

**CORPORATION OF THE CITY OF COURTENAY  
COUNCIL MEETING AGENDA**

**DATE:** Monday, November 18, 2013  
**PLACE:** City Hall Council Chambers  
**TIME:** 4:00 p.m.

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**1.00 ADOPTION OF MINUTES**

1. Adopt November 12, 2013 Regular Council

**2.00 INTRODUCTION OF LATE ITEMS**

**3.00 DELEGATIONS**

Page #

1. McElhanney Engineering re: zoning amendment 2368, 2498 & 2650 Arden Road
- 1 2. C.V. Project Watershed Society re: K'omoks Estuary

**4.00 COMMITTEE/STAFF REPORTS**

**(a) Community Services**

- 11 1. Dawn to Dawn Agreement

**(b) Development Services**

- 19 2. Rezoning of 2368, 2698 and 2650 Arden Road
- 45 3. Airpark Lagoon Habitat Enhancements

**5.00 REPORTS AND CORRESPONDENCE FOR INFORMATION**

- 73 1. Police Report for October 2013
- 77 2. Comox Valley Cycling Task Force re: HASTe

**6.00 REPORTS FROM COUNCIL REPRESENTATIVES**

**7.00 RESOLUTIONS OF COUNCIL**

1. In Camera Meeting

That notice is hereby given that a Special In-Camera meeting closed to the public will be held November 18, 2013 at the conclusion of the Regular Council Meeting pursuant to the following sub-sections of the *Community Charter*:

- 90 (1) (e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.
- 90 (1) (k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could reasonably be expected to harm the interests of the municipality if they were held in public.

2. Councillor Leonard proposed resolution re: Hospital Bus Stop

*WHEREAS the City approved the rezoning application for the new hospital, including provision for a bus stop at the entrance;*

*AND WHEREAS citizens, including the Comox Valley Accessibility Committee, are raising concerns that a bus stop will not be provided by the approving authority;*

*THEREFORE BE IT RESOLVED that Council write to BC Transit to advocate for a bus stop immediately adjacent to the hospital entrance.*

**8.00 UNFINISHED BUSINESS**

**9.00 NOTICE OF MOTION**

**10.00 NEW BUSINESS**

**11.00 BYLAWS**

**For First and Second Reading**

- 79 1. “Zoning Amendment Bylaw No. 2770, 2013”  
(CD-25 Zone-2368, 2498 and 2650 Arden Road)

**For Third Reading subject to Public Hearing**

- 83 1. “Zoning Amendment Bylaw No. 2726, 2013”  
(rezone Lot 15, Dogwood Drive from R-1 to R-1S)

**12.00 COUNCIL MEMBER ROUND TABLE**

**13.00 ADJOURNMENT**

**Note: there is a public hearing at 5:00 p.m. in relation to Zoning Amendment Bylaw No. 2726**

Delegation

## Introduction and Background

The Comox Valley Project Watershed Society has identified the K'omoks estuary as a key area for restoration and enhancement so that ecosystems that support fish, birds and other wildlife may thrive once again. Historical human activity has damaged the estuary, resulting in the cutting off of floodplains and reduced functioning of key ecosystems. The Airpark lagoon has been identified as a restoration priority to address a limiting factor to fish productivity in the estuary (wetland off-channel habitat: Morris et al, 1979; Hamilton et. al., 2002; Jenkins, et. al., 2006; Hamilton et. al. 2008; Tryon, 2011) and help return the K'omoks estuary to a functioning state through breaching the dike between the river and the lagoon.

This project involves adding a breach in the Airpark lagoon adjacent to the lower ecotone<sup>1</sup> of the K'omoks estuary. This breach will improve access for salmon into and out of the Airpark lagoon, and improve habitat conditions there through increased flushing from the river. This project is in alignment with both the Coastal Puntledge Watershed and the Salmon Action Plans as it will improve the integrity and productivity of salmon habitat, and in turn, habitat for wildlife. It will benefit FWCP species of interest, including Puntledge Summer Chinook during both smolt and migrating adult life stages. It also benefits other species of salmon in the system that use the estuary as both migration corridors and for feeding and holding. Salmon that use the lagoon will benefit from the enhanced refuge opportunities from their predators, including seals. Avian predators that feed on fish in the lagoon will also benefit, including the Great Blue Heron, a COSEWIC species of Special Concern and an FWCP species of interest.

This project incorporates a strong community engagement component through its high profile location, education components, and volunteer opportunities. The necessary prior planning has gone into this project, including studies of the fish and bird use, water and sediment quality, and hydrologic modeling. This information has a high likelihood for success, and is financially and technically feasible.

### Site Description

The project area was once a large tidal channel through the estuary before it was diked and converted to a City of Courtenay sewage lagoon in the 1950's. These operations ceased in the 1980's, and in the early 1990's the lagoon was breached at the downstream end, dredged and converted to a public park (i.e. the "Airpark Lagoon"). Park construction included extending the Courtenay Walkway along the dike and planting salt marsh vegetation along the lagoon perimeter. Since then, the salt marsh has thrived, eelgrass has established in submerged areas, and riparian habitat has been improved through the ongoing efforts of the Comox Valley Naturalists. Figure 1 provides a photo timeline of the area.

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<sup>1</sup> The ecotone of the K'omoks estuary is the area from the upper limit of tidal influence (Tsolum/Puntledge confluence) to the beginning of the mudflats.

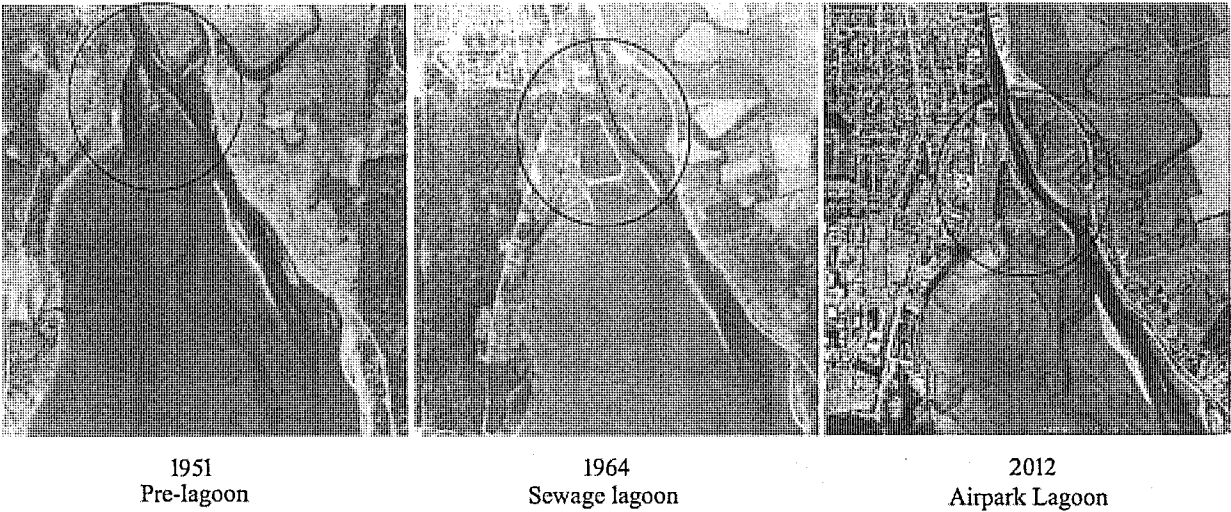


Figure 1: Timeline of modifications to the current Airpark lagoon. Red arrows indicate flow and direction.

Rationale

The lagoon has been highly modified from its natural state and is far below its potential to provide high quality off-channel wetland habitat for fish and to support food chain dynamics that benefit fish and wildlife in the K'omoks estuary. For example:

- The lagoon provides a refuge from seals that currently predate upon salmon populations in deeper channels of the K'omoks estuary. However, fish access is limited to the existing outlet, which opens to mudflats at an elevation of ~2m chart datum.
- There is low diversity of bird use in the lagoon during the summer months relative to surrounding areas
- Water quality conditions deteriorate over the summer months due to stratification and poor mixing, with maximum temperatures exceeding lethal limits for salmon (25°) later in the summer (Figure 2).

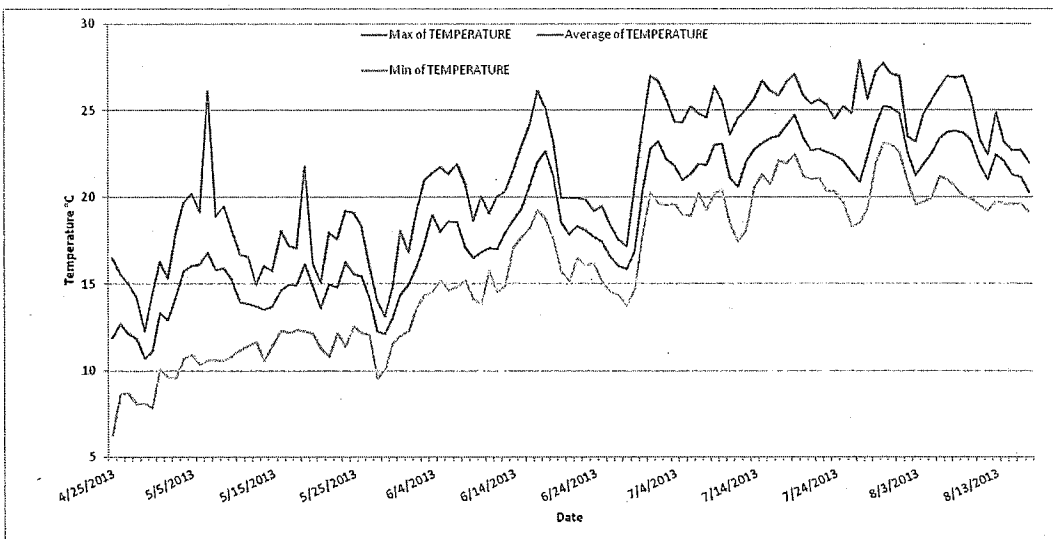


Figure 2: Daily maximum and average temperatures in the Airpark lagoon, 2013. Chinook are deterred from habitat with temperatures <22° (Bjornn and Reiser 1991).

## Methods and Approach

This project is Phase 3 of a multiphase project. For more details on past phases, refer to “Past Projects” section. Phase 3 involves:

- Permitting/approvals
- Ongoing communications with the City of Courtenay and public,
- project implementation/construction
  - site prep, culvert installation, pathway cleaning and paving, plant restoration
- a 3-5 year restoration monitoring plan
- baseline and follow-up monitoring
- interim and final reporting

Restoration plans involve a simple breach at the top end of the lagoon opposite the current outlet (Figure 3). The breach will be in the form of a 2.3m concrete box culvert of 20m in length and set at an elevation slightly greater than the outlet to allow water flows from the river into the lagoon at high tides and river discharge. Detailed drawings of the proposed breach are provided in Hill (2013). Salvaged salt marsh vegetation will be replanted over the boulder aprons topped by fines and gravels. The project will be monitored for success through ongoing studies of fish and bird use, benthic invertebrate assemblages, and water quality.



Figure 3: Proposed location of new breach and existing outlet in the Courtenay Airport lagoon.

## Value-added Criteria

This project will leverage the potential provided by the high profile location and stakeholder opportunities. It is a well-used public park owned and managed by the City of Courtenay. The CoC has already provided important background information to facilitate this project, including bathymetry and LiDAR data for project modeling. They have contributed staff time to project consultations, including parks and engineering staff. They are very interested in this project, and will continue to provide staff time to work with us to implement this project.

We also require support for site access from the Comox Valley Airpark Club. Machine and materials must access the site from across the airpark runway, which requires their consent and cooperation. They have discussed this at a recent Board meeting and have provided consent for project access.

The Comox Valley Naturalists have been restoring riparian habitat in the area since the early 1990's. They have also provided their support for this project, and will be involved in the riparian restoration component through planting advice and volunteer support.

Dave Davies, DFO community advisor, has participated in the technical committee for this project since Phase 1. He will continue to provide in-kind support as an advisor and a liaison with other DFO staff involved with this project, including Nick Leone.

Volunteer opportunities will be provided for conduction and monitoring phases. For the construction phase, volunteers will help salvage riparian and salt marsh vegetation that would otherwise be disturbed from construction activities, and in their later replanting. Volunteer have already participated in baseline monitoring activities for fish and bird use, and will continue to do so for post-construction monitoring.

Signage is an essential component of this project given its high public profile and multiple partners. We will be applying to TD Friends of the Environment in 2014 to leverage funds for signage that will acknowledge project partners and to provide public education of project benefits.

## Risks and Benefits

Prior planning involved verifying benefits of this project and identifying and mitigating for potential risks. Planning involved both technical analysis and stakeholder consultation. Hydraulic modeling of the breach was carried out by Northwest Hydraulic Consultants (NHC) to quantify the benefits from flushing and examine the potential for erosion and deposition using TELEMAK-2D modeling software. The results of this analysis are provided in Hill (2013) as an attachment to this proposal. Planning during 2013 also involved consultation with experts and stakeholders to ensure all possible information could be applied to leverage project benefits and address potential risks.

### Benefits

Engineer Graham Hill of NHC ran a hydraulic model that included a dye test to identify the magnitude of lagoon flushing with and without the proposed breach. The model indicated the breach will flush at least twice as quickly in the summer months with the breach. Water levels in the lagoon will not exceed the current maximum (high tide) water levels in the lagoon, though low tide levels in the lagoon will be higher than existing during high flow conditions (i.e. >300cms river discharge). Discharge through the culvert will range from 0 (low water, low tide) to ~1.0 cms (high tide, extreme flood conditions). These discharges present a low increased flood and erosion risk to the lagoon areas with the proposed culvert breach, making the benefits from increased flushing highly attractive.

The model also identified a slow incremental increase in sediment load to the lagoon, as suspended particulates from the river will enter through the new breach. This was not unexpected; in fact it is considered a benefit rather than a liability as sediment is part of an important process that helps to build estuarine salt marsh habitat where it accretes.

Further benefits include:

- Both adult and juvenile fish will find access to the lagoon through both the breach and the current outflow, where they can feed and hide from predators.
- Juvenile fish that use the lagoon as a nursery for part of their lives as they prepare for their ocean journey will find it remains cooler longer due to influx of cool river water at high tides. Currently, summer conditions will warm the mudflats below the lagoon outlet, which in turn will warm the water entering the lagoon during a flood tide.
- Adult salmon currently enter the lagoon through the outlet and become trapped at low tides. A second breach will increase opportunity for salmon to escape on the receding tide.
- Well-oxygenated brackish water in the lagoon will support an abundance of important microscopic food items suitable for salmon.
- Project design will work with the City of Courtenay's current infrastructure and ongoing access requirements.
- Community benefits will come about through the high profile of the restoration site combined with media releases and educational signage, increased presence of salmon and associated wildlife, and volunteer opportunities associated with the monitoring phase.
- This project is in alignment with addressing limiting factors to Chinook salmon, an important species identified by BC Hydro in their Strategic Action Plans.

### Risks

The risks and mitigation details are below:

- Consultation with the City of Courtenay (CoC) brought up concerns for public safety and maintenance. There is the potential for woody debris to accumulate on the lagoon side of the breach and block it off. The option of installing a rack was discussed, and may be required by the CoC for this project to go ahead.
- Project Watershed and CoC have discussed public safety concerns, including the potential for children and kayakers to access the breach culvert. Solutions include rack installation (which will also prevent woody debris accumulation) and strategic planting of thick, thorny vegetation to prevent pedestrian access from the trail. Further, except during low tide/extreme flood events, water levels in the culvert will only rise with the tide, otherwise it will have less than 1 cms running through it, and then only when the public is not likely to attempt access (i.e. extreme winter flow conditions). This potential risk can be further addressed through signage.
- The risk for fish stranding in the culvert was also considered; to prevent this the culvert will have a smooth bottom and placed along a level surface.

### Measures of Success

We expect this project to have immediate and lasting benefits to fish and fish habitat following restoration. Success will be evaluated based on the key objectives to increase fish access to the lagoon and to improve the function of lagoon habitat for fish and wildlife. Key indicators will be measured over the 3 years following construction (funding dependent):

Assessment Endpoint	Indicator	Timing/Frequency	Notes
Improved Water Quality	temperature	April to Sept, 10 min. intervals (logger), 2014-2106	Logger installed in lagoon at ~0.5m depth. Results compared to 20° and 25° thresholds for salmon success (Bjornn and Reiser 1991).
Improved juvenile salmon access to the lagoon	Presence/Absence	April to Aug, 1x per month, 2014-2016	Baseline years = 2010 and 2013. Success indicated by longer residence in lagoon through July-Aug. CPUE also collected.
Increased bird diversity in lagoon and surrounding foreshore	Relative frequency of use by different species	Seasonal: Spring, Summer, Fall Winter 2014-2016)	Baseline for summer 2013, data collection ongoing (2013-2014). Success based on increase in bird use and diversity.
Increased use of estuary during salmon migration	Sr signature in otoliths	Fall collection of coho salmon otoliths from Puntledge River hatchery adults (2017-2018)	Baseline available for adult coho in PUN. Success based on longer residence time in estuary of spawning salmon. See Sea Grant (2011) for example.

## Communication Plan

Comox Valley Project Watershed Society (CVPW) has been conducting watershed stewardship activities, which includes watershed education, water quality monitoring, fish habitat restoration, and sensitive habitat mapping activities since 1993. FWCP projects will be promoted in the community through press releases and radio announcements in local media outlets, guided watershed walks on the Puntledge River and K'omoks Estuary. CVPW participated in the open house at the Puntledge Hatchery again this fall and will continue to be part of this activity in the future.

We are also reporting our progress and findings on our website (for example <http://projectwatershed.ca/plan-improved-habitat-air-park-lagoon/>) and will continue to do this as the project unfolds. These reports also get posted to our Facebook page. In both instances members of the public have the opportunity to comment on our work.

As the Air Park is a highly used public area we will be working with the City of Courtenay to inform users of our plans, construction dates and interruption of trail usability through online announcements, newspaper articles, radio announcements, public meetings and site signage.

This project will be one of the three focal points in our 2014 Keeping It Living Awareness Campaign which we run every year. The campaign includes full page ads in the paper with details on our focal projects, our funders logos and short description, events, walks, an art and literature competition and a grand finale event. The grand finale will be held around Earth Day (April 22nd, 2014). In the past our grand finale events have attracted 300+ attendees. This project will be presented in the context of our long term plan of promoting several channels off the main stem of the Courtenay River to provide habitat complexity and refuge from predators (seals) and high water velocities in the main river.

Our aim is to build on the work already undertaken by FWCP with its stakeholder workshops held in 2005 and 2008, as well as agency action plan prioritizations. In addition, the current plans and results of community lead



restoration and watershed awareness activities occurring in the Puntledge River, Tsolum River, Morrison Creek and the K'omoks Estuary.

### **Past Projects**

The following provide information on past related FWCP projects, including the participation of the current project team<sup>2</sup>.

#### **2010**

##### **Investigation of restoration and protection options in the Courtenay River Estuary (Tryon 2011)**

In 2010, Project Watershed undertook a comprehensive study of the Courtenay River estuary with the assistance of many volunteers and the BC Hydro FWCP (BCFWCP Project # 10.PUN.08). The goal of this study was to provide a foundation for future activities that will help to restore and protect important habitats in the estuary for salmon, including the food webs of which they are a part and the processes that support them. This study resulted in an overall ecological characterization of the estuary and the development of a comprehensive list of restoration and protection options. For further information, contact the project biologist, Lora McAuley at 250-898-742.

#### **2012**

##### **Lagoon Airpark Study Phase 1**

A \$5000 seed grant was awarded to CVPW by FWCP to undertake a preliminary analysis of the lagoon and its suitability to support a breach in the upper end. Project activities involved surveying of the river area adjacent to the breach. The results indicated that a breach to the lagoon was desirable and feasible and identified the need for more detailed information.

#### **2013**

##### **Lagoon Airpark Study Phase 2**

This phase involved the development of a hydraulic model to test the technical feasibility of a lagoon breach, and the collection of data on water levels, fish and bird use, sediment and water quality. The hydraulic modeling was undertaken by Graham Hill of NHC, who incorporated 2012 LiDAR and bathymetry data from the City of Courtenay, detailed lagoon bathymetry collected by Bob Foster and Project Watershed, Canadian Hydrographic Services tide chart predictions, and Water Survey of Canada and PW flow and stage data. Hydraulic modeling involved the use of Telemac-2D software to model flushing and flows given different breach scenarios. From this a concept plan and detailed CAD drawings of a 2.4m concrete culvert. Meetings were held with stakeholders, including the City of Courtenay, and watershed groups in the Comox Valley. Others who could not make the meetings were consulted via phone and email, including DFO, the Comox Valley Airpark Club and the K'omoks First Nation.

For more information contact:

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<sup>2</sup> For more information on Northwest Hydraulic Consultants past projects contact Graham Hill at 250-754-6425

Lora McAuley (for overall project planning, implementation and monitoring and all biological aspects): 250-898-7426

Graham Hill (for details on project design and hydraulic modeling): 250-754-6425

Caila Holbrook (for communications): 250-703-2871

Dan Bowen (for overall Project Watershed administrative inquiries): 250-338-8978

## Literature Cited

Bjornn, T. C. and D. W. Reiser. 1991. Habitat requirements of salmonids in streams. American Fisheries Society Special Publication 19:83-138.

Hamilton, S.L., B.A. Bravender, B. Munroe, S. Stevens, T. Dziekan, 2002. Results of Beach, Mini Purse, Purse, Gee Trap and Pole Seine surveys at the Courtenay River Estuary and Baynes Sound, Courtenay, B.C., 2001. Can. Data Rep. Fisheries and Aquatic Science, 1089

Hamilton, S.L., B.A. Bravender, C. Beggs, B. Munroe, 2008. Distribution and Abundance of Juvenile Salmonids and Other Fish Species In the Courtenay River Estuary and Baynes Sound, 2001. Can. Tech. Rep. Fisheries and Aquatic Science, 2806.

Hill, Graham, 2013. Courtenay Airpark Lagoon Breach Modeling and Conceptual Design. Presentation prepared for the CVPW, October 10<sup>th</sup>, 2013.

Jenkins, J.A., B.A. Bravender, C. Beggs, B. Munroe, and D. Miller, 2006. The Distribution and Abundance of Juvenile Salmonids and Other Fish Species In the Courtenay River Estuary and Baynes Sound, 2000. Can. Tech. Rep. Fisheries and Aquatic Science, 2659.

Morris, S., A.J. Leaney, L.M. Bell and J.M. Thompson. 1979. The Courtenay River Estuary: Status of Environmental Knowledge to 1978. Special Estuary Series No. 8. Department of Fisheries and the Environment, West Vancouver, BC 355p.

Tryon, L., 2011. Investigation of Restoration and Protection Options for Juvenile Salmonids in the Courtenay Estuary. BC Hydro Fish and Wildlife Compensation Program Project # 10.PUN.08)

## Multi-year Projects Only

This proposal is part of a phased approach that will result in breaching the dike between the Airpark Lagoon and the river. More information on Phases 1 and 2 are provided in the "Past Projects" section.

- **Phase 1** took place in 2011 and involved \$5000 in FWCP seed funding. It involved preliminary survey data collection and analysis, and identified that a breach to the lagoon was desirable and feasible.
- **Phase 2** was carried out in 2013 and involved funding from FWCP, PSF and TD Friends of the Environment for the collection of baseline data and preparation of a detailed engineering design and construction budget.
- **Phase 3** (this proposal) is planned for 2014, and will involve breach construction.
- **Phase 3** will be multi-year and will involve monitoring of the breach project for success to improve water quality, increase access for salmon, improve bird habitat, and provide greater

opportunity for the estuary to contribute to overall salmon survival in the Puntledge and Tsolum systems. For more information on Phase 3, see section "Measures of Success".

## Credentials and Qualifications

### **Northwest Hydraulics Consulting**

Dr. David McLean has over 30 years of experience in sedimentation, river hydraulics, river engineering and fluvial geomorphology. David has participated in a wide range of water resource projects involving hydrological analysis, field data collection and surveys, hydraulic analysis and modelling in rivers, estuaries and coastal environments. NHC conducted one dimensional hydraulic modelling of the Courtenay River in Courtenay on behalf of BC Hydro in 1995 and 1990 to assess flood hazards associated with various dam releases.

Mr. Graham Hill has over 12 years of experience in project planning, analysis, design, construction supervision, and project monitoring. He has worked within multi-disciplinary teams of engineers, biologists, technicians, planners, and environmental scientists and has experience in permitting, project implementation, and project management. Graham's project experience includes riverbank stabilization, fish habitat restoration including large woody debris design, off channel habitat improvements, estuary and wetland restoration, fishways, fish passage through culverts.

### **Lora McAuley, MSc., R.P.Bio., Lake Trail Environmental Consulting, Project Biologist**

Lora is a registered professional biologist (R.P.Bio) and an independent consultant working out of the Comox Valley. She has 13 years experience working with industry, non-profit groups, government, private companies, and First Nations on a variety of projects including stream, wetland, estuary and marine environmental assessments, restoration monitoring, training, stream restoration, hydraulic monitoring studies, management plan development and policy development. She received a BSc degree in Fisheries and Aquaculture in 2000, and a M.Sc. degree in Environmental Management at Royal Roads University.

### **Wayne White, PW Technical Committee member, Project Facilitator**

### **Caila Holbrook, Project Watershed Estuary Coordinator, Communications Liason**

Caila has been coordinating projects with Project Watershed since November 2008. During this time she has done project management, financial management, communications work, volunteer coordination, GPS and GIS technical work. She has a Masters in International Nature Conservation and a BSc in Environmental Science. She has also been involved with many international environmental restoration and research projects.

### **Dan Bowen, Project Watershed Director and Project Manager**

Dan has worked in the public and private sector as a project manager involving many road construction projects on Vancouver Island. He has 40 years experience working in the surveying, development approvals, project development and construction supervision. With a construction survey background

Dan has worked on large projects and specialized in drainage management and culvert installation with specific fish sensitivities. Within the provincial government he was the contract documents manager for several multimillion dollar projects. Dan is part of the "Blue Carbon" team of Project Watershed that has signed the MOU with the Provincial Climate Secretariat. He was the project manager on a large marine eelgrass project in the K'omoks Estuary. As the Technical Director of Comox Valley Project Watershed Dan oversaw and completed FWPC projects 11.Pun.01; 12.Pun.01; 12.Pun.03; Pun.12.Pun.04 and is currently working on 13.Pun.01; 13.Pun.02; 13,Pun.03; 13.Pun.04.



THE CORPORATION OF THE CITY OF COURTENAY  
**STAFF REPORT**

**To:** Mayor and Council  
**From:** Chief Administrative Officer  
**Subject:** Dawn to Dawn Agreement

**File No.:** 2380-20  
**Date:** November 18, 2013

**PURPOSE:**

To seek direction from Council on whether to enter into an agreement for the use of City Property for use of a community garden.

**CAO RECOMMENDATIONS:**

That based on the November 18<sup>th</sup> 2013 staff report, "Dawn to Dawn Lease Agreement", Council approve the attached agreement for a five year period with Dawn to Dawn Action on Homelessness Society for the use of a portion of City lands located on Harmston Avenue for the purpose of a community garden.

Respectfully submitted,

David Allen  
Chief Administrative Officer

**BACKGROUND:**

The Dawn to Dawn Action on Homelessness Society ("Dawn to Dawn") currently has consecutive one year agreements with the City for the past two years for the purpose of initiating a community garden. The Society has indicated their satisfaction with the site and the success of the program on this site, and wishes to enter into a five year agreement to continue the program.

**DISCUSSION:**

Dawn to Dawn commenced a pilot project in 2011 for a community garden to engage some of their clients and community members in urban food production which could be used to feed the homeless and other persons facing poverty. The project was very successful and was renewed in 2012.

A year by year occupancy agreement with the City was established to identify the potential sustainability of the project. Dawn to Dawn has experienced tremendous success as a result of the community garden project and new partnerships have develop as a result. The Aboriginal Head Start Program, St George' United Church Sunshine Club and others have assisted with the program.

The City has identified the Harmston property as a potential future home for an RCMP building and may consider the property for other uses. If any of the City projects come about during the term of the lease there is a termination clause incorporated into the agreement.

**FINANCIAL IMPLICATIONS:**

The City provides water service, garbage cans, and a port a potty over the summer months at a minimal cost which is included in the annual operations budget.

**ADMINISTRATIVE IMPLICATIONS:**

Parks Division staff liaise with the community gardens volunteers throughout the year as part of the annual corporate work plan.

**STRATEGIC PLAN REFERENCE:**

N/A

**OFFICIAL COMMUNITY PLAN REFERENCE:**

N/A

**REGIONAL GROWTH STRATEGY REFERENCE:**

N/A

**CITIZEN/PUBLIC ENGAGEMENT:**

N/A

**OPTIONS:**

- 1) Approve a 5 year lease agreement with the Dawn To Dawn Action on Homelessness Society
- 2) Approve a 1 year agreement only with the Dawn to Dawn Action on Homelessness Society
- 3) Not enter into an agreement for use of City property for a community garden.

Prepared by:



Randy Wiwchar  
Director of Community Services



# Dawn to Dawn

ACTION ON HOMELESSNESS SOCIETY

Unit 6C - 821 Shamrock Place, Comox, BC Canada V9M 3P6

Mr. Wiwchar

Director of Community Services

City of Courtenay

Nov 04, 2013

Dear Mr. Wiwchar,

Re: Dawn to Dawn Community Garden

I am writing to request another renewal of the agreement between the City of Courtenay and Dawn to Dawn for the operation of a community garden on part of the city-owned property at the corner of Grant and 6<sup>th</sup> St.

The garden has been a wonderful successful beyond our dreams. It has proven to be a very helpful vehicle to build social interaction between our clients and other citizens who are or have faced homelessness and others within the community who have not.

When we commenced the pilot project two years ago our vision was that to see it might be a way to engage some of our clients and other community members in urban food production. The food could be used to feed the homeless and other persons facing poverty. That is exactly what has happened and more.

Yes our participating clients have learned about gardening and food security. And, they have been able to provide fresh produce to the homeless and other members of the community, some directly and others through our partnership with Lush Valley Sharing Shelf. As well, to the Sonshine Club at St George's church and for a luncheon program at the garden every summer Sunday, when the Sonshine Club does not operate.

The Comox Valley, enjoyed a spectacular summer this year and many community members took advantage of that and gave of their time, their gardening expertise, seeds and seedlings to help make the garden successful. We estimate that we had 2,000 visits to the garden throughout the summer.

However, we could not have done it without the wonderful support and collaboration from the City of Courtenay. The city's support has really helped make the garden the success it has been. We very much appreciate the opportunity we have had to try this pilot and the very cooperative working relationship with City of Courtenay staff. Special thanks to James Nixon for his support and guidance.

After two years of piloting the program, we would like to be able to extend this venture for a longer period if that is possible. Three to five years would be ideal. Such an extension will enable us to engage more community partners in the garden. We will continue to be responsible for the garden's operation

and our relationship with the City. But, more partners will make lighter work for our part-time gardeners and volunteers. We of course understand that we will need to vacate should the City determine other uses for the property.

We believe the garden has proven its merit and look forward to more success in the future.



Sincerely,

Richard Clarke

President



**Community Garden Report** - submitted by Judy Brooks

Dianne MacLean and Joan Mathias were responsible for another excellent garden season, despite the deer invasion and very hot July weather. They also expanded it, adding 7 beds. Last but not least, they also created a welcoming environment and did much to reach out and help people in need.

**Produce was distributed** to many people through the **LUSH Valley Sharing Shelf** / and to others, directly from the garden.

**Over 2,000 people came to visit, or participated in the garden since April this year.** This includes:

- **over 500 prepared meals** were served to the homeless from the garden on Sundays, May to Sept. by the group **Food Not Bombs**
- **Regular drop-ins:** Kiwanis Village and other neighbors, service providers, tourists. average: 10 per week X 25 wks = **250 visits**
- It is well used as a **resting place** for street people in the afternoons and evenings. We have **benches and chairs** around, and the City installed a **portable toilet & allowed access to a water source.** total: **1,500 visits**
- Children tending their own garden (CV Aboriginal HeadStart) : **80 visits**

Our **Recreation Program**, which includes the community garden, provides activities for homeless persons to develop in unique ways. It allows them to:

- to participate in and contribute to ordinary recreational activities
- to come together as a community and to connect with others
- to share a common experience in a safe and healthy environment

**Sponsors & funding:**

- City of Courtenay for the site & services / the CVRD for supporting our Recreation Program
- The Home Depot Canada Foundation & the HD Courtenay Store
- This fall, the CV Horticultural Society is donating \$600.

**DAWN TO DAWN COMMUNITY GARDEN AGREEMENT**

THIS AGREEMENT made as of the 1st day of December, 2013

BETWEEN:

**THE CORPORATION OF THE CITY OF COURTENAY**, a municipal corporation incorporated under the *Community Charter* and having an address of 830 Cliffe Avenue, Courtenay B.C.

(the "City")

OF THE FIRST PART

AND:

**DAWN TO DAWN ACTION ON HOMELESSNESS SOCIETY**, a registered society with an address of Unit 6C-821 Shamrock Place, Comox, B.C.

(the "Society")

OF THE SECOND PART

**WHEREAS:**

- A. The Society has constructed certain improvements on lands owned by the City including raised garden beds and a drip irrigation system as shown on the sketch attached hereto as Schedule "A" (the "Lands"); and
- B. The City has agreed to allow the Society to use the Lands with these improvements (the "Improvements") on the terms and conditions set out herein.

**NOW THEREFORE** in consideration of the mutual covenants contained herein and other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged by the parties), the parties agrees as follows:

**USE OF LANDS AND IMPROVEMENTS**

- 1. The City hereby grants the Society rights to use on a non-exclusive basis the Lands and the Improvements so long as they are being used for a community garden and other related activities (including garden demonstrations and educational events and community food and harvest gatherings) and for no other use (without the City's prior written consent which may be withheld in the City's sole discretion).
- 2. The Society will maintain the Lands and Improvements to the City's standards (to be established by mutual agreement between the Society and the City's Director of Community Services, it being understood that the Society will repair any damage, howsoever caused, including (without limitation) by acts of vandalism.
- 3. The Society will obtain the City's prior written consent before undertaking any further alterations to the Lands and the Improvements.

## **TERM, RENEWAL AND TERMINATION**

4. The term of this Agreement is for a period of five years commencing on December 1, 2013 and terminating on November 30, 2018.
5. This Agreement may be terminated by the Society or the City upon giving to the other party 30 days notice of its intention to terminate, such notice to be given in writing on the last day of any month.
6. Upon expiration of the term, all improvements on the Lands must be removed by the Society. This requirement may be waived by the City if the Society receives approval from City Council to continue the use of the property in the future.

## **INDEMNIFICATION OF CITY**

7. The Society agrees to indemnify and save the City harmless from and against any loss or damage suffered by the City as a result of an action brought against the City by any person in connection with any activities on the Lands. For certainty, the reference to the City in this and the previous sections refers, where the context so allows, to the City's Councillors, officers, employees, agents, contractors, subcontractors and others for whom it is responsible in law. The indemnities contained in this Agreement will survive the expiration or earlier termination of the Term.

## **LIABILITY INSURANCE**

8. At its expense, the Society must provide and maintain throughout the Term:
  - (a) comprehensive general liability insurance to protect and indemnify itself and the City against claims for bodily injury, death, property damage, property loss, economic loss and other loss or damage occurring upon, in or about the Lands in an amount not less than TWO MILLION (\$2,000,000.00) DOLLARS per accident or occurrence or such greater amount as the City may stipulate from time to time; and
  - (b) property insurance against all risks, in a commercially prudent form, against loss or damage to any personal property located on the lands which insurance must be for replacement cost.

Those insurance policies must be in the standard form carried by the City, and approved through the City Representative. The policies must provide for 30 days notice to the City before cancellation and should a policy lapse or be cancelled, the City may, at the cost of the Society, place insurance as provided in this section.





THE CORPORATION OF THE CITY OF COURTENAY  
**STAFF REPORT**

2

**To:** Mayor and Council  
**From:** Chief Administrative Officer  
**Subject:** Rezoning of 2368, 2698 and 2650 Arden Road

**File No.:** 3360-20-1301  
**Date:** November 18, 2013

**PURPOSE:**

The purpose of this application is to consider a zoning amendment to facilitate the reconfiguration of a previously approved development at 2368, 2698 and 2650 Arden Road.

**C.A.O. RECOMMENDATIONS:**

That based on the November 18<sup>th</sup> 2013 staff report, "Rezoning of 2368, 2698 and 2650 Arden Road", Zoning Amendment Bylaw 2770, 2013 to rezone 2368, 2498 and 2650 Arden Road to the PA-2, R-1D and CD-25 zones proceed First and Second Readings; and

That Council direct staff to schedule and advertise a statutory Public Hearing with respect to Zoning Amendment Bylaw No. 2770, 2013 on December 9, 2013 at 5:00 p.m. in City Hall Council Chambers.

Respectfully submitted,

David Allen  
Chief Administrative Officer

**BACKGROUND:**

The subject properties are located within the Arden Corridor and are currently zoned Comprehensive Development Twenty (CD-20) zone, Residential Three (R-3) zone and Public Areas Two (PA-2) zone. This zoning was adopted by Council in August, 2011 and permits the development of a mixed residential neighbourhood with a maximum density of 128 units in a combination of single, duplex and triplex residential units.

In the summer of 2012 the owners approached the City to discuss amending the zoning to better reflect the current market demand for housing. The conceptual plan that this rezoning application is based on will reduce the maximum permitted density from 128 units to 97 units in a mix of fee simple single family lots and two separate multi-family strata developments containing duplex and triplex units.

**DISCUSSION:**

**Official Community Plan Review**

The subject properties are currently designated "Urban Residential" in the *City of Courtenay Official Community Plan Bylaw No. 2387, 2005* (OCP). The proposal is consistent with this designation and accordingly an OCP amendment is not required.

Section 4.4.3 of the OCP outlines the following key residential policies when considering increased densities:

- balance land uses to create a vibrant and diverse neighbourhood and community;
- create neighbourhoods that will offer a variety of transportation choices;
- preserve and enhance open spaces, greenways and environmentally sensitive areas;
- encourage green buildings and infrastructure; and
- lead in creating inclusive neighbourhoods for housing.

With regard to balancing land uses the conceptual development plan (see attached) for the site shows a mix of fee simple single family housing with the option of secondary suites, and two multi-family strata developments containing duplex and triplex units. Although this concept offers a similar housing typology to the current CD-20 zone, the new concept offers more variety in tenure with the mix of strata and fee simple ownership compared to the currently approved full strata development. This balance should assist with the creation of a neighbourhood for a range of life stages, incomes and tenure options, leading to an inclusive and diverse community.

Transportation choices can be difficult to address in smaller developments. Overall we still live in an automobile oriented society and modal shifts to alternative forms of transportation have been slow. Within this development a recreational trail with links to the broader network will be provided by the developer. These trail connections will assist in encouraging walking and cycling alternatives for residents of the development and the community in general. Densities in the area are still relatively low to support regular transit service. However, it is anticipated that as the Arden corridor builds out the increased densities will create demand and make transit more feasible.

#### **Natural Environment & Greenway Corridor**

A detailed environmental assessment was completed in 2011 following the original rezoning application and an Environmental Development Permit was issued at that time. This permit has since expired and an updated assessment was completed for the revised proposal. In general, the updated assessment results in similar setbacks to those previously established (30m along the entire length of Piercy Creek). However, the new concept plan proposes to remove an ephemeral ditch bisecting the property and replacing it with a piped system and stormwater management ponds. Accordingly, much of the current environmental review has been with DFO, who must approve removal of the ditch. Following DFO approval to remove the ditch, the City will issue an updated Environmental Development permit, complete with monitoring provisions.

DFO approval is critical to advancing the concept plan submitted by the applicants. The importance of this approval was discussed with the applicant in August 2012, 6 months before the formal application was made. As a result of changes to the DFO operational structure, this approval has still not been received and will be required prior to final adoption of the bylaws. To date much of the discussion with DFO has involved compensation for the lost habitat and for the trails that fall inside the riparian areas. It is the understanding of City Staff that the compensation balance sheet has been accepted by DFO in principal and they are awaiting clarification from the applicant on a few items.

Of importance to this site and the Arden Corridor in general, the environmental impact assessment identifies that the availability of wetted summer flows is a significant limit to fish production in the Piercy Creek watershed during periods of prolonged droughts. It is also known that increases in impervious surface and drainage density can result in increased flashiness of flows in the creek resulting in habitat degradation. Stormwater management and hydrological function is therefore a critical component of the development. To this end, the applicant has proposed a stormwater management plan that is based on four "subcatchments" utilizing stormwater attenuation ponds and rock pits. To facilitate the development

a large volume of fill will be required. It is expected this fill will provide for effective groundwater infiltration.

It is important to note that the detailed stormwater management and other infrastructure design have not been completed. Prior to going to this level of detail the applicant is looking for the degree of comfort offered by 3rd reading of the bylaw. Staff generally accepts this approach with the understanding that the proposed subdivision layout and associated densities are considered conceptual until the detailed design work is done to prove it is feasible. Further, it is understood that the final subdivision layout will be at the sole discretion of the Approving Officer.

As noted in the attached correspondence from the neighbourhood information meeting, there is a desire by some of the residents in the adjacent Creekside Commons development to retain the treed buffer between the two sites. In an effort to address this, the applicant has requested that the front yard setback of the proposed lots along this boundary be reduced to 4.5m to limit the intrusion into this treed area. A separate development variance permit will be brought forward, should the zoning amendment be approved. Additionally, the applicant will be required to register a covenant on these lots to prevent the removal of any trees without the approval of the City. This removal would only occur in the event of a hazard tree and would be subject to an Arborist report.

#### **PARKLAND**

Similar to the original proposal the riparian area in and around the watercourse will be dedicated to the City as park. As an Environmentally Sensitive Area, and in accordance with OCP policy, this land will not be considered as part of the 5% parkland dedication at the time of subdivision. Accordingly, the City will also require the dedication of a neighbourhood park within the fee simple subdivision area. The proposed area shown on the attached plan is less than 5% of the overall land area so the developer will also be required to contribute cash in lieu at the time of subdivision.

#### **PROPOSED ZONE**

The proposed CD-25 zone applies to the two multi-family strata sites. This zone limits the maximum density to 46 units and permits the same uses, setbacks and heights as the existing CD-20 zone. As noted in the above discussion on stormwater management, the proposed layout and unit density for these sites is conceptual. The final layout and density will be subject to Development Permit approval taking into consideration the multi-family development permit guidelines and detailed servicing design.

#### **ARDEN LAP**

Early in the discussions with the applicants regarding this proposal, the question of the Arden Local Area Plan (LAP) process and its impact on their application was considered. Recognizing that the subject properties were already zoned for relatively intense residential development and the new concept would not increase density and is not a significant departure from the approved zoning, Staff agreed the application could be considered in advance of the Arden LAP. The draft LAP which is currently scheduled for Public Hearing on December 2nd, 2013, identifies the subject development as an existing zoned site.

#### **FINANCIAL IMPLICATIONS:**

The applicant will contribute to the "Affordable Housing Amenity Reserve Fund" and the "Park, Recreation, Cultural and Seniors Facilities Amenity Reserve Fund" for each lot created by subdivision or building permit

issued for a multifamily building. The contribution will be calculated based on the policies found in Section 7.7 of the Official Community Plan and will be no less than \$1000.00 per lot created by subdivision for each of the reserve funds. For the multifamily units the amount will be no less than \$500.00 per unit for each of the reserve funds. This requirement will be secured in the development covenant which will be registered prior to final bylaw adoption.

**ADMINISTRATIVE IMPLICATIONS:**

The processing of development applications is included in the current work plan as a statutory component. If the bylaw passes Third Reading staff time will be required to review the detailed engineering design drawings and prepare the development covenant. The staff time required for this work will be dependent on the quality and completeness of the submissions.

**STRATEGIC PLAN REFERENCE:**

N/A

**OFFICIAL COMMUNITY PLAN REFERENCE:**

The subject properties are designated "urban residential" in the Official Community Plan. This designation is intended for single family and duplex residential development with a broad range of fully serviced subdivisions and the provision for a variety of lot sizes in a neighbourhood. The proposed development is consistent with this designation.

**REGIONAL GROWTH STRATEGY REFERENCE:**

The proposed development is consistent with the RGS goals and objectives to ensure a diversity of housing options to meet evolving demographics and needs, and to locate housing in core settlement areas close to existing services.

**CITIZEN/PUBLIC ENGAGEMENT:**

The applicant held a neighbourhood information meeting on October 29, 2013 at Arden Elementary School. The meeting was attended by 24 people and comments received included the desire to retain trees and build a fence adjacent to the Creekside Commons development, concerns about traffic in the Arden corridor, and rainwater management. Comment sheets are attached for Council's information.

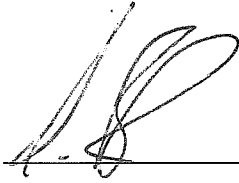
**OPTIONS:**

1. Give Zoning Amendment Bylaw 2770, 2013 to rezone the properties legally described as Lot A, District Lot 230, Comox District, Plan 48707; Parcel A (DD 10616N) of Lot 4, District Lot 230, Comox District, Plan 2152, Except That Part Shown Outlined In Red On Plan 688R And That Part In Plan 48707; and That Part of Parcel A (DD10616N) of Lot 4, District Lot 230, Comox District, Plan 2152 Shown Outlined in Red on Plan 688R, Except Parts in Plans 6030 And 23672 (2368, 2498 and 2650 Arden Road) from R-3, CD-20 and PA-2 to R-1D, CD-25 and PA-2, First and Second Readings and proceed to Public Hearing; (Recommended)



2. Defer consideration of Bylaw 2770, 2013 with a request for additional information;
3. Defeat Bylaw 2770, 2013.

Prepared by:



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Ian Buck, MCIP, RPP  
Manager of Planning



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Peter Crawford, MCIP, RPP  
Director of Development Services

Applicant Submissions



January 21, 2013

MCSL File: 2211-47258-0

City of Courtenay  
Planning Department  
830 Cliffe Ave.,  
Courtenay, BC V9N 2J7

Attention: Mr. Peter Crawford

Dear Sir,

**PROPOSED SINGLE & MULTI FAMILY DEVELOPMENT OF 2368, 2498, AND 2650 ARDEN ROAD, COURTENAY- DEVELOPMENT SYNOPSIS**

This is in support of the zoning bylaw amendment, Environmental Development Permit, and Development Variance Permit applications submitted to the City this date. This document provides a development synopsis with respect to proposed land use, park dedication, development variance permit, and affordable housing.

**INTRODUCTION**

The 11.5ha subject property is comprised of 3 land parcels fronting Arden Road. Topography generally slopes from east to west and a mixture of second growth fir/cedar partially covers the landscape.

The properties are bounded by Arden Road to the west, Piercy Creek to the east, Ronson Road to the south, and a mixture of residential land uses to the north.

Tributary 7 and Tributary 8 drainage courses convey stormwater across the property, from Arden Road to Piercy Creek.

An existing residence on site has been incorporated into proposed development plans.

**LAND USE**

The subject property's land use designation was recently amended to CD-20 and R-3, in support of a prior multi-family proposal by the same owners. Since completing that amendment process, the owners have re-evaluated the approved development plan within the context of current housing market conditions. The result of this analysis suggests a mixture of single & multi-family residences better suits the both owners and the City's objectives; these being:

1. Provide a land use mixture that ensures a diversity of housing options to meet evolving demographics.
2. Encourage varying housing types for a range of household incomes.
3. Improve the local rental market inventory.

...continued

495 Sixth St  
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Our File: 2211-47258-0  
Page 2

4. Retain and protect the natural environment.
5. Provide low impact public access to natural environment retention areas.

A total of 46 multi-family units are proposed in two separate Cd zone strata sites. The first area proposes 38 units in duplex and tri-plex configurations proximal to Arden Road. The second offers 8 residential units within the same building configurations.

The proposed multi-family development CD zone meets all applicable existing CD-20 zone land use restrictions. As such, this portion of the development proposal does not introduce any new land uses that have not previously been approved by council.

Between the two multi-family development sites, 49 single family residential R-1D lots are proposed. Proposed lots ranging in size (520 to 1010 square meters) and varying in shape promotes architectural diversity within the development.

Introducing a single family residential component to the development facilitates a mixture of land uses that encourages neighborhood social and economic diversity. In addition, overall development density adjacent to Piercy Creek and Tributary 8 natural reserve areas is reduced from 17.5 units per hectare to 13.6.

To alleviate excessive on street parking within the multi-family development sites, a total of 12 visitor spaces are offered as an alternate to the minimum (5) required by bylaw.

The proposed development footprint is contained within the developable area established by the prior land use amendment process.

#### **PARK DEDICATION**

The 4.2ha riparian area park dedication and trail network along Tributary 7, 8, and Piercy Creek that was enshrined in the prior development plan will be carried forward in this new proposal. Additionally, further park dedications are now offered within the single family component as stormwater features. Given the extensive passive park dedication area on-site, in concert with adjacent existing neighborhood park amenities, cash in lieu is being offered to meet applicable single family park dedication responsibilities.

The provision of 2 walkway linkages between the single family residential lots and the park/ trail network will allow a greater population to access the passive park area than was possible in the prior development plan.

Both multi-family development sites exceed the minimum on-site open space requirement of 50 square meters per 2 bedroom unit by providing 1442 and 750 square meters respectively.

...continued



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Page 3

#### **DEVELOPMENT VARIANCE PERMIT**

The development variance permit application applies to proposed single family lots 5 through 16 and requests a reduction in the front yard setback from 7.5m to 4.5m. By relaxing front yard setback requirements in this area, future homes may be positioned closer to the street and the resulting expanded rear yards minimize potential disturbance to existing mature trees along the north property boundary. Such a variance is warranted given these tree specimens enhance development character, provide screening to adjacent properties, and contribute to riparian habitat.

#### **AFFORDABLE HOUSING CONTRIBUTION**

The owners offer 1 fully serviced single family residential lot within the proposed development as contribution towards the City's affordable housing initiative. All lot servicing and registration costs will be paid by the owners prior to title transfer to a selected not for profit agency.

We feel the provision of a lot within the development, as an alternate to the spatially separated location previously planned, will provide future residents an increased sense of neighborhood and community.

Yours truly,

MCELHANNEY CONSULTING SERVICES LTD.

Derek Jensen, ASCT.  
Project Manager

DJ:njg

cc. Arden Road Developments Ltd., Wayne Rideout



January 21, 2013

MCSL file: 2211-47258-0

City of Courtenay  
Planning Department  
830 Cliffe Ave.,  
Courtenay, BC V9N 2J7

Attention: Mr. Peter Crawford

Dear Sir,

**PROPOSED SINGLE & MULTI FAMILY DEVELOPMENT OF 2368, 2498, AND 2650  
ARDEN ROAD, COURTENAY- SUSTAINABILITY CHECKLIST**

In support of our land use amendment application submission this date, we provide the following completed sustainability evaluation checklist.

1. Land Use

The proposed development is consistent with the City's OCP by confirming to the existing urban residential designation.

The location of the site represents an 'in fill' development proximal to the City's core. Through this infill, the pressure for further municipal annexation and resulting urban sprawl is reduced.

The introduction of a single family residential component to the existing multi-family land use provides both social diversity and a mixture of land uses within the proposed development that is consistent with the surrounding lands.

The addition of R-1D single family land use will provide an opportunity to expand the local rental market through secondary suite allowances.

Extensive park and riparian area dedications will add to the existing neighborhood amenity inventory.

2. Transportation

The development is located adjacent to Cumberland Road, a major public transit route.

continued...

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Page 2

With the provision of the proposed expansive park pathway network, cycling and walking activities are encouraged.

There are ample retail, commercial and recreation/parks opportunities within proximity to the development, affording alternate and sustainable transportation options.

### 3. Infrastructure

All municipal and 3<sup>rd</sup> party services to support the development are largely in place; negating the need for offsite mainline extensions.

The applicant will encourage low flow plumbing fixtures throughout the development.

Drought resistant landscaping will be encouraged to minimized potable water demands.

An extensive trail network will encourage alternate modes of transportation.

The proposed development represents an overall density reduction which results in less post development stormwater runoff.

Low impact stormwater management strategies such as roof leader infiltration galleries, stormwater detention and polishing facilities and the installation of oil/grit separators will assist in maintaining water quality prior to discharge into receiving waters.

### 4. Environmental Protection

Through prior applications to DFO, appropriate development setbacks from environmentally sensitive areas have been established. These setback limits will be re-affirmed through an updated DFO approvals process.

4.2ha of the property abutting Piercy Creek, Tributary 7 & 7A, and Tributary 8 will be dedicated to the City of Courtenay as passive park.

The extensive trail network proposed within riparian areas will formalize public access to this amenity while minimizing disturbance.

Higher levels of stormwater management, both in terms of water quality and quantity will be implemented.



continued...

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Page 3

5. Building Design

Development controls will be implemented by the owners to ensure a high standard of architecture and finish are maintained.

Builders will be encouraged to utilize 30 year asphalt shingle roofing as well as seek locally sourced building materials where available and cost effective.

Buildings will be constructed and finished in accordance with Build Green BC or equivalent.

Yours truly,

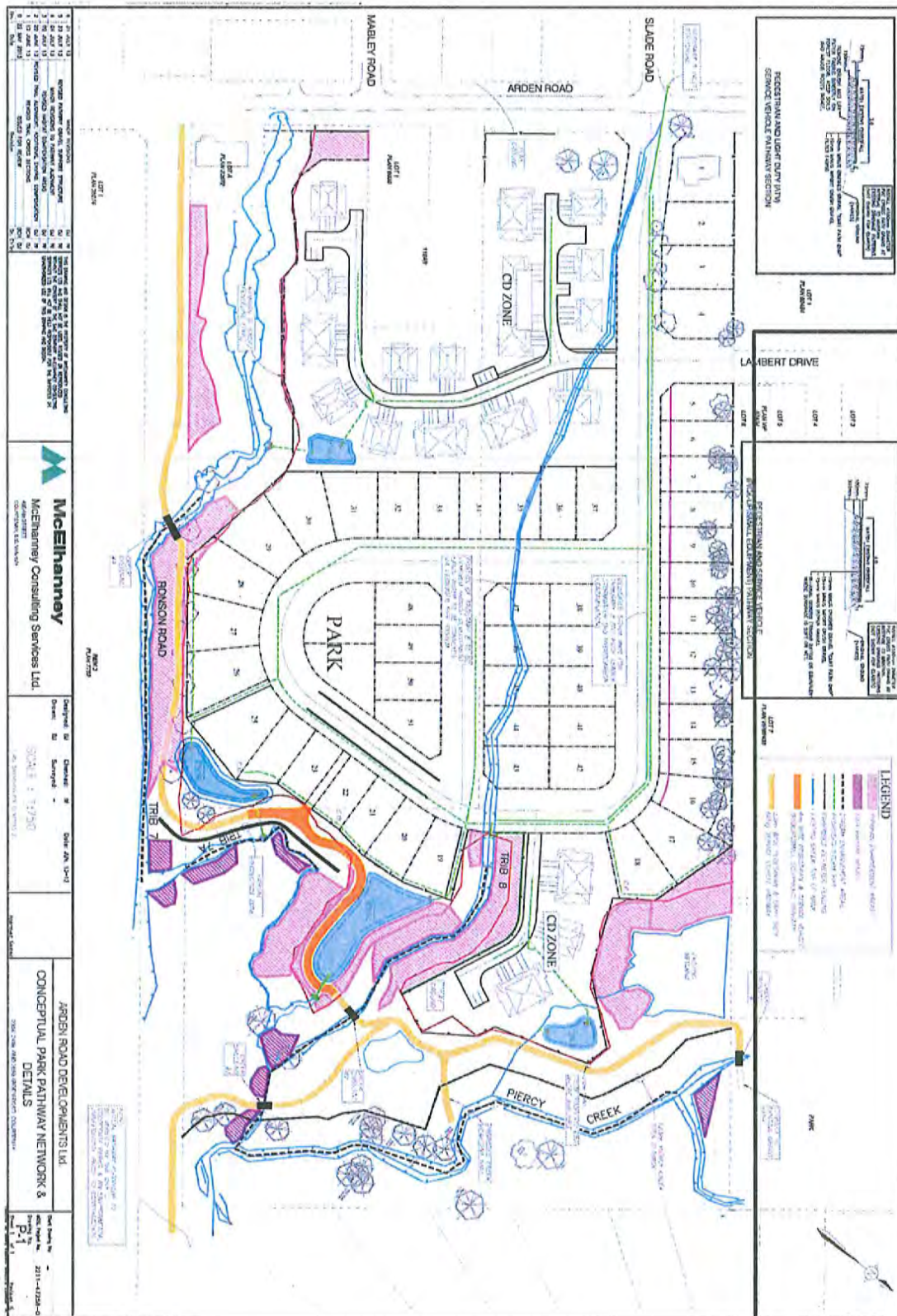
McELHANNEY CONSULTING SERVICES LTD.

Derek Jensen, A.Sc.T.

DJ:ldg

cc: Arden Road Developments Ltd., Attention: Wayne Rideout

CONCEPTUAL SITE PLAN





**PROPOSED ZONING**



NEIGHBOURHOOD MEETING SUMMARY



October 30, 2013

Our File number: 2211-47258-0  
City File: 3320-20-1163

City of Courtenay  
830 Cliffe Avenue  
Courtenay, BC V9N 2J7

Attention: Ian Buck, Manager of Planning

Dear Sir,

**ZONING AMENDMENT, DEVELOPMENT VARIANCE PERMIT AND ENVIRONMENTAL  
DEVELOPMENT PERMIT - 2368, 2498 AND 2650 ARDEN ROAD  
NEIGHBOURHOOD MEETING – SUMMARY REPORT**

A neighbourhood meeting regarding the above application was hosted by Arden Road Developments Ltd. on Tuesday, October 29, 2013:

- a) Meeting was located in the Arden Elementary School Gym, beginning at 5:30 and finishing at 7:00 pm.
- b) We have record of 24 residents in attendance.
- c) Meeting notification details were hand delivered to all properties as per the list provided by the City of Courtenay, and mailed to all owners listed (not within 100m of the development).
- d) Information provided: General overview of the development proposal, rationale for the amendment, environmental mitigation measures, park dedication, and trail network amenities.
- e) Generally, topics of discussion included:
  - Tree retention along the north property boundary.
  - Fence treatment along the north property boundary.
  - Implementation schedule for the trail network.
  - Development phasing and construction sequence/timing.
  - Land clearing schedule.
  - Environmental compensation and proposed improvements.

Yours truly,

McELHANNEY CONSULTING SERVICES LTD.

A handwritten signature in blue ink, appearing to read 'Derek Jensen', is written over a horizontal line.

Derek Jensen, A.Sc.T.  
Project Manager

cc: Arden Developments Ltd. Group

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**SIGN IN SHEET FOR  
 NEIGHBOURHOOD MEETING  
 For  
2368, 2498, 2650 Arden Road**

Name (Printed Please)	Address
Jeanine Maars	206-2202 Lambert Dr. Contena
Linda Nygaard	2530 Mablay Rd. Ctry.
Lingey Evans	2674 ARDEN RD.
Shields Roy	4364 MUNSTER RD.
Pam Munroe	2202 Lambert Drive Ctry
Tim CROSSIN	2202 Lambert Dr. Ctry.
PICK STOBART	2306 " " "
BARRY ARNEIL	2326 LAMBERT Dr.
JACKIE FINNIE	2450 SLADE RD
Tom Linnie	2450 SLADE Rd
Chris Nagle	310-2202 Lambert Dr
Michelle Nagle	310-2202 Lambert Dr.

October 29, 2013 (MCSL FILE: 2211-47258-0)

**SIGN IN SHEET FOR  
 NEIGHBOURHOOD MEETING  
 For  
2368, 2498, 2650 Arden Road**

Name (Printed Please)	Address
Mary Lang	405-2202 Lambert Dr.
Lori Ball	2616 Mabley Road.
Rod Heitzmann	# 307-2202 Lambert Dr.
Peter Kitchell	304-2202 Lambert Dr.
Kathy Dawson	304-2202 Lambert Dr.
K. Humphreys	403 2202 Lambert Dr.
RUSSELL Ball	2616 Mabley Rd
Steve Williams	3430 Sandpiper Dr. (Midland Pkwy W.S.)
Taris Gower	210-2202 Lambert Drive
Peter Ashmore	311 2202 Lambert Drive
Arlene Krustham	208 2202 Lambert Dr.
Sharon Haave	208-2202 Lambert Dr.

October 29, 2013 (MCSL FILE: 2211-47258-0)

**COMMENT SHEET**

**NEIGHBOURHOOD MEETING  
October 29, 2013**

**For  
2368, 2498, 2650 Arden Road**

**Name & Address**

Jacquie Mcaree

206-2202 Lambert Dr.

Courtesy

**Comments Welcome:**

I am concerned about the proposed CD area at the NE end of the property, so close to sensitive fish habitat. A tremendous amount of fill is necessary close to the creek + tribs - how can we be assured that this is done without causing environmental damage.

How can we be assured that the covenanted trees + their natural habitat remain.

I seriously question the need for a fence between Creekside Commons and this proposed development. This disturbs more of the habitat than necessary and it is aesthetically not pleasing to the eye.

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**

**NEIGHBOURHOOD MEETING**

**October 29, 2013**

**For**

**2368, 2498, 2650 Arden Road**

**Name & Address**

Rod Hertzmann

#307, 2202 Lambert Dr

Courtenay

Comments Welcome:

1. The trees between Creekside Commons + this property should follow City of Courtenay Official Community Plan Environmental Development Permit Areas Map 6 which requires a 5m. buffer.
2. More pedestrian access should be provided in area of Lot 18.
3. There should be a fence constructed between Creekside Commons if buffer is not designated.
4. There should be a guarantee provided that the fill will be from "clean" sources.
5. This project should contribute to upgrade cost of intersection of Arden/Cumberland.

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**

**NEIGHBOURHOOD MEETING**  
**October 29, 2013**

**For**  
**2368, 2498, 2650 Arden Road**

**Name & Address** Kirstin Humphreys  
403- 2202 Lambert Dr  
(Creekside Commons)

**Comments Welcome:**

- Most the boundary trees are protected
- Hope Creekside has input into  
type of fence.
- Good presentation.  
Good luck

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**  
**NEIGHBOURHOOD MEETING**  
**October 29, 2013**  
**For**  
**2368, 2498, 2650 Arden Road**

**Name & Address** BARRY ARNEIL 2326 LAMBERT DR.

Comments Welcome:

The Big Maple Tree on Lot 5 I THINK  
IS A HAZARD AND ALL THE LEAVES  
AND WIRLY BROWN FLYING THINGS ARE  
A PROBLEM AND BIG BRANCHES COULD BREAK  
OFF. WOULD BE WILLING TO BUY TREES  
FOR REPLACEMENT

October 29, 2013 (MCSL file 2211-47258-0)



**COMMENT SHEET**  
**NEIGHBOURHOOD MEETING**  
**October 29, 2013**  
**For**  
**2368, 2498, 2650 Arden Road**

**Name & Address** Michelle Nagle  
310-7202 Lambert Dr.  
Courtenay BC

**Comments Welcome:**  
I am concerned that a tree-line  
remain along the NW side (border  
between Creekside). I would also  
like to see more done for a wildlife  
corridor here along this side of the  
property.

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**  
**NEIGHBOURHOOD MEETING**  
**October 29, 2013**  
**For**  
**2368, 2498, 2650 Arden Road**

**Name & Address** Dick STUBBART 2306 Lambert

\_\_\_\_\_  
\_\_\_\_\_

Comments Welcome:

\_\_\_\_\_  
Not to happy with just 2 exits at the west  
end of project (i.e FIRE EXITS)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**

**NEIGHBOURHOOD MEETING**

**October 29, 2013**

For

**2368, 2498, 2650 Arden Road**

**Name & Address**

LORI BALL 2616 HABLEY ROAD

Comments Welcome:

- CONCERNS ABOUT FILLING IN SWAMP LANDS AROUND CREEK AREA
- TRAFFIC, ROAD CONDITION CONCERNS
- # OF HOMES - GET RID OF ALL MULTI-FAMILY UNITS COMPLETELY.
- THERE IS ALREADY A FEW NEW COMPLEXES WITH MULTIFAMILY  
KEEP THE AREA TO SINGLE FAMILY HOMES, PLEASE!

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**

**NEIGHBOURHOOD MEETING**

**October 29, 2013**

**For**

**2368, 2498, 2650 Arden Road**

**Name & Address**

Pam Monroe

203 2202 Lambert Rd. Courtenay

**Comments Welcome:**

I am not sure this "development" will ever play out. The market in the area won't support this. However I like the increased density for this area despite the fact that the physical infrastructure is inadequate to provide safe walking + cycling. Before this development goes through there needs to be a serious fixing of the Arden / Cumberland / 20th intersection including lower the speed limit much further south on Cumberland. Keeping the trees on the border with Creekside is a high priority.

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**  
**NEIGHBOURHOOD MEETING**  
**October 29, 2013**  
**For**  
**2368, 2498, 2650 Arden Road**

**Name & Address**

Sharon Haave  
208-2202 Lambert Dr. (Creekside)

**Comments Welcome:**

The continuity of fencing on the property line adjacent to Creekside is of high concern as we see the entire line of that property line.

October 29, 2013 (MCSL file 2211-47258-0)

**COMMENT SHEET**  
**NEIGHBOURHOOD MEETING**  
**October 29, 2013**  
**For**  
**2368, 2498, 2650 Arden Road**

**Name & Address**

Tanis Gower

210 220 2 Lambert Drive

tgower@shaw.ca

**Comments Welcome:**

Very interested to ensure 300mm  
topsoil across the whole site,  
+ effective rainwater infiltration  
(infrastructure) on the areas of the  
property that are not on fill.

October 29, 2013 (MCSL file 2211-47258-0)



## STAFF REPORT

3

**To:** Mayor and Council  
**From:** Chief Administrative Officer  
**Subject:** Airpark Lagoon Habitat Enhancements

**File No.:** 0400-20  
**Date:** November 18, 2013

### PURPOSE:

To inform Council on the status of the Airpark Lagoon habitat enhancement project and to request approval to provide a letter of support for the continuation of the project.

### CAO RECOMMENDATION:

That based on the November 18, 2013 staff report, "Airpark Lagoon Habitat Enhancements", Council approve Option #1, and direct staff to prepare a letter of support to the Comox Valley Project Watershed Society on the Airpark Lagoon habitat enhancement project.

Respectfully submitted,

David Allen  
Chief Administrative Officer

### BACKGROUND:

The Project Watershed Society first approached the City with a proposal to provide fish habitat enhancements in the Airpark Lagoon in the fall of 2010. The original project scope included detailed surveys of the lagoon, including water and sediment sampling and plant inventory, with the intent of conducting water flow analyses (e.g. lagoon dike breach) at a later phase of the project. Council passed the following motion at the November 1<sup>st</sup> 2010 council meeting (at this time only the Airpark Lagoon project is being discussed, not the Simms Millennium project):

*"That Council endorse the fish habitat restoration projects in the Courtenay Airpark Salt Marsh and Simms Millennium Park for which funding from BC Hydro is being pursued by Comox Valley Project Watershed Society and Fisheries and Oceans Canada."*

Since then, the Project Watershed Society has been successful in securing funding to conduct the habitat enhancement project in a phased approach.

In 2011, Council received an update on the project which included the intent to secure funds to create a detailed design for a breach from the Courtenay River into the Airpark Lagoon.

In 2012, staff provided a letter of support for the continued work, including in-kind support in the form of LiDAR survey data to assess the geography of the area, upon the securing of a data sharing agreement.

The Project Watershed Society is now entering the final and implementation phase of the project and is seeking Council's continued support for the project in the form of:

- A letter of support to project funders (note – staff have provided a ‘place holder’ letter of support to Project Watershed for funding application deadline purposes. See the letter in Attachment No. 1);
- Staff in-kind support in the form of time to review the detailed design of the lagoon breach once it has been completed and coordination of communications to the public when the work would occur, if approved; and
- Acceptance of the infrastructure asset which will be maintained by the City over time once the project has been completed, if approved.

The past studies have confirmed that the Airpark Lagoon is a good contender for fish habitat enhancements and that the construction of a breach in the dike is feasible and is anticipated to provide the ‘flushing’ and nutrient circulating function that it was envisioned to fulfil. These factors are projected to increase fish rearing habitat on a section of the Courtenay River that has been highly modified by human activities.

The land in question is crown land leased by the City of Courtenay. The 30 year lease will be expiring in 2015 and staff is in the process of reviewing the lease renewal process and the ownership implications of the proposed asset. City support is contingent on the approval of the land owner and the conditions they may require for the project to move forward.

#### **DISCUSSION:**

Attachment No.2 contains information on the highlights from the biological and hydrological studies that both conclude that the Airpark Lagoon dike breach proposal is feasible from a biological and hydrological perspective. Note the proposed location of the breach on pages 2 and 3 of the “Courtenay Airpark Lagoon Breach Modelling and Conceptual Design” material (Attachment No. 2). A summary of this material is provided below:

##### Biological/environmental study:

- Off-channel refuge is limiting for rearing salmonids in the estuary and along the Courtenay river;
- Historical records (1951) confirm that the area of the Airpark Lagoon provided a source of fish habitat and was part of the river channel, thus providing consistent flow dynamics, which will in part be replicated through the project proposal;
- Benefits to fish would include: double access to the lagoon, refuge from seal predation, better mixing of oxygen within the water column in the lagoon, lower water temperatures in the lagoon;
- Saltmarsh restoration is part of the overall proposal, to occur just south of the existing lagoon/estuary boundary, outside of the lagoon, but as part of a separate project application;
- Sediment sampling indicates that all of the analyzed parameters are below regulatory maximums, therefore soil/sediment contamination is not a concern;
- The project provides an opportunity for community stewardship and education in the form of volunteer activities and ongoing monitoring.

##### Hydrological study:

- A 20m long, 2.44m wide box culvert is proposed and is sufficient to increase flushing rates to the lagoon and provide a new path for fish to access the lagoon;



- There is a low risk of increased flood and erosion to the lagoon area associated with the proposed culvert breach.

Now that the details of the project are better known, staff have a number of items that they require more information on in order to better understand any operation and maintenance implications for the City:

- A life cycle projection of the longevity of the infrastructure, the maintenance aspects (including processes such as permitting requirements from senior agencies), projected frequencies of maintenance and replacement cost and time-line of the asset;
- Safety to the public and public works servicing implications and recommended mitigation options;
- Confirmation that the structure will have a net zero impact on the extents of the flood plain and to the existing drainage infrastructure that discharges to this lagoon.

#### **FINANCIAL IMPLICATIONS:**

The financial implications are indirect and long-term. The project is intended to be entirely funded by granting agencies and other sources. The City of Courtenay is not being asked to dedicate any funds to the creation of this project.

An estimation of the maintenance and replacement costs is being requested as part of the next phase of the study. Note that staff are discussing with the land owners (the Province) the proposed asset and long-term responsibilities thereof.

#### **ADMINISTRATIVE IMPLICATIONS:**

Since 2010, staff time devoted to this project has been minimal, generally limited to a once a year update. Now that the work is entering detailed implementation phase, staff anticipate that more staff time will be required to review the incoming studies and designs, advise on the technical specifications and standards for the end product, support the Project Watershed Society as they liaise with other levels of government for approvals to construct, and to communicate to the public the project, if approved.

#### **STRATEGIC PLAN REFERENCE:**

- Promote efforts to preserve and protect the estuary
- Related to: Advocacy/ Partnerships – Estuary Management Action Plan

#### **OFFICIAL COMMUNITY PLAN REFERENCE:**

The OCP chapter on the environment states a number of goals including: "To protect and enhance fish and wildlife habitats" and "to work with watershed and stream stewardship groups on environmental related matters." The OCP also identifies the protection of wildlife corridors among its policies, where wildlife corridors may include stream channels and other aquatic areas of respite and feeding that adult and juvenile and fish require to successfully migrate between their various habitats throughout their lifecycle.

#### **REGIONAL GROWTH STRATEGY REFERENCE:**

Policy 2B-2: Explore and encourage the practice of restoration of urban and rural ecosystems to increase ecological functions.

#### **CITIZEN/PUBLIC ENGAGEMENT:**

The City has undertaken no public engagement on this project. The Project Watershed Society convened a meeting on October 16 in which a number of stakeholders were invited to discuss the proposal. No objections have been raised.

**OPTIONS:**

1. Write a letter of support (Recommended)

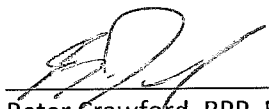
That Council write a Letter of support to the Comox Valley Project Watershed Society on the Airpark Lagoon habitat enhancement project, notably the dike breach design and implementation, with the conditions that the following be included as part of the next phase of the project study:

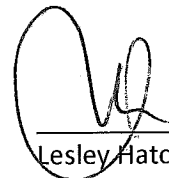
- A life cycle projection of the longevity and replacement cost of the infrastructure, and maintenance costs(including processes such as permitting requirements from senior agencies);
- Public safety and public works servicing implications and recommended mitigation options;
- Confirmation that the structure will have a net zero impact on the flood plain and to the existing drainage infrastructure that discharges to this lagoon;
- Confirmation of ownership implications of the proposed asset given that the land is a Crown Lease; and

That the findings of this study be presented to Council for consideration.

2. Do not write a letter of support
3. Refer the item back to staff for further review, and/or revision

Prepared by:

  
Peter Crawford, RPP, MCIP  
Director of Development Services

  
Lesley Hatch, P.Eng.  
Senior Manager of Engineering

  
Nancy Hofer, MSc  
Environmental Planner

## THE CORPORATION OF THE CITY OF COURTENAY

*Development Services*  
830 Cliffe Avenue  
Courtenay BC V9N 2J7



*phone: (250) 334-4441*  
*fax: (250) 334-4241*  
*planning@courtenay.ca*

BC Hydro's Fish and  
Wildlife Compensation Program  
Coastal Region  
6911 Southpoint Drive – E11  
Burnaby, B.C.  
V3N 4X8

October 22, 2013

**Attn: BC Hydro's Fish and Wildlife Compensation Program**  
**Re: City support for Airpark Lagoon habitat enhancement project**

The City of Courtenay has supported in principle the Airpark Lagoon habitat enhancement (i.e. dike breach and saltwater march restoration) project since we were first presented with the idea in fall 2010. We are pleased to see that the project has completed its feasibility studies, and to learn there is genuine potential for fish habitat restoration along the Courtenay River - a river known to lack habitat complexity in general and fish rearing habitat in particular.

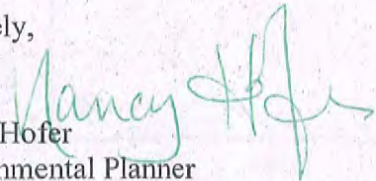
Courtenay's Official Community Plan (OCP) supports species and habitat protection and restoration and promotes the maintenance of ecological integrity on all lands within the City. The OCP chapter on the environment states a number of goals including: "To protect and enhance fish and wildlife habitats" and "to work with watershed and stream stewardship groups on environmental related matters."

Now that the project is entering the detailed implementation phase, the City must examine in more detail the implications of inheriting and managing the asset that is being proposed (i.e. the culvert and associated infrastructure). Staff will be taking the existing proposal including the hydrological modeling and biological findings to Council at our November 4 Council meeting to seek direction on the further commitment to the project.

At this point, staff are able to report that the City continues to support the project in principle. We look forward to confirming the details with the Project Watershed Society. Please accept this letter as a 'place holder' for application submission purposes until such time as we have secured the Council motion to support the detailed recommendations of the project.

If you have any questions or concerns, please don't hesitate to contact me.

Sincerely,

  
Nancy Hofer  
Environmental Planner



## Lagoon Breach Project

### Background and Rationale

Lora Tryon, R.P.Bio, M.Sc.

## Objectives

- To address limitations in off-channel refuge for fish
- To enhance flushing in lagoon
- To work with stakeholders to achieve a mutually agreeable and beneficial project



## Historic Air Photos 1951 and 1964



Courtenay Airpark area circa 1951 (without lagoon)

Courtenay Airpark area circa 1964 (with lagoon)

Note river channel in the area where the lagoon was constructed in the ensuing years.

## Airpark Lagoon 2012



## Concept for breach and saltmarsh



Note: only a portion of the area in red is planned for planting: the entire area only shows potential

## Background

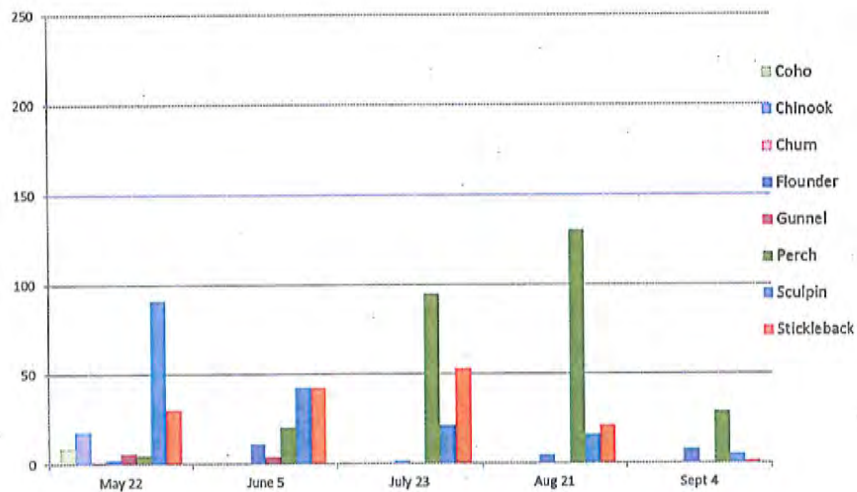
- 2010 Project Watershed study to investigate restoration and protection options in estuary.
- 41 restoration & 33 protection options identified
- Off-channel refuge limiting for rearing salmonids in estuary
- Lagoon breach project opportunity to increase access to off-channel rearing, and improvement of that habitat with increased flushing
- Extra benefits of public education, stakeholder involvement and community volunteer activities through ongoing monitoring

## Current Conditions

- Juvenile salmon use May to early June
- Bird use- summer months mostly outside of lagoon, move in Sept-Oct
- Saltmarsh vegetation well-established, some invasives, much native planting done in past years.
- Sediment Sampling: some contamination according to CCME SQGL, not CSR



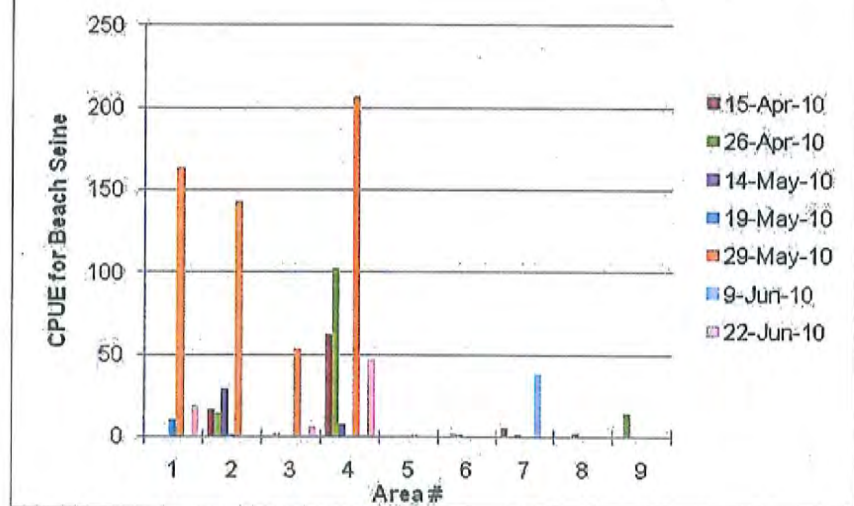
## Fish Sampling 2013 CPUE All species



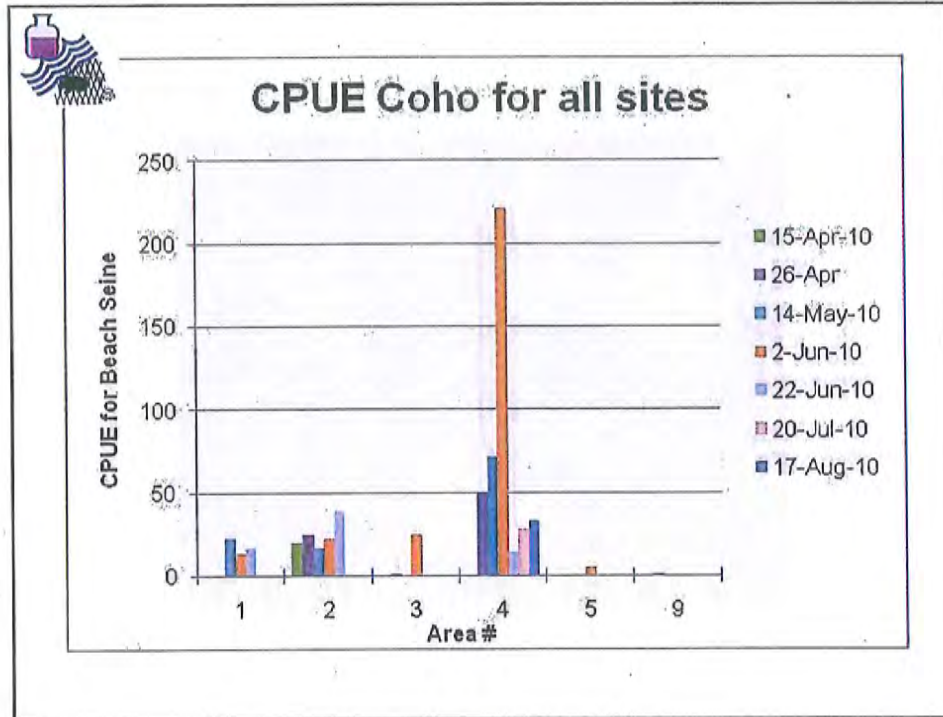
# Estuary Fish 2010



## 2010 CPUE Chinook for all sites







## Bird Use May 17-Sept 9, 2013

- Ducks frequented the lagoon, while geese, gulls and terns used foreshore
- Sampling at high tide, little shorebird use
- Bird use expected to increase when migrating and overwintering birds arrive

## Vegetation polygons for mapping (data analysis in progress)



## Sediment sampling:

August 21, 2013:

- Organo-chlorine  
Pesticide Scan
- Penta Chloro Phenol
- PAH's
- Metals- marine sediment



## Results:

- Below Detection Limits:
  - All PCB's
  - All organochlorine pesticides
  - Penta Chloro Phenol's
- PAH - Phenanthrene above CCME interim criteria, not CSR for S Breach
- Copper and Mercury above CCME, below CSR Criteria
- All below Ocean Dumping Criteria and Contaminated Sites Regulation (CSR) Criteria for both sensitive aquatic habitats and for general protection of aquatic life

## PAH's Above Detection Limits: *(Polycyclic Aromatic Hydrocarbons)*

	Criteria								
	Results		CSR		CCME				Ocean Dumping Sea
	Results (ug/g dr weight)	Marine & estuarine sediment (ug/g)	Interim Sediment Quality Guideline (ug/g)	Probable effects level (ug/g)	(ug/g dry weight)				
<b>PAH's Above D.L.</b>	<b>Breach</b>	<b>Breach</b>	<b>Sensitive</b>	<b>typical</b>	<b>*fw</b>	<b>marine</b>	<b>fw</b>	<b>marine</b>	<b>marine</b>
Anthracene	0.007	0.15	0.29	0.0469	0.0469	0.245	0.245		
Benzo(a)anthracene	0.02	0.43	0.83	0.0317	0.0748	0.385	0.693		
Fluoranthene	0.05	0.93	1.8	0.111	0.113	2.355	1.494		
Naphthalene	0.026	0.24	0.47	0.0346	0.0346	0.391	0.391		
Phenanthrene	0.01	0.07	0.34	0.0419	0.0867	0.515	0.544		
Pyrene	0.05	0.87	1.7	0.053	0.153	0.875	1.398		
PAH's total	0.01	0.223	10	20					2.5

\*a site with sensitive aquatic habitat and for which sensitive sediment management objectives apply  
 \*\*Criteria to protect marine and/or estuarine aquatic life.

## Metals

Metals	Results		Criteria						Ocean Dumping Sea
			Contaminated Regulation		CCME				
	Results (ug/g dry weight)	Breach	Marine & estuarine sediment (ug/g)	Interim Sediment Quality Guidelines (ug/g)	Probable effects level (ug/g)		(ug/g dry weight)		
	Breach	Sensitive	typical**	fw	marine	fw	marine	marine	
Arsenic	<0.20	5.59	26	50	5.9	17	7.24	41.6	
Cadmium	0.09	0.36	2.6	5	0.6	3.5	0.7	4.2	0.6
Chromium	30.5	30.3	99	190	37.3	90	52.3	160	
Copper	45.9	56.7	67	130	35.7	197	18.7	108	
Lead	4	12.8	69	130	35	91.3	30.2	112	
Mercury	0.038	0.3	0.43	0.84	0.17	0.486	0.13	0.7	0.75
Zinc	45.3	67.6	170	330	123	315	124	271	

\*a site with sensitive aquatic habitat and for which sensitive sediment management objectives apply  
 \*\*Criteria to protect marine and/or estuarine aquatic life.

## Next Steps

- Sediment Results- further input from gov't agencies
- Planning for saltmarsh restoration plots
- Validate model, finish veg mapping
- Stakeholder meetings, letters of support
- Apply for FWCP funding for 2014 implementation (Nov. 1<sup>st</sup>)
- Continue monitoring birds for overwinter use of lagoon and foreshore



## Project Funders

- BC Hydro Fish and Wildlife Compensation Program
- TD Friends of the Environment

# Courtenay Airpark Lagoon Breach Modelling & Conceptual Design

Prepared for Comox Valley Project Watershed

Presented by Graham Hill P.Eng on October 10, 2013



**nhc**

northwest hydraulic consultants

water resource specialists

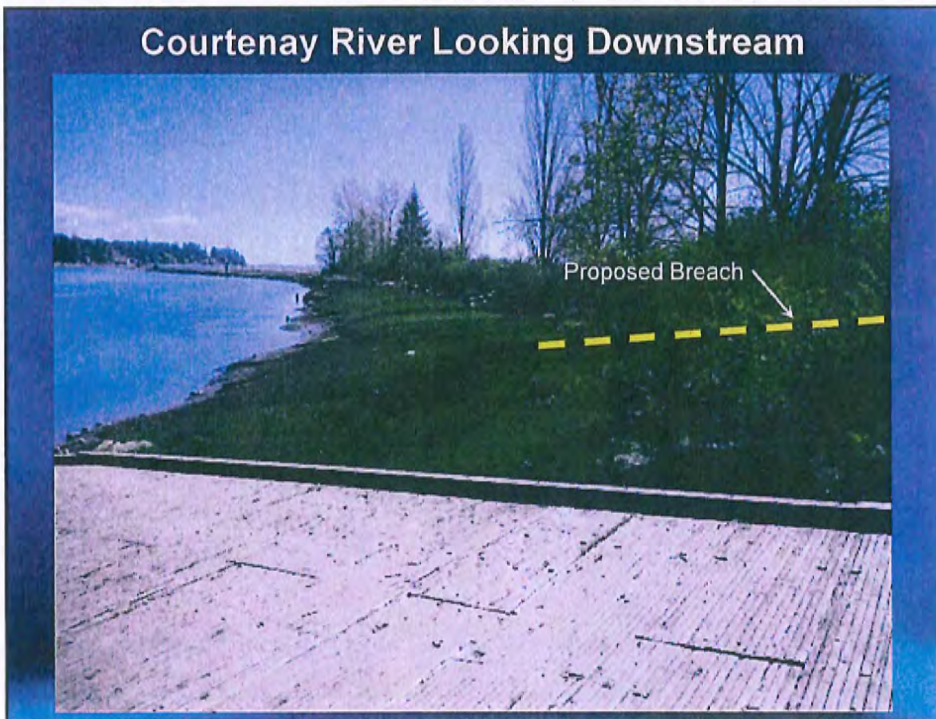
## Study Objectives

- Assess the hydraulic effects of breaching the lagoon dike near the airplane ramp for a combination of river flows and tides.
- Compare the circulation characteristics of the existing configuration to the proposed breach configurations.

**nhc**

water resource specialists

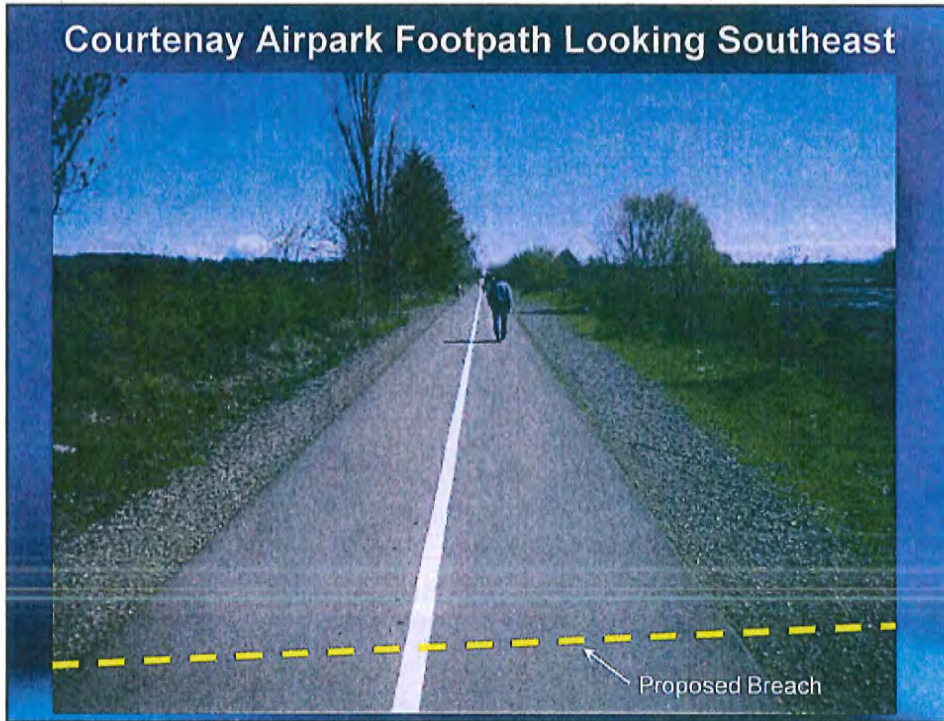
Courtenay River Looking Downstream



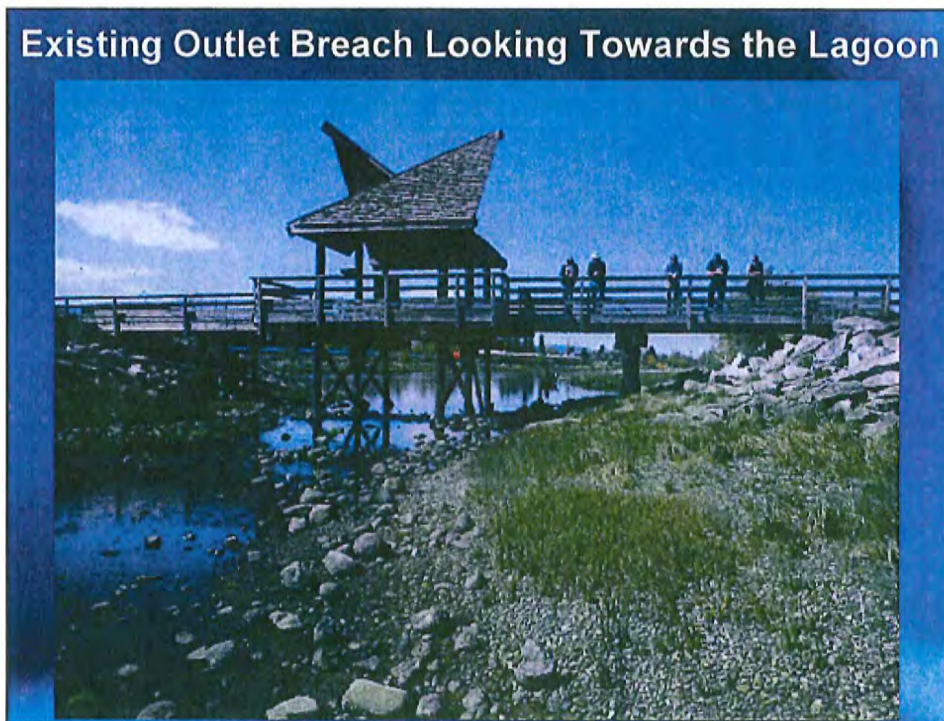
Lagoon Looking South



Courtenay Airpark Footpath Looking Southeast



Existing Outlet Breach Looking Towards the Lagoon





## Numerical Model

- TELEMAC-2D
- Open source software.
- Developed by the Laboratoire National d'Hydraulique et Environnement (LNHE) of the Research and Development Directorate of the French Electricity Board (EDF-R&D), in collaboration with other research institutes.

**nhc**

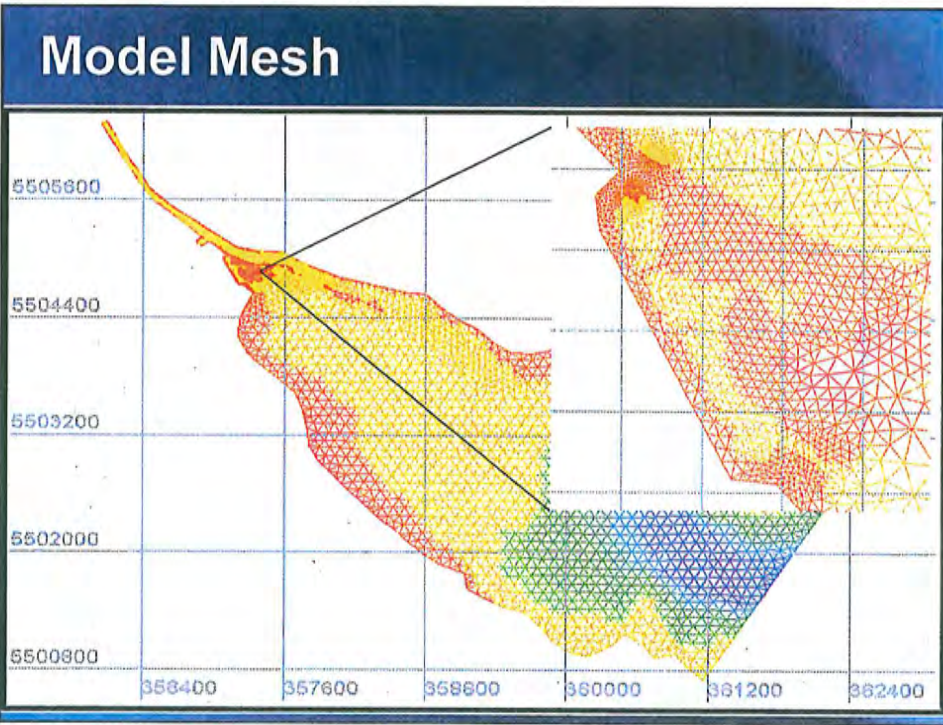
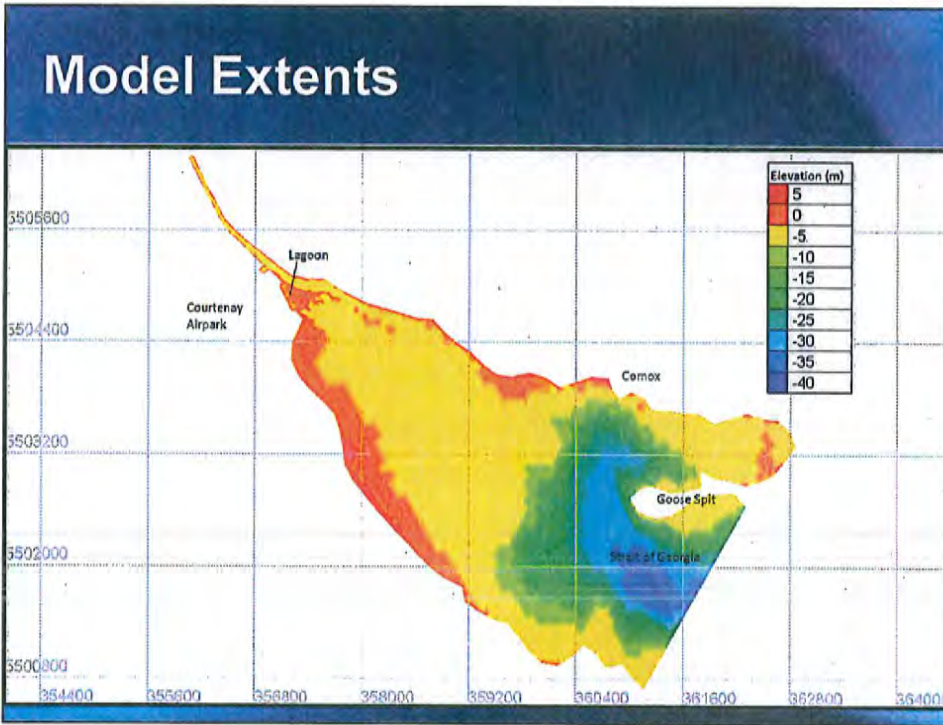
water resource specialists

## Data Input

- City of Courtenay 2012 LiDAR and bathymetry data.
- PW lagoon bathymetry.
- Canadian Hydrographic Service (CHS) Charts.
- Water Survey of Canada (WSC) and PW flow and stage data.

**nhc**

water resource specialists



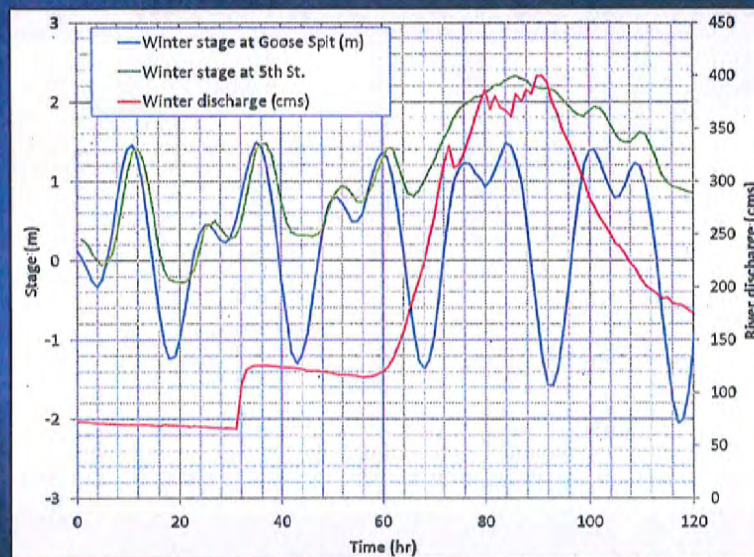
## Modelled Scenarios

- Geometry
  - Existing conditions
  - 2.44 m wide by 1.83 m high box culvert, invert = 0.2 m
  - 4.27 m wide by 1.83 m high box culvert, invert = 0.2 m
- Hydrologic Inputs / Boundary Conditions
  - January 1 – 7, 2010 “Winter Conditions”
  - July 1 – 7, 2010 “Summer Conditions”
  - Peak discharge “Extreme Conditions” with January 1 – 7, 2010 tides

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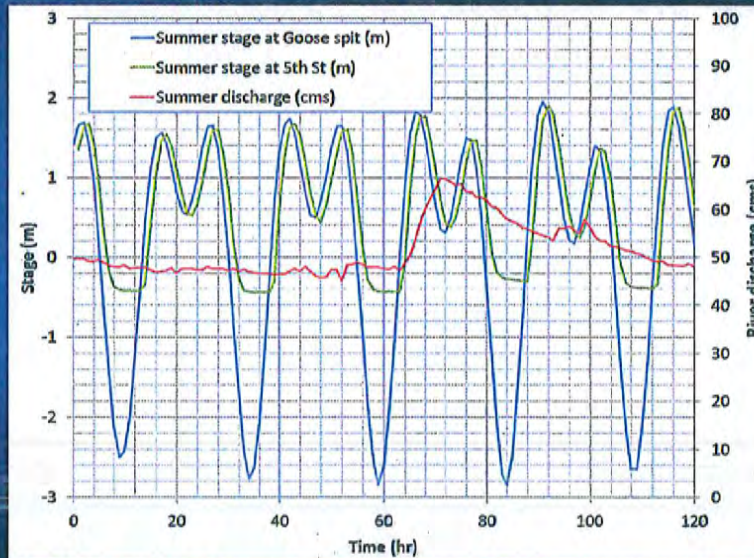
## January 1 – 7, 2010



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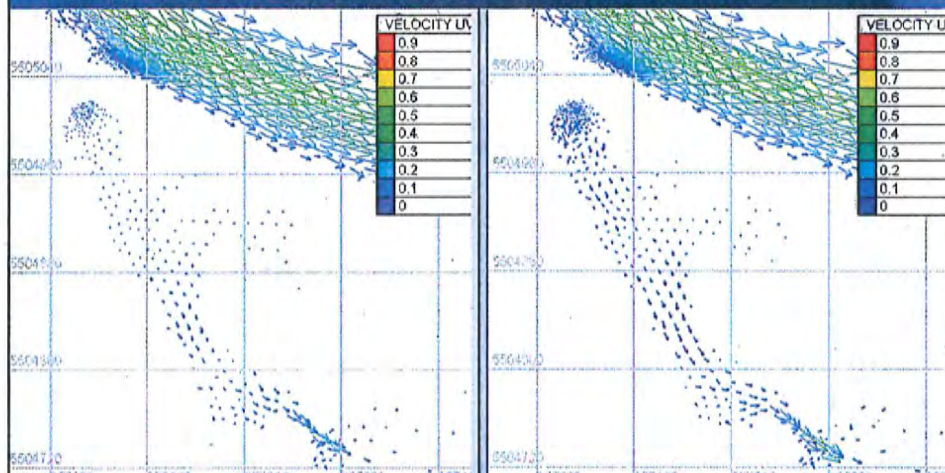
## July 1 – 7, 2010



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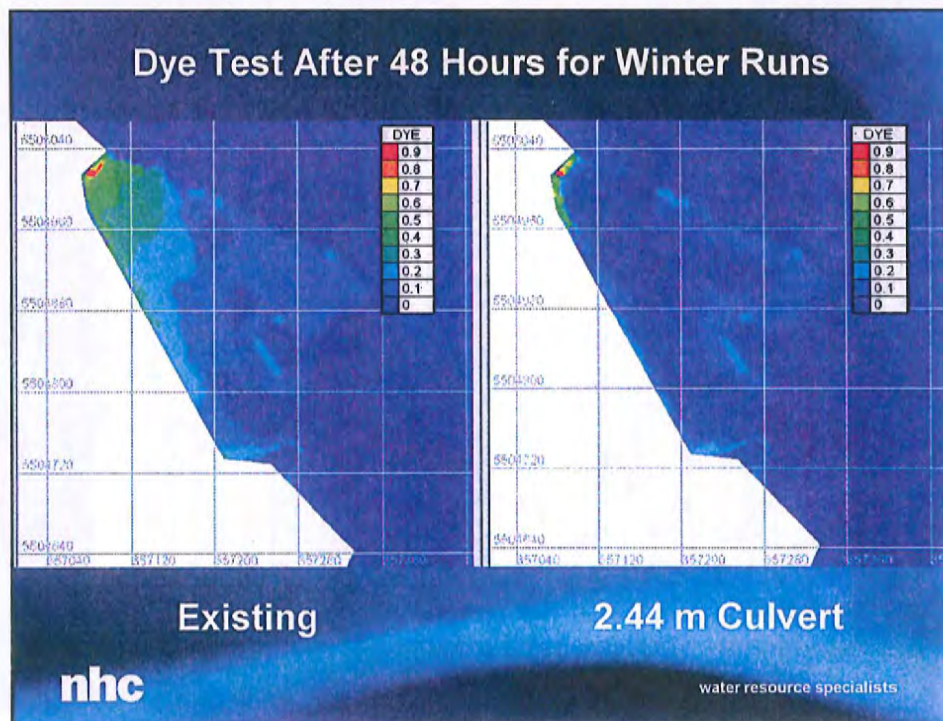
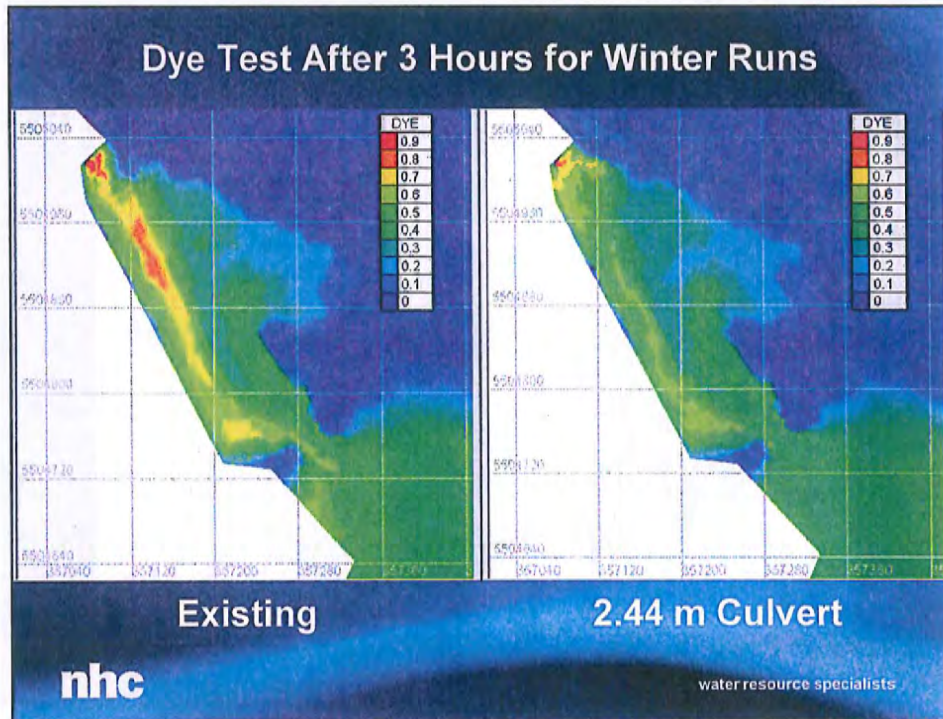
water resource specialists

## Example of Existing Conditions Compared to the 2.44 m x 1.83 m Culvert on July 2, 2010 @ 05:00

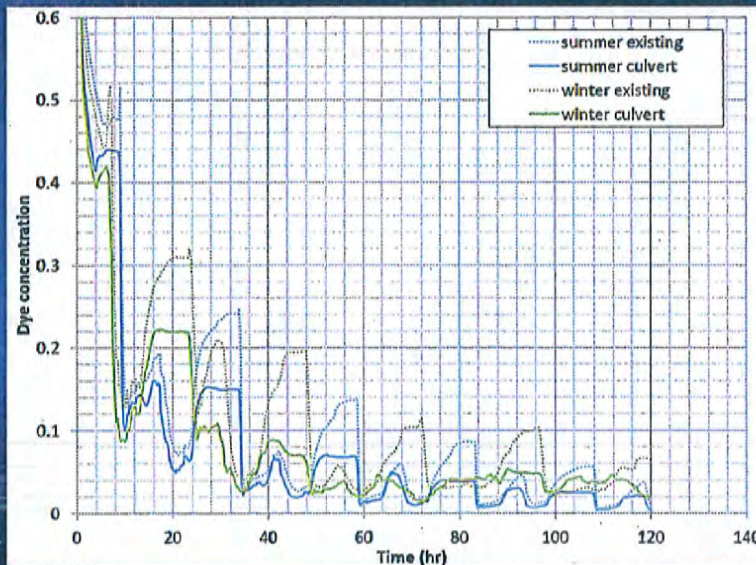


nhc

water resource specialists



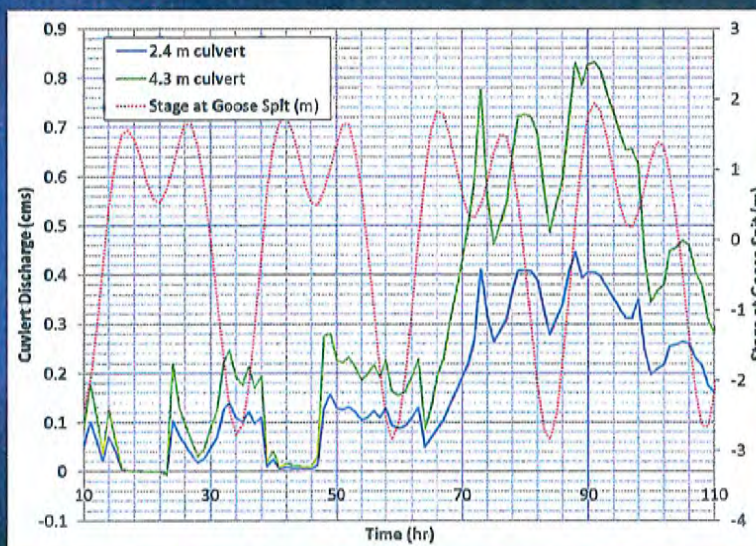
### Dye Test Comparison for Summer and Winter Runs



nhc

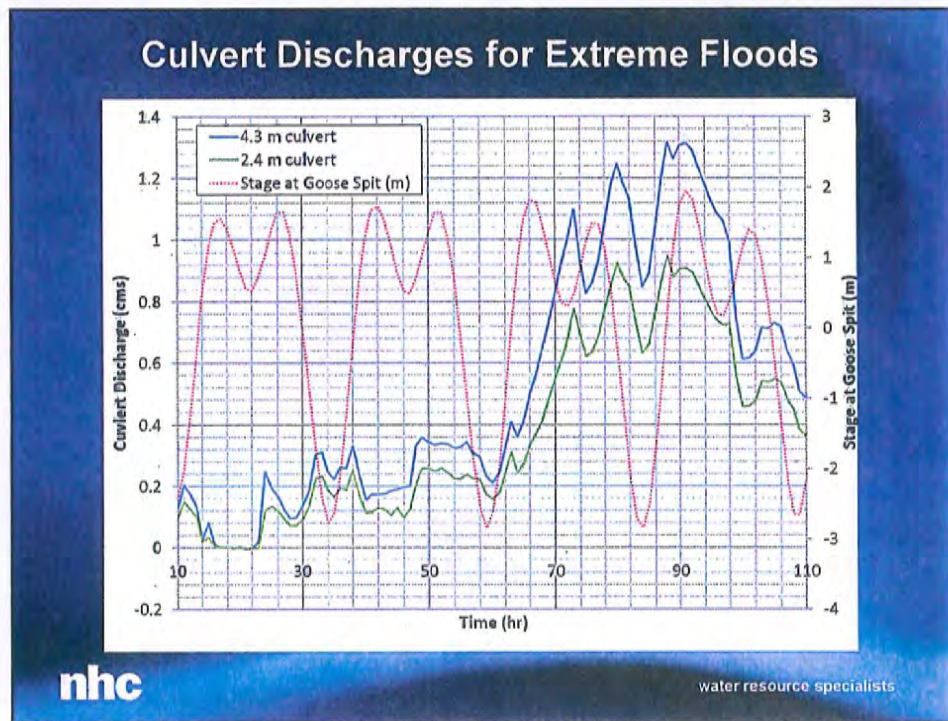
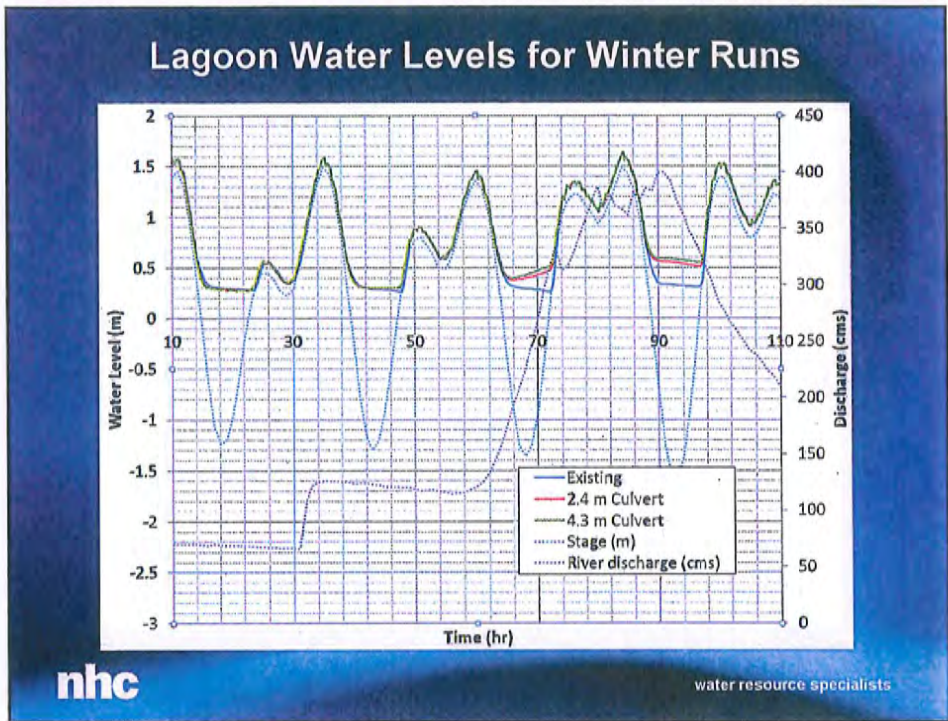
water resource specialists

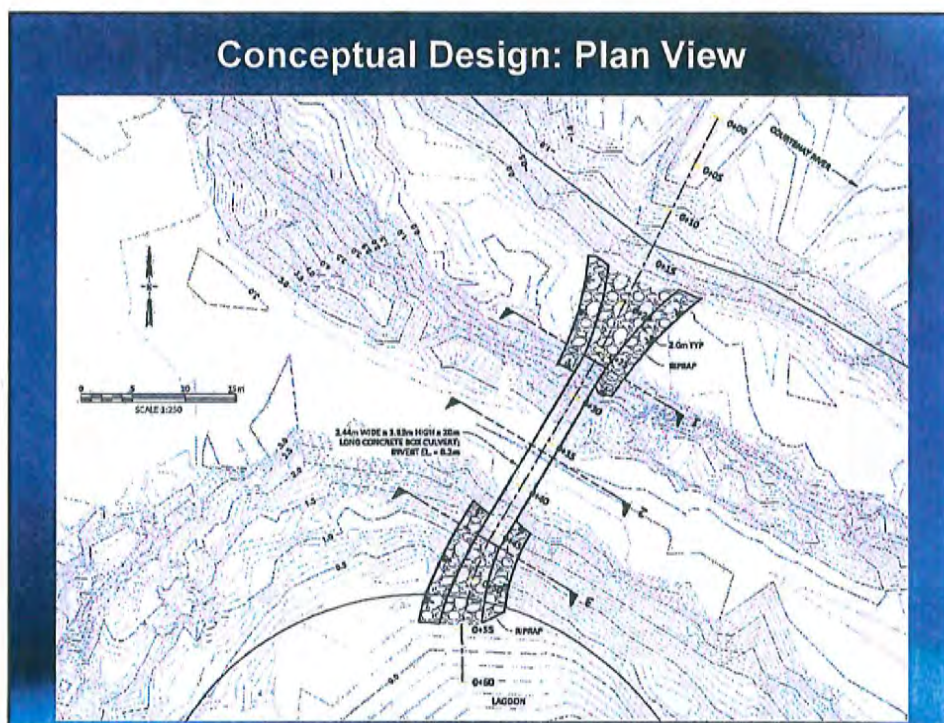
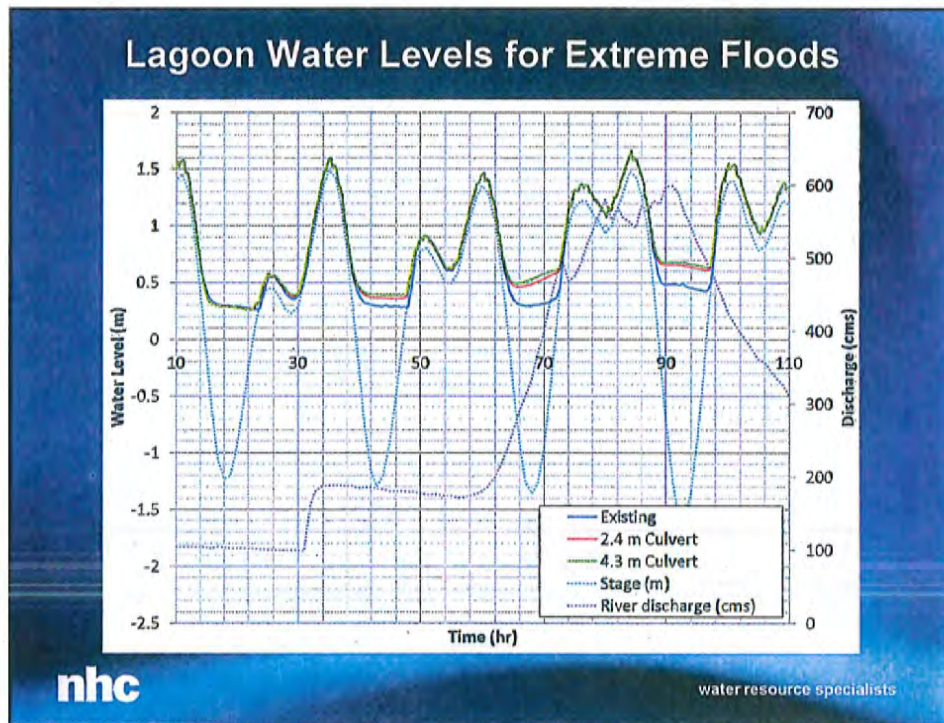
### Culvert Discharges for Winter Runs



nhc

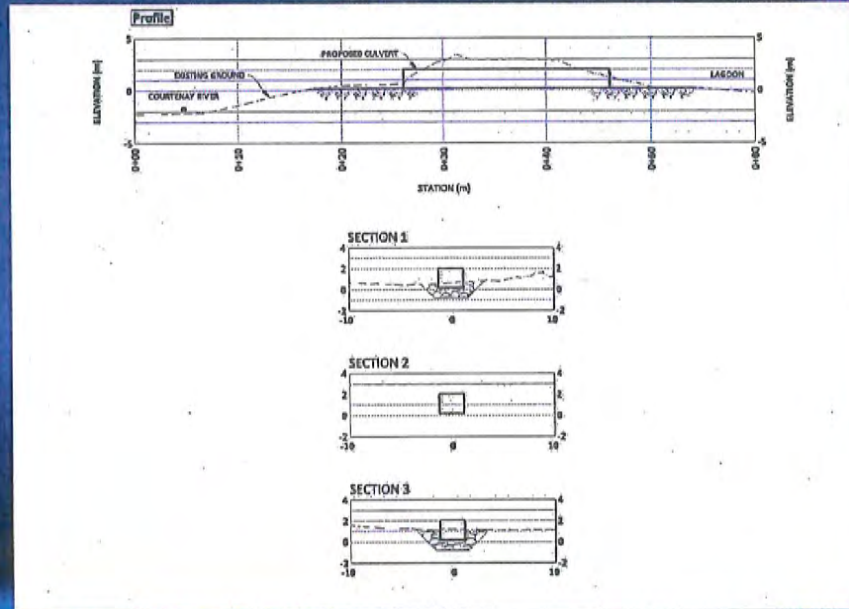
water resource specialists







## Conceptual Design: Profile & Sections



## Conclusions

- There is a low increased flood and erosion risk to the lagoon area with the proposed culvert breach.
- The 2.44 m culvert is sufficient to increase flushing rates to the lagoon and provides a new path for fish to access the south areas of the estuary.





Royal Canadian  
Mounted Police

Gendarmerie royale  
du Canada

Security Classification/Designation  
Classification/désignation sécuritaire

Unclassified

Your File - Votre référence

Our File - Notre référence

302-2

Date

November 3<sup>rd</sup>, 2013

FOR  
INFO

Officer in Charge  
Comox Valley Detachment  
800 Ryan Road  
Courtenay, BC V9N 7T1

Mayor and Council  
City of Courtenay  
830 Cliffe Avenue  
Courtenay, BC V9N 2J7

Dear Mayor and Council:

**Re: Comox Valley RCMP Second Quarter Policing Report**

Please find attached a copy of the Comox Valley RCMP Detachment second quarter Mayor's Report.

Should you wish to discuss this report or any other matter, please feel free to contact me.

Kindest Regards;

(B. McDONALD), Inspector  
Officer in Charge  
Comox Valley RCMP Detachment



# Comox Valley RCMP Mayor's Report - October 2013

RCMP - GRC

Volume 1 Issue 2

October 08, 2013

## Pedestrian Hit and Run Major Story for Second Quarter



During the late night hours of September 11, 2013, a Comox woman in her twenties was walking along the Dyke road near Courtenay when she was struck by a vehicle. The driver of the vehicle left the scene and did not offer any assistance to the badly injured woman. The woman laid un-noticed off the side of the road until her cries for help were finally heard. The woman was located just off

the Dyke road which was closed for several hours while police conducted their investigation. Numerous members from a variety of RCMP sections attended the scene and conducted a thorough examination in the hopes of gathering any evidence that was left at the scene. The investigation led to the discovery of a vehicle that was believed to have been involved in the hit and run. The victim in this

incident was air-lifted to hospital in Victoria where she was listed in critical condition. The victim has now undergone several surgeries and medical procedures and is continuing to recuperate. Although the vehicle that is believed to be involved in this incident has been located and the registered owner identified, the RCMP are continuing on with the investigation in order to positively identify the driver of the vehicle so that charges can be laid and the offender brought before the courts to answer any charges. The Comox Valley RCMP are still appealing to the public for any information that may assist in this investigation or would assist in determining the identity of the driver of the vehicle involved. The victim remains in hospital and is expected to recover.

### Special points of interest:

- HIT AND RUN ON SEPTEMBER 11TH.
- 25 YEAR OLD FEMALE CRITICALLY INJURED.
- VEHICLE LOCATED WITHIN HOURS.
- THE REGISTERED OWNER OF THE VEHICLE IDENTIFIED.
- THE INVESTIGATION IS CONTINUING.

## Break and Enter Spree in Comox comes to an end.

During the months of May through September the Comox area was hit by a rash of Break and Enters. The Break and Enters occurred predominantly at businesses in the Comox area. After a lengthy and detailed investigation involving numerous members from the Comox Valley Detachment, a 42 year old Comox resident was arrested and charged with several criminal code offences. The male is still in custody.



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### Large Cocaine Seizure

Members of the Comox Valley RCMP Drug Section are continuing their investigation after making a substantial drug seizure. The Drug Section had been busy conducting an investigation into the trafficking of cocaine in and around the Comox Valley for several months. This investigation culminated with the arrest of a ?? Year old Qualicum Beach male shortly after he had disembarked from B.C.

Ferries in Nanaimo. Subsequent to the arrest, members of the Drug Section located one kilogram of what is believed to be Cocaine. The male, who has prior convictions for drug trafficking was arrested at the scene and remains in custody.



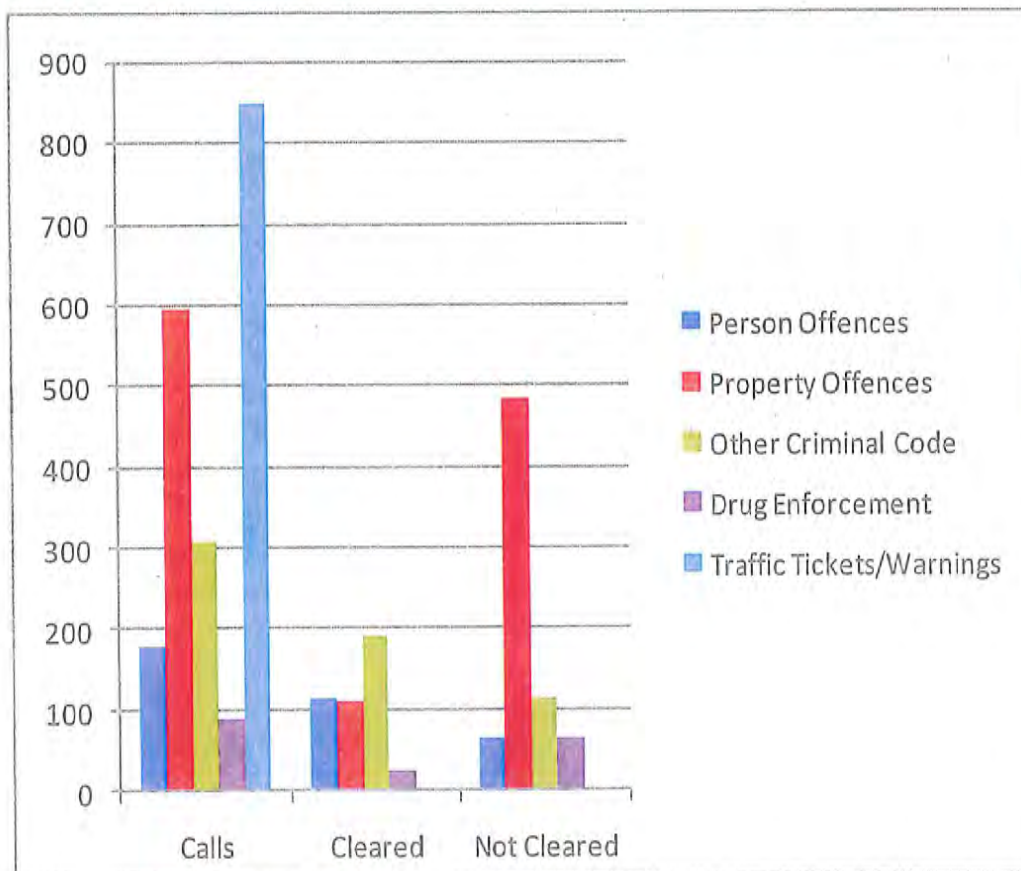
### Cops for Cancer



The 2013 Cops for Cancer, Tour de Rock has taken place for another year. This years ride featured Jennifer Faerber from Jet

FM. Jennifer is a cancer survivor which gave her lots of motivation to be involved in this years ride. This year members of the Comox Valley RCMP raised over \$15,000 for Cops for Cancer. A huge effort was made by several members, but most notably, Stephanie Bremer, Brad Fairall, Marlene Hawkes and local businessman Dave Smith.

### July 1– September 30 ( Total Calls for Service 4441 )



ALTHOUGH THE DRUG OFFENCE CLEARANCE RATE APPEARS TO BE IN THE LOWER RANGE, THE DRUG SECTION HAS FOCUSED ON LARGER DRUG SEIZURES THIS QUARTER.



#### RETIRING:

Sgt. Paul West  
Cpl. Andrew Irvine  
Cst. Line West

#### TRANSFERRING IN:

Cpl. Jason Jenkins  
Cst. Nathalie Bandet  
Sgt. Ray Haugen  
Cst. Holly Carlson  
Cst. Robert Wheaton  
Cst. Stephanie Wheaton



FOR  
Info



**Comox Valley Cycling Task Force**

*Represented by:*  
Town of Comox  
City of Courtenay  
Village of Cumberland  
Comox Valley Regional District

October 31, 2013

**Attn: The Honorable Ms. Polak, BC Minister of Environment**  
**Re: Funding in support of HASTe**

On behalf of the Comox Valley Cycling Task Force, which represents all four of our local governments and a number of stakeholders, we are very concerned to learn that the BC Ministry of the Environment is no longer providing operational funding for HASTe BC, the Hub for Active School Travel.

We started our relationship with HASTe a little over a year ago, and have been incredibly grateful for the support they have provided in the form of assistance and resource support on Active School Travel planning and implementation, an area that clearly has plenty of existing work to draw upon. As we all know, there is no point in re-inventing the wheel; HASTe has been indispensable in helping us to cut to the chase in terms of promising approaches and activities to get active travel behaviour established in our communities.

In the Comox Valley, a relatively small rural region, active travel remains a surprisingly controversial and polarizing topic. This troubles groups like ours as we know that active transportation for children, adults (and in our particular case, seniors), and indeed the entire family, is critical to achieving multiple beneficial, long-term goals: greenhouse gas reduction, health promotion, and relief on public roads thus reducing public costs over the long run, admirable goals of the Province that we are trying to implement locally.

HASTe has offered a helpful and practical framework for action to raise the awareness of the value of active travel. Because of HASTe - their resources, guidance, reputation and proven track record - we have been successful in piecing together funds from a range of sectors to hire an active school travel coordinator for our School District (71). I must emphasize this form of collaboration between the funders (SD71, City of Courtenay, Town of Comox, Comox Valley Regional District and in-kind support from the Comox Valley Cycling Coalition) is unprecedented in our context. We are aware that we are 'forging new ground' in terms of establishing working relationships across sectors that we will all benefit from in the future.

While we cannot speak specifically to the outcomes of the work as our coordinator has just started, we already are seeing the public get excited about the active school travel process, parents want the program to be offered at more schools (we are starting with three in our first year) and our local governments strongly supported the program. Again, I must emphasize that in a community where active travel remains controversial, this degree of support is viewed as a promising point of entry from which to promote active transportation more generally.



## Comox Valley Cycling Task Force

Represented by:  
Town of Comox  
City of Courtenay  
Village of Cumberland  
Comox Valley Regional District

We are sure you hear from local governments that we are increasingly feeling the pressure to conduct more activities (that were formerly conducted by senior governments) with our limited tax-base revenue. We can attest that the Comox Valley Cycling Task Force works with its partners incredibly strategically to leverage our funds in order to conduct important work such as Active School Travel planning. We do this because we have to; we have very little funds to work with. As local governments, we are confident that we are best positioned to work directly with other local agencies in conducting the Active School Travel program. But we require the support from the senior governments such as yours to help share existing examples of best practice being applied elsewhere, and some coordination to get us off the ground. These are roles that locally we cannot be expected to fill effectively, not in all the areas that local governments must provide services for.

As we see our provincial government demonstrate leadership in environmental protection, greenhouse gas reduction and health promotion through the lens of families, we had hoped that more, not fewer, funds would be allocated to strategically valuable roles such as HASTe which clearly plays a role in supporting healthy active families.

Please consider this letter an expression of support from the Comox Valley Cycling Task Force, comprised of representatives from all four Local Governments, for the Provincial Government's continued operational funding of HASTe BC. HASTe's continued viability is key to ensuring that British Columbia's children have access to active, safe and sustainable routes to school.

Sincerely,

Jim Gillis, CVRD Area B Director  
Chair, Comox Valley Cycling Task Force

CC: The Honourable Todd Stone, Ministry of Transportation; The Honourable Peter Fassbender, Ministry of Education; The Honourable Terry Lake, Ministry of Health



THE CORPORATION OF THE CITY OF COURTENAY

BYLAW NO. 2770

A bylaw to amend Zoning Bylaw No. 2500, 2007

WHEREAS the Council has given due regard to the consideration given in Section 903 of the *Local Government Act*;

NOW THEREFORE the Council of the Corporation of the City of Courtenay in open meeting assembled enacts as follows:

1. This bylaw may be cited for all purposes as “Zoning Amendment Bylaw No. 2770, 2013”.
2. That “Zoning Bylaw No. 2500, 2007” be hereby amended as follows:
  - a) That “Division 8, Classification of Zones” be amended by adding Part 52 as follows:

**Part 52 - Comprehensive Development Twenty Five Zone (CD-25)**

Lot A, District Lot 230, Comox District, Plan 48707; Parcel A (DD 10616N) of Lot 4, District Lot 230, Comox District, Plan 2152, Except that Part Shown Outlined in Red on Plan 688R and Except that Part in Plan 48707; That Part of Parcel A (DD 10616N) of Lot 4, District Lot 230, Comox District, Plan 2152 Shown Outlined in Red on Plan 688R, Except Parts in Plans 6030 and 23672 (2368, 2498 and 2650 Arden Road)

**8.52.1 Intent**

The CD-25 Zone is intended to accommodate two strata developments on the property identified on Attachment A and commonly described as 2368, 2498 and 2650 Arden Road, Courtenay, BC. No development or land alteration may take place within the CD-25 Zone without first obtaining a development permit the particulars of which must conform to the Environmental and Multi-Residential Development Permit Area Guidelines.

**8.52.2 Permitted Uses**

In the CD-25 Zone, the following uses are permitted and all other uses are prohibited except as otherwise noted in this bylaw:

1. Single residential dwelling
2. Duplex residential dwelling
3. Triplex residential dwelling

**8.52.3 Density**

The maximum number of individual dwelling units in this zone shall not exceed a total of 46. This density may be achieved through combinations of single, duplex and triplex residential units.

**8.52.4 Setbacks**

1. Except where otherwise specified in this bylaw the building setback from all property lines shall be 6m.
2. The minimum setback between residential buildings shall not be less than 5m.
3. The minimum setback for a residential building from a strata road shall not be less than 6m.

**8.52.5 Height of Buildings**

The maximum height for any building shall not exceed 8m.

- b) by rezoning Lot A, District Lot 230, Comox District, Plan 48707; Parcel A (DD 10616N) of Lot 4, District Lot 230, Comox District, Plan 2152, Except That Part Shown Outlined in Red On Plan 688R And That Part In Plan 48707; and That Part of Parcel A (DD10616N) of Lot 4, District Lot 230, Comox District, Plan 2152 Shown Outlined in Red on Plan 688R, Except Parts in Plans 6030 And 23672 from Comprehensive Development Twenty (CD-20) zone, Residential Three (R-3) zone, and Public Areas Two (PA-2) zone to Comprehensive Development Twenty Five (CD-25) zone, Residential One D (R-1D) zone and Public Areas Two (PA-2) zone, as outlined on Attachment A which is attached hereto and forms part of this bylaw;
- c) That Zoning Bylaw No. 2500, 2007, Schedule No. 8 be amended accordingly.

3. This bylaw shall come into effect upon final adoption hereof.

Read a first time this 18<sup>th</sup> day of November, 2013

Read a second time this 18<sup>th</sup> day of November, 2013

Considered at a Public Hearing this                    day of                    , 2013

Read a third time this                    day of                    , 2013

Finally passed and adopted this                    day of                    , 2013

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Director of Legislative Services





THE CORPORATION OF THE CITY OF COURTENAY

BYLAW NO. 2726

A bylaw to amend Corporation of the City of Courtenay Zoning Bylaw No. 2500, 2007

WHEREAS the Council has given due regard to the consideration given in Section 903 of the *Local Government Act*;

NOW THEREFORE the Council of the Corporation of the City of Courtenay in open meeting assembled enacts as follows:

1. This bylaw may be cited for all purposes as “Zoning Amendment Bylaw No. 2726, 2013”.
2. That “Zoning Bylaw No. 2500, 2007” be hereby amended as follows:
  - (a) By rezoning Lot 15, Block 5, Section 68, Comox District, Plan 16252, as shown in bold outline on **Attachment A** which is attached hereto and forms part of this bylaw, from Residential One Zone (R-1) to Residential One S Zone (R-1S); and
  - (b) That Schedule No. 8 be amended accordingly.
3. This bylaw shall come into effect upon final adoption hereof.

Read a first time this 4<sup>th</sup> day of November, 2013

Read a second time this 4<sup>th</sup> day of November, 2013

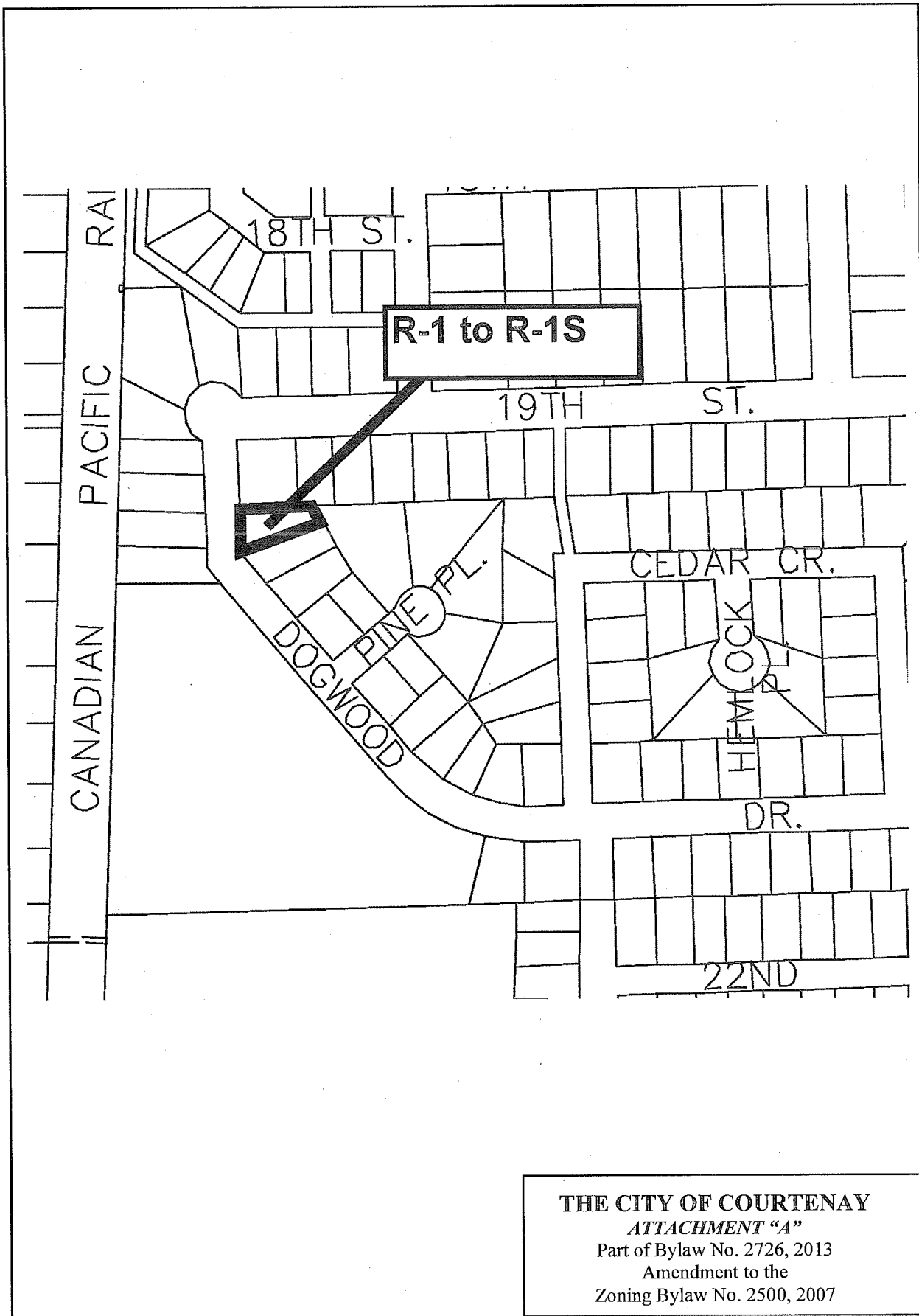
Considered at a Public Hearing this            day of            , 2013

Read a third time this            day of            , 2013

Finally passed and adopted this            day of            , 2013

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Director of Legislative Services



**THE CITY OF COURTENAY**  
**ATTACHMENT "A"**  
Part of Bylaw No. 2726, 2013  
Amendment to the  
Zoning Bylaw No. 2500, 2007