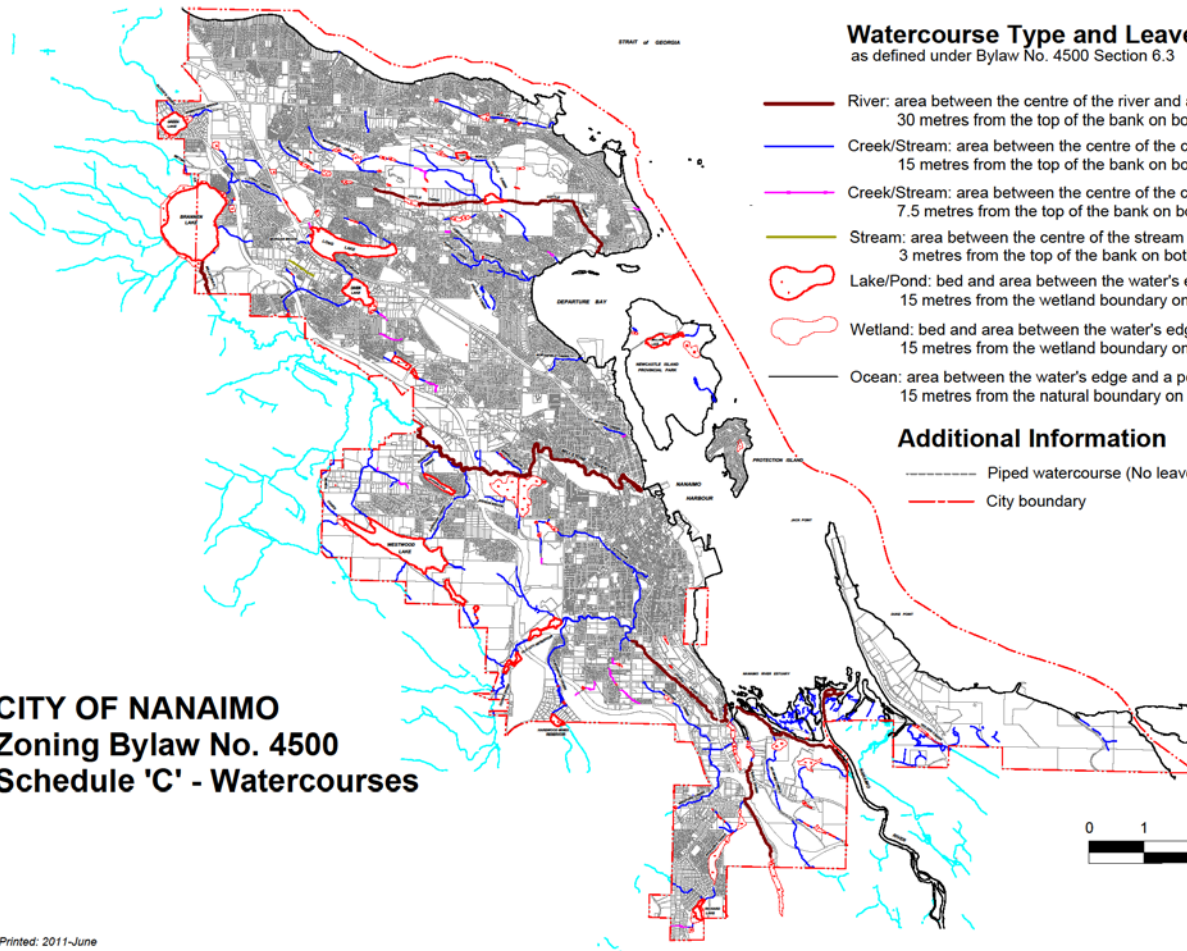
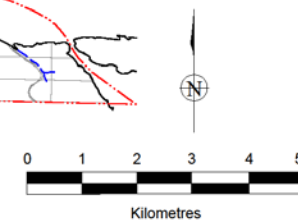
**Watercourse Type and Leave Strip**

as defined under Bylaw No. 4500 Section 6.3

-  River: area between the centre of the river and a perpendicular line inland 30 metres from the top of the bank on both sides
-  Creek/Stream: area between the centre of the creek and a perpendicular line inland 15 metres from the top of the bank on both sides
-  Creek/Stream: area between the centre of the creek and a perpendicular line inland 7.5 metres from the top of the bank on both sides
-  Stream: area between the centre of the stream and a perpendicular line inland 3 metres from the top of the bank on both sides
-  Lake/Pond: bed and area between the water's edge and a perpendicular line inland 15 metres from the wetland boundary on all sides
-  Wetland: bed and area between the water's edge and a perpendicular line inland 15 metres from the wetland boundary on all sides
-  Ocean: area between the water's edge and a perpendicular line inland 15 metres from the natural boundary on all sides

**Additional Information**

-  Piped watercourse (No leave strip required)
-  City boundary





# Environmental Management

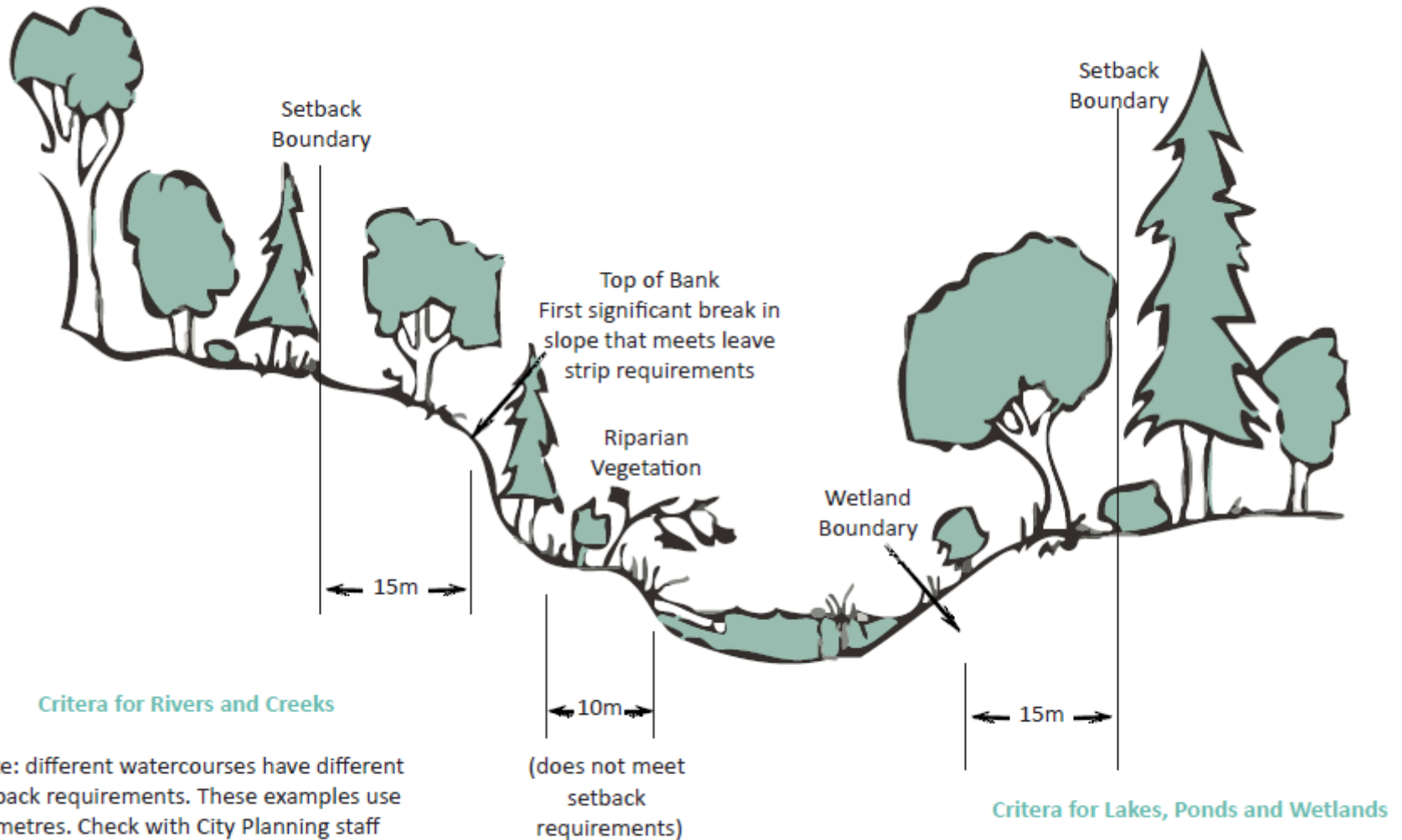
## Watercourses

### Zoning Bylaw 4500 – Watercourses – Schedule C

- 15m or 30m setback from top of bank of a stream
- 15m setback from wetland boundary of a lake or wetland
- Variances through DPA



# Environmental Management



Note: different watercourses have different setback requirements. These examples use 15 metres. Check with City Planning staff for specific setback.





# Environmental Management

## Riparian Areas Protection Regulation (RAPR)

- Provincial regulation from the Riparian Area Protection Act
- For the protection of fish and fish habitat only
- Streamside Protection and Enhancement Area (SPEA) measured from high water mark
- SPEA is the minimum protection to avoid HADD under Fisheries Act



# Environmental Management

## Environmentally Sensitive DPA

- Non-fish bearing watercourses and wetlands
- Terrestrial herbaceous
- Older forest
- SARA (critical habitat protection) and Red/Yellow listed species





# Environmental Management

## Environmentally Sensitive DPA

### Process

- Development application
- Request environmental assessment be completed by Qualified Environmental Professional (RPBio)
- Assessment review by staff
- ESA protection through DP conditions





# Urban Forestry





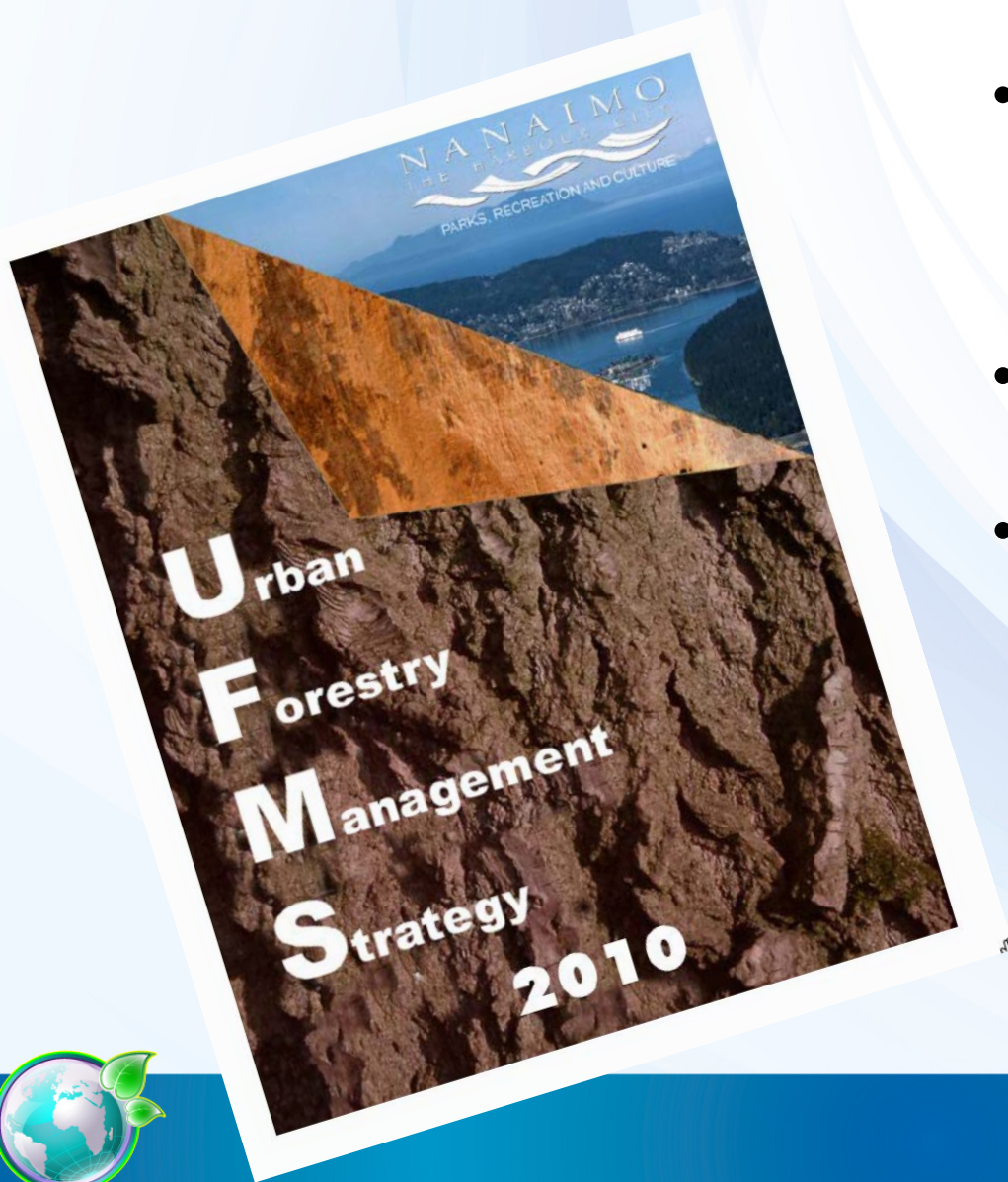
# Urban Forestry

## Benefits of a well-functioning Urban Forest

- Environmental
  - Sequester Carbon
  - Mitigate Flooding
  - Improve water quality
- Social
  - Create sense of place
  - Mental and Physical Health
  - Food Security
- Economic
  - Natural Asset
  - Extends life of Infrastructure
  - Reduce heating and cooling costs



# Urban Forestry



- Developed to fulfill the need for better forest, vegetation and ecosystem management throughout the City.
- Identified the need for a new tree bylaw
- Established a goal of increasing tree canopy coverage by 4% over ten years





# Urban Forestry

## Bylaw No. 7126 Management & Protection of Trees within the City of Nanaimo



- Adopted in 2013
- A home owner is allowed to **remove up to 4** non “protected” trees in a calendar year without a permit.
- If a permit is required, replacement trees must be replanted.
- If a parcel of land being developed is **over 0.5ha in size, 20% of the trees onsite** must be retained.

*It takes many years for a tree planted today to provide the same environmental benefits as retaining a mature tree.*





# Urban Forestry

A photograph of a forest landscape. The foreground shows a grassy field with several small, young trees. The middle ground is filled with a dense forest of evergreen and deciduous trees. Many of the deciduous trees have yellow and orange autumn foliage. The background is shrouded in a thick mist or fog, creating a layered effect. The overall scene is serene and natural.

## Current Projects and Programs

RonKirk  
Photography



# Urban Forestry

**CITY OF NANAIMO**  
Urban Forestry  
250-755-4460 ext. 4357

**Urban Trees**

Tree to be picked up from:  
Green Thumb Garden Centre  
6261 Hammond Bay Road  
Nanaimo, BC  
Phone: 250-755-0808

## TREE VOUCHER

*This voucher may be exchanged for one tree. Redeemable at Green Thumb Garden Centre* **\$20**

to \_\_\_\_\_

Authorized by Patrick McIntosh, Urban Forestry Coordinator

Expires: 2018-MAR-25

Number: \_\_\_\_\_

**Green Thumb GARDEN CENTRE**  
**NANAIMO**  
THE HARBOUR CITY

Max 2 per property. Must be a City of Nanaimo resident or property owner. Not redeemable for cash. Redemption value not to exceed \$75.00. Tree shall be a designated tree specified for voucher program. Not valid for any other nursery stock.

1300 Vouchers sold since 2017!  
Funded by money collected through  
fines, permits and development.

**\$20 TREE VOUCHERS**  
(UP TO \$75 VALUE)

The City of Nanaimo wants your help in increasing our urban forest canopy. Nanaimo residents can purchase a **\$20 tree voucher** here and redeem it for a fruit or coniferous tree at Green Thumb Garden Centre.

**Save the World!**

**PLANT MORE TREES!**

**PROGRAM DETAILS**

- There will be ~~400~~ vouchers available for Nanaimo residents or property owners to use for the purchase of a tree for \$20 each (cash only)
- No more than 2 vouchers issued per property per year
- All sales are final
- Redemption value not to exceed \$75
- Vouchers expire on December 16, 2018

**CITY OF NANAIMO**  
THE HARBOUR CITY

**Green Thumb GARDEN CENTRE**



# Urban Forestry

## Beaufort Food Forest

- Planted in December 2017.
- Collaboration between the City, Neighborhood, MYCDC, and BC Hydro Greening Grant.
- 59 fruit and nut trees and many edible shrubs.
- Watering done by City Park staff and volunteers.
- Will serve to provide, food security, forest cover, educational opportunities, sense of community, wildlife habitat, recreation.

### BEAUFORT PARK FOOD FOREST

These gardens were designed to demonstrate edible landscaping in the City.

A **Food Forest** is intended to mimic a natural forest ecosystem with plants chosen and located around the trees in a way that helps support and sustain them. Many of the plants you will see are chosen to act as pollinator attractors, nutrient accumulators and soil stabilizers.

- Be gentle when picking fruit
- Be respectful of all users in this space
- During summer months, help us keep our "gator" bags filled with water

We welcome everyone to enjoy this space and to enjoy the food it provides.

Interested in helping out at the Beaufort Forest? Contact us!



[www.nanaimo.ca](http://www.nanaimo.ca) • 250-756-5200 • [parksandrecreation@nanaimo.ca](mailto:parksandrecreation@nanaimo.ca)

#### Beaufort Food Forest Tree List

**APPLES:** Originating in Kazakhstan, apples arrived in Europe by way of the Middle East, and arrived in Canada with the French explorer Samuel de Champlain. They were planted throughout the country by the pioneers who ate them raw, cooked and baked with them, dried them for winter food and processed them into cider.



**CHERRIES:** From Europe, Western Asia and parts of Northern Africa, cherries are classified as stone fruits (fruits containing a singular central seed), alongside apricots, plums, peaches and almonds.



**PEARS:** The pear is native to coastal and mildly temperate regions of Western Europe, North Africa and Asia. The tree typically reaches heights of 10-17 metres (33-56 ft). Because of its versatility and long storage life, pears were a valuable commodity in the ancient world.



**PLUMS:** Plums may have been one of the first fruits domesticated by humans. Three of the most common varieties are only found around human settlement.



**OTHER TREES:** Look at the map at the back of this book to see other trees that are growing in this food forest, including quince, mulberry, almond, hazelnut and walnut.





## Shaw Tree Planting Grant

- Administered through Tree Canada, Shaw provided \$3000.00 for materials and 30 volunteers.
- 250 trees and shrubs planted.
- Reforested the top of the bank along the Millstone.



## Overview of Policies and Guidelines

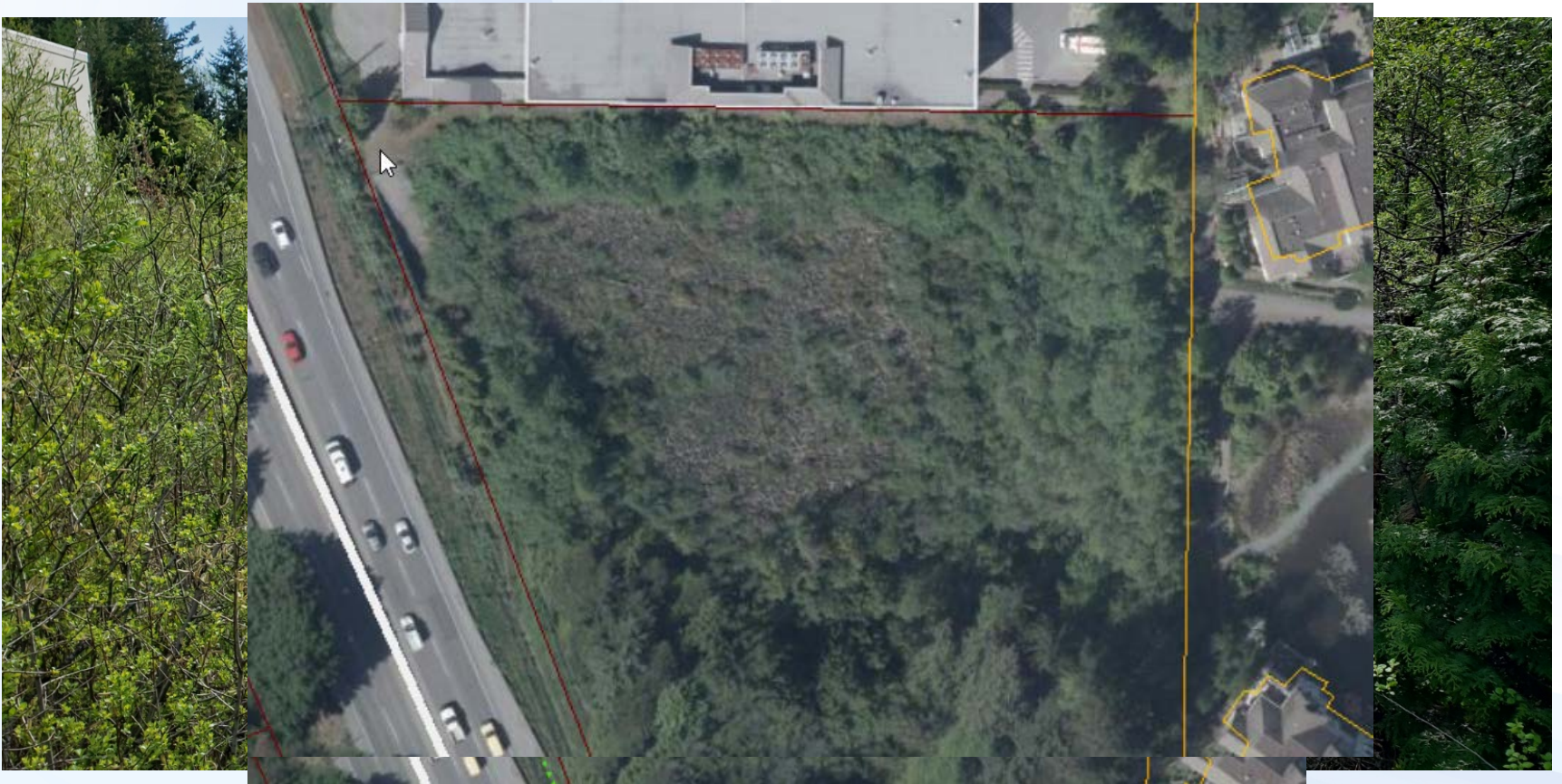
- OCP
- Stormwater Management in Nanaimo Guidelines
- Steep Slope Development Guidelines
- Stormwater Planning Guidebook
- ISMP's (Wexford & Walley)
- MoESS Section 7





# Stormwater Management

## Project Highlights Longwood Station





# Stormwater Management

## Project Highlights Hawthorne Subdivision





# Stormwater Management

## Project Highlights Greenrock Industrial Subdivision



## Adoption of MoESS Section 7

**November, 2016**

- Capture, retain, infiltrate or reuse 6-Month, 24-hour rainfall (31mm +/-)
- Detain for areas that discharge into watercourses to minimize erosion
- Treatment to remove 90% of suspended particles
- Account for climate change





## Ongoing Collaboration & Implementation

- Continuing to refine development requirements
- Collaboration with Parks & Recreation and E&PW to identify opportunities
- Review and recommend bylaw amendments to Council



# Sanitation Services

- Service Levels
- Regulatory Framework
- Looking Forward

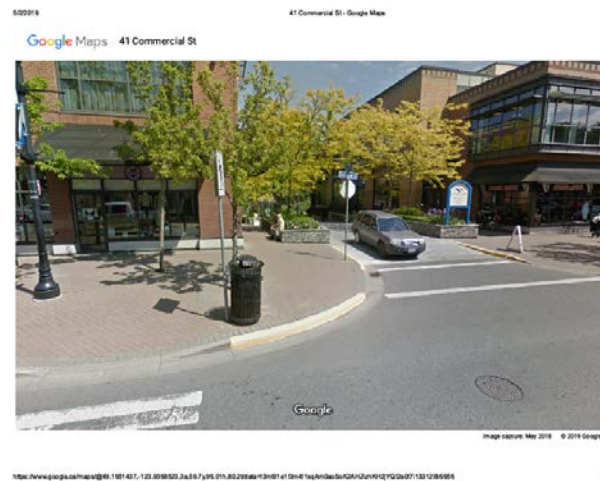
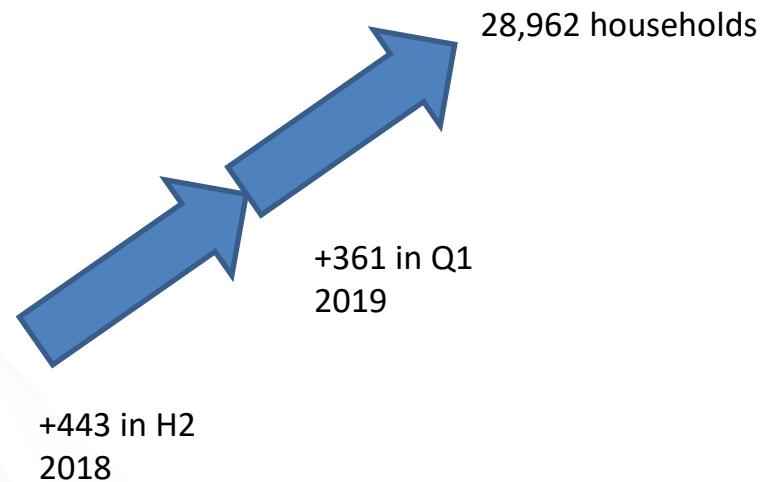




# Sanitation Services



Cart location and accessibility



100+ streetside receptacles -primarily downtown



# Sanitation Services Regulatory Framework

## Waste Management Act

- Includes Recycling Regulation (EPR Programs)
- Requires Regional Districts to develop Solid Waste Management Plans and update regularly – RDN waiting approval on latest update

## Local Government Act

- Confers authority on Regional Districts to establish bylaws related to services and facilities
- Does not impede Municipalities from setting higher standards

## Solid Waste Management Plan

- Sets regional goals, targets, and programs
- Applies to private and public sector activities

## City of Nanaimo Bylaw 7128

- Municipal Solid Waste Collection Bylaw
- Last update 2018-DEC-17
- Sets service levels, rates, and requirements related to municipal collection services

## RecycleBC Collection Contract

- EPR Stewardship Agency under the Recycling Regulation
- Contract with City to collect recyclables from eligible curbside households. Expires ?





# Sanitation Services

## Looking Forward

- New programs included in the RDN Solid Waste Management Plan
- What's in the garbage? – **waste composition study**
- Promote use of the **NanaimoRecycles** App as a primary information source for residents
- Improve collection efficiency through routing optimization
- Continue **citizen engagement** education through hiring of Zero Waste Coordinator
- Monitor safety outcomes associated with automation implementation
- Plan for new resources as the City grows

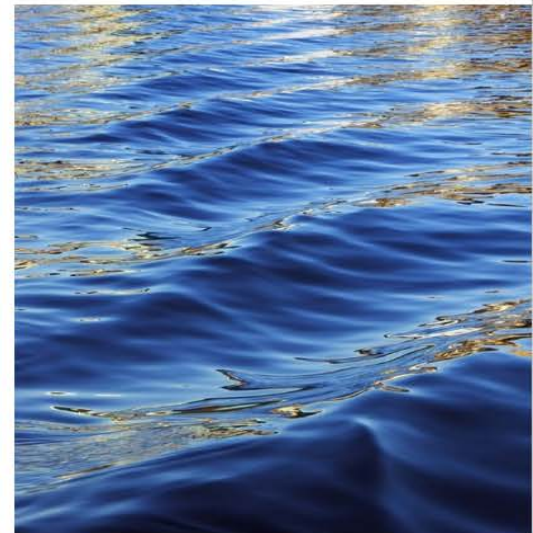


# Fleet Operations



City of Nanaimo

Green Fleet





# Nanaimo's Fleet

Fleet Services repairs and maintains over 400 vehicles and equipment

Compact cars to fire rescue equipment



# Initiatives to Date

## Alternative fuel vehicles

- 4 Hybrid
- 21 Propane / CNG pickup trucks
- 9 CNG garbage truck fleet
- 5 fully electric cars
- 5 fully electric ice resurfacing machines





# Initiatives to Date

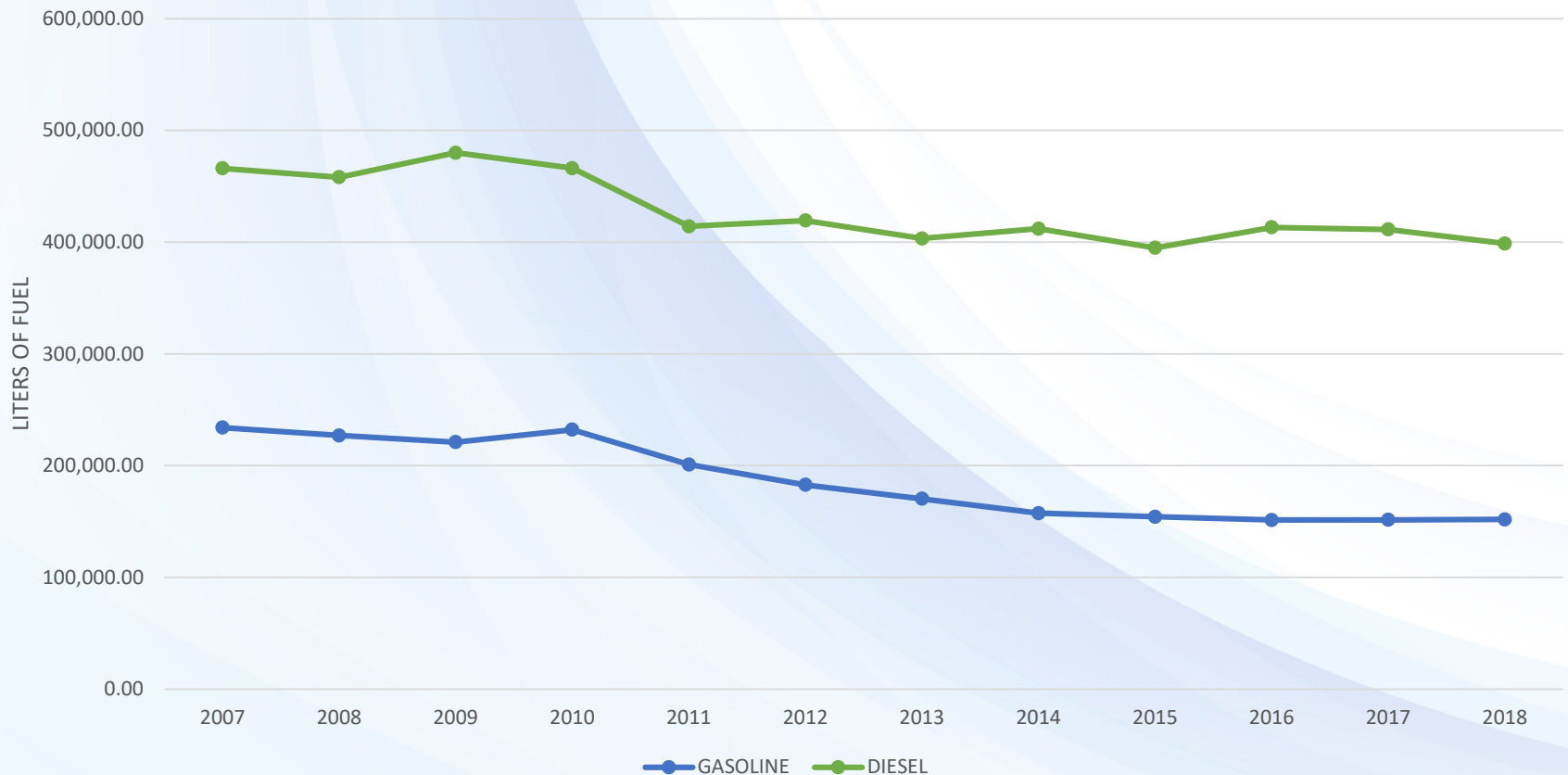
- Installed automated fuel management system
- Implemented a preventive maintenance system
- Adopted a corporate anti-idling policy in 2007
- Implemented a pool car program in 2008
- Adopted bio-diesel 5 blend in 2009



# 17% Decrease in Diesel fuel used 2007-2018

## 4% Decrease in gasoline used 2007-2018

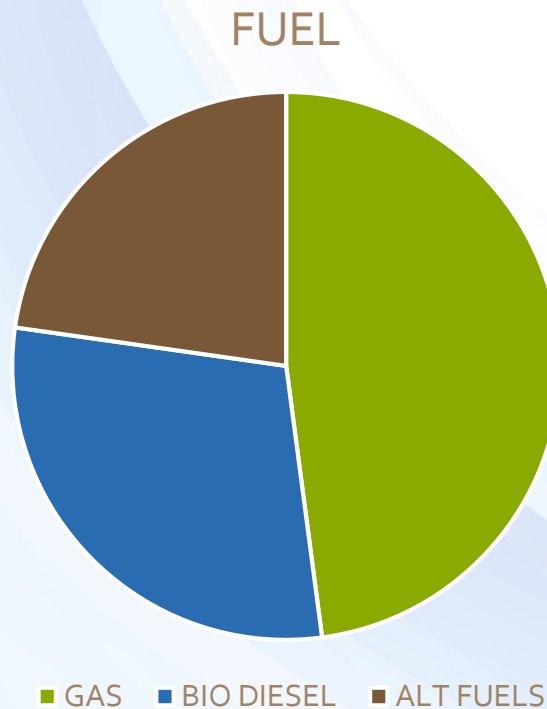
### 10 YEAR DIESEL & GASOLINE USEAGE





# GREEN FLEET ACHIEVEMENTS

22% fleet using alternative fuels  
29% fleet using Bio-Diesel



# Current Initiatives

- Partnering with neighbouring municipalities to share best practices
- Right-sizing vehicles at time of purchase
- Annually evaluating the preventative maintenance program
- Provide fuel consumption reports to departments
- Assessing 10 year purchase of vehicles for potential alternative fuel vehicles
- Currently developing a **Corporate Green Fleet Strategy**





# Future Goals

- Preparation of formal Fleet Strategy for Council
- Joining the **E3 Fleet challenge program**
- Complete a Corporate Green Fleet Strategy with data provided from E3 Fleet review



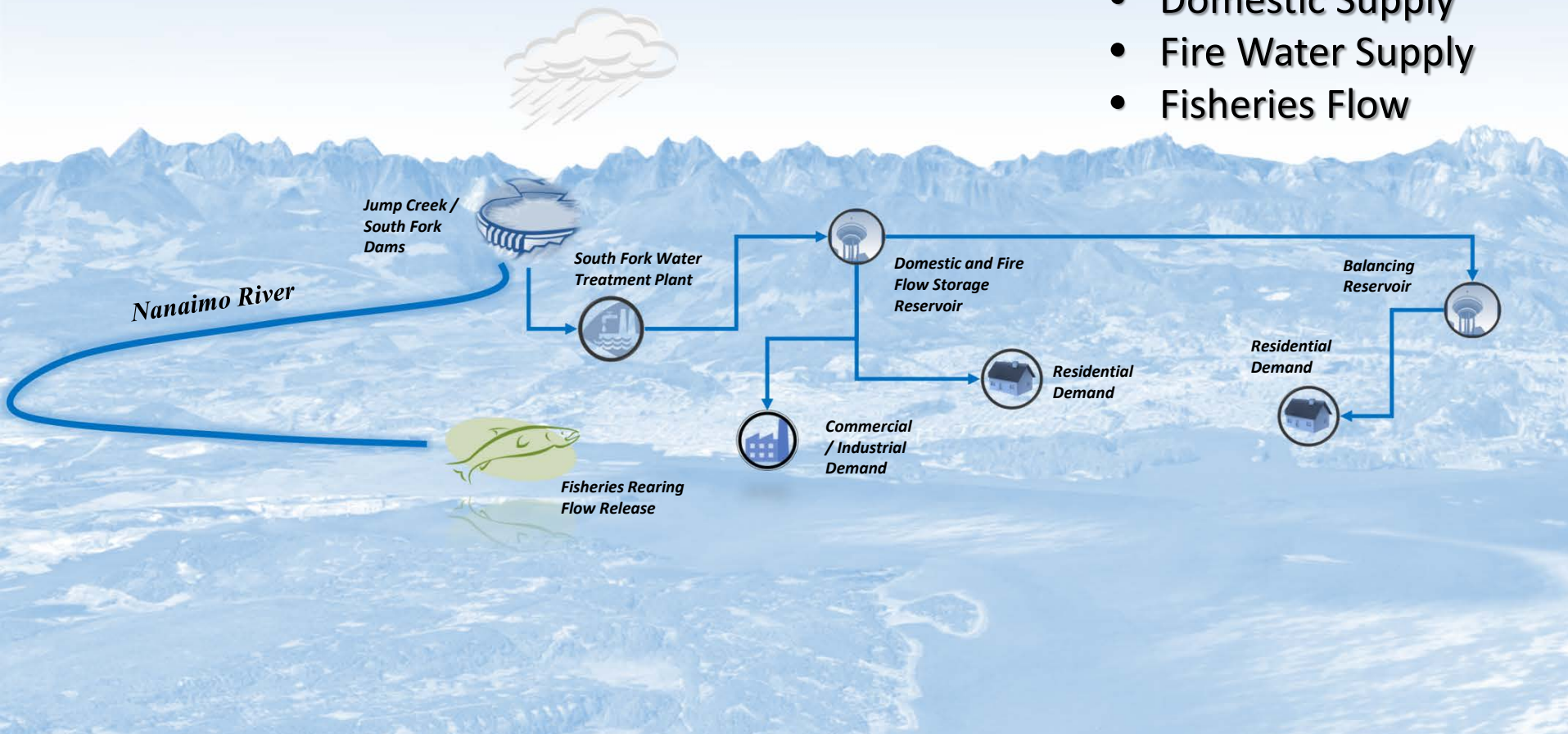
# Water Resources





# Water Resources

- Domestic Supply
- Fire Water Supply
- Fisheries Flow



- City of Nanaimo
- Snuneymuxw First Nation
- West Extension Water District

Emergency / Temporary Supply:

- District of Lantzville
- North Cedar Improvement District
- Nanaimo Forest Products (Harmac)





# Energy Recovery Facility

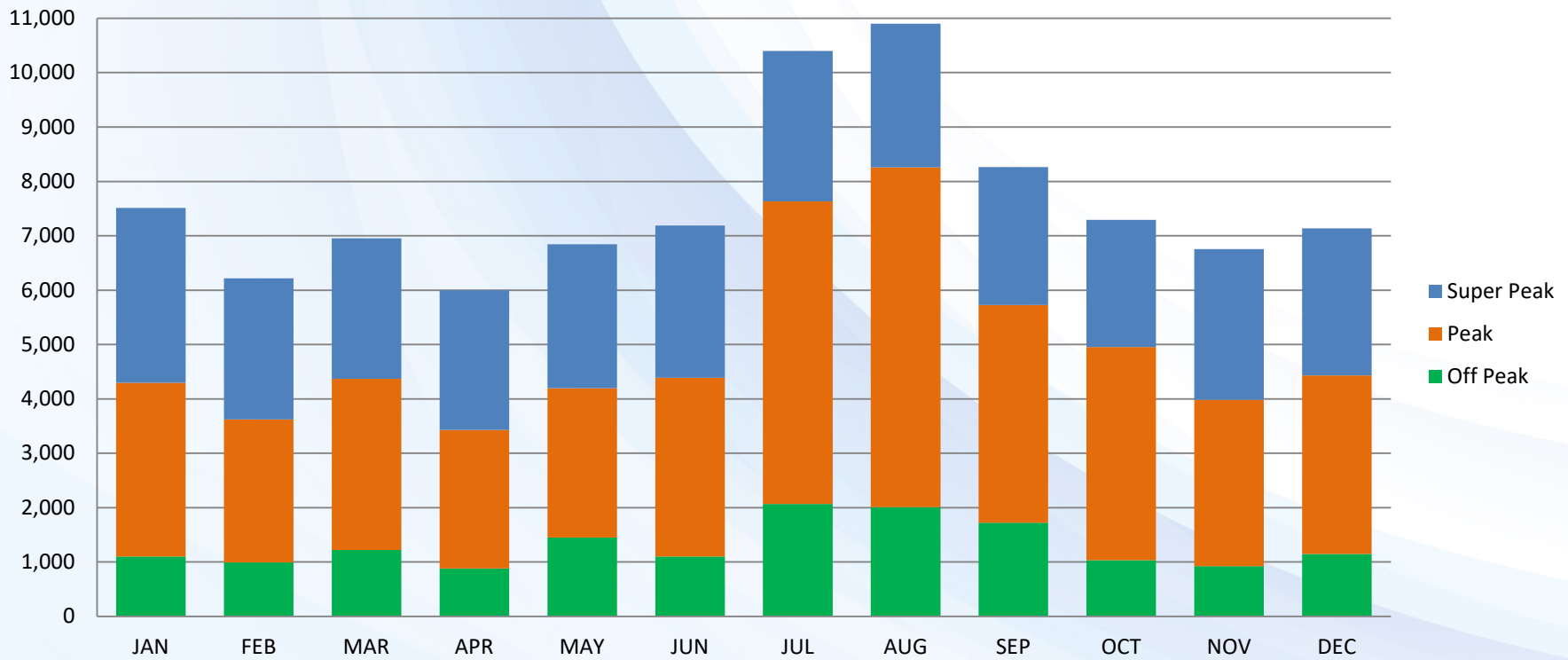




# Energy Recovery Facility

- In 2018 the Reservoir No. 1 Energy Recovery Facility generated an average of \$7,600 / month income for the City from electricity production care of BC Hydro, enough power for **60-70 residential homes** or \$91,450 for the year.

2018



# Fisheries Release

## South Fork Dam – Fisheries Release:

- Min. Requirement below South Fork Dam: **0.28 m<sup>3</sup>/s** (10 Olympic sized pools / day)
- Additional Requirement Downstream of the Nanaimo River Bridge (Above Nanaimo Forest Product's Water Intake), Min. Flow: **3.9 m<sup>3</sup>/s** (138CFS)

Shared Allocations  
between:



Nanaimo Forest Products 75 %  
City of Nanaimo 25%





# Water Conservation

## *How do we manage and encourage efficient water use?*

- Universal Water Metering (since 1983)
- Tired Billing Rate (more water use = more you pay)
- Full-cost pricing (since 1992)
- Water Audits
- Regulation of permitted uses and summer watering restrictions
- Annual user rate increases to ensure funding sustainable for major capital and ongoing operations (2007)
- Low-Flow Toilet Rebate Program / BC Hydro Rebates (since 2009)
- Computerized water system monitoring and operation (SCADA)
- 2008 Water Conservation Strategy (updated 2014)
- Instrumentation: Rainfall / Snow / River Flows
- RDN & *Team WaterSmart* partnership

**Managing**  
*Tap into It!*  
**your water**



# Water Conservation

## Public Education

- Partnering with the Regional District of Nanaimo Team WaterSmart program includes a Water-Wise Education component.
- School presentation tours in conjunction with Forestry companies





# Residential Use - Water Demands

Total Residential  
Daily Use  
(liters per capita per day)

National Average

**274**



British Columbia Average

**353**



City of Nanaimo Average (2007 - 2012)

**274**

City of Nanaimo Average (last 5 years)

**228**



↓ - 10 %

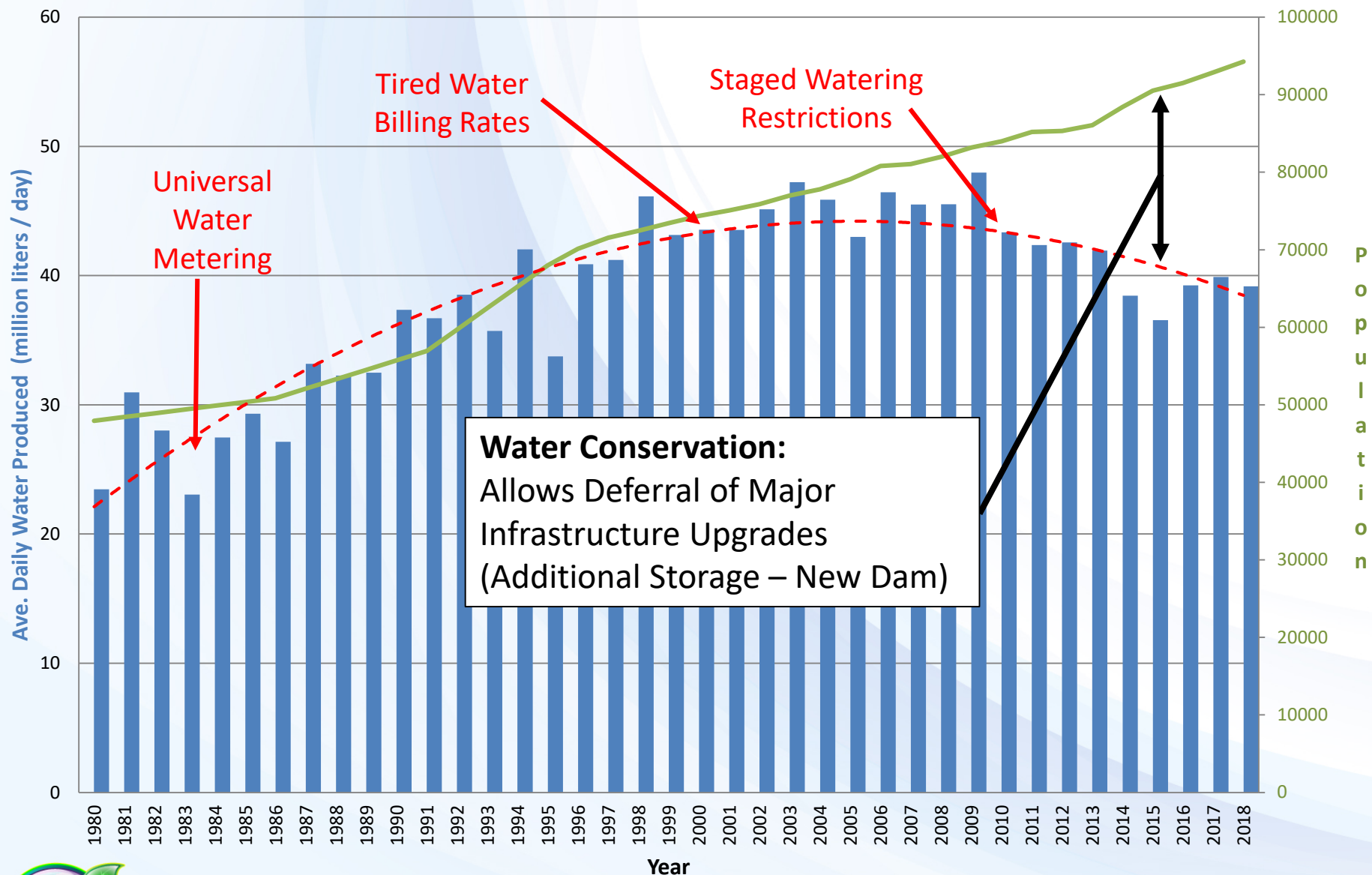
The updated 2014 Water  
Conservation Strategy  
Targets a 10 % reduction  
over the next 10 years



Source: Environment Canada – 2011 Municipal Water Report

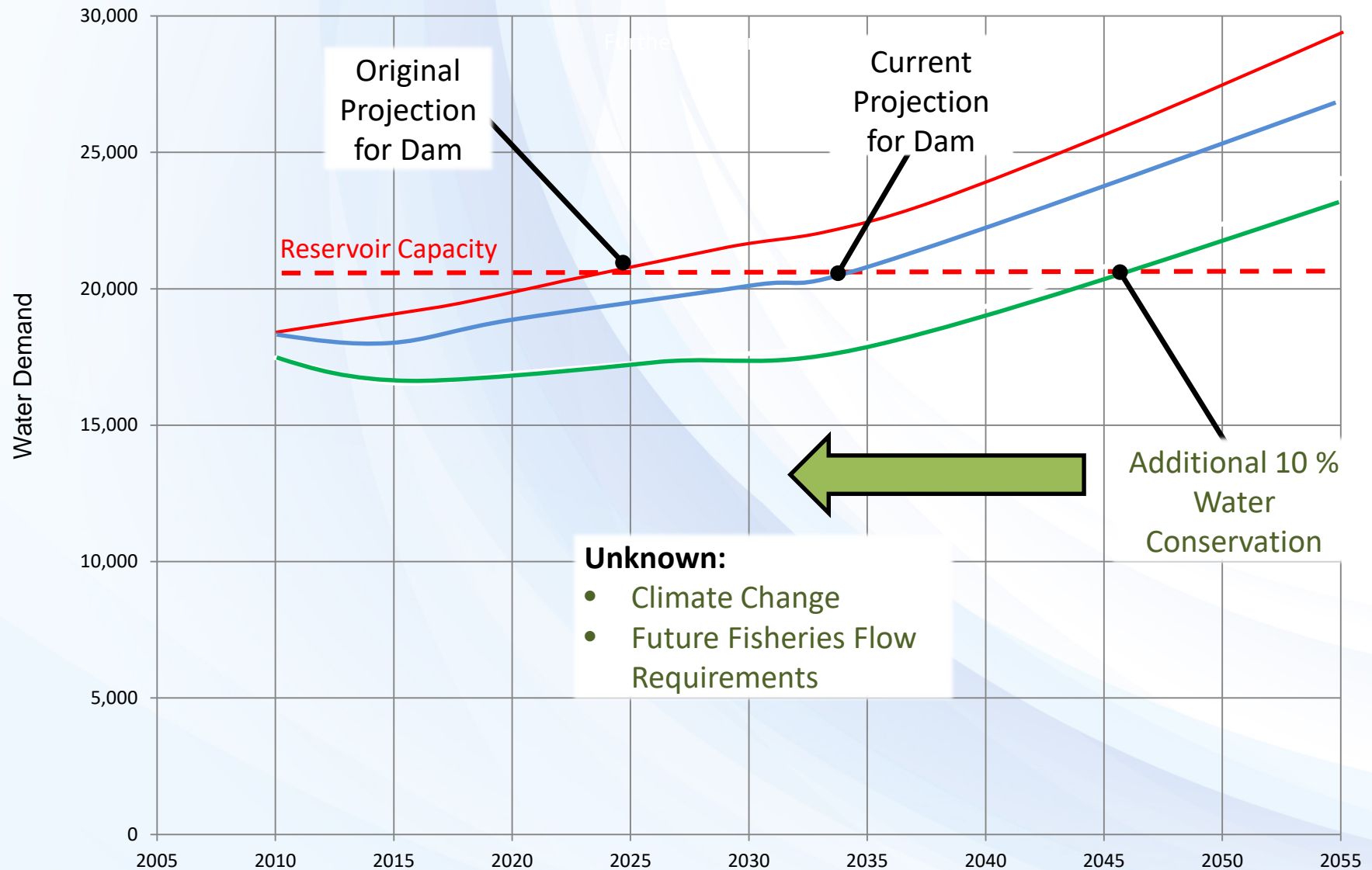


# Demand Management

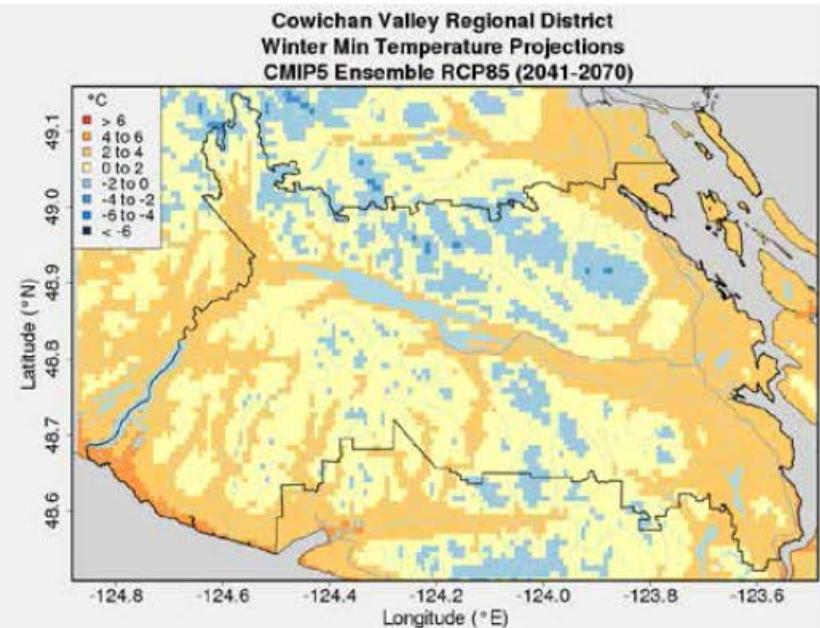
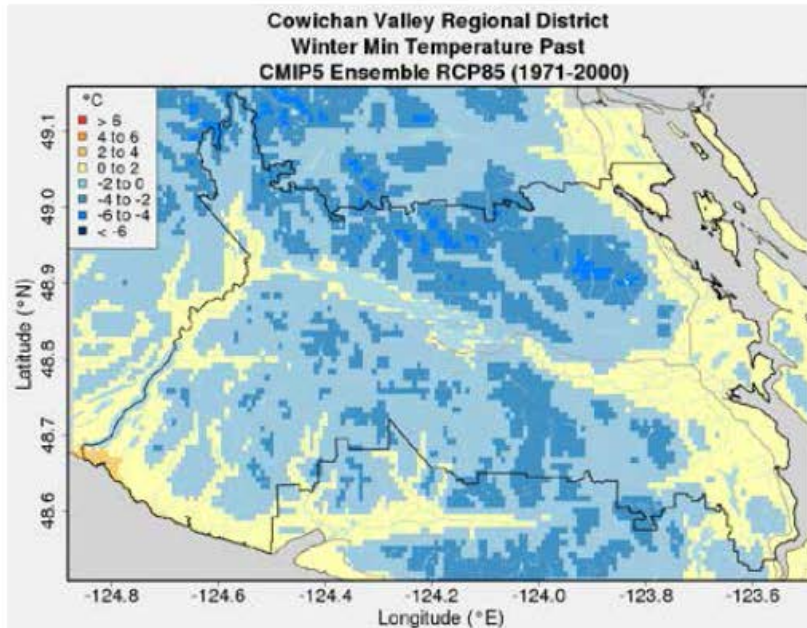




# Future Expansion



# Update Water Supply Strategic Plan



Blue = Below Freezing



Yellow / Orange = Above Freezing

- Predicted: Longer and Drier summers will result in higher domestic water volume demands and longer Fisheries Flow requirement in September through November.
- Additional regulatory requirement for building a new dam may require an increase to the Fisheries Flow Requirements







# PARKS OPERATIONS

# Parks Operations

Parkland in Nanaimo	
Owner	Hectares
City of Nanaimo	1079
Province	317
Nature Trust of BC	133
Other	188
<b>Total</b>	<b>1717</b>

City Parkland by Zone	
Zone	Hectares
PRC - 1	753.75
PRC - 2	192.73
PRC - 3	132.30





# Ecosystem Types Found in Parks



Coastal Bluff (CB)



Woodland (WD)



Terrestrial Herbaceous (HT)



Older CDF Forest (OF)





# Ecosystem Types Found in Parks



Wetlands (WT)



Riparian (RP)





# Parks Operations

## Examples of rare species found in Nanaimo Parks



*Hocksackia pinnata*  
Bog bird's foot trefoil



*Bidens amplissima*  
Vancouver Island Beggartick



*Aster curtus*  
White-top aster



# Parks Operations

## Restoration Projects in Parks

### Vancouver Island Beggarticks

- SARA listed species
- 59 sites in BC/  
Washington
- Funding awarded through  
Environment and Climate  
Change Canada
- Reintroduced to Jingle  
Pot (Third Street) Marsh
- Only site in Nanaimo
- 165 plants observed





# Parks Operations

## Restoration Projects in Parks

### Bowen Park Side Channel

- In 2007, a major fish bypass channel was constructed from Deadman Falls upstream to a point above major fish barriers
- Side channel is 857 m long and contains significant fish habitat
- Ongoing partnership with Fisheries and Oceans and Vancouver Island University



# Parks Operations

## Restoration Projects in Parks

### Knotweed / Hogweed Control

- Contract with Invasive Species Committee since 2015
- Education and Awareness
  - Coordinated between CISC and City
- Field Program (Sites Treated)
  - 140 Knotweed Sites
  - 7 Giant Hogweed Sites
- Data collected and posted to provincial database (IAPP)





# Parks Operations

## Conservation Partnerships

### Buttertubs Marsh Conservation Area

- 55 Ha wetland complex currently co-managed by the Nature Trust of BC, Ducks Unlimited and the City of Nanaimo
- Ongoing environmental research and training by VIU in the West Marsh of Buttertubs
- Conservation Area Management Plan adopted by Council in 2016



# Parks Operations

## Municipal Natural Capital Initiative: Buttertubs Marsh Pilot Study



Making Nature Count

*Buttertubs Marsh Conservation Area is a 55 HA reclaimed wetland/floodplain*

**Site and natural assets:** Entire marsh under consideration including adjacent forest.

**Emerging project model:** Determine role marsh plays in mitigating localized flooding and increasing storm events; determine value of the Marsh in attenuating downstream flooding on the Millstone.

**Possible outcome:** developing an marsh restoration and maintenance plan built around an asset management approach.





# Parks Operations

## Community Outreach

### Partners In Parks Program (PIP)

- The Volunteers in the Park Program (VIP) was initiated by the City in 1982.
- Since then it has been renamed Partners in Parks Program (PIP) and grown to include:
  - Neighbourhood Playground Development
  - Community Gardens
  - Park Beautification and Tree Planting
  - Gatekeepers & Park Naturalists
  - Public Art
  - Invasive Plant Removal Work parties
  - Park Ambassadors
  - Adopt-A-Park Program
  - Eco Club/School Group Ecological Stewardship Projects (invasive plant removal, restoration, monitoring)



# Parks Operations

## Broom Busters Partnership (2014 – 2019)

- 60 Volunteers involved in cutting flowering broom
- City coordinates broom chipping and disposal at the end of the season
- Broom cut on:
  - 33 City Parks
  - Over 50 sections of City road right of way
  - 8 Elementary Schools
  - 18 Commercial Properties





# Parks Operations

## Student Ecological Stewardship Program

### Examples of Student Ecological Stewardship Projects:

- Plant Identification – native and invasive
- Plant Mapping (Barefoot Mapping)
- Invasive Plant Removal
- Restoration - replanting & watering of new native plants
- Student Partnerships with NS3 and the Great Shoreline Clean Up Initiative ie. Trash to Treasures
- Involvement in the **Adopt-a-Park Program** – ongoing stewardship in one particular park





# Departure Bay Elementary School & Stream Keepers



**Restoration in  
Woodstream Park in 2016**





# Departure Bay Elementary School & Stream Keepers



## Departure Creek Realignment and Enhancement Project in 2018





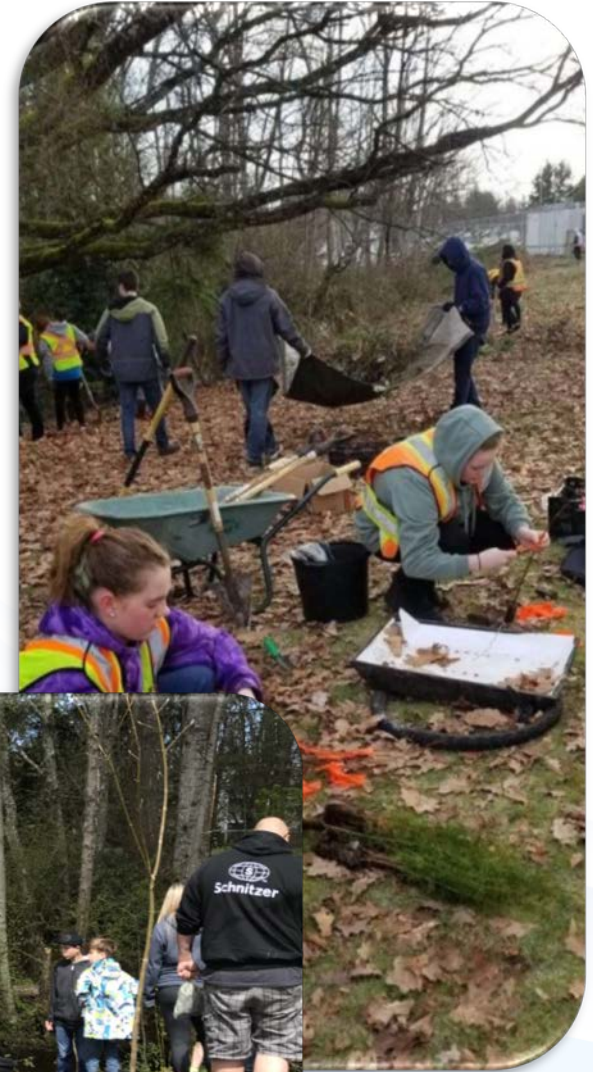
# Dover Bay Secondary School Eco Club





# MyCDC & John Barsby School

## Chase River Restoration Project





# Parks Operations

## Volunteer Recognition





# Climate Action in Nanaimo

1. Corporate Energy and Emissions Management
2. Community Energy and Emissions Management
3. Climate Resiliency Strategy
4. Climate Emergency Declaration
  1. Next steps and group discussion



# Climate Action Update

## Policy Development

- Corporate Climate Action Plan (2007)
- Community Sustainability Action Plan (2012)
  - Energy Conservation and Management Policy
  - Purchasing Policy – Green Purchasing
  - Green Building Strategy
  - Anti-Idling Policy

### CORPORATE CLIMATE CHANGE PLAN

ENERGY AND EMISSIONS  
MANAGEMENT

2007



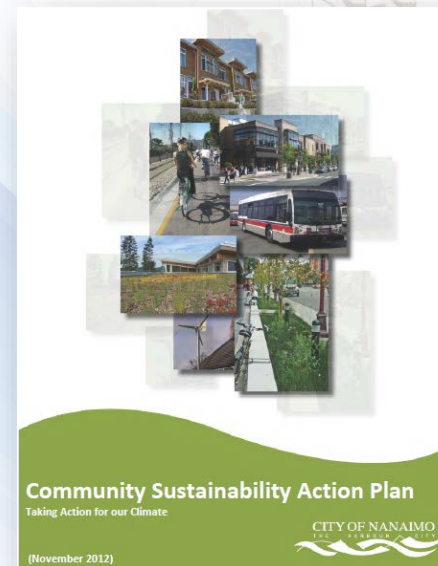
### City of Nanaimo COMMUNITY ENERGY & EMISSIONS STUDY

Final Report, November 2011



CITY OF NANAIMO  
THE HARBOUR CITY

Stantec



### Community Sustainability Action Plan

Taking Action for our Climate

(November 2012)

CITY OF NANAIMO  
THE HARBOUR CITY





# Climate Action Update

## Corporate vs. Community GHGs

### Corporate Emissions



**Objective:**  
Carbon neutral  
operations since 2010  
(Climate Action Charter)

### Community Emissions



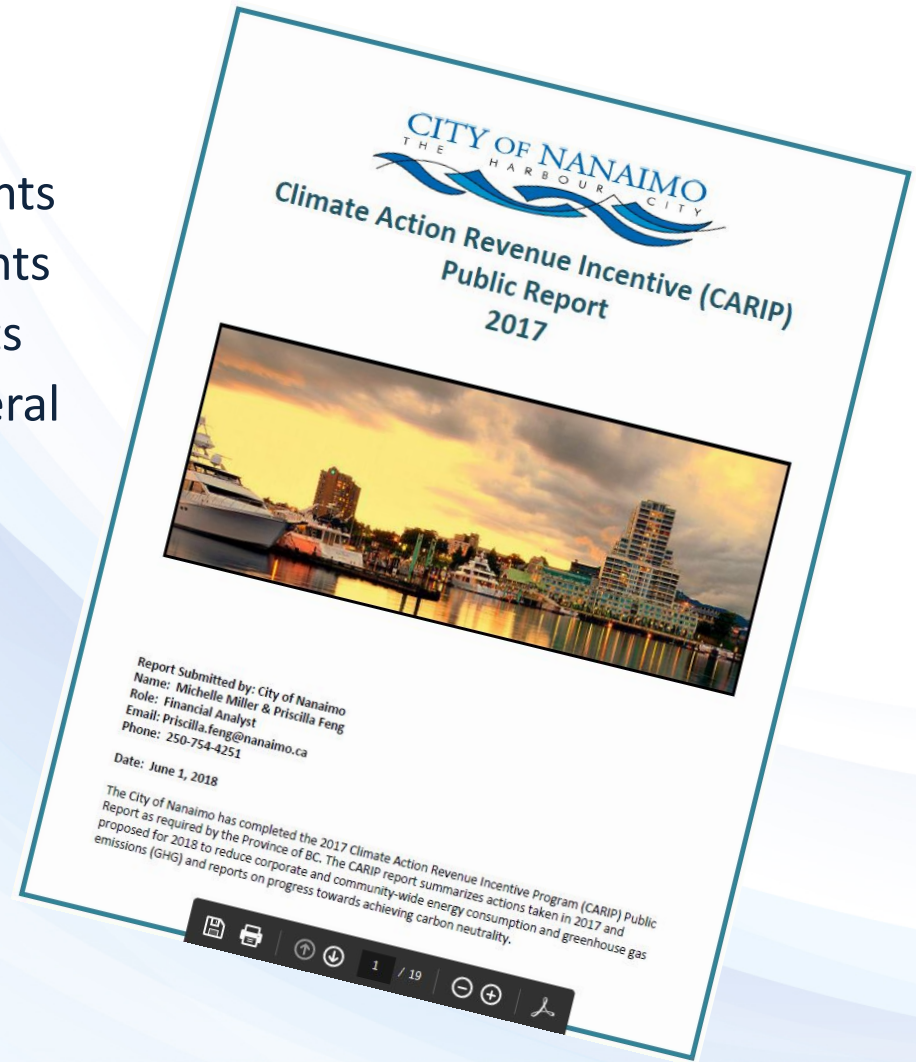
**Objective:**  
Community in OCP  
(LG Act, Bill 27 – 2008)



# Corporate Energy and Emissions

## What we are doing

- Partnerships / Programs / Agreements
- Collaboration with other departments
- Incorporating efficiency into projects
- Funding from Sustainability or General Capital Reserves
- Sharing Results
- Climate Action Revenue Incentive Reporting (CARIP)





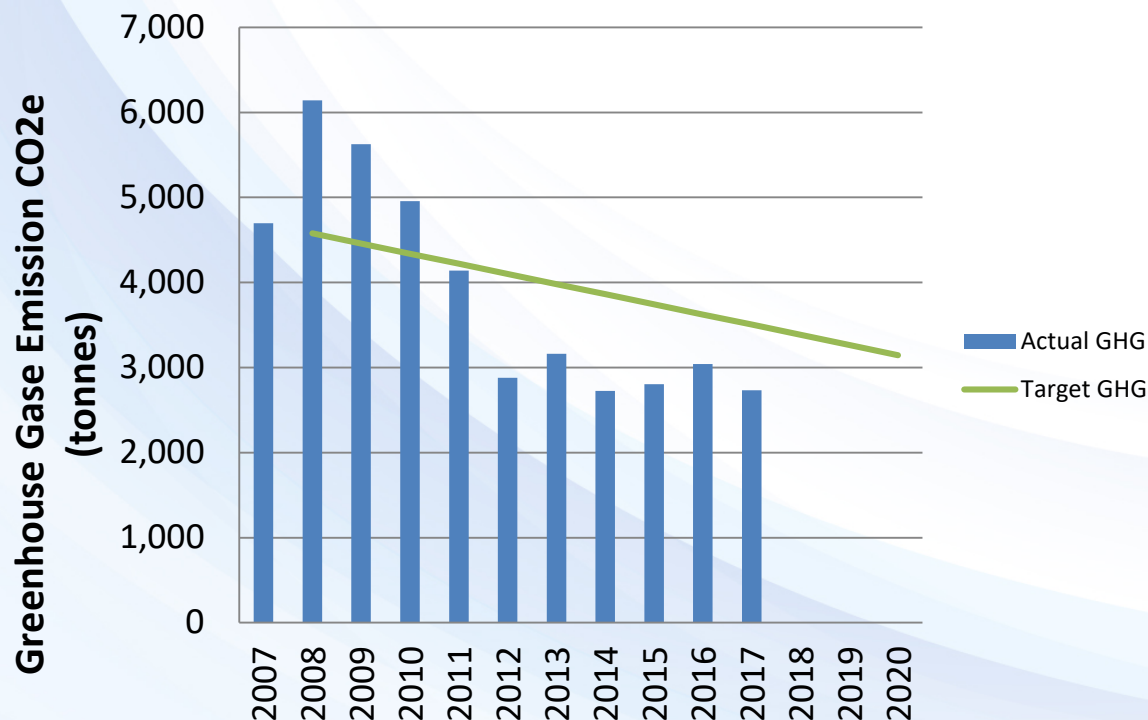
# Corporate Energy and Emissions

## How are we doing?

- Targets, monitoring, reporting
- Low-hanging fruit
- Program Changes
  - Conservation
  - Low Carbon Electrification

## Over the past 10 years

- Reduced emissions by 42%
- Received \$1.93M in incentives
- Annual Energy & Cost Savings \$ 1.1M



# Corporate Energy and Emissions

## Plans moving forward

### Update :

- Energy Conservation and Management Policy
- 2007 Corporate Climate Change Plan (Energy and Emissions Mgt.)

### Continue to develop:

- Low Carbon Electrification – Feasibility and benefits of Retrofits and New Construction Projects
- Fleet Electrification – BC Hydro Study Funding – Charging infrastructure and vehicle options
- Explore and implement new technologies and alternative energy options





# Community Energy and Emissions

OCP+ Plus Scenario

Nanaimo CEES

## OCP+ Plus Scenario



Population

	2007	2020	2050
	79,000	93,000	133,000



GHG Target (below 2007)

	2020	2050
	-3%	-40%



Total GHG Emissions (CO<sub>2</sub>e)

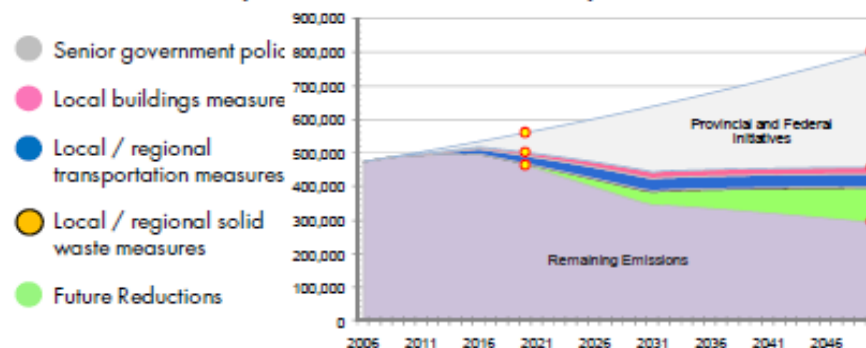
	2007	2020	2050
	480,421	355,098	295,000



Per Capita GHGs (CO<sub>2</sub>e/person)

	2007	2020	2050
	6.0	5.0	2.2

### Summary of GHG reductions by sector



### Key features of the OCP+ Plus scenario

- New growth largely focused in urban nodes, though some continues to occur throughout the city;
- Alternative transportation network grows and transit service improvements occur;
- TDM program implemented;
- Outreach campaign to promote idling reduction;
- Outreach campaign, coupled with incentives, to encourage energy efficiency improvements and alternative energy systems in buildings;
- One district energy system is implemented;
- Waste diversion continues to increase



# Community Energy and Emissions

## Actions Taken to Date

Theme	Strategies	Examples
Land Use and Transportation	<ul style="list-style-type: none"><li>• Compact, Complete Community</li><li>• Alternative and Active Transportation</li><li>• Low Carbon Mobility</li></ul>	<ul style="list-style-type: none"><li>• Urban Containment Boundary</li><li>• OCP Policy</li><li>• EV Charging</li><li>• Fleet Greening</li></ul>
Buildings	<ul style="list-style-type: none"><li>• Energy Efficient Existing Buildings</li><li>• Energy Efficient New Buildings</li></ul>	<ul style="list-style-type: none"><li>• Realtor Energy Efficiency Program</li><li>• Realtor Energy Efficiency Rebate</li><li>• BC Energy Step Code</li></ul>
Solid Waste	<ul style="list-style-type: none"><li>• Composting / Zero Waste</li></ul>	<ul style="list-style-type: none"><li>• Sort Toss Roll</li></ul>





# Putting into Practice: Implementation Approach for City of Nanaimo

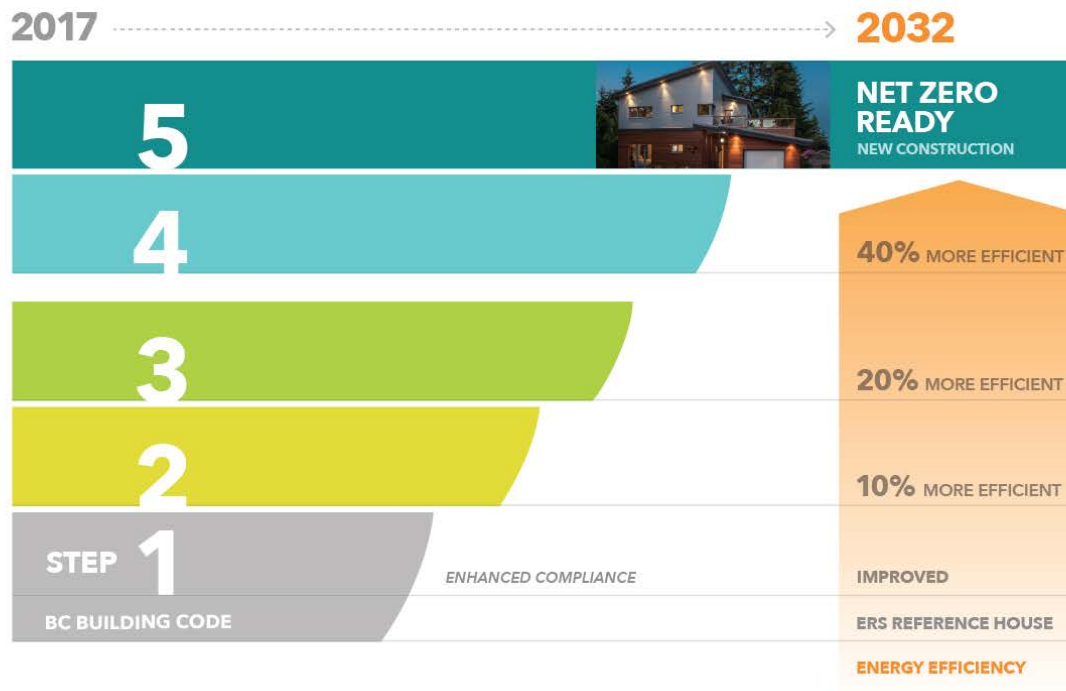
## Proposed Building Bylaw Amendment

Part 9 – January 1<sup>st</sup>, 2022

Part 3 – January 1<sup>st</sup> 2022

Part 9 - January 1<sup>st</sup>, 2021

Part 3 and 9:  
6 month after City of Nanaimo  
Building Bylaw Adoption



# Climate Action Update

## Climate Resiliency Strategy

### Two parts:

- Sea Level Rise Mapping Study
  - Determines the extent of impacts of sea level rise and storm surge for 2050 and 2100 along the City's shoreline.
- Climate Resiliency Strategy
  - To identify risks and vulnerabilities affecting city land use, infrastructure, parks, public health and safety. Provide direction to help minimize or avoid the identified risks and vulnerabilities.





# Climate Action Update

## Global Covenant of Mayors Covenant

The Global Covenant of Mayors Canada is a collaboration between the Federation of Canadian Municipalities, ICLEI Canada, the Global Covenant of Mayors Secretariat and the International Urban Cooperation Project supported by funding from the European Union.

The initiative combines two leading domestic climate programs, the Partners for Climate Protection (PCP) program and Building Adaptive and Resilient Communities (BARC), with the leading global climate program. Together we can further advance Canadian local climate action by adding value, opportunities and streamlined support for members.



# Climate Action Update

## Global Covenant of Mayors Covenant

### What is the Showcase Cities Pilot Project?

- Tailored **workshops** for municipal staff on themes including GHG inventories, risk and vulnerability assessments and climate change adaptation and mitigation planning
- **One-on-one support** for municipal staff working through local climate planning processes
- Assistance with reporting to the **GCoM, Partners for Climate Protection (PCP) program** and **Building Adaptive and Resilient Communities (BARC)** program
- Access to exclusive **networking opportunities** and showcasing of municipal actions nationally and internationally
- **Free of cost** for Canadian municipalities

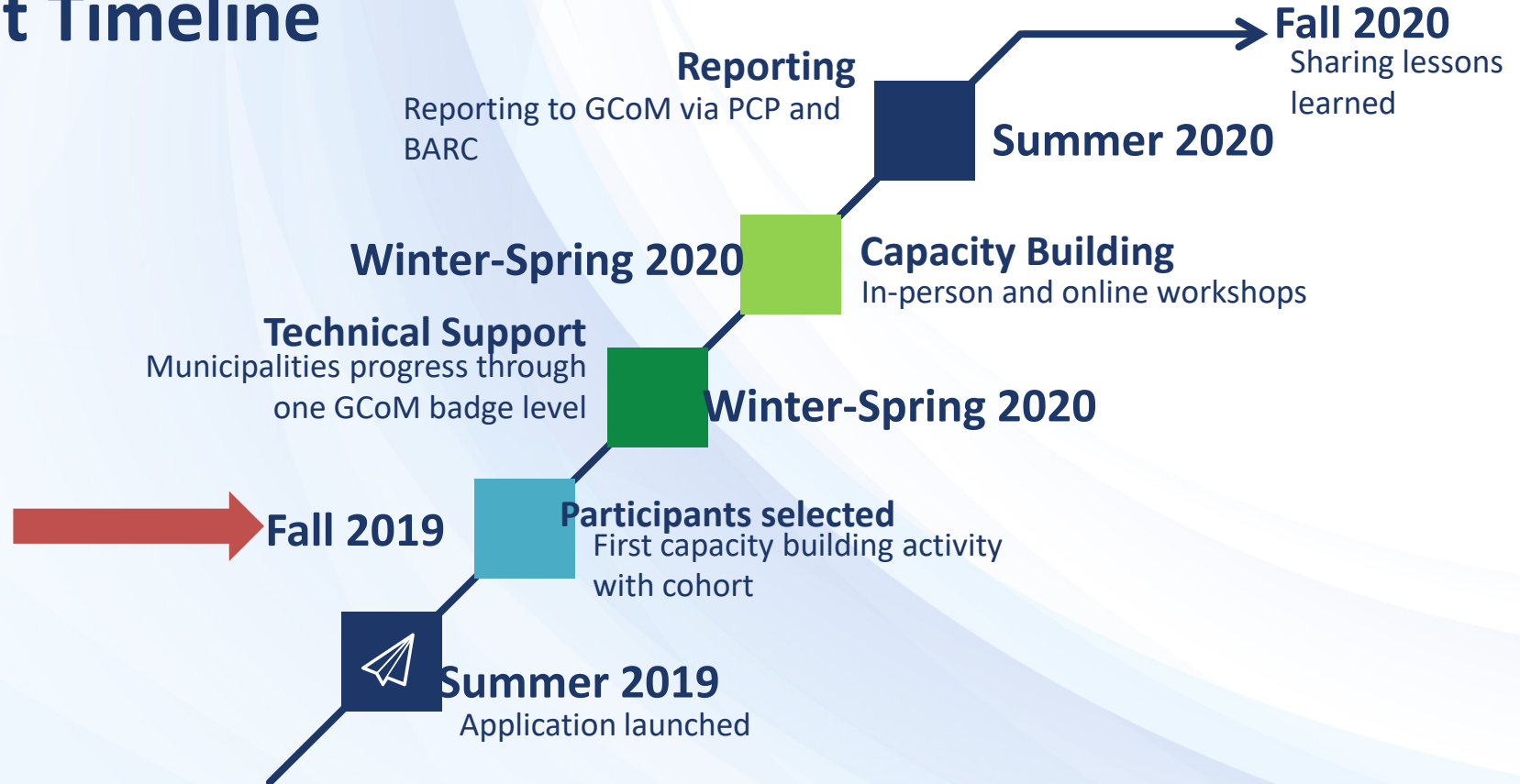


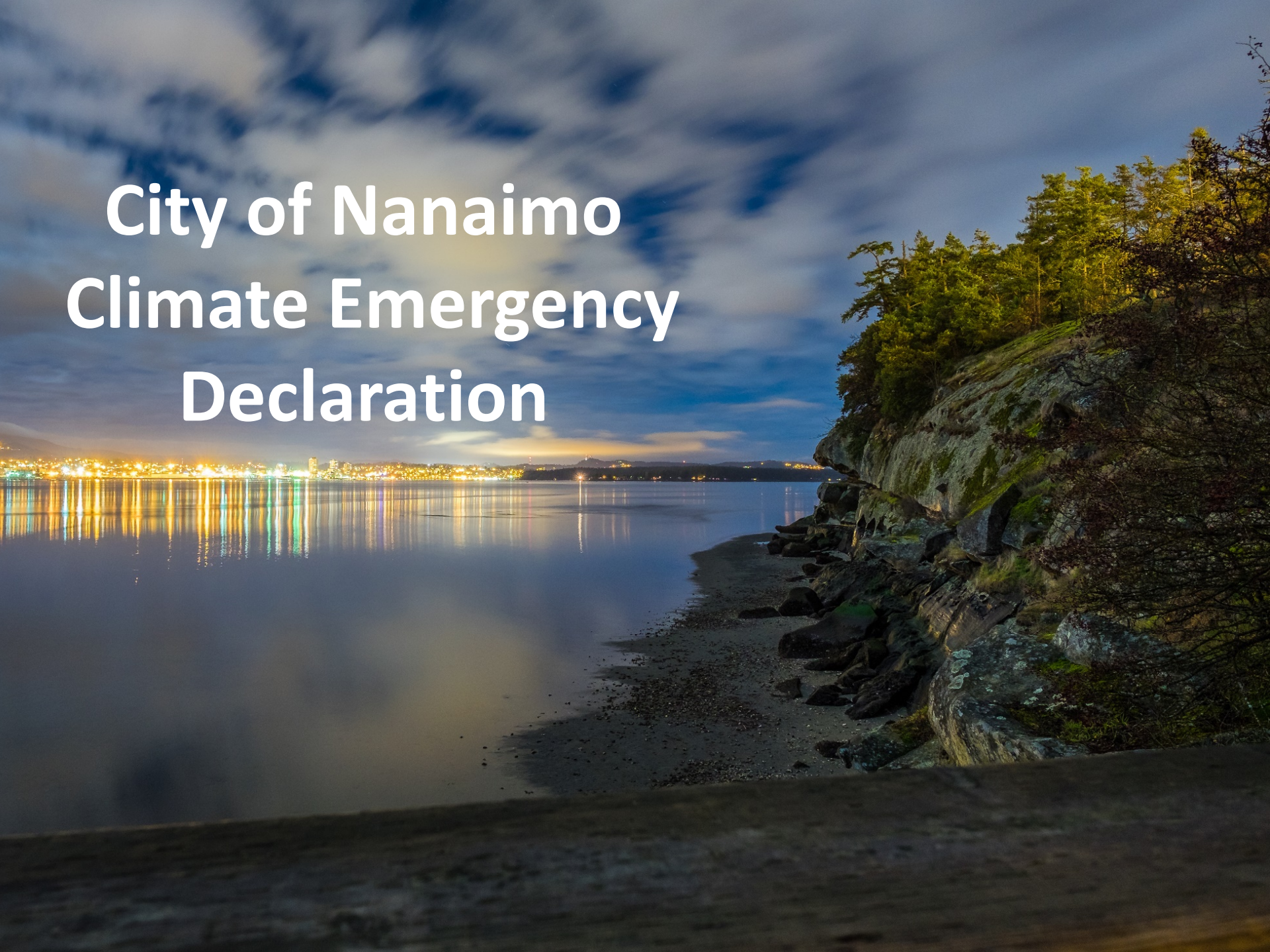


# Climate Action Update

## Global Covenant of Mayors Covenant

### Pilot Timeline



A nighttime photograph of a coastal scene. In the foreground, a dark, rocky shoreline slopes down from the right. The middle ground shows a calm body of water reflecting the city lights across the bay. The background features a city skyline with numerous illuminated buildings under a dark, cloudy sky. The text "City of Nanaimo Climate Emergency Declaration" is overlaid in white on the left side of the image.

# City of Nanaimo Climate Emergency Declaration



# City of Nanaimo Climate Emergency Declaration

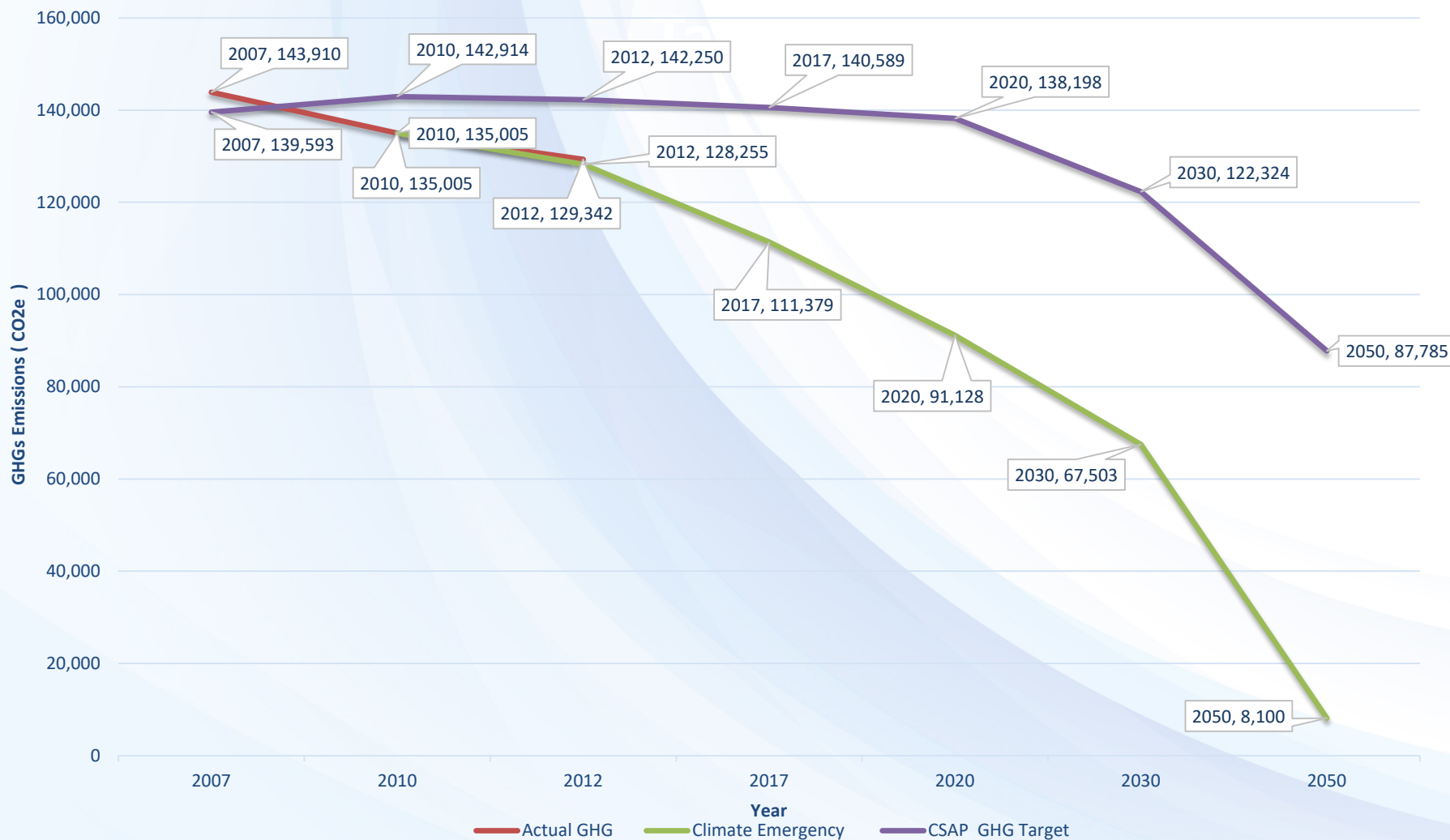
On April 29<sup>th</sup>, 2019 Council declared a Climate Emergency with the following actions:

- The Regional Emissions Reduction Reserve be moved to a new reserve fund for the purpose of supporting projects, plans and initiatives that reduce the **City of Nanaimo's community wide CO<sup>2</sup> emissions to between 50% to 58% below 2010 levels by 2030, and between 94% and 107% below 2010 levels by 2050.**
- The framework, strategies, actions, and implementation of the City of Nanaimo Community Sustainability Action Plan be updated to reflect the target goal, based on the information contained in the latest Intergovernmental Panel on Climate Change report.



# City of Nanaimo Climate Emergency Declaration

## Comparing Community Emission Reduction Targets





# City of Nanaimo Climate Emergency Declaration

## Making Choices on Further Action

Policy Tool	Potential Impact	Description
Education and Outreach	Low ~ 0 – 10% uptake	<ul style="list-style-type: none"><li>• Low effort, low cost, low result</li><li>• BUT foundations for other actions (Still necessary!)</li></ul>
Non-financial incentives	Low to Medium ~ 10 to 50% uptake	<ul style="list-style-type: none"><li>• Infrastructure / amenities to encourage action</li></ul>
Financial Incentives	Medium ~ 50 to 75% uptake	<ul style="list-style-type: none"><li>• Rebates, pricing, tax incentives</li><li>• Higher cost, higher impact</li></ul>
Regulation	High ~ 75 to 100% uptake	<ul style="list-style-type: none"><li>• Requirements that are often enforced (i.e. Bylaws)</li><li>• High impact</li></ul>

