REGIONAL DISTRICT OF NANAIMO

REGULAR BOARD MEETING
TUESDAY, FEBRUARY 25, 2014
7:00 PM

(RDN Board Chambers)

A G E N D A

PAGES

1. CALL TO ORDER

2. DELEGATIONS

14 **Len Walker,** re Seaweed Harvesting in Electoral Area 'H'.

15 **Dianne Eddy,** re Seaweed Harvest in Bowser/Deep Bay.

16 **Robert Saunders, Island Scallops Ltd.,** re Harvesting the Seaweed *Mazzaella* in the Baynes Sound Area.

3. BOARD MINUTES

17-32 Minutes of the Board meeting held Tuesday, January 28, 2014 (All Directors – One Vote).

33-35 Minutes of the Special Board meeting held Tuesday, February 11, 2014 (All Directors – One Vote).

4. BUSINESS ARISING FROM THE MINUTES

5. COMMUNICATIONS/CORRESPONDENCE

(All Directors – One Vote)

36-38 **Director Rhona Martin, President, UBCM,** re 2013 Resolutions.

6. UNFINISHED BUSINESS

7. STANDING COMMITTEE, SELECT COMMITTEE AND COMMISSION MINUTES AND RECOMMENDATIONS

7.1 ELECTORAL AREA PLANNING STANDING COMMITTEE

39-40 Minutes of the Electoral Area Planning Committee meeting held Tuesday, February 11, 2014 (for information) (All Directors – One Vote).

DEVELOPMENT PERMIT APPLICATION / STRATA CONVERSION

Building Strata Conversion Application No. PL2012-159 – Development Permit Application No. PL2012-163 – Walton/Fern Road Consulting – 319 Allsbrook Road, Electoral Area 'G' (Electoral Area Directors, Except EA 'B').

1. *That the request for the Building Strata Conversion Application No. PL2012-159 be approved subject to the conditions being met as set out in Attachment 2 and 3.*

2. *That Development Permit Application No. PL2012-163 to permit the proposed strata conversion subdivision be approved subject to the conditions outlined in Attachments 2 and 3.*

7.2 COMMITTEE OF THE WHOLE STANDING COMMITTEE

41-50 Minutes of the Committee of the Whole meeting held Tuesday, February 11, 2014 (for information) (All Directors – One Vote).

COMMUNICATION/CORRESPONDENCE

(All Directors – One Vote)

Paul Glassen, Nanaimo Working Group on Homelessness, re Rental Support Program Application for Support.

That the correspondence received from Paul Glassen, Nanaimo Working Group on Homelessness, regarding the Rental Support Program application for support, be received.

Taryn O'Flanagan, Nanaimo Region John Howard Society, re Rental Support Program application for funds designated for capacity building to end homelessness.

That the correspondence received from Taryn O'Flanagan, Nanaimo Region John Howard Society, regarding the Rental Support Program application for funds designated for capacity building to end homelessness, be received.

Barry Smith, Canadian Wildlife Service – Pacific and Yukon Region, re Consultation on Species At Risk Act Listing Process for Terrestrial Species 2013 and 2014.

That the correspondence received from Barry Smith, Canadian Wildlife Service – Pacific and Yukon Region, regarding Consultation on the Species At Risk Act listing process for Terrestrial Species 2013 and 2014, be received.

Larry Cross, President, Association of Vancouver Island Coastal Communities, re AVICC motion to facilitate meeting on solid waste management.

That the correspondence received from Larry Cross, President, Association of Vancouver Island Coastal Communities, regarding the Association of Vancouver Island and Coastal Communities motion to facilitate a meeting on solid waste management, be received.

Brian D. Tutty, re Industrial stack emissions affecting Nanaimo airshed.

That the correspondence received from Brian D. Tutty regarding industrial stack emissions affecting Nanaimo airshed, be received.

Charna Macfie, re Pheasant Glen Golf Course Residential Development Application.

That the correspondence received from Charna Macfie, regarding Pheasant Glen Golf Course residential development application, be received.

Wheelabrator Technologies Inc., Urbaser, Seaspan, re Meeting request to present waste-to-energy concept.

That the correspondence received from Wheelabrator Technologies Inc., Urbaser, and Seaspan, regarding the meeting request to present the waste-to-energy concept to the Board, be received.

FINANCE

2014 to 2018 Financial Plan (All Directors – One Vote).

That the Board receive the report on the 2014 Budget as amended and the 2014 to 2018 Financial Plan, and direct staff to prepare the Financial Plan bylaw on that basis.

CORPORATE SERVICES

ADMINISTRATIVE SERVICES

Disclosure of Contracts - Section 107(1) of the Community Charter (All Directors – One Vote).

That the report titled Disclosure of Contracts - Section 107(1) of the Community Charter, be received for information.

INFORMATION TECHNOLOGY

Rogers Cell Tower Agreement and Renewal Extension (All Directors – Weighted Vote).

That the Board approve the offer from Rogers Communications Inc. of $12,600 per year for the 2013 — 2018 term and to allow one additional five-year extension commencing June 1, 2023 for the Statutory Right of Way Agreement for the cell tower at 6300 Hammond Bay Rd., Nanaimo.

TRANSPORTATION AND SOLID WASTE

SOLID WASTE

51-53 **Bylaw 1591.04 - Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw.**

(All Directors – Weighted Vote)

1. *That "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw No. 1591.04, 2014", be introduced and read three times.*

(All Directors – 2/3 Weighted Vote)

2. *That "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw No. 1591.04, 2014", be adopted.*

STRATEGIC AND COMMUNITY DEVELOPMENT

BUILDING, BYLAW & EMERGENCY PLANNING

2533 Island Highway East — Electoral Area 'E' — Unsightly Premises (All Directors – One Vote).

Delegations Wishing to Speak to 2533 Island Highway East — Electoral Area 'E' — Unsightly Premises.

That the Board, pursuant to Unsightly Premises Regulatory Bylaw No. 1073, 1996, directs the owners of Lot 2, District Lot 79, Nanoose District, Plan 13501 (2533 Island Highway East), to remove the accumulation of machinery, derelict vehicles, automotive parts, construction material, scrap metal and wood, appliances and household garbage from the property within thirty (30) days, or the work will be undertaken by the Regional District of Nanaimo or its agents at the owner's cost.

6712 Island Highway West — Electoral Area 'H' — Unsightly Premises (All Directors – One Vote).

Delegations Wishing to Speak to 6712 Island Highway West — Electoral Area 'H' — Unsightly Premises.

That the Board, pursuant to Unsightly Premises Regulatory Bylaw No. 1073, 1996, directs the owners of Lot 2, District Lot 85, Newcastle District, Plan 14562 (6712 Island Highway West), to remove the accumulation of derelict vehicles and boats, automotive parts, scrap metal and discarded construction material from the property within six (6) months, or the work will be undertaken by the Regional District of Nanaimo or its agents at the owner's cost.

81 Noonday Road — Electoral Area 'H' — Unsightly Premises (All Directors – One Vote).

Delegations Wishing to Speak to 81 Noonday Road — Electoral Area 'H' — Unsightly Premises.

That the Board, pursuant to Unsightly Premises Regulatory Bylaw No. 1073, 1996, directs the owner of Lot 4, District Lot 22, Newcastle District, Plan 12132 (81 Noonday Road), to remove the accumulation of derelict vehicles, discarded metal, bicycle parts, lumber and disused building material from the property within thirty (30) days, or the work will be undertaken by the Regional District of Nanaimo or its agents at the owner's cost.

LONG RANGE PLANNING

Funding Request — Capacity Building to End Homelessness Reserve Fund (All Directors – Weighted Vote).

That the Regional District of Nanaimo Board allocate $45,000 from the reserve fund to the Nanaimo Region John Howard Society to continue the Rental Support Program that directly supports those at risk of or experiencing homelessness in the region.

2013 Annual Report on Regional Growth Strategy Implementation and Progress (All Directors, except EA 'B' – One Vote).

1. *That the Regional Growth Strategy 2013 Annual Report, be received.*

2. *That staff be directed to distribute and use the 2013 Annual Report as part of efforts to raise awareness and provide education about the Regional Growth Strategy and its implementation.*

Electoral Area 'B' Participation in the Regional Growth Management Function (All Directors – Weighted Vote).

That Electoral Area 'B' remain in the Regional Growth Management function as a partial participant at 50% of the overall requisition for the service.

CURRENT PLANNING

Options for Agricultural Advisory Committee and Area Director Comment on Agricultural Land Reserve Applications (All Directors – One Vote).

1. *That the Board approve the amended Agricultural Advisory Committee Terms of Reference as outlined in the report to allow the Committee to provide comment on all applications for exclusion, subdivision or non-farm use in the Agricultural Land Reserve.*

2. *That the Board approve amended Policy B1.8 "Review of Provincial Agricultural Land Reserve Applications" as outlined in the report to provide for Agricultural Advisory Committee and Electoral Area Director comment on applications for exclusion, subdivision, or non-farm use of Agricultural Land Reserve land.*

REGIONAL AND COMMUNITY UTILITIES

WASTEWATER

54-57 **Bylaw No. 975.61 — Pump & Haul Local Service Establishment Amendment to Exclude Lot 58, District Lot 78, Plan 14275, Nanoose Land District** (All Directors – One Vote).

1. *That the boundaries of the "Regional District of Nanaimo Pump & Haul Local Service Establishment Bylaw No. 975, 1995" be amended to exclude Lot 58, District Lot 78, Plan 14275, Nanoose District (Electoral Area `E).*

2. *That "Regional District of Nanaimo Pump & Haul Local Service Amendment Bylaw No. 975.61, 2014", be introduced and read three times.*

WATER AND UTILITY

58-59 **Bylaw No. 1655.02 -Water User Rate Amendments 2014** (Electoral Areas A, E, F, G – Weighted Vote).

That "Regional District of Nanaimo Water Services Fees & Charges Amendment Bylaw No. 1655.02, 2014", be introduced and read three times.

60-70 **Bylaws No. 1241.06, 765.14, 422.17, 1472.05, 1532.03 - Sanitary Sewer User Rate Amendments.**

(All Directors – One Vote)

1. *That "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.06, 2014", be introduced and read three times.*

(All Directors – One Vote – 2/3)

2. *That "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.06, 2014", be adopted.*

(All Directors – One Vote)

3. *That "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.14, 2014", be introduced and read three times.*

(All Directors – One Vote – 2/3)

4. *That "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.14, 2014", be adopted.*

(All Directors – One Vote)

5. *That "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.17, 2014", be introduced and read three times.*

(All Directors – One Vote - 2/3)

6. *That "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.17, 2014", be adopted.*

(All Directors – One Vote)

7. *That "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.05, 2014", be introduced and read three times.*

(All Directors – One Vote – 2/3)

8. *That "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.05, 2014", be adopted.*

(All Directors – One Vote)

9. *That "Cedar Sewer Rates and Regulations Amendment Bylaw No. 1532.03, 2014", be introduced and read three times.*

(All Directors – One Vote – 2/3)

10. *That "Cedar Sewer Rates and Regulations Amendment Bylaw No.1532.03, 2014", be adopted.*

71-74 **Hawthorne Rise Sanitary Sewer Extension — Construction Tender Award – Bylaws No. 1696 & 1697.**

(All Directors – Weighted Vote)

That the Board approve Milestone Equipment Contracting Inc. be awarded the construction of the Hawthorne Rise Sanitary Sewer Extension project for the tender price of $121,546.77.

(All Directors – Weighted Vote)

1. *That "Hawthorne Rise Sanitary Sewer Capital Financing Service Security Issuing Bylaw No. 1696, 2014", be introduced and read three times.*

(All Directors - 2/3 Weighted Vote)

2. *That the "Hawthorne Rise Sanitary Sewer Capital Financing Service Security Issuing Bylaw No. 1696, 2014", be adopted.*

(All Directors – Weighted Vote)

3. *That "Hawthorne Rise Sanitary Sewer Capital Financing Service Interim Financing Bylaw No. 1697, 2014", be introduced and read three times.*

(All Directors - 2/3 Weighted Vote)

4. *That the "Hawthorne Rise Sanitary Sewer Capital Financing Service Interim Financing Bylaw No. 1697, 2014", be adopted.*

STANDING COMMITTEE, SELECT COMMITTEE, AND COMMISSION

Regional Liquid Waste Advisory Committee

Minutes of the Regional Liquid Waste Advisory Committee meeting held Tuesday, November 19, 2013 (All Directors – One Vote).

That the minutes of the Regional Liquid Waste Advisory Committee meeting held Tuesday, November 19, 2013, be received for information.

Electoral Area 'E' Parks and Open Space Advisory Committee.

Minutes of the Electoral Area 'E' Parks and Open Space Advisory Committee meeting held Monday, December 16, 2013 (All Directors – One Vote).

That the minutes of the Electoral Area 'E' Parks and Open Space Advisory Committee meeting held Monday, December 16, 2013, be received for information.

Agricultural Advisory Committee.

Minutes of the Agricultural Advisory Committee meeting held Friday, January 24, 2014 (All Directors – One Vote).

That the minutes of the Agricultural Advisory Committee meeting held Friday, January 24, 2014, be received for information.

Dogs Harassing Livestock (All Directors – One Vote).

1. *That Bylaw and Policy Review project in the 2014-2016 Agricultural Area Plan (AAP) Implementation Action Plan include consideration of options to minimize the impact of trespass by at-large dogs on farms with livestock.*

2. *That staff be directed to investigate and bring back a report on amending Regional District of Nanaimo animal control bylaws to include provisions for classifying and regulating nuisance to livestock dogs and the compensation to parties as result of the actions of dangerous or nuisance dogs.*

3. *That the Board of Directors of the Regional District of Nanaimo send a letter to the Minister of Agriculture asking that the Livestock Act be amended so as to better protect livestock from nuisance dogs.*

SCHEDULED STANDING COMMITTEES - EXTERNAL

Arrowsmith Water Service Management Board

Minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, June 6, 2013 (All Directors – One Vote).

That the minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, June 6, 2013, be received for information.

Minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, December 12, 2013 (All Directors – One Vote).

That the minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, December 12, 2013, be received for information.

Englishman River Water Service Management Board

Minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, June 6, 2013 (All Directors – One Vote).

That the minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, June 6, 2013, be received for information.

Minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, December 12, 2013 (All Directors – One Vote).

That the minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, December 12, 2013, be received for information.

7.5 SCHEDULED STANDING, ADVISORY, AND SELECT COMMITTEES

Electoral Area 'F' Parks and Open Space Advisory Committee

75-76 **Minutes of the Electoral Area 'F' Parks and Open Space Advisory Committee meeting, held Monday, December 2, 2013** (All Directors – One Vote).

That the minutes of the Electoral Area 'F' Parks and Open Space Advisory Committee meeting, held Monday, December 2, 2013, be received for information.

Electoral Area 'H' Parks and Open Space Advisory Committee

77-78 **Minutes of the Electoral Area 'H' Parks and Open Space Advisory Committee meeting, held Wednesday, December 4, 2013** (All Directors – One Vote).

That the minutes of the Electoral Area 'H' Parks and Open Space Advisory Committee meeting, held Wednesday, December 4, 2013, be received for information.

Electoral Area 'G' Parks and Open Space Advisory Committee

79-80 **Minutes of the Electoral Area 'G' Parks and Open Space Advisory Committee meeting, held Monday, December 9, 2013** (All Directors – One Vote).

That the minutes of the Electoral Area 'G' Parks and Open Space Advisory Committee meeting, held Monday, December 9, 2013, be received for information.

Emergency Management Select Committee

81-82 **Minutes of the Emergency Management Select Committee meeting, held Friday, January 24, 2014** (All Directors – One Vote).

That the minutes of the Emergency Management Select Committee meeting, held Friday, January 24, 2014, be received for information.

83-87 **Transport Canada Rail Safety Measures** (All Directors – One Vote)

1. *That the Transport Canada Rail Safety Measures Report be received for information and Staff be directed to request ongoing reports on the transportation of dangerous goods in the Regional District of Nanaimo.*

2. *That Staff be directed to contact Southern Vancouver Island Railway to determine the nature and frequency of dangerous goods being transported through the RDN Electoral Areas and the condition of the infrastructure being used to transport the goods.*

88-95 **Status of Reviews and Assessments of Dams in the RDN Electoral Areas** (All Directors – One Vote)

That the report on the status of reviews and assessments of dams in the RDN Electoral Areas be received.

96-110 **Amendment to the District 69 Regional Emergency Resource Agreement**

(All Directors – Weighted Vote)

1. *That upon similar direction from the City of Parksville and the Town of Qualicum Beach, Staff be directed to amend the current Regional Emergency Resource Agreement to allow the 2014 honorarium funding to be redirected and used to fund a part-time contract position to coordinate Emergency Social Services and Emergency communications functions in District 69 area.*

(Lantzville, All Electoral Areas – Weighted Vote)

2. *That Staff evaluate the effectiveness of the position during 2014 and provide further recommendations to the Board with respect to the continuation or expansion of the position in 2015 and beyond.*

8. ADMINISTRATOR'S REPORTS

111-112 **Resolution to support Sponsored Crown Grant Application for land at Spider Lack for Bow Horn Bay Fire Department** (All Directors – One Vote).

113-123 **Zoning Amendment Application No. PL2013-054 – Bylaw No. 500.391 – Oswald – 3030 Yellow Point Road, Electoral Area 'A'** (Electoral Area Directors, Except EA 'B' – One Vote).

124-134 **Zoning Amendment Application No. PL2013-114 – Bylaw 1285.20 – Fern Road Consulting Ltd. – Electoral Area 'F'** (Electoral Area Directors, Except EA 'B' – One Vote).

135-300 **Nanoose Volunteer Fire Department – Fire Protection Services Study** (All Directors – One Vote).

301-308 **Nanaimo Recycling Exchange Funding Options** (All Directors – One Vote).

9. ADDENDUM

10. BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

11. NEW BUSINESS

13. IN CAMERA

That pursuant to Section 90 (1) (j) of the Community Charter the Board proceed to an In Camera meeting for discussions related to third party information.

14. ADJOURNMENT

Re: Seaweed Harvesting in Electoral Area 'H'

Thank you for the ten minute time slot to present a request for **4 resolutions** to the RDN board on February 25th, 2014 at 7pm.

They are in regard to the INDUSTRIAL removal of beach cast seaweed from a 5 km stretch of Bowser Beach.

We need enforcement of our common law NO DRIVING ON BEACHES

We need our District Rep to meet with the Minister of Agriculture

We need to extend the Wildlife Management Area to encompass all of area H.

We need HONEST waterfront land values assessed in Bowser that reflect actual use

During this presentation I will ask for these resolutions from the board as well as show photographic proof why they are necessary and back up the requests with Legal Statements gleaned from Provincial documents found on line.

This will be a modified presentation of the same which I delivered to the Provincial Assessment Panel regarding my RESIDENTIAL waterfront home tax assessment on Feb 7, 2014.

Thank you

Len Walker
5185 Gainsberg Road
Deep Bay (AREA H>>>BOWSER)

Re: Seaweed Harvest in Bowser/Deep Bay

From: Dianne Eddy [mailto:d-eddy@shaw.ca]
Sent: Monday, February 17, 2014 2:37 PM
Subject: Submission of a request

Would you please register me as a delegation for the Regular Board meeting on February 25? Please confirm. I presume I am early enough for a 10 minute spot.

The topic will be on the seaweed harvest in Bowser/Deep Bay and implied responsibility of the RDN has in protecting the assets of rural properties.

Regards,
Dianne Eddy

Re: Harvesting the Seaweed *Mazzaella* in the Baynes Sound Area

From: Barb Bunting
Sent: Thursday, February 20, 2014 10:03 AM
Subject: Tues Board meeting

As per our conversation, please add Robert Saunders of Island Scallops Ltd to the agenda of Tuesday's Board meeting as a delegate.

The subject of his presentation will be "Harvesting the Seaweed *Mazzaella* in the Baynes Sound Area".

Thank you.

Barb Bunting
Island Scallops Ltd
5552 West Island Hwy
Qualicum Beach, BC V9K 2C8

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE REGULAR BOARD MEETING OF THE REGIONAL DISTRICT OF NANAIMO HELD ON TUESDAY, JANUARY 28, 2014 AT 7:00 PM IN THE RDN BOARD CHAMBERS

In Attendance:

Director J. Stanhope	Chairperson
Director A. McPherson	Electoral Area A
Director H. Houle	Electoral Area B
Director M. Young	Electoral Area C
Director G. Holme	Electoral Area E
Director J. Fell	Electoral Area F
Director B. Veenhof	Electoral Area H
Director J. de Jong	District of Lantzville
Director J. Ruttan	City of Nanaimo
Director G. Anderson	City of Nanaimo
Director B. Bestwick	City of Nanaimo
Director T. Greves	City of Nanaimo
Director D. Johnstone	City of Nanaimo
Director J. Kipp	City of Nanaimo
Alternate	
Director B. McKay	City of Nanaimo
Director M. Lefebvre	City of Parksville
Director D. Willie	Town of Qualicum Beach

Regrets:

Director D. Brennan	City of Nanaimo

Also in Attendance:

P. Thorkelsson	Chief Administrative Officer
J. Harrison	Director of Corporate Services
W. Idema	Director of Finance
T. Osborne	Gen. Mgr. Recreation & Parks
D. Trudeau	Gen. Mgr. Transportation & Solid Waste
G. Garbutt	Gen. Mgr. Strategic & Community Development
R. Alexander	Gen. Mgr. Regional & Community Services
J. Hill	Mgr. Administrative Services
C. Golding	Recording Secretary

CALL TO ORDER

The Chairperson called the meeting to order and welcomed Alternate Director McKay to the meeting.

DELEGATIONS

Michael D. Mehta, Thompson Rivers University, re Options for a District-wide bylaw dealing with smoky fireplaces and woodstoves.

Michael Mehta provided a visual presentation and raised his concerns regarding the possible health effects of reduced air quality due to wood smoke.

Peter Law, Mid-Vancouver Island Habitat Enhancement Society, re Habitat Status Report for the Englishman River.

Peter Law provided a visual presentation along with an overview on habitat pressures on the Englishman River Watershed.

Jan Hastings, Nanaimo Recycling Exchange, re Funding request for new recycling centre.

Jan Hastings provided a visual presentation and overview of the Nanaimo Recycling Exchange, and requested the Regional District of Nanaimo partner with and provide funding to the organization.

LATE DELEGATIONS

14-013 MOVED Director Young, SECONDED Director Houle, that late delegations be permitted to address the Board.

CARRIED

Craig Evans, re Value of community-based recycling programs within the Regional District.

Craig Evans provided a brief history of community based non-profit recycling programs in Nanaimo and asked the Board for increased public engagement, increased tipping fees and the creation of a local Air Quality Advisory Committee.

BOARD MINUTES

Minutes of the Special Board meeting held Tuesday, December 3, 2013.

14-014 MOVED Director Veenhof, SECONDED Director Houle, that the minutes of the Special Board meeting held Tuesday, December 3, 2013, be adopted.

CARRIED

Minutes of the Inaugural Board meeting held Tuesday, December 10, 2013.

14-015 MOVED Director Houle, SECONDED Director Anderson, that the minutes of the Inaugural Board meeting held Tuesday, December 10, 2013, be adopted.

CARRIED

Minutes of the Special Board meeting held Tuesday, January 14, 2014.

14-016 MOVED Director Veenhof, SECONDED Director Houle, that the minutes of the Special Board meeting held Tuesday, January 14, 2014, be adopted.

CARRIED

BUSINESS ARISING FROM THE MINUTES

Electoral Area 'H' Parks and Open Space Advisory Committee Appointments.

14-017 MOVED Director Veenhof, SECONDED Director Willie, that the Board reconsider the motion from the January 14, 2014 Special Board meeting to appoint Nancy Robertson, Dagmar Seydel, and Keith Nickerson to the Electoral Area 'H' Parks & Open Space Advisory Committee for terms ending December 31, 2015.

CARRIED

14-018 MOVED Director Veenhof, SECONDED Director Holme, that Nancy Robertson and Dagmar Seydel be appointed to the Electoral Area 'H' Parks & Open Space Advisory Committee for terms ending December 31, 2015.

CARRIED

COMMUNICATION/CORRESPONDENCE

Erik Andersen, re Proposed garbage incinerator for Duke Point.

14-019 MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence from Erik Andersen, regarding the proposed garbage incinerator for Duke Point, be received.

CARRIED

Scott Stoness, Kinder Morgan Canada, re Trans Mountain Expansion – Application to Participate Notification.

14-020 MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence from Scott Stoness, Kinder Morgan Canada, regarding the Trans Mountain Expansion – application to participate notification, be received.

CARRIED

MNP, re Regional District of Nanaimo Audit Service Plan.

14-021 MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence from MNP, regarding the Regional District of Nanaimo Audit Service Plan, be received.

CARRIED

Jef Keighley, BC Ferry Coalition, re BC Coastal-Mainland Alliance.

14-022 MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence from Jef Keighley, BC Ferry Coalition, regarding BC Coastal-Mainland Alliance, be received.

CARRIED

Selina Robinson, MLA, re Introduction of *Local Elections Campaign Financing Act* during the Spring 2014 legislative session.

14-023 MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence from Selina Robinson, MLA, regarding the introduction of *Local Elections Campaign Financing Act* during the Spring 2014 legislative session, be received.

CARRIED

David Graham, Chair, Gabriola Island Local Trust Committee, re Duke Point as a potential waste incineration site.

14-024 MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence from David Graham, Chair, Gabriola Island Local Trust Committee, regarding Duke Point as a potential waste incineration site, be received.

CARRIED

Arrowsmith Parks and Land-Use Council, re Proposed Metro Vancouver Waste Incinerator Facility.

14-025 MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence from the Arrowsmith Parks and Land-Use Council, regarding the proposed Metro Vancouver Waste Incinerator Facility, be received.

CARRIED

UNFINISHED BUSINESS

BYLAW ADOPTION

Bylaws No. 889.66 and 1124.11 – Inclusion of 962 Surfside Drive into Sewer Service Areas, Electoral Area 'G'.

14-026 MOVED Director Holme, SECONDED Director Willie, that "Regional District of Nanaimo Northern Community Sewer Local Service Boundary Amendment Bylaw No. 889.66, 2013", be adopted.

CARRIED

14-027 MOVED Director Holme, SECONDED Director Willie, that "Surfside Sewer Local Service Boundary Amendment Bylaw No. 1124.11, 2013", be adopted.

CARRIED

STANDING COMMITTEE, SELECT COMMITTEE AND COMMISSION MINUTES & RECOMMENDATIONS

ELECTORAL AREA PLANNING STANDING COMMITTEE

14-028 MOVED Director Holme, SECONDED Director Fell, that the minutes of the Electoral Area Planning Committee meeting held Tuesday, January 14, 2014, be received for information.

CARRIED

COMMUNICATIONS/CORRESPONDENCE

Wendy and Stephen Jessen, re Zoning Amendment Application No. PL2013-089 – Bylaw No. 500.390, 2013 – Obradovic – 3389 Jingle Pot Road, Electoral Area 'C'.

14-029 MOVED Director Holme, SECONDED Director Veenhof, that the correspondence received from Wendy and Stephen Jessen, regarding Zoning Amendment Application No. PL2013-089 – Bylaw No. 500.390, 2013 – Obradovic – 3389 Jingle Pot Road, Electoral Area 'C', be received.

CARRIED

Dennis Shaw, re Zoning Amendment Application No. PL2013-089 – Bylaw No. 500.390, 2013 – Obradovic – 3389 Jingle Pot Road, Electoral Area 'C'.

14-030 MOVED Director Holme, SECONDED Director Veenhof, that the correspondence received from Dennis Shaw, regarding Zoning Amendment Application No. PL2013-089 – Bylaw No. 500.390, 2013 – Obradovic – 3389 Jingle Pot Road, Electoral Area 'C', be received.

CARRIED

ZONING AMENDMENT APPLICATIONS

Zoning Amendment Application No. PL2013-089 – Bylaw No. 500.390, 2013 – Obradovic – 3389 Jingle Pot Road, Electoral Area 'C'.

14-031 MOVED Director Young, SECONDED Director Veenhof, that the summary of the Public Information Meeting held on November 20, 2013, be received.

CARRIED

14-032 MOVED Director Young, SECONDED Director McPherson, that the conditions set out in Attachment No. 2 of the staff report be completed prior to Bylaw No. 500.390 being considered for adoption.

CARRIED

14-033 MOVED Director Young, SECONDED Director McPherson, that "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.390, 2013", be introduced and read two times.

CARRIED

14-034 MOVED Director Young, SECONDED Director McPherson, that the Public Hearing on "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.390, 2013", be chaired by Director Young or her alternate.

CARRIED

Zoning Amendment Application No. PL2013-054 – Bylaw No. 500.391, 2014 – Oswald – 3030 Yellow Point Road, Electoral Area 'A'.

14-035 MOVED Director McPherson, SECONDED Director Veenhof, that the Summary of the Public Information Meeting held on December 11, 2013, be received.

CARRIED

14-036 MOVED Director McPherson, SECONDED Director Veenhof, that the conditions set out in Attachment 4 of the staff report be completed prior to Bylaw No. 500.391, 2014 being considered for adoption.

CARRIED

14-037 MOVED Director McPherson, SECONDED Director Veenhof, that "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014", be introduced and read two times.

CARRIED

14-038 MOVED Director McPherson, SECONDED Director Veenhof, that the Public Hearing on "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014", be chaired by Director McPherson or his alternate.

CARRIED

Zoning Amendment Application No. PL2013-114 – Bylaw No. 1285.20, 2014 – Fern Road Consulting – Springhill Road, Electoral Area 'F'.

14-039 MOVED Director Fell, SECONDED Director Holme, that the summary of the Public Information Meeting held on Thursday, December 19, 2013, be received.

CARRIED

14-040 MOVED Director Fell, SECONDED Director Holme, that the conditions set out in Attachment 2 of the staff report be completed prior to Amendment Bylaw No. 1285.20 being considered for adoption.

CARRIED

14-041 MOVED Director Fell, SECONDED Director McPherson, that "Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014", be introduced and read two times.

CARRIED

14-042 MOVED Director Fell, SECONDED Director Holme, that the Public Hearing on "Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014", be chaired by Director Fell or his alternate.

CARRIED

OTHER

Revisions to Bylaw 1285.19- Secondary Suites.

14-043 MOVED Director Fell, SECONDED Director Holme, that the Board bring forward the Administrator's report titled Revisions to Bylaw No. 1285.19 – Secondary Suites.

CARRIED

14-044 MOVED Director Fell, SECONDED Director McPherson, that "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.19, 2014" be introduced and read two times.

CARRIED

14-045 MOVED Director Fell, SECONDED Director Young, that "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.19, 2014" proceed to Public Hearing.

CARRIED

14-046 MOVED Director Fell, SECONDED Director McPherson, that the Public Hearing on "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.19, 2014" be delegated to Director Fell or his alternate.

CARRIED

Secondary Suites Community Engagement Summary and Program Proposal – Bylaws No. 500.389, 2014, and 1285.19, 2014.

14-047 MOVED Director Holme, SECONDED Director Veenhof, that the online questionnaire results attached as Appendix F and the public consultation summary attached as Appendix G be received.

CARRIED

14-048 MOVED Director Holme, SECONDED Director Veenhof, that 1st and 2nd reading be given to "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.389, 2014".

CARRIED

14-049 MOVED Director Holme, SECONDED Director Veenhof, that staff proceed with further community engagement as identified in the staff report.

CARRIED

14-050 MOVED Director Holme, SECONDED Director Veenhof, that "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.389, 2014" proceed to Public Hearing.

CARRIED

14-051 MOVED Director Holme, SECONDED Director Veenhof, that the Public Hearing on "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.389, 2014" be delegated to Director Stanhope or his alternate.

CARRIED

14-052 MOVED Director Holme, SECONDED Director Veenhof, that staff be directed to review the existing building permit, development cost charges, and utility fee structure and prepare a report on options for providing incentives for secondary suites.

CARRIED

14-053 MOVED Director Holme, SECONDED Director Veenhof, that the proposed Secondary Suite Policy be referred back to staff for discussions with the Electoral Area Directors prior to the January 28, 2014 Board meeting.

CARRIED

Proposed Yellow Point Aquifer Protection Development Permit Area Update and Proposed Bylaw Amendments – Bylaw No. 1620.02, 2013 – Electoral Area 'A'.

14-054 MOVED Director McPherson, SECONDED Director Veenhof, that "Regional District of Nanaimo Electoral Area 'A' Official Community Plan Amendment Bylaw No. 1620.02, 2013" be given 1st and 2nd reading.

CARRIED

14-055 MOVED Director McPherson, SECONDED Director Veenhof, that "Regional District of Nanaimo Electoral Area 'A' Official Community Plan Amendment Bylaw No. 1620.02, 2013" has been considered in conjunction with the Regional District of Nanaimo's Financial Plan and Liquid and Solid Waste Management Plans.

CARRIED

14-056 MOVED Director McPherson, SECONDED Director Veenhof, that staff proceed with the recommended public consultation actions identified in this report.

CARRIED

14-057 MOVED Director McPherson, SECONDED Director Veenhof, that "Regional District of Nanaimo Electoral Area 'A' Official Community Plan Amendment Bylaw No. 1620.02, 2013" proceed to Public Hearing.

CARRIED

14-058 MOVED Director McPherson, SECONDED Director Veenhof, that the Public Hearing on "Regional District of Nanaimo Electoral Area 'A' Official Community Plan Amendment Bylaw No. 1620.02, 2013" be delegated to Director McPherson or his alternate.

CARRIED

COMMITTEE OF THE WHOLE STANDING COMMITTEE

Minutes of the Committee of the Whole meeting held Tuesday, January 14, 2014.

14-059 MOVED Director Lefebvre, SECONDED Director Veenhof, that the minutes of the Committee of the Whole meeting held Tuesday, January 14, 2014, be received for information.

CARRIED

COMMUNICATION/CORRESPONDENCE

Bruce Jolliffe, Chair, Vancouver Island Regional Library Board of Trustees, re Community Library Branch – Cedar Rural Village Centre.

14-060 MOVED Director Houle, SECONDED Director Veenhof, that the correspondence received from Bruce Jolliffe, Chair, Vancouver Island Regional Library Board of Trustees, regarding Community Library Branch – Cedar Rural Village Centre, be received.

CARRIED

Coralee Oakes, Minister of Community, Sport, and Cultural Development, re Local Government Elections Reform Stakeholder Consultation.

14-061 MOVED Director Houle, SECONDED Director Veenhof, that the correspondence received from Coralee Oakes, Minister of Community, Sport, and Cultural Development, regarding Local Government Elections Reform Stakeholder Consultation, be received.

CARRIED

Heather Sarchuk, North Cedar Improvement District, re Cost Sharing for Constructing a 400,000 Imperial Gallon Reservoir.

14-062 MOVED Director Houle, SECONDED Director Veenhof, that the correspondence received from Heather Sarchuk, North Cedar Improvement District, regarding cost sharing for constructing a 400,000 imperial gallon reservoir, be received.

CARRIED

Amanda Weeks, City of Parksville, re 2014 Council Appointment to the District 69 Recreation Commission.

14-063 MOVED Director Houle, SECONDED Director Veenhof, that the correspondence from Amanda Weeks, City of Parksville, regarding the 2014 Council appointment to the District 69 Recreation Commission, be received.

CARRIED

Amanda Weeks, City of Parksville, re 2014 Council Voting Representative – Arrowsmith Water Service Management Board.

14-064 MOVED Director Houle, SECONDED Director Veenhof, that the correspondence from Amanda Weeks, City of Parksville, regarding the 2014 Council voting representative to the Arrowsmith Water Service Management Board, be received.

CARRIED

Amanda Weeks, City of Parksville, re 2014 Council Voting Representative – Englishman River Water Service Management Board.

14-065 MOVED Director Houle, SECONDED Director Veenhof, that the correspondence received from Amanda Weeks, City of Parksville, regarding the 2014 Council voting representative to the Englishman River Water Service Management Board, be received.

CARRIED

CHIEF ADMINISTRATIVE OFFICER

2014 Service Area Work Plan Projects.

14-066 MOVED Director Veenhof, SECONDED Director Lefebvre, that the Board receive the list of service area work plan projects for 2014 for information.

CARRIED

CORPORATE SERVICES

ADMINISTRATIVE SERVICES

Bylaw No. 1694, 2014 – A Bylaw to Secure Long Term Debt for the City of Nanaimo Water Treatment Plant.

14-067 MOVED Director Ruttan, SECONDED Director Bestwick, that the Board consent to the borrowing of $9.2 million dollars from the Municipal Finance Authority of British Columbia over a 20 year term for the purpose of funding the City of Nanaimo's Water Treatment Plant construction project.

CARRIED

14-068 MOVED Director Ruttan, SECONDED Director Bestwick, that "Regional District of Nanaimo Security Issuing (City of Nanaimo) Bylaw No. 1694, 2014" be introduced and read three times.

CARRIED

14-069 MOVED Director Ruttan, SECONDED Director Anderson, that "Regional District of Nanaimo Security Issuing (City of Nanaimo) Bylaw No. 1694, 2014" be adopted.

CARRIED

FINANCIAL SERVICES

Bylaw No. 1693, 2014 – A Bylaw to authorize preparation of 2014 Parcel Tax Rolls.

14-070 MOVED Director Holme, SECONDED Director Fell, that the "2014 Parcel Tax Assessment Roll Bylaw No. 1693, 2014", be introduced and read three times.

CARRIED

14-071 MOVED Director Holme, SECONDED Director Fell, that the "2014 Parcel Tax Assessment Roll Bylaw No. 1693, 2014" be adopted.

CARRIED

14-072 MOVED Director Holme, SECONDED Director Fell, that the Board appoint the Chairperson, the Manager, Administrative Services and the Director of Finance to preside as the 2014 parcel tax review panel.

CARRIED

Bylaw No. 1467.01, 2014 – A Bylaw to amend the requisition limit for the Electoral Area 'A' Recreation and Culture Service.

14-073 MOVED Director McPherson, SECONDED Director Veenhof, that "Electoral Area 'A' Recreation and Culture Service Amendment Bylaw No. 1467.01, 2014" be introduced and read three times.

CARRIED

14-074 MOVED Director McPherson, SECONDED Director Veenhof, that "Electoral Area 'A' Recreation and Culture Service Amendment Bylaw No. 1467.01, 2014" be adopted.

CARRIED

Bylaw No. 798.08, 2014 – A Bylaw to amend the requisition limit for the Electoral Area 'A' Community Parks Service.

14-075 MOVED Director McPherson, SECONDED Director Veenhof, that "Electoral Area 'A' Community Parks Local Service Amendment Bylaw No. 798.08, 2014" be introduced and read three times.

CARRIED

14-076 MOVED Director McPherson, SECONDED Director Veenhof, that "Electoral Area 'A' Community Parks Local Service Amendment Bylaw No. 798.08, 2014" be adopted.

CARRIED

Report on Actuarial Services for Unfunded Liabilities.

14-077 MOVED Director Willie, SECONDED Director Veenhof, that the Board direct staff to enter into a three year agreement with Mercer to provide actuarial services for unfunded liabilities related to employee benefits.

CARRIED

Feasibility Study Reserve Accounts Update.

14-078 MOVED Director Ruttan, SECONDED Director Fell, that the report on the status of Feasibility Study Reserve Accounts be received.

CARRIED

2014 Proposed Budget External Requests for Funding.

14-079 MOVED Director Holme, SECONDED Director Lefebvre, that the 2014 proposed budget external requests for funding be referred to a special meeting.

CARRIED

RECREATION AND PARKS SERVICES

PARKS SERVICES

Development Funding for the E&N Regional Rail Trail.

14-080 MOVED Director Anderson, SECONDED Director Lefebvre, that the development funding request for the E&N Regional Rail Trail be referred to a special meeting with the other external requests for funding.

CARRIED

STRATEGIC AND COMMUNITY DEVELOPMENT

LONG RANGE PLANNING

Regional Growth Strategy Targets and Indicators Project.

14-081 MOVED Director Bestwick, SECONDED Director Ruttan, that staff proceed with the Targets and Indicators Project as outlined in the attached Terms of Reference.

CARRIED

REGIONAL AND COMMUNITY UTILITIES

WASTEWATER SERVICES

Liquid Waste Management Plan Amendment.

14-082 MOVED Director Holme, SECONDED Director Anderson, that the Board receive the Liquid Waste Management Plan Amendment, Consultation Summary Report and First Nations Engagement Progress Report for information.

CARRIED

14-083 MOVED Director Holme, SECONDED Director Anderson, that the Board directs staff to make appropriate revisions to the Liquid Waste Management Plan Amendment document, related to comments in the Ministry of Environment letter of January 9, 2014.

CARRIED

14-084 MOVED Director Holme, SECONDED Director Anderson, that the Board supports the Liquid Waste Management Plan Amendment and recommendation to provide secondary treatment at Greater Nanaimo Pollution Control Centre by 2018 and secondary treatment at Nanoose Bay Pollution Control Centre by 2023.

CARRIED

14-085 MOVED Director Holme, SECONDED Director Anderson, that the Board directs staff to submit the Liquid Waste Management Plan Amendment to the Minister of Environment for approval.

CARRIED

COMMISSIONS, ADVISORY & SELECT COMMITTEES

Regional Parks and Trails Select Committee

Minutes of the Regional Parks and Trails Select Committee meeting held Tuesday, December 3, 2013.

14-086 MOVED Director Willie, SECONDED Director Lefebvre, that the minutes of the Regional Parks and Trails Select Committee meeting held Tuesday, December 3, 2013, be received.

CARRIED

Benson Creek Falls Management Plan 2014 – 2024.

14-087 MOVED Director McKay, SECONDED Director Ruttan, that the 2014 – 2024 Benson Creek Falls Management Plan be approved.

CARRIED

RDN Parks and Trails Guidelines.

14-088 MOVED Director Kipp, SECONDED Director Veenhof, that the Parks and Trails Guidelines Report be approved and adopted as a guide for parks and trail development and operations.

CARRIED

NEW BUSINESS

2014 Tax Requisition for Electoral Area 'A' Recreation and Culture Service.

14-089 MOVED Director McPherson, SECONDED Director Young, that staff be directed to increase the 2014 tax requisition for the Electoral Area 'A' Recreation and Culture Service by $20,000 to a total of $172,785 and to update the proposed 2014 - 2018 Regional District of Nanaimo Financial Plan to reflect this increase.

CARRIED

14-090 MOVED Director McPherson, SECONDED Director Young, that staff be directed to increase the 2014 tax requisition for the Electoral 'A' Community Parks Service by $20,000 to a total of $145,650 and to update the proposed 2014 – 2018 Regional District of Nanaimo Financial Plan to reflect this increase.

CARRIED

Restructure Study for Electoral Area 'A'.

14-091 MOVED Director McPherson, SECONDED Director Fell, that the Chair inform the Minister of Community, Sport & Cultural Development that the Regional District of Nanaimo Board supports the Ministry's consideration of funding a restructure study for Electoral Area 'A' as a priority.

MOVED Director Fell, SECONDED Director Houle, that the Board amend the main motion by adding the words "In the event that an unforeseen circumstance prevents the advancement of a restructure study for Electoral Area 'A', a restructure study for Electoral Area 'F', being of equal standing, shall be supported."

CARRIED

The vote was taken on the main motion as amended:

That the Chair inform the Minister of Community, Sport & Cultural Development that the Regional District of Nanaimo Board supports the Ministry's consideration of funding a restructure study for Electoral Area 'A' as a priority. In the event that an unforeseen circumstance prevents the advancement of a restructure study for Electoral Area 'A', a restructure study for Electoral Area 'F', being of equal standing, shall be supported.

CARRIED

14-092 MOVED Director McPherson, SECONDED Director Veenhof, that the Director for Electoral Area 'A' provide additional information to the Minister of Community, Sport & Cultural Development as requested in her October 21, 2013 letter.

CARRIED

SPECIAL COMMITTEE OF THE WHOLE STANDING COMMITTEE

FINANCIAL SERVICES

2014 Proposed Budget External Requests for Funding.

Oceanside Hospice Society.

14-093 MOVED Director Holme, SECONDED Director Lefebvre, that staff be directed to advise the Oceanside Hospice Society that grant funding is available at this time only through the Grants-In-Aid service criteria.

CARRIED

Nanaimo Hospice Society.

14-094 MOVED Director Holme, SECONDED Director Anderson, that staff be directed to amend the 2014 – 2018 Financial Plan to include $5,000.00 for one-time funding in 2014 to the Nanaimo Hospice Society for their building project.

CARRIED

Director Veenhof left the meeting at 8:47 pm citing a possible conflict of interest with the next agenda item.

Lighthouse Country Marine Rescue Society.

14-095 MOVED Director Holme, SECONDED Director Lefebvre, that staff be directed to proceed with establishment of a new service and to seek elector approval for marine rescue funding in the Electoral Area 'H' participating area.

CARRIED

Director Veenhof returned to the meeting at 8:48 pm.

Oceanside Community Policing.

14-096 MOVED Director Holme, SECONDED Director Lefebvre, that staff be directed to amend the 2014 – 2018 Financial Plan to include $29,220.00 for additional annual funding to support the Community Policing Office and the Citizens on Patrol programs under the Northern Community Justice service area.

CARRIED

Nanaimo RCMP Victim Services.

14-097 MOVED Director Holme, SECONDED Director Anderson, that staff be directed to amend the 2014 – 2018 Financial Plan to include $2,500.00 for additional annual funding to support the Nanaimo RCMP Victim Services program under the Southern Restorative Justice/Victim Services service area.

CARRIED

Nanaimo Regional Rail Trail Partnership.

14-098 MOVED Director Holme, SECONDED Director Anderson, that staff be directed to amend the 2014 – 2018 Financial Plan to include $15,000.00 for a one-time grant to the Nanaimo Regional Rail Trail Partnership under the Grants-In-Aid service.

CARRIED

Nanaimo and Area Land Trust.

14-099 MOVED Director Holme, SECONDED Director Young, that staff be directed to amend the 2014 – 2018 Financial Plan to include $30,000.00 for a one-time grant to the Nanaimo and Area Land Trust under the Regional Parks Operations service.

CARRIED

Regional Trail Development Funding.

14-100 MOVED Director Holme, SECONDED Director Anderson, that staff be directed to work with the Regional Parks and Trails Select Committee to amend the 2014 – 2018 Regional Parks Acquisition/Development plan and budget to redistribute capital plans to focus on regional trail development.

CARRIED

NEW BUSINESS

14-101 MOVED Director Holme, SECONDED Director Veenhof, to extend an invitation to Island Corridor Foundation and the CEO of Southern Rail to meet with the Board of the Regional District of Nanaimo.

CARRIED

ADMINISTRATOR'S REPORTS

Community Parks and Trails Strategy – Electoral Areas E, F, G, and H.

14-102 MOVED Director Holme, SECONDED Director Veenhof, that the Community Parks and Trails Strategy for Electoral Areas E, F, G and H be approved.

CARRIED

Town of Qualicum Beach Official Community Plan Regional Context Statement.

14-103 MOVED Director Willie, SECONDED Director Ruttan, that the Town of Qualicum Beach Regional Context Statement be accepted by the Regional District of Nanaimo Board.

CARRIED

Amendment Bylaws No. 500.387, 2013 & 1285.18, 2013 – Zoning Amendment to Address Marihuana for Medical Purposes Regulations (MMPR) – Electoral Areas 'A', 'C', 'E', 'F', 'G', and 'H'.

14-104 MOVED Director Veenhof, SECONDED Director Fell, that the report of the public hearing held on January 9, 2014 on "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.387, 2013" and "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1282.18, 2013" be received.

CARRIED

14-105 MOVED Director Veenhof, SECONDED Director McPherson, that "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.387, 2013" be read a third time.

CARRIED

14-106 MOVED Director Veenhof, SECONDED Director McPherson, that "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.18, 2013 be read a third time.

CARRIED

Development Permit with Variance Application No. PL2013-127 – Magnolia Enterprises Ltd. – 6996 Island Highway West, Electoral Area 'H'.

14-107 MOVED Director Veenhof, SECONDED Director Young, that staff be directed to complete the required notification.

CARRIED

14-108 MOVED Director Veenhof, SECONDED Director Young, that Development Permit with Variance Application No. PL2013-127 to permit the construction of an ambulance station be approved subject to the conditions outlined in Attachments 2 to 7.

CARRIED

3560 Allsop Road, Electoral Area 'C' – Building and Zoning Bylaw Contraventions.

14-109 MOVED Director Young, SECONDED Director Fell, that staff be directed to suspend further enforcement action and assist the owner of 3560 Allsop Road with the applicable permitting processes and that the owner be directed to make application for the required permits to recognize all structures on the property within 30 days.

CARRIED

Solid Waste Management – Flow Control.

14-110 MOVED Director Holme, SECONDED Director Bestwick, that the Board endorse Metro Vancouver's development of a waste flow management strategy for Metro Vancouver and the Greater Vancouver Sewerage and Drainage District Recyclable Materials Regulatory Bylaw No. 280 and that a letter supportive of the initiative be provided to Ministry of Environment.

CARRIED

Board Member Appointments to Standing, Select and Advisory Committees – Chair Report.

14-111 MOVED Director Kipp, SECONDED Director Anderson, that the Board member appointments to the 2014 Regional District of Nanaimo Standing Committees be received for information.

CARRIED

14-112 MOVED Director Anderson, SECONDED Director Houle, that the Board member appointments to the 2014 Regional District of Nanaimo Select and Scheduled Standing (External) Committees be received for information.

CARRIED

14-113 MOVED Director Anderson, SECONDED Director Houle, that the recommendations for Board member appointments to the 2014 Regional District of Nanaimo Advisory Committees and Commissions be endorsed.

CARRIED

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

Michael D. Mehta, Thompson Rivers University, re Options for a District-wide bylaw dealing with smoky fireplaces and woodstoves.

14-114 MOVED Director Houle, SECONDED Director Bestwick, that the Board direct staff to investigate opportunities to educate owners of wood stoves and fireplaces to reduce the health effects of wood smoke from home heating.

CARRIED

Jan Hastings, Nanaimo Recycling Exchange, re Funding request for new recycling centre.

14-115 MOVED Director Bestwick, SECONDED Director Veenhof, that staff bring a report back to the Board on a potential funding mechanism for the Nanaimo Recycling Exchange.

CARRIED

NEW BUSINESS

Notice of Motion.

Director Anderson noted that the following motion will be brought forward to the February 11, 2014 Committee of the Whole Agenda:

That staff be directed to increase the City of Nanaimo 2014 tax requisition by 175,000 for a 2014 transit expansion inside the City of Nanaimo boundaries and that a report be prepared that outlines expansion options that could be implemented by September 2014 and their financial impacts.

IN CAMERA

14-116 MOVED Director Holme, SECONDED Director Young, that pursuant to Section 90 (1)(a), (c) and (e) of the *Community Charter* the Board proceed to an In Camera meeting for discussions related to committee appointments, labour relations and land acquisition.

CARRIED

TIME: 9:52 PM

RISE AND REPORT

Application for Board Appointment – Electoral Area 'B' Parks and Open Space Advisory Committee.

14-117 MOVED Director Veenhof, SECONDED Director Kipp, that Megan Dickinson be appointed to the Electoral Area 'B' Parks and Open Space Advisory Committee for a term ending December 31, 2014.

CARRIED

San Pareil Boardwalk.

14-118 MOVED Director Veenhof, SECONDED Director Willie, that the Regional District not proceed with the San Pareil Boardwalk at this time.

CARRIED

ADJOURNMENT

MOVED Director Holme, SECONDED Director Johnstone, that this meeting terminate.

CARRIED

TIME: 10:04 PM

CHAIRPERSON

CORPORATE OFFICER

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE SPECIAL BOARD MEETING OF THE REGIONAL DISTRICT OF NANAIMO HELD ON TUESDAY, FEBRUARY 11, 2014 AT 7:00 PM IN THE RDN BOARD CHAMBERS

In Attendance:

Director J. Stanhope	Chairperson
Director D. Brennan	Deputy Chairperson
Director A. McPherson	Electoral Area A
Director H. Houle	Electoral Area B
Director M. Young	Electoral Area C
Alternate	
Director F. Van Eynde	Electoral Area E
Director J. Fell	Electoral Area F
Director B. Veenhof	Electoral Area H
Director J. de Jong	District of Lantzville
Director J. Ruttan	City of Nanaimo
Director G. Anderson	City of Nanaimo
Director B. Bestwick	City of Nanaimo
Director T. Greves	City of Nanaimo
Director D. Johnstone	City of Nanaimo
Director J. Kipp	City of Nanaimo
Director M. Lefebvre	City of Parksville
Alternate	
Director S. Tanner	Town of Qualicum Beach

Regrets:

Director G. Holme	Electoral Area E
Director D. Willie	Town of Qualicum Beach

Also in Attendance:

P. Thorkelsson	Chief Administrative Officer
J. Harrison	Director of Corporate Services
W. Idema	Director of Finance
T. Osborne	Gen. Mgr. Recreation & Parks
D. Trudeau	Gen. Mgr. Transportation & Solid Waste
G. Garbutt	Gen. Mgr. Strategic & Community Development
R. Alexander	Gen. Mgr. Regional & Community Services
J. Hill	Mgr. Administrative Services
C. Golding	Recording Secretary

CALL TO ORDER

The Chairperson called the meeting to order.

MOTION TO WAIVE NOTICE

14-119 MOVED Director Lefebvre, SECONDED Director Veenhof, that the Special Board meeting notice requirements be waived.

CARRIED UNANIMOUSLY

UNFINISHED BUSINESS

Development Permit with Variance Application No. PL2013-127 – Magnolia Enterprises Ltd. – 6996 Island Highway West, Electoral Area 'H'.

14-120 MOVED Director Veenhof, SECONDED Director Fell, that the motion that Development Permit with Variance Application No. PL2013-127 to permit the construction of an ambulance station be approved subject to the conditions outlined in Attachments 2 to 7, adopted at the January 28, 2014 Regular Board meeting, be rescinded.

CARRIED

14-121 MOVED Director Veenhof, SECONDED Director Young, that Development Permit with Variance Application No. PL2013-127 to permit the construction of an ambulance station be approved subject to the conditions outlined in Attachments 2 to 7.

CARRIED

ADMINISTRATOR'S REPORTS

Amendment Bylaws No. 500.387, 2013 & 1285.18, 2013 – Zoning Amendments to Address Marihuana for Medical Purposes Regulations (MMPR).

14-122 MOVED Director Veenhof, SECONDED Director McPherson, that "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.387, 2013" be adopted.

CARRIED

14-123 MOVED Director Fell, SECONDED Director McPherson, that "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.18, 2013" be adopted.

CARRIED

NEW BUSINESS

Director Greves left the meeting at 7:06 PM citing a conflict of interest with the next agenda item.

Island Corridor Foundation Funding.

14-124 MOVED Director Lefebvre, SECONDED Director Veenhof, that staff be directed to remove the requisition of funds from the Grants-in-Aid service for the Island Corridor Foundation upgrade project from the 2014 budget.

CARRIED

14-125 MOVED Director Lefebvre, SECONDED Director Van Eynde, that the Board consider the inclusion of Grants-in-Aid funding for the Island Corridor Foundation in the 2015 budget subject to the completion of an agreement between the Island Corridor Foundation and VIA Rail for the return of passenger rail service.

CARRIED

Director Greves returned to the meeting at 7:15 PM.

RECESS

14-126 MOVED Director Brennan, SECONDED Director McPherson, that the Board recess and reconvene immediately following the Committee of the Whole meeting for the purpose of moving In Camera.

CARRIED

RECESS: 7:16 PM

RECONVENE: 10:08 PM

IN CAMERA

14-127 MOVED Director Brennan, SECONDED Director McPherson, that pursuant to Section 90 (1)(c) of the *Community Charter*, the Board proceed to an In Camera meeting for discussions related to labour relations.

CARRIED

ADJOURNMENT

MOVED Director Bestwick, SECONDED Director Van Eynde, that this meeting terminate.

CARRIED

TIME: 10:52 PM

CHAIRPERSON

CORPORATE OFFICER

Union of BC Municipalities
Suite 60 10551 Shellbridge Way
Richmond, BC, Canada V6X 2W9

Phone: 604.270.8226
Email: ubcm@ubcm.ca

February 6, 2014

RDN CAO'S OFFICE			
CAO	✓	GM R&P	
GMS&CD	✓	GM T&SW	
GM R&CU		DF	
FEB 1 1 2014			
DCS		BOARD	✓
CHAIR			

Chair Joe Stanhope
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo BC V9T 6N2

Dear Chair Stanhope:

Re: 2013 Resolutions

Please find attached the provincial response to the 2013 resolution(s) put forward by your Board and endorsed by the UBCM membership at Convention.

I trust this information will be of assistance to you. Please feel free to contact Reiko Tagami, UBCM Information & Resolutions Coordinator with any questions.

Tel: 604.270.8226 ext. 115 Email: rtagami@ubcm.ca

Sincerely,

Director Rhona Martin
President

Enclosure

2013 B29 STREAMKEEPERS - WORKS IN STREAMS **Nanaimo RD**

WHEREAS Streamkeepers and other such non-profit societies provide a valuable service in protecting and enhancing fish habitat;

AND WHEREAS, under the current federal Department of Fisheries and Oceans and provincial regulations, non-profit societies are not able to receive the appropriate approvals to undertake certain projects that would greatly improve fish habitat:

THEREFORE BE IT RESOLVED that UBCM urge the Department of Fisheries and Oceans and the Province of British Columbia to permit non-profit societies to do works in streams for the purpose of improving fish habitat.

CONVENTION DECISION: ENDORSED

PROVINCIAL RESPONSE

Ministry of Forests, Lands & Natural Resource Operations

The Province appreciates, supports and permits the efforts of non-profit groups in working to restore fish habitat; however, the appropriate approvals must be in place to ensure that conservation objectives are being met. In-stream activities in particular can result in significant damage to fish habitat if not conducted properly.

Under the Water Act, Section 9, no one may make "changes in and about a stream" without an approval or notification in accordance with Part 7 of the Water Regulation. This provision applies, with very few exceptions, to all activities in and about a stream, even those activities carried out by provincial and federal staff.

Projects in and around fish habitat are also subject to review and approval under the federal Fisheries Act.

The Province has reviewed proposals in the past that, if implemented, would have caused more harm than benefit to fish habitat. For that reason, the Ministry recommends that groups work with qualified environmental professionals to design and oversee projects that aim to improve fish habitat and that the necessary approvals are in place.

2013 B34 PROVINCIAL COMMUNICATION WITH LOCAL GOVERNMENT REGARDING LICENSES & PERMITS **Nanaimo RD**

WHEREAS the Provincial Ministry of Agriculture recently issued harvesting licences that allow for the removal of thousands of tonnes of beach-cast seaweed from the Vancouver Island shoreline;

AND WHEREAS local governments were not aware of the issuance of these licences and are not made aware of other licences issued by the Province that may impact local government:

THEREFORE BE IT RESOLVED that the provincial government be required to inform local governments and allow them the opportunity to comment and ensure local government zoning is in place prior to issuing licences for activity to take place on lands within or adjacent to any local government.

CONVENTION DECISION: ENDORSED

PROVINCIAL RESPONSE

Ministry of Agriculture

Aquatic plant harvesting is seasonal and transient in nature, does not involve long-term occupancy of the land, nor any structures or works to be placed on the land, and as such, is outside of the jurisdiction of local government zoning. While, the legislation that governs the harvest (Fisheries Act and Fisheries Act Regulations) imposes no legal requirement to refer applications to local governments or to the public, Ministry staff would be pleased to work with local governments to explain the nature of the harvest and to assist with any public inquiries they receive.

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE ELECTORAL AREA PLANNING COMMITTEE MEETING OF THE REGIONAL DISTRICT OF NANAIMO HELD ON TUESDAY, FEBRUARY 11, 2014 AT 6:30 PM IN THE RDN BOARD CHAMBERS

In Attendance:

Director J. Stanhope	Chairperson
Director A. McPherson	Electoral Area A
Director M. Young	Electoral Area C
Alternate	
Director F. Van Eynde	Electoral Area E
Director J. Fell	Electoral Area F
Director B. Veenhof	Electoral Area H

Regrets:

Director G. Holme	Electoral Area E

Also in Attendance:

P. Thorkelsson	Chief Administrative Officer
J. Harrison	Director of Corporate Services
T. Osborne	Gen. Mgr. Recreation & Parks
D. Trudeau	Gen. Mgr. Transportation & Solid Waste
R. Alexander	Gen. Mgr. Regional & Community Utilities
G. Garbutt	Gen. Mgr. Strategic & Community Development
Jeremy Holm	Mgr. Current Planning
J. Hill	Mgr. Administrative Services
C. Golding	Recording Secretary

CALL TO ORDER

The Chairperson called the meeting to order.

ELECTORAL AREA PLANNING COMMITTEE MINUTES

Minutes of the regular Electoral Area Planning Committee meeting held Tuesday, January 14, 2014.

MOVED Director Van Eynde, SECONDED Director Fell, that the minutes of the regular Electoral Area Planning Committee meeting held Tuesday, January 14, 2014 be adopted.

CARRIED

DEVELOPMENT PERMIT APPLICATION / STRATA CONVERSION

Building Strata Conversion Application No. PL2012-159 – Development Permit Application No. PL2012-163 – Walton/Fern Road Consulting – 319 Allsbrook Road, Electoral Area 'G'.

MOVED Director Young, SECONDED Director Van Eynde, that the request for the Building Strata Conversion Application No. PL2012-159 be approved subject to the conditions being met as set out in Attachment 2 and 3.

CARRIED

MOVED Director Young, SECONDED Director Van Eynde, that Development Permit Application No. PL2012-163 to permit the proposed strata conversion subdivision be approved subject to the conditions outlined in Attachments 2 and 3.

CARRIED

ADJOURNMENT

MOVED Director Veenhof, SECONDED Director Fell, that this meeting terminate.

CARRIED

TIME: 6:34 PM

CHAIRPERSON

CORPORATE OFFICER

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE REGULAR COMMITTEE OF THE WHOLE MEETING OF THE REGIONAL DISTRICT OF NANAIMO HELD ON TUESDAY, FEBRUARY 11, 2014 AT 7:16 PM IN THE RDN BOARD CHAMBERS

In Attendance:

Director J. Stanhope	Chairperson
Director D. Brennan	Deputy Chairperson
Director A. McPherson	Electoral Area A
Director H. Houle	Electoral Area B
Director M. Young	Electoral Area C
Alternate	
Director F. Van Eynde	Electoral Area E
Director J. Fell	Electoral Area F
Director B. Veenhof	Electoral Area H
Director J. de Jong	District of Lantzville
Director J. Ruttan	City of Nanaimo
Director G. Anderson	City of Nanaimo
Director B. Bestwick	City of Nanaimo
Director T. Greves	City of Nanaimo
Director D. Johnstone	City of Nanaimo
Director J. Kipp	City of Nanaimo
Director M. Lefebvre	City of Parksville
Alternate	
Director S. Tanner	Town of Qualicum Beach

Regrets:

Director G. Holme	Electoral Area E
Director D. Willie	Town of Qualicum Beach

Also in Attendance:

P. Thorkelsson	Chief Administrative Officer
J. Harrison	Director of Corporate Services
W. Idema	Director of Finance
T. Osborne	Gen. Mgr. Recreation & Parks
D. Trudeau	Gen. Mgr. Transportation & Solid Waste
R. Alexander	Gen. Mgr. Regional & Community Utilities
G. Garbutt	Gen. Mgr. Strategic & Community Development
J. Hill	Mgr. Administrative Services
C. Golding	Recording Secretary

CALL TO ORDER

The Chairperson called the meeting to order and welcomed Alternate Director Van Eynde and Alternate Director Tanner to the meeting.

DELEGATIONS

Rob Christopher, Nanaimo Search and Rescue Society, re 2013-2014 Operations.

Rob Christopher provided a slide presentation to accompany his overview of how grant dollars were allocated during 2013 including large capital projects still underway.

Anna Sjoo, re District 69 Recreation.

Anna Sjoo provided a slide presentation and spoke of the imminent closure of the Qualicum Beach Elementary School and raised her concerns regarding the impact that the closure will have on the community.

Taryn O'Flanagan, Nanaimo Region John Howard Society, re Funding Request – Capacity to End Homelessness Reserve Fund.

Taryn O'Flanagan provided an overview regarding the Rental Support Program since its implementation in 2012 and requested the Board provide $45,000 in funding for the program.

COMMITTEE OF THE WHOLE MINUTES

Minutes of the Regular Committee of the Whole meeting held Tuesday, January 14, 2014.

MOVED Director Veenhof, SECONDED Director Anderson, that the minutes of the regular Committee of the Whole meeting held January 14, 2014, be adopted.

CARRIED

Minutes of the Special Committee of the Whole meeting held Tuesday, January 28, 2014.

MOVED Director Veenhof, SECONDED Director Greves, that the minutes of the Special Committee of the Whole meeting held Tuesday, January 28, 2014, be adopted.

CARRIED

COMMUNICATION/CORRESPONDENCE

Paul Glassen, Nanaimo Working Group on Homelessness, re Rental Support Program Application for Support.

MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence received from Paul Glassen, Nanaimo Working Group on Homelessness, regarding the Rental Support Program application for support, be received.

CARRIED

Taryn O'Flanagan, Nanaimo Region John Howard Society, re Rental Support Program application for funds designated for capacity building to end homelessness.

MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence received from Taryn O'Flanagan, Nanaimo Region John Howard Society, regarding the Rental Support Program application for funds designated for capacity building to end homelessness, be received.

CARRIED

Barry Smith, Canadian Wildlife Service – Pacific and Yukon Region, re Consultation on *Species At Risk Act* Listing Process for Terrestrial Species 2013 and 2014.

MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence received from Barry Smith, Canadian Wildlife Service – Pacific and Yukon Region, regarding Consultation on the *Species At Risk Act* listing process for Terrestrial Species 2013 and 2014, be received.

CARRIED

Larry Cross, President, Association of Vancouver Island Coastal Communities, re AVICC motion to facilitate meeting on solid waste management.

MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence received from Larry Cross, President, Association of Vancouver Island Coastal Communities, regarding the Association of Vancouver Island and Coastal Communities motion to facilitate a meeting on solid waste management, be received.

CARRIED

Brian D. Tutty, re Industrial stack emissions affecting Nanaimo airshed.

MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence received from Brian D. Tutty regarding industrial stack emissions affecting Nanaimo airshed, be received.

CARRIED

Charna Macfie, re Pheasant Glen Golf Course Residential Development Application.

MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence received from Charna Macfie, regarding Pheasant Glen Golf Course residential development application, be received.

CARRIED

Wheelabrator Technologies Inc., Urbaser, Seaspan, re Meeting request to present waste-to-energy concept.

MOVED Director Anderson, SECONDED Director Lefebvre, that the correspondence received from Wheelabrator Technologies Inc., Urbaser, and Seaspan, regarding the meeting request to present the waste-to-energy concept to the Board, be received.

CARRIED

FINANCE

2014 to 2018 Financial Plan.

MOVED Director Brennan, SECONDED Director Anderson, that the Board receive the report on the 2014 Budget as amended and the 2014 to 2018 Financial Plan, and direct staff to prepare the Financial Plan bylaw on that basis.

CARRIED

CORPORATE SERVICES

ADMINISTRATIVE SERVICES

Disclosure of Contracts - Section 107(1) of the *Community Charter*.

MOVED Director Tanner, SECONDED Director Houle, that the report titled Disclosure of Contracts - Section 107(1) of the *Community Charter,* be received for information.

CARRIED

INFORMATION TECHNOLOGY

Rogers Cell Tower Agreement and Renewal Extension.

MOVED Director Van Eynde, SECONDED Director Houle, that the Board approve the offer from Rogers Communications Inc. of $12,600 per year for the 2013 — 2018 term and to allow one additional five-year extension commencing June 1, 2023 for the Statutory Right of Way Agreement for the cell tower at 6300 Hammond Bay Rd., Nanaimo.

CARRIED

TRANSPORTATION AND SOLID WASTE

SOLID WASTE

Bylaw 1591.04 - Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw.

MOVED Director Brennan, SECONDED Director Houle, that "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw No. 1591.04, 2014", be introduced and read three times.

CARRIED

MOVED Director Brennan, SECONDED Director Houle, that "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw No. 1591.04, 2014", be adopted.

CARRIED

STRATEGIC AND COMMUNITY DEVELOPMENT

BUILDING, BYLAW & EMERGENCY PLANNING

2533 Island Highway East — Electoral Area "E" — Unsightly Premises.

MOVED Director Van Eynde, SECONDED Director Veenhof, that the Board, pursuant to Unsightly Premises Regulatory Bylaw No. 1073, 1996, directs the owners of Lot 2, District Lot 79, Nanoose District, Plan 13501 (2533 Island Highway East), to remove the accumulation of machinery, derelict vehicles, automotive parts, construction material, scrap metal and wood, appliances and household garbage from the property within thirty (30) days, or the work will be undertaken by the Regional District of Nanaimo or its agents at the owner's cost.

CARRIED

6712 Island Highway West — Electoral Area "H" — Unsightly Premises.

MOVED Director Veenhof, SECONDED Director Houle, that the property owners be permitted to address the Board.

The property owners stated that they would work in cooperation with the tenants to clean up the property and requested the Board to provide more time to complete the cleanup.

MOVED Director Veenhof, SECONDED Director Fell, that the Board, pursuant to Unsightly Premises Regulatory Bylaw No. 1073, 1996, directs the owners of Lot 2, District Lot 85, Newcastle District, Plan 14562 (6712 Island Highway West), to remove the accumulation of derelict vehicles and boats, automotive parts, scrap metal and discarded construction material from the property within six (6) months, or the work will be undertaken by the Regional District of Nanaimo or its agents at the owner's cost.

CARRIED

81 Noonday Road — Electoral Area "H" — Unsightly Premises.

MOVED Director Veenhof, SECONDED Director Lefebvre, that the Board, pursuant to Unsightly Premises Regulatory Bylaw No. 1073, 1996, directs the owner of Lot 4, District Lot 22, Newcastle District, Plan 12132 (81 Noonday Road), to remove the accumulation of derelict vehicles, discarded metal, bicycle parts, lumber and disused building material from the property within thirty (30) days, or the work will be undertaken by the Regional District of Nanaimo or its agents at the owner's cost.

CARRIED

LONG RANGE PLANNING

Funding Request — Capacity Building to End Homelessness Reserve Fund.

MOVED Director Ruttan, SECONDED Director Brennan, that the Regional District of Nanaimo Board allocate $45,000 from the reserve fund to the Nanaimo Region John Howard Society to continue the Rental Support Program that directly supports those at risk of or experiencing homelessness in the region.

CARRIED

2013 Annual Report on Regional Growth Strategy Implementation and Progress.

MOVED Director Brennan, SECONDED Director Veenhof, that the Regional Growth Strategy 2013 Annual Report, be received.

CARRIED

MOVED Director Brennan, SECONDED Director Veenhof, that staff be directed to distribute and use the 2013 Annual Report as part of efforts to raise awareness and provide education about the Regional Growth Strategy and its implementation.

CARRIED

Electoral Area 'B' Participation in the Regional Growth Management Function.

MOVED Director Houle, SECONDED Director Veenhof, that Electoral Area 'B' remain in the Regional Growth Management function as a partial participant at 50% of the overall requisition for the service.

CARRIED

CURRENT PLANNING

Options for Agricultural Advisory Committee and Area Director Comment on Agricultural Land Reserve Applications.

MOVED Director Johnstone, SECONDED Director Veenhof, that the Board approve the amended Agricultural Advisory Committee Terms of Reference as outlined in the report to allow the Committee to provide comment on all applications for exclusion, subdivision or non-farm use in the Agricultural Land Reserve.

CARRIED

MOVED Director Johnstone, SECONDED Director Veenhof, that the Board approve amended Policy B1.8 "Review of Provincial Agricultural Land Reserve Applications" as outlined in the report to provide for Agricultural Advisory Committee and Electoral Area Director comment on applications for exclusion, subdivision, or non-farm use of Agricultural Land Reserve land.

CARRIED

REGIONAL AND COMMUNITY UTILITIES

WASTEWATER

Bylaw No. 975.61 — Pump & Haul Local Service Establishment Amendment to Exclude Lot 58, District Lot 78, Plan 14275, Nanoose Land District.

MOVED Director Van Eynde, SECONDED Director Houle, that the boundaries of the "Regional District of Nanaimo Pump & Haul Local Service Establishment Bylaw No. 975, 1995" be amended to exclude Lot 58, District Lot 78, Plan 14275, Nanoose District (Electoral Area `E).

CARRIED

MOVED Director Van Eynde, SECONDED Director Houle, that "Regional District of Nanaimo Pump & Haul Local Service Amendment Bylaw No. 975.61, 2014", be introduced and read three times.

CARRIED

WATER AND UTILITY

Bylaw No. 1655.02 -Water User Rate Amendments 2014.

MOVED Director Brennan, SECONDED Director Veenhof, that "Regional District of Nanaimo Water Services Fees & Charges Amendment Bylaw No. 1655.02, 2014", be introduced and read three times.

CARRIED

Bylaws No. 1241.06, 765.14, 422.17, 1472.05, 1532.03 - Sanitary Sewer User Rate Amendments.

MOVED Director Veenhof, SECONDED Director Houle, that "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.06, 2014", be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.06, 2014", be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.14, 2014", be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.14, 2014", be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.17, 2014", be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.17, 2014", be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.05, 2014", be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.05, 2014", be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Cedar Sewer Rates and Regulations Amendment Bylaw No. 1532.03, 2014", be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Houle, that "Cedar Sewer Rates and Regulations Amendment Bylaw No.1532.03, 2014", be adopted.

CARRIED

Hawthorne Rise Sanitary Sewer Extension — Construction Tender Award.

MOVED Director Veenhof, SECONDED Director Tanner, that the Board approve Milestone Equipment Contracting Inc. be awarded the construction of the Hawthorne Rise Sanitary Sewer Extension project for the tender price of $121,546.77.

CARRIED

MOVED Director Veenhof, SECONDED Director Tanner, that "Hawthorne Rise Sanitary Sewer Capital Financing Service Security Issuing Bylaw No. 1696, 2014", be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Tanner, that the "Hawthorne Rise Sanitary Sewer Capital Financing Service Security Issuing Bylaw No. 1696, 2014", be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Tanner, that "Hawthorne Rise Sanitary Sewer Capital Financing Service Interim Financing Bylaw No. 1697, 2014", be introduced and read three times.

CARRIED

MOVED Director Veenhof, SECONDED Director Tanner, that the "Hawthorne Rise Sanitary Sewer Capital Financing Service Interim Financing Bylaw No. 1697, 2014", be adopted.

CARRIED

STANDING COMMITTEE, SELECT COMMITTEE, AND COMMISSION

Regional Liquid Waste Advisory Committee.

Minutes of the Regional Liquid Waste Advisory Committee meeting held Tuesday, November 19, 2013.

MOVED Director Anderson, SECONDED Director Veenhof, that the minutes of the Regional Liquid Waste Advisory Committee meeting held Tuesday, November 19, 2013, be received for information.

CARRIED

Electoral Area 'E' Parks and Open Space Advisory Committee.

Minutes of the Electoral Area 'E' Parks and Open Space Advisory Committee meeting held Monday, December 16, 2013.

MOVED Director Van Eynde, SECONDED Director Anderson, that the minutes of the Electoral Area 'E' Parks and Open Space Advisory Committee meeting held Monday, December 16, 2013, be received for information.

CARRIED

Agricultural Advisory Committee.

Minutes of the Agricultural Advisory Committee meeting held Friday, January 24, 2014.

MOVED Director Johnstone, SECONDED Director Fell, that the minutes of the Agricultural Advisory Committee meeting held Friday, January 24, 2014, be received for information.

CARRIED

Dogs Harassing Livestock.

MOVED Director Fell, SECONDED Director Johnstone, that Bylaw and Policy Review project in the 2014-2016 Agricultural Area Plan (AAP) Implementation Action Plan include consideration of options to minimize the impact of trespass by at-large dogs on farms with livestock.

CARRIED

MOVED Director Fell, SECONDED Director Johnstone, that staff be directed to investigate and bring back a report on amending Regional District of Nanaimo animal control bylaw to include provisions for classifying and regulating nuisance to livestock dogs and the compensation to parties as result of the actions of dangerous or nuisance dogs.

CARRIED

MOVED Director Fell, SECONDED Director Johnstone, that the Board of Directors of the Regional District of Nanaimo send a letter to the Minister of Agriculture asking that the *Livestock Act* be amended so as to better protect livestock from nuisance dogs.

CARRIED

NEW BUSINESS

Notice of Motion – Nanaimo Tax Requisition Increase for Transit Expansion.

Director Anderson advised that he is withdrawing his Notice of Motion that was provided at the January 28, 2014 Board meeting.

SCHEDULED STANDING COMMITTEES - EXTERNAL

Minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, June 6, 2013.

MOVED Director Lefebvre, SECONDED Director Tanner, that the minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, June 6, 2013, be received for information.

CARRIED

Minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, December 12, 2013.

MOVED Director Lefebvre, SECONDED Director Tanner, that the minutes of the Regular meeting of the Arrowsmith Water Service Management Board, held Thursday, December 12, 2013, be received for information.

CARRIED

Englishman River Water Service Management Board

Minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, June 6, 2013.

MOVED Director Lefebvre, SECONDED Director Tanner, that the minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, June 6, 2013, be received for information.

CARRIED

Minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, December 12, 2013.

MOVED Director Lefebvre, SECONDED Director Tanner, that the minutes of the Regular meeting of the Englishman River Water Service Management Board, held Thursday, December 12, 2013, be received for information.

CARRIED

IN CAMERA

MOVED Director Van Eynde, SECONDED Director de Jong, that pursuant to Section 90 (1)(j) of the *Community Charter* the Board proceed to an In Camera meeting for discussions related to third party interests.

CARRIED

TIME: 9:47 PM

ADJOURNMENT

MOVED Director Bestwick, SECONDED Director Van Eynde, that this meeting terminate.

CARRIED

TIME: 10:05 PM

CHAIRPERSON

CORPORATE OFFICER

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1591.04

A BYLAW TO AMEND THE SOLID WASTE AND RECYCLING COLLECTION SERVICE RATES AND REGULATIONS BYLAW

WHEREAS the Regional District of Nanaimo established the Solid Waste and Recycling Collection Service pursuant to Bylaw No. 793, cited as "Recycling and Compulsory Collection Local Service Establishment Bylaw No. 793, 1989";

AND WHEREAS the Regional District of Nanaimo adopted a rates and regulations bylaw in relation to the Solid Waste and Recycling Collection Service, cited as "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates And Regulations Bylaw No. 1591, 2010";

AND WHEREAS the Board of the Regional District of Nanaimo wishes to update user rates;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. Amendments

"Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Bylaw No. 1591, 2010" is amended as follows:

(a) By deleting Schedule 'A' and replacing it with the Schedule 'A' attached to and forming part of this bylaw.

2. Citation

This bylaw may be cited as "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw No. 1591.04, 2014".

Introduced and read three times this ___ day of _____, 2014.

Adopted this ___ day of _____, 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule `A' to accompany "Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Bylaw No. 1591.04, 2014".

_____
Chairperson

_____
Corporate Officer

SCHEDULE 'A'

BYLAW NO. 1591

User Fees associated with Collection of Garbage, Food Waste and Recyclable Materials

The rates in this schedule apply to the jurisdictions as outlined in the body of this bylaw.

Service Area	Prompt Payment Rate (rates rounded for convenience)	Payment after Due Date	Other Charges
Electoral Areas [1]	$133.20	$148.00	
City of Parksville [1]	$133.20	$148.00	
District of Lantzville [1]	$133.20	$148.00	
Town of Qualicum Beach [2]	$91.80	$102.00	
Recycling Only [3]	$31.50	$35.00	
Tags for set out of additional Garbage Containers (excluding Town of Qualicum Beach)	-	-	$2.00 per garbage container
Green Bin food waste containers			$25.00[4] each

Explanation of Service Level Container Limits included in Basic Rate

(1) Service Level Basic Rates Container Limits =
The basic rate will include up to one container of Residential Garbage per collection period (one container per two weeks), one container of Residential Food Waste per collection period (one container per week), and unlimited Recyclable Materials per collection period.

(2) Service Level Basic Rates Recycling and Food Waste Collection for Town of Qualicum Beach =
The basic rate will include up to one container of Residential Food Waste per collection period (one container per week), and unlimited Recyclable Materials per collection period.

(3) Service Level Basic Rates Recycling Only Collection =
The basic rate includes unlimited Recyclable Materials only per collection period.

(4) $25 charge for Green Bin food waste container includes taxes.

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 975.61

A BYLAW TO AMEND THE BOUNDARIES OF THE PUMP & HAUL LOCAL SERVICE

WHEREAS the Regional District of Nanaimo established a Pump and Haul Service pursuant to Bylaw No. 975, cited as "Regional District of Nanaimo Pump & Haul Local Service Establishment Bylaw No. 975, 1995";

AND WHEREAS the Board of the Regional District of Nanaimo has been petitioned by the property owner to reduce the boundaries of the service area to exclude the land legally described as:

- Lot 58, District Lot 78, Plan 14275, Nanoose District;

AND WHEREAS at least 2/3 of the service participants have consented to the adoption of this bylaw in accordance with section 802 of the *Local Government Act*;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. Citation

This bylaw may be cited for all purposes as "Regional District of Nanaimo Pump & Haul Local Service Amendment Bylaw No. 975.61, 2014".

2. Amendment

"Regional District of Nanaimo Pump & Haul Local Service Establishment Bylaw No. 975, 1995" is amended by deleting Schedule 'A' and replacing it with the Schedule 'A' attached to and forming part of this bylaw.

Introduced and read three times this day of , 2014.

Adopted this day of , 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule 'A' to accompany "Regional District of Nanaimo Pump & Haul Local Service Amendment Bylaw No. 975.61, 2014".

_____

Chairperson

_____

Corporate Officer

BYLAW NO. 975.61

SCHEDULE 'A'

Electoral Area 'B'

1. Lot 108, Section 31, Plan 17658, Nanaimo Land District.
2. Lot 6, Section 18, Plan 17698, Nanaimo Land District.
3. Lot 73, Section 31, Plan 17658, Nanaimo Land District.
4. Lot 26, Section 12, Plan 23619, Nanaimo Land District.
5. Lot 185, Section 31, Plan 17658, Nanaimo Land District.
6. Lot A, Section 31, Plan VIP84225, Gabriola Island, Nanaimo District
7. Lot 120, Section 31, Plan 17658, Nanaimo Land District.
8. Lot 108, Section 12, Plan 23435, Nanaimo Land District.
9. Lot 75, Section 13, Plan 21531, Nanaimo Land District.
10. Lot 85, Section 18, Plan 21586, Nanaimo Land District.
11. Lot 14, Section 21, Plan 5958, Nanaimo Land District.
12. Lot 108, Section 13, Plan 21531, Nanaimo Land District.
13. Lot 84, Sections 12 & 13, Plan 21531, Nanaimo Land District.
14. Lot 72, Section 13, Plan 21531, Nanaimo Land District.
15. Lot 61, Section 18, Plan 21586, Gabriola Island, Nanaimo District.

Electoral Area 'E'

1. Lot 1, District Lot 72, Plan 17681, Nanoose Land District.
2. Lot 17, District Lot 78, Plan 14212, Nanoose Land District.
3. Lot 32, District Lot 68, Plan 26680, Nanoose Land District.
4. Lot 13, Block E, District Lot 38, Plan 13054, Nanoose Land District.
5. Lot 13, District Lot 78, Plan 25828, Nanoose Land District.
6. Lot 28, District Lot 78, Plan 15983, Nanoose Land District.
7. Lot 23, District Lot 78, Plan 14212, Nanoose Land District.
8. Lot 23, District Lot 78, Plan 28595, Nanoose Land District.
9. Lot 53, District Lot 78, Plan 14275, Nanoose Land District.
10. Lot 12, District Lot 8, Plan 20762, Nanoose Land District.
11. Lot 57, District Lot 78, Plan 14275, Nanoose District
12. Lot 18, District Lot 78, Plan 19688, Nanoose District

Electoral Area 'F'

1. Lot 2, District Lot 74, Plan 36425, Newcastle Land District.

Electoral Area 'G'

1. Lot 28, District Lot 28, Plan 26472, Nanoose Land District.
2. Lot 1, District Lot 80, Plan 49865, Newcastle Land District.

Electoral Area 'H'

1. Lot 22, District Lot 16, Plan 13312, Newcastle Land District.
2. Lot 29, District Lot 81, Plan 27238, Newcastle Land District.
3. Lot 46, District Lot 81, Plan 27238, Newcastle Land District.
4. Lot 9, District Lot 28, Plan 24584, Newcastle Land District.
5. Lot 41, District Lot 81, Plan 27238, Newcastle Land District.
6. Lot 20, District Lot 16, Plan 13312, Newcastle Land District.
7. Lot 1, District Lot 40, Plan 16121, Newcastle District.
8. Lot 27, Plan 16121, District Lot 40, Newcastle Land District.

District of Lantzville

1. Lot 24, District Lot 44, Plan 27557, Wellington Land District.
2. Lot A, District Lot 27G, Plan 29942, Wellington Land District.
3. Lot 1, District Lot 85, Plan 15245, Wellington Land District.

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1655.02

A BYLAW TO AMEND THE FEES AND CHARGES FOR REGIONAL DISTRICT OF NANAIMO WATER SERVICES

WHEREAS The Board of the Regional District of Nanaimo adopted the "Regional District of Nanaimo Water Services Fees & Charges Bylaw No. 1655, 2012" which established fees and charges for water services;

AND WHEREAS the Board of the Regional District of Nanaimo wishes to introduce water user rate increases of 2% in accordance with the 2014 Financial Plan;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. **Citation**

   This bylaw may be cited for all purposes as the "Regional District of Nanaimo Water Services Fees & Charges Amendment Bylaw No. 1655.02, 2014".

2. **Amendment**

   "Regional District of Nanaimo Water Services Fees & Charges Bylaw No. 1655, 2012" is amended as follows:

   By deleting Schedule 'A' of Bylaw No. 1655 and replacing it with the Schedule 'A' attached to and forming part of this bylaw.

3. **Effective Date**

   The effective date of this Bylaw is May 1, 2014.

Introduced and read three times this day of, 2014.

Adopted this day of , 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule `A' to accompany "Regional District of Nanaimo Water Services Fees & Charges Amendment Bylaw No. 1655.02, 2014".

_____
Chairperson

_____
Corporate Officer

SCHEDULE 'A'

WATER RATES

1. (a) Calculated on the average daily consumption per unit:

   i) For the first 0.7 cubic meters per day, $0.96 per cubic meter.

   ii) From 0.71 to 1.4 cubic meters per day, $1.10 per cubic meter.

   iii) From 1.41 to 2.1 cubic meters per day, $1.40 per cubic meter.

   iv) From 2.11 to 2.8 cubic meters per day, $1.66 per cubic meter.

   v) From 2.81 to 3.5 cubic meters per day, $2.21 per cubic meter.

   vi) Over 3.50 cubic meters per day, $3.32 per cubic meter.

   (b) Minimum rate is $0.30 per day.

   (c) Un-metered connections - $3.00 per day.

   (d) Schools – As per (a) above plus $80.00 per billing period.

   (e) Un-metered fire lines, $65.00 per billing period.

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1241.06

A BYLAW TO AMEND THE SURFSIDE SEWER USER RATES AND REGULATIONS BYLAW NO. 1241

WHEREAS The Board of the Regional District of Nanaimo adopted the "Surfside Sewer Rates and Regulation Bylaw No. 1241, 2001" which provides for the regulation of sewer collection and established the fees and charges for the sewer service;

AND WHEREAS the Board wishes to amend the rates for properties having the sewer collection system service available to them;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. **Citation**

   This bylaw may be cited for all purposes as the "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.06, 2014".

2. **Amendment**

   "Surfside Sewer Rates and Regulation Bylaw No. 1241, 2001" is amended as follows:

   By deleting Schedule 'D' of Bylaw 1241 and replacing it with Schedule 'D' attached to and forming part of this bylaw.

Introduced and read three times this day of , 2014.

Adopted this day of , 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule 'D' to accompany "Surfside Sewer Rates and Regulation Amendment Bylaw No. 1241.06, 2014".

_____
Chairperson

_____
Corporate Officer

SCHEDULE 'D'
[Section 19.1]

USER CHARGE
[*if applicable*]

1. Billing and Payment:

(a) Annual sewer rates as invoiced by the Regional District are due and payable on presentation. A ten (10%) percent discount will be applied if payment of all outstanding charges in effect from time to time is received on or before the discount date shown on the invoice.

(b) Amounts unpaid on the 31st of December in any year shall be deemed to be taxes in arrears and will be transferred to property taxes.

(c) All payments received will be applied firstly against arrears and then to current balances.

2. Rates Payable:

(a) User Charge:

	Classification		**Annual Rate**
(a)	Single Family Residence	- up to 12 fixtures	$ 142.80
		- each additional fixture	$ 11.83
(b)	Apartments, Suites or Duplex - Each Unit		$ 142.80
(c)	Cafes and Restaurants – for each group of plumbing fixtures		$ 142.80
(d)	Garage or Service Station		$ 142.80
(e)	Store or Business Premises – for each group of plumbing fixtures		$ 142.80
(f)	Mobile Homes (whether situated in a mobile Home park or not) – per unit		$ 142.80
(g)	Office Building – for each group of plumbing fixtures		$ 142.80
(h)	Churches and Public Halls – for each group of plumbing fixtures		$ 85.68
(i)	Licenses Premises – for each group of plumbing fixtures		$ 142.80
(j)	Motels – per unit – including residential managers' or owners' units		$ 1.12
(k)	Hotels – per room		$ 1.12
(l)	Camping	– for each group of plumbing fixtures	$ 1.12
		- for each space with a sewer connection	$ 1.12
(m)	Marinas – for each group of plumbing fixtures		$ 142.80
(n)	Laundry, Laundromat or Dry Cleaners – per washer		$ 81.60
(o)	Sani Dump (per connection)		$ 443.70
(p)	Swimming Pool		$ 107.10

3. Connection Fee $ 300.00

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 765.14

A BYLAW TO AMEND THE FAIRWINDS SEWERAGE FACILITIES SPECIFIED AREA RATES BYLAW NO. 765

WHEREAS The Board of the Regional District of Nanaimo adopted the "Fairwinds Sewerage Facilities Specified Area Rates Bylaw No. 765, 1989" which provides for the regulation of sewer collection and established the fees and charges for the sewer service;

AND WHEREAS the Board wishes to amend the rates for properties having the sewer collection system service available to them;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. **Citation**

   This bylaw may be cited for all purposes as the "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.14, 2014.

2. **Amendment**

   "Fairwinds Sewerage Facilities Specified Area Rates Bylaw No. 765, 1989" is amended as follows:

   By deleting Schedule 'B' of Bylaw 765 and replacing it with Schedule 'B' attached to and forming part of this bylaw.

Introduced and read three times this day of , 2014.

Adopted this day of , 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule `B' to accompany "Fairwinds Sewerage Facilities Specified Area Rates Amendment Bylaw No. 765.14, 2014".

_____
Chairperson

_____
Corporate Officer

SCHEDULE 'B'

FAIRWINDS SEWERAGE FACILITIES USER RATES

	Classification		Annual Rate
(a)	Private Residential –		
	Single Family Dwelling	Up to 12 fixtures	$ 75.58
		Each additional fixture	$ 6.32
(b)	Apartments, Condominiums, Duplexes, Hotels, Suites or Strata Title Units – per unit		$ 75.58
(c)	Campground (see item (d) for restrooms or laundry facilities) – per space with sewer connection		$ 75.58
(d)	Commercial		
	(i) General, per group of fixtures		$ 90.58
	(ii) Laundry, Laundromat or Dry Cleaners – per washer		$ 45.70
(e)	Sani-dump – per vehicle connection		$ 452.68
(f)	Swimming pool		$ 56.71
(g)	Department of National Defense		By Agreement

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 422.17

A BYLAW TO AMEND THE FRENCH CREEK SEWER RATES AND REGULATION BYLAW NO. 422

WHEREAS The Board of the Regional District of Nanaimo adopted the "French Creek Sewer Specified Area Rates By-Law No. 422, 1979" which provides for the regulation of sewer collection and established the fees and charges for the sewer service;

AND WHEREAS the Board wishes to amend the rates for properties having the sewer collection system service available to them;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. **Citation**

   This bylaw may be cited for all purposes as the "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.17, 2014".

2. **Amendment**

   "French Creek Sewer Specified Area Rates By-Law No. 422, 1979" is amended as follows:

   By deleting Schedule 'A' of Bylaw 422 and replacing it with Schedule 'A' attached to and forming part of this bylaw.

Introduced and read three times this day of , 2014.

Adopted this day of , 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule `A' to accompany "French Creek Sewer Specified Area Rates Amendment Bylaw No. 422.17, 2014".

_____
Chairperson

_____
Corporate Officer

SCHEDULE 'A'

FRENCH CREEK SEWER USER RATES

Classification		Annual Rate
(a) Single Family Residence	- up to 12 fixtures	$ 167.27
	- each additional fixture	$ 13.97
(b) Apartments, Suites or Duplex - Each Unit		$ 167.27
(c) Cafes and Restaurants - for each group of plumbing fixtures		$ 167.27
(d) Garage or Service Station		$ 167.27
(e) Store or Business Premises - for each group of plumbing fixtures		$ 167.27
(f) Mobile Homes (whether situated in a mobile Home park or not) - per unit		$ 167.27
(g) Office Buildings - for each group of plumbing fixtures		$ 167.27
(h) Churches and Public Halls - for each group of plumbing fixtures		$ 101.33
(i) Licensed Premises - for each group of plumbing fixtures		$ 167.27
(j) Motels - per unit – including residential manager's or owner's unit		$ 167.27
(k) Hotels – per room		$ 167.27
(l) Camping	- for each group of plumbing fixtures	$ 167.27
	- for each space with a sewer connection	$ 43.05
(m) Marinas – for each group of plumbing fixtures		$ 167.27
(n) Laundry, Laundromat or Dry Cleaners – per washer		$ 87.68
(o) Schools	- per connection	$ 321.83
	- plus for each group of plumbing fixtures	$ 125.37
(p) Swimming Pool		$ 125.37

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1472.05

A BYLAW TO AMEND BARCLAY CRESCENT SEWER RATES AND REGULATIONS BYLAW NO. 1472

WHEREAS The Board of the Regional District of Nanaimo adopted the "Barclay Crescent Sewer Rates and Regulations Bylaw No. 1472, 2005" which provides for the regulation of sewer collection and established the fees and charges for the sewer service;

AND WHEREAS the Board wishes to amend the rates for properties having the sewer collection system service available to them;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. **Citation**

   This bylaw may be cited for all purposes as the "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.05, 2014".

2. **Amendment**

   "Barclay Crescent Sewer Rates and Regulations Bylaw No. 1472, 2005" is amended as follows:

   By deleting Schedule 'C' of Bylaw 1472 and replacing it with Schedule 'C' attached to and forming part of this bylaw.

Introduced and read three times this day of , 2014.

Adopted this day of , 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule 'C' to accompany "Barclay Crescent Sewer Rates and Regulations Amendment Bylaw No. 1472.05, 2014".

_____

Chairperson

_____

Corporate Officer

SCHEDULE 'C'
[Section 19.1]

USER CHARGE
[if applicable]

1. Billing and Payment:

(a) Annual sewer rates as invoiced by the Regional District are due and payable on presentation. A ten (10%) percent discount will be applied if payment of all outstanding charges in effect from time to time is received on or before the discount date shown on the invoice.

(b) Amounts unpaid on the 31st of December in any year shall be deemed to be taxes in arrears and will be transferred to property taxes.

(c) All payments received will be applied firstly against arrears and then to current balances.

2. Rates:

	Classification	Annual Rates	Other Rates
(a)	Single Family Residence	$ 243.08	
(b)	Apartments, Suites or Duplex – Each Unit	$ 243.08	
(c)	Cafes and Restaurants – for each group of plumbing fixtures	$ 243.08	
(d)	Garage or Service Station	$ 243.08	
(e)	Store or Business Premises – for each group of plumbing fixtures	$ 243.08	
(f)	Mobile Homes (whether situated in a Mobile Home Park or not) – per unit	$ 243.08	
(g)	Churches and Halls – for each group of plumbing fixtures	$ 243.08	
(h)	Licensed Premises – for each group of plumbing fixtures	$ 243.08	
(i)	Motels – per unit – including residential managers' or owners' units	$ 243.08	
(j)	Hotels – per room	$ 1.08	
(k)	Camping - for each group of plumbing fixtures	$ 1.08	
	- for each space with a sewer connection	$ 1.08	
(l)	Laundry, Laundromat or Dry Cleaners – per washer	$ 81.37	
(m)	Sani Dump (per connection)	$ 459.38	
(n)	Waste Discharge permit holder	$ 1,030.00	Daily rate per Part 4

SCHEDULE 'C' continued

3. A group of plumbing fixtures is equivalent to three fixtures.

4. For Waste Discharge permit holders, in addition to the annual fee shown under Part 2. Rates shown above, a daily rate per cubic meter shall apply. The daily rate shall be calculated as follows:

$$\frac{\text{Annual Single Family Residential Rate}}{255 \text{ cu m}} = \text{rate per cubic meter per day}$$

The daily rate shall be applied to the average daily flow calculated from the total annual flows measured for the permit holder divided by 365.

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1532.03

A BYLAW TO AMEND THE CEDAR SEWER SERVICE AREA RATES AND REGULATIONS BYLAW NO. 1532

WHEREAS The Board of the Regional District of Nanaimo adopted the "Cedar Sewer Rates and Regulations Bylaw No. 1532, 2007" which provides for the regulation of sewer collection and established the fees and charges for the sewer service;

AND WHEREAS the Board wishes to amend the rates for properties having the sewer collection system service available to them;

NOW THEREFORE the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. **Citation**

   This bylaw may be cited for all purposes as the "Cedar Sewer Rates and Regulations Amendment Bylaw No. 1532.03, 2014".

2. **Amendment**

   "Cedar Sewer Rates and Regulations Bylaw No. 1532, 2007" is amended as follows:

   A. By deleting Section 19.1 and replacing it with the following:

      "19.1 Every property in the service area shall pay the applicable Base Annual Charge as shown on Schedule 'B' attached to and forming a part of this bylaw."

   B. By adding a new Section 19.2 as follows:

      "19.2 Every property connected to the sewer collection system shall, in addition to the Base Annual Charge, pay a Daily Rate user fee as shown in Schedule 'B' attached to this bylaw."

   C. By deleting Schedule "B" and replacing it with Schedule "B" attached to and forming part of this bylaw.

Introduced and read three times this day of , 2014.

Adopted this day of , 2014.

CHAIRPERSON

CORPORATE OFFICER

Schedule `B' to accompany "Cedar Sewer Rates and Regulations Amendment Bylaw No. 1532.03, 2014"

_____
Chairperson

_____
Corporate Officer

SCHEDULE 'B'

USER CHARGES

1. Billing and Payment:

   (a) Annual user charges invoiced by the Regional District are due and payable on presentation. A ten percent (10%) discount will be applied if payment of all outstanding charges in effect from time to time is received on or before the discount date shown on the invoice.

   (b) Amounts unpaid on the 31st of December in any year shall be deemed to be taxes in arrears and will be transferred to property taxes.

   (c) All payments received will be applied firstly against arrears and then to current balances.

   (d) A group of plumbing fixtures is equivalent to three fixtures rounded to the next highest integer (example 4 sinks, plus 2 toilets, plus one shower in a building = 2.3 groups rounded to the next highest integer = 3)

2. User Charges:

Classification	Base Annual Charge	Daily Rate
Single Residential premises (includes mobile homes in mobile home parks or on any parcel of land)	$226.60 per unit or connection	$1.55 per dwelling unit per day
Apartments, Condominiums or multi family dwellings	$226.60 per unit	$1.44 per unit per day
Assisted living premises	$1,100	$75.19
Churches and Halls	$226.60 per building	$0.77
Halls, Community Centers and similar facilities	$226.60 per building	$0.78
Schools	$1,133	$5.670
Commercial premises	$679.80	$1.55 per building per day
Motels and Hotels – including residential managers' or owners' units	$1,133	$4.53 per unit per day
Camping - for each group of plumbing fixtures within a building	$226.60	$1.55
Camping - for each space with a sewer connection	$226.60	$0.77
Laundry, Laundromat or Dry Cleaners	$679.80	$1.55 per washer per day
Sani Dump	$679.80 per connection	
Sportsfields	$679.80	$0.77

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1696

A BYLAW TO AUTHORIZE THE ENTERING INTO OF AN AGREEMENT RESPECTING FINANCING BETWEEN THE REGIONAL DISTRICT OF NANAIMO (THE "REGIONAL DISTRICT") AND THE MUNICIPAL FINANCE AUTHORITY OF BRITISH COLUMBIA (THE "AUTHORITY")

WHEREAS the Authority may provide financing of capital requirements for regional districts and for their member municipalities by the issue of debentures, or other evidence of indebtedness of the Authority and lending the proceeds therefrom to the Regional District on whose request the financing is undertaken;

AND WHEREAS, pursuant to the provisions of Section 825 of the *Local Government Act*, the amount of borrowing authorized by the following Loan Authorization Bylaw, the amount already borrowed under the authority thereof, the amount of authorization to borrow remaining thereunder and the amount being issued under the authority thereof by this bylaw is as follows:

Regional District	L/A Bylaw No.	Purpose	Amount Borrowing Authorized	Amount Already Borrowed	Borrowing Authority Remaining	Term of Issue (Yrs.)	Amount of Issue
Nanaimo	1687	Hawthorne Rise Sanitary Sewer Capital Financing Service	$380,000	Nil	$380,000	20	$250,000
Total Financing pursuant to Section 825							$250,000

AND WHEREAS the Regional Board, by this bylaw, hereby requests that such financing shall be undertaken through the Authority;

NOW THEREFORE, the Regional Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. The Authority is hereby requested and authorized to finance from time to time the aforesaid undertakings at the sole cost and on behalf of the Nanaimo Regional District and its municipalities hereinbefore referred to, in Canadian Dollars or in such other currency or currencies as the Authority shall determine so that the amount realized does not exceed Two Hundred Fifty Thousand Dollars ($250,000) in Canadian Dollars and/or the equivalent thereto and at such interest and with such discounts or premiums and expenses as the Authority may deem consistent with the suitability of the money market for sale of securities of the Authority.

2. Upon completion by the Authority of financing undertaken pursuant hereto, the Chairperson and Director of Finance of the Regional District, on behalf of the Regional District and under its seal shall, at such time or times as the Trustees of the Authority may request, enter into and deliver to the Authority one or more agreements which said agreement or agreements shall be substantially in the form annexed hereto as Schedule 'A' and made part of this bylaw (such agreement or agreements as may be entered into, delivered or substituted hereinafter referred to as the "Agreement") providing for payment by the Regional District to the Authority of the amounts required to meet the obligations of the Authority with respect to its borrowings undertaken pursuant hereto, which Agreement shall rank as debenture debt of the Regional District.

3. The Agreement in the form of Schedule 'A' shall be dated and payable in the principal amount or amounts of money in Canadian Dollars or as the Authority shall determine and subject to the *Local Government Act*, in such other currency or currencies as shall be borrowed by the Authority pursuant to Section 1 and shall set out the schedule of repayment of the principal amount together with interest on unpaid amounts as shall be determined by the Treasurer of the Authority.

4. The obligations incurred under the said Agreement shall bear interest from a date specified therein, which date shall be determined by the Treasurer of the Authority and shall bear interest at a rate to be determined by the Treasurer of the Authority.

5. The Agreement shall be sealed with the seal of the Regional District and shall bear the signatures of the Chairperson and Director of Finance.

6. The obligations incurred under the said Agreement as to both principal and interest shall be payable at the Head Office of the Authority in Victoria and at such time or times as shall be determined by the Treasurer of the Authority.

7. If during the currency of the obligations incurred under the said Agreement to secure borrowings in respect of Hawthorne Rise Sanitary Sewer Capital Financing Service Loan Authorization Bylaw No. 1687, the anticipated revenues accruing to the Regional District from the operation of the said Hawthorne Rise Sanitary Sewer Capital Financing Service are at any time insufficient to meet the annual payment of interest and the repayment of principal in any year, there shall be requisitioned an amount sufficient to meet such insufficiency.

8. The Regional District shall provide and pay over to the Authority such sums as are required to discharge its obligations in accordance with the terms of the Agreement, provided however that if the sums provided for in the Agreement are not sufficient to meet the obligations of the Authority, and deficiency in meeting such obligations shall be a liability of the Regional District to the Authority and the Regional District shall make provision to discharge such liability.

9. At the request of the Treasurer of the Authority and pursuant to Section 15 of the *Municipal Finance Authority Act*, the Regional District shall pay over to the Authority such sums and execute and deliver such promissory notes as are required pursuant to said Section 15 of the *Municipal Finance Authority of British Columbia Act*, to form part of the Debt Reserve Fund established by the Authority in connection with the financing undertaken by the Authority on behalf of the Regional District pursuant to the Agreement.

10. This bylaw may be cited as "Hawthorne Rise Sanitary Sewer Capital Financing Service Security Issuing Bylaw No. 1696, 2014".

Introduced and read three times this __ day of _____, 2014.

Adopted this __ day of _____, 2014.

_____ _____

CHAIRPERSON CORPORATE OFFICER

REGIONAL DISTRICT OF NANAIMO

BYLAW NO. 1697

A BYLAW TO AUTHORIZE TEMPORARY BORROWING OF MONEY PENDING THE ISSUANCE OF SECURITIES WHICH HAVE BEEN AUTHORIZED

WHEREAS pursuant to Section 823.2 of the *Local Government Act* a regional district may, where it has adopted a loan authorization bylaw, borrow temporarily without further assents or approvals, from any person under the conditions therein set out;

AND WHEREAS by "Hawthorne Rise Sanitary Sewer Capital Financing Loan Authorization Bylaw No. 1687, 2013" ("Bylaw No. 1687"), the Board of the Regional District of Nanaimo was authorized to borrow upon the credit of the Regional District a sum not exceeding $380,000.00 for the purpose of the Hawthorne Rise Sanitary Sewer Service capital upgrades;

AND WHEREAS the remaining authorized borrowing power under the said Bylaw No. 1687 stands at $380,000.00;

AND WHEREAS the Board wishes to borrow temporarily before entering into long term debt;

NOW THEREFORE, the Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

1. The Board of the Regional District of Nanaimo is hereby authorized and empowered to borrow temporarily from any person or body corporate, sums not exceeding $250,000.00 solely for the purposes specified in Bylaw No. 1687.

2. The form of obligations, to be given to the lender in acknowledgement of the liability of the said Regional District Board shall be a promissory note, or notes, bearing the Corporate Seal of the Regional District of Nanaimo and signed by the Chairperson and Director of Finance of the Regional District.

3. The proceeds from the sale of debentures or so much thereof as may be necessary shall be used to repay the money so borrowed.

4. This bylaw may be cited as "Hawthorne Rise Sanitary Sewer Capital Financing Service Interim Financing Bylaw No. 1697, 2014".

Introduced and read three times this __ day of _____, 2014.

Adopted this __ day of _____, 2014.

_____ _____

CHAIRPERSON CORPORATE OFFICER

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE AREA F PARKS AND OPEN SPACE ADVISORY COMMITTEE (POSAC)
REGULAR COMMITTEE MEETING HELD
MONDAY DECEMBER 2, 2013
7:00PM

(ERRINGTON WAR MEMORIAL HALL, ERRINGTON)

ATTENDANCE: Leanne Salter, alternate Area F director of the RDN board, Chair
Alfred Jablonski
David Edgeley
Barbara Smith
Skye Donald
Steve Chomolok

STAFF: Wendy Marshall

REGRETS: Colin Anderson

CALL TO ORDER

Chair Salter called the meeting to order at 7:03 p.m.

MINUTES:

MOVED A. Jablonski, SECONDED S. Donald that the Minutes of the Electoral Area F Parks and Open Space Advisory Committee meeting dated May 6, 2013 be approved.

CARRIED

BUSINESS ARISING FROM THE MINUTES

Ms. Marshall advised that the hazard trees in Malcolm Park have been removed.

REPORTS

Community Parks & Trails Strategic Plan – Final Draft Report

Ms. Marshall reviewed the Draft Community Parks and Trails Strategy. Ms. Marshall reviewed Development Cost charges as a way to develop Parks. This method has not been used to date. She reviewed how the POSAC budgets are determined. Ms. Marshall discussed the difference between a linear park and a trail. She noted that the Project Recommendations listed on page 67 of the Report were suggestions made at the various Public meetings. She reviewed the 17 Project Implementation Summary recommendations.

S. Chomolok pointed out that a good example of active volunteer programs are the river and stream stewardships. He suggested that the RDN be prepared to encourage such groups to be motivated now, not in 2015 as recommended.

S. Edgeley pointed out the importance developing an active transportation plan, especially for the Englishman River subdivision.

S. Chomolok questioned the use of the word" streamline" in regards to the internal review of subdivision applications with the concern that might make it easier for subdivisions to be created. Ms. Marshall explained that the system now is quite complicated.

B. Smith advised that the Area E, F, G and H POSAC members involved in the making of the Report were impressed with its content and very satisfied with the Guidelines and Recommendations.

B. Smith noted that signage in Malcolm Park only notifies the Public when they are leaving the Park onto private land, and that there is no signage for entering the Park.

S. Donald suggested that the word "vibrant" was overused in describing the vision statement for each Electoral Area. B. Smith pointed out that the vision for Area F included an interconnected trail system.

Ms. Marshall gave an update on the Meadowood CP Phase 1 Construction and referred to the website at http://www.rdn.bc.ca/cms.asp?wpID=2768.

MOVED S. Donald, SECONDED A. Jablonski that Community Parks & Trails Strategic Plan be received.

CARRIED

NEW BUSINESS

2014 Budget Schedule

Ms. Marshall outlined the Proposed 2014 Budget Timeline with the adoption of the financial plan bylaw by March 25 2014.

2014 Advisory Committee Appointments

Ms. Marshall reminded POSAC that 4 of the Board members' appointments terminate at the end of the year and that those members need to send in their applications very soon.

Volunteer Mileage Reimbursement Policy

Ms. Marshall advised that there is volunteer mileage reimbursement for the Board members' attendance at the meetings payable only if submitted within 90 days of the month end in which they are incurred.

AJOURNMENT

MOVED B. Smith that the meeting be adjourned at 8:30 p.m.

CARRIED

_____

Chairperson

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE ELECTORAL AREA 'H' PARKS AND OPEN SPACE ADVISORY REGULAR COMMITTEE MEETING WEDNESDAY, DECEMBER 4, 2013 10:00 AM

Attendance: Bill Veenhof, Chair, Director, RDN Board
Barry Ellis
Richard Leontowich
Nancy Robertson
David Wiwchar
Dagmar Seydel

Staff: Wendy Marshall, Manager of Park Services
David Palidwor, Parks Superintendent
Elaine McCulloch, Parks Planner

REGRETS: Valerie Weismiller

CALL TO ORDER

Chair Veenhof called the meeting to order at 10:00am.

MINUTES

MOVED B. Ellis, SECONDED D. Seydel, that the minutes from the June 5th, 2013 meeting be approved.

COMMUNICATIONS/CORRESPONDENCE

MOVED R. Leontowich, SECONDED B. Ellis that the following Correspondence be received:

D. Eddy, Mapleguard Ratepayers' Association, to T. Osborne, RDN
RE: Community Park in Area 'H'

CARRIED

BUSINESS ARISING FROM THE MINUTES

Beach Access Priorities

Shoreline Dr. Water Access stair repairs – currently on the Parks work plan to be completed in 2014.

RDN staff requested to provide the POSAC with a draft list of Water Access development priorities indicating what may be achievable as well as a draft Water Access sign layout.

Sunny Beach Water Access – request for "trailer parking only" signage in the parking lot.

REPORTS

Community Parks and Trails Strategy (CPTS) – Final Draft Report

Ms. Marshall provided a summary of the recently completed November 20th DRAFT of the Community Parks and Trails Strategy (copy provided to each member). An additional report was handed out at the meeting, titled: Community Parks and Trails Strategy- Cultural Mapping Project Summary.

Generally, the Area H POSAC felt the CPTS document was well written and will be helpful in the future for Community Park Management. Ms. Marshall summarized materials in the report, and POSAC members provided some comments for each section of the report. She noted these comments will be taken into account in the final Community Parks and Trails Strategy when it goes to the Board.

Leon Rd Trail – Update

E. McCulloch informed the committee that the bridge over the creek along the Leon Rd. trail has been completed. This footpath connection between Leon Rd. and Marshall Rd. in the Dunsmuir community is now accessible to the public.

MOVED B. Ellis, SECONDED D. Seydel that the reports be received.

NEW BUSINESS

2014 Budget Schedule

E. McCulloch explained the process of the budget timeline and said more information would be available for the next meeting.

2014 Advisory Committee Appointments

N. Robertson and D. Seydel are both completing their term appointments to the Area H POSAC.

Volunteer Mileage Reimbursement Policy

Ms. McCulloch provided notice to all members of the POSAC that a new policy passed by the RDN Board will allow mileage to be claimed for travel to attend meetings called by RDN starting in April 1st 2013. Members should note the procedures for submitting a claim. Members were notified to submit claims to Ann Marie Harvey.

Director Veenhof spoke to the Committee regarding his effort towards improving roadsides for pedestrian and bicycle use in Electoral Area 'H'.

ADJOURNMENT

MOVED B. Ellis that the meeting be adjourned at 5:25pm.

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Chair

MINUTES
REGIONAL DISTRICT OF NANAIMO
ELECTORAL AREA 'G' PARKS AND OPEN SPACE ADVISORY COMMITTEE
MONDAY, DECEMBER 9, 2013
7:00pm
(Oceanside Place, Multipurpose Room)

Attendance:	Joe Stanhope, Director, RDN Board Brian Coath Ann Douglas Michael Foster Rick Horte Mimi Corbett
Staff:	Elaine McCulloch, Parks Planner

CALL TO ORDER

Chair Stanhope called the meeting to order at 7:00 PM

Appointment of recording Secretary for this meeting; Rick Horte agreed

MINUTES

MOVED B. Coath, SECONDED M. Foster that the following minutes and notes be received:

Minutes of the regular Electoral Area 'G' Parks and Open Space Advisory Committee meeting held March 11, 2013.

Notes of the May 22 Regular Electoral Area 'G' Parks and Open Space Advisory Committee meeting. (No Quorum)

Notes of the June 12, 2013 Special Electoral Area 'G' Parks and Open Space Advisory Committee meeting. (No Quorum)

CARRIED

REPORTS

Little Qualicum River Hall (Dashwood) Report

Committee members asked the following questions to staff regarding the Little Qualicum River Hall Report.

- What are the costs of the additional upgrades (accessible ramp, upgraded washrooms, upgrades to mechanical/electrical systems, septic tank upgrades)? **Note:** There is concern that once the repairs commence the scope will change and costs increase.

- What is the increase in taxes both dollar value and mill rate per household and the duration for the total cost of repairs?
- What, if any liability is incurred by the RDN's by not completing the repairs?
- Investigate potential funding from the federal and provincial governments for handicap washrooms and building access?
- Given current policy, how can the RDN utilize volunteers on local community based projects, with a view to reducing costs?

MOVED R. Horte, SECONDED B. Coath that staff address their questions about the Little Qualicum River Hall Report, if possible, prior to the next regular meeting

CARRIED

Community Parks and Trails Strategy – Final Draft Report

MOVED A. Douglas, SECONDED R. Horte that the Community Parks and Trails Strategy report be received.

CARRIED

NEW BUSINESS

2014 Budget Schedule

Ms. McCulloch reviewed the budget sheet with the committee.

Volunteer Mileage Reimbursement Policy

Ms. McCulloch explained the policy and reimbursement form for Committee member's mileage.

ADJOURNMENT

Chair Stanhope adjourned the meeting at 8:45.

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Chairperson

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE EMERGENCY MANAGEMENT SELECT COMMITTEE
MEETING HELD ON FRIDAY, JANUARY 24, 2014 AT 1:30 PM
IN THE RDN COMMITTEE ROOM

Present:

Director M. Young	Chairperson
Director A. McPherson	Electoral Area A
Director H. Houle	Electoral Area B
Director G. Holme	Electoral Area E
Director J. Fell	Electoral Area F
Director J. Stanhope	Electoral Area G
Director B. Veenhof	Electoral Area H

Regrets:

Director J. de Jong	District of Lantzville

Also in Attendance:

G. Garbutt	General Manager Strategic & Community Development
T. Armet	Manager Building, Bylaw & Emergency Planning
J. Drew	Emergency Coordinator
J. Brand	Recording Secretary

CALL TO ORDER

The meeting was called to order at 1:37 pm by the Chair.

DELEGATIONS

MINUTES

MOVED Director Holme, SECONDED Director Fell, that the minutes of the Emergency Management Select Committee meeting held on Tuesday, August 27, 2013, be adopted.

CARRIED

REPORTS

Transport Canada Rail Safety Measures.

MOVED Director Stanhope, SECONDED Director Holme, that the Transport Canada Rail Safety Measures Report be received for information and Staff be directed to request ongoing reports on the transportation of dangerous goods in the Regional District of Nanaimo.

CARRIED

MOVED Director Stanhope, SECONDED Director Veenhof, that Staff be directed to contact Southern Vancouver Island Railway to determine the nature and frequency of dangerous goods being transported through the RDN Electoral Areas and the condition of the infrastructure being used to transport the goods.

CARRIED

Status of Reviews and Assessments of Dams in the RDN Electoral Areas.

MOVED Director Fell, SECONDED Director Houle, that the report on the status of reviews and assessments of dams in the RDN Electoral Areas be received.

CARRIED

Amendment to the District 69 Regional Emergency Resource Agreement.

MOVED Director McPherson, SECONDED Director Fell, that upon similar direction from the City of Parksville and the Town of Qualicum Beach, Staff be directed to amend the current Regional Emergency Resource Agreement to allow the 2014 honorarium funding to be redirected and used to fund a part-time contract position to coordinate Emergency Social Services and Emergency communications functions in District 69 area.

CARRIED

MOVED Director Holme, and SECONDED Director Veenhof, that Staff evaluate the effectiveness of the position during 2014 and provide further recommendations to the Board with respect to the continuation or expansion of the position in 2015 and beyond.

CARRIED

Emergency Program Update Power Point (Verbal).

MOVED Director Houle, SECONDED Director Veenhof, that the verbal Emergency Program Update report be received.

CARRIED

NEW BUSINESS

None

ADJOURNMENT

MOVED Director Fell, SECONDED Director Veenhof, that this meeting be adjourned.

CARRIED

TIME: 2:48 PM

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CHAIRPERSON

REGIONAL DISTRICT OF NANAIMO

RDN REPORT
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MEMORANDUM

TO: Tom Armet, Manager
Building, Bylaw and Emergency Planning Services

DATE: January 20, 2013

FROM: Jani M. Drew, Emergency Coordinator

FILE:

SUBJECT: **Transport Canada Rail Safety Measures**

PURPOSE

To inform the Board of new Transport Canada rail safety measures.

BACKGROUND

On November 27, 2013, Transport Canada announced a new measure requiring rail companies to share dangerous goods information with local governments. After several recent rail accidents, the Federation of Canadian Municipalities, National Municipal Rail Safety Working Group, determined that local governments need to know basic information about dangerous goods being transported through their communities in order to plan for effective response and recovery. The Director General of the Transport Dangerous Goods Directorate issued a Protective Directive under section 32 of the *Transportation of Dangerous Goods Act, 1992* to enable the below measures;

- All Canadian railway operators to provide municipal (includes regional districts and bands) emergency planners and first responders with annual information on the nature and volume of dangerous goods being transported through their communities;
- Large Canadian railway companies like Canadian National and Canadian Pacific will be required to include in their annual reports a quarterly breakdown of the nature and volume of dangerous goods shipped through Canadian communities;
- Smaller railways will be required to notify municipalities of any significant changes to the information provided in their annual reporting.

Receiving the above information is optional. A local government may request that Transport Canada, add the name of its designated Emergency Planning Coordinator to the list.

Local Context

Southern Rail Vancouver Island transports hazardous materials, most commonly Liquid Petroleum Gas (LPG), as well as less frequent smaller, mixed loads. Locally, most shipments terminate at the City of Nanaimo, Superior Road facility every few days and the rail operator sends an email to the Nanaimo Fire Department Chief on rail cars that exceed the parking time in the Wilcox rail yard. Very few hazardous materials are shipped further north via rail through the Electoral Areas, however it is possible that spills in one jurisdiction may impact a neighboring jurisdiction during either or both of the response or recovery phases.

There is a more likely a risk of a hazardous materials accident in the region for products shipped by truck (sodium chlorate, hydrogen peroxide etc.) destined for Harmac, Crofton and Port Alberni. (*See Attachment No. 2 for SVI Rail route map*).

The primary responsibility for on-site hazardous materials emergency planning and response lies with the responsible party. Local governments with their emergency services are responsible for operational support to the extent that expertise and resources are available. Should a hazardous materials incident occur that is beyond the capabilities of a fire department, assistance from other Electoral Area or municipal fire departments can be requested via fire mutual aid or the *Emergency Management Agreement*. The RDN's Emergency Plan includes a hazardous materials contingency plan and in a large or regional event, the Emergency Operations Center may be activated to provide site support.

ALTERNATIVES

1. Receive the report and direct Staff to request that dangerous goods reports be provided to the Regional District of Nanaimo Emergency Coordinator.
2. Provide further direction to staff

FINANCIAL IMPLICATIONS

There are no financial implications with respect to these alternatives.

STRATEGIC PLAN IMPLICATIONS

The Board's Strategic Plan places emphasis on consulting with various levels of government and industry to minimize environmental impacts. The transportation of dangerous goods throughout the region creates the potential for environmental and economic impacts in the event of a spill or accident. Increasing awareness of the type of materials being transported by rail will assist in planning for such events and strengthen relationships with regional partners and stakeholders.

SUMMARY

In November 2013, Transport Canada announced that in response to community concerns about rail safety, a new Directive requiring railway companies to share dangerous goods information with local government authorities is being implemented. The measure acknowledges that local governments need to know the basic information about dangerous goods being transported through their communities.

The RDN's Hazard Risk Vulnerability Risk Analysis (2006) rates the risk of rail accident as 'low' and the RDN has a contingency plan in place in the event of an accident. Receiving ongoing reports on the type and frequency of dangerous goods passing through our region is valuable information for effective, ongoing response and recovery planning.

RECOMMENDATION

That the report on Transport Canada rail safety measures be received and Staff be directed to request ongoing reports on the transportation of dangerous goods in the Regional District of Nanaimo.

Report Writer

for General Manager Concurrence

Manager Concurrence

CAO Concurrence

COMMENTS:

ATTACHMENT NO. 1

TRANSPORT CANADA ANNOUNCEMENT NOVEMBER 2013

OTTAWA — The Honourable Lisa Raitt, Minister of Transport, today issued a protective direction directing rail companies to share information with municipalities. By issuing the protective direction, the Minister has acted to further enhance safety in the transportation of dangerous goods and facilitate an ongoing dialogue between railways and municipalities.

"We recognize the responsibilities of all parties involved in maintaining safe railway transportation in Canada," said Minister Raitt. "Our government remains committed to two-way dialogue and information exchange with key transportation stakeholders in communities across Canada. We are demonstrating that today with the issuance of this protective direction. "

Effective immediately, Transport Canada requires that:

- Any Canadian Class 1 railway company that transports dangerous goods must provide municipalities with yearly aggregate information, presented by quarter, on the nature and volume of dangerous goods the company transports by rail through that municipality; and
- Any person who transports dangerous goods by rail, who is not a Canadian Class 1 railway company, must provide municipalities with yearly aggregate information on the nature and volume of dangerous goods transported through that municipality and notify municipalities of any significant changes to that information, as soon as possible.

The safety of Canadians is Transport Canada's top priority. The department continues to work closely with all stakeholders, including the rail industry and municipalities to examine all means of improving rail safety and the transportations of dangerous goods. "Our government is taking strong action to protect public safety," said the Honourable Steven Blaney, Minister of Public Safety and Emergency Preparedness. "Local governments and first responders are the front line in keeping our communities safe, and we are ensuring they have the information they need about the dangerous goods being transported in their communities. "

These measures address requests from the Federation of Canadian Municipalities and its members for more information on the dangerous goods being transported by rail in their communities. In addition these measures further support municipal emergency planners and first responders with their emergency planning and response training.

"Today's announcement is welcome news for Canadian communities," said Claude Dauphin, President of the Federation of Canadian Municipalities. "It sends a clear message that the Government of Canada fully agrees that local governments need to know basic information about dangerous goods being transported through their communities."

Railway safety and transportation of dangerous goods regulations exist to protect the safety of the public. Transport Canada does not hesitate to take new steps whenever appropriate. The Protective Direction was issued pursuant to section 32 of the *Transportation of Dangerous Goods Act, 1992* and will remain in effect for three years, or until cancelled by the Minister or her designate, in order to allow the department sufficient time to develop appropriate permanent regulations.

ATTACHMENT NO. 2

SVI RAILWAY ROUTE MAP

REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
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MEMORANDUM

TO: Tom Armet, Manager
Building, Bylaw and Emergency Planning Services

DATE: January 20, 2014

FROM: Jani M. Drew, Emergency Coordinator

FILE: 7130-05-01 DAM

SUBJECT: **Status of Reviews and Assessments of Dams in the RDN Electoral Areas**

PURPOSE

To provide the Board with the status of reviews and assessments of dams in the RDN Electoral Areas.

BACKGROUND

At the Emergency Management Select Committee meeting held August 27, 2013, Staff was directed to investigate and report on the status of reviews and assessments of dams located within the Electoral Areas of the Regional District. This report outlines the Provincial legislation, review process and applicable assessments of dams in the Electoral Areas.

British Columbia is one of four provinces in Canada with a formal dam safety program. Dams are regulated under the *BC Dam Safety Regulation (44/2000)* of the *Water Act of BC*, with oversight by the Dam Safety Program (Ministry of Forests, Lands and Natural Resource Operations). In 2007 the Canada Dam Association re-wrote Dam Safety Guidelines to establish safety requirements for new and existing dams, to enable the consistent evaluation of dam safety deficiencies and to provide a basis for dam safety legislation and regulation.

Following the Testalinden Dam failure near Oliver, BC in 2010, the Province placed additional emphasis and priority on dam safety. This unfortunate event was the impetus for immediate action to further improve dam safety in BC and shaped much of the Dam Safety Program activities such as completion of Rapid Dam Assessments, BC Dam Safety Regulation Amendment and updating of the Dam Registry.

In BC, dams are rated in accordance with a "consequence classification" from low to extreme (see Attachment No. 1). Dam owners are responsible for inspection and maintenance of their dams. Each year, owners of the approximately 290 'high' and 'very high' consequence dams in BC are requested to return an Inspection Compliance Monitoring report to determine if the dam is being inspected and maintained as required.

These reports are intended for the review of the three components of a safe dam – competent design, construction and operation. The dam safety review process is achieved by inspection and dam owner compliance reporting.

The Ministry of Forests, Lands and Natural Resource Operations provided information on the following dams in the RDN that fall under Provincial dam safety regulations:

Fourth Lake Dam – Rated 'HIGH'

This dam is owned by Nanaimo Forest Products Ltd, Harmac Pacific Division, with operation and maintenance carried out by Harmac staff (unattended except during routine visits by the mill water attendant). This concrete faced, rock fill dam was constructed in 1952 and is located near the original outlet of Fourth Nanaimo Lake on Sadie Creek (a tributary of the Nanaimo River). The purpose of the dam is to store water for dry season use by Harmac. In the summer and early fall months, water is discharged from the reservoir to augment low flows in the Nanaimo River, which serves as a water supply source for the mill. In addition, extra water is normally discharged up to twice per year for fisheries enhancement.

Harmac is in the second year of a three year Dam Safety Review. They have been working on their inundation study (with some assistance from RDN GIS) and share updated versions of the Emergency Preparedness Plans with the RDN and other stakeholders on a routine basis. This plan includes procedures intended to prevent or minimize loss of life and/or property damage resulting from an emergency at the dam.

Jump Creek Dam – Rated 'HIGH'

While this dam is owned by the City of Nanaimo, the flood inundation zone impacts the Electoral Areas. If this 1970's earth fill dam were to fail, it is anticipated it would likely induce a form of failure in the South Fork dam, creating a 'domino effect' of downstream impacts. Some upgrades were implemented in 2010 and the Jump Creek dam was slated for a 2013 Dam Safety Review by the Province. Information with respect to this review has not yet been made available to RDN Staff.

The City of Nanaimo is undertaking a review of the seismic vulnerability of its dams, and to plan for upgrades to minimize downstream damage. In order to decrease flooding during winter months the gates of the spillway are always in the down position so that water is not held back, ensuring that storms pass through the reservoir and down the spillway into the river.

South Fork Dam – Rated 'HIGH'

The City of Nanaimo's website states this 1930's concrete dam *"is in excellent condition, however, it falls short of new Dam Safety Regulations and will require an upgrade, with work likely taking place in 4-5 years"*. A previous study had determined that a moderate earthquake could destroy the top one-third of this dam.

Enos Lake Dam – Rated 'High':

This High Consequence dam is owned and maintained by Fairwinds Community and Resort. The dam was originally built in the 1950's, with a clay core, rip rap, road base on top, and measures 15 m high and 25 m wide. In 2011 EBA Engineering Consulting Ltd. conducted a Dam Safety Review and found that the dam would retain a consequence classification of 'High'. In 2012 RDN Staff made a site visit and reviewed the Fairwinds Emergency Preparedness Plan for the dam. Recommendations were made to

Fairwinds to include emergency notification procedures to inform the appropriate regulating agencies and the RDN in potential future events.

Arrowsmith Dam - Rated 'High':

The Arrowsmith Dam is located at the top of Englishman River approximately 4 km east of the Mount Arrowsmith peak and 35 km south of Parksville. This concrete gravity dam was commissioned in 2000 and built as the Arrowsmith Water Service joint venture between the City of Parksville, the Regional District of Nanaimo and the Town of Qualicum Beach.

The dam, with a live storage volume of 9 million cubic meters, is used to regulate the flow in the Englishman River for release during the summer and fall to meet the domestic water demands in the service area and to improve fisheries flow in the downstream area. Should the Arrowsmith Dam fail, the flood would reach the City of Parksville in approximately 2.5 hours. This may provide adequate time to warn residents in the inundation zone if proper alarms and procedures were in place and the impacted residences were properly identified.

In 2012, EBA Engineering Consultants Ltd. was hired to conduct the dam's first ever Dam Safety Review. The report concluded that the dam was being operated in a diligent, responsible manner and is performing as intended and generally meets the current design criteria.

The report recommended that the dam's Emergency Preparedness Plan include expanded and current emergency contact information and a dam breach study be commissioned. This study would focus on the development of an inundation map to identify potential downstream impacts as current information indicates that the low lying San Pareil neighborhood and Rathtrevor Park would be flooded as well as a hatchery, bridges, water system intake and other infrastructure. Permanent residents near certain roadways or bridges and the recreating public are potentially at risk during a dam breach. It was also recommended that the Plan include effects of inundation, an overview of emergency response structure and notification procedures.

Lacey Lake Dams - Rated 'High'

The Lacey Lake dams are located in the Cherry Creek watershed in the Alberni-Clayoquot Regional District (ACRD). While out of the RDN's jurisdiction, dam failure inundation could impact Horne Lake Regional Park and other stakeholders in that immediate area – hence inclusion in this report. The ACRD has hired Magill Engineering to conduct an inundation study as part of their dam review process. ACRD staff will provide information regarding the inundation path through the RDN Electoral Areas once the study has been completed.

ALTERNATIVES

This report is being provided for the information of the Board.

FINANCIAL IMPLICATIONS

There are no financial implications in receiving this report.

SUMMARY

There are five dams in the Electoral Areas and the RDN has partial ownership of one. Each dam has a Consequence Classification of 'High' and has the potential to put permanent residences at risk, cause loss of life, damage to the environment and cultural values and have a significant impact on infrastructure and economics. While the RDN's *Hazard Vulnerability Risk Analysis* rates dam failure as 'low' (likelihood/frequency), the potential impacts of a breach in an inundation zone are rated as 'high'. These potential impacts to infrastructure are deemed significant and it is estimated that damage to fish habitat, water quality and sensitive riparian areas would also be significant in the event of a dam failure.

Each dam owner either has a current and satisfactory Dam Safety Review, or is in the process of completing one. In reviewing dam Emergency Preparedness Plans it was noted that the RDN was not always a top priority contact in the event of an emergency dam breach. Having current and accurate contact information and being included in emergency response drills/exercises will give the RDN the opportunity to practice, test and improve dam breach response contingencies.

RECOMMENDATION

That this report on the status of reviews and assessments of dams in the RDN Electoral Areas be received.

Report Writer

fa General Manager Concurrence

Manager Concurrence

CAO Concurrence

COMMENTS:

ATTACHMENT NO. 1
DAM FAILURE CONVERSION GUIDELINE

Ministry of
Forests, Lands and
Natural Resource Operations

INFORMATION SHEET

Dam Failure Consequence Classification Conversion Guideline For Dams in British Columbia (BC Reg. 163/2011, November 30, 2011)

Background to Dam Classification in BC

In 1999 the Canadian Dam Association (CDA) published Dam Safety Guidelines to establish safety requirements for new and existing dams, enable the consistent evaluation of dam safety deficiencies and to provide a basis for dam safety legislation and regulation. The Guidelines included a 4-tier failure consequence classification system: very low, low, high and very high. In February 2000, the BC Dam Safety Regulation (44/2000), under the *Water Act* of BC, was enacted. Schedule 1 of the Regulation defined 4 dam classifications similar to those provided by the CDA. In 2007, the CDA Guidelines were rewritten and the consequence classification system changed to 5 tiers: low, significant, high, very high and extreme. The Province has recently amended the BC Dam Safety Regulation bringing the provincial consequence classification system in-line with the CDA Guidelines.

2011 BC Dam Safety Regulation Amendment

On November 30, 2011, the BC Dam Safety Regulation was amended. Schedule 1 of the amended Regulation includes a 5-tier dam failure consequence classification (Attachment 1). This change aligns the consequence classification of BC dams with the current CDA Guidelines thus ensuring BC's dam safety requirements are consistent with the current CDA Guidelines.

Conversion to the New 2011 Dam Failure Consequences Classifications

The dam failure consequence classifications for all dams in BC have been converted to the new 5-tier classifications as per Schedule 1 of the BC Regulation 163/2011 (Attachment 1). The conversions are based on the Dam Consequence Conversion Table provided in Attachment 2. Dam owners are being advised of the Regulation change and provided with confirmation of their dam failure consequence classification by registered letter during August and September 2011. Many dam owners have undertaken dam break inundation studies to confirm the consequence classification or to provide evidence for a revised classification. If a dam owner does not receive notice of their new dam classification by October 2011, or if you have additional information that might influence the dam failure consequence classification, please contact your local Dam Safety Officer.

1

Additional Information

It is important to note that the BC Dam Safety Regulation dam failure consequence classification determines the requirements that a **dam owner** must meet. The CDA Guidelines classifications are for **dam design** criteria. Please refer to the CDA website to order the CDA Guidelines (http://www.cda.ca/).

Please note that under the amended BC Dam Safety Regulation (163/2011), there are some additional dam safety requirements for dam owners based on the consequence classifications. For example, owners of Significant Consequence Classification dams (formally Low Consequence Classification dams, BC Reg. 44/2000) are now required to prepare Emergency Preparedness Plans. Also, effective November 30, 2011, all owners of dams located on Crown land, except those dams classified as Low Consequence, are required to post signs at their dams. For further information please refer to the Dam Signage Requirement Information Sheet and OIC 237/2011 available on the BC Dam Safety website.

BC Dam Safety Website: http://www.env.gov.bc.ca/wsd/public_safety/dam_safety/index.html

Attachments:
Attachment 1 –BC Dam Safety Regulation (163/2011), Schedule 1. November 30, 2011.
Attachment 2 – BC Dam Consequence Classification Conversion Table. March 27, 2012.

Attachment 1

Schedule 1 – Dam Safety Regulation (163/2011), November 30. 2011[1]

Downstream Dam Failure Consequences Classification Table

Dam failure consequences classification	Population at risk	Consequences of failure		
		Loss of life	Environment and cultural values	Infrastructure and economics
Low	None[2]	There is no possibility of loss of life other than through unforeseeable misadventure.	Minimal short-term loss or deterioration and no long-term loss or deterioration of (a) fisheries habitat or wildlife habitat, (b) rare or endangered species, or (c) unique landscapes or sites of cultural significance	Minimal economic losses mostly limited to the dam owner's property, with virtually no pre-existing potential for development within the dam inundation zone.
Significant	Temporary only[3]	Low potential for multiple loss of life	No significant loss or deterioration of (a) important fisheries habitat or important wildlife habitat, (b) rare or endangered species, or (c) unique landscapes or sites of cultural significance, and restoration or compensation in kind is highly possible.	Low economic losses affecting limited infrastructure and residential buildings, public transportation or services or commercial facilities, or some destruction of or damage to locations used occasionally and irregularly for temporary purposes.
High	Permanent[4]	10 or fewer	Significant loss or deterioration of (a) important fisheries habitat or important wildlife habitat, (b) rare or endangered species, or (c) unique landscapes or sites of cultural significance, and restoration or compensation in kind is highly possible.	High economic losses affecting infrastructure, public transportation or services or commercial facilities, or some destruction of or some severe damage to scattered residential buildings.
Very high	Permanent[4]	100 or fewer	Significant loss or deterioration of (a) critical fisheries habitat or critical wildlife habitat, (b) rare or endangered species, or (c) unique landscapes or sites of cultural significance, and restoration or compensation in kind is possible but impractical.	Very high economic losses affecting important infrastructure, public transportation or services or commercial facilities, or some destruction of or some severe damage to residential areas.
Extreme	Permanent[4]	More than 100	Major loss or deterioration of (a) critical fisheries habitat or critical wildlife habitat, (b) rare or endangered species, or (c) unique landscapes or sites of cultural significance, and restoration or compensation in kind is impossible.	Extremely high economic losses affecting critical infrastructure, public transportation or services or commercial facilities, or some destruction of or some severe damage to residential areas

[1] This table is a copy of Schedule 1 of the Dam Safety Regulation 163/2011. In case of discrepancy between this table and the approved Regulation, the Regulation takes precedence.
[2] There is no identifiable population at risk.
[3] People are only occasionally and irregularly in the dam breach inundation zone, for example stopping temporarily, passing through on transportation routes or participating in recreational activities.
[4] The population at risk is ordinarily or regularly located in the dam-breach inundation zone, whether to live, work or recreate.

3

Attachment 2

BC Dam Failure Consequences Classification Conversion Table (March 27, 2012)[1]

Consequence Classification NEW BC Dam Safety Regulation 163/2011	Population at Risk	Loss of Life		Environment and Cultural Values[2]		Infrastructure & Economics[2]		Consequence Classification OLD BC Dam Safety Regulation 44/2000
	BC Reg. 163/2011 Only	BC Reg. 163/2011	BC Reg. 44/2000[3]	BC Reg. 163/2011	BC Reg. 44/2000	BC Reg 163/2011	BC Reg. 44/2000	
Low	None	No possibility of loss of life	Minimal	Minimal short-term and no long-term loss or deterioration	No significant loss of habitat or sites	Minimal economic losses mostly limited to dam owner's property	< $100K Minimal	Very Low
Significant	Temporary Only	Low potential for multiple loss of life[4]	Some Possible	No significant loss or deterioration incl. Important habitat. Restoration or compensation possible	Loss or deterioration of regionally important habitat & sites – High chance for restoration or compensation	Low economic losses to buildings, services, public transportation infrastructure etc.	< $1M Limited Infrastructure, Public, Commercial	Low
High	Permanent Residents	< 10	< 10[4]	Significant loss or deterioration incl. Important habitat. Restoration or compensation possible	Same as below	High economic losses to buildings, services, public transportation, commerce, utilities, airport etc.	< $10M[4] Same as below	High (Low[4])
Very High	Permanent Residents	< 100	< 100	Significant loss or deterioration incl. critical habitat. Restoration or compensation impractical	Loss or deterioration of Nationally & Provincially important habitat & sites – High chance for restoration or compensation	Very high economic losses to important buildings, services, transportation, infrastructure, commerce etc. Or severe damage to residential areas	< $100M Substantial Infrastructure, Public, Commercial	High (High[4])
Extreme	Permanent Residents	>100	>100	Major loss or deterioration incl. critical habitat. Restoration or compensation impossible	Loss or deterioration of Nationally & Provincially important habitat & sites – Low chance for restoration or compensation	Extremely high economic losses to critical buildings, services, transportation, infrastructure, commerce etc. Or destruction or severe damage to residential areas	>$100M Very High Infrastructure, Public, Commercial, Residential	Very High

[1] This table contains abridged descriptions of the dam failure consequences. Attachment 1 contains the full descriptions from BC Regulation 163/2011. In all cases the Regulation takes precedence over information contained in this table.
[2] Names for these categories in BC Reg. 44/2000 are "Environmental and Cultural Losses" and "Economic and Social Losses" respectively.
[3] Conservative estimate of loss of life amongst population affected by the flood waters (may equal Population at Risk).
[4] Sub-classifications of "High (Low)" and "High (High)" and associated thresholds were established by policy in 1998 for use in the BC Dam Safety Program risk-based assessment.
[5] A temporary population (e.g. in recreational areas) could be quite large and a "sunny-day" failure could result in multiple fatalities.

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REGIONAL DISTRICT OF NANAIMO

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MEMORANDUM

TO: Tom Armet, Manager
Building, Bylaw and Emergency Planning Services

DATE: January 20, 2014

FROM: Jani M. Drew, Emergency Coordinator

FILE: 7103-D69 REG EP

SUBJECT: **Amendment to the District 69 Regional Emergency Resource Agreement**

PURPOSE

To obtain Board direction on amending the jointly funded District 69 *Regional Emergency Resource Agreement* as a result of changes in volunteer resources.

BACKGROUND

In 2010, the Regional District of Nanaimo, City of Parksville and Town of Qualicum Beach entered into a five year agreement to share volunteer resources and the cost of providing honorariums and expenses for key positions within Emergency Social Services and Emergency Communications in District 69 (Attachment No. 1). As of December 31, 2013, these volunteers have resigned for varying reasons and the remaining volunteers are not willing or qualified to fill the vacancies.

This has left a significant gap in the ability of the three local governments to meet our statutory requirements to provide these emergency services. In accordance with the terms of the Agreement all parties must agree to any changes to the Agreement. Council for the City of Parksville recently supported amending the terms of the Agreement for the creation of a part-time contract position. The Regional District of Nanaimo and the Town of Qualicum Beach must also consider the proposed amendment.

ALTERNATIVES

1. Amend the current Agreement to allow for the honorarium money budgeted for 2014 to be re-directed and used to fund a one year part-time contract position to provide stability and direction to the volunteer programs.
2. Amend the current Agreement to fund a full-time contract position.

FINANCIAL IMPLICATIONS

Alternative #1 - Amend the current Agreement to allow for the honorarium money budgeted for 2014 to be re-directed and used to fund a one year part-time contract position to provide stability and direction to the volunteer programs.

The current Agreement is in year 4 of an overall 5 year Agreement that expires on March 31, 2015. The total amount shared by all parties in 2014 is $21,000 which is sufficient to fund a one year contract position (approximately 2 days/wk). There is a pressing need to provide leadership, continuity of services and program stability. Hiring a part-time contractor within existing funding will meet these immediate needs and provide an opportunity to assess the requirements of the position in terms of time and duties, should more funding become available beyond 2015.

***Alternative #2* - Amend the current Agreement to fund a full-time contract position.**

It is estimated that additional annual funding by each party in the amount of $16,000 will be necessary to fund a full time position. Prior to doing so however, a careful analysis of roles and responsibilities should be undertaken by all parties to properly define and justify funding a full-time position. Engaging a part-time contractor for the balance of the Agreement as outlined in Alternative #1 will enable Staff to assess the effectiveness of the role and determine whether additional support and funding may be required to expand the role.

STRATEGIC PLAN IMPLICATIONS

There are no strategic plan implications with respect to the proposed amendment.

SUMMARY

The *Regional Emergency Resource Agreement* provides an honorarium for volunteers who take on roles of responsibility within the Emergency Program. The volunteers in positions of responsibility resigned on December 31st, 2013, and the remaining volunteers are not prepared or willing to step forward and fill these vacancies. The proposed remedy is to combine the honorarium positions into one part-time contract with the possibility of expanding to a full time position following expiration of the existing Agreement.

The current model for managing and supporting volunteers with volunteers in no longer a practical approach. The local government areas within District 69 are at risk of not meeting our statutory requirements under the *Emergency Act* and more importantly, not providing service to the public when it is really needed. In order to start moving towards a more sustainable service, it is recommended that the Regional Emergency Resource Agreement be amended to re-direct the current year funding to the creation of a part-time contract position as outlined in this report.

RECOMMENDATIONS

1. That, upon similar direction from the City of Parksville and the Town of Qualicum Beach, Staff be directed to amend the current Regional Emergency Resource Agreement to allow the 2014 honorarium funding to be re-directed and used to fund a part-time contract position to coordinate Emergency Social Services and Emergency Communications functions in District 69 area.
2. That Staff be directed to evaluate the effectiveness of the position during 2014 and provide further recommendations to the Board with respect to the continuation or expansion of the position in 2015 and beyond.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

COMMENTS:

ATTACHMENT NO. 1
DISTRICT 69 REGIONAL EMERGENCY RESOURCE AGREEMENT

Attachment No. 1

REGIONAL EMERGENCY RESOURCE AGREEMENT

THIS AGREEMENT made this day of , 2010

AMONG

THE CITY OF PARKSVILLE

AND

THE TOWN OF QUALICUM BEACH

AND

THE REGIONAL DISTRICT OF NANAIMO

WHEREAS the City of Parksville and the Town of Qualicum and the Regional District of Nanaimo each share and provide a Regional Emergency Social Service and Emergency Communications Team response capability to the City of Parksville, Town of Qualicum Beach and portions of Regional District of Nanaimo Electoral Areas E, F, G and H within School District 69;

AND WHEREAS the parties have entered into an Emergency Management Agreement to support the shared Emergency Social Services and Emergency Communications Team volunteer resources;

AND WHEREAS the parties consider it to be of mutual benefit to provide financial and capital support and share these resources for response to Emergency Incidents within the jurisdictions of the City of Parksville, the Town of Qualicum Beach and Regional District of Nanaimo Electoral Areas E, F, G and H within School District 69;

AND WHEREAS the parties to this Agreement agree and acknowledge that the City of Parksville Emergency Program Coordinator will act as the administrator of the agreement providing the funds and acting as the point of contact for each of the volunteer groups to contact when requesting resources or asking questions;

NOW THEREFORE the parties wish to describe the terms and conditions for support of a Regional Emergency Social Service and Emergency Communications Team response capability to the City of Parksville, Town of Qualicum Beach and portions of Regional District of Nanaimo Electoral Areas E, F, G and H within School District 69.

DEFINITIONS:

District 69 means the land within the boundary of School District 69 including the City of Parksville, Town of Qualicum Beach and the Regional District of Nanaimo Electoral Areas E, F, G and H.

Local Government means the City of Parksville, the Town of Qualicum Beach and the Regional District of Nanaimo.

Operating Committee means the committee established under Section 2.1 of this Agreement.

Party means the City of Parksville, the Town of Qualicum Beach and the Regional District of Nanaimo.

Primary Contact/Chair means an appointed member of the operating committee that will organize and lead the operating committee.

Volunteer Resource Groups means the Oceanside Emergency Social Services and the Emergency Communications Team.

1.0 TERM OF AGREEMENT

1.1 The parties agree that the term of this agreement shall be for five years commencing on April 1, 2010 and ending March 21, 2015, subject to earlier termination as herein provided.

2.0 PURPOSES:

2.1 To ensure the long term funding and support of Emergency Social Services and Emergency Communications within the City of Parksville, Town of Qualicum Beach and portions of Regional District of Nanaimo Electoral Areas E, F, G and H within School District 69.

2.2 To ensure adequately trained personnel that can respond when activated, and arrive at the Emergency Incident in a timely manner to act on behalf of each local government.

2.3 To provide for an enhanced, effective and economical level of emergency response support services for residents or occupants who live within the area described in Section 1.1.

2.4 To provide a terms of reference for Emergency Social Services in accordance with Schedule "A" of this agreement and the Emergency Communications Team in accordance with Schedule "B" of this agreement.

3.0 OPERATING COMMITTEE:

3.1 An Operating Committee shall be established, and will consist of the Emergency Program Coordinator or designate of each of the local governments. The Operating Committee will designate one of its members as the primary contact/chair for communications between the Parties arising in the course of this Agreement. The primary contact/chair position shall be rotated through the members of the operating committee on an annual basis.

3.2 The Operating Committee is authorized to make amendments to Schedule A and Schedule B of this Agreement and the primary contact of the Operating Committee designated under Section 2.1

shall be responsible for ensuring that all changes are communicated in writing in a timely manner to each Party.

3.3 The Operating Committee is authorized to review and comment on the annual operating budget, capital budget and annual accounting of operating expenses for both of the volunteer groups.

3.4 The Operating Committee will meet at the request of any Party to review any request by the volunteer groups.

4.0 OBLIGATIONS OF THE PARTIES TO THIS AGREEMENT

Upon entering this Agreement, each Party shall provide the other Parties to this Agreement with its applicable payment each year on or before January 31 of each year for the duration of the agreement.

5.0 FINANCIAL OBLIGATIONS

5.1 Each of the local governments agrees to provide $1500.00 as an annual operating budget totaling $4,500 for Emergency Social Services. The amount will be paid to the City of Parksville and distributed to Oceanside Emergency Social Services in the form of one consolidated cheque in the amount of $4500.00.

5.2 Each of the local governments agrees to provide $500.00 as an annual operating budget totaling $1500.00 for the Emergency Communications Team. The amount will be paid to the City of Parksville and distributed to the Emergency Communications Team in the form of one consolidated cheque in the amount of $1500.00.

5.3.1 Each of the local governments agrees to provide $1000.00 in the first year, $2000.00 in the second year, $3000.00 in the third year, $4000.00 in the fourth year and $5000.00 in the fifth year of the agreement for a total of $15000.00 as an annual honorarium to be distributed to the Emergency Social Services volunteers in accordance with Schedule "C" of this agreement.

5.3.2 Each of the local governments agrees to provide $500 in the first year, $1,000 in the second year, $1,500 in the third year, $2,000 in the fourth year and $2,000 in the fifth year of the agreement as an annual honorarium to be distributed to the Emergency Communications Team volunteers in accordance with Schedule "D" of this agreement.

5.4

Svc. Components	Year 1	Year 2	Year 3	Year 4	Year 5	Svc Component Totals
ESS Op Costs	$1,500	$1,500	$1,500	$1,500	$1,500	$7,500
ECT Op Costs	$500	$500	$500	$500	$500	$2,500
ESS Honorarium	$1,000	$2,000	$3,000	$4,000	$5,000	$15,000
ECT Honorarium	$500	$1,000	$1,500	$2,000	$2,000	$7,000
TOTALS/YR	$3,500	$5,000	$6,500	$8,000	$9,000	$32,000

5.5 It is agreed and acknowledged by each Party that requests by each of the volunteer resources for capital equipment, etc will be reviewed by the operating committee and the costs for this equipment will be equally distributed between the local governments if the item is for the benefit of the entire Region. Capital items for the use of one single jurisdiction will be reviewed and paid for entirely by the jurisdiction benefitting from the purchase.

6.0 ANNUAL REVIEW OF OPERATING EXPENSES

6.1 Oceanside Emergency Social Services is required to provide a complete accounting of the operating funds supplied by the local governments no later than January 31 of each year. The accounting must be submitted to the City of Parksville Emergency Program Coordinator.

6.2 The Emergency Communications Team is required to provide a complete accounting of the operating funds supplied by the local governments no later than January 31 of each year. The accounting must be submitted to the City of Parksville Emergency Program Coordinator.

6.3 Upon receipt of the accounting from the volunteer resource groups, the Operating Committee will meet to review the accounting to determine that the funds were spent appropriately on operating expenses for the submitted year.

6.4 Upon completion of a satisfactory review, the Operating Committee will approve the release of the funding for the following year to each volunteer group.

6.5 If a volunteer group fails to submit an accounting or does not submit a satisfactory accounting, the Operating Committee can hold the following year operating funds and ask the City of Parksville to administer the funds. As a result, the volunteer group would be required to make written requests to the City of Parksville Emergency Program Coordinator in advance of events requiring operating funding.

7.0 DISPUTE RESOLUTION

7.1 Should a dispute arise regarding any matter involving this Agreement it will be adjudicated by a panel of one appropriately qualified staff person designated by each of the Local Government Parties to this Agreement. The decision of the panel will be by simple majority.

7.2 Notwithstanding Section 6.1, all disputes arising out of or in connection with this Agreement, or in respect of any defined legal relationship associated therewith or derived therefrom, may at the instance of any party, be referred to a Court of competent jurisdiction or to arbitration by delivery of a Notice of Arbitration in writing. If the parties cannot agree on a choice of arbitrator then each party may appoint an arbitrator and the two arbitrators so appointed must appoint a third arbitrator failing which the third arbitrator must be appointed by a Judge of the Supreme Court of British Columbia. Arbitration will be governed by the *Commercial Arbitration Act (British Columbia)*. The place of arbitration shall be Nanaimo, British Columbia, Canada and the costs shall be borne equally by the parties.

8.0 GENERAL

8.1 This Agreement enhances and is in addition to and does not derogate from the Emergency Management Agreement.

8.2 In addition to Section 2.2, this Agreement shall be amended only with the written consent of the Parties.

8.3 Nothing in this Agreement shall be interpreted as prejudicing or affecting the rights and powers of the Parties in the exercise of their functions under any public and private statutes, bylaws, orders and regulations, all of which may be fully and effectively exercised as if this Agreement had not been executed.

8.4 This Agreement shall ensure to the benefit of and be binding upon the parties hereto and their respective heirs, administrators, executors, successors and permitted assignees.

8.5 The waiver by a Party of any failure on the part of the other party to perform in accordance with any of the terms or conditions of this Agreement shall not be construed as a waiver of any future or continuing failure, whether similar or dissimilar.

8.6 The headings in this Agreement are inserted for convenience and reference only and in no way define, limit or enlarge the scope or meaning of this Agreement or any provision of it.

8.7 Wherever the singular masculine and neuter are used throughout this Agreement, the same shall be construed as meaning the plural or the feminine or the body corporate or politic as the context so requires.

8.8 No remedy under this Agreement shall be deemed exclusive but shall, where possible, be cumulative with all other remedies at law or in equity.

8.9 This Agreement shall be construed in accordance with and governed by the laws applicable in the Province of British Columbia.

9.0 NOTICES

All notices and demands required or permitted to be given hereunder shall be in writing and may be delivered personally, sent by facsimile or may be mailed by first class, prepaid registered mail to the addresses set forth below. Any notice delivered or sent by facsimile shall be deemed to have been given and received at the time of delivery. Any notice mailed as aforesaid shall be deemed to have been given and received on the expiration of 5 business days after it was posted, addressed as follows:

The Town of Qualicum Beach
PO Box 130
Qualicum Beach, BC V9K 1S7
Attention: Administrator

Regional District of Nanaimo
6300 Hammond Bay Rd.
Nanaimo, B.C. V9T 6N2
Attention: Chief Administrative Officer

The City of Parksville
100 E. Jensen Avenue
Parksville, BC V9P 2H3
Attention: Administrator

10.0 TERMINATION

Any party to this Agreement may terminate its participation by giving notice in writing to all of the other Parties notice of termination, not less than six months in advance of the date on which it wishes to terminate its participation. The party terminating participation in this agreement gives up the ability to use or rely on the volunteer resources named in this agreement.

IN WITNESS WHEREOF the parties hereto have set their hands as of the day and year first above written.

FOR THE CITY OF PARKSVILLE

_____
Mayor, Ed Mayne

_____
Fred Manson, C.A.O.

FOR THE TOWN OF QUALICUM BEACH

_____
Mayor, Teunis Westbroek

_____
Mark Brown, C.A.O.

FOR THE REGIONAL DISTRICT OF NANAIMO

_____
Chair, Joseph Stanhope

_____
Carol Mason, C.A.O.

Schedule "A"

Terms of Reference
For
Oceanside Emergency Social Services Director

Reporting to the Emergency Program Coordinator for each party, the Oceanside Emergency Social Services Director (OESSD) is responsible and accountable for staffing and delivery of emergency social services including ensuring evacuees are appropriately provided with temporary food, clothing and lodging support.

The following information is a general description of the preferred training and principal functions of this job and is not a detailed description of all job duties:

Required Training:

- Introduction to Emergency Social Services course
- Reception Centre Course
- Documentation Unit course
- Managing Walk-In Disaster Volunteers course
- Group Lodging Course
- ESS Resource Acquisition: Food, Clothing & Lodging course
- Leadership course
- ESS Directors Course
- ESS in a BCERMS Environment course
- Referrals Unit course
- Level One ESS course
- Level One ESS Supervisors Guidelines course

The OESSD must have exceptional interpersonal, communication, presentation, facilitation, negotiation, problem solving, decision making, leadership and general management skills. A proven ability to effectively lead, coach, and motivate volunteers in a team environment along with the ability to address confidential and sensitive issues on a regular basis.

The OESSD must ensure the following functions are completed and the OESSD must also ensure appropriate direction is provided to Oceanside ESS members who provide these functions (the order of these is random):

- Accounting – all revenue and expenditures are tracked and approved, with bank accounts balanced to bank statements on a continual basis.
- Training – all volunteers receive an orientation and training consistent with the needs of their assigned areas of responsibility. Training and evaluation of team members is provided with the approval of the OESSD or a designated alternate.
- Volunteer management – all volunteers are supervised by the OESSD, with personal information held in confidence. Volunteers are assigned to areas of interest where possible and are informed of the training requirements for their assigned responsibilities; and volunteers are informed when training sessions of interest to them are scheduled. The OESSD is responsible for maintaining the support and motivation of team members.

- Administration – ensure computer files are established and maintained for the organization's requirements and agreements are in place and regularly reviewed and updated with potential suppliers of goods and services that may be required in the event of any type of emergency to which Oceanside ESS may be asked to respond to. The OESSD is also responsible for the development and maintenance of Community ESS plan.
- Emergency exercise training – ensure emergency exercises are conducted with sufficient regularity to ensure ESS members get opportunities to practice the skills they may be called upon to use in a real emergency.
- Promoting public education, awareness of and support for Oceanside ESS – meet with various groups including: service clubs, chambers of commerce, church groups, residents associations, etc to inform these groups on the function of Oceanside ESS, discuss how these organizations might support ESS in an emergency, and potentially recruit new volunteers for ESS.
- Network with partner agencies – maintain regular contact with groups such as the Salvation Army, Emergency Communications Team, Search and Rescue, Victim Services, and other agencies to ensure an understanding of the respective roles of the partner agencies and ESS in an emergency and to provide an opportunity to become acquainted with key personnel in these organizations.
- The OESSD must appoint an alternate OESSD to act on his or her behalf during any absences.
- Attend meetings with and provide information to the EPC as requested.
- The OESSD must establish a regular meeting schedule for the ESS planning team.

In fulfilling his or her position requirements, it may be necessary for the Oceanside OESSD to travel anywhere with in the Oceanside area from Bowser to Nanoose and occasionally it will also be necessary to travel outside the Oceanside area for training or for other purposes. The Oceanside ESSD may occasionally send someone else to fulfill his or her commitment or perhaps to accompany the OESSD and or assist the OESSD in his or her role.

Schedule "B"

Terms of Reference
For
Emergency Communications Team

Reporting to the Emergency Program Coordinator for each party, the Municipal Amateur Coordinator (MAC) for the Emergency Communications Team is responsible and accountable for staffing and delivery of emergency communications including ensuring volunteers with appropriate training are available to support OFSS on a call by call basis and to the EOC/ECC should one be activated.

The following information is a general description of the preferred training and principal functions of this job and is not a detailed description of all job duties:

Required Training;

- Current Amateur Radio Operator Certificate
- Introduction to Emergency Management course
- EOC Level 1 course
- ICS-100 Course
- EOC Level 2 course
- EOC Level 3 Logistics Section course

The MAC must have exceptional interpersonal, communication, presentation, facilitation, negotiation, problem solving, decision making, leadership and general management skills. A proven ability to effectively lead, coach, and motivate volunteers in a team environment along with the ability to address confidential and sensitive issues on a regular basis.

The MAC must ensure the following functions are completed and the MAC must also ensure appropriate direction is provided to ECT members who provide these functions (order of the below is not priorized):

- Accounting – all revenue and expenditures are tracked and approved, with bank accounts balanced to bank statements on a continual basis.
- Training – all volunteers receive training consistent with the needs of their assigned areas of responsibility. Training and evaluation of team members is provided with the approval of the MAC or a designated alternate and the EPC.
- Volunteer management – all volunteers are tracked, with personal information held in confidence. Volunteers are assigned to areas of interest where possible and are informed of the training requirements for their assigned responsibilities; and volunteers are informed when training sessions of interest to them are scheduled. The MAC is responsible for maintaining the support and motivation of team members.
- Administration - ensure computer files are established and maintained for the organization's requirements and agreements are in place and regularly reviewed and updated with potential suppliers of goods and services that may be required in the event of any type of emergency to which Oceanside ESS may be asked to respond to. The MAC is also responsible for the development and maintenance of an ECT response plan.
- Emergency exercise training – ensure emergency exercises are conducted with sufficient regularity to ensure ECT members get opportunities to practice the skills they may be called upon to use in a real emergency.
- Promoting public education, awareness of and support for the ECT – meet with various groups including: service clubs, chambers of commerce, church groups, residents associations, etc to

inform these groups on the function of Oceanside ESS, discuss how these organizations might support the ECTS in an emergency, and potentially recruit new volunteers for the ECT.

- Network with partner agencies – maintain regular contact with groups such as the Salvation Army, Emergency Social Services, Search and Rescue, Victim Services, and other agencies to ensure an understanding of the respective roles of the partner agencies and the ECT in an emergency and to provide an opportunity to become acquainted with key personnel in these organizations.
- The MAC must appoint an alternate MAC to act on his or her behalf during any absences.
- Attend meetings with and provide information to the EPC as requested.
- The MAC must establish a regular meeting schedule for the ECT members.

In fulfilling his or her position requirements, it may be necessary for the MAC to travel anywhere with in the Oceanside area from Bowser to Nanoose and occasionally it will also be necessary to travel outside the Oceanside area for training or for other purposes. The MAC may occasionally send someone else to fulfill his or her commitment or perhaps to accompany the MAC and or assist the MAC in his or her role.

Schedule "C"

Terms of Reference
For
Oceanside Emergency Social Services Honorarium

For the purpose of this document, travel costs means mileage undertaken by an OESS volunteer when responding to a request for emergency social service. Mileage costs shall be at the same rate paid to City of Parksville staff for using their own vehicle for work purposes by the party at the time of the request for service.

The honorarium provided by the parties to the Oceanside Emergency Social Services Team (OESS) shall be distributed as follows;

	Year 1	Year 2	Year 3	Year 4	Year 5
Amount	$3000.00	$6000.00	$9000.00	$12,000.00	$15,000.00
ESSD	$1100.00	$3000.00	$4800.00	$7200.00	$8400.00
Alternate	$900.00	$2000.00	$3200.00	$4800.00	$5600.00
Travel Costs	$1000.00	$1000.00	$1000.00	$1000.00	$1000.00

Emergency Social Services Director (ESSD)
The amount includes travel costs.
Total amount to be divided by 12 and paid monthly.

Alternate Emergency Social Services Director (Alternate)
This amount includes travel costs.
Total amount to be divided by 12 and paid monthly.

Travel costs
Made by remaining ESS members using their
vehicle for call out, training or special event reasons.
Amounts to be paid on a case by case basis. Form to be completed by member and submitted to ESSD for approval and forwarding to the EPC for payment.

Schedule "D"

Terms of Reference
For
Emergency Communications Team Honorarium

For the purpose of this document, travel costs means mileage undertaken by an ECT volunteer when responding to a request for emergency communications service. Mileage costs shall be at the same rate paid to City of Parksville staff for using their own vehicle for work purposes by the party at the time of the request for service.

The honorarium provided by the parties to the Emergency Communications Team (ECT) shall be distributed as follows;

	Year 1	Year 2	Year 3	Year 4	Year 5
Amount	$1500.00	$3000.00	$4500.00	$6000.00	$6000.00
ECT MAC	$600.00	$1500.00	$2400.00	$3300.00	$3300.00
Alternate	$400.00	$1000.00	$1600.00	$2200.00	$2200.00
Travel Costs	$500.00	$500.00	$500.00	$500.00	$500.00

ECT Municipal Amateur Coordinator
The amount includes travel costs.
Total amount to be divided by 12 and paid monthly.

Alternate ECT Municipal Amateur Coordinator
The amount includes travel costs.
Total amount to be divided by 12 and paid monthly.

Travel costs
Made by any ECT member using their vehicle for
call out, training or special event reasons.
Amounts to be paid on a case by case basis. Form to be completed by member and submitted to ESSD for approval and forwarding to the EPC for payment.

REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
CAO APPROVAL		
EAP		
COW		
FEB 19 2014		
RHD		
BOARD	✓	

MEMORANDUM

TO: Paul Thorkelsson
Chief Administrative Officer

DATE: February 15, 2014

FROM: Wendy Idema
Director of Finance

SUBJECT: **Resolution to support Sponsored Crown Grant Application for land at Spider Lake for Bow Horn Bay Fire Department**

PURPOSE:

To obtain Board support to apply for a Crown Grant of land for future fire hall purposes with respect to the Bow Horn Bay Volunteer Fire Department.

BACKGROUND:

The Regional District, on behalf of the Bow Horn Bay Fire Department, received a Crown Grant for approximately 0.75 acre of land in the Spider Lake area in 2008. The purpose of the grant at that time was to enlarge an area previously held for water tank storage only to allow for development of a fire hall to service additional properties in the Horne Lake and Spider Lake areas. Since that time, the Bow Horn Bay Fire Department has revised their plans for the area and has asked the RDN to request an additional Crown Grant for land adjacent to the existing grant area.

The revised plan would allow for improved access to and from the road, provide for underground water storage, development of a training area and for the transition from an initial vehicle garage to a larger fire hall in the longer term. The additional land being requested is Crown Land currently used as a gravel pit and support from the RDN Board is required as part of the Province's Crown Land Tenure application process.

ALTERNATIVES:

1. Support an application for an approximately 0.45 hectare parcel of Crown Land located on land described as Lot A, Block 360, VIP54327 on Horne Lake Road.
2. Do not support the application at this time.

FINANCIAL IMPLICATIONS:

Alternative 1

The Bow Horn Bay Fire Department has not committed to a specific timeframe for constructing a fire hall and a financing strategy has not been fully developed, although it is likely the project will commence in the next five years. The Province will determine whether the grant will be provided at no cost or if

there would be some cost attached to it which cannot be determined at this preliminary stage. There is a $262.50 cost for the Crown Land Tenure application process, and should it receive initial approvals, there will also be surveying and advertising costs.

STRATEGIC PLAN IMPLICATIONS:

The 2013-2015 Strategic Plan includes several areas that support the review of existing services, development of new services and ensuring stakeholder participation in decision making. In particular, the Regional Federation section of the plan includes the support of volunteer opportunities for residents. Provision of new fire services to growing areas of the community through volunteer fire departments will enhance community development opportunities and provide additional public safety and emergency response services.

SUMMARY/CONCLUSIONS:

The Regional District, on behalf of the Bow Horn Bay Fire Department, received a Crown Grant for approximately 0.75 acre of land in the Spider Lake area in 2008. Since that time the Bow Horn Bay Fire Department has revised their plans for the area and has asked the RDN to request an additional Crown Grant for land adjacent to the existing grant area.

The revised plan would allow for improved access to and from the road, provide for underground water storage, development of a training area and for the transition from an initial vehicle garage to a larger fire hall in the longer term. The additional land being requested is Crown Land currently used as a gravel pit and support from the RDN Board is required as part of the Province's Crown Land Tenure application process.

RECOMMENDATION:

That the Board supports the submission of an application for a sponsored Crown Grant for a portion of land for fire department purposes on the parcel described as Lot A, Block 360, VIP54327 on Horne Lake Road.

Report Writer

CAO Concurrence

REGIONAL DISTRICT OF NANAIMO

RDN REPORT
CAO APPROVAL
EAP
COW
FEB 17 2014
RHD
BOARD

MEMORANDUM

TO: Jeremy Holm
Manager, Current Planning

DATE: February 13, 2014

FROM: Kristy Marks
Planner

FILE: PL2013-054

SUBJECT: **Zoning Amendment Application No. PL2013-054 – Oswald**
Lot 1, Section 2, Range 7, Cedar District, Plan 18354 – 3030 Yellow Point Road
Electoral Area 'A'

PURPOSE

To receive the report of the public hearing containing the summary of the minutes and submissions of the public hearing held on February 12, 2014, and further, to consider Bylaw No. 500.391, 2014 for third reading.

BACKGROUND

Bylaw No. 500.391 (see Attachment 1) was introduced and given first and second reading on January 28, 2014. This was followed by a public hearing held on February 12, 2014. The public hearing minutes and written submissions are attached for the Board's consideration (see Attachments 2 and 3).

The purpose of the amendment bylaw is to rezone a portion of the foreshore adjacent to the subject property from Water 1 (WA1) Zone to a new Water 5 (WA5) Zone in order to permit the construction of a dock (See Attachment 4 - Subject Property Map). The new Water 5 Zone would permit one dock per parcel and includes minimum setbacks and restrictions on the maximum size of a dock. The amendment bylaw will also introduce a definition for 'dock' to the definitions section of Bylaw 500. If the proposed amendment bylaw is granted third reading the applicant will apply to the Province for a Specific Permission or lease to permit the proposed dock. A condition of approval of the amendment bylaw will be that the applicant obtains approval from the Province for the proposed dock (see Attachment 5 - Condition of Approval). The proposed amendment does not require the approval of the Ministry of Transportation and Infrastructure as the site is located more than 800 metres from a controlled access highway in accordance with Section 52 of the *Transportation Act*.

ALTERNATIVES

1. To receive the report of the public hearing and give third reading to "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014."

2. To receive the report of the public hearing and deny "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014.

SUMMARY/CONCLUSIONS

The purpose of Amendment Bylaw No. 500.391, 2014 is to rezone a portion of the foreshore adjacent to the subject property from Water 1 Zone to a new Water 5 Zone in order to permit the construction of a private dock. The proposal is consistent with the "Regional District of Nanaimo Electoral Area 'A' Official Community Plan Bylaw No. 1620, 2011" Coastal Zone Management policies to develop regulations for the construction of private docks. The applicant has demonstrated that the proposed use can be accommodated without negatively impacting the environment, public access, navigation, or views for adjacent properties. "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014" was considered by the Board and given first and second reading on January 28, 2014. The associated public hearing was held on February 12, 2014. Given that the applicants must obtain approval from the Province for the proposed dock prior to adoption, staff recommends that "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014" be considered for third reading.

RECOMMENDATIONS

1. That the report of the public hearing held on February 12, 2014 on "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014" be received.

2. That "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014" be read a third time.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

Attachment 1
Proposed Amendment Bylaw No. 500.391

A Bylaw to Amend Regional District of Nanaimo
Land Use and Subdivision Bylaw No. 500, 1987

The Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

A. This Bylaw may be cited as "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014".

B. "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987", is hereby amended as follows:

1. Under **PART 2, INTERPRETATION, DEFINITIONS** by adding the following definition in alphabetical order:

   "***dock*** means a structure used for the purpose of private mooring of boats and for providing pedestrian access to and from the moored boats, and consists of a single dock, float or wharf and may include an access walkway, stairs or ramp."

2. Under **PART 3 LAND USE REGULATIONS, Section 3.1 Zones** by adding the following zoning classification and corresponding short title after Water 4 (WA4) Zone:

   "Water 5 (WA5)"

3. By adding Section 3.4.95 (WA5) as shown on Schedule '1' which is attached to and forms part of this Bylaw.

4. By rezoning the surface of the water and foreshore adjacent to the upland property legally described as Lot 1, Section 2, Range 7, Cedar District, Plan 18354 as shown on the attached Schedule '2' as follows from Water 1 (WA1), Subdivision District 'Z' to Water 5 (WA5), Subdivision District 'Z'.

Introduced and read two times this 28th day of January 2014.

Public Hearing held this 12th day of February 2014.

Read a third time this ___ day of _____ 2014.

Adopted this___ day of _____ 2014.

Chairperson

Corporate Officer

Schedule '1' to accompany "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014".

_____
Chairperson

_____
Corporate Officer

Section 3.4.95

	WATER 5	**WA5**
Section 3.4.95.1	**Permitted Uses**	
a) Dock		
3.4.95.2	**Maximum Number and Size of Buildings and Structures**	
Docks/parcel	1	
Width	Walkways, stairs and ramps shall not exceed 1.5 m in width	
Area	The dock, excluding walkway, stairs and ramp, shall not exceed 37m^2	
3.4.95.3	**Minimum Setback Requirements**	
Lot lines adjacent to the natural boundary or lease boundary lines	0.0 m	
Interior side lot lines	5.0 m	
Interior side lot lines adjacent to a dedicated public access	10.0 m	
Adjacent dock or other structure that is fully or partially in, on or over navigable waters	10.0 m	

Attachment No. 2

Summary of the Public Hearing
Held at Cedar Community Secondary School, 1640 MacMillan Road, Cedar
February 12, 2014 at 6:30 pm

To Consider Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014

Summary of Minutes and Submissions

Note: That these minutes are not a verbatim recording of the proceedings, but summarize the comments of those in attendance at the public hearing.

PRESENT:

Alec McPherson	Chairperson, Director, Electoral Area 'A'
Kristy Marks	Planner
Greg Keller	Senior Planner
Darrell Oswald	Applicant

There were 12 people in attendance in addition to the applicants' agent and Regional District representatives.

The Chair called the hearing to order at 6:35 pm, introduced those present representing the Regional District, and outlined the procedures to be followed during the hearing.

Kristy Marks provided an explanation of the proposed amendment bylaw and application.

The Chair called for formal submissions with respect to Bylaw 500.391, 2014.

One written submission was received at the hearing and two written submissions were received prior to the hearing. The following comments were received.

Richard Noble, 2870 Twin Oaks Drive noted that he has lived in the area for more than 20 years and that he is opposed to docks on the east coast of Vancouver Island. He stated that allowing one dock will result in more applications to allow other docks. He mentioned he can see the subject property and Roberts Memorial Park from his property and it is a pristine environment that families currently enjoy. He feels that waterfront property owners should be satisfied with using mooring buoys and mooring boats at nearby marinas. He stated that it would be a shame if this dock was allowed as it may negatively impact the value of adjacent properties and the beauty of the existing coastline.

Dan Johnston, 1932 Bostrom Road noted that he is also a waterfront owner and that waterfront property owners often have an affinity for water and coastal areas, and with having a disabled daughter he recognizes the importance of having safe access to water. He commented that docks do need to be regulated and that safety, depth of water, public access and aesthetics has been addressed through the

application and draft guidelines. He stated that the dock does not seem overbuilt and given the abundance of coastline, impacts of the dock would be minimal.

Fred Green, 3082 & 3090 Yellow Point Road stated that they do not have a dock and that safe access to their boat is a concern. He further stated that while they will not be applying for a dock they do not have any concern with the dock and are in support of the application.

June Noble, 2870 Twin Oaks Drive commented that a huge amount of driftwood ends up on the beach in this area and there will likely be impacts and potentially damage to the dock as a result.

Ron Sunnus, 3505 Juriet Road indicated that boating and water access have always been important to his family and the neighbourhood and he feels that access to the water should be allowed. He noted that they also do not intend to apply for a dock but that safe access to their boat for his elderly mother was definitely an issue. He understands the need for a facility and feels that the applicants would likely allow access to their dock for neighbours when needed. He stated that he doesn't feel that allowing this dock will result in a number of new applications being made.

Darrell Oswald, 3030 Yellow Point Road noted that the proposed dock will still allow for public access and will have a minimal footprint impact given its narrow width and the extensive length of beach front. He further noted that his family members are keen conservationists and that two of his children have degrees in environmental science and worked as research divers. In addition he noted that a letter of support for the application was provided by the VP of Marine Science at the Vancouver Aquarium and the dock would enhance rock fish habitat. Mr. Oswald confirmed that if the application receives 3rd reading he will still need to obtain approval from the Province and DFO.

Dan Johnston, 1932 Bostrom Road stated that he does not think that approving one dock will result in a proliferation of docks along the coast.

Richard Noble, 2870 Twin Oaks Drive noted that there are many docks in the City of Nanaimo and that when one is allowed more will follow. He stated that there is a reason we don't see any now in the Regional District and that people have been getting along fine without them.

The Chair called for any further submissions.

The Chair called for further submissions for the second time.

The Chair called for further submissions a third and final time.

There being no further submissions, the Chair adjourned the hearing at 7:03 pm.

Certified true and accurate this 13th day of February, 2014.

Kristy Marks
Recording Secretary

Attachment 3
Correspondence Received
(Page 1 of 3)

Marks, Kristy

From: bbegert@ypoint.ca
Sent: Wednesday, February 05, 2014 1:55 PM
To: Marks, Kristy
Cc: Darrell Oswald
Subject: Dock application - 3030 Yellow Point Road -PL 2013 - 054 Mr. Darrell Oswald

Dear Kristy - I am a property owner located at 2640 Pylades Drive and I am writing to express my strong support for Mr. Oswald's dock construction project referenced above. We live on the water nearby the subject property and Mr. Oswald's property is visible from our beach. There are two principal reasons we favour the project:

1. Boats are more likely to be docked rather than moored in the bay in front of Mr. Oswald's. We find the view towards the water is less appealing when a boat is moored in the bay so the dock will result in the resident boat moved closer to shore and as a result an improved view for all residents within close proximity to Mr. Oswald.

2. Safety - on occasion we and others travel in front of Mr. Oswald's property at dusk and it can be dangerous with boats moored a long distance in front of the shoreline. By using Mr. Oswald's dock, fewer boats will be moored in deeper waters in front of the property and as a result the waters will be safer for passing boaters.

In conclusion, we favour the construction of Mr. Oswald's dock facility. Feel free to contact the undersigned (250 722 0270) if you wish to have further discussions about this matter.

Yours Truly,

Brian Begert

Attachment 3
Correspondence Received
(Page 2 of 3)

PO Box 3232, Vancouver, British Columbia, Canada V6B 3X8
Telephone 604 659 3500 Facsimile 604 659 3515 www.vanaqua.org
Accredited by American Zoo & Aquarium Association
Alliance of Marine Mammal Parks & Aquariums
Canadian Association of Zoos and Aquariums

February 6, 2014

Alec McPherson & Kristy Marks
Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

Dear Alec and Kristy:

re Oswald Family dock, Yellow Point: **PL 2013-054**

This letter is to confirm my association with Sean and Taylor Oswald, and indirectly their father Darrell, regarding marine conservation issues relevant to Strait of Georgia seabeds. I had the pleasure of employing Taylor Oswald as a dive biologist from 2008 through 2011, and Sean Oswald during 2011 and 2012. They are both excellent divers who regularly dive the shoreline of their family land at 3030 Yellow Point Road. Considering the training in biodiversity monitoring and rockfish population assessment, I am certain that local authorities can be as confident as I am that they will keep close watch on the seashore around the area where they are planning a dock installation. Taylor and Sean both have university degrees in environmental science.

The type of seabed and the depth profile described to me for this dock siting is typical of the seabed situation where a well-moored, secure dock leads to enhancement of rockfish abundance by providing overhead cover that is attractive, comparable to a kelp cover. The Oswalds have a long commitment to marine conservation and will undoubtedly conduct an installation with the best practices.

It is reassuring that the Oswald family is settling on their Yellow Point shoreline property as the final, permanent family residence. Citizen awareness of marine conservation issues is a core need for communities devoted to maintaining our maritime heritage. Please do not hesitate to contact me at 604-659-3481 for any further discussion.

Sincerely,

Jeffrey B. Marliave, Ph.D.

VP Marine Science

vancouver aquarium

Attachment 3
Correspondence Received
(Page 3 of 3)

Feb 11, 2014

Dear Sir:

My husband & I are against this application # PL 2013 - 054

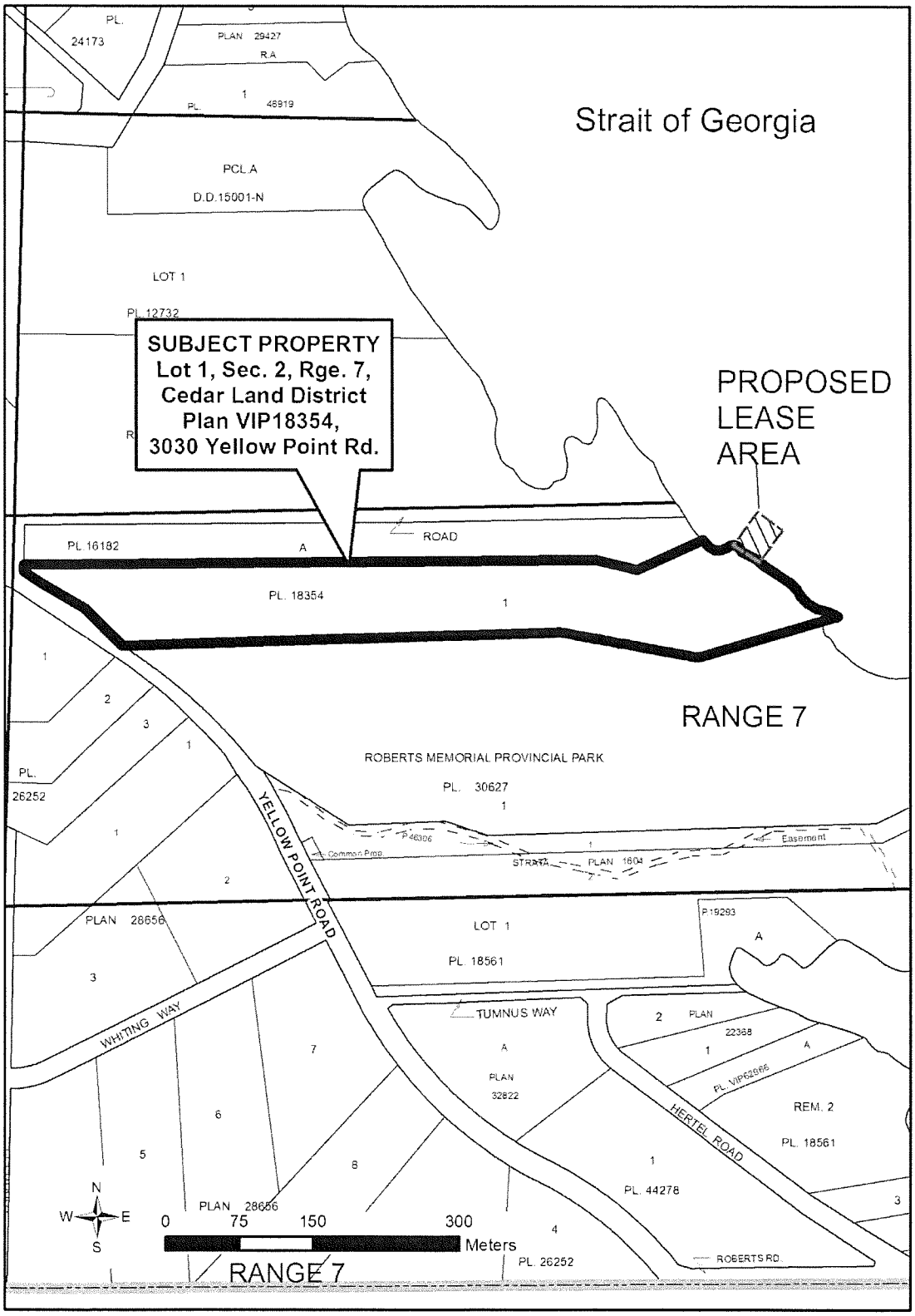
This sets a example for future private docks that neighbours will built.

This is a eye sore, also it interfers with boaters coming close to the shore for fishing and also for the kayakers.

Also people walking on the shoreline will be hindered.

Yours truly
Peter + Lenie Johnson
3597 JURIET RD

Attachment 4
Subject Property Map



Attachment 5
Condition of Approval

The following is required prior to the "Regional District of Nanaimo Land Use and Subdivision Amendment Bylaw No. 500.391, 2014" being considered for adoption:

Condition of Approval

The applicant is to obtain approval from the Province of BC for the proposed dock prior to final adoption.

REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
CAO APPROVAL		
EAP		
COW		
FEB 17 2014		
RHD		
BOARD		

MEMORANDUM

TO: Jeremy Holm
Manager, Current Planning

DATE: February 14, 2014

FROM: Tyler J. Brown
Planner

FILE: PL2013-114

SUBJECT: **Zoning Amendment Application No. PL2013-114 – Fern Road Consulting Ltd.**
Lot B, District Lot 103, Nanoose District, Plan EPP9445
Electoral Area 'F'

PURPOSE

To receive the report summarizing the minutes and submissions received at the Public Hearing held on February 12, 2014, and to consider Amendment Bylaw No. 1285.20, 2014, for third reading.

BACKGROUND

Amendment Bylaw No. 1285.20 (see Attachment 1) was introduced and given first and second reading on January 28, 2014. This was followed by a Public Hearing held on February 12, 2014. The summary of the minutes and submissions is attached for the Board's consideration (see Attachment 2).

The proposed Amendment Bylaw would create a new Comprehensive Development 19 (CD19) zone to permit a go-cart race track with accessory food concession along with the currently permitted industrial uses on the property (see Attachment 3 – Subject Property Map). The existing I-1 zoning of the subject property permits the following as principle uses: commercial card lock, dwelling unit, equipment rental, log home building, product assembly, marshalling yard, outdoor sales, service and repair, transportation/trans-shipment terminal, lumber remanufacturing, heliport, warehousing/wholesaling and mini-storage.

Furthermore, the amendment bylaw includes general amendments by introducing two new definitions: Go-Cart Race Track and Accessory Food Concession. The proposed CD-19 zone would continue to allow the industrial uses which are currently permitted, along with go-cart race track use and accessory food concession with a maximum capacity for indoor seating of twenty seats. The property has sufficient site area to accommodate the proposed go-cart track.

ALTERNATIVES

1. To receive the report of the Public Hearing and give third reading to "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014".
2. To receive the report of the Public Hearing and deny "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014".

SUMMARY/CONCLUSIONS

The purpose of Amendment Bylaw No. 1285.20, 2014 is to rezone the subject property to permit a go-cart race track with accessory food concession along with the currently permitted industrial uses. A new CD-19 zone has been drafted to accommodate the proposed go-cart race track use and accessory food concession. The applicant has demonstrated that there is adequate site area and sufficient well water supply for the proposed uses. Moreover, the applicant has submitted a Storm Water Management Report which concludes that surface water can be managed within the property. The amendment bylaw was introduced and given first and second reading on January 28, 2014, and proceeded to Public Hearing on February 12, 2014. The requirements set out in the Conditions of Approval (see Attachment 4) are to be addressed by the applicant prior to the Board's consideration of the Bylaw for adoption. The Bylaw must also be approved by the Ministry of Transportation and Infrastructure prior to adoption. Staff recommend that Bylaw No. 1285.20, 2014, be considered for third reading.

RECOMMENDATIONS

1. That the report of the Public Hearing held on February 12, 2014, on "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014" be received.

2. That "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014" be read a third time.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

Attachment 1
Proposed Amendment Bylaw No. 1285.20, 2014

REGIONAL DISTRICT OF NANAIMO BYLAW NO. 1285.20

A Bylaw to Amend Regional District of Nanaimo
Electoral Area 'F' Zoning and Subdivision Bylaw No. 1285, 2002

The Board of the Regional District of Nanaimo, in open meeting assembled, enacts as follows:

A. This Bylaw may be cited as "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014".

B. "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Bylaw No. 1285, 2002", is hereby amended as follows:

1. Under SECTION 4 – ZONES, Comprehensive Development Zones by adding the following zoning classification and corresponding short title after Section 4.41 CD-18 Alberni Highway Mini- Storage

   Section 4.42, CD-19 Springhill Road

2. By adding Section 4.42, (CD-19 Springhill Road) as shown on Schedule '1' which is attached to and forms part of this Bylaw.

3. By rezoning the lands shown on the attached Schedule '2' and legally described as Lot B, District Lot 103, Nanoose District, Plan EPP9445 from Industrial 1 (I-1) to CD-19 Springhill Road.

4. Under SECTION 5 – DEFINITIONS by adding the following definitions in alphabetical order:

   "*Accessory Food Concession* means an eating establishment, accessory to a principal commercial use, providing for the sale of prepared foods and non-alcoholic beverages which are ready for consumption and are to be consumed on the premises.

   Go-Cart Race Track means the use of lands, buildings and structures for the controlled racing of motorized go-carts on a dedicated track."

Introduced and read two times this 28th day of January, 2014.

Public Hearing held this 12th day of February, 2014.

Read a third time this ___ day of _____2014.

Approved by the Minister of Transportation and Infrastructure pursuant to the *Transportation Act* this ___ day of _____ 2014

Adopted this___ day of _____ 2014.

_____ _____

Chairperson Corporate Officer

Schedule '1' to accompany "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014".

_____
Chairperson

_____
Corporate Officer

Schedule '1'

CD-19 Springhill Road
Section 4.42

4.42.1 Permitted Principal Uses

a) Commercial Card Lock
b) Dwelling Unit
c) Equipment Rental
d) Log Home Building
e) Product Assembly
f) Marshalling Yard
g) Outdoor Sales
h) Service and Repair
i) Transportation/Trans-shipment Terminal
j) Value Added Lumber Remanufacturing
k) Heliport
l) Warehousing/Wholesaling
m) Mini-storage
n) Go-Cart Race Track

4.42.2 Permitted Accessory Uses

a) Accessory Outdoor Storage
b) Accessory Building and Structures
c) Accessory Office and Retail Sales
d) Accessory Food Concession

4.42.3 Regulations Table

Categories	Requirements
a) Maximum Density	1 Dwelling Unit Per lot
b) Minimum Lot Size	2 ha
c) Minimum Lot Frontage	30 metres
d) Maximum Lot Coverage i. First 1 ha of Lot with ii. Remainder of Lot Greater than 1 ha	 30% 5%
e) Maximum Building and Structure Height	15 metres
f) Minimum Setback from: i) Front and Exterior Side Lot Lines ii) All Other Lot Lines	 4.5 metres 2 metres
g) Minimum Setback from Watercourses	As outlined in Section 2.10
h) Runoff Control Standards	As outlined in Section 2.5
i) General Land Use Regulations	Refer to Section 2 - General Regulations

4.42.4 Regulations

a) All principal and accessory uses, buildings and structures on lots adjacent to the Vancouver Island Highway No. 19 shall be located a minimum of 30 metres from the Vancouver Island Highway No. 19 right-of-way.

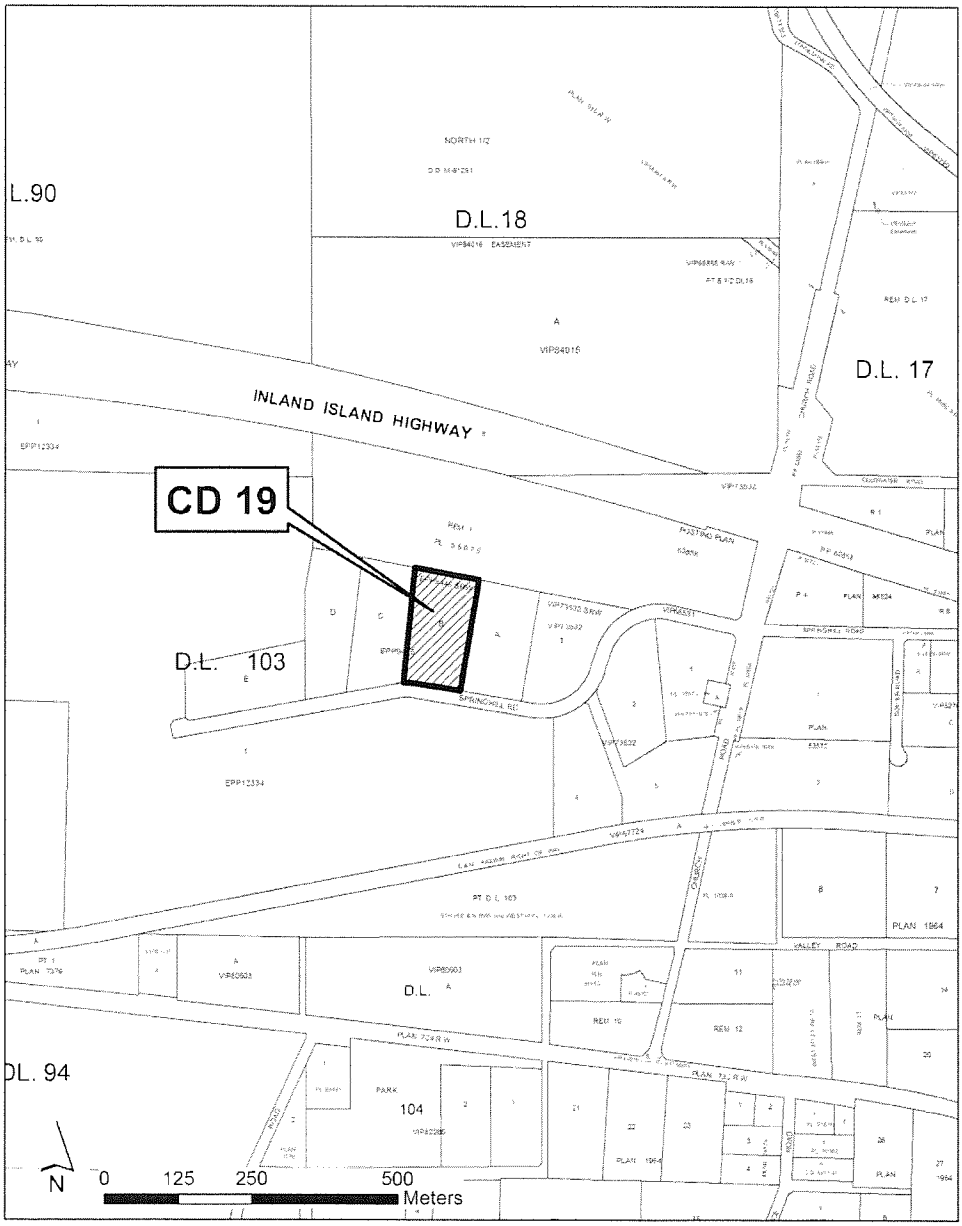
b) Indoor seating associated with Accessory Food Concession shall not exceed 20 seats.

Schedule '2' to accompany "Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014"

_____
Chairperson

_____
Corporate Officer

Schedule '2'



Attachment 2

Summary of the Public Hearing
Held at Cedar Community Secondary School, 975 Shearme Road
February 12, 2014 at 7:00 pm

To Consider Regional District of Nanaimo Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014

Summary of Minutes and Submissions

Note: That these minutes are not a verbatim recording of the proceedings, but summarize the comments of those in attendance at the Public Hearing.

PRESENT:

Julian Fell	Chairperson, RDN
Tyler Brown	Planner, RDN
Jeremy Holm	Manager, Current Planning, RDN
Norm Spann	Applicant Representation
Doug Mclean	Applicant Representation

5 members of the public attended the meeting.

The Chairperson called the hearing to order at 7:05 pm, introduced those present and outlined the procedures to be followed during the Public Hearing.

The Planner provided an explanation of the proposed amendment bylaw.

The Chairperson called for formal submissions with respect to Amendment Bylaw No. 1285.20, 2014.

Joe Pullen, 1949 Swayne Road stated that he was in favour of the proposal and thought it was long overdue. He expressed that zoning was very limiting in Area 'F' for allowing go-cart tracks. He believes the proposal will be beneficial to young people in the area and will prevent anti-social behavior among the youth. Additionally, he stated support for the location and did not expect the noise resulting from the use to be greater than that of the highway or Qualicum airport.

Oliver Watson, 826 Humphrey Road, stated concern over the potential noise and commercial traffic on Springhill Road resulting from the new use.

James Wright, 2530 Alberni Highway, iterated that supporting auto racing in a controlled environment was beneficial to both young people and automobile sport. He expressed his full support for the proposal as it is exciting and new, and will provide a tourism activity in the area.

No written submissions were received.

The Chairperson called for further submissions for the second time.

Joe Pullen, 1949 Swayne Road, reiterated that he did not believe noise from the proposal would be a problem for the area.

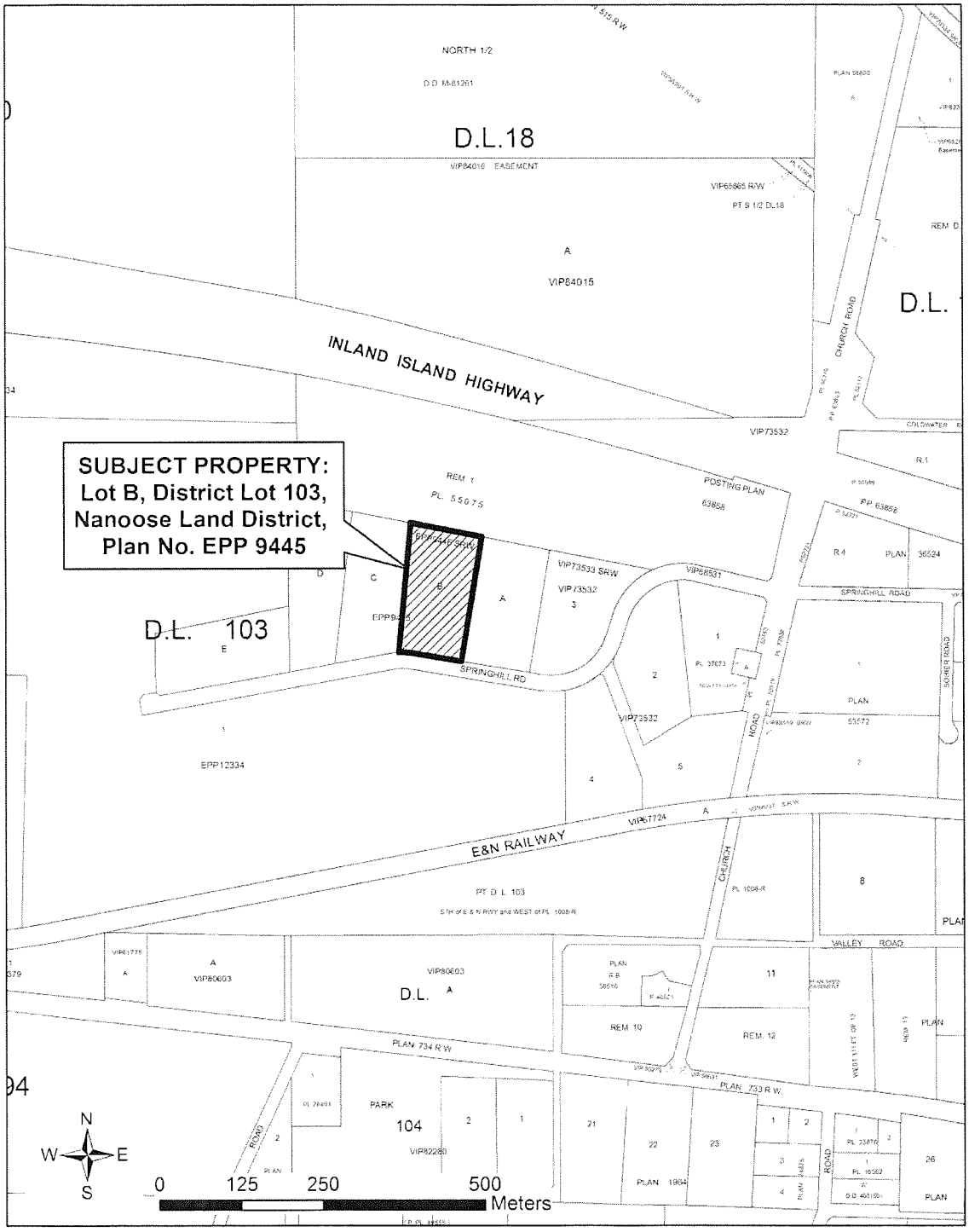
The Chairperson called for further submissions a third and final time.

There being no further submissions, the Chairperson adjourned the hearing at 7:26 pm.

Certified true and accurate this 13th day of February, 2014.

for Tyler J. Brown
Recording Secretary

Attachment 3
Location of Subject Property



Attachment 4
Conditions of Approval

The following is required prior to the "Electoral Area 'F' Zoning and Subdivision Amendment Bylaw No. 1285.20, 2014" being considered for adoption:

Conditions of Approval

1. The subject property shall be developed in accordance with the Storm Water Management Report prepared by Park City Engineering Ltd. dated November 8, 2013. The applicant shall register a Section 219 covenant containing a storm water management plan with well protection of the existing well from floodwater in accordance with Vancouver Island Health Authority standards. In addition, as per the recommendations of the Engineer, detailed drawings and storm water plan must be submitted to the satisfaction of the Regional District of Nanaimo prior to issuance of a building permit.

2. The applicant is to obtain source approval for domestic water use from the Vancouver Island Health Authority.

3. The applicant is required to obtain all necessary building permits for existing buildings and structures.

REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
CAC APPROVAL		
EAP		
COW		
FEB 18 2014		
RHD		
BOARD		

MEMORANDUM

TO: Geoff Garbutt, General Manager
Strategic and Community Development

DATE: February 17, 2014

FROM: Tom Armet, Manager
Building, Bylaw & Emergency Planning Services

FILE:

SUBJECT: **Nanoose Volunteer Fire Department – Fire Protection Services Study**

PURPOSE:

To receive the final report on the Nanoose Volunteer Fire Department fire protection services study for the Board's information.

BACKGROUND:

With the development plans for the Schooner Cove and Lakes District area of Nanoose Bay, a review of the impact on the delivery of fire and rescue services in the community was raised at the time of consideration of Official Community Plan amendments. At the request of the Nanoose Fire Protection Society and with the financial support of the Developer, Regional District staff undertook the process to retain a consultant to review and analyze the Nanoose Volunteer Fire Department's (NVFD) capacity to provide current and future fire protection to the community as a whole.

Fire Underwriter's Survey (Opta Municipal Consulting Services) was engaged to undertake the review and recently delivered their final report to the RDN and NVFD. The detailed report (Attachment No. 1) provides an evaluation of the following areas:

- Community risk and hazards assessment
- Analysis of the current NVFD response capacity
- Assessment of apparatus, manpower, training and operations
- Fire prevention and public education
- Assessment of future needs

Fire Underwriter's Survey also conducted a fire insurance grade review and concluded that the insurance grades for the Nanoose Bay community have improved considerably since the previous assessment in 1982.

The report includes 28 recommendations to assist in strategically guiding the fire department through the next 25 years of population growth and community development. The recommendations (listed for convenience - Attachment No. 2) are currently being reviewed by the NVFD Chief and Deputy Chief and comments will be provided to the Nanoose Fire Protection Society Board and RDN at a later date.

ALTERNATIVES:

This report is presented for the information of the Board.

FINANCIAL IMPLICATIONS:

There are no financial implications in receiving this report. The $15,000 cost of the review was shared by the Nanoose Fire Protection Society ($5,000) and Bentall Kennedy/Fairwinds ($10,000).

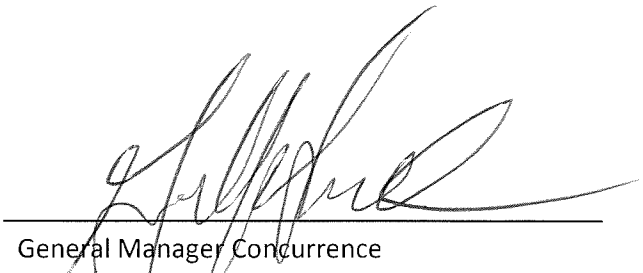
SUMMARY:

With the development plans for the Schooner Cove and Lakes District area of Nanoose Bay, a review of the impact on the delivery of fire and rescue services in the community was raised at the time of consideration of Official Community Plan amendments. At the request of the Nanoose Fire Protection Society and with the financial support of the Developer, Regional District staff undertook the process to retain a consultant to review and analyze the Nanoose Volunteer Fire Department's (NVFD) capacity to provide current and future fire protection to the community as a whole. The report includes recommendations to assist in strategically guiding the fire department through the next 25 years of population growth and community development.

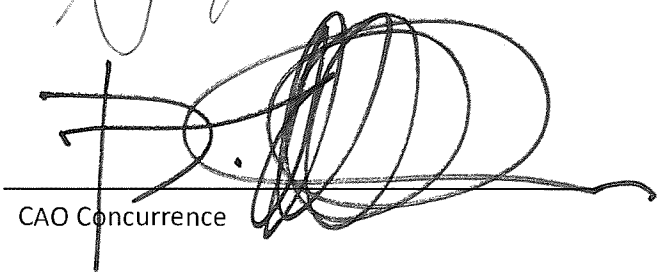
RECOMMENDATIONS

That the report on the Nanoose Volunteer Fire Department fire protection services study be received.

Report Writer



General Manager Concurrence



CAO Concurrence

Attachment No. 1
Nanoose Volunteer Fire Department – Fire Protection Services Study Report

Fire Underwriters Survey
A Service to Insurers and Municipalities

Fire Protection Services Study

FINAL

Nanoose Volunteer Fire Department

Fire Protection Services Study

2013

2013-12-19

Notice of Confidentiality

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Disclaimer

Our proposal is being submitted for your review and consideration. If the proposal is acceptable, the parties shall enter into a separate agreement with respect to the subject matter hereof and such agreement shall supersede this proposal and any other agreements, understandings or representations. It is also subject to ongoing due diligence and customary business investigations by SCM – Opta Information Intelligence with respect to the requisite business arrangements necessary to carry out its obligations. The results of such a review may impact upon the terms and conditions of this proposal, including in respect of business structure, business terms and financial arrangements. SCM – Opta Information Intelligence makes no representation or warranty to Recipient with respect to the Information and shall not be liable for any errors or omissions in the Information or the use of thereof.

Trademarks

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Opta Information Intelligence, an SCM Company
3999 Henning Drive
Burnaby, BC V5C 6P9
1-800-665-5661

Table of Contents

TABLE OF CONTENTS **1**

APPENDICES **3**

TABLES AND FIGURES **3**

1. SCOPE OF OUR ENGAGEMENT **5**

1.1. ACKNOWLEDGEMENT 5
1.2. DISTRIBUTION OF USE 5
1.3. RELIANCE AND LIMITATION 6

2. EXECUTIVE SUMMARY **7**

3. TERMS OF REFERENCE **8**

4. FIRE UNDERWRITERS SURVEY **14**

4.1. FIRE INSURANCE GRADING CLASSIFICATIONS 14
4.2. PUBLIC FIRE PROTECTION CLASSIFICATION SYSTEM 15
4.3. DWELLING PROTECTION GRADING SYSTEM 16
4.4. MEASURING FIRE RISK IN THIS REVIEW 17
4.5. OVERVIEW OF THE ASSESSMENT PROCESS 18

5. PROJECT SCOPE AND METHODOLOGY **20**

5.1. PROJECT OBJECTIVES 20

6. COMMUNITY RISK AND HAZARD ASSESSMENT **22**

6.1. BACKGROUND 22
6.2. MEASURING FIRE RISK 22
6.3. NANOOSE BAY COMMUNITY RISK PROFILE 26
6.3.1. Required Fire Flows 26
6.3.2. Basic Fire Flow 29
6.3.3. Demographics 29
6.3.4. Geography/Road Infrastructure 29
6.3.5. Fire Loss Statistics 29
6.3.6. Recommendations 31

7. FIRE DEPARTMENT ASSESSMENT **32**

7.1. FIRE DEPARTMENT RESPONSE ASSESSMENT 32
7.1.1. Historical Response Data 33
7.1.2. Response Assessment – NFPA 1720 33
7.1.3. Response Assessment – Fire Underwriters Survey 35
7.1.4. Residential Zones 37
7.1.5. Commercial Zones 38
7.1.6. Highest Calculated Required Fire Flows 39
7.1.7. Standard of Response Cover 42
7.2. FIRE DEPARTMENT GRADING ITEMS 45
7.2.1. Engine Service 46
7.2.2. Ladder Service 49

7.2.3. Distribution of Companies 50
7.2.4. Engine and Ladder Pump Capacity 53
7.2.5. Design, Maintenance and Condition of Fire Apparatus 55
7.2.6. Number of Line Officers – Fire Suppression 57
7.2.7. Total Fire Force Available 60
7.2.8. Engine and Ladder Company Unit Manning 64
7.2.9. Master and Special Stream Devices 64
7.2.10. Equipment for Engines and Ladder Apparatus, General 65
7.2.11. Fire Hose 65
7.2.12. Condition of Fire Hose 66
7.2.13. Training and Qualifications 66
7.2.14. Response to Alarms 69
7.2.15. Fire Ground Operations 71
7.2.16. Special Protection Required 71
7.2.17. Miscellaneous Factors and Conditions 72
7.2.18. Pre-Incident Planning 74
7.2.19. Administration 75

8. PFPC - FIRE SAFETY CONTROL ASSESSMENT 76

8.1. Fire Safety Control Grading Items 76
8.1.1. General Program 76
8.1.2. Fire Safety Laws and Enforcement 80
8.1.3. Building Construction Laws and Enforcement 81
8.1.4. Electrical Code and Inspections 82

9. PFPC - FIRE SERVICE COMMUNICATIONS ASSESSMENT 83

9.1. System Description Overview 83
9.2. Fire Service Communications Grading Items 83
9.2.1. Communication Center 83
9.2.2. Means for Transmitting Alarm by Public 84
9.2.3. Fire Department Telephone Service (Incoming from Public) 84
9.2.4. Means of Alarm Dispatch 85
9.2.5. Dispatching Service 85
9.2.6. Operations Radio 85
9.2.7. Miscellaneous Factors 86

10. WATER SUPPLY ASSESSMENT 87

10.1. Overview 87

11. FIRE INSURANCE GRADING 90

11.1. PFPC - Fire Insurance Grading Areas 90
11.1.1. Fire Department Assessment within the Fire Insurance Grading 90
11.1.2. Fire Safety Control within the Fire Insurance Grading 94
11.1.3. Fire Service Communications within the Fire Insurance Grading 96
11.1.4. Water Supplies within the Fire Insurance Grading 97
11.1.5. Summary of PFPC Fire Insurance Grading 103
11.2. DPG - Fire Insurance Grading 104

12. FUTURE NEEDS ASSESSMENT 107

12.1. CHANGES TO THE COMMUNITY RISK PROFILE 107
12.1.1. Required Fire Flows and Basic Fire Flow 107
12.1.2. Population and Demographics 109
12.2. RESPONSE CAPABILITY 110
12.2.1. Response Assessment for Fire Insurance Grading 110
12.2.2. Multi-level buildings 111
12.3. STATION LOCATION ANALYSIS 112
12.4. STAFFING 117

13. STUDY CONCLUSIONS 120

Appendices

Appendix A – Dwelling Protection Grade Summary of Basic Requirements
Appendix B – Fire Underwriters Survey – 1999 – Water Supply for Public Fire Protection
Appendix C – Required Fire Flow Summary
Appendix D – FUS – Insurance Grading of Used or Rebuilt Apparatus
Appendix E – NFPA Standards for Fire Department Access

Tables and Figures

Table 4.3-1 FUS Grades Correlation to Commonly used Insurance Terminology and Simplified Grades 17
Table 6.2-1 Fire Underwriters Survey - Table of Effective Response 24
Table 6.3-1 Nanoose Bay Community Risk Profile 30
Table 7.1-1 Nanoose Volunteer Fire Department Average Response Times (08/2011 – 08/2013) 33
Table 7.1-2 NFPA 1720 Response Time Standards 34
Table 7.1-3 Response Benchmark based on Table of Effective Response for Glen Eagle Multi-family 39
Table 7.1-4 Response Benchmark based on Table of Effective Response for Arbutus Equestrian Centre 40
Table 7.1-5 Response Benchmark based on Table of Effective Response for Pacific Shores Resort & Spa 41
Table 7.2-1 Nanoose Volunteer Fire Department Credited in Service Engine Summary 47
Table 7.2-4 Pumping Capacity Credit Summary 54
Table 7.2-2 Service Schedule for Fire Apparatus for Fire Insurance Grading Purposes 56
Table 7.2-3 Nanoose VFD Apparatus Replacement Schedule for Fire Insurance Grading Purposes 57
Table 7.2-5 Fire Fighter Equivalent Units Credit Summary 62
Table 7.2-6 Initial Response to Alarms of Fire 70
Table 8.1-1 Recommended Inspection and Education programs 78
Table 8.1-2 Fire Prevention Program evaluation criteria 78
Table 10.1-1 Nanoose Bay Water System summary 87

Table 11.1-1 Fire Department Grading Items Summary – Nanoose Volunteer Fire Department 92
Table 11.1-2 Fire Safety Control Grading Items Summary 94
Table 11.1-3 Fire Service Communications Grading Items Summary 96
Table 11.1-4 Water Supply Grading Items Summary – All Water Systems in Nanoose Bay 98
Table 11.1-5 Water Supply Grading Items Summary – Englishman River Water System 99
Table 11.1-6 Water Supply Grading Items Summary – Nanoose Peninsula Water System 101
Table 11.1-5 Credit Range Per Public Fire Protection Classification 103
Table 11.1-6 Summary of Public Fire Protection Classification (PFPC) – Nanoose Bay Fire Protection Area 104
Table 11.2-1 Dwelling Protection Grade Summary 105
Table 11.2-2 Summary of Dwelling Protection Grades (DPG) – Nanoose Bay Fire Protection Area 106
Table 12.1-1 Schooner Cove RFF Calculations – No sprinkler protection 108
Table 12.1-2 Schooner Cove RFF Calculations – Sprinkler protection 108
Table 12.1-3 Lake District RFF Calculations 108
Table 12.1-4 Projected Community risk profile 109
Table 12.3-1 Benchmark Distances when Applying Grades 112
Table 12.4-1 Benchmark Distances when applying grades 118

Figure 6.3-1 Required Fire Flow Locations – Nanoose Bay Fire Protection Area 28
Figure 7.1-1 Fire Propagation Curve 32
Figure 7.1-2 Response Benchmark – Residential Zones 37
Figure 7.1-3 Response Benchmark – Commercial Zones 38
Figure 7.1-4 Response Benchmark based on Table of Effective Response for Glen Eagle Multi-family 40
Figure 7.1-5 Response Benchmark based on Table of Effective Response for Arbutus Equestrian Centre 41
Figure 7.1-6 Response Benchmark based on Table of Effective Response for Pacific Shores Resort & Spa 42
Figure 7.2-1 Response Benchmark – Nanoose Bay Community 51
Figure 7.2-2 Heat Map of Concentration Weighted RFFs 52
Figure 11.1-1 Fire Department Grading Items Summary – Nanoose Volunteer Fire Department 93
Figure 11.1-2 Fire Safety Control Grading Items Summary 95
Figure 11.1-3 Fire Service Communications Grading Items Summary 97
Figure 11.1-3 Englishman River Water Supply Grading Items Summary 100
Figure 11.1-5 Nanoose Peninsula Water Supply Grading Items Summary 102
Figure 12.3-1 Distribution of Response 114
Figure 12.3-2 Nanoose Bay – Standard Distances Analysis Fire Hall (Current location) 115
Figure 12.3-3 RFF Points and 2.5/5/8km responses from the Fire Hall 116

1. SCOPE OF OUR ENGAGEMENT

The Regional District of Nanaimo contracted the services of Opta Intelligence Services Inc. (formerly IAO) – Fire Underwriters Survey to carry out a review of the Nanoose Volunteer Fire Department. The purpose of the assessment is to review the Nanoose Volunteer Fire Department's capacity to provide current and future fire protection and rescue services to the community of Nanoose Bay.

This report will provide an update on Nanoose Bay Fire Protection Area's fire insurance grading assignments and make recommendations aimed at improving the level of public fire protection and fire insurance grading classifications when considering the above items.

1.1. Acknowledgement

OPTA and Fire Underwriters Survey wishes to thank the Nanoose Volunteer Fire Department and the Regional District of Nanaimo staff for their valuable assistance in conducting this survey and preparation of this report.

1.2. Distribution of Use

This report, along with the findings and conclusions, contained herein, is intended for the sole use of the Regional District of Nanaimo, the Nanoose Volunteer Fire Department and the Nanoose Bay community members to assist in the public fire protection planning needs of the community.

Judgements about the conclusions drawn, and opinions presented in this report should be made only after considering the report in its entirety. This report is Private and Confidential and is intended for the exclusive use of the Regional District of Nanaimo, Nanoose Volunteer Fire Department and the Nanoose Bay community members.

1.3. Reliance and Limitation

We have relied on the general accuracy of information provided by stakeholders without independent verification. However, we have reviewed this information for consistency and reasonableness. The accuracy of our conclusions is dependent upon the accuracy and completeness of this underlying data. Therefore, any discrepancies discovered in this data by the reader should be reported to us and this report amended accordingly, as warranted.

2. EXECUTIVE SUMMARY

This report outlines the significant findings of a Fire Underwriters Survey of the Nanoose Volunteer Fire Department and the community of Nanoose Bay. The Regional District of Nanaimo contracted the services of Opta Intelligence Services Inc. (formerly IAO) – Fire Underwriters Survey to carry out a review of the Nanoose Volunteer Fire Department. The purpose of the review is to evaluate the Nanoose fire department current capabilities as well as to strategically guide the fire department through the next 25 years of population growth and community development. The study included a review of all aspects of the fire department to ensure that performance standards reflect industry best practices. A second objective of the report was to carry out a fire insurance grade review for the community and provide recommendations in areas that would help improve the overall level of public fire protection as well as fire insurance grading classifications.

The report covers a community risk and hazard assessment, an analysis of the Nanoose Volunteer Fire Department current response capability, a fire department assessment including apparatus, manpower, training and operations, fire safety control assessment including fire prevention and public education programs, and a future needs assessment based on proposed community development. Additionally comments have been provided concerning apparatus requirements for multilevel buildings as well as guidelines to address fire department access issues on new developments. A Fire Hall location analysis has also been provided to evaluate the current and future station coverage of properties in Nanoose Bay. The study also included a Fire Insurance Grade review for the community of Nanoose Bay. The report includes several recommendations to guide the fire department and community in each of the areas five areas assessed for fire insurance grading purposes.

The fire insurance grades the Nanoose Bay have improved since the previous assessment. The results of the updated Fire Insurance Grades are summarized below for general Commercial Lines and Personal Lines classifications.

Fire Insurance Grade	2013	1982
PFPC – Public Fire Protection Classification (Commercial Lines)	5	8
DPG – Dwelling Protection Grade (Personal Lines)	3A	3A

3. TERMS OF REFERENCE

Term	Definition
Aerial Fire Apparatus.	A vehicle equipped with an aerial ladder, elevating platform, aerial ladder platform, or water tower that is designed and equipped to support fire fighting and rescue operations by positioning personnel, handling materials, providing continuous egress, or discharging water at positions elevated from the ground.
Aid - Automatic Aid	A plan developed between two or more fire departments for immediate joint response on first alarms. This process is accomplished through simultaneous dispatch, documented in writing, and included as part of a communication center's dispatch protocols.
Aid - Mutual Aid	Reciprocal assistance by emergency services under a prearranged plan. This is part of the written deployment criteria for response to alarms, as dispatched by the communications center.
Basic Fire Flow	The benchmark required fire flow for a community, typically the fifth highest calculated required fire flow of all areas within the community. The Basic Fire Flow is the benchmark against which all protective facilities are measured.
Building	Any structure used or intended for supporting or sheltering any use or occupancy.
Building area	The greatest horizontal area of a building above grade within the outside surface of exterior walls or within the outside surface of exterior walls and the centre line of firewalls.
Building height	The number of storeys contained between the roof and the floor of the first storey.
Built Environment	Buildings and structures: human-made buildings and structures, as opposed to natural features.
Combustible	A material fails to meet the acceptance criteria of CAN4-S114, “Determination of Non-Combustibility in Building Materials.”
Commercial Lines Insurance	A distinction marking property and liability coverage written for business or entrepreneurial interests (includes institutional, industrial, multi-family residential and all buildings other than detached dwellings that are designated single family residential or duplex) as opposed to Personal Lines.
Community - Major or Large	An incorporated or unincorporated community that has: • a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND • a total population of 100,000 or greater.
Community - Medium	An incorporated or unincorporated community that has: • a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND/OR • a total population of 1,000 or greater.
Community - Small	An incorporated or unincorporated community that has: • no populated areas with densities that exceed 200 people per square kilometre; AND • does not have a total population in excess of 1,000.
Company	A group of members that is (1) under the direct supervision of an officer or leader; (2) trained and equipped to perform assigned tasks; (3) usually organized and identified as engine companies, ladder companies, rescue companies, or squad companies;

	(4) usually operates with one piece of fire apparatus (pumper, ladder truck, elevating platform, rescue, squad, ambulance); and (5) arrives at the incident scene on fire apparatus or assembles at the scene prior to assignment. The term company is synonymous with company unit, response team, and response group.
Demand Zone Levels	An area used to define or limit the management of a risk situation. A demand zone can be a single building or a group of buildings. It is usually defined in terms of geographical boundaries, called fire management areas or fire management zones.
Detached Dwelling	Buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms. Aka. One- and Two-Family Dwelling
Dwelling Protection Grade (DPG)	The fire insurance grade or grades utilized by Personal Lines Insurers in Canada. The DPG is a number between 1 and 5 that is calculated by comparing the fire risk in terms of require fire flows to available resources. Unlike the PFPC system, within the DPG system, the benchmark required fire flow is a constant, and is typical for a Detached Dwelling. The DPG for communities across Canada is determined from a basic survey of the available resources related to fire risk reduction and fire protection capacity.
Dwelling, Typical	Refers to One- and Two-Family Detached Dwellings: - with no structural exposures (buildings with an area exceeding 9.3 sq.m) within 3 m; - with no unusual fire risks (such as wood shake roofs); AND - with an effective area (all storeys excluding basements) not exceeding 334 sq.m (3,600 sq.ft).
Emergency Dispatch Protocol	A standard sequence of questions used by telecommunicators that provides post-dispatch or pre-arrival instructions to callers.
Emergency Incident	Any situation to which the emergency services organization responds to deliver emergency services, including rescue, fire suppression, emergency medical care, special operations, law enforcement, and other forms of hazard control and mitigation.
Emergency Response Facility (ERF)	A structure or a portion of a structure that houses emergency response agency equipment or personnel for response to alarms. Examples of ERFs include a fire station, a police station, an ambulance station, a rescue station, a ranger station, and similar facilities.
Emergency	A condition that is endangering or is believed to be endangering life or property; an event that requires the urgent response of an emergency response agency.
Engine	A fire department pumper having a rated capacity of 2840 L/min (625 Igpm) or more.
Exposing building face	That part of the exterior wall of a building which faces one direction and is located between ground level and the ceiling of its top storey or, where a building is divided into fire compartments, the exterior wall of a fire compartment which faces one direction.
Exposure	The heat effect from an external fire that might cause ignition of, or damage to, an exposed building or its contents.
Fire Apparatus	A fire department emergency vehicle used for rescue, fire suppression, or other specialized functions.
Fire Department Vehicle	Any vehicle, including fire apparatus, operated by a fire department.

Fire Department	A fire department is a group of persons formally organized as an authorized service of a municipal or other local government having a sustainable source of funding, which could include taxation, fees for services provided, contracts, permit fees or other reliable sources of revenue which will support the cost of services provided. A minimum number of trained persons able and equipped to respond with motorized fire fighting apparatus to extinguish fires or to respond to other classes of circumstances which may occur within a designated geographical area.
Fire Department. - Public Fire Department	A legally formed organization providing rescue, fire suppression, emergency medical services, and related activities to the public.
Fire Force, Available	A measure of the human resources that are available to participate in fire fighting operations on the fire ground or an equivalent measure.
Fire Force, Required	A measure of the human resources that are needed to participate in fire fighting operations on the fire ground (or an equivalent measure) for an ideal response based on the required fire flow, number of companies and average response time as specified in the Table of Effective Response.
Fire Flow	The flow rate of a water supply, measured at 20 psi (137.9 kPa) residual pressure that is available for fire fighting.
Fire Growth Potential	The potential size or intensity of a fire over a period of time based on the available fuel and the fire's configuration.
Fire Hall	An "emergency response facility" where fire department apparatus and equipment are housed, protected against harm, and made readily accessible for use in emergencies. The fire hall is normally the location where fire fighters respond from. Other primary purposes include training and administration of the fire department.
Fire load	(as applying to an occupancy) The combustible contents of a room or floor area expressed in terms of the average weight of combustible materials per unit area, from which the potential heat liberation may be calculated based on the calorific value of the materials, and includes the furnishings, finished floor, wall and ceiling finishes, trim and temporary and movable partitions.
Fire Protection	Methods of providing fire detection, control, and extinguishment.
Fire Suppression	The activities involved in controlling and extinguishing fires. Fire suppression includes all activities performed at the scene of a fire or training exercise that expose fire department members to the dangers of heat, flame, smoke, and other products of combustion, explosion, or structural collapse.
First Responder (EMS)	Functional provision of initial assessment (airway, breathing, and circulatory systems) and basic first aid intervention, including CPR and automatic external defibrillator (AED) capability. A first responder assists higher level EMS providers.
First Storey	The uppermost storey having its floor level not more than 2 m above grade
Grade	(as applying to the determination of building height) The lowest of the average levels of finished ground adjoining each exterior wall of a building, except that localized depressions such as for vehicle or pedestrian entrances need not be considered in the determination of average levels of finished ground.
Hazard	The potential for harm or damage to people, property, or the environment. Hazards include the characteristics of facilities, equipment systems, property, hardware, or other objects, and the actions and inactions of people that create such hazards.

Hazardous Material	A substance (solid, liquid, or gas) that when released is capable of creating harm to people, the environment, and property.
Incident Commander.	The person who is responsible for all decisions relating to the management of the incident and is in charge of the incident site.
Incident Management System (IMS)	An organized system of roles, responsibilities, and standard operating procedures used to manage emergency operations. Such systems are also referred to as incident command systems (ICS).
Initial Attack	An aggressive suppression action consistent with fire fighter and public safety and values to be protected.
Initial Attack Apparatus	Fire apparatus with a permanently mounted fire pump of at least 250 USgpm (950 L/min) capacity, water tank, and hose body whose primary purpose is to initiate a fire suppression attack on structural, vehicular, or vegetation fires, and to support associated fire department operations.
Ladder Company	A fire department company that is provided with an aerial fire apparatus and is trained and equipped to support fire fighting and rescue operations by positioning personnel, handling materials, providing continuous egress, or discharging water at positions elevated from the ground.
Ladder Truck	An alternate name for Aerial Fire Apparatus.
Master Stream	A portable or fixed fire fighting appliance supplied by either hose lines or fixed piping and that has the capability of flowing in excess of 300 USgpm (1140 L/min) of water or water based extinguishing agent.
Member	A person involved in performing the duties and responsibilities of a fire department, under the auspices of the organization. A fire department member can be a full-time or part-time employee or a paid or unpaid volunteer, can occupy any position or rank within the fire department, and can engage in emergency operations.
Mobile Water Supply (Tanker)	A vehicle designed primarily for transporting (pickup, transporting, and delivery) water to fire emergency scenes to be applied by other vehicles or pumping equipment.
Non-combustible	A material that meets the acceptance criteria of CAN4-S114, “Determination of Non-Combustibility in Building Materials.”
Non-combustible construction	The type of construction in which a degree of fire safety is attained by the use of non-combustible materials for structural members and other building assemblies.
Non-combustible Material	A material, as defined in NFPA 220, Standard on Types of Building Construction, that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapours when subjected to fire or heat. Materials reported as non-combustible, when tested in accordance with ASTM E 136, Standard Test Method for Behaviour of Materials in a Vertical Tube Furnace at 750°C, are considered non-combustible materials.
Officer	
Officer - Company Officer	A supervisor of a crew/company of personnel. This person could be someone appointed in an acting capacity. The rank structure could be either sergeant, lieutenant, or captain.
Officer - Incident Safety Officer	An individual appointed to respond or assigned at an incident scene by the incident commander to perform the duties and responsibilities of that position as part of the command staff.

Officer - Supervisory Chief Officer	A member whose responsibility is above that of a company officer, who responds automatically and/or is dispatched to an alarm beyond the initial alarm capabilities, or other special calls. In some jurisdictions, this is the rank of battalion chief, district chief, deputy chief, assistant chief, or senior divisional officer (UK fire service). The purpose of their response is to assume command, through a formalized transfer-of-command process, and to allow company officers to directly supervise personnel assigned to them.
One- and Two-Family Dwelling	Buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than three outsiders, if any, accommodated in rented rooms.
Optimum Level of Fire Protection	The combination of fire fighting staff and apparatus that delivers a suppression effort commensurate with the fire demand faced, yet representing the most efficient use of resources in a safe and effective manner.
Peak Fire Flow	All buildings and building groups within a District or Municipality, the highest calculated required fire flow.
Personal Lines Insurance	Insurance covering the liability and property damage exposures of private individuals and their households as opposed to Commercial Lines. Typically includes all detached dwellings that are designated single family residential or duplex.
Personal Protective Clothing	The full complement of garments fire fighters are normally required to wear while on emergency scene, including turnout coat, protective trousers, fire-fighting boots, fire-fighting gloves, a protective hood, and a helmet with eye protection.
Personal Protective Equipment	Consists of full personal protective clothing, plus a self-contained breathing apparatus (SCBA) and a personal alert safety system (PASS) device.
Public Fire Department	An organization providing rescue, fire suppression, emergency medical services, and related activities to the public.
Public Fire Protection Classification	The fire insurance grade or grades utilized by Commercial Lines Insurers in Canada. The PFPC is a number between 1 and 10 that is calculated by comparing the fire risk in terms of require fire flows to available resources. The PFPC for communities across Canada is determined from an extensive survey and analysis of the fire risk in the built environment and the available resources related to fire risk reduction and fire protection capacity.
Public Fire Service Communications Center	The building or portion of the building used to house the central operating part of the fire alarm system; usually the place where the necessary testing, switching, receiving, transmitting, and power supply devices are located.
Public Safety Answering Point	A facility in which 9-1-1 calls are answered.
Pumper	Fire apparatus with a permanently mounted fire pump of at least 750 USgpm (2850 L/min or 625 Igpm) capacity, water tank, and hose body whose primary purpose is to combat structural and associated fires.
Quint	Fire apparatus with a permanently mounted fire pump, a water tank, a hose storage area, an aerial ladder or elevating platform with a permanently mounted waterway, and a complement of ground ladders. The primary purpose of this type of apparatus is to combat structural and associated fires and to support fire-fighting and rescue operations by positioning personnel-handling materials, providing continuous egress, or discharging water at positions elevated from the ground.
Required Fire Flow	The rate of water flow, at a residual pressure of 20 psi (138 kPa) and for a specified duration, that is necessary to confine and control a major fire in a specific building or group of buildings which comprise essentially the same fire area by virtue of

	immediate exposure. This may include as much as a city block.
Storey	That portion of a building which is situated between the top of any floor and the top of the floor next above it, and if there is no floor above it, that portion between the top of such floor and the ceiling above it.
Wildland/Urban Interface	The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

4. FIRE UNDERWRITERS SURVEY

Fire Underwriters Survey is a national organization that represents more than 85 percent of the private sector property and casualty insurers in Canada. Fire Underwriters Survey provides data to program subscribers regarding public fire protection for fire insurance statistical and underwriting evaluation. It also advises municipalities if they desire to review the current levels of fire defence in the community and provide direction with recommendations where improvements will enable them to better deal with fire protection problems.

Fire Underwriters Survey offices maintain data from surveys on public fire protection programs throughout all municipalities across Canada. The results of these surveys are used to establish the Public Fire Protection Classification (PFPC) and Dwelling Protection Grade (DPG) for each community. The PFPC and DPG is used by insurance underwriters to determine the amount of risk they are willing to assume in a given community or section of a community.

The overall intent of the fire insurance grading systems is to provide a measure of the ability of the protective facilities within a community to prevent and control the major fires that may be expected to occur by evaluating in detail the adequacy, reliability, strength and efficiency of these protective facilities.

4.1. Fire Insurance Grading Classifications

Public Fire Protection Classification

The Public Fire Protection Classification is a numerical grading system scaled from 1 to 10. Class 1 is the highest grading possible and Class 10 indicates that little or no public fire protection is in place. The PFPC grading system evaluates the ability of a community's fire protection programs to prevent and control major fires that may occur in multifamily residential, commercial, industrial, and institutional buildings and course of construction developments.

Fire Underwriters Survey also assigns a second grade for community fire protection, referred to as the Dwelling Protection Grade (DPG), which assesses the protection available for small buildings such as single-family dwellings.

Dwelling Protection Grade

The Dwelling Protection Grade is a numerical grading system scaled from 1 to 5. One (1) is the highest grading possible and five (5) indicates little or no fire protection is provided. This grading reflects the ability of a community to handle fires in small buildings such as single family residences.

4.2. Public Fire Protection Classification System

The Public Fire Protection Classification grading system is a measure of a community's overall programs of public fire protection. The ability of a community's fire defences are measured against recognized standards of public fire protection relative to fire hazard and fire / life safety risk present within the community. The following areas of public fire protection are reviewed in the survey and have the following weights within the PFPC grading system:

- Fire Department 40 percent
- Water Supply 30 percent
- Fire Safety Control 20 percent
- Fire Service Communications 10 percent

The Public Fire Protection Classifications are conveyed to subscribing insurance companies of Fire Underwriters Survey. FUS subscribers represent approximately 85 to 90 percent of the fire insurance underwriters in Canada. Subscribers use this information as a basis in their fire insurance underwriting programs to set limits in the amount of risk they are willing to assume within a given portion of a community, and to set fire insurance rates for commercial properties. Improved public fire protection grades may result in increased competition for insurance underwriting companies to place their business within a community. Our analysis indicates that an improved fire protection grade has a positive effect on fire insurance rates.

In addition, PFPC classifications are a measure of the public fire protection within a community. Many progressive communities use the classification system to assess the performance of their public fire protection programs, and to plan the direction of public fire protective services for the future of the community.

Improvements that would have a cumulative positive effect in fire insurance grading classifications and public fire protection ability are discussed within this report. The intent of

identifying areas where improvements can be made is to provide the Nanoose Volunteer Fire Department, the community of Nanoose Bay and the Regional District of Nanaimo with direction in their community fire protection planning, if so desired and supported by the community.

4.3. Dwelling Protection Grading System

Dwelling Protection Grades are based on a 1 to 5 grading system; DPG 5 indicates little or no fire protection being available. Most small and midsize communities that have a gradable fire department and a gradable emergency water supply system are assigned a DPG 3A rating, which the insurance industry has termed fully protected. DPG 3B refers to communities, or portions of communities, that have a recognized fire department but are not protected with a recognized water supply. The insurance industry has termed this 'semi-protected'. Within the Fire Underwriters Survey grading, a grade of 3B indicates that the fire department is equipped, trained, prepared and adequately staffed to provide "Standard Shuttle Service" to a fire event within a reasonable response time (i.e. utilize a pumper, tender and various related equipment to deliver water to a fire site and provide structural firefighting at the fire event).

The protected assignment refers to DPG 1 to DPG 3A. An unprotected designation refers to DPG 5. DPG 3B and 4 are given the semi-protected designation. The lower the DPG assignment is, the larger the discount given in fire insurance rates. The discounts given for an identical property considered fully-protected over those considered unprotected can be approximately 60 percent. Where there is sufficient population and sufficient taxation base, the savings generated can more than offset the operating and capital costs of an effective fire service.

A summary of the minimum requirements for the Dwelling Protection Grade system is provided in Appendix A.

Many insurers have simplified the Dwelling Protection Grading system to a simple three tier system. This is typical for setting insurance premium rates for detached single family residences only.

Different insurers utilize the Dwelling Protection Grades differently to set their own rates based on the marketplace and their own loss experiences. The three tier system that is typically used

by many insurers is shown in Table 4.3-1 FUS Grades Correlation to Commonly used Insurance Terminology and Simplified Grades.

Table 4.3-1 FUS Grades Correlation to Commonly used Insurance Terminology and Simplified Grades

Fire Underwriters Survey Dwelling Protection Grades	System Used by Many Insurance Companies "3 tier" system	Insurance Companies typically refer to this grade as
1	Table I	Fully Protected, Career
2	Table I	Fully Protected, Composite
3A	Table I	Fully Protected, Volunteer
3B[1]	Table II	Semi–Protected, Career or Volunteer (Shuttle)
4	Table II or III	Limited–Protection, Career or Volunteer
5	Table III	Unprotected

[1] Note that communities qualifying for Dwelling Protection Grade of 3B may also be able to achieve and equivalency to DPA 3A through Superior Tanker Shuttle Service accreditation.

The fire insurance industry has minimum requirements that communities must meet in order for their fire protection program to receive recognition. The insurance industry sets benchmarks for:

- Fire Department Organization
- Membership
- Training
- Fire Apparatus Requirements
- Fire Suppression Capability, and
- Alarm Notification

4.4. Measuring Fire Risk in This Review

The strength of fire defence within a community depends largely on the will and financial ability of the community to support this emergency service. Fire Underwriters Survey and the National Fire Protection Association statistics indicate that the larger the population of a community, the higher the level of fire protection, when measured against the risk of fires within the community. The best scenario for the level of fire protection occurs when expectations of fire suppression and prevention match the community's willingness to pay for this expectation.

Community growth resulting from capital developments increases the level of fire risk; however, the development of fire protective services often falls behind the developments, particularly in

communities where growth happens quickly. If the community expectation levels are constant and the fire protective service level is also constant, then as the fire risk level increases the fire protection level relative to the fire risk level decreases and community expectation (for a reasonable level of fire protection) may no longer be met.

Optimum Level of Fire Protection

The combination of firefighting staff and apparatus that delivers a suppression effort commensurate with the fire demand faced, yet representing the most efficient use of resources in a safe and effective manner.

4.5. Overview of the Assessment Process

There is no one universal model of fire defence that can be applied to all situations or to a community requiring this emergency service. Ideally, the strength of a fire protection program is balanced between the risk of serious fire and the community's fire loss experience. Fire defences should be tailored with these issues in mind. To gauge the needs of the fire service based on experience alone would be to ignore perils that have not yet occurred. Ignoring experience and focusing on risk alone may tend to build-up a fire department force beyond the financial acceptability of the community paying for the service.

Fire Underwriters Survey measures the ability of a fire department against the risk of fire likely to occur within a community. This measurement is usually not determined by the most significant risk, nor is it based on the average fire risk. FUS's measurement tends to focus on those structures where there is a considerable risk to fire and life safety, and where total or temporary loss of a particular structure would have a significant impact on a community's tax base and economy. A fire department should be structured and supported to effectively deal with everyday emergencies while at the same time capable of controlling and extinguishing most fires that may occur.

In the case of Nanoose Volunteer Fire Department, the fire protective service was measured in its ability to provide public fire protection to the typical risks found in the community, i.e. 95th percentile of Required Fire Flows calculated for the community. These risks included (but were not limited to): single family residential, multiple family residential and commercial buildings. In addition to the Required Fire Flow calculations, other risk factors that make up the Nanoose community risk profile were identified. These include the geography and road infrastructure, the

community demographic profile and past fire loss statistics. Identifying such risk factors will aid in the planning of fire protection services for Nanoose Bay.

It is important to note that Fire Underwriters Survey examines the entire program of the community's fire defence in order to grade the overall program. However in this study, some of the assessments carried out do not form part of the Fire Insurance Grading and do not influence the community's overall grade. They are provided only to strategically guide the fire department in planning through the next 25 years of population growth and community development. These include the review of the fire department response against performance standards and industry best practices such as NFPA 1720.

5. PROJECT SCOPE AND METHODOLOGY

5.1. Project Objectives

The scope of this project was to carry out a review of the Nanoose Volunteer Fire Department's capacity to provide current and future fire protection services to the community of Nanoose Bay. The study included a comprehensive review of the fire department resources and operations, the current response level and an assessment of the fire departments future resource needs based on anticipated community growth. Additionally firefighting equipment requirements for multilevel buildings as well as building design guidelines to facilitate fire department access were identified. A fire insurance grade update for Nanoose Bay was carried out. The evaluation considered both current and future fire protection needs. The tasks and methodology used to conduct the assessment are listed below:

1. **Community Risk and Hazard Assessment**
    - Assessment of community profile
    - Required Fire Flow Calculations
    - Profile and quantify hazard and risk
2. **Fire Department Assessment**
    - Fire Department Profile
    - Apparatus and equipment
    - Distribution of resources
    - Pumping capacity
    - Maintenance programs
    - Staffing and personnel
    - Training programs
    - Administration
    - Pre-Incident Planning Program
3. **Fire Safety Control Assessment**
4. **Fire Service Communications Assessment**
5. **Complete a Fire Insurance Grading Review**
6. **Develop a Report that Includes Findings and Recommendations**

The following key contacts were made and provided information throughout the survey and development of report:

- Doug Penny, Fire Chief, NVFD
- John Newall, Deputy Fire Chief, NVFD
- Denis Holme, Training Officer, NVFD
- Tom Armet, Manager Building, Bylaw & Emergency Planning Services, Regional District of Nanaimo
- Tom Sohier, GIS Coordinator, Regional District of Nanaimo
- Deborah Churko, Engineering Technologist, Regional District of Nanaimo

6. COMMUNITY RISK AND HAZARD ASSESSMENT

6.1. Background

A fire hazard and risk assessment was conducted throughout the community of Nanoose Bay to aid in determining each of the communities fire protection needs and to assist in assessing the adequacy of the Fire Department. A risk and hazard assessment, along with a response distance review, community growth assessment and assessment of trends of emergency responses, lays the groundwork to determine fire protection needs within a community. This assessment is important in determining organizational structure, personnel requirements, training requirements, fire apparatus and fire equipment needs, response time requirements and adequacy of fire station location.

The "Risk and Hazard Assessment" is an evaluation of the life safety risks, fire loading and risk of fire that is present in a given area.

6.2. Measuring Fire Risk

Adequate response to a fire emergency is generally measured by the speed with which a responding firefighting crew(s) can arrive at the fire emergency with the correct type and amount of resources, to have a reasonable degree of opportunity to control or extinguish a fire. Simply put, the response provided by a firefighting crew should equal the potential severity of the fire or fire emergency. The required response from a firefighting crew is greater if life safety is a factor in a fire event and the expected response time is shorter.

The potential severity of a fire event is generally associated with the fuel load present and exposures to the fire. Factors such as building construction materials; quality of construction; building renovation history; building size, height and age; occupancy and hazards associated with the occupancy, will all contribute to the potential severity of a fire. In addition, other buildings sufficiently exposed to a burning building can contribute to the magnitude of a fire and, the resources necessary to be in place to control or extinguish a given fire. Alternatively, building controls and automatic fire protection systems (both active and passive) that limit fire spread will reduce the potential severity of a fire. For building controls to be considered effective, their design, installation and maintenance must also be reviewed as any weak link may result in the system being ineffectual.

Much of the research into fire protection requirements for individual buildings and communities and the corresponding number of "*engine companies*" and response times has been conducted by Fire Underwriters Survey and the National Fire Protection Association. Fire Underwriters Survey evaluates adequacy of response by comparing the potential severity of fires that may occur with a rating of the ability of fire crews and their resources responding within a specified time period relative to the fire and life safety risk potential that may be needed. NFPA on the other hand measures fire department response in two parts:

- First response – Getting the first company to arrive on scene in an accepted time frame.
- Depth of response – Assembling adequate crew resources on scene within an acceptable time frame to effectively fight a fire.

Both evaluations are based on the level of risk present in the community. The base point for measuring fire risk and the resultant available and adequate response in the Fire Underwriters Survey method is the determination of Required Fire Flows. In this study other factors that contribute to the overall community risk profile were also identified. These include community demographics, geography and road infrastructure, and past fire loss statistics.

Table 6.2-1 Fire Underwriters Survey - Table of Effective Response illustrates various sectors commonly found in most communities, and indicates a range of risk ratings that are commonly applied to these sectors. The Table of Effective Response also indicates a range of fire flows that are normally associated with each community sector profile. Additionally, Table 6.2-1 indicates the number of engine and ladder companies that are expected to be needed to control and suppress fires occurring within representative building zones throughout the community.

The number of fire companies that will be needed is correlated to fire loading within the community's building stock and to life safety risks present. Fire flow requirements are determined by construction characteristics, occupancy, size and exposures to representative buildings throughout the community.

Table 6.2-1 Fire Underwriters Survey - Table of Effective Response

The following Table aids in the determination of Engine and Ladder Company distribution and total members needed. It is based on availability within specified response travel times in accordance with the fire potential as determined by calculation of required fire flows, but requiring increases in availability for severe life hazard.

RISK RATING	BUILDING DISTRICT EXAMPLES	FIRE FLOW		INITIAL RESPONSE TO ALARMS		1st DUE	2nd DUE	1st DUE	TOTAL AVAILABILITY NEEDED			
		L/min X1000	Approx. Igpm Range	Engine Companies	Ladder Companies	Engine Company, Minutes	Engine Company, Minutes	Ladder Company, Minutes	Engine Companies.		Ladder Companies	
									No.	Min.	No.	Min.
1 (a)	Very small buildings, widely detached buildings.	2	400	1	0	7.5	-	*9	1	7.5	*1	9
(b)	Scattered development (except where wood roof coverings).	3	600	1	0	6	-	*7.5	1	6	*1	7.5
2	Typical modern, 1 - 2 storey residential subdivision 3 - 6 m 10 - 20 ft. detached).	4-5	800-1,000	2	0	4	6	*6	2	6	*1	6
3 (a)	Close 3 - 4 storey residential and row housing, small mercantile and industrial.	6-9 10-13	1,200-2,000 2,200-2,800	2 2	1 (if required by Hazards)	3.5 3.5	5 5	*4 *4	2 3	5 6	*1 *1	4 4
3 (b)	Seriously exposed tenements. Institutional. Shopping Centres Fairly large areas, fire loads, and exposures.	14-16 17-19	3,000-3,600 3,800-4,200	2 2	1 1	3.5 3.5	5 5	4 4	4 5	7 7	1 **1	4 4
4 (a)	Large combustible institutions, commercial buildings, multi- storey and with exposures.	20-23 24-27	4,400-5,000 5,200-60,00	2	1	2.5 2.5	4 4	3.5 3.5	6 7	7.5 7.5	2 2	5 5
4 (b)	High fire load warehouses and buildings like 4(a).	28-31 32-35	6200-6800 7000-7600	3	1	2.5 2.5	3.5 3.5	3.5 3.5	8 9	8 8	3 3	7 7
5	Severe hazards in large area buildings usually with major exposures. Large congested frame districts.	36-38 39-42 43-46	7,800-8,400 86,00-9,200 9,400-10,000	3	3	2 2 2	3.5 3.5 3.5	2.5 2.5 2.5	10 12 14	8 9 9	4 5 6	7.5 8 9

Notes to Table of Effective Response

* A ladder company is required here only when exceptional conditions apply, such as 3 storey heights, significant life hazards.

** For numerous or large single buildings over three stories use two ladder companies in 5 minutes.

When unsprinklered buildings over six stories have fire flow requirements less than Group 4, the number of Pumper and Ladder Companies under "Total Availability Needed" should be increased at least to the next group to provide the additional manpower required except where this additional manpower regularly responds in the time allotted, as occurs in some volunteer or composite fire departments.

The table gives travel times for apparatus AFTER dispatch and turn-out. Under very exceptional conditions affecting total response time, these nominal figures should be modified.

From the perspective of insurers, the level of fire risk is a function of several key factors (each of which are influenced by a number of sub-factors) that include:

1. **Likelihood** of fire event occurring
    - Influenced by many risk factors
    - Occupancy type (industrial, commercial, multi-family residential)
    - WUI - wild land urban interface exposures and Climatic conditions
    - Presence of combustibles, presence of ignition sources
    - Quantity of area protected, number of buildings/risks
    - Population demographic
2. **Consequence** of fire event occurring
    - Loss of life
    - Density of population
    - Number of persons expected to be affected
    - Loss of property and property values
    - Loss of business, employment, tax revenue, economic impacts
3. Controls in place to prevent fire event from occurring
    - Codes, Bylaws and enforcement measures

- Fire Prevention Program
- Community and building design

4. Controls in place to reduce impact of fire event that occurs
    - Quality and availability of fire department
    - Number of staff and quality of training program
    - Number of apparatus and quality/reliability of equipment
    - Availability and reliability of adequate water supplies for fire fighting

When there is an increase in the quantity of values that are being protected by a fire protective service organization, the level of fire protective service typically must increase to meet the increased risk levels. If the level of fire protective service remains a constant during the rise of protected property values, then the rated overall level of risk increases and the fire insurance grade typically reflects this.

6.3. Nanoose Bay Community Risk Profile

A number of factors were considered in developing a community risk profile for Nanoose Bay. These factors are Required Fire Flows, community demographics, past fire loss statistics and the geography/road infrastructure in Nanoose Bay.

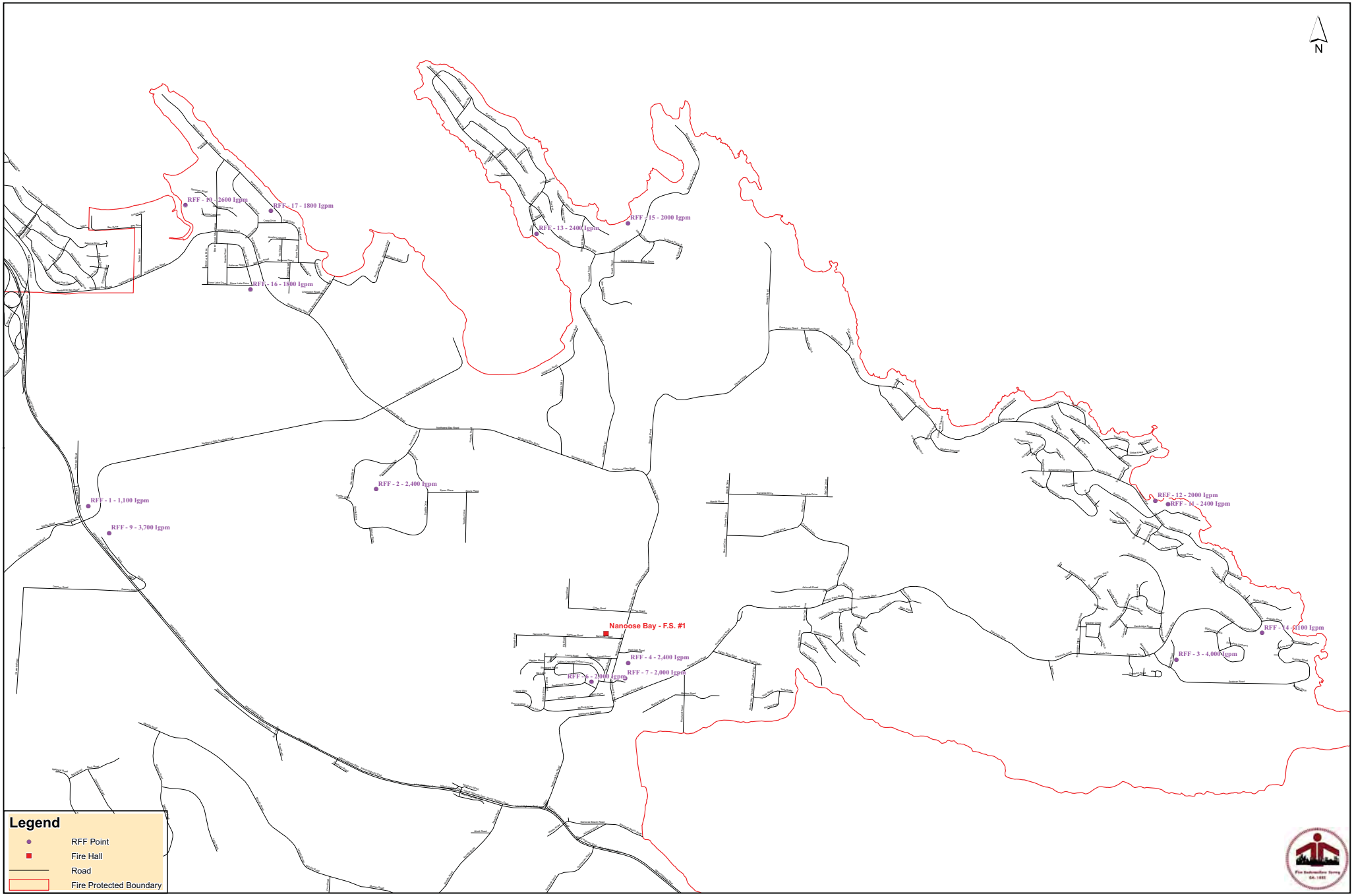
6.3.1. Required Fire Flows

To develop the Required Fire Flows within Nanoose Bay, the methodology described in the Fire Underwriters Survey Water Supply for Public Fire Protection, 1999 edition was used. Refer to Appendix B.

Required Fire Flows may be described as the amount and rate of water application required in firefighting to confine and control the fires possible in a building or group of buildings which comprise essentially the same fire area by virtue of immediate exposures.

It should also be noted that the Required Fire Flows determined by the Fire Underwriters Survey are then used to set the benchmark (Basic Fire Flow) that the community will be measured against. These fire flows are intended to be adequate to fight fires offensively, and to provide property protection (including exposure protection) in addition to life safety protection.

17 Required Fire Flows were calculated throughout Nanoose Bay Fire Protection Area to provide an accurate idea of the level of fire risk that is within the fire protection area. Figure 6.3-1 shows the locations of the calculated Required Fire Flows in Nanoose Bay. Full details regarding the calculation of each Required Fire Flow can be viewed in Appendix C. The Table 6.2-1 Fire Underwriters Survey - Table of Effective Response was used in determining the Required Fire Flows.



Nanoose Bay	Calculated RFF Points Scale = 1:9,000 0 275 550 Meters	Fire Underwriters Survey

6.3.2. Basic Fire Flow

The Basic Fire Flow is determined from the analysis of the Required Fire flows. It is important to stress that the Basic Fire Flow assigned is not the peak required fire flow and is intended to be adequate for 90 to 95 percent of the typical structure fires that are expected to occur based on the Required Fire Flows calculated as part of the risk assessment.

The Basic Fire Flow for Nanoose Bay has been set at 2,400 IGPM in 2013.

Required Fire Flows calculated that were higher than the Basic Fire Flow are not excluded from the fire insurance grading review. They are still utilized as part of the analysis under specific grading items. Additional resources and planning may be required to adequately provide protection to peak Required Fire Flow risks.

6.3.3. Demographics

Community demographics are important for gaining insight on the population being protected. Demographic information that should be determined when building a community risk profile includes population distribution by age, vulnerable individuals or occupancies and population shifts. The population of Nanoose Bay as reported by Statistics Canada 2011 census data is 5,471 with approximately 30 percent of the population aged 65 and over.

6.3.4. Geography/Road Infrastructure

The fire department's ability to respond to an emergency promptly may be impacted by the geography or road infrastructure that exists in the community. Due to the geography of the Nanoose Bay, some properties are in excess of ten minute response times from the Nanoose fire hall.

6.3.5. Fire Loss Statistics

Reviewing historical fire loss data including types and number of fire incidents can highlight the fire incident patterns that are prevalent in a community. Based on historic data provided by the Nanoose Volunteer Fire Department, there was an average of three structure fires per year (between Aug 2011 and Aug 2013) which is below the provincial average for similar sized communities.

A summary of the Nanoose Bay community risk profile is shown in Table 6.3-1 below:

Table 6.3-1 Nanoose Bay Community Risk Profile

Risk Factors	Community Profile	Level of concern
Basic Fire Flow	A Basic Fire Flow of 2,400 IGPM was assigned to the community of Nanoose Bay.	Moderate
Number of Buildings with Required Fire Flows greater than 3,300 IGPM	Two buildings in the community have a calculated Required Fire Flow greater than 3,300 IGPM	Moderate
Building Height	One multi-unit residential building 4 storeys in height One multi-unit residential building 3 storeys in height	Moderate
Demographic Profile	High percentage of population identified as senior citizens over the age of 65. (25 percent in Electoral area E) Vulnerable occupancies such as retirement homes.	High
Geography	Excess of ten minutes response times to certain properties in the community Areas with high risk of Wildland Urban Interface (WUI) fires.	High
Past Fire Loss Statistics	An average of three structure fires per year over the past three years. This is below the provincial average when compared with similar sized communities	Moderate

6.3.6. Recommendations

It is recommended that the Nanoose Volunteer Fire Department carry out Simplified Risk Assessments to monitor and update the community risk profile. The Simplified Risk Assessments maybe carried out every two to five years following three steps:

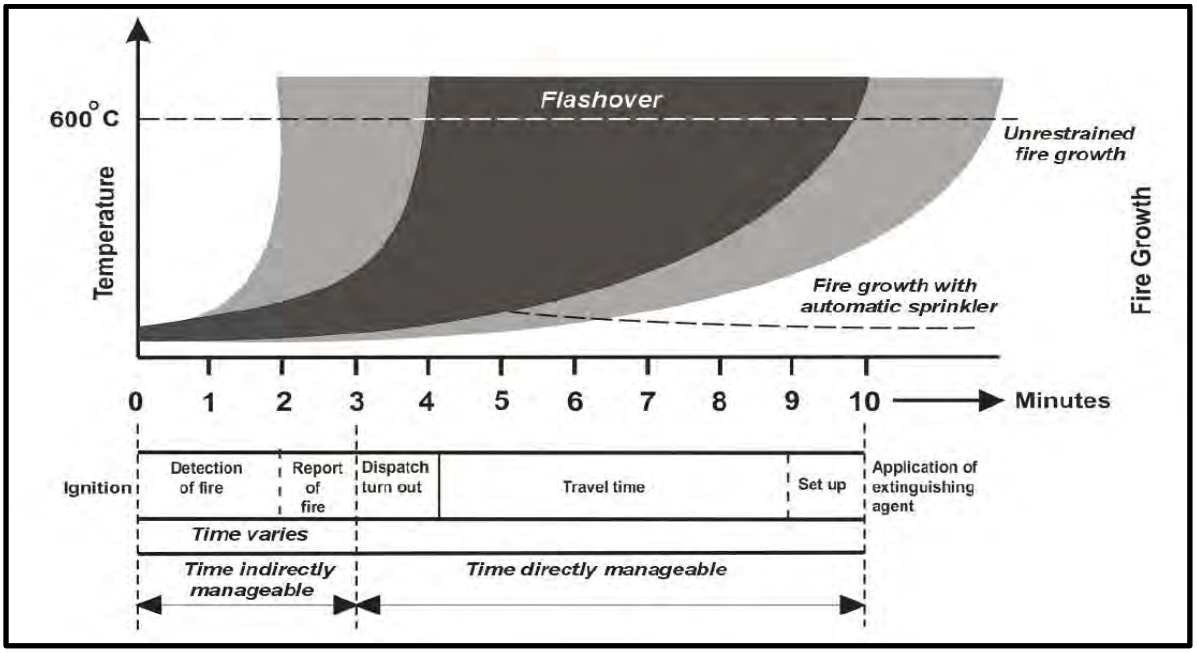
1. Identify any changes to the six listed risk factors. Changes may include new buildings or occupancy changes to buildings; new residents or changes to fire loss statistics.
2. Based on the updated community risk profile, compile a list of potential fire risk scenarios. An example of a simple risk scenario is “A structure fire in a residential building that is primarily occupied by senior citizens.”
3. Assign probability and consequence levels to each fire scenario. This will aid in establishing overall risk levels for each scenario and prioritizing risks in the community.

7. FIRE DEPARTMENT ASSESSMENT

7.1. Fire Department Response Assessment

There is no standardized system to measure the level of response although various exist with some more widely accepted than others. However, while non-standardized systems exist, the intent of all systems is to arrive at a fire scene with the necessary resources before the point of flashover, see Figure 7.1-1. Beyond the point of flashover, it can become very difficult to combat a fire as fire growth increases exponentially as can be seen.

Figure 7.1-1 Fire Propagation Curve



A fire department needs to evaluate its existing fire suppression capabilities to ensure that it can respond to and address all fires that occur in the community. To do so, the resources available to a fire department are measured against acceptable standards and best practices. In this study the Nanoose Volunteer Fire Department was assessed against the NFPA 1720: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the public by Volunteer Fire Departments* and the Fire Underwriters Survey Effective Response. In this study, the response assessment using Fire Underwriters Survey methodology was primarily used to evaluate the Fire Insurance Grades for the community rather than form the standard which the Nanoose Volunteer Fire Department should strive to meet.

7.1.1. Historical Response Data

In order to assess the existing response conditions of the Nanoose Volunteer Fire Department, a review of call data and response statistics was carried out. The average response times by incident type for alarms received between August 2011 and August 2013 are provided in Table 7.1-1 below. Average response time includes Assembly and Travel time.

Table 7.1-1 Nanoose Volunteer Fire Department Average Response Times (08/2011 – 08/2013)

Type of Fire	Average Response Time	Total Number of alarms	Number of responses within 10 minutes	% of Responses within 10 minutes
Vehicle Fire	9 minutes	9	8	90%
Brush or Grass Fire	19 minutes	5	4	80%
Motor Vehicle Accident	11 minutes	71	33	46%
Structure Fires & Fires within structures	11 minutes	14	5	35%

An analysis of response statistics for structural fires shows that the average Assembly time (Dispatch + Turnout time) is 8 minutes 03 seconds while the average Travel time is 3 minutes 36 seconds.

7.1.2. Response Assessment – NFPA 1720

NFPA 1720 is an industry standard addressing personnel deployment and response times to fires and medical emergencies and is designed primarily for communities with volunteer fire departments. The standard specifies some minimum criteria to address the effectiveness and efficiency of volunteer fire suppression operations. The guidelines for staffing and response times vary depending on the population density of the area, generally referred to as demand zones. Table 7.1-2outlines response time standards based on the demand zones as listed in NFPA 1720.

Table 7.1-2 NFPA 1720 Response Time Standards

Demand Zone	Demographics	Staffing/Response Time	Percentage of time
Urban	>1000 People/sq. mile	15 Firefighters/ 9 min	90%
Suburban	500 -1000 People/sq. mile	10 Firefighters/ 10 min	90%
Rural	<500 People/sq. mile	6 Firefighters/ 14 min	90%
Remote	Travel distance > 8 miles	4/ No specified response time	90%

NFPA 1720 is widely recognized as an acceptable standard to which smaller volunteer fire departments can aspire. The NFPA 1720 guideline recommends a minimum of ten firefighters arriving in ten minutes from the receipt of the call for 90 percent of reported fire emergencies. While NPFA 1720 does not specify the number of firefighters initially responding to the scene, it is recommended (based on NFPA 1710) that a minimum of four firefighters should form the initial responding team. Included in the recommended ten minute response time is:

- Dispatch time: Typically 1-2 minutes
- Turn-out time: Typically 1 minute for career firefighters but varies for volunteer firefighters
- Travel time: Typically 7-8 minutes.

Based on historic response data, it was determined that the Nanoose fire department responds to 60 percent of fire calls within ten minutes. Table 7.1-1 Nanoose Volunteer Fire Department Average Response Times shows the response times for different incident types.

The Nanoose Volunteer Fire Department operating policy for structure fires specifies that a minimum of four firefighters must be assembled on the fire ground before attempting firefighting operations. This is in line with NFPA recommendation for first response minimum staffing. Based on historic call data from 2011 through 2013, the average total manpower response for fire calls (structure and non-structure) is 10 in Nanoose Bay. Ten firefighters responded to 60 percent of all fire calls and to 100 percent of structure fires. However these values do not indicate if the ten firefighters arrived within the ten minute window.

As is the case with most volunteer fire departments, Nanoose Volunteer Fire Department may not necessarily be able to attain the above standards at the frequency recommended (i.e. 90 percent of the time). The depth of response may be especially difficult to achieve in rural areas

due to longer travel times. The main factors that impact the department's ability to meet the standards are:

- Turnout times exceed what can reasonably be achieved. A turn-out time of 1 minute is achievable for career firefighters but would not necessarily be achievable for volunteer firefighters.
- Some geographic areas lie at greater distances from the current station location

Response assessment of the Nanoose Volunteer Fire Department shows that the fire department combines the challenges typical for a suburban town with those of more rural localities.

7.1.3. Response Assessment – Fire Underwriters Survey

For the Fire Underwriters Survey response assessment, the Table of Effective Response is used as the benchmark. The following is provided as an example to illustrate how the Table of Effective Response is interpreted:

- A sample building has a Required Fire Flow of 2,200 IGPM
- The requirements for Pumper and Ladder companies is read from the Table of Effective Response as follows:
- Initial response to alarms for Pumper companies is 2, i.e. One Pumper company in a first due response time of 3.5 minutes and One Pumper company in a second due response time of five minutes.
- The total number of Pumper companies required is 3 in 6 minutes.
- In the case of 2,200 IGPM a Ladder company is required only if the building is three stories or greater. The total number of Ladder companies that would be required in this case (three storeys) would be one in four minutes.
- The response times are then converted into distance using the following formula:

$$D = \frac{T - 0.65}{1.065}$$

Where

D=distance in kilometres

T=time in minutes

Individual property response is measured against these benchmarks with 100% credit being applied where the requirements are met. The distance/time formula used here takes into account acceleration/road travel/deceleration and is found to be generally indicative of actual response times. As previously stated, Response assessment or Distribution of response is one of the items reviewed under the Fire Department grading in 7.2.3.

Most response standards identify two levels of responses:

- Initial Response – usually a time to scene for the first apparatus
- Total Concentration Response – usually the total number of apparatus needed on scene within a specified time

Within the Fire Underwriters Survey methodology the following are identified for each Required Fire Flow (RFF) (building):

- First due response – Initial number of companies within a specified time/distance depending on RFF value
- Second due response – Secondary number of companies within a specified time/distance depending on RFF value
- Total concentration response – Total number of companies within a specified time/distance depending on RFF value

Fire Underwriters Survey methodology benchmark response is determined in terms of number of responding apparatus and response times as shown in the Table of Effective Response. The response analysis for Nanoose Volunteer Fire Department was carried out based on road distance from the Required Fire Flow points (properties) to the Nanoose fire hall, estimated response times were calculated using the Distance-Time formula presented above and available apparatus measured against the needed benchmark response from the Table of Effective response. The response times do not consider turn out time. The following is the response capability analysis for the Residential and Commercial Zones as well as the buildings with the highest fire flows in the community. An analysis for all areas of Nanoose Bay is detailed in 7.2.3.

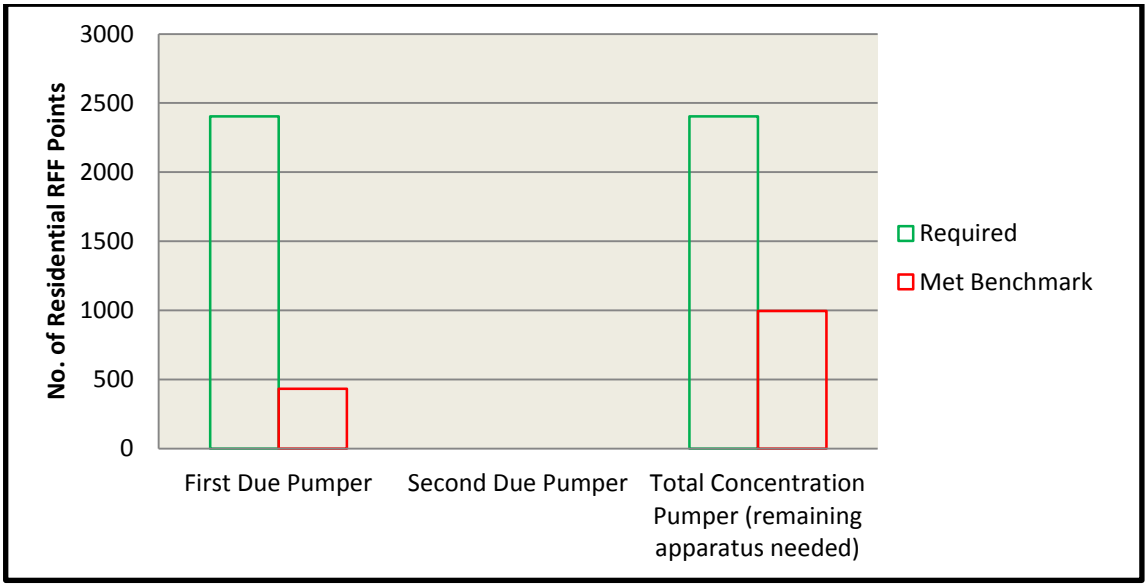
7.1.4. Residential Zones

A Basic Fire Flow of 1,000 IGPM was assigned to the Residential Zones (buildings located in Residential Zones RS-1 & RS-5) in the Nanoose Bay community. For a Required Fire Flow of 1,000 IGPM, the needed benchmark response, read from the Table of Effective Response is:

- First Due Engine Response – one apparatus in four minutes
- Second Due Engine Response – one apparatus in six minutes
- Total Concentration Engine Response – Total two apparatus in six minutes

A total of 2,404 risks were considered within the Residential Zone as shown in Figure 7.1-2 Response Benchmark – Residential Zones. The Green bar shows the number of residential buildings requiring First Due, Second Due and Total Concentration Engine Response while the Red bar shows the number of residential buildings within the benchmark response times. A total of 432 (18 percent) residential buildings are within First Due Engine response time. 995 (41 percent) residential buildings meet requirements for Total Concentration Engine response.

Figure 7.1-2 Response Benchmark – Residential Zones



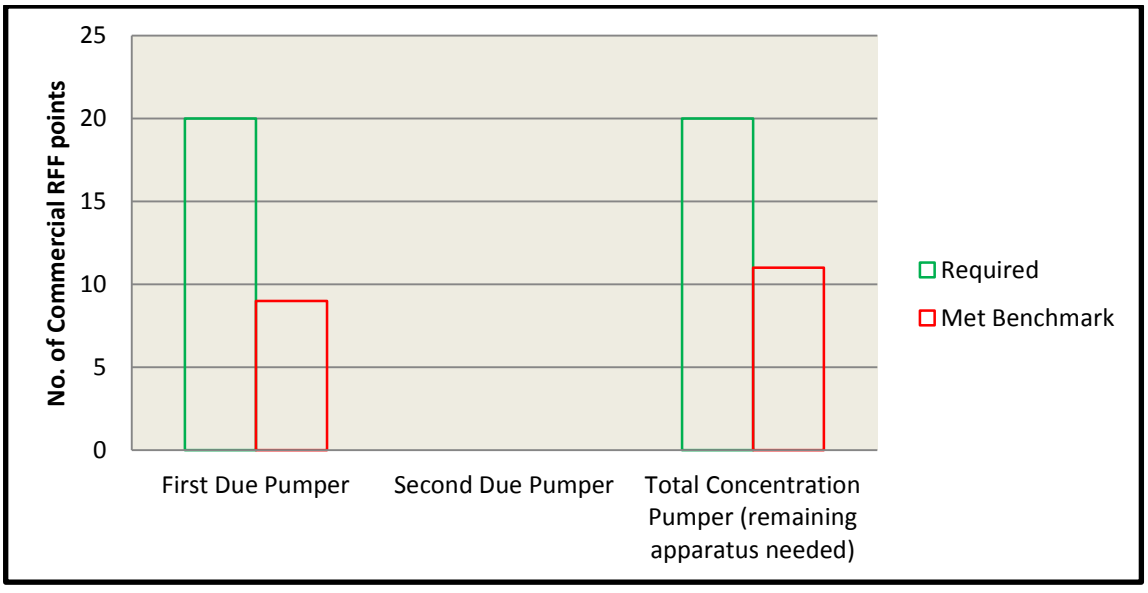
7.1.5. Commercial Zones

A Basic Fire Flow of 2,000 IGPM was assigned to the Commercial Zones (buildings located in Commercial Zones CM2-CM7) in the Nanoose Bay area. For a Required Fire Flow of 2,000 IGPM, the needed benchmark response, read from Table of Effective Response is:

- First Due Engine Response – one apparatus in 3.5 minutes
- Second Due Engine Response – one apparatus in five minutes
- Total Concentration Engine Response – Total two apparatus in five minutes

A total of 20 commercial buildings were considered for the analysis as shown in Figure 7.1-3 Response Benchmark – Commercial Zones. The Green bar shows the number of commercial buildings requiring First Due, Second Due and Total Concentration Engine Response while the Red bar shows the number of commercial buildings within the benchmark response times. Based on estimated road travel times, nine buildings (45 percent) are within the benchmark time for the First Due response. As shown in Figure 7.1-3 below, 11 buildings (55 percent) are within the required distance for Total Concentration Engine response.

Figure 7.1-3 Response Benchmark – Commercial Zones



7.1.6. Highest Calculated Required Fire Flows

A response analysis was also carried out for the three buildings with the highest calculated Required Fire Flows in the community.

Glen Eagle 5-Plex @ 2655 Andover Road

The Required Fire Flow calculated for the Glen Eagle multi-family residential is 4,000 IGPM. The needed benchmark response, read from Table 6.2-1 Fire Underwriters Survey - Table of Effective Response, for 4,000 IGPM is:

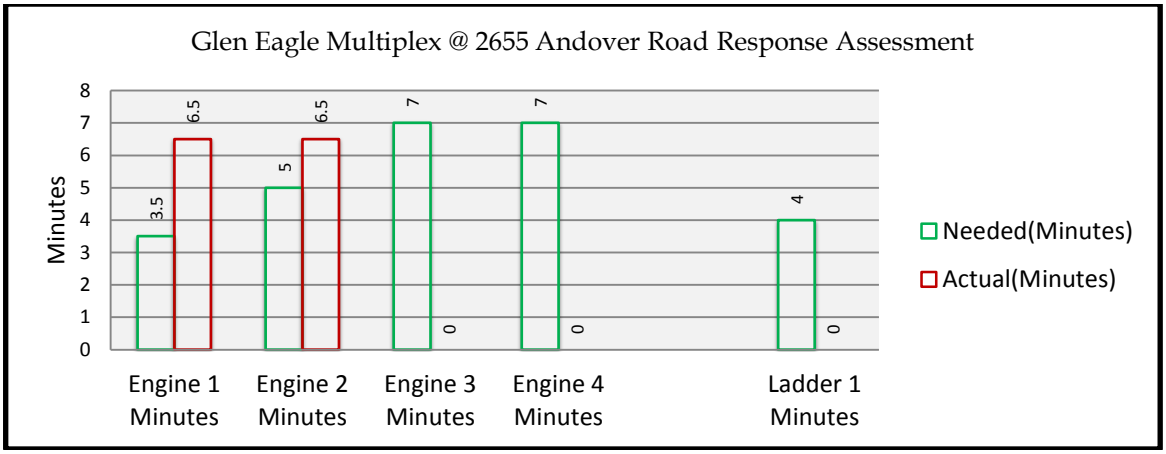
- First Due Engine Response – one apparatus in 3.5 minutes
- Second Due Engine Response – one apparatus in five minutes
- Total Concentration Engine Response – Total one apparatus in seven minutes
- First Due Ladder Response – one apparatus in four minutes

This is shown in Table 7.1-3 Response Benchmark based on Table of Effective Response for Glen Eagle. Again this is graphically illustrated in Figure 7.1-4 below. Red shows estimated response based on road distance and the Distance-Time formula presented in section 7.1and Green shows needed benchmark response based on the Table of Effective response.

Table 7.1-3 Response Benchmark based on Table of Effective Response for Glen Eagle Multi-family

Apparatus	Needed (minutes)	Actual (minutes)
Engine 1 Minutes	3.5	6.5
Engine 2 Minutes	5	6.5
Engine 3 Minutes	7	0
Engine 4 Minutes	7	0
Ladder 1 Minutes	4	0

Figure 7.1-4 Response Benchmark based on Table of Effective Response for Glen Eagle Multi-family



Arbutus Meadows Equestrian Centre @ 1515 Island Hwy East

The Required Fire Flow calculated for the Arbutus Meadows Equestrian Centre is 3,700 IGPM. The needed benchmark response, read from the Table 6.2-1 Fire Underwriters Survey - Table of Effective Response for 3,700 IGPM is:

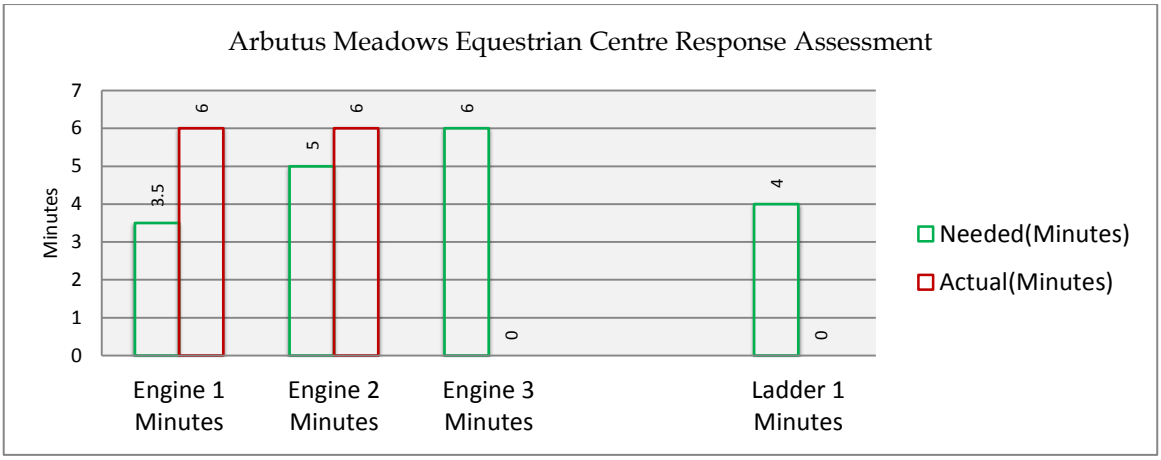
- First Due Engine Response – one apparatus in 3.5 minutes
- Second Due Engine Response – one apparatus in five minutes
- Total Concentration Engine Response – Total four apparatus in seven minutes
- First Due Ladder Response – one apparatus in four minutes

This is shown in Table 7.1-4 and graphically illustrated in Figure 7.1-5. Red shows estimated response based on road distance and the Distance-Time formula presented in section 7.1 and Green shows needed benchmark response based on the Table of Effective response.

Table 7.1-4 Response Benchmark based on Table of Effective Response for Arbutus Equestrian Centre

Apparatus	Needed (minutes)	Actual (minutes)
Engine 1 Minutes	3.5	6.5
Engine 2 Minutes	5	6.5
Engine 3 Minutes	6	0
Engine 4 Minutes	7	0
Ladder 1 Minutes	4	0

Figure 7.1-5 Response Benchmark based on Table of Effective Response for Arbutus Equestrian Centre



Pacific Shores Resort & Spa:

The Required Fire Flow calculated for Pacific Shores Resort & Spa is 2,600 IGPM. The needed benchmark response, read from Table 6.2-1 Fire Underwriters Survey - Table of Effective Response for 2,600 IGPM is:

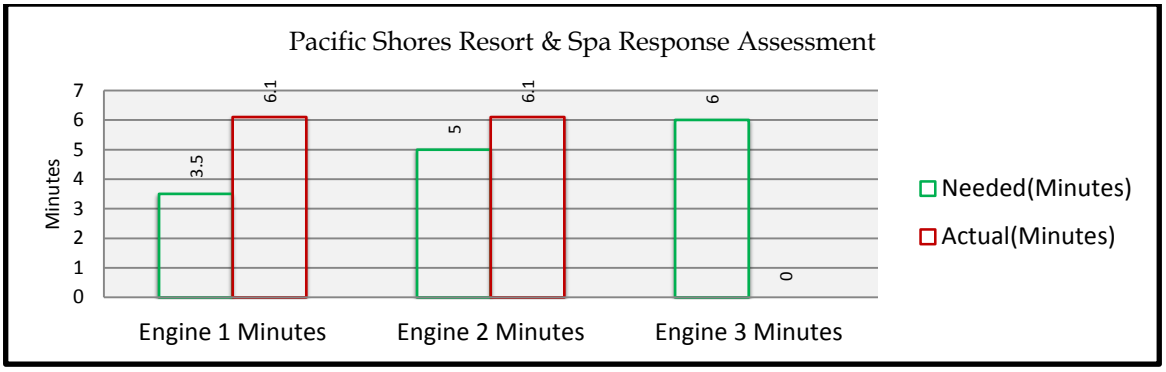
- First Due Engine Response – one apparatus in 3.5 minutes
- Second Due Engine Response – one apparatus in five minutes
- Total Concentration Engine Response – Total three apparatus in six minutes

This is shown in Table 7.1-5Response Benchmark for Pacific Shores Resort & Spa where the credit applied in the grading can also be seen. Again this is graphically illustrated in Figure 7.1-6 below.

Table 7.1-5 Response Benchmark based on Table of Effective Response for Pacific Shores Resort & Spa

Apparatus	Needed (minutes)	Actual (minutes)
Engine 1 Minutes	3.5	6.1
Engine 2 Minutes	5	6.1
Engine 3 Minutes	6	0

Figure 7.1-6 Response Benchmark based on Table of Effective Response for Pacific Shores Resort & Spa



The analysis shows that buildings in the residential zone require two pumpers arriving within 6 minutes, with the first pumper arriving in four minutes. The majority of the buildings in the residential zone are beyond six minutes travel time from the Nanoose fire hall. Buildings in the Commercial zone similarly require two pumpers arriving within five minutes, with the first pumper arriving in 3.5 minutes. Nearly half of the commercial buildings are within five minutes of the fire hall.

The response to the buildings with the highest Required Fire Flows in the community was also evaluated. While these response assessments are not used as the benchmark for determining the fire department resource needs (i.e. the benchmark response assessment used within the Fire Insurance Grading methodology is typically based on the 90-95th percentile calculated Required Fire Flow within the community), they are useful in pre-planning for such fires particularly where the required resources are not available.

7.1.7. Standard of Response Cover

Overall, the Nanoose Volunteer Fire Department should identify the level of response that it will strive to provide and establish a standard of response policy statement. The standard may be developed for response to residential zones, commercial zones and high hazard buildings. The following is an excerpt from the Fire Accreditation International manual "Creating and Evaluating Standards of Response Coverage for Fire Departments", Chapter One – Service Level Expectations:

"After understanding the risks present in the community, what control measures do the citizens and elected officials expect? For example, does the agency confine the fire to the compartment

of origin, area of origin, floor of origin, or building of origin? Some agencies in sparsely populated areas with response times of 30 minutes or more might have to accept (not like) an exposure level of service where the building fire does not spread to the adjoining forest and start a conflagration……Each risk category found in a community should have an outcome expectation developed for it."

To address this, the Nanoose Volunteer Fire Department is encouraged to develop a "Standard of Response Cover" statement which will enable them to strive to meet industry standards as closely as possible. The concept of Standards of Response was introduced in the last 10 years by the CPSE (Centre for Public Safety Excellence previously the Commission on Fire Accreditation International) to assist fire departments in response planning. The Standards of Coverage is developed based on the various services currently provided by the fire department and the level of risk within the community. Developing a Standards of Response Cover statement typically includes:

- Establishment of response performance objectives, usually expressed in both time and resources.
- Determination of tasks that must be performed at various emergency events and the number of personnel needed to achieve them.
- Determination of the number of response resources needed to effectively mitigate an emergency.

Guidance documents on standards of response have been released: The CPSE document "Creating and Evaluating Standards of Response Coverage for Fire Departments" and Office of the Fire Marshall Public Fire Safety Guidelines (PFSG 04-08-10) document "Operational Planning: An Official Guide to Matching Resource Deployment and Risk". These provide a framework in which a municipality, in conjunction with the Fire Department, can establish the level of service to be provided to various areas of a community and to the whole community.

There are several methods of developing a Standards of Response Cover statement or policy but a recommended process is outlined below:

1. Complete a Simplified Risk Assessment using the Nanoose community risk profile.
2. Evaluate the current fire department response. This was carried out in Section 7.3 and 7.4 of this report. Based on the assessment, that the Nanoose Volunteer Fire

Department is meeting the NFPA 1720 Standard for a majority of incidents, some properties present a challenge as they are at greater distances from the fire hall. As such the response assessment shows that it is important for the fire department to develop Standard of Response cover statements for each area of the community.

3. Critical Task Analysis (Critical Tasking): This is an evaluation of the tasks that must be performed during the initial stages of an event in order to provide effective service. These tasks must be conducted in a timely manner by firefighters in order to control the situation and mitigate loss. Critical tasking should begin by identifying all tasks that must be performed at various emergency events and the number of personnel needed to achieve them. All personnel responding should be capable of performing all the described tasks in a prompt, efficient and safe manner. The fire department should develop a critical task list for each of the emergency scenarios identified in the Simplified Risk Assessment (Step 1). The OFM document "Operational Planning: An Official Guide to Matching Resource Deployment and Risk" provides a Critical Task Matrix (Form 300A) to enable fire departments to identify fire ground critical tasks and the number of personnel required to perform various tasks for different levels of risks (low – extreme risk). It is highly recommended that the Nanoose Volunteer Fire Department use this form as a template for critical tasking. Using the Critical Task list the fire department will be able to identify, for each emergency event, how many firefighters are trained and available to respond. This forms the basis for developing the available manpower standard.
4. Determine Response Time Objectives: Once the manpower resources have been defined, the fire department will then determine response time objectives. This again should be based on the level of risk as outlined in the community risk profile and historical response data. For example, for the fire department may aim to respond within 10 minutes to residential zones with a high risk level.
5. Write down a response statement for each risk zone.

Once the response standards have been established, the fire department should carry out an annual evaluation to determine if the standards have been met.

Recommendation 7.1-1 Develop a Standard of Response cover statement for all areas

No mandatory standard or legislative requirement currently exists to specify response standards for fire departments in British Columbia. As such standards of response statement should be developed by the fire department in consultation with community stakeholders to define the level of service that will be

delivered to various areas including commercial buildings, residential zones, rural areas and properties in remote areas. The Standard of Response should be developed using the procedure outlined in Section 7.1.7 Standard of Response Cover.

- Measure fire department performance annually against adopted Standards of Response. This should include recording the number of firefighters on scene in ten minutes (if this is the adopted standard) or within the time selected as a standard.
- Consider adopting a ten-in-ten response as a performance target for commercial and high density residential areas within 8 km of the fire hall.

7.2. Fire Department Grading Items

The sections below cover the 19 items of the Fire Department Assessment and Grading. Forty percent of the Public Fire Protection Classification of Nanoose Bay comes from the grading of the Fire Department. Information was provided and collected during a field survey in 2013.

Areas analyzed in the assessment of the Fire Department are as follows:

FD – 1: Engine Service
FD – 2: Ladder Service
FD – 3: Distribution of Companies
FD – 4: Engine and Ladder Pump Capacity
FD – 5: Design, Maintenance and Condition of Apparatus
FD – 6: Number of Line Officer – Fire Suppression
FD – 7: Total Fire Force Available
FD – 8: Engine and Ladder Company Unit Manning
FD – 9: Master and Special Stream Devices
FD – 10: Equipment for Engines and Ladder Apparatus
FD – 11: Fire Hose
FD – 12: Condition of Fire Hose
FD – 13: Training and Qualifications
FD – 14: Response to Alarms
FD – 15: Fire Ground Operations
FD – 16: Special Protection Required
FD – 17: Miscellaneous Factors and Conditions
FD – 18: Pre-Incident Planning
FD – 19: Administration

7.2.1. Engine Service

Fire departments are evaluated for the number of engine companies in service relative to the overall fire potential and the area being protected. Engine apparatus are required to be adequately housed and staffed in order to receive full credit.

The engine service grading item refers to the amount of credit received for each of the department's engines. Recognition and credit for engines may be reduced or withheld based upon the measured reliability of the pumps and the apparatus upon which they are installed (ex. factors such as age, listing, testing, etc.).

Fire apparatus that serve dual purposes are evaluated based on the primary duty it serves on the fire ground. For example, a ladder apparatus with a fire pump may be credited in one of two ways.

- 100 percent credit as a ladder apparatus and 50 percent credit as an engine, or
- 100 percent credit as an engine apparatus and 50 percent credit as a ladder apparatus.

This depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

The maximum acceptable age of apparatus specified in the fire insurance grading index is 20 years to receive maximum credit. Refer to Appendix D for Insurance Grading Recognition of Used and Rebuilt Fire Apparatus.

The benchmark number of Engine Companies that Nanoose Volunteer Fire Department can receive credit for based on the Basic Fire Flow of 2,400 IGPM is three engine companies. Values are cross referenced with the Table of Effective Response.

Additionally, credit can be received for one reserve Engine Company in this grading item. For fire insurance grading, a fire department should have one reserve engine for each eight engines in service. A fire department even with a single engine company should have a reserve engine.

The Total Credited Engine Companies calculated by summing the Primary Engine Company Credit and the Support Engine Company Credit. The calculation is as follows:

$$CEC_{Total} = ECC_{Primary} + ECC_{Support}$$

CEC_{Total} = Total Credited Engine Company
$ECC_{Primary}$ = Primary Engine Company Credit (local to the Fire Station)
$ECC_{Support}$ = Support Engine Company Credit (coming from other areas/stations)

Primary Engine Company Credit ($ECC_{Primary}$) is set by taking the sum of the number of in service engine apparatus in the hall and downgrading from 100 percent based on reliability factors (including but not limited to age, quality, listing and pump test results).

Support Engine Company Credit ($ECC_{Support}$) is set by taking the sum of the number of support engine apparatus and giving a specified percentage based on the aid being automatic or mutual. If aid is automatic a maximum of 90 percent of the engine company may be credited. If aid is mutual a maximum of 33 percent of the engine company is credited if responding fire apparatus are within 25 kilometres.

Table 7.2-1 Nanoose Volunteer Fire Department Credited in Service Engine Summary

Unit #	Vehicle Type	Year	Apparatus Credit	Engine Credit	Reserve Engine Credit
16	Pumper/Tanker	1999	100% Engine Credit	1	0
11	Pumper/Tanker	1990	80% Reserve Credit	0	1
18	Light Attack Vehicle	2011	50% Engine Credit	0.5	0
13	Tanker	1993	N/A	N/A	N/A
17	Tanker	2001	N/A	N/A	N/A
Lantzville	Engine	2004	33% Engine (Mutual Aid) Credit	0.33	0
			Total Engine/Reserve Engine Credit Received:	1.83	1
			Maximum Credit Receivable (BFF 2,400 IGPM):	3	1

Individual Apparatus Credited

Engine #16

The Superior Pumper/Tanker was given 100 percent credit as part of the assessment.

Engine #11

Due to the age of the Anderson Pumper/Tanker at 23 years and as Nanoose Bay is considered a "Medium Sized Community" (population of Nanoose Bay at 5,470 in 2011 according to Statistics Canada census data) from this apparatus is credited as a reserve apparatus within the Fire Insurance Grading.

Engine #18

The Light Attack Vehicle received 50 percent engine credit. In light residential districts two light attack vehicles may be considered equivalent to one pumper, but should not make up for more than one third of the required pumper companies. In all cases, a full triple combination pumper should be included in the response to building fires.

Rescue

This apparatus is not considered as part of the fire insurance grading process under this item.

Tanker

This apparatus is not considered as part of the fire insurance grading process under this item.

Lantzville – Engine #1

This apparatus has been credited as Support Engine Company Credit ($ECC_{Support}$).

The Nanoose Volunteer Fire Department received 147 points of credit out of the maximum possible 240 for this grading item.

Recommendation 7.2-1 Provide Additional Engine Apparatus

The engine service requirements for fire insurance grading have not been fully met with the Nanoose Volunteer Fire Department's existing apparatus fleet. The Nanoose Volunteer Fire Department may wish to improve its firefighting capabilities by acquiring additional apparatus. Fire apparatus should be ULC listed, be of an appropriate age, have an adequate pumping capacity, and be proven reliable. Doing so may help to provide an adequate level of fire protection and potentially improve the fire insurance grade for the community.

The Nanoose Volunteer Fire Department received credit for 1.83 Engine Company and Support Engine Company Credit. Credit up to the maximum amount of 1.17 can still be awarded for this grading item.

Acquiring additional fire apparatus is a serious matter that requires careful consideration. There are many factors to consider and fire insurance grading is only one such factor.

Recommendation 7.2-2 Provide Reserve Engine Apparatus

The reserve engine service requirements for fire insurance grading have not been met. The Nanoose Volunteer Fire Department may wish to improve its redundancy for firefighting capabilities by acquiring a reserve fire apparatus. Reserve fire apparatus should be ULC listed, be of an appropriate age, have an adequate pumping capacity, and be proven reliable. Doing so may help ensure an adequate level of fire protection and potentially improve the fire insurance grade for the community.

The Nanoose Volunteer Fire Department received no credit for a reserve engine company. Credit up to the maximum amount of one can still be awarded for this grading item

Acquiring additional fire apparatus is a serious matter that requires careful consideration. There are many factors to consider and fire insurance grading is only one such factor.

7.2.2. Ladder Service

Fire departments are evaluated for the number of ladder companies in service relative to the overall fire potential and the area being protected. Ladder apparatus are required to be adequately housed and staffed in order to receive full credit.

The ladder service grading item refers to the amount of credit received for each of the fire department's ladder apparatus. Recognition and credit for ladders may be reduced or withheld based upon the measured reliability of the apparatus upon which they are installed (ex. factors such as age, listing, testing, etc.).

Fire apparatus that may serve dual purposes and are evaluated based on the primary duty it serves on the fire scene. As previously stated, a ladder apparatus with a fire pump may be credited in one of two ways.

- 100 percent ladder credit as a ladder apparatus and 50 percent credit as an engine, or
- 100 percent credit as an engine apparatus and 50 percent credit as a ladder apparatus.

This all depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

Response areas with five buildings that are 3 storeys or 10 m (35 ft) or more in height; five buildings which have a Required Fire Flow of 3,300 IGPM (15,000 LPM) or more; or a

combination of these, should have a ladder company. The height of all buildings in the community, including those protected by automatic sprinklers, is considered when determining the number of needed ladder companies for fire insurance grading to receive maximum credit.

Presently the Basic Fire Flow for the community is set at 2,400 IGPM. In addition there are only two buildings with Required Fire Flow greater than 3,300 IGPM and two buildings 3 storeys or higher. As such a Ladder apparatus is not required at this time for fire insurance grading purposes.

Proposed developments in the Schooner Cove and Lake District neighbourhoods in Nanoose Bay may see addition of multi-storey residential buildings in the community. For fire insurance grading purposes, response areas with five buildings that are 3 storeys or 10 m (35 ft) or more in height; five buildings which have a Required Fire Flow of 3,300 IGPM (15,000 LPM) or more; or a combination of these, should have a ladder company. Therefore should there be addition of more than five buildings, 3 stories or more, in the community a Ladder apparatus would be required to receive maximum credit in this item for Fire Insurance Grading.

Construction of larger buildings in these areas may result in buildings with higher Required Fire Flows, and a higher Basic Fire Flow for the community. Should the Basic Fire Flow for the community equal or exceed 3,300 IGPM as a result of new developments, a Ladder apparatus would be required for fire insurance grading purposes. To maintain credit in this grading item, the Nanoose Volunteer Fire Department should consider purchase of a ladder apparatus should any of the proposed developments meet or exceed the outlined requirements for a ladder. Refer to Section 12.0 for further information.

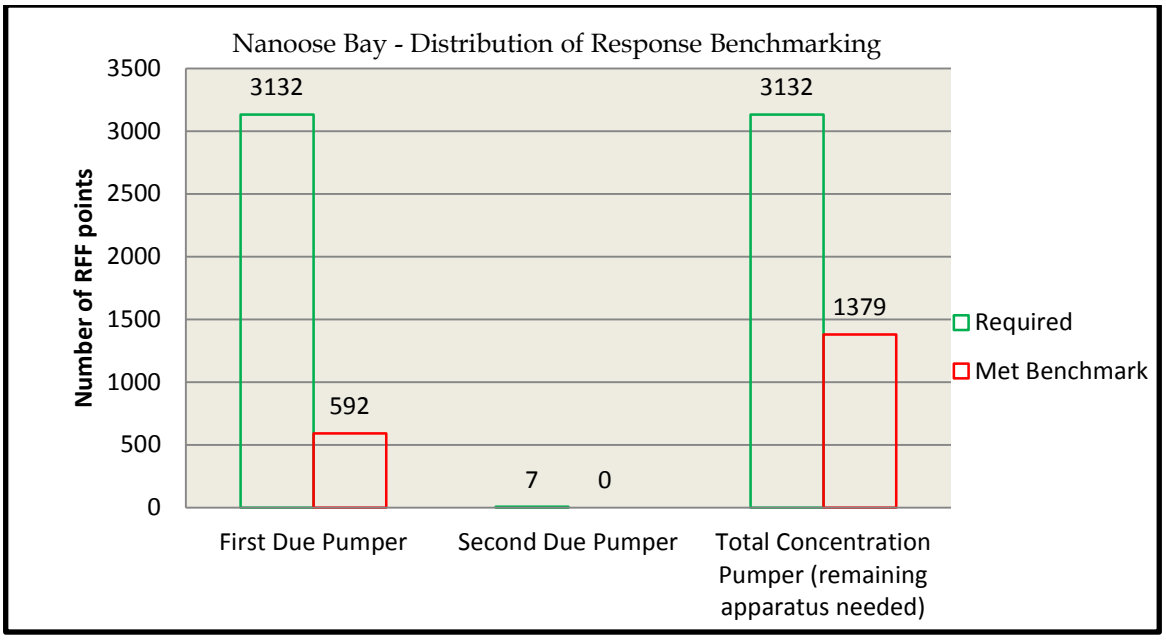
Nanoose Volunteer Fire Department received 170 points of credit out of the maximum possible 170 for this grading item.

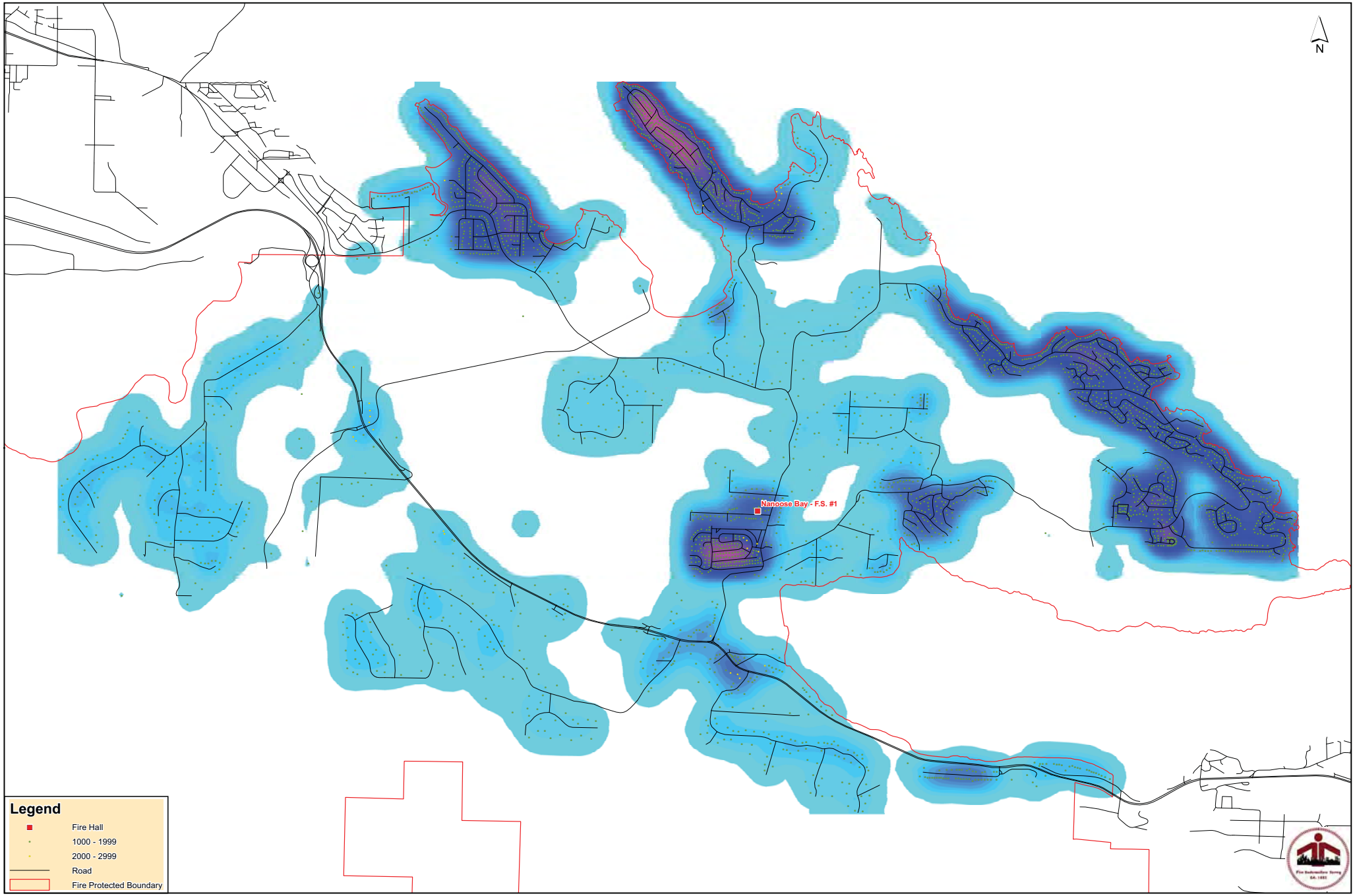
7.2.3. Distribution of Companies

This is a highly weighted portion of the grading as it identifies the actual response available to each building in the community. Required Fire Flow calculations are completed for each building (or group of buildings depending on separations) based on base GIS and zoning data and the resultant response is read from the Table of Effective Response. The response to the building

(Required Fire Flow (RFF)) is then measured against what is actually available using GIS analysis and a percentage credit is applied to the Response Area. The results of this analysis are shown in Figure 7.2-1. Note that the analysis is based on travel time, i.e. after turnout time. The response analysis included all zoning areas as classified in the Official Community Plan for Nanoose Bay: Residential Zone (2,404 building points), Commercial Zone (20 building points), Rural Zone (466 building points), Comprehensive Development Zone (166 building points), Industrial Zone (8 building points), Public/Conservation Zone (68 building points). All points analyzed for response are shown in Figure 7.2-2 Heat Map of Concentration Weighted RFFs.

Figure 7.2-1 Response Benchmark – Nanoose Bay Community





Nanoose Bay

Heat Map of Concentration Weighted RFFs

Scale = 1:12,000 0 385 770 Meters

Fire Underwriters Survey

Nanoose Volunteer Fire Department received 103 points of credit out of the maximum possible 200 for this grading item.

7.2.4. Engine and Ladder Pump Capacity

The Engine and Ladder Pump Capacity grading item refers to the capacity of credited, recognized pumps located on fire apparatus. Recognition and credit for pumps on fire apparatus may be reduced or withheld based upon the measured reliability of the pumps and the apparatus upon which they are installed (ex. factors such as age, listing, testing, etc.).

Fire apparatus that may serve dual purposes are evaluated based on the primary duty it serves on the fire scene. As previously stated, a ladder apparatus with a fire pump may be credited in one of two ways.

- 100 percent credit as a ladder apparatus and 50 percent credit of the pump on the apparatus, or
- 100 percent for the pump on the ladder and 50 percent credit as a ladder apparatus.

This all depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

The benchmark pumping capacity that the Nanoose Volunteer Fire Department can receive credit for is based on the Basic Fire Flow of 2,400 IGPM.

The Total Credited Pump Capacity is calculated by summing the Primary Pump Capacity and Support Pump Capacity. The calculation used is:

$$PC_{Total} = PC_{\mathrm{Pr}imary} + PC_{Support}$$

PC_{Total} = Total Credited Pump Capacity
$PC_{Primary}$ = Primary Pump Capacity (local to the specific hall)
$PC_{Support}$ = Support Pump Capacity (coming from other areas/halls)

Primary Pump Capacity ($PC_{Primary}$) is set by taking the sum of the rated capacities of the engines or ladders in the hall and downgrading from 100 percent of the rated capacities based on reliability factors (including but not limited to age, quality, listing and pump test results).

Support Pump Capacity ($PC_{Support}$) is set by taking the sum of the rated capacities of the support engines or ladders and giving a specified percentage of the rated capacity based on the aid being automatic or mutual. If aid is automatic a maximum of 90 percent of the pump capacity may be received. If aid is mutual a maximum of 33 percent of the pump capacity is received.

Table 7.2-2 Pumping Capacity Credit Summary

Unit #	Vehicle Type	Pump (IGPM)	Tank Imp. Gal	Pump Capacity Credit %	Credited Pump Capacity (IGPM)
16	Pumper/Tanker	1050	800	100%	1050
11	Pumper/Tanker	840	800	100% Reserve Credit	840
12	Mini - pumper	415	400	50%	207.5
Lantzville	Engine	1250	800	33% Mutual Aid	0
				Total Credited Pump Capacity:	2,444.5
				Maximum Credit Receivable:	2,400

The Total Credited Pump Capacity of the Nanoose Volunteer Fire Department is 2,400 IGPM. The Total Credited Pump Capacity should be at least equal to the Basic Fire Flow. Additional capacity is needed for Required Fire Flows higher than the Basic Fire Flow. Credit reduction may be applied if there is a large divergence between Required Fire Flows that are greater than the Basic Fire Flow.

A secondary analysis occurs in this grading item that analyzes the Total Credited Pump Capacity to meet the Basic Fire Flow benchmark with the most significant engine and pump out of service.

Overall, the Nanoose Volunteer Fire Department graded very well within this grading item considering first due pumping capacity and reserve pumping capacity.

Nanoose Volunteer Fire Department received 151 points of credit out of the maximum possible 170 for this grading item.

7.2.5. Design, Maintenance and Condition of Fire Apparatus

Fire Department apparatus should be of suitable design and well maintained for the emergency service that is to be performed. A breakdown en route to, or on the fire ground could result in loss of life and greater damage to property. Maintenance facilities, quality of maintenance programs, qualifications of maintenance personnel, apparatus suitability and apparatus age are considered in this item.

Maintenance Facilities

Major repairs to apparatus and pumps are conducted by Inland Kenworth. Minor repairs can be completed in-house by Inland mechanics or by mechanics on the fire department staff. Preventative maintenance on apparatus is conducted annually by Profire (Safetek Group of Companies).

Engine and Ladder Testing

Engine and ladder service tests including but not limited to pump testing are valuable in assessing the effectiveness of the preventive maintenance program. Service tests of pumps and ladders on apparatus are generally conducted to show whether the equipment is working correctly.

Annual pump tests are conducted as per NFPA 1911. Pump tests are conducted by Profire (Safetek Group of Companies). Annual road and weight tests are not conducted by Profire.

Age, Obsolescence and Condition of Apparatus

The age of fire apparatus is reviewed within the fire insurance grading system relative to age benchmarks of 15 and 20 years for first line and second line fire apparatus. This item has been addressed in previous sections.

Apparatus Replacement Schedule

Formal apparatus replacement schedules are an important aspect of fleet management within fire departments. While costly, replacing fire apparatus is a necessary part of maintaining safe, effective and efficient fire department operations. Decisions regarding apparatus replacement should be informed by industry standards. Fire Underwriters Survey evaluates the age of apparatus for fire insurance grading and provides a service schedule as shown in Table 7.2-3 below.

Table 7.2-3 Service Schedule for Fire Apparatus for Fire Insurance Grading Purposes

Apparatus Age	Major Cities [3]	Medium Sized Cities [4]	Small Communities [5] and Rural Centres
0 – 15 Years	First Line Duty	First Line Duty	First Line Duty
16 – 20 Years	Reserve	2nd Line Duty	First Line Duty
20 – 25 Years [1]	No Credit in Grading	No Credit in Grading or Reserve [2]	No Credit in Grading or 2nd Line Duty [2]
26 – 29 Years [1]	No Credit in Grading	No Credit in Grading or Reserve [2]	No Credit in Grading or Reserve [2]
30 Years +	No Credit in Grading	No Credit in Grading	No Credit in Grading

[1] All listed fire apparatus 20 years of age and older are required to be service tested by recognized testing agency on an annual basis to be eligible for grading recognition. (NFPA 1071)
[2] Exceptions to age status may be considered in a small to medium sized communities and rural centres conditionally, when apparatus condition is acceptable and apparatus successfully passes required testing.
[3] Major Cities are defined as an incorporated or unincorporated community that has: a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND a total population of 100,000 or greater.
[4] Medium Communities are defined as an incorporated or unincorporated community that has: a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND/OR a total population of 1,000 or greater.
[5] Small Communities are defined as an incorporated or unincorporated community that has: no populated areas with densities that exceed 200 people per square kilometre; AND does not have a total population in excess of 1,000.

Nanoose Volunteer Fire Department is currently developing an apparatus replacement schedule. It is recommended that the fire department adopt a replacement schedule based on the above table. Adopting this schedule will ensure the fire department maintains apparatus credits for fire insurance grading as well ensure that the apparatus age and condition meets industry standards. The following apparatus replacement schedule applies to Nanoose Bay Volunteer fire department for fire insurance grading purposes:

Table 7.2-4 Nanoose VFD Apparatus Replacement Schedule for Fire Insurance Grading Purposes

Apparatus	Year	Current Credit	Recommendation
Engine #16	1999	100% (First/2nd Line Duty)	Replace in 2019 for First/2nd Line Duty Credit.
Engine #11	1990	100% (Reserve)	Replace in 2013 for First/2nd Line Duty Credit OR replace prior to 2020 in order to maintain credit as reserve apparatus.
Tanker #13	1993	100% (Tanker Credit)	Replace in 2013 to maintain First Line credit OR replace prior to 2023 in order to maintain credit as reserve apparatus.

The Nanoose Volunteer Fire Department received 116 points of credit out of the maximum possible 150 for this grading item.

Recommendation 7.2-3 Adopt Apparatus replacement schedule

Engine #11 should be replaced with an apparatus of acceptable age. At this time Engine #11 is credited as a reserve apparatus for Fire Insurance Grading purposes and as such less credit is being received in the overall PFPC calculation. Replacing this apparatus with one of acceptable age would allow for additional credit as this apparatus is currently credited as a reserve due to age. Current reserve credit for this apparatus can be maintained until 2020; replacement should be considered prior to 2020.

Engine #16 should be replaced in 2019 to maintain First Line apparatus credit within the Fire Insurance Grading of the Nanoose Volunteer Fire Department.

7.2.6. Number of Line Officers – Fire Suppression

The number of Chief Officers and Company Officer positions is reviewed and graded under this item. The number of Chief Officers and Company Officers required to receive maximum credit for this grading item is determined from the Basic Fire Flow and the resulting number of engine and ladder companies associated with the benchmark.

Chief Officers

For fire insurance grading the maximum credit the Nanoose Volunteer Fire Department can receive for Chief Officers is two. Full credit is received for each career Chief or career Deputy Chief on the department. An Auxiliary Chief or Auxiliary Deputy Chief is credited at 50 percent. Nanoose Volunteer Fire Department has 2 Auxiliary Chief Officers.

Nanoose Volunteer Fire Department has two volunteer Chief Officers and received one credit out the maximum two that can be received. The Nanoose Volunteer Fire Department received 27 points of credit out of the maximum 50 in this portion of the grading item.

Additional credit can be received up to the maximum if there were career Chief Officers assigned and trained to provide duties of the Fire Chief and or Deputy Chief. Credit can be received through a combination of career and auxiliary Chief Officer positions.

Company Officers

The number of Company Officers that the Nanoose Volunteer Fire Department can receive maximum credit for fire insurance grading is determined by the total number of engine and ladder companies based on the Basic Fire Flow benchmark and an on duty shift factor. Credit can be received through a combination of career and auxiliary officers on the fire department. Full credit is received for each career officer on the department. Auxiliary officers are credited at 50 percent.

To determine the shift factor a typical 4 on/ 4 off system is used. If all shifts were operated continuously year round, then four career Company Officers would be required for each required company. However, in normal circumstances, shift coverage (holidays, leaves, etc.) requires that additional company officers be provided for continuous coverage. Typically the true value of required company officers will fluctuate between 4.6 and 6 company officers per company.

For fire insurance grading the maximum credit for Company Officers that the Nanoose Volunteer Fire Department can receive credit for is 12 officers. This was determined by the number of engine and ladder companies and an on duty shift factor. A shift factor of 4 was used.

The Nanoose Volunteer Fire Department has 7 auxiliary company officers. Forty-two percent credit was achieved for auxiliary officers for fire insurance grading purposes.

Additional credit can be received up to the maximum if there were more fire fighters as trained officers on the fire department. Credit can be received through a combination of career and auxiliary officers.

Nanoose Volunteer Fire Department received 42 points of credit out of the maximum possible 100 for this grading item.

Recommendation 7.2-4 Chief Officer Positions

Nanoose Volunteer Fire Department received credit for two volunteer Chief Officers (equivalent to one career Chief Officer) when measured against two for fire insurance grading purposes. The Nanoose Volunteer Fire Department can receive additional credit up to the maximum if it increases the total number of Chief Officers on the fire department. Credit can be received through a combination of career and auxiliary Chief Officers.

Nanoose Volunteer Fire Department can receive additional credit up to the maximum if it increases the total number of Chief Officers on the fire department. To ensure full credit is received for career or auxiliary Chief Officers, they should be adequately trained, preferably in accordance with NFPA 1021: *Standard for Fire Officer Professional Qualifications, 2014 Edition* or recent edition.

Training and qualifications should be determined by the fire department and municipality to ensure chief officers are competent in both management and fire emergency incident command.

Recommendation 7.2-5 Train and Qualify Additional Firefighters to Officer Positions

Nanoose Volunteer Fire Department received credit for three career officers when measured against the 12 career needed based on a shift factor of four. The Nanoose Volunteer Fire Department can receive additional credit up to the maximum if it increases the total number of Company Officers on the fire department. Credit can be received through a combination of career and auxiliary officers.

A fire department should have sufficient Company Officers available and assigned to provide one on duty response with each required engine or ladder company. The Company Officers should be adequately trained, preferably in accordance with NFPA 1021: *Standard for Fire Officer Professional Qualifications, 2014 Edition* or recent edition to receive full credit for fire insurance grading purposes.

7.2.7. Total Fire Force Available

Under this grading item, a fire department is measured in its ability to meet the staffing requirements as determined by the Basic Fire Flow benchmark from the Table of Effective Response. For the grading of this item there should be at least six competent career fire fighters available and assigned to respond to fire for duty with each required engine and ladder company. The number of these fire fighters that should be on-duty with the apparatus of these companies at all times should be appropriate to the fire risk and fire incidence load.

The Basic Fire Flow for Nanoose Bay is set at 2,400 IGPM in 2013.

For the purposes of fire insurance grading, the maximum creditable number of career fire fighters per company is six (including officers). Therefore, the maximum credit that that Nanoose Volunteer Fire Department can receive for this grading item is 18 career fire fighters.

The total maximum creditable number of firefighters is based on the number of companies (total concentration) and the maximum creditable number of career fire fighters per company (six) per shift (including officers), available continuously year round (day and night) for fire insurance grading.

Credit for available fire force may be received according to the:

- minimum career fire fighters on duty,
- minimum regular vol. and off shift response of career fire fighters on 1st alarms,
- police officer/fire fighter and ambulance attendant/fire fighter,
- minimum automatic aid response,
- minimum mutual aid response, and
- minimum response of off-shift career fire fighters on multiple alarms.

Career Fire fighters on duty

For fire insurance grading, career fire fighters on duty are equal to one Fire Fighter Equivalent Unit (FFEU). The Nanoose Volunteer Fire Department has no career fire fighters.

Volunteer Fire Fighters response on First Alarm

Typically three off duty or auxiliary members responding on first alarm are considered as one FFEU for grading purposes. Consideration for credit is based on records being available

indicating response statistics. If no records are kept of response, credit for FFEU is limited to one FFEU for each six off duty or auxiliary members responding.

Nanoose Volunteer Fire Department has a roster of 29 auxiliary fire fighters. Based on turn out statistics provided (staff turnout for structure fire calls), the fire department was credited with 21 auxiliary fire fighters available to respond and therefore credit is applied by using a factor of 1/3.

Police and Ambulance Personnel

Fire Departments may receive credit within the grading of this item for police and ambulance personnel responding and performing fire ground duties. The amount of credit depends upon the extent to which they are available and are used for response to fire alarms. Records of response and training are reviewed to determine that amount of credit that can be received. Each ambulance attendant/fire fighter or police officer/fire fighter on duty in a radio equipped vehicle and responding on first alarm equals 0.5 FFEU. The Nanoose Volunteer Fire Department has no records of response or training for police and ambulance personnel to receive credit towards its total available fire force.

Automatic Aid

Fire departments that have formal contracts for automatic aid response may receive credit for the personnel responding for this grading item. For personnel to be credited for automatic aid the responding fire department should be within 8 km in road travel distance to built-up areas of the community or municipality. Each career fire fighter from the responding fire department may be credited as one FFEU and each volunteer fire fighter from the responding fire department may be credited as 0.33 FFEU.

The Nanoose Volunteer Fire Department has no automatic aid agreements with neighbouring fire departments to receive credit.

Mutual Aid

Fire departments that have formal contracts for mutual aid response may receive some credit for the personnel responding for this grading item. For personnel to be credited for mutual aid the responding fire department should be within 25 km of travel distance to built-up areas of the community or municipality. Each career fire fighter from the responding fire department may be credited as one FFEU and each volunteer fire fighter from the responding fire

department may be credited as 0.33 FFEU. Nanoose Volunteer Fire Department has mutual aid agreements with the neighbouring District of Lantzville, The Town of Qualicum Beach, City of Parksville, Deep Bay Improvement District and the Regional District of Nanaimo on behalf of the Bow-horn Bay, Coombs-Hilliers, Dashwood and Errington fire departments to receive additional fire force credit.

Off shift Response on Multiple Alarms

Fire departments that have formal agreements for career members to respond off shift on multiple alarms may receive credit for members responding within this grading item. Career members responding on multiple alarms are credited on the basis of four off duty career members being equal to one FFEU. Auxiliary members are credited the same as on first alarm as 1/3 if statistical records of response are available or 1/6 if no records of response are available.

The Nanoose Volunteer Fire Department has no career fire fighter to receive credit for off shift response on multiple alarms.

Table 7.2-5 Fire Fighter Equivalent Units Credit Summary

	Nanoose Volunteer Fire Department Credit
Minimum Career Firefighters on Duty	0
Minimum Regular Volunteer & Off-shift on 1st Alarms	7
Police and Ambulance Crews credited	0
Automatic Aid	0
Mutual Aid	3
Off shift response on multiple alarms	0
Total Credit Received	10
Maximum credit receivable (BFF 2400 IGPM)	18

For the Nanoose Volunteer Fire Department, recruitment and retention of volunteer firefighters is crucial to maintaining or adding to the current fire force available. The option of adding a full-time crew to the fire department will be considered in Section 12 FUTURE NEEDS ASSESSMENT. However, the current staffing needs of the fire department should focus on the recruitment or retention of volunteers. The recommendations provided below should be considered to assist the Nanoose fire department in recruiting and retaining volunteers.

The Nanoose Volunteer Fire Department received 246 points of credit out of the maximum possible 400 for this grading item.

Recommendation 7.2-6 Improve Total Available Fire Force

The Nanoose Volunteer Fire Department is credited with 9 fire fighter equivalent units in its available fire force out of the maximum it can receive out of 18. The Nanoose Volunteer Fire Department can receive additional credit up to the maximum if it improved its available fire force. Credit can be obtained through career and auxiliary members.

Note that the available fire forces can be improved through additional volunteers up to 50 percent of the required fire force. (In the case of the Nanoose Volunteer Fire Department, the required force is 18, so the maximum available fire force that can be provided through volunteers and other FFEU sources is 9.)

Providing additional staffing either being career or auxiliary is a serious matter that requires careful consideration. There are many factors to consider and the fire insurance grading is only one such factor.

Recommendation 7.2-7 Establish an annual recruitment and retention program

Establish an annual recruitment and retention program within the fire department and update operational guidelines to include the program. Select an individual(s) responsible for recruitment as management of a recruitment program will best be achieved if assigned to a single individual or committee. Ensure the recruitment program outlines recruitment strategies being used. These strategies should be annually evaluated for effectiveness.

Broaden recruitment strategies to look beyond the “fire suppression” perspective. Consider recruitment for roles that contribute to fire prevention and public education activities, inspection programs, education and training, and administration.

Obtain assistance from individuals in the community to assist with short-term tasks in the recruitment and retention program. These may include human resource professional to assist with conducting interviews, or members of the media to assist with communication strategies.

Recommendation 7.2-8 Establish a Work Experience Program

The general structure of a Work Experience Program is to provide formally trained firefighters seeking work experience for career development with the opportunity to work on a well-organized volunteer fire department. The work experience program would be used to supplement the regular core of volunteer firefighters to meet the demand for service. The program would require the firefighters to commit to the

fire department for a specific period of time (8 to 12 months) and would work a standard daytime shift routine, Monday to Friday. The fire department would provide live-in dormitories and/or suites in the fire hall or a nearby location. In addition the firefighters would be remunerated for response to emergencies and attendance to scheduled training. A stipend or education allowance may also be provided to enable the firefighters to expand their training. When not responding to calls, the firefighters would get exposure to different aspects of the fire service including inspections, fire prevention, and pre-fire planning. One of the challenges facing most volunteer fire departments such as Nanoose Volunteer Fire Department is the high turnover rate of volunteers as they leave to join career fire departments. The fact that the work experience program allows for short duration of service works not only to the advantage of the firefighters seeking experience but to the recruiting fire department as they are guaranteed daytime volunteer service for an established period of time. The work experience program has been used successfully in a number of Canadian fire departments such as Merritt Fire Rescue, Big White Fire Department and Sun Peaks Fire Rescue.

7.2.8. Engine and Ladder Company Unit Manning

This grading item measures the company unit strength of on-duty paid personnel responding on in-service apparatus. A maximum manning of six can be credited for each in service Engine and Ladder Company.

Nanoose Volunteer Fire Department received 240 points of credit out of the maximum possible 240 for this grading item.

7.2.9. Master and Special Stream Devices

This grading item considers the equipment fire fighters would use to be effective in combating large fires, flammable fire and fires in upper storey's or hard to reach locations. Equipment considered under this grading item are fixed and portable turrets, large spray nozzles, distributing nozzles, foam equipment, and elevated master stream devices.

The Nanoose fire department graded well in regards to being equipped with the necessary equipment to provide effective structural fire protection to large fires, flammable fire and fires in upper storey's or hard to reach locations. Credit was reduced within the grading item where equipment did not exist. Credit up to the maximum can be achieved within this grading item if additional firefighting equipment is acquired.

Nanoose Volunteer Fire Department received 49 points of credit out of the maximum possible 50 for this grading item.

7.2.10. Equipment for Engines and Ladder Apparatus, General

This grading item considers the general equipment for engine and ladder apparatus. Equipment includes, but is not limited to, rope, cutters, fire extinguishers, nozzles, first aid equipment, wrenches, generators, salvage tarps, etc.

Inventories have been developed by the fire department to keep track of equipment stored on its fire apparatus. SCBA testing and maintenance is completed annually by a contractor in accordance with NFPA 1852. Ladder testing is completed by a contractor. Ladders are tested annually in accordance with NFPA 1932, Standard on Use, Maintenance, and Service Testing of In-service Fire Department Ground Ladders.

Nanoose Volunteer Fire Department received 95 points of credit out of the maximum possible 100 for this grading item.

7.2.11. Fire Hose

Fire hose used by the fire department should be distributed so that each engine company carries a minimum of at least 360 m (1,200 ft) of 65 mm (2 ½ in) (or larger), 180 m (600 ft) of 38 mm (1 ½ in), and 60 m (200 ft) of 25 mm (1 in) booster hose (or equivalent hose). A fire department should maintain a complete reload or spare hose at the fire hall. Maximum credit for this grading item is given if the fire department meets or exceeds the minimum hose totals. Larger hose may be credited in the place of smaller hose.

Review indicated the Nanoose Volunteer Fire Department has an adequate amount of fire hose on their fire apparatus.

Nanoose Volunteer Fire Department received 176 points of credit out of the maximum possible 180 for this grading item.

7.2.12. Condition of Fire Hose

This grading item reviews the condition and maintenance of the fire department's fire hose. Fire hose should be properly cared for. Fire hose failure on the fire ground can lead to injury or death of building occupants or to fire fighters, and result in unnecessary property damage. Suitable facilities should be provided for washing, drying, and storing of fire hose. Fire hose should be maintained in good condition and tested annually to at least 1,700 kPa (250 psi).

Testing Program and Age of Fire Hose

A portion of this grading item reviews the testing procedures and frequency of testing of the fire department fire hose. Fire hose should be maintained in accordance with NFPA 1962, *Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose,* recent edition.

All fire hose is tested annually and testing records are kept.

Drying Facilities

Facilities and equipment for cleaning and drying of fire hose are reviewed in this portion of the grading item. There is a hose drying facility at the Nanoose Fire Hall.

Nanoose Volunteer Fire Department received 44 points of credit out of the maximum possible 50 for this grading item.

7.2.13. Training and Qualifications

Fire Department training is commensurate with fire potential in the community or municipality which facilitates the effective handling of fires through provision of a competent force of personnel. The objective of this grading item is to measure qualifications of the members of the department through the results of the training programs, not simply the programs and facilities themselves. The training and qualifications grading item is separated into five areas for review and grading.

Facilities should be provided, sufficient in size and number and suitably equipped, for the proper instruction of all members. There should be a complete, uniform training program under the

close supervision of a competent officer; the program should include the study and development of modern practices, including standard operational procedures. There should be a comprehensive schedule of regular classes and drills at the training facility and at fire stations. Special classes for new members, officers, operators, and drivers should be held.

Quality of Basic Recruit Training

This portion of the grading item reviews the basic recruit training program used by the fire department. The fire department's probation period is considered. Ideally a fire fighter should serve a probation period of up to one year in training status in which thorough training is provided in safe and efficient firefighting and the probationer is assessed in actual fire service performance.

Training should produce, for most of the force, an all-round fire fighter/fire prevention inspector. This allows the fire fighting force to complement the fire prevention staff in the total fire department objective. Recruit training should be separate from the routine drill program.

Quality of On-going Drills and Training

This portion of the grading reviews a fire departments on-going drill and training program. A fire department training program should include practice evolutions, classroom work, firefighting, prevention and other areas, all to be contained in a department manual; as well as inter-company and building familiarization exercises. This program should be under the supervision of an officer in charge with developing, coordinating and evaluating the results.

Qualifications of Line Officers

A portion of the grading item reviews the fire departments qualifications of line officers and promotion of its members. Within the fire insurance grading, promotions should be carried out under a documented system providing job related criteria for each rank for internal and lateral entry. Written and oral examinations, in-service training, programs directed toward particular job positions, and evaluation by superiors as well as training ground tests should be used for the selection of candidates for fire suppression officer positions. Career, on-call and auxiliary members of the same fire department should be trained to identical qualification levels. (NFPA Standards for Professional Qualifications, 1001, 1002, 1021, 1031 and 1041 are indicative of good practice.)

Qualification of Specialists

A portion of the grading item reviews the specialized training and qualifications of members of the fire department. Training and education of members of the department on the job or by outside resources should provide personnel with the abilities to perform their manual rescue firefighting, fire fighting or specialist functions effectively in a manner commensurate with the size of the fire department and the fire potential of the community or municipality, including pump and ladder operators, mechanics, communications and any other fire suppression specialized personnel.

Specialized training should be conducted in accordance with the level of risk with a community. For small communities providing structural fire protection services only specialized training should include but not limited to:

- Driver training for fire apparatus
- Incident Command
- Pump Operator
- Ladder Operation
- Safety Officer
- Training Officer
- Rapid Intervention Teams

For larger departments providing additional life safety services in addition to structural fire protection, specialized training may include but not limited to:

- Search and Rescue
- Hazardous Materials Response
- High Angle Rescue
- Confined Space Rescue
- Motor Vehicle and Accident Response

Facilities for Training

Facilities for drill and training should be readily available for these purposes and include necessary buildings or structures for ladder work, smoke and breathing apparatus training, use of pumpers and hose lines, lecture space, are all in keeping with the size of the fire department. Larger fire departments should have full training facilities capable of duplicating or simulating a variety of fire types and situations using real fires. Smaller departments may use provincial, regional or cooperative training facilities according to need, but in any case should provide for a broad range of realistic training exercises. Training facilities should always work towards

meeting the needs of the potential fires. When a ladder company is required, the tower should be at least 4 stories.

Nanoose Volunteer Fire Department has 1 training officer in its training division. The theoretical training is computer based while practical training is carried out by fire department officers.

The Nanoose Volunteer Fire Department has identified and implemented crucial training programs based on the volunteer firefighter staffing and training time available. The current training standard in place is the NFPA 1001 Fire Fighter I & II. They have worked to ensure all fire fighters are trained up to level II certification and have established a training officer position. NFPA 1021 was adopted for Fire Officer training. The Fire Officers train together which ensures all officers at the same level and reduces the cost of training. Training sessions are carried out weekly at the fire hall with the Fire Officers administering training to firefighters for certification. Senior Officers carry out the training evaluations. Live fire training is completed annually at the Comox Fire Training Centre.

Nanoose Volunteer Fire Department received 312 points of credit out of the maximum possible 400 for this grading item.

Recommendation 7.2-9 Full-time/Part-time administrative assistance

Administrative duties being completed by the Fire Chief and Training officer may in the long run take away from the number of hours they can devote to the main function of developing and delivering fire department training. A full-time/part time administrative assistant should be considered to carry out administrative duties. One administrative assistant could feasibly be shared between public education, fire prevention, training and emergency planning. This would allow the Fire Chief and Training officer to dedicate more time to training duties and will also assist in maintaining detailed training records.

Recommendation 7.2-10 Update operational guidelines to include adopted training standards

Nanoose Volunteer Fire Department should define the adopted (current) volunteer fire fighter training standards in the operational guidelines for the Fire Department training program.

7.2.14. Response to Alarms

An adequate initial response of apparatus and personnel upon receipt of an alarm of fire is essential to provide for prompt control of what is generally an escalating emergency. This is

required to be pre-arranged in nature as far as possible to ensure reliability. Efficient advance plans should be made for developing a maximum concentration of forces including reserve apparatus and outside assistance for the largest fires. Response should be commensurate with the hazard of the location responded to, with due consideration for the likelihood of other, simultaneous fires. Minimum responses to fires in buildings considered reasonable are set out in the

Table 7.2-6 Initial Response to Alarms of Fire, which is based off the Table of Effective Response.

Table 7.2-6 Initial Response to Alarms of Fire

Group	General Description Examples	Fire Flow		Response to First Alarm		Add for Severe Life Hazard: Engine, Ladder or Rescue Company, at Least
		L/min x 1000	Approx. Igpm range	Engine Companies	Ladder Companies	
1 (a)	Minor fires not in buildings, very small buildings, widely detached	1 2	200 400	1		
1 (b)	Scattered development (except wood covered roofs)	3	600	1		
2	Typical modern, 1-2 storey residential subdivision, 3-6 m (10-20 ft.) detached.	4-5	800 - 1,000	2		
3 (a)	Close 3-4 storey residential & row housing, small mercantile and industrial	6-13	1,200 - 2,800	2	1 (if required by hazards)	
3 (b)	Seriously exposed tenements. Institutional. Shopping Centres. Fairly large areas & fire loads, exposures.	14-19	3,000 - 4,200	2	1	1
4 (a)	Large combustible institutions, commercial buildings, multi-storey and with exposures.	20-27	4,400 - 6,000	2	1	1
4 (b)	High fire load warehouses and buildings like 4 (a).	28-35	6,200 - 7,600	3	1	1
5	Severe hazards in large area buildings usually with major exposures. Large congested frame districts.	36-46	7,800 - 10,000	3	2	1

Nanoose Fire Department will send two pumper apparatus to a structure fire call. 2nd alarm responses would require mutual aid.

Nanoose Volunteer Fire Department received 81 points of credit out of the maximum possible 100 for this grading item.

7.2.15. Fire Ground Operations

Within this portion of the grading item all phases of operations at fires are considered. The fire department is reviewed in its ability to operate effectively at fires both small and large in magnitude, including rescue work when necessary.

Good results at the fire scene depend on the use of effective and efficient fire methods and standard operating procedures, involving the laying of 65 mm (2 ½ inch) or larger hose lines, connecting pumpers to hydrants, connecting to and supplying sprinkler and standpipe systems in buildings so equipped and the efficient use of breathing equipment and tools and other devices as may be called for by the conditions encountered.

Fire ground operations will also be influenced (favourably or unfavourably) by the adequacy of department manpower, sufficiency of pumper and ladder companies, quality of training and other factors.

The Nanoose Volunteer Fire Department follows a regular training schedule to maintain the adequacy of its members to perform on the fire ground. The fire department is currently reviewing and updating the department standard operating procedures/guidelines.

Nanoose Volunteer Fire Department received 247 points of credit out of the maximum possible 300 for this grading item.

Recommendation 7.2-11 Update Standard Operational Guidelines

The Nanoose Volunteer Fire Department should update and review Standard Operating Guidelines and effectively implement the guidelines throughout the department.

7.2.16. Special Protection Required

Some municipalities have particular fire hazards within areas they protect requiring specialized apparatus or equipment which should be provided either by the fire department, individual property owners, or both together. These hazards, including waterfront port and marina facilities, large petrochemical installations or brush and grass fire potentials should be provided for.

There is a considerable risk of fire in the Wildland Urban Interface zone in the Nanoose Bay community. More than 80 percent of the land base covered in this area is classified as a high and/or extreme hazard area for interface fire.

Nanoose Bay conducted a Community Wildfire Protection Plan in 2010 in order to address the Wildland Urban Interface (WUI) in Nanoose Bay. The Plan has yet to be implemented in the community.

Nanoose Volunteer Fire Department received 184 points of credit out of the maximum possible 200 for this grading item.

Recommendation 7.2-12 Develop a plan to implement the recommendations of Community Wildfire Protection Plan

To reduce the risk of Wildland Urban Interface (WUI) fire losses throughout the community, the community should review the recommendations of the 2010 Community Wildfire Protection Plan, prioritize them and develop a plan for implementation.

7.2.17. Miscellaneous Factors and Conditions

Records (For Effective Operations, Planning)

Suitable records of fires, fire operations, personnel, training, fire hose and other essential matters should be kept. Records should be maintained as they are essential to effective and responsible management of a fire department. Daily, monthly, and annual reports are useful management tools for the Fire Chief.

Records of fires, training, tests, attendance and activities in the department should be developed to aid in planning future activity and policy as well as the assessment of performance. Good records of performance evaluations, work record and training should be maintained for each member.

The Nanoose Volunteer Fire Department maintains both paper and digital records of personnel and records of tests and maintenance on apparatus and equipment.

Fire Stations (Suitability)

All stations should be of substantial construction, suitable for the service, and located and arranged for ease and quickness of response. Proper safeguards against internal hazards should be provided. Construction of fire stations should be substantial, non-combustible, preferably fire resistive and protected from exposures, with internal and external hazards minimized. Stations should be equipped with adequate heating and lighting with consideration of the need to dry or thaw wet or frozen equipment and perform maintenance on apparatus.

The Nanoose Volunteer Fire Department completed and moved into a new fire hall in 2013. The fire hall built to post disaster requirements, protected by an automatic sprinkler system and is of wood frame construction. The fire hall is well designed to ensure adequate space for apparatus bays, training and administration facilities. The fire hall is equipped with adequate heating and lighting, and back-up power supplies. There is no dedicated area for fire prevention at this time.

Apparatus Refuelling

Fuel should be available in sufficient quantities at convenient points within the community or municipality. Suitable arrangements should be made for delivery of fuel to apparatus at fires of long duration.

Apparatus refuelling is carried out at the Nanoose Volunteer Fire Department fire hall.

Response Delays (Exceptional)

Every fire department may have delays in response for personnel or when on route to an emergency. The possibility of delays due to poor condition of roads, including inadequate snow removal and sanding, steep grades, vehicle parking, traffic, railroad crossing, and other similar features should be considered.

Overall, there were no significant issues within the Nanoose fire protection area that would cause exceptional delays of the fire department. Road ways were in good condition and were not viewed to cause any problems for fire department response. Traffic congestion was minimal but may increase as the community develops.

Nanoose Volunteer Fire Department received 116 points of credit out of the maximum possible 200 for this grading item.

7.2.18. Pre-Incident Planning

Pre-incident planning is one of the most effective tools a fire department has in controlling or reducing the damage caused by fire. Planning for fires in industrial and commercial occupancies increases the confidence and ability of the fire department in handling the fires and reduces the risk to the life safety of the fire fighters involved.

This grading item reviews the fire departments pre-incident planning program. Review of this grading item looks at the pre-incident plan inspection program, preparation of plans, quality of data, and the use of pre-incident plans in training.
Pre-incident planning is currently in progress. Nanoose Fire Department has developed some pre-incident plans for buildings that require them. Pre-incident plans are available in the hall in a digital format but are not yet available on apparatus. The fire crews are involved in the development of pre-incident plans. Completed pre-incident plans should be used in firefighter training.

Nanoose Volunteer Fire Department received 51 points of credit out of the maximum possible 200 for this grading item.

Recommendation 7.2-13 Develop Pre-Incident Plans for high risks and vulnerable occupancies

The fire department should use the community risk profile to prioritize buildings for pre-incident planning. The buildings presenting the highest risks (such as buildings with the highest Required Fire Flows, vulnerable occupancies) should have pre-plans developed for them.

Pre-incident plans should be developed in accordance with NFPA 1620, *Recommended Practice for Pre-Incident Planning*, recent edition or a similar standard/guideline.

Recommendation 7.2-14 Use developed Pre-incident Plans in training

Once developed, pre-plans should be used in training. This may involve classroom discussions or visiting the site and performing firefighting or rescue scenarios.

7.2.19. Administration

Fire departments should be administrated and managed by qualified and progressive leadership with adequate authority to carry out its mandate. Adequate procedures should be established to govern the administration and operation of the organization.

The fire department should be organized with appropriate staff for routine management and operational firefighting and emergency command.

Nanoose Fire Department is administered by the Nanoose Fire Protection Society. The current volunteer Fire Chief is progressive and has worked very hard to develop and get the fire department operational. The department is organized with volunteer administration and staffing to manage the operations of fire suppression, training, and fire prevention.

Nanoose Volunteer Fire Department received 180 points of credit out of the maximum possible 200 for this grading item.

Recommendation 7.2-15 Acquire Additional Administration Personnel

Nanoose Volunteer Fire Department should consider hiring a full-time/part-time administrative assistant to assist Senior Officers with administration duties.

8. PFPC - FIRE SAFETY CONTROL ASSESSMENT

8.1. Fire Safety Control Grading Items

The sections below cover the four grading items that pertain to Fire Safety Control. Twenty percent of the Public Fire Protection Classification of the Nanoose Volunteer Fire Department comes from the grading of Fire Safety Control. Fire Safety Control has become an increasingly heavily weighted portion of the fire insurance grading system. This is as a result of statistical data showing that communities employing effective programs in these areas have significantly reduced fire related losses.

A substantial degree of safety to life and protection of property from fire should be provided by provincial and municipal control of hazards. Control can be best accomplished by the adoption and enforcement of appropriate codes and standards for manufacture, storage, and use of hazardous materials and for building construction, as well as through training, advisory and education programs for the public.

Nanoose Volunteer Fire Department was reviewed in the effectiveness of their practices with regard to Fire Safety Control and Fire Prevention.

8.1.1. General Program

This grading item reviews the general fire prevention, inspection and investigation activities of the fire department. The official in charge of fire prevention activities, in cooperation with the chief of the fire department, should establish an inspection procedure for correction of: obstructions to exits which interfere with emergency egress or with fire department operations, inadequate or defective automatic or other fire alarm equipment or fire extinguishing equipment or conditions in buildings or other structures which create a severe life hazard potential. Provisions should be made for the investigation of fires.

The fire prevention program should include visiting and inspecting of dwellings on an occupant voluntary basis and the continuous education of the public. The fire department should maintain a highly visible profile in enforcement, education, training, and advisory services.

The Nanoose Volunteer Fire Department currently carries out inspections when complaints are received or inspections requested. The fire department carries out some Public Education activities including fire hall tours and elementary school programs during Fire Prevention week and posting education material on their website. There is no fire prevention by-law currently in place.

The following programs should be considered for implementation by Nanoose Volunteer Fire Department to mitigate the current and future community risks through fire prevention and public education.

Smoke Alarm Program

The goal of the program is to conduct door to door visits of all high risk residential units including but not limited to mobile homes, residences in remote areas and multi-unit residential facilities to check for smoke alarm compliance. Firefighters should be trained on the procedures to conduct visits and inspections. The smoke alarm program should check to ensure that smoke alarms are installed on every level of residential units and have working batteries.

Target Specific Inspection and Education Program

The Nanoose Volunteer Fire Department currently has programs and material in place to convey safety information to the public. The selection of fire prevention programs should depend on the nature of risk and the resources available to the community. Nanoose Volunteer Fire Department may adopt target (risk) specific inspection programs whereby inspections are prioritized based on the level of risk present in various occupancies and where education programs are selected based on demographics. Inspection frequencies should also be assigned based on risk. The Tables below give examples of Inspection and Education programs that may be adopted to address both present and future fire prevention needs in the community.

Table 8.1-1 Recommended Inspection and Education programs

Level of Risk	Type	Inspection Program	Education Program
High	Children	Annual Day Care Inspections Annual School Inspections	TAPP-C Arson prevention program School Visits
High	Seniors	Annual Inspection of Care facilities	Older and Wiser Program Presentations to Seniors Clubs and groups
High	Residents in remote areas	Inspection by complaint/request Burning permits	Smoke Alarm program Rural public education campaigns
High	Multi-family residential Commercial	Annual inspection or on a schedule Plans examination	Smoke Alarm program

Once an inspection program is set in place, a software database (backed-up) solution should be implemented for managing and storing fire prevention inspection data. Fire inspection data can be used to update pre-incident plans.

For every program implemented an annual evaluation should be carried out to determine and measure the program's effectiveness. The evaluation should indicate the need to modify a program and whether its goals and objectives have been achieved. Table 8.1-2 below provides suggestions for criteria that may be used to evaluate fire prevention programs.

Table 8.1-2 Fire Prevention Program evaluation criteria

Program	Evaluated for
Inspection	Compliance with applicable fire codes Reduced impact of fire on inspected properties Fire loss reduction Number of prevented fires
Public Education	Improvement in occupant knowledge and fire safety behavior Fire loss reduction Number of prevented fires

Nanoose Volunteer Fire Department received 201 points of credit out of the maximum possible 500 for this grading item.

Recommendation 8.1-1 Hire a Fire Prevention Officer

Consideration should also be given to the addition a full time fire prevention officer in the next 5 years to develop and deliver all fire prevention and public education programs as the community develops. Increasing administrative support for the fire prevention and public education services would help to improve the frequency of inspections and further develop public education programs. With current staffing levels and projected community developments, the Nanoose Volunteer Fire Department may only be able to carry out inspections on a reactionary basis when complaints are received or inspections requested. The Fire Prevention Officer would participate in building inspections thereby reducing the work load of the fire officers trained in inspections. A considerable amount of time is required to organize the completion of training and certification requirements for fire prevention. The Fire Prevention Officer would co-ordinate the training of volunteer firefighters to carry out smoke alarm inspections and public education programs such as the TAPP-C.

The options for addition of a full-time Fire Prevention Officer are:

Option 1 Hire a Regional Fire Prevention Officer – In this case the Fire Prevention Officer would administer fire prevention programs in the region under the Regional District of Nanaimo. Discussion should be held with the Regional District and other fire departments in the region to explore this option.

Option 2 Hire a Fire Prevention Officer in the Nanoose Volunteer Fire Department – This option will largely depend on community funding but should be seriously considered to address fire prevention needs in the community over the next 5 years.

Recommendation 8.1-2 Develop Standard Operating Policies relating to fire prevention and public education

The Nanoose Volunteer Fire Department should develop Standard Operating Policies (SOPs) relating to fire prevention and public education to formalize the department's responsibilities with respect to fire prevention. SOPs that should be developed include but are not limited to:

- Conducting fire safety inspections
- Fire inspector training
- Daytime Open Burning complaints
- Smoke Alarm program (including inspections)
- Open Burn regulations
- Delivery of public education

Up to date fire prevention operating guidelines and policies are important to ensure delivery of key messages to both the community and vulnerable populations.

Recommendation 8.1-3 Implement smoke alarm program and target specific inspection programs

The Nanoose Volunteer Fire Department should consider implementing the recommended programs to mitigate current and future community risks. Once an inspection program is set in place a software database (backed-up) solution should be implemented for managing and storing fire prevention inspection data. Fire inspection data can be used to update pre-incident plans.

8.1.2. Fire Safety Laws and Enforcement

This grading item reviews the fire safety laws in use and the enforcement of those laws within a community or municipality. Adequate laws or ordinances should be enacted to properly regulate the manufacture, storage, transportation and use of hazardous liquids, gases, and other combustible materials, including the handling of combustible waste, and to properly control building construction and electrical, heating, and ventilating installations. The National Fire and Building Codes of Canada and the Canadian Electrical Codes are accepted as the minimum standard regulation.

For enforcement purposes, inspections shall be made by personnel having specialized knowledge of special hazards by fire company members. Inspections should be made as frequently as may be necessary for the proper enforcement of fire prevention regulations.

Proper records of permits (licenses if required by local regulation), inspections, violations and their correction, and of all other important matters should be kept and analyzed.

The Regional District of Nanaimo currently does not enforce fire safety laws in the community. For fire insurance grading purposes a municipality should establish a bylaw or policy for fire prevention that includes fire safety laws, public education and inspections.

This item also looks further at the inspection program in place which has been discussed in the previous section. Recommendations made in the previous section equally apply.

Nanoose Volunteer Fire Department, the community of Nanoose Bay and the Regional District of Nanaimo received 116 points of credit out of the maximum possible 350 for this grading item.

Recommendation 8.1-4 Develop Fire Prevention Bylaw

As no policy or bylaw exists within the community of Nanoose Bay policy or bylaw should be established. The frequency of inspections to be conducted within the community should be outlined in the by-law.

Fire Underwriters Survey recommends the following to receive maximum credit for fire insurance grading purposes:

National Building Code of Canada			Minimum Inspection Frequency
Group	Division	Description of Major Occupancies	
A	1	*Assembly occupancies* intended for the production and viewing of the performing arts	6 months
A	2	*Assembly occupancies* not elsewhere classified in Group A	6 months
A	3	*Assembly occupancies* of the arena type	6 months
A	4	*Assembly occupancies* in which occupants are gathered in the open air	6 months
B	1	*Care or detention occupancies* in which persons are under restraint or are incapable of self-preservation because of security measures not under their control	6 months
B	2	*Care or detention occupancies* in which persons having cognitive or physical limitations require special care or treatment	6 months
C	—	*Residential occupancies*	6 months
D	—	*Business and personal services occupancies*	12 months
E	—	*Mercantile occupancies*	12 months
F	1	*High-hazard industrial occupancies*	3 months
F	2	*Medium-hazard industrial occupancies*	6 months
F	3	*Low-hazard industrial occupancies*	6 months

8.1.3. Building Construction Laws and Enforcement

This grading item reviews the building construction laws in use and the enforcement of those laws within a community or municipality. An adequate building construction code and enforcement program should be provided in the municipality, using a code equal to or better than the National Building Code of Canada. This item falls under the responsibility of the Regional District of Nanaimo.

Building design guidelines for fire department access should be established by the Regional District of Nanaimo based on provincial or national building codes and industry standards. To minimize fire department access issues NFPA 1, Fire Code Handbook, 2012 provides details on

fire department access. Excerpts from NFPA 1, Chapter 18 are provided in Appendix E – Design for fire department access.

Sprinkler systems should be considered for buildings with fire department access issues. Sprinkler protection (when designed and installed in accordance with NFPA 13 and maintained in accordance with NFPA 25) is widely accepted as one of the most effective methods of reducing fire risk in buildings and communities. Statistically properly designed, installed and maintained sprinkler systems have been shown to reduce fire losses significantly and reduce the number of lives lost to fire.

Nanoose Volunteer Fire Department, the community of Nanoose Bay and the Regional District of Nanaimo received 68 points of credit out of the maximum possible 100 for this grading item.

8.1.4. Electrical Code and Inspections

This grading item reviews the extent of electrical code inspections and enforcement. An electrical code should be applicable and equivalent to the Canadian Electrical Code and be enforced by an inspection and permits program.

The Regional District of Nanaimo does not provide electrical codes inspections. Electrical inspections and permits are required to be obtained from the BC Safety Authority.

Nanoose Volunteer Fire Department, the community of Nanoose Bay and the Regional District of Nanaimo received 32 points of credit out of the maximum possible 50 for this grading item.

9. PFPC - FIRE SERVICE COMMUNICATIONS ASSESSMENT

9.1. System Description Overview

Emergency communications for the Nanoose Volunteer Fire Department is provided by North Island 911. North Island 911 provides 9-1-1 call answer, fire/EMS dispatch and police dispatch services to the following Regional Districts: Mt. Waddington, Strathcona, Comox Valley, Powell River, Alberni-Clayoquot and Nanaimo (SD 69 only).

9.2. Fire Service Communications Grading Items

The sections below cover the seven grading items that pertain to Fire Service Communications. Ten percent of the Public Fire Protection Classification of the Nanoose Volunteer Fire Department comes from the grading of Fire Service Communications.

9.2.1. Communication Center

This grading item reviews the facility used for emergency communications. Equipment for the receipt and transmission of alarms should be housed securely and be protected against fire or damage from other sources, including flooding, vandalism, and earthquakes. Emergency communication centres should be of non-combustible construction with one to three hour protection from exposures depending on complexity of the installation. Most importantly, there should be protection from ignition sources and rapid initial fire spread through control of such sources as flammable furnishings and building finish materials.

North Island 911 was reviewed and the facility is designed to post disaster construction requirements and NFPA 1221: *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*. North Island 911 received near maximum credit within this grading item.

North Island 911 received 50 points of credit out of the maximum possible 60 for this grading item.

9.2.2. Means for Transmitting Alarm by Public

This grading item reviews the means for transmitting alarm by the public. There should be reliable and convenient means for the public to communicate alarms of fire to the fire department, by public telephone or alternative means.

There are reliable and convenient means for the public to communicate alarms of fire to the fire department, by public telephone throughout Nanoose Bay. Cellular service and landlines are available throughout the majority of the community.

North Island 911 received 70 points of credit out of the maximum possible 80 for this grading item.

9.2.3. Fire Department Telephone Service (Incoming from Public)

This grading item considers the means for the public to contact the fire department. There should be reliable and convenient means for the public to communicate alarms of fire to the fire department, by public telephone or alternative means.

This grading item reviews how the public contacts the emergency response agency. This is usually done by a published fire emergency number or 911. The primary means for the public to contact Nanoose Fire Department is through the use of 911. The Department also has a non-emergency number for general inquiries.

North Island 911 has an adequate number of dedicated fire lines to receive emergency calls from the public for fire insurance grading.

North Island 911 received 78 points of credit out of the maximum possible 80 for this grading item.

9.2.4. Means of Alarm Dispatch

This grading item considers the point of receipt of fire alarms from the public. It is necessary to have reliable and prompt notification of fire fighters to respond. The use of both audible and visual means is considered essential in larger fire departments having more frequent fire calls.

Sufficiency of circuits or radio frequencies for the transmission of alarms to fire stations shall be provided as required by NFPA 1221. Alarm-receiving equipment in fire stations, and elsewhere as may be required, shall be provided and served as specified in NFPA 1221.

North Island 911 received 293 points of credit out of the maximum possible 300 for this grading item.

9.2.5. Dispatching Service

This grading item considers the dispatching services in use. Telephone alarms should be received at a point where a competent operator or firefighter assigned to duty is available to promptly receive and process emergency calls at all times.

Operators should be familiar with the facilities provided and adequate in number for handling all alarms as required by the NFPA 1221 and NFPA 1061. The handling of all calls, including those related to fire and other emergencies shall be considered in determining the number of operators to be on duty.

North Island 911 received 59 points of credit out of the maximum possible 80 for this grading item.

9.2.6. Operations Radio

This grading item considers the means of the emergency communication centre to stay in contact with fire stations, apparatus, and personnel during emergency events. Telecommunicators should be able to maintain radio communications, using established procedures, with fire companies and essential personnel away from their quarters, in order to permit more effective and efficient operations, including the recall or re-assignment of

companies, passing reports from and between units on the fire ground and contact with units on in-service inspection activity and training.

Hand portable radios should be provided for all operational Chief and Company Officers on duty. The housing of base station equipment should be reliable and facilities preferably duplicated as to transmitter, wire circuits or radio relays. A duplicate transmitter and auxiliary power supply should be provided in fire departments having frequent fire calls.

There is a base radio at Fire Hall 1. Pagers can be alerted from the Fire Hall. Standby power is available for the radio system. Access to radio repeaters sites allows for no major communications dead-spots in the fire protection area.

The Nanoose Volunteer Fire Department received 72 points of credit out of the maximum possible 80 for this grading item.

9.2.7. Miscellaneous Factors

This grading item considers any factors or conditions, not covered elsewhere, that may adversely affect the receipt and transmission of fire alarms or related emergency calls. These could include, but are not limited to: incompetent or insufficient supervisory and maintenance personnel; insufficient size or physical arrangement of the communication centre such that efficiency of fire alarm operators is decreased; unsuitable location of these operators; improper use of or inadequate testing of existing equipment; inadequate records; inadequate maintenance; possible delays to the handling of non-emergency calls; handling of alarms prior to receipt by the fire alarm operators and other undesirable operating procedures.

North Island 911 was reviewed and no factors or conditions were determined to adversely affect the receipt and transmission of fire alarms or related emergency calls.

North Island 911 received 25 points of credit out of the maximum possible 30 for this grading item.

10.WATER SUPPLY ASSESSMENT

10.1. Overview

An adequate and reliable water supply is an essential part of the firefighting facilities of a community or municipality. A water supply is considered to be adequate if it can deliver the Required Fire Flow for the appropriate duration while simultaneously providing domestic water supply at the max day demand; if this delivery is possible under certain emergency or unusual conditions, the water supply is also considered to be reliable.

The Water Supply Assessment contributed 30% to the total Public Fire Protection Classification grade for Nanoose Bay. The Nanoose Bay Peninsula Water System and the Englishman River Water systems provide water to the Nanoose Bay community. The water systems were reviewed as part of the fire insurance grading but a water supply assessment report was beyond the scope of this study. However recommendations were provided to ensure adequate water supply is provided for public fire protection. Private water systems were not reviewed in this study.

A summary of the Fire Insurance Grading status of water systems in Nanoose Bay is provided in Table 10.1-1.

Table 10.1-1 Nanoose Bay Water System summary

Water System	Reviewed	Maintenance	Hydrants	Recognized
Nanoose Peninsula – Pressure Zone 1 (Beachcomber & Dolphin Area)	Y	RDN	Y	Y
Nanoose Peninsula – Pressure Zone 2 (Madrona Area)	Y	RDN	Y	Y
Nanoose Peninsula – Pressure Zone 3 (Fairwinds Area)	Y	RDN	Y	Y
Nanoose Peninsula – Pressure Zone 4 (Arbutus Area)	Y	RDN	Y	Y
Nanoose Peninsula – Pressure Zone 5 (West Bay Area)	Y	RDN	Y	Y
Englishman River	Y	RDN	Y	Y

Recommendation 10.1-1 Carry out flow tests on the Nanoose Peninsula and Englishman River systems

Previous flow tests conducted on the water systems showed low Available Flows. As such hydrant flow testing should be carried out for both Nanoose Peninsula and Englishman River systems to verify Available Fire Flows in the system. Flow testing should be done in Commercial areas, Residential areas and at hydrants near buildings with high required fire flows. Flow testing should be carried out within the next 6 months and results provided to the Fire Underwriters Survey.

Recommendation 10.1-2 Develop a water servicing by-law

A water servicing bylaw considering provision of fire flows for different occupancy types should be developed to ensure a minimum level of water for fire protection is provided.

Recommendation 10.1-3 Apply for Superior Tanker Shuttle Service (STSS) Accreditation

Nanoose Volunteer Fire Department should consider applying for Superior Tanker Shuttle Service (STSS) Accreditation. Requirements for STSS Accreditation are outlined below.

Accredited Superior Tanker Shuttle Service is a recognized equivalency to hydrant protection. To be accredited, fire departments must commit to maintaining a high standard of organization, and practice delivering the service regularly. The fire department must be able to show through testing and documentation that it can continuously provide water supplies in excess of the minimum required for municipal water supplies with hydrants.

To be recognized for Accredited Superior Tanker Shuttle Service, the system of delivery of water supplies must be well-designed and well-documented. The system of delivery must meet all of the requirements specified for Standard Tanker Shuttle Service and must exceed the requirements in several key areas:

- The fire department must be able to prove through testing that the specified requirements of Superior Tanker Shuttle Service can be met.
- For personal lines insurance, the fire department must be able to deliver a flow rate of not less than 950 LPM (200 IGPM) within five minutes of arriving at the test site with the first major piece of apparatus (wheel stop).
- For commercial lines insurance, the fire department must be able to deliver a flow rate of not less than 1,900 LPM (400 IGPM) within five minutes of arriving at the test site with the first major piece of apparatus (wheel stop).
- The fire department must be able to deliver the flow rate which will be accredited within 10 minutes of arriving at the test site with the first major piece of apparatus (wheel stop).
- The volume of water available for firefighting must be adequate to sustain the accredited flow rate for duration in accordance with the Fire Underwriters Survey Water Supplies for Public Fire Protection

Further Notes

To be recognized for fire insurance grading purposes, the protected property must be located within:

- Commercial Lines (PFPC) - 5 km of a fire station AND 2.5 km of an approved water supply point
- Personal Lines (DPG) - 8 km of a fire station AND 5 km of an approved water supply point

To be recognized for fire insurance grading purposes, the water-delivery system must be available AND accessible 24 hours per day and 365 days per year;

To be recognized for fire insurance grading purposes, the water capacity of alternative water supply sources must be documented for a 50-year drought cycle and documentation must be available for review. Alternative evidence of reliability of supply will be considered on a case by case basis.

Fire Underwriters Survey treats dry hydrants with suction points in the same way as it treats standard (pressurized) fire hydrants. Any property within 300 metres of a dry hydrant may be eligible for a Dwelling Protection Grade better than 3B, provided the building is within eight kilometres by road of a responding fire station, the fire department is recognized as meeting the criteria for a Dwelling Protection Grade of 3A or better and the fire department has adequate apparatus to effectively utilize the dry hydrant through suction. Testing of the fire department's capacity to utilize the dry hydrant and documentation of the dry hydrant design and maintenance may also be required.

Fire Underwriters Survey may extend credit beyond 300 metres of a fire hydrant when the responding fire company uses large-diameter hose, if the fire department can demonstrate a standard procedure for deployment of hose and also establish a relay operation as needed.

11.FIRE INSURANCE GRADING

Fire insurance grades are calculated as a single point in time measurement of fire risk and fire protection. The measurement is intended to be representative of the normal level of fire risk and fire protection resources in a community or a municipality at some given point in time and is considered from the perspective of property protection as opposed to life safety. In reality, fire protection capacity changes continuously as does fire risk and dynamic measurements of these are possible, but are not the method used for fire insurance grading.

The fire insurance grades have been calculated for Nanoose Bay fire protection district in 2013 based on information acquired throughout the survey and described in this report.

11.1. PFPC - Fire Insurance Grading Areas

To determine the final fire insurance grades, four separate relative classifications (with differing weights) have been determined:

- Fire Department 40 percent
- Water Supplies 30 percent
- Fire Prevention and Safety Control 20 percent
- Emergency Communications 10 percent

Each of these areas is further broken down and scored in a number of separate items with differing weights based on the importance of the item with respect to control of losses.

11.1.1. Fire Department Assessment within the Fire Insurance Grading

The Fire Department Assessment contributes 40 percent to the total Public Fire Protection Classification grade of the community or municipality. This is the most heavily weighted portion of the grading and as such is considered to be the most significant indicator of a community or municipality's overall preparedness for dealing with fire emergencies.

The weighting system is a two level system and the first level designates a specific number of available credit points for each item graded.

Note that a total of 3,650 credit points are available through the 19 items evaluated in the Fire Department, however this area of the grading is graded out of 1,800. This means that the first

1,850 points are required (at a minimum) to be recognized and the remaining 1,800 are then credit points. The total number of credit points are then scored as a percent ex. 1,620/1,800 = 90 percent.

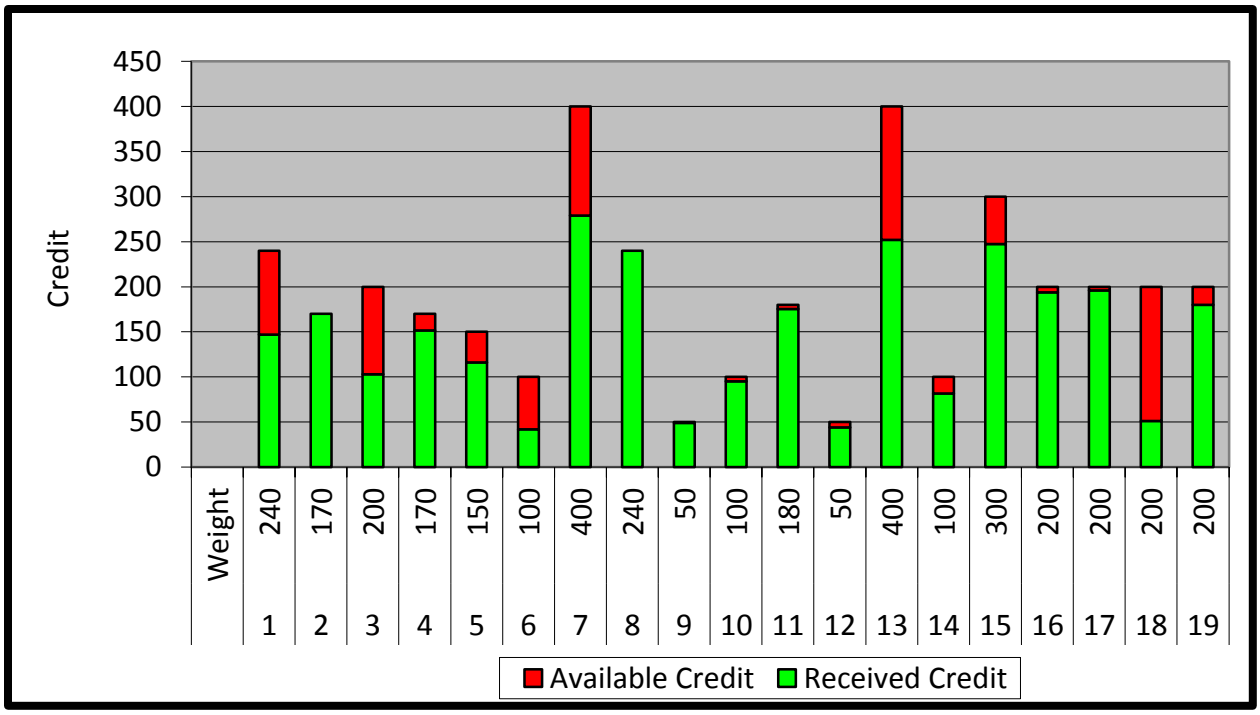
This forms the basis of the relative classification of the Fire Department.

Once each major grading area has a relative classification, the second tier weighting is applied as noted above (Fire Department 40%; Water Supplies 30%; Fire Safety Control 20%; Fire Service Communications 10%). The combination of relative classifications with applied weights forms the final Public Fire Protection Classification.

Table 11.1-1 Fire Department Grading Items Summary – Nanoose Volunteer Fire Department

Grading Item	Category	Credit Received	Maximum Credit	% of FD	% of All
FD-1	Engine Service	147	240	6.58%	2.63%
FD-2	Ladder Truck Service	170	170	4.66%	1.86%
FD-3	Distribution of Companies and Type of Apparatus	103	200	5.48%	2.19%
FD-4	Engine and Ladder Pump Capacity	151	170	4.66%	1.86%
FD-5	Design, Maintenance and Condition of Apparatus	116	150	4.11%	1.64%
FD-6	Number of Line Officers – Fire Suppression	42	100	2.74%	1.10%
FD-7	Total Fire Force Available	246	400	10.96%	4.38%
FD-8	Engine and Ladder Company Unit Manning	240	240	6.58%	2.63%
FD-9	Master and Special Stream Devices	49	50	1.37%	0.55%
FD-10	Equipment for Engines and Ladder Trucks, General	95	100	2.74%	1.10%
FD-11	Fire Hose	176	180	4.93%	1.97%
FD-12	Condition of Fire Hose	44	50	1.37%	0.55%
FD-13	Training and Qualifications	312	400	10.96%	4.38%
FD-14	Response to Alarms	81	100	2.74%	1.10%
FD-15	Fire Ground Operations	247	300	8.22%	3.29%
FD-16	Special Protection Required	184	200	5.48%	2.19%
FD-17	Miscellaneous Factors and Conditions	116	200	5.48%	2.19%
FD-18	Pre-Incident Planning	51	200	5.48%	2.19%
FD-19	Administration	180	200	5.48%	2.19%
	Total Available	2,750	3,650	100%	40.00%
	Minimum to be Recognized	1,850	1,850	100%	
	Graded out of	330	1,800	18.32%	
Weight in Grading	40			Credit Received	20.29
Relative Classification					
5					

Figure 11.1-1 Fire Department Grading Items Summary – Nanoose Volunteer Fire Department



The figure above shows each grading item of the Nanoose Volunteer Fire Department and how much credit was received and how much credit is still available per grading item.

Recommendations have been provided throughout the fire department assessment section of the report. Recommendations are provided for Nanoose Volunteer Fire Department if it wishes to work towards improving the relative classification. Credit up to the maximum can be received for each grading item.

Nanoose Volunteer Fire Department is encouraged to review the grading items that received the lowest amount of credit for the Nanoose Fire Station and decide if they wish to make specific plans to try and receive additional credit in those grading items.

Improving the relative classification of the fire department is an important step in improving the overall Public Fire Protection Classification of the community.

11.1.2. Fire Safety Control within the Fire Insurance Grading

The Fire Safety Control assessment contributes 20 percent to the total Public Fire Protection Classification grade of the Nanoose Volunteer Fire Department.

Fire Safety Control is graded more simplistically with 1,000 credit points being available and no minimum number needed to be recognized. However, two tiers of weights are applied as in other areas of the grading.

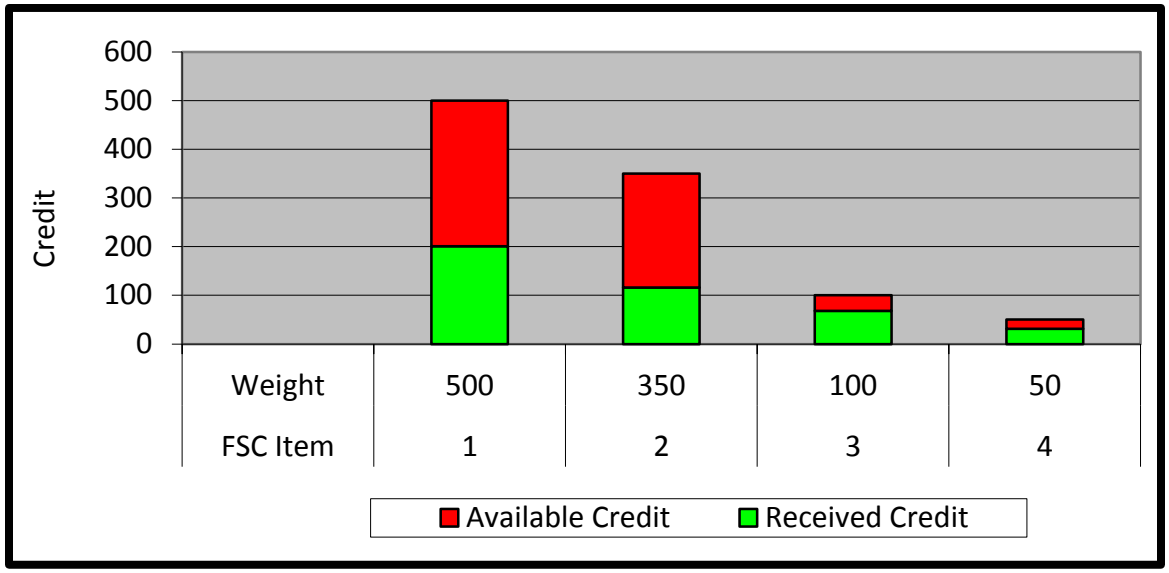
This forms the basis of the relative classification of Fire Service Communications.

Once each major grading area has a relative classification, the second tier weighting is applied as noted above (Fire Department 40%; Water Supplies 30%; Fire Safety Control 20%; Fire Service Communications 10%). The combination of relative classifications with applied weights forms the final Public Fire Protection Classification.

Table 11.1-2 Fire Safety Control Grading Items Summary

Grading Item	Category	Credit Received	Maximum Credit	% of FSC	% of All
FSC-1	General Program	201	500	50.00%	10.00%
FSC-2	Fire Safety Laws and Enforcement	116	350	35.00%	7.00%
FSC-3	Building Construction Laws and Enforcement	68	100	10.00%	2.00%
FSC-4	Electrical Code and Inspections	32	50	5.00%	1.00%
	Total Available	417	1,000	100%	20%
	Graded out of	556	1,000	55.60%	
Weight in Grading	20			Credit Received	8.32
Relative Classification 6					

Figure 11.1-2 Fire Safety Control Grading Items Summary



Improvements in the public education programs and a fire prevention inspection program are recommended to receive additional credit within this grading area.

Recommendations have been provided throughout the fire safety control assessment section of the report. Recommendations are provided for Nanoose Volunteer Fire Department and the Regional District of Nanaimo if they wish to work towards improving the relative classification further. Credit up to the maximum can be received for each grading item.

Improving the relative classification of fire safety control helps in improving the overall Public Fire Protection Classification of Nanoose Volunteer Fire Department.

11.1.3. Fire Service Communications within the Fire Insurance Grading

Fire service communications contributes 10 percent of the overall grade in the calculation of Public Fire Protection Classification.

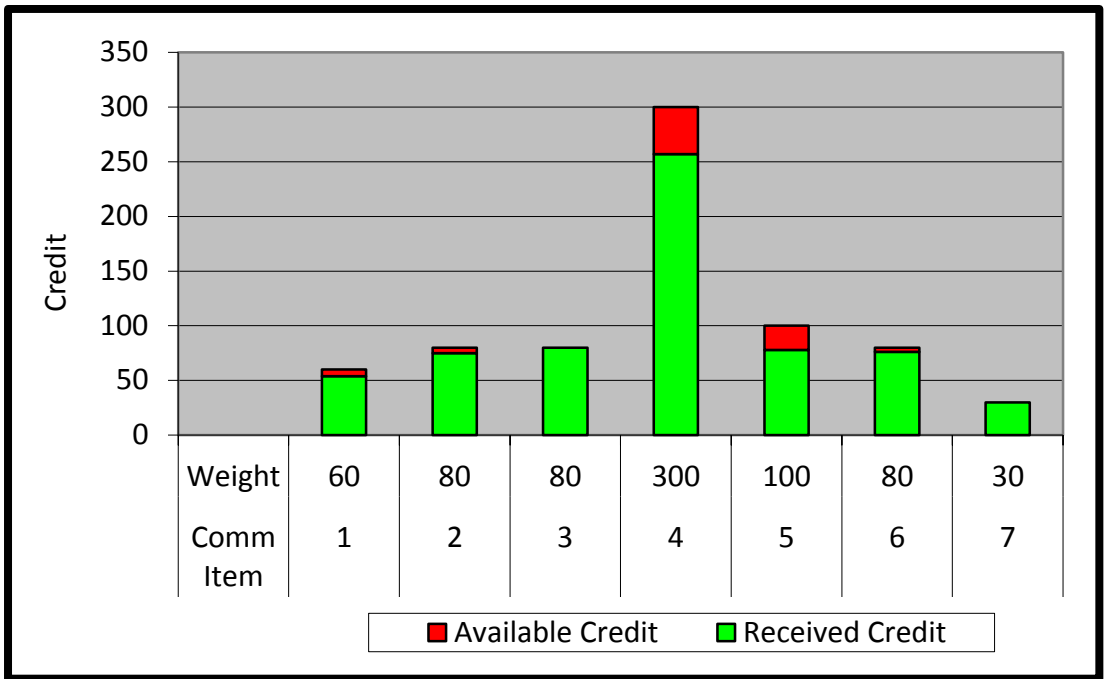
As noted above in the sections of the Fire Department and Water Supply, Fire Service Communications is graded similarly with two tiers of weight.

Note that a total of 730 credit points are available through the 7 items evaluated in Fire Service Communications, however this area of the grading is graded out of 500. This means that the first 230 points are required (at a minimum) to be recognized and the remaining 500 are then credit points. The total number of credit points are then scored as a percent ex. 450/500 = 90 percent. This forms the basis of the relative classification of the Fire Service Communications. Once each major grading area has a relative classification, the second tier weighting is applied as noted above (Fire Department 40%; Water Supplies 30%; Fire Safety Control 20%; Fire Service Communications 10%). The combination of relative classifications with applied weights forms the final Public Fire Protection Classification.

Table 11.1-3 Fire Service Communications Grading Items Summary

Grading Item	Category	Credit Received	Maximum Credit	% of Comm	% of All
Comm-1	Communication Center	43	60	8.22%	0.82%
Comm-2	Means for Transmitting Alarm by Public	67	80	10.96%	1.10%
Comm-3	Fire Department Telephone Service (Incoming from Public)	70	80	10.96%	1.10%
Comm-4	Means of Alarm Dispatch	293	300	41.10%	4.11%
Comm-5	Dispatching Service	79	100	13.70%	1.37%
Comm-6	Operations Radio	72	80	10.96%	1.10%
Comm-7	Miscellaneous Factors	20	30	4.11%	0.41%
	Total Available	644	730	100%	10%
	Minimum to be Recognized	230	230	100%	
	Graded out of	414	500	80.40%	
Weight in Grading	10			Credit Received	8.28
Relative Classification 2					

Figure 11.1-3 Fire Service Communications Grading Items Summary



The Fire Service Communications provided by the North Island 911 and utilized by Nanoose Volunteer Fire Department are adequate for ensuring the notification of fire emergencies. Overall, the emergency communication systems available and in use by the Nanoose Volunteer Fire Department is considered good in terms of fire insurance grading.

11.1.4. Water Supplies within the Fire Insurance Grading

The Water Supply Assessment contributes 30 percent to the total Public Fire Protection Classification grade of Nanoose Bay. As noted in the Fire Department section above, the Water Supply is graded similarly with two separate tiers of weight.

Note that a total of 3,382 credit points are available through the 15 items evaluated in Water Supply, however this area of the grading is graded out of 1,700. This means that the first 1,682 points are required (at a minimum) to be recognized and the remaining 1,700 are then credit points. The total number of credit points are the scored as a percent ex. 1530/1700 = 90 percent.

This forms the basis of the relative classification of Water Supplies.

Once each major grading area has a relative classification, the second tier weighting is applied as noted above (Fire Department 40%; Water Supplies 30%; Fire Safety Control 20%; Fire Service Communications 10%). The combination of relative classifications with applied weights forms the final Public Fire Protection Classification.

Table 11.1-4 Water Supply Grading Items Summary – All Water Systems in Nanoose Bay

Grading Item	Category	Credit Received	Maximum Credit	% of WS	% of All
WS-1	Normal Adequacy of Supply Works	200	300	8.87%	2.66%
WS-2	Reliability of Sources of Supply	171	200	5.91%	1.77%
WS-3	Reliability of Pumping Capacity (Pumps and Drivers)	92	150	4.44%	1.33%
WS-4	Reliability of Power Supply	132	182	5.38%	1.61%
WS-5	Reliability, Condition, Arrangement, Operation, and Maintenance of System Components	161	200	5.91%	1.77%
WS-6	Fire Flow Delivery by Mains	299	700	20.70%	6.21%
WS-7	Reliability of Principal Mains	23	100	2.96%	0.89%
WS-8	Installation of Pipes	22	100	2.96%	0.89%
WS-9	Arrangement of Distribution System	83	100	2.96%	0.89%
WS-10	Additional Factors and Conditions Relating To Supply and Distribution	126	200	5.91%	1.77%
WS-11	Distribution of Hydrants	555	650	19.22%	5.77%
WS-12	Fire Hydrants – Size, Type, and Installation	95	100	2.96%	0.89%
WS-13	Fire Hydrants – Condition and Inspection	78	100	2.96%	0.89%
WS-14	Other Conditions affecting Adequacy and Reliability	179	200	5.91%	1.77%
WS-15	Management	97	100	2.96%	0.89%
	Total Available	2,312	3,382	100%	30%
	Minimum to be Recognized	1,682	1,682	100%	
	Graded out of	1,070	1,700	63.00%	
Weight in Grading	30			Credit Received	11.12
Relative Classification 7					

Table 11.1-5 Water Supply Grading Items Summary – Englishman River Water System

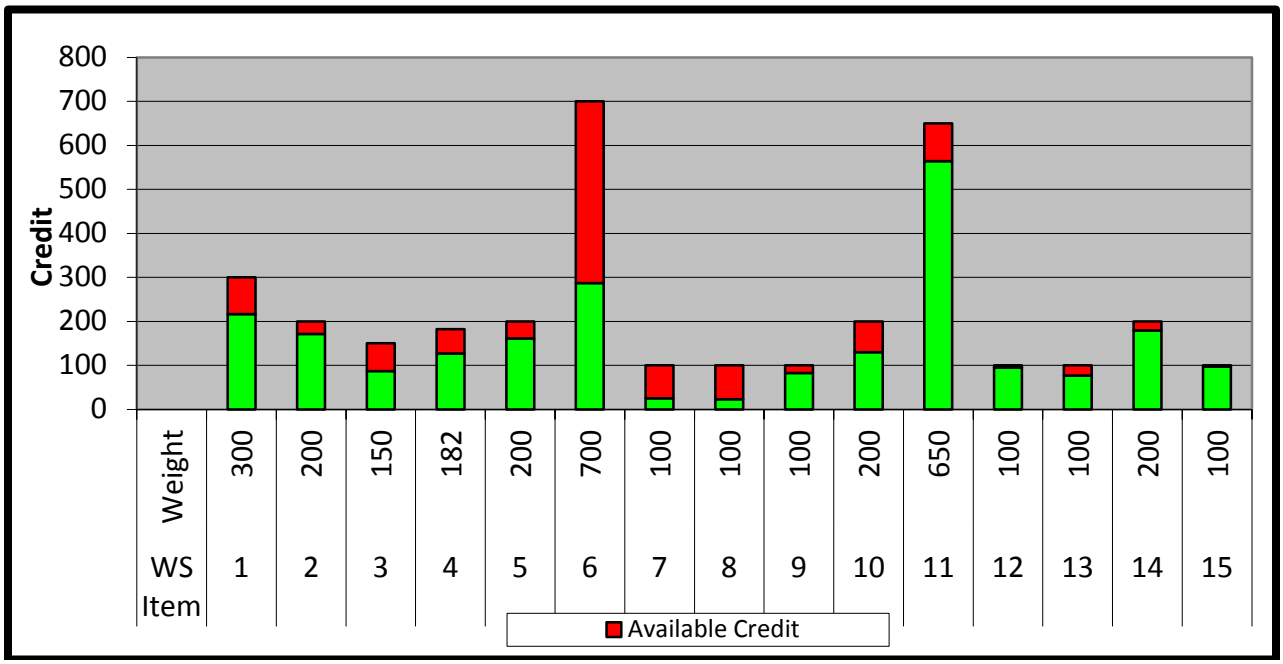
Grading Item	Category	Credit Received	Maximum Credit	% of WS	% of All
WS-1	Normal Adequacy of Supply Works	3	300	8.87%	2.66%
WS-2	Reliability of Sources of Supply	171	200	5.91%	1.77%
WS-3	Reliability of Pumping Capacity (Pumps and Drivers)	150	150	4.44%	1.33%
WS-4	Reliability of Power Supply	182	182	5.38%	1.61%
WS-5	Reliability, Condition, Arrangement, Operation, and Maintenance of System Components	161	200	5.91%	1.77%
WS-6	Fire Flow Delivery by Mains	430	700	20.70%	6.21%
WS-7	Reliability of Principal Mains	100	100	2.96%	0.89%
WS-8	Installation of Pipes	11	100	2.96%	0.89%
WS-9	Arrangement of Distribution System	83	100	2.96%	0.89%
WS-10	Additional Factors and Conditions Relating To Supply and Distribution	84	200	5.91%	1.77%
WS-11	Distribution of Hydrants	450	650	19.22%	5.77%
WS-12	Fire Hydrants – Size, Type, and Installation	97	100	2.96%	0.89%
WS-13	Fire Hydrants – Condition and Inspection	90	100	2.96%	0.89%
WS-14	Other Conditions affecting Adequacy and Reliability	183	200	5.91%	1.77%
WS-15	Management	94	100	2.96%	0.89%
	Total Available	2,289	3,382	100%	30%
	Minimum to be Recognized	1,682	1,682	100%	
	Graded out of	1,093	1,700	64.00%	
Weight in Grading	30			Credit Received	9.32
Relative Classification 7					

Figure 11.1-4 Englishman River Water Supply Grading Items Summary

Table 11.1-6 Water Supply Grading Items Summary – Nanoose Peninsula Water System

Grading Item	Category	Credit Received	Maximum Credit	% of WS	% of All
WS-1	Normal Adequacy of Supply Works	216	300	8.87%	2.66%
WS-2	Reliability of Sources of Supply	171	200	5.91%	1.77%
WS-3	Reliability of Pumping Capacity (Pumps and Drivers)	87	150	4.44%	1.33%
WS-4	Reliability of Power Supply	127	182	5.38%	1.61%
WS-5	Reliability, Condition, Arrangement, Operation, and Maintenance of System Components	161	200	5.91%	1.77%
WS-6	Fire Flow Delivery by Mains	287	700	20.70%	6.21%
WS-7	Reliability of Principal Mains	25	100	2.96%	0.89%
WS-8	Installation of Pipes	23	100	2.96%	0.89%
WS-9	Arrangement of Distribution System	83	100	2.96%	0.89%
WS-10	Additional Factors and Conditions Relating To Supply and Distribution	130	200	5.91%	1.77%
WS-11	Distribution of Hydrants	564	650	19.22%	5.77%
WS-12	Fire Hydrants – Size, Type, and Installation	95	100	2.96%	0.89%
WS-13	Fire Hydrants – Condition and Inspection	77	100	2.96%	0.89%
WS-14	Other Conditions affecting Adequacy and Reliability	179	200	5.91%	1.77%
WS-15	Management	97	100	2.96%	0.89%
	Total Available	2,321	3,382	100%	30%
	Minimum to be Recognized	1,682	1,682	100%	
	Graded out of	1,061	1,700	62.00%	
Weight in Grading	30			Credit Received	11.28
Relative Classification 7					

Figure 11.1-5 Nanoose Peninsula Water Supply Grading Items Summary



11.1.5. Summary of PFPC Fire Insurance Grading

The overall Public Fire Protection Classification grade is determined by totalling the credit received per grading item. A summary of the grades calculated for Nanoose Bay in 2013 are provided in Table 11.1-6 below. The Public Fire Protection Classification (PFPC) grades showed significant improvement from a PFPC 8 to a PFPC 5. This will result in insurance savings for commercial property owners. A PFPC 5 is above average for the size of community. Majority of communities with a population between 4,500 and 5,500 have a commercial classification of 6. The Nanoose Volunteer Fire Department and the community of Nanoose Bay are congratulated on this improvement.

Table 11.1-7 Credit Range Per Public Fire Protection Classification

Overall PFPC	Credit Range Per PFPC Grade
1	90.00 – 100.00
2	80.00 – 89.99
3	70.00 – 79.99
4	60.00 – 69.99
5	50.00 – 59.99
6	40.00 – 49.99
7	30.00 – 39.99
8	20.00 – 29.99
9	10.00 – 19.99
10	0.00 – 9.99

Table 11.1-8 Summary of Public Fire Protection Classification (PFPC) – Nanoose Bay Fire Protection Area

Sub-districts	Previous PFPC	2013 PFPC	Comments
Nanoose Fire Station – Nanoose Peninsula Water System	8	5	Hydrant Protected – Commercial Lines insured properties within specified distances of a hydrant on the Nanoose Peninsula water system and within 5 road km of Nanoose Fire Station
Nanoose Fire Station Englishman River Water System	Not previously graded	5	Hydrant Protected – Commercial Lines insured properties within specified distances of a hydrant on the Englishman River water system and within 5 road km of Nanoose Fire Station
Nanoose Fire Station	9	9	Fire Hall Protected – Commercial Lines insured properties not within specified distances of a hydrant on either water system but within 5 road km of Nanoose Fire Station
Areas beyond 5km road response distance	10	10	Unprotected – Commercial Lines insured properties not within 5 road km of Nanoose Fire Station

11.2. DPG - Fire Insurance Grading

To determine Dwelling Protection Grade many of the details were used to calculate the Public Fire Protection Classification. The minimum requirements to achieve Dwelling Protection Grade recognition have been reviewed for the Nanoose Volunteer Fire Department. The following table summarizes the review.

Table 11.2-1 Dwelling Protection Grade Summary

Required for Dwelling Protection Grade System		Requirement Met?
		Nanoose Volunteer Fire Department
Organization	Meet the requirements for organization under the authority of the Municipal Government Act. It should establish requirements for the establishment of boundaries, provision of funding and for the formal appointment of a fire chief by the involved local government body.	Yes
Membership	Adequate roster levels for a recognized fire department. Fire department members should respond from within a reasonable travel distance to the fire station. An auxiliary fire fighter should live and work within 8 km of the fire hall. DPG 3A - 15 auxiliary fire fighters credit, or DPG 4 – 15 or 10 minimum auxiliary fire fighters credit	Yes 29 members on roster
Training System	Meet minimum training levels including required frequency of training and maintenance of training records. NFPA 1001	Yes
Fire Fighting Apparatus	Meet minimum apparatus standards and requirements. Can/ULC S-515 or NFPA 1901	Yes triple combination pumper
Fire apparatus equipment	Outline minimum equipment requirements pursuant to local needs and operating conditions.	Yes
Fire Station	Provide a well designed and located fire station to serve the department and the community, and house apparatus.	Yes
Alarm Notification System	Provide a reliable means of receipt of alarms and the immediate notification of fire fighters required to respond to these alarms, 24 hours/day, 365 days/year.	Yes – North Island 911
Water Supply	Require that a fire department has an adequate water supply for fire suppression purposes. Provide hydranted water supply designed in accordance with FUS Water Supply for Public Fire Protection.	Yes
	Dwelling Protection Grade	3A

Table 11.2-2 Summary of Dwelling Protection Grades (DPG) – Nanoose Bay Fire Protection Area

Sub-districts	Previous DPG	2013 DPG	Comments
Nanoose Fire Station – Nanoose Peninsula Water System	3A	3A	Hydrant Protected – Personal Lines insured properties within 300m of a hydrant on the Nanoose Peninsula water system and within 8 road km of Nanoose Fire Station
Nanoose Fire Station – Englishman River Water System	3A	3A	Hydrant Protected – Personal Lines insured properties within specified distances of a hydrant on the Englishman River water system and within 8 road km of Nanoose Fire Station
Nanoose Fire Station	3B	3B	Fire Hall Protected – Personal Lines insured properties not within specified distances of a hydrant on the either water system but within 8 road km of Nanoose Fire Station
Areas beyond 8km road response distance	5	5	Unprotected – Personal Lines insured properties not within 8 road km of Nanoose Fire Station

The Nanoose Volunteer Fire Department has maintained its Dwelling Protection Grades since the previous assessment. A Dwelling Protection Grade 3A (volunteer fully protected) and 3B (volunteer semi-protected) apply to Personal Lines insured properties in the community of Nanoose Bay. A summary of the minimum requirements for the Dwelling Protection Grade system is provided in Appendix A.

12.FUTURE NEEDS ASSESSMENT

A considerable amount of development is anticipated in the Nanoose Fire Protection district over the next 25 years. The future growth includes development plans in the two areas of Nanoose Bay: Schooner Cove and the Lakes District. The Schooner Cove plan covers 12 acres of a mixed use neighbourhood while the Lake District plan consists primarily of single family and multi-family residential homes. A review of the Nanoose Volunteer Fire Department's capacity to provide fire protection services to the new developments was carried out. The analysis involved a risk assessment of the neighbourhoods based on anticipated building stock and an evaluation of the resources required to respond to the identified risks (response assessment).

12.1. Changes to the Community Risk Profile

The future growth includes development plans in the two areas of Nanoose Bay: Schooner Cove and the Lakes District. The Schooner Cove plan covers 12 acres of a mixed use neighbourhood while the Lake District plan consists primarily of single family and multi-family residential homes. Together, future growth in the Lakes District and Schooner Cove is currently recognized within the Official Community Plan (OCP) to accommodate up to 2,688 residential units. As such, there is a residual capacity of 1,918 units should Schooner Cove and the Lakes District develop to its full potential under the current OCP.

12.1.1. Required Fire Flows and Basic Fire Flow

Changes to building stock will result in changes to calculated Required Fire Flows for buildings and changes to the overall Basic Fire Flow for the community. For each of the neighbourhoods Required Fire Flows were calculated to determine the future risk.

Schooner Cove Neighbourhood:

Anticipated developments in the Schooner Cove Neighbourhood Plan include multi-family housing units and a mixed use commercial Village. A risk assessment based on calculated Required Fire Flows for proposed multi-level residential and commercial buildings. The risk assessment considered two scenarios - where buildings are sprinklered and unsprinklered. The calculated Required Fire Flows are shown in Table 12.1-1 and Table 12.1-2 below.

Table 12.1-1 Schooner Cove RFF Calculations – No sprinkler protection

Building Name	Footprint Area	Number of Storeys	Effective Total Area	Building Construction	Occupancy Charge	Sprinkler Protection Reduction	Exposure Charge	Required Fire Flow
	m^2		m^2					IGPM
The Commercial Village	2,508	2 to 5	5,016	Ordinary	-10%	0%	15%	3,700
The Commons	2,400	3.0	7,200	Non-combustible	-15%	0%	15%	3,300
The Commons	2,400	4.0	9,600	Non-combustible	-15%	0%	15%	3,700
The Waterfront & Ridge	2,000	5.0	10,000	Non-combustible	-15%	0%	13%	3,700
The Waterfront & Ridge	2,000	3.0	6,000	Ordinary	-15%	0%	10%	3,500

Table 12.1-2 Schooner Cove RFF Calculations – Sprinkler protection

Building Name	Footprint Area	Number of Storeys	Effective Total Area	Building Construction	Occupancy Charge	Sprinkler Protection Reduction	Exposure Charge	Required Fire Flow
	m^2		m^2					IGPM
The Commercial Village	2,508	2 to 5	5,016	Ordinary	-10%	-50%	15%	2,000
The Commons	2,400	3.0	7,200	Non-combustible	-15%	-50%	15%	1,800
The Commons	2,400	4.0	9,600	Non-combustible	-15%	-50%	15%	2,000
The Waterfront & Ridge	2,000	5.0	10,000	Non-combustible	-15%	-50%	13%	2,200
The Waterfront & Ridge	2,000	3.0	6,000	Ordinary	-15%	-50%	10%	2,000

Lakes District Neighbourhood

It is anticipated that the development in the Lakes District neighbourhood will consist largely of single family and multi-family residential units and a community mixed use area incorporating some civic and commercial buildings. A risk assessment based on calculated Required Fire Flows for proposed residential buildings and a community mixed use centre was carried out. The calculated Required Fire Flows are shown in Table 12.1-3 below.

Table 12.1-3 Lake District RFF Calculations

Building Name	Footprint Area	Number of Storeys	Effective Total Area	Building Construction	Occupancy Charge	Sprinkler Protection Reduction	Exposure Charge	Required Fire Flow
	m^2		m^2					IGPM
Lake Districts Single Family	150	2.0	300	Wood-framed	-15%	-50%	30%	1,500
Lake Districts Duplex	250	2.0	500	Wood-framed	-15%	-50%	20%	1,500
Multifamily Residential 1	600	4.0	2,400	Ordinary	-15%	-50%	10%	2,200
Lake House Community Centre	400	1.0	400	Wood-framed	-15%	-50%	0%	1,500
Multifamily Residential 2	600	3.0	1,800	Ordinary	-15%	-50%	10%	1,800

Based on the above calculations, the projected Basic Fire Flow for Nanoose Bay is 3,300 IGPM. It should be noted that if the proposed buildings in the Schooner Cove are sprinklered, the Basic Fire Flow would remain at 2,400 IGPM.

12.1.2. Population and Demographics

Based on the current rates of growth, the population growth forecast for the community of Nanoose Bay estimates a population of between 7,000 and 11,000 by 2021 according to the Nanoose Bay Official Community Plan (2005). According to the 2007 Urban Futures study *Population and Housing Change in the Nanaimo Region,* the population of retirement aged residents (65 years and over) will increase significantly, accounting for most of the community growth. The study also projects a smaller increase (30 to 40 percent) in family rearing age groups between 25 years and 54 years old. However the most significant population change is expected in residents aged 55 years and older. The forecast trends have a major relevance in the planning of fire safety needs for a community. They are particularly important in the planning of public education and fire prevention activities to address demographic risks.

Considering the above changes to the risk factors in the community, the projected community risk profile is summarized in Table 12.1-4 below. The community profile shows both scenarios where new developments are sprinklered and non-sprinklered.

Table 12.1-4 Projected Community risk profile

Risk Factors	Community Profile	Level of Concern
Basic Fire Flow	A projected Basic Fire Flow of 3,300 IGPM (no sprinklers).	High
	A projected Basic Fire Flow of 2,400 IGPM (sprinklers)	Moderate
Number of Buildings with Required Fire Flows greater than 3,000 IGPM	7 or more buildings in the community have a calculated Required Fire Flow greater than 3,000 IGPM (no sprinklers).	High
	2 buildings in the community have a calculated Required Fire Flow greater than 3,000 IGPM (sprinklers).	Moderate
Building Height	Six multi-unit residential building 3 or more storeys in height.	High
Demographic Profile	High percentage of population identified	High

	as senior citizens over the age of 65. (25% in Electoral area E). Vulnerable occupancies such as retirement homes. More daycare facilities and schools.	
Geography	Excess of 12 minutes response times to certain properties in the community. Areas with high risk of Wildland Urban Interface (WUI) fires.	High
Past Fire Loss Statistics	An average of 3 structure fires per year over the past three years. This is below the provincial average when compared with similar sized communities.	Moderate

12.2. Response Capability

The response capability of the Nanoose Volunteer Fire Department considering anticipated developments was reviewed based on fire insurance grading and industry standards.

12.2.1. Response Assessment for Fire Insurance Grading

Schooner Cove Neighbourhood

Where buildings are not sprinklered, a Basic Fire Flow of 3,300 IGPM was determined. If the same buildings are sprinklered, the Basic Fire Flow is 1,800 IGPM.

For a Required Fire Flow of 3,300 IGPM, the needed benchmark response, read from Table 6.2-1 Fire Underwriters Survey - Table of Effective Response is:

- First Due Engine Response – one apparatus in 3.5 minutes
- Second Due Engine Response – one apparatus in five minutes
- Total Concentration Engine Response – Total four apparatus in seven minutes
- First Due Ladder Response – one apparatus in four minutes

For a Required Fire Flow of 1,800 IGPM, the needed benchmark response, read from Table 6.2-1 Fire Underwriters Survey - Table of Effective Response is:

- First Due Engine Response – one apparatus in 3.5 minutes
- Second Due Engine Response – one apparatus in five minutes
- Total Concentration Engine Response – Total two apparatus in five minutes

The Schooner Cove neighbourhood is approximately 9 minutes road travel distance from the Nanoose fire hall. For the scenario with no sprinkler systems installed in the buildings, 1 ladder apparatus would be required for fire insurance grading purposes.

Installing sprinkler systems in the proposed buildings lowers the Required Fire Flows and consequently the requirements for apparatus response and response times based on the Table of Effective Response. Sprinkler systems should be considered for new multi-storey buildings within the Schooner Cove neighbourhood.

Lake District Neighbourhood

A Basic Fire Flow of 1,500 IGPM was assigned to the Lake District neighbourhood at final build out phase. For a Required Fire Flow of 1,500 IGPM, the needed benchmark response, read from Table 6.2-1 Fire Underwriters Survey - Table of Effective Response is:

- First Due Engine Response – 1 apparatus in 3.5 minutes
- Second Due Engine Response – 1 apparatus in 5 minutes
- Total Concentration Engine Response – Total 2 apparatus in 5 minutes

12.2.2. Multi-level buildings

A number of multi-level residential buildings (3 to 6 storeys) have been proposed for both the Schooner Cove and Lake District neighbourhoods. For fire insurance grading purposes, a ladder company is required in communities with 5 buildings or more that are three stories or higher.

Should there be five or more three storey or higher buildings constructed in Nanoose Bay, a Ladder apparatus should be considered to receive full credit for fire insurance grading purposes.

12.3. Station Location Analysis

Response distances have been considered under various time intervals and standard response distances used for Fire Insurance Grading purposes. Distances are further broken down into the following 2 categories:

- First due response distances read from the Table of Effective Response i.e. the time of response needed based on the level of risk present.
- Distances used by underwriters when applying the Fire Insurance Grades to a policy which are shown in Table 12.3-1 Benchmark Distances when Applying Grades.

The coverage analysis is based on the current road network data in Nanoose Bay. Where travel times have been provided they are based on the following:

$$D = \frac{T - 0.65}{1.065}$$

Where: D = distance in km based on shortest distance on Nanoose Bay road network
T = time in minutes

Table 12.3-1 Benchmark Distances when Applying Grades

Grouping	Dwelling Protection Grade (DPG)	Public Fire Protection Classification (PFPC)
Ideal	5km	2.5km
Maximum	8km	5km

Coverage Analysis:

The distribution of response time is shown in Figure 12.3-1. It can be seen that the highest percentage of responses lie in thesix to seven6-7 minute range. 3.9 percent of buildings considered are beyond ten minute response travel time from the Nanoose fire hall. This number may increase as developments occur in the community. The fire department should develop a Standard of Response cover statement for properties beyond ten minutes travel time to define response capabilities for these areas.

The standard Fire Insurance Grading distances are shown in Figure 12.3-2where it can be seen that 18.88 percent RFF points lie within their respective first due distances of the fire hall; 13.09

percent within 2.5km; 43.88 percent within 5km; and 94.22 percent within 8km. For fire insurance grading purposes, the station coverage is well-suited to allow for the majority of properties to fall within the 5km and 8km minimum grading distances. The proposed developments at Schooner cove and the Lake Districts fall within the 8km fire insurance grading distance. For personal lines properties beyond 8km of the Nanoose Fire hall, a Dwelling Protection Grade (DPG) 5 would apply. For commercial properties beyond 5km of the fire hall, a Public Fire Protection Classification (PFPC) 10 would be applicable. Seventeen of the 20 buildings within the Commercial Zone are within 5km of the fire hall. Figure 12.3-3RFF Points and 2.5/5/8km Response shows all the building points analyzed and their distances from the fire hall.

An additional Satellite station may be considered to gain more credit under item 7.2.3 Distribution of Companies. However it was noted that most of the volunteer members reside close to the current fire hall location and as such the turnout time to a satellite hall may be slower resulting in delayed responses. The need for a satellite hall may be offset by adding career firefighters to the fire department to reduce response times.

Figure 12.3-1 Distribution of Response

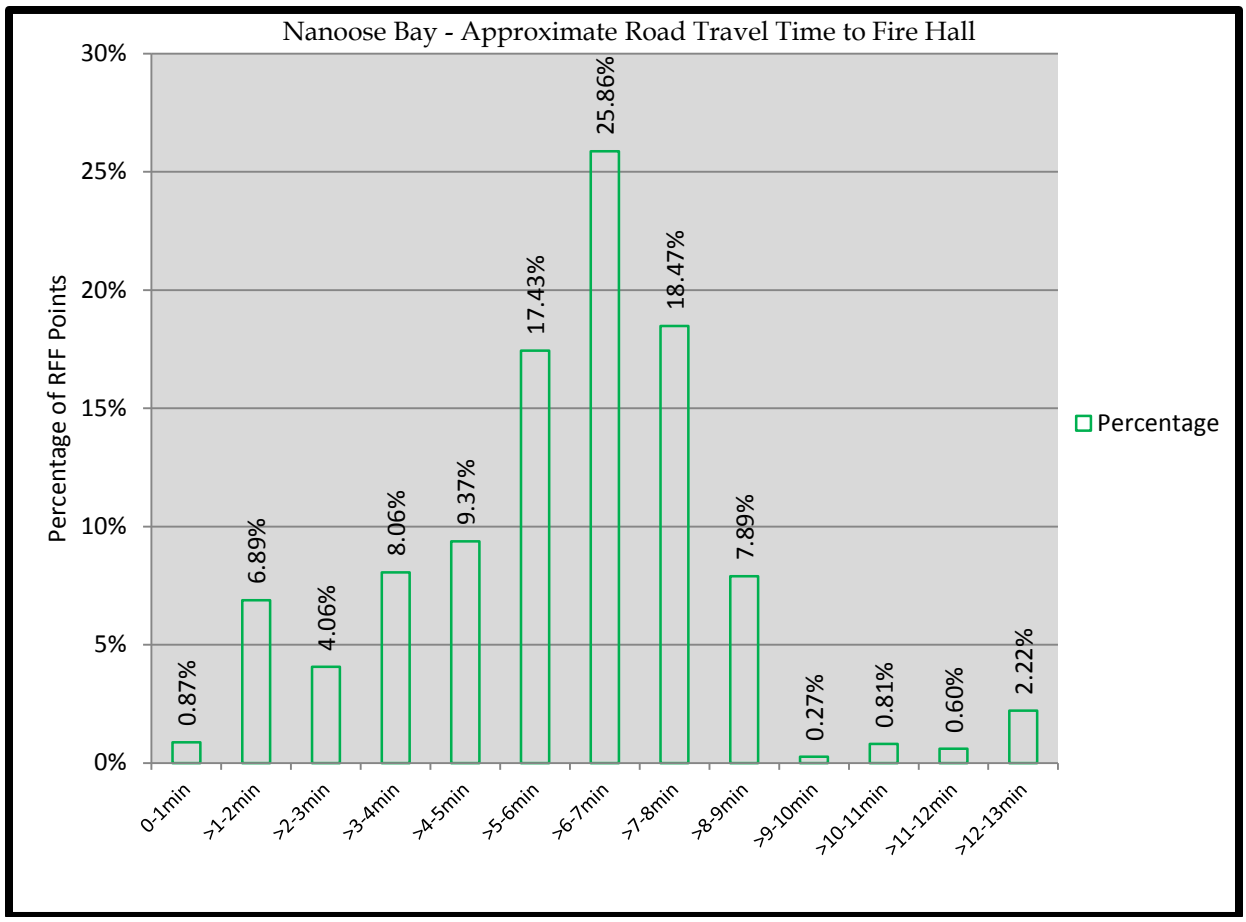
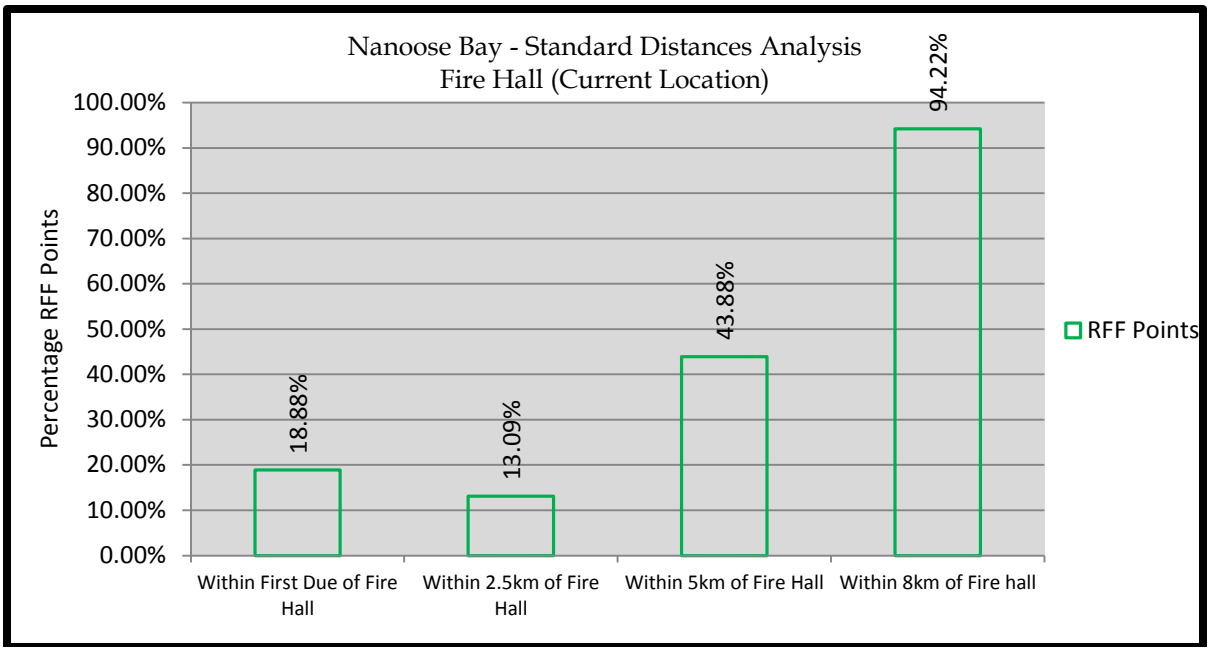
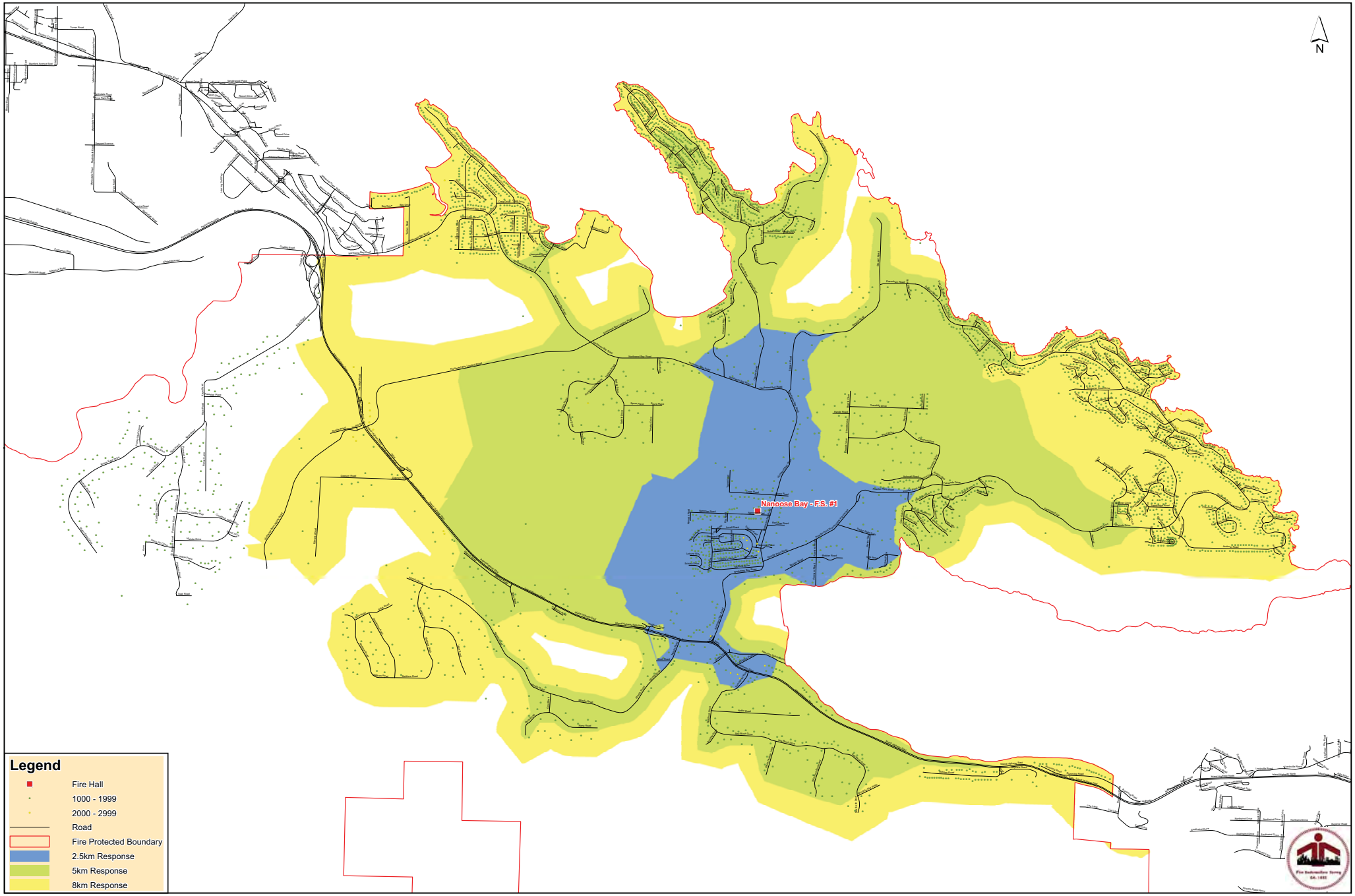


Figure 12.3-2 Nanoose Bay – Standard Distances Analysis Fire Hall (Current location)





Nanoose Bay

RFF Points and 2.5/5/8km Responses from Fire Hall

Scale = 1:12,000 0 385 770 Meters

Fire Underwriters Survey

12.4. Staffing

The following are recommended staffing goals at five year, ten year and 25 year development stages based on the changes in community risk profile. The recommendations are reliant on the anticipated population growth and development in Nanoose. The staffing recommendations aim to maintain or improve the Fire Insurance Grade for the community, improve response times for all areas including new developments, and ensure firefighter safety when responding to fires.

Phase I (0-5 years) – Establish a Volunteer Recruitment and Retention program to maintain or increase the available volunteer fire force. Efforts should be made to develop a Work Experience Program to supplement the core volunteer fire force. Hire a full-time Fire Prevention Officer to develop and administer a fire prevention and public education program.

Phase II (5-10 years) – Consider hiring a career Fire Chief Officer. As the community develops and population grows, the demand for fire service will also increase. Several programs have been recommended to meet the demand but each program implemented will result in increased need for management and administration. Having a career Fire Chief on duty will also result in enhanced day time response times. The estimated cost is $90,000.

Phase III (10-25 years) – Consider adding three more career firefighter positions at an estimated cost of $195,000. This would provide full day time coverage seven days a week and enable a one minute turnout time from the fire hall, resulting in reduced response times. This would also guarantee a minimum first response staffing of 4 firefighters.

The population of Nanoose Bay is projected to reach approximately 11,000 in the next 15 years (Statistics Canada). Table 12.4-1 below shows current staffing resources for similar sized communities in British Columbia.

Table 12.4-1 Benchmark Distances when applying grades

Municipality/Survey	Summerland	Nelson	Revelstoke	Salt Spring	Lake Country
Population (BC Stats)	11,280	10,230	7,277	10,235	11,708
Fire Chiefs	1	1	1	1	1
Deputy Fire Chiefs	0	1	0	0	2
Career Firefighters	2	10	6	3	0
Total Career Staff (Includes Fire Prevention or Other full-time Staff)	4	12.5	8	7	4

Recommendation 12.4-1 Develop Standard of Response Cover statements for new developments

Standard of Response Cover Statements should be developed for the neighbourhoods for each phase of development. These should be based on projected community risk profiles and fire department resources.

Recommendation 12.4-2 Consider purchase of a ladder apparatus

For fire insurance grading purposes, a ladder company is required in communities with 5 buildings or more that are three stories or higher. Should there be five or more three storey or higher buildings constructed in Nanoose Bay, a Ladder apparatus should be considered to receive full credit for fire insurance grading purposes.

Recommendation 12.4-3 Install sprinkler systems in proposed developments

Installing sprinkler systems in the proposed buildings lowers the Required Fire Flows and consequently the requirements for apparatus response and response times based on the Table of Effective Response. Sprinkler systems should be considered for new multi-storey buildings within the Schooner Cove neighbourhood.

Recommendation 12.4-4 Update fire prevention programs

Fire prevention programs should be evaluated and updated based on the changes to community risk profile.

Recommendation 12.4-5 Adopt recommended staffing schedule

Nanoose Volunteer Fire Department should adopt the provided five, ten and 25 year staffing schedule to maintain or improve the Fire Insurance Grade for the community, improve response times for all areas including new developments, and ensure firefighter safety when responding to fires.

13. STUDY CONCLUSIONS

The fire insurance grades for the community of Nanoose Bay have improved since the previous assessment. The Public Fire Protection Classification improved from a class 8 to class 5. The Dwelling Protection Grades that apply to the community have been maintained.

Fire Insurance Grade	2013	1982
PFPC – Public Fire Protection Classification (Commercial Lines)	5	8
DPG – Dwelling Protection Grade (Personal Lines)	3A	3A

A number of recommendations have been made as a result of our assessment to aid the Nanoose Volunteer Fire Department enhance the fire protection services provided to the community of Nanoose Bay, plan for future developments and maintain or improve its public fire protection classification. The following list summarizes the recommendations provided throughout this report.

Recommendation 12.4-1 Develop a Standard of Response cover statement for all areas

Recommendation 12.4-2 Provide additional Engine Apparatus

Recommendation 12.4-3 Provide Reserve Engine Apparatus

Recommendation 12.4-4 Adopt Apparatus replacement schedule

Recommendation 12.4-5 Additional Chief Officer positions

Recommendation 12.4-6 Train and qualify additional firefighters to Officer positions

Recommendation 12.4-7 Improve total available fire force

Recommendation 12.4-8 Establish an annual recruitment and retention program

Recommendation 12.4-9 Establish a Work Experience Program

Recommendation 12.4-10 Full-time/Part-time administrative assistance

Recommendation 12.4-11 Update operational guidelines to include adopted training standards

Recommendation 12.4-12 Update Standard Operational Guidelines

Recommendation 12.4-13 Develop a plan to implement the recommendations of Community Wildfire Protection Plan

Recommendation 12.4-14 Develop Pre-Incident Plans for high risks and vulnerable occupancies

Recommendation 12.4-15 Use developed Pre-incident Plans in training

Recommendation 12.4-16 Acquire Additional Administration Personnel
Recommendation 12.4-17 Hire a Fire Prevention Officer
Recommendation 12.4-18 Develop Standard Operating Policies relating to fire prevention and public education
Recommendation 12.4-19 Implement smoke alarm program and target specific inspection programs
Recommendation 12.4-20 Develop Fire Prevention Bylaw
Recommendation 12.4-21 Carry out flow tests on the Nanoose Peninsula and Englishman River systems to verify Available Fire Flows
Recommendation 12.4-22 Develop a water servicing by-law
Recommendation 12.4-23 Apply for Superior Tanker Shuttle Service (STSS) Accreditation
Recommendation 12.4-24 Develop Standard of Response Cover statements for new developments
Recommendation 12.4-25 Consider purchase of a ladder apparatus
Recommendation 12.4-26 Install sprinkler systems in proposed developments
Recommendation 12.4-27 Update fire prevention programs according to changes in community risk
Recommendation 12.4-28 Adopt recommended staffing schedule

Appendix A – Dwelling Protection Grade Summary of Basic Requirements

Dwelling Protection Grade Summary of Basic Requirements per Fire Station[i]

DWELLING PROTECTION GRADE	WATER WORKS SYSTEM	FIRE DEPARTMENT		CORRELATION WITH PFPC[ii] Public Fire Protection Classification
		EQUIPMENT	FIREFIGHTERS[iii]	
1	Water supply system designed in accordance with Fire Underwriters Survey standard "Water Supply for Public Fire Protection" with a relative classification of 5 or better	Response from within 8 km by road of a triple combination pumper	Minimum Response: - On-duty: 3 career fire fighters, plus - Off-duty: fire chief or other officer	Water Supply and Fire Department must grade PFPC Relative Class 5 or better
2	Water supply system designed in accordance with Fire Underwriters Survey standard "Water Supply for Public Fire Protection" with a relative classification of 6 or better	Response from within 8 km by road of a triple combination pumper	Minimum Response: - On-duty: 1 career fire fighters, plus - On-call: 15 auxiliary fire fighters	Water Supply and Fire Department must grade PFPC Relative Class 6 or better
3A	Water supply system designed in accordance with, and meeting the minimum requirements of, Fire Underwriters Survey standard "Water Supply for Public Fire Protection"	Response from within 8 km by road of a triple combination pumper	15 auxiliary fire fighters	No Public Fire Protection Classification required
3B	Not required – however fire department must have adequate equipment, training and access to approved water supplies to deliver standard shuttle service in accordance with NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting	2 units required. Triple combination pumper plus a mobile water supply with a combined water carrying capacity of not less than 6,820 L (1,500 IG)	15 auxiliary fire fighters	No Public Fire Protection Classification required
4[3]	Not required – however fire department must have adequate equipment, training and access to approved water supplies to deliver shuttle service in accordance with NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting	2 units required. Triple combination pumper plus a mobile water supply with a combined water carrying capacity of not less than 6,820 L (1,500 IG)	15 auxiliary fire fighters	No Public Fire Protection Classification required
5	Unprotected communities or communities not qualifying for Grades 1, 2, 3A, 3B, or 4 above	Unprotected communities or communities not qualifying for Grades 1, 2, 3A, 3B, or 4 above	Unprotected communities or communities not qualifying for Grades 1, 2, 3A, 3B, or 4 above	No Public Fire Protection Classification required

[i] Refer to additional notes and requirements for interpretation

[ii] The P.F.P.C. is a sophisticated municipal fire protection grading system utilized for Commercial Lines insurance. PFPC fire insurance grades are scaled from 1 to 10. One (1) represents a high level of fire protection and 10 indicates little or no recognized fire protection. This system evaluates the ability of a community's fire defences to prevent and control major fires that may occur in commercial, industrial and institutional buildings and/or districts.

[iii] Requirements for Dwelling Protection Grade 4 are the same as for Dwelling Protection Grade 3B, however in some cases, an allowance may be considered for Dwelling Protection Grade 4 where all of the criteria for Dwelling Protection Grade 3B have been met with one exception. If more than one criteria has not been met (ex. less than 15 auxiliary fire fighters and a single pumper apparatus) Dwelling Protection Grade 5 is applied.

Where Dwelling Protection Grade 4 is applied, a signed letter of intent from the community is to be sent to Fire Underwriters Survey indicating that improvements will be made, within an agreed timeframe, to meet the criteria of Dwelling Protection Grade 3B.

It is important to note that the absolute minimum number of auxiliary fire fighters considered within the fire insurance grading is 10 and that maximum age of apparatus that can be considered is 30.

Appendix B – Fire Underwriters Survey – 1999 – Water Supply for Public Fire Protection

WATER SUPPLY
FOR
PUBLIC FIRE PROTECTION

1999

FIRE UNDERWRITERS SURVEY

A SERVICE TO INSURERS AND MUNICIPALITIES

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Quebec	CGI Risk Management Services Fire Underwriters Survey 1611 Crémazie Blvd. East Montreal, Quebec H2M 2P2	Local: 514-735-3561 Toll Free: 1-800-263-5361 Fax: 514-844-0777
Ontario	CGI Risk Management Services Fire Underwriters Survey Lock Box 200 150 Commerce Valley Drive, West Markham, Ontario L3T 7Z3	Local: 905-882-6300 Toll Free: 1-800-387-4356 Fax: 905-695-6543
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TABLE OF CONTENTS

PREFACE 5

PART I 6

GENERAL 6

ADEQUACY AND RELIABILITY. 6

STORAGE. 6

PRESSURE. 7

SUPPLY WORKS 7

NORMAL ADEQUACY OF SUPPLY WORKS. 7

RELIABILITY OF SOURCE OF SUPPLY. 7

GRAVITY SYSTEMS. 8

PUMPING 9

RELIABILITY OF PUMPING CAPACITY. 9

POWER SUPPLY FOR PUMPS. 9

FUEL SUPPLY. 10

BUILDINGS AND PLANT 10

BUILDINGS AND STRUCTURES. 10

MISCELLANEOUS SYSTEM COMPONENTS, PIPING AND EQUIPMENT. 10

OPERATIONS. 11

EMERGENCY SERVICES. 11

PIPING 12

RELIABILITY OF SUPPLY MAINS. 12

INSTALLATION OF PIPE. 12

VALVES. 13

HYDRANTS 14

SIZE, TYPE AND INSTALLATION. 14

INSPECTION AND CONDITION. 14

HYDRANT DISTRIBUTION. 14

RECORDS 15

PLANS AND RECORDS. 15

TABLES 16

PART II 17

GUIDE FOR DETERMINATION OF REQUIRED FIRE FLOW COPYRIGHT I.S.O. 17

Notes to Calculation 19

OUTLINE OF PROCEDURE 20

APPENDIX 21

TYPES OF CONSTRUCTION 21

OCCUPANCIES 21

EXPOSURES 23

CONVERSION FACTORS 24

WATER SUPPLY FOR PUBLIC FIRE PROTECTION

PREFACE

This guide summarizes the more significant recommendations of Fire Underwriters Survey with respect to fire protection requirements in municipal water works system design. It reflects the manner in which FUS assesses the water supply aspect of a municipality's fire risk potential during surveys on behalf of the Canadian property insurance industry and represents the accumulated experience of many years of study of actual fires. Water supply is one of a number of components evaluated by FUS in the municipal fire protection system. Recommendations applying to the fire departments and code enforcement are covered in other publications of Fire Underwriters Survey. FUS local offices are prepared to assist municipal officials or their consultants with advice on special problems, as time limits permit, in accordance with the intent of this guide. The minimum size water supply credited by FUS must be capable of delivering not less than 1000 L/min for two hours or 2000 L/min for one hour in addition to any domestic consumption at the maximum daily rate. Static suction supplies to fire department pumpers are recognized as a supplement to the piped system.

In the FUS assessment of a water supply system, the major emphasis is placed upon its ability to deliver **adequate** water to control major fires throughout the municipality on a **reliable** basis via sufficient and suitable **hydrants**. What is ultimately available to the fire department is the critical test in this fire protection evaluation.

Rates of flow for firefighting purposes are expressed in litres per minute as this is the adopted unit for the firefighting field.

In this edition all quantities are specified in S.I. units.

PART I

GENERAL

ADEQUACY AND RELIABILITY. An adequate and reliable water supply for firefighting is an essential part of the fire protection system of a municipality. This is normally a piped system in common with domestic potable water service for the community.

A water supply system is considered to be fully adequate if it can deliver the necessary fire flow at any point in the distribution gridiron for the applicable time period specified in the table “Required Duration of Fire Flow” with the consumption at the maximum daily rate (average rate on maximum say of a normal year). When this delivery is also possible under certain emergency or unusual conditions as herein specified, the system is considered to be reliable. In cities of population in excess of 250,000 (or smaller places with high fire incident and severe hazard conditions) it is usually necessary to consider the possibility of two simultaneous major fires in the area served by the system.

Fire flows are amounts of water necessary to control fires. These are determined as shown in Part II. System design should contemplate meeting the required fire flows existing or probable with the possible exception of gross anomalies where there is no fire threat to the remainder of the community. In these cases, the properties should preferably be modified in hazard to reduce the required flow as part of a coordinated community fire protection system.

The protection of buildings by automatic sprinkler systems is a significant contribution to the fire protection of the community and should be encouraged, not penalized by onerous service charges or metering requirements.

In order to provide reliability, duplication of some or all parts of the system will be necessary, the need for duplication being dependent upon the extent to which the various parts may reasonably be expected to be out of service as a result of maintenance and repair work, an emergency or some unusual condition. The introduction of storage, either as part if the supply works or on the distribution system, may partially or completely offset the need for duplicating various parts of the system, the value of the storage depending upon its amount, location and availability.

STORAGE. In general, storage reduces the requirements of those parts of the system through which supply has already passed. Since storage usually fluctuates, the normal daily minimum maintained is the amount that should be considered as available for fires. Because of the decrease in pressure when water is drawn down in standpipes, only the portion of this normal daily minimum storage that can be delivered at a residual pressure of 150kPa at the point of use is considered as available. As well as the quantity available, the rate of delivery of water to the system from storage for the fire flow period is critical to this consideration.

PRESSURE. The principal requirement to be considered is the ability to deliver water in sufficient quantity to permit fire department pumpers to obtain an adequate supply from hydrants. To overcome friction loss in the hydrant branch, hydrant and suction hose, a minimum residual water pressure of 150 kPa in the street main is required during flow. Under conditions of exceptionally low suction losses, a lower residual may be possible. This includes the use of 100 mm and larger outlets for fire department pumper use and hydrants with large waterways.

Higher sustained pressure is of importance in permitting direct continuous supply to automatic sprinkler systems, to building standpipe and hose systems, and in maintaining a water plan so that no portion of the protection area is without water, such as during a fire at another location. Residual pressures that exceed 500 kPa during large flows are of value as they permit short hose-lines to be operated directly from hydrants without supplementary pumping.

SUPPLY WORKS

NORMAL ADEQUACY OF SUPPLY WORKS. The source of supply, including impounding reservoirs, and each part of the supply works should normally be able to maintain the maximum daily consumption rate plus the maximum required fire flow. Each distribution service within the system should similarly support its own requirements. In large cities where fire frequency may result in simultaneous fires, additional flow must be considered in accordance with the potential. Filters may be considered as capable of operating at a reasonable overload capacity based upon records and experience. In general, overload capacity will not exceed 25 percent, but may be higher in well designed plans operating under favourable conditions.

The absolute minimum supply available under extreme dry weather conditions should not be taken as the measure of the normal ability of the source of supply such as supply from wells. The normal or average capacity of wells during the most favourable nine month period should be considered, or the normal sustained flow of surface supplies to the source.

RELIABILITY OF SOURCE OF SUPPLY. The effect on adequacy must be considered for such factors as frequency, severity and duration of droughts, physical condition of dams and intakes; danger from earthquakes, floods, forest fires, and ice dams or other ice formations; silting-up or shifting of channels; possibility of accidental contamination of watershed or source; absence of watchmen or electronic supervision where needed; and injury by physical means. Where there is a risk of disruption, special precautions or alternate supplies should be arranged.

Where the supply is from wells, some consideration should be given to the absolute minimum capacity of the wells under the most unfavourable conditions; also to the length of time that the supply from the wells would be below the maximum daily consumption rate, and the likelihood of this condition recurring every year or only at infrequent intervals. It should be recognized that some water is generally available from wells and that the most extreme conditions are not as serious as a total interruption of the supply, as would be the case in the breaking of a dam or shifting of a channel. The possibility of clogging, salinity, and the need for periodic cleaning and overhauling must be considered. Dependence upon a single well, even where records are favourable, may be considered a feature of unreliability.

Frequent cleaning of reservoirs and storage tanks may be considered as affecting reliability.

Continuity of, and delay in implementing water supplies obtained from systems or sources not under the control of the municipality or utility should be considered also from these aspects.

GRAVITY SYSTEMS. A gravity system delivering supply from the source to distribution directly without the use of pumps is advantageous from a fire protection point of view because of its inherent reliability, but a pumping system can also be developed to a high degree of reliability.

PUMPING

RELIABILITY OF PUMPING CAPACITY. Pumping capacity, where the system or service is supplied by pumps, should be sufficient, in conjunction with storage when the two most important pumps are out of service, to maintain the maximum daily consumption rate plus the maximum required fire flow at required pressure for the required duration. For smaller municipalities (usually up to about 25,000 population) the relative infrequency of fires is assumed as largely offsetting the probability of a serious fire occurring at times when two pumps are out of service. (The most important pump is normally, but not always, the one of largest capacity, depending upon how vital is its contribution to maintaining flow to the distribution system.)

To be adequate, remaining pumps in conjunction with storage, should be able to provide required fire flows for the specified durations at any time during a period of five days with consumption at the maximum daily rate. Effect of normal minimum capacity of elevated storage located on the distribution system and storage of treated water above low lift pumps should be considered. The rate of flow from such storage must be considered in terms of any limitation of water main capacity. The availability of spare pumps or prime movers that can quickly be installed may be credited, as may pumps of compatible characteristics which may be valved from another service.

POWER SUPPLY FOR PUMPS. Electric power supply to pumps should be so arranged that a failure in any power line or the repair or replacement of a transformer, switch, control unit or other device will not prevent the delivery, in conjunction with elevated storage, of required fire flows for the required durations at any time during a period of two days with consumption at the maximum daily rate.

Power lines should be underground from the station or substation of the power utility to water plants and pumping stations and have no other consumers enroute. The use of the same transmission lines by other consumers introduces unreliability because of the possibility of interruption of power or deterioration of power characteristics.

Overhead power lines are more susceptible to damage and interruption than underground lines and introduce a degree of un-reliability that depends upon their location and construction. In connections with overhead lines, consideration should be given to the number and duration of lightning, wind, sleet, and snow storms in the area; the type of poles or towers and wires; the nature of the country traversed; the effect of earthquakes, forest fires, and floods; the lightning and surge protection provided; the extent to which the system is dependent upon overhead lines; and the ease of, and facilities for, repairs.

The possibility of power systems or network failures affecting large areas should be considered. In-plant auxiliary power or internal combustion driver standby pumping are appropriate solutions to these problems in many cases, particularly in small plants where high pumping capacity is required for fire protection service. When using automatic starting, prime 'movers' for auxiliary power supply and pumping should have controllers listed by Underwriters' Laboratories of Canada to establish their reliability.

FUEL SUPPLY. At least a five day supply of fuel for internal combustion engines or boilers used for regular domestic supply should be provided. Where long hauls, condition of roads, climatic conditions, or other circumstances could cause interruptions of delivery longer than five days, a greater storage should be provided. Gas supply should be from two independent sources or from duplicate gas-producer plants with gas storage sufficient for 24 hours. Unreliability of regular fuel supply may be offset in whole or in part by suitable provisions for the use of an alternate fuel or power supply.

BUILDINGS AND PLANT

BUILDINGS AND STRUCTURES. Pumping stations, treatment plants, control centres and other important structures should be located, constructed, arranged, and protected so that damage by fire, flooding, or other causes will be held to a minimum. They should contain no combustible material in their construction, and, if hazards are created by equipment or materials located within the same structure, the hazardous section should be suitably separated by fire-resistive partitions or fire walls.

Buildings and structures should have no fire exposures. If exposures exist, suitable protection should be provided, Electrical wiring and equipment should be installed in accordance with the Canadian Electrical Code. All internal hazards should be properly safeguarded in accordance with good practice. Private in-plant fire protection should be provided as needed.

MISCELLANEOUS SYSTEM COMPONENTS, PIPING AND EQUIPMENT. Steam piping, boiler-feed lines, fuel-piping (gas or oil lines to boilers as well as gas, oil or gasoline lines to internal-combustion engines), and air lines to wells or control systems should be so arranged that a failure in any line or the repair or replacement of a valve, fuel pump, boiler-feed pump, injector, or other necessary device, will not prevent the delivery, in conjunction with storage, of the required fire flows for the specified duration at any time during a period of two days with consumption at the maximum daily rate.

Plants should be well arranged to provide for effective operation. Among the features to be considered are: ease of making repairs and facilities for this work, danger of flooding because of broken piping; susceptibility to damage by spray; reliability of priming and chlorination equipment; lack of semi-annual inspection of boilers or other pressure vessels; dependence upon common non-sectionalized electric bus bars; poor arrangement of piping; poor condition or lack of regular inspections of important valves; and factors affecting the operation of valves or other devices necessary for fire service such as design, operation, and maintenance of pressure regulating valves, altitude valves, air valves, and other special valves or control devices, provision of power drives, location of controls, and susceptibility to damage.

Reliability of treatment works is likely to be influenced by the removal from service of at least one filter or other treatment unit; the reduction of filter capacity by turbidity, freezing or other conditions of the water; the need for cleaning basins; and the dependability of power for operating valves, wash-water pumps, mixers and other appurtenances.

OPERATIONS. Reliability in operation of the supply system and adequate response to emergency or fire demands are essential. Instrumentation, controls and automatic features should be arranged with this in mind. Failure of an automatic system to maintain normal conditions or to meet unusual demands should result in the sounding of an alarm where remedial action will be taken.

The operating force should be competent, adequate, and continuously available as may be required to maintain both the domestic and fire services.

EMERGENCY SERVICES. Emergency crews, provided with suitable transportation, tools and equipment, should be continuously on duty in the larger systems and be readily available upon call in small systems. Spare pipe and fittings, and construction equipment should be readily available. Alarms for fires in buildings should be received by the utility at a suitable location where someone is always on duty who can take appropriate action as required, such as placing additional equipment in operation, operating emergency or special valves, or adjusting pressures. Receipt of alarms may be by fire alarm circuit, radio, outside alerting device, or telephone, but where special operations are required, the alarm service should be equivalent to that needed for a fire station.

Response of an emergency crew should be made to major fires to assist the fire department in making the most efficient use of the water system and to ensure the best possible service in the event of a water main break or other emergency. The increase of pressures by more than 25 percent for fires is considered to increase the possibility of breaks.

PIPING

RELIABILITY OF SUPPLY MAINS. Supply mains cut off for repair should not drastically reduce the flow available to any district. This includes all pipe lines or conduits on which supply to the distribution system is dependent, including intakes, suction or gravity lines to pumping stations, flow lines from reservoirs, treatment plant piping, force mains, supply and arterial mains, etc. Consideration should be given to the greatest effect that a break, joint separation or other failure could have on the delivery of the maximum daily consumption rate plus required fire flow at required pressure over a three day period. Aqueducts, tunnels or conduits of substantial construction may be considered as less susceptible to failure and equivalent to good mains with a long history of reliability.

INSTALLATION OF PIPE. Mains should be in good condition and properly installed. Pipe should be suitable for the service intended. Asbestos-cement, poly-vinyl chloride (PVC), cast and ductile iron, reinforced concrete and steel pipe manufactured in accordance with appropriate Canadian Standards Association or ANSI/AWWA standards, or any pipes listed by Underwriters' Laboratories of Canada for fire service are considered satisfactory. Normally, pipe rated for a maximum working pressure of 1000 kPa is required, Service records, including the frequency and nature of leaks, breaks, joint separations, other failures and repairs, and general conditions should be considered as indicators of reliability. When mains are cleaned they should be lined.

Mains should be so laid as not to endanger one another, and special construction should be provided to prevent their failure at stream crossings, railroad crossings, bridges, and other points where required by physical conditions; supply mains should be valved at one and one half kilometre intervals and should be equipped with air valves at high points and blow offs at low points. Mains should not be buried extremely deep or be unusually difficult to repair, though depths to ten feet may be required because of frost conditions.

The general arrangement of important valves, of standard or special fittings, and of connections at cross-overs, intersections, and reservoirs, as well as at discharge and suction headers, should be considered with respect to the time required to isolate breaks. The need for check valves on supply or force mains and for other arrangements to prevent flooding of stations or emptying of reservoirs at the time of a break in a main should also be considered, as well as the need for relief valves or surge chambers. Accessibility of suitable material and equipment and ease of making repairs should be considered.

Arterial feeder mains should provide looping throughout the system for mutual support and reliability, preferably not more than 1000 metres between mains. Dependence of a large area on a single main is a weakness. In general the gridiron of minor distributors supplying residential districts should consist of mains at least 150mm in size and arranged so that the lengths on the long sides of blocks between intersecting mains do not exceed 200 metres. Where longer lengths of 150mm pipe are necessary 200mm or larger intersecting mains should be used. Where initial pressures are unusually high, a satisfactory gridiron may be obtained with longer lengths of 150mm pipe between intersecting mains.

Where deadends and a poor gridiron are likely to exist for a considerable period or where the layout of the streets and the topography are not well adapted to the above arrangement, 200mm pipe should be used. Both the ability to meet the required fire flows and reliability of a reasonable supply by alternate routing must be taken into account in this consideration.

VALVES. A sufficient number of valves should be installed so that a break or other failure will not affect more than 400 metres of arterial mains, 150 metres of mains in commercial districts, or 250 metres of mains in residential districts. Valves should be maintained in good operating condition. The recommended inspection frequency is once a year, and more frequently for larger valves and valves for critical applications.

A valve repair that would result in reduction of supply is a liability, but because of the probable infrequency of occurrence, it might be considered as introducing only a moderate degree of unreliability even if it resulted in total interruption. The repair of a valve normally should be accomplished in two days. Valves opening opposite to the majority are undesirable and when they do occur they should be clearly identified.

HYDRANTS

SIZE, TYPE AND INSTALLATION. Hydrants should conform to American Water Works Standard for Dry Barrel Fire Hydrants or Underwriters' Laboratories of Canada listing. Hydrants should have at least two 65mm outlets. Where required fire flows exceed 5000 l/min or pressures are low there should also be a large pumper outlet. The lateral street connection should not be less than 150mm in diameter. Hose threads, operating and cap nuts on outlets should conform to Provincial Standard dimensions. A valve should be provided on lateral connections between hydrants and street mains.

Hydrants that open in a direction opposite to that of the majority are considered unsatisfactory. Flush hydrants are considered undesirable because of delay in getting into operation; this delay is more serious in areas subject to heavy snow storms. Cisterns are considered unsatisfactory as an alternative to pressure hydrants. The number and spacing of hydrants should be as indicated in the table titled "Standard Hydrant Distribution".

INSPECTION AND CONDITION. Hydrants should be inspected at least semi-annually and after use. The inspection should include operation at least once a year. Where freezing temperatures occur, the semi-annual inspections should be made in the spring and fall of each year. Because of the possibility of freezing they should be checked frequently during extended periods of severe cold. Hydrants should be kept in good condition and suitable records of inspections and repairs be maintained. Hydrants should be painted in highly visible colours so that they are conspicuous and be situated with outlets at least twelve inches above the grade. There should be no obstruction that could interfere with their operation. Snow should be cleared promptly after storms and ice and snow accumulations removed as necessary.

HYDRANT DISTRIBUTION. Hydrant locations and spacing should be convenient for fire department use. Hydrants should be located at intersections, in the middle of long blocks and at the end of long dead-end streets. To allow for convenient utilization of water supplies, distribution density of hydrants should be in accordance with the required fire flows indicated in the table titled "Standard Hydrant Distribution" (page 16). The maximum recommended spacing of hydrants in commercial, industrial, institutional and multi-family residential areas is 90 metres; in single family residential areas 180 metres is recommended. In areas where fire apparatus have access (e.g. large properties, private developments, etc.), hydrants should be required by bylaw. The planning of hydrant locations should be a cooperative effort between the water utility and fire department.

RECORDS

PLANS AND RECORDS. Complete, up-to-date plans and records essential for the proper operation and maintenance of the system should be available in a convenient form, suitably indexed and safely filed. These should include plans of the source as well as records of its yield and a reliable estimate of the safe yield; plans of the supply works including dams, intakes, wells, pipelines, treatment plants, pumping stations, storage reservoirs and tanks; and a map of the distribution system showing mains, valves, and hydrants. Plans and maps should be in duplicate and stored at different locations.

Detailed distribution system plans, in a form suitable for field use, should be available for maintenance crews. Records of consumption, pressures, storage levels, pipes, valves, hydrants, and of the operations of the supply works and distribution system, including valve and hydrant inspections and repairs should be maintained.

TABLES

STANDARD HYDRANT DISTRIBUTION	
Fire Flow Required (litres per minute)	Average Area per Hydrant (m^2)
2,000	16,000
4,000	15,000
6,000	14,000
8,000	13,000
10,000	12,000
12,000	11,000
14,000	10,000
16,000	9,500
18,000	9,000
20,000	8,500
22,000	8,000
24,000	7,500
26,000	7,000
28,000	6,500
30,000	6,000
32,000	5,500
34,000	5,250
36,000	5,000
38,000	4,750
40,000	4,500
42,000	4,250
44,000	4,000
46,000	3,750
48,000	3,500

REQUIRED DURATION OF FIRE FLOW	
Fire Flow Required (litres per minute)	Duration (hours)
2,000 or less	1.0
3,000	1.25
4, 000	1.5
5,000	1.75
6,000	2.0
8000	2.0
10,000	2.0
12,000	2.5
14,000	3.0
16,000	3.5
18,000	4.0
20000	4.5
22,000	5.0
24,000	5.5
26,000	6.0
28,000	6.5
30,000	7.0
32000	7.5
34,000	8.0
36,000	8.5
38,000	9.0
40,000 and over	9.5

Interpolate for intermediate figures

Area refers to surface area of blocks and bounding streets. For a street without adjacent streets, a depth of one-half block is used.

A water supply system is considered to be adequate for fire protection when it can supply water as indicated above with consumption at the maximum daily rate. Certain types of emergency supplies may be included where reasonable conditions for their immediate use exist. Storage on the system is credited on the basis of the normal daily minimum maintained insofar as pressure permits its delivery at the rate considered.

PART II

GUIDE FOR DETERMINATION OF REQUIRED FIRE FLOW
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N.B. It should be recognized that this is a "guide" in the true sense of the word, and requires a certain amount of knowledge and experience in fire protection engineering for its effective application. Its primary purpose is for the use of surveyors experienced in this field, but it is made available to municipal officials, consulting engineers and others interested as an aid in estimating fire flow requirements for municipal fire protection.

Required Fire Flow may be described as the amount and rate of water application required in firefighting to confine and control the fires possible in a building or group of buildings which comprise essentially the same fire area by virtue of immediate exposure. This may include as much as a city block.

1. An estimate of the fire flow required for a given area may be determined by the formula:

$$F = 220C\sqrt{A}$$

where

F = the required fire flow in litres per minute.

C = coefficient related to the type of construction.

= 1.5 for wood frame construction (structure essentially all combustible).

= 1.0 for ordinary construction (brick or other masonry walls, combustible floor and interior).

= 0.8 for non-combustible construction (unprotected metal structural components, masonry or metal walls).

= 0.6 for fire-resistive construction (fully protected frame, floors, roof).

Note: For types of construction that do not fall within the categories given, coefficients shall not be greater than 1.5 nor less than 0.6 and may be determined by interpolation between consecutive construction types as listed above. Construction types are defined in the Appendix.

A = The total floor area in square metres (including all storeys, but excluding basements at least 50 percent below grade) in the building being considered.

For fire-resistive buildings, consider the two largest adjoining floors plus 50 percent of each of any floors immediately above them up to eight, when the vertical openings are inadequately protected. If the vertical openings and exterior vertical communications are properly protected (one hour rating), consider only the area of the largest floor plus 25 percent of each of the two immediately adjoining floors.

For one family and two family dwellings not exceeding two storeys in height, see **Note J.**

2. The value obtained in No. 1 may be reduced by as much as 25% for occupancies having a low contents fire hazard or may be increased by up to 25% surcharge for occupancies having a high fire hazard. Those may be classified as to contents as follows:

Non-Combustible	-25%	Free Burning	+15%
Limited Combustible	-15%	Rapid Burning	+25%
Combustible	No Charge		

As guide for determining low or high fire hazard occupancies, see the list in the Appendix. The fire flow determined shall not be less than 2,000 L/min,

3. The value obtained in No.2 above may be reduced by up to 50% for complete automatic sprinkler protection depending upon adequacy of the system. The credit for the system will be a maximum of 30% for an adequately designed system conforming to NFPA 13 and other NFPA sprinkler standards. Additional credit of up to 10% may be granted if the water supply is standard for both the system and fire department hose lines required. The percentage reduction made for an automatic sprinkler system will depend upon the extent to which the system is judged to reduce the possibility of fires spreading within and beyond the fire area. Normally this reduction will not be the maximum allowed without proper system supervision including water flow and control valve alarm service. Additional credit may be given of up to 10% for a fully supervised system.

4. To the value obtained in No. 2 above a percentage should be added for structures exposed within 45 metres by the fire area under consideration. This percentage shall depend upon the height, area, and construction of the building(s) being exposed, the separation, openings in the exposed building(s), the length and height of exposure, the provision of automatic sprinklers and/or outside sprinklers in the building(s) exposed, the occupancy of the exposed building(s), and the effect of hillside locations on the possible spread of fire.

   The charge for any one side generally should not exceed the following limits for the separation:

Separation	Charge	Separation	Charge
0 to 3m	25%	20.1 to 30 m	10%
3.1 to 10m	20%	30.1 to 45m	5%
10.1 to 20m	15%		

   The total percentage shall be the sum of the percentage for all sides, but shall not exceed 75%.

   The fire flow shall not exceed 45,000 L/min nor be less than 2,000 L/min.

Notes to Calculation

Note A: The guide is not expected to necessarily provide an adequate value for lumber yards, petroleum storage, refineries, grain elevators, and large chemical plants, but may indicate a minimum value for these hazards.

Note B: Judgment must be used for business, industrial, and other occupancies not specifically mentioned.

Note C: Consideration should be given to the configuration of the building(s) being considered and accessibility by the fire department.

Note D: Wood frame structures separated by less than 3 metres shall be considered as one fire area.

Note E: Fire Walls: - In determining floor areas, a fire wall that meets or exceeds the requirements of the current edition of the National Building Code of Canada (provided this necessitates a fire resistance rating of 2 or more hours) may be deemed to subdivide the building into more than one area or may, as a party wall, separate the building from an adjoining building.

Normally any unpierced party wall considered to form a boundary when determining floor areas may warrant up to a 10% exposure charge.

Note F: High one storey buildings: When a building is stated as 1=2, or more storeys, the number of storeys to be used in the formula depends upon the use being made of the building. For example, consider a 1=3 storey building. If the building is being used for high piled stock, or for rack storage, the building would probably be considered as 3 storeys and, in addition, an occupancy percentage increase may be warranted.

However, if the building is being used for steel fabrication and the extra height is provided only to facilitate movement of objects by a crane, the building would probably be considered as a one storey building and an occupancy credit percentage may be warranted.

Note G: If a building is exposed within 45 metres, normally some surcharge for exposure will be made.

Note H: Where wood shingle or shake roofs could contribute to spreading fires, add 2,000 L/min to 4,000 L/min in accordance with extent and condition.

Note I: Any non-combustible building is considered to warrant a 0.8 coefficient.

Note J: Dwellings: For groupings of detached one family and small two family dwellings not exceeding 2 stories in height, the following short method may be used. (For other residential buildings, the regular method should be used.)

Exposure distances	Suggested required fire flow	
	Wood Frame	Masonry or Brick
Less than 3m	See Note "D"	6,000 L/min
3 to 10m	4,000 L/min	4,000 L/min
10.1 to 30m	3,000 L/min	3,000 L/min
Over 30m	2,000 L/min	2,000 L/min

If the buildings are contiguous, use a minimum of 8,000 L/min. Also consider Note H.

OUTLINE OF PROCEDURE

A. Determine the type of construction.

B. Determine the ground floor area.

C. Determine the height in storeys.

D. Using the fire flow formula, determine the required fire flow to the nearest 1,000 L/min.

E. Determine the increase or decrease for occupancy and apply to the value obtained in D above. Do not round off the answer.

F. Determine the decrease, if any, for automatic sprinkler protection. Do not round off the value.

G. Determine the total increase for exposures, Do not round off the value.

H. To the answer obtained in E, subtract the value obtained in F and add the value obtained in G.

The final figure is customarily rounded off to the nearest 1,000 L/min.

APPENDIX

TYPES OF CONSTRUCTION

For the specific purpose of using the Guide, the following definitions may be used:

Fire-Resistive Construction - Any structure that is considered fully protected, having at least 3-hour rated structural members and floors. For example, reinforced concrete or protected steel.

Non-combustible Construction - Any structures having all structural members including walls, columns, piers, beams, girders, trusses, floors, and roofs of non-combustible material and not qualifying as fire-resistive construction. For example, unprotected metal buildings.

Ordinary Construction - Any structure having exterior walls of masonry or such non-combustible material, in which the other structural members, including but not limited to columns, floors, roofs, beams, girders, and joists, are wholly or partly of wood or other combustible material.

Wood Frame Construction - Any structure in which the structural members are wholly or partly of wood or other combustible material and the construction does not qualify as ordinary construction.

OCCUPANCIES

Examples of Low Hazard Occupancies:

Apartments
Asylums
Churches
Clubs
Colleges & Universities
Dormitories
Dwellings
Hospitals
Hotels
Institutions
Libraries, except Large Stack Room Areas
Museums
Nursing, Convalescent and Care Homes
Office Buildings
Prisons
Public Buildings
Rooming Houses
Schools
Tenements

Generally, occupancies falling in National Building Code Groups A, B, C and D are of this class.

Examples of High Hazard Occupancies:

- Aircraft Hangars
- Cereal, Feed, Flour and Grist Mills
- Chemical Works - High Hazard
- Cotton Picker and Opening Operations
- Explosives & Pyrotechnics Manufacturing
- Shade Cloth Manufacturing
- Foamed Plastics, Storage or use in Manufacturing
- High Piled Combustibles Storage in excess of 6.5 metres high
- Linseed Oil Mills
- Match Manufacturing
- Oil Refineries
- Paint Shops
- Pyroxylin Plastic Manufacturing & Processing
- Solvent Extracting
- Varnish and Paint Works
- Woodworking with Flammable Finishing
- Linoleum and Oilcloth Manufacturing

Other occupancies involving processing, mixing storage and dispensing flammable and/or combustible liquids. Generally, occupancies falling in National Building Code Group F, Divisions 1 and 2 would be in this class.

For other occupancies, good judgment should be used, and the percentage increase will not necessarily be the same for all buildings that are in the same general category - for example "Colleges and Universities": this could range from a 25% decrease for buildings used only as dormitories to an increase for a chemical laboratory. Even when considering high schools, the decrease should be less if they have extensive shops.

It is expected that in commercial buildings no percentage increase or decrease for occupancy will be applied in most of the fire flow determinations. In general, percentage increase or decrease will not be at the limits of plus or minus 25%.

EXPOSURES

When determining exposures it is necessary to understand that the exposure percentage increase for a fire in a building (x) exposing another building (y) does not necessarily equal the percentage increase when the fire is in building (y) exposing building (x). The Guide gives the maximum possible percentage for exposure at specified distances. However, these maximum possible percentages should not be used for all exposures at those distances. In each case the percentage applied should reflect the actual conditions but should not exceed the percentage listed.

The maximum percentage for the separations listed generally should be used if the exposed building meets all of the following conditions:

a. Same type or a poorer type of construction than the fire building.
b. Same or greater height than the fire building.
c. Contains unprotected exposed openings.
d. Unsprinklered.

CONVERSION FACTORS

Multiply	By	To Obtain
Centimetre	0.3937	Inches
Cubic Foot	0.0283	Cubic Metres
Cubic Metre	35.3145	Cubic Feet
Cubic Metre	219.97	Imperial Gallons
Cubic Metre	1.000	Litres
Foot	0.3048	Metres
Horsepower	0.7457	Kilowatt
Imperial Gallon	4.546	Litres
Inch	2.54	Centimetres
Kilogram	2.2046	Pounds
Kilogram of Water	1	Litres
Kilopascal	0.1450	Pounds per sq. inch
Kilowatt	1.341	Horsepower
Litre	0.21997	Imperial Gallons
Litre of Water	1	Kilograms
Metre	3.281	Feet
Metre of Water	10	Kilopascals
Pound	0.4536	Kilograms
Pound per sq. inch	6.89476	Kilopascals
U.S. Gallons	0.8327	Imperial Gallons
Imperial Gallons	1.201	U.S.Gallons

Appendix C – Required Fire Flow Summary

17 Specific RFF Calculations

Address	Building Name	Footprint Area	Number of Storeys	Effective Total Area	Building Construction	Occupancy Charge	Sprinkler Protection Reduction	Exposure Charge	F_3	F_3
		m^2		m^2					LPM	IGPM
1461 Island Hwy East	Island Rope Ltd	477	1=2	477	Ordinary	0%	0%	3%	5,000	1,100
2038 Rocking Horse Place	Rock Horse Pub	372	2.0	744	Wood-framed	0%	0%	1%	11,000	2,400
2665 Andover Road	Glen Eagle Five Plex	837	1 and 2	1,674	Wood-framed	-15%	0%	48%	18,000	4,000
2875 Nanoose Bay Road	Nanoose Bay Elementary School	3,486	1.0	3,486	Ordinary	-15%	0%	0%	11,000	2,400
2451 Collins Crescent	Multiple Mercantile Stores	1,273	1.0	1,273	Ordinary	0%	0%	12%	9,000	2,000
2443 Collins Crescent	Quality Foods/Post Office	1,707	1.0	1,707	Ordinary	0%	0%	3%	9,000	2,000
2925 Northwest Bay Road	Nanoose Place - Community Centre	1,428	1.0	1,959	Ordinary	-15%	0%	2%	9,000	2,000
2414 Island Hwy East	Arlington Inn and Liquor Store	813	1.0	813	Wood-framed	-15%	0%	0%	8,000	1,800
1515 Island Hwy East	Arbutus Meadows Equestrian Centre	5,845	1.5	8,768	Non-combustible	0%	0%	6%	17,000	3,700
1600 Strougler Road	Pacific Shores Resort & Spa	1,294	4.0	5,176	Wood-framed	-10%	-50%	6%	12,000	2,600
3565 Outrigger Road	Schooner Cove Condo	613	3.0	1,839	Ordinary	-10%	0%	20%	11,000	2,400
3521 Dolphin Drive	Schooner Cove Marina Hotel	2,265	1.0	2,265	Ordinary	-10%	0%	3%	9,000	2,000
1600 Brynmarl Road	Beachcomber Marina	2,300	1.0	2,300	Ordinary	-10%	0%	8%	11,000	2,400
3730 Fairwinds Drive	Fairwinds Golf Clubhouse	840	1.0	840	Ordinary	-10%	0%	0%	5,000	1,100
Dorcas Point Road	Residential	590	1.0	590	Wood-framed	-15%	0%	25%	9,000	2,000
Stone Lake Drive	Single Family Residential	177	2.0	354	Wood-framed	-15%	0%	48%	8,000	1,800
Madrona Drive	Single Family Residential	159	2.0	318	Wood-framed	-15%	0%	55%	8,000	1,800

Appendix D – FUS – Insurance Grading of Used or Rebuilt Apparatus

TECHNICAL BULLETIN

FIRE UNDERWRITERS SURVEY™

A Service to Insurers and Municipalities

INSURANCE GRADING RECOGNITION OF USED OR REBUILT FIRE APPARATUS

The performance ability and overall acceptability of older apparatus has been debated between municipal administrations, the public fire service and many others for years. Fire Underwriters Survey (FUS) has reviewed experiences across Canada and in other countries and has developed a standard for acceptance of apparatus as the apparatus becomes less reliable with age and use.

The public fire service is unique compared to other emergency services in that fire apparatus vehicles are not continuously in use. However, when in use, the apparatus is subject to considerable mechanical stress due to the nature of its function. This stress does not normally manifest itself on the exterior of the equipment. It is effectively masked in most departments by a higher standard of aesthetic care and maintenance. Lack of replacement parts further complicates long term use of apparatus. Truck and pump manufacturers maintain a parts inventory for each model year for a finite time. After that period, obtaining necessary parts may be difficult. This parts shortage is particularly acute with fire apparatus due to the narrow market for these devices.

Fire Underwriters Survey lengthy experience in evaluating fire apparatus indicates that apparatus should be designed to an acceptable standard. The standard that is accepted throughout Canada by Fire Underwriters Survey is the Underwriters' Laboratories of Canada (ULC) Standard S515 (most updated version) titled, "Automobile Fire Fighting Apparatus," which was adopted as a National Standard of Canada in September 2004. Alternatively, NFPA 1901, the Standard for Automotive Fire Apparatus (most updated version) is also accepted by Fire Underwriters Survey with respect to apparatus design. Fire apparatus should be built by recognized manufacturers and tested by a suitably accredited third party.

Fire apparatus should respond to first alarms for the first fifteen years of service. During this period it has reasonably been shown that apparatus effectively responds and performs as designed without failure at least 95% of the time. For the next five years, it should be held in reserve status for use at major fires or used as a temporary replacement for out-of-service first line apparatus. Apparatus should be retired from service at twenty years of age. Present practice indicates the recommended service periods and protocols are usually followed by the first purchaser. However, at the end of that period, the apparatus is either traded in on new apparatus or sold to another fire department. At this juncture, the unit may have one or more faults which preclude effective use for emergency service. These deficiencies include:

a. Inadequate braking system
b. Slow pick-up and acceleration

c. Structurally weakened chassis due to constant load bearing and/or overloading
d. Pump wear

FUS has modified its application of the age requirement for used or rebuilt apparatus. Due to municipal budget constraints within small communities we have continued to recognize apparatus over twenty years of age, provided the truck successfully meets the recommended annual tests and has been deemed to be in excellent mechanical condition. The specified service tests are outlined below under the heading "Recommended Service Tests for Used or Modified Fire Apparatus". Testing and apparatus maintenance should only be completed by a technician who is certified to an appropriate level in accordance with NFPA 1071, *Standard for Emergency Vehicle Technician Professional Qualifications*.

Insurance grading recognition may be extended for a limited period of time if we receive documentation verifying that the apparatus has successfully passed the specified tests. If the apparatus does not pass the required tests or experiences long periods of "downtime" we may request the municipal authority to replace the equipment with new or newer apparatus. If replacement does not occur, fire insurance grading recognition may be revoked for the specific apparatus which may adversely affect the fire insurance grades of the community. This can also affect the rates of insurance for property owners throughout the community.

Table 1 Service Schedule for Fire Apparatus For Fire Insurance Grading Purposes

Apparatus Age	Major Cities [3]	Medium Sized Cities [4]	Small Communities [5] and Rural Centres
0 – 15 Years	First Line Duty	First Line Duty	First Line Duty
16 – 20 Years	Reserve	2nd Line Duty	First Line Duty
20 – 25 Years [1]	No Credit in Grading	No Credit in Grading *or* *Reserve* [2]	No Credit in Grading *or* *2nd Line Duty* [2]
26 – 29 Years [1]	No Credit in Grading	No Credit in Grading *or* *Reserve* [2]	No Credit in Grading *or* *Reserve* [2]
30 Years +	No Credit in Grading	No Credit in Grading	No Credit in Grading

[1] All listed fire apparatus 20 years of age and older are required to be service tested by recognized testing agency on an annual basis to be eligible for grading recognition. (NFPA 1071)

[2] Exceptions to age status may be considered in a small to medium sized communities and rural centres conditionally, when apparatus condition is acceptable and apparatus successfully passes required testing.

[3] Major Cities are defined as an incorporated or unincorporated community that has:
- *a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND*
- *a total population of 100,000 or greater.*

[4] Medium Communities are defined as an incorporated or unincorporated community that has:
- *a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND/OR*
- *a total population of 1,000 or greater.*

[5] Small Communities are defined as an incorporated or unincorporated community that has:
- *no populated areas with densities that exceed 200 people per square kilometre; AND*
- *does not have a total population in excess of 1,000.*

Table 2 Frequency of Listed Fire Apparatus Acceptance and Service Tests

	Frequency of Test					
	@ Time of Purchase New or Used	**Annual Basis**	**@ 15 Years**	**@ 20 Years** *See Note 4*	**20 to 25 Years (annually)**	**After Extensive Repairs** *See Note 5*
Recommended For Fire Insurance Purposes	Acceptance Test if new; Service Test if used & < 20 Years	Service Test	Acceptance Test	Acceptance Test	Acceptance Test	Acceptance or Service Test depending on extent of repair
Required For Fire Insurance Purposes	Acceptance Test if new; Service Test if used & < 20 Years	No Test Required	No Test Required	Acceptance Test	Acceptance Test	Acceptance or Service Test depending on extent of repair
Factor in FUS Grading	Yes	Yes	Yes	Yes	Yes	Yes
Required By Listing Agency	Acceptance Test	No	No	No	N/A	Acceptance Test
Required By NFPA *See Note 6*	Acceptance Test	Annual Service Test	Annual Service Test	Annual Service Test	Annual Service Test	Service Test

Note 1: See: 'Service Tests for Used or Rebuilt Fire Apparatus' for description of applicable tests
Note 2: Acceptance Tests consist of 60 minute capacity and 30 minute pressure tests
Note 3: Service Tests consist of 20 minute capacity test and 10 minute pressure test in addition to other listed tests
Note 4: Apparatus exceeding 20 years of age may not be considered to be eligible for insurance grading purposes regardless of testing. Application must be made in writing to Fire Underwriters Survey for an extension of the grade-able life of the apparatus.
Note 5: Testing after extensive repairs should occur regardless of apparatus age within reason.
Note 6: Acceptance Tests: See NFPA 1901, Standard for Automotive Fire Apparatus
Service Tests: See NFPA 1911, Standard for Service Tests of Fire Pump Systems on Fire Apparatus, Article 5.1

SERVICE TESTS FOR USED OR MODIFIED FIRE APPARATUS

The intent of this document is to ensure that all used or modified fire apparatus, equipped with a pump or used for tanker service, essentially meet the requirements of Underwriters' Laboratories of Canada (ULC) "Standard for Automobile Fire Fighting Apparatus" S515-04 or subsequent (current) editions of the Standard. Full adherence with the following specified tests is recommended when purchasing used apparatus.

Weight Tests

Load Balance Test:

When fully laden (including a 460kg (1000 lbs) personnel weight, full fuel and water tanks, specified load of hose and miscellaneous equipment), the vehicle shall have a load balance of 22% to 50% of total vehicle mass on the front axle and 50% to 78% of this mass on the rear axle.

Distribution of mass of 33% and 67% respectively on the front and rear axles is preferable for a vehicle having dual rear tires or tandem rear axles.

For a vehicle having tandem rear axles and dual tires on each axle, a loading of between 18% and 25% on the front axle with the balance of mass on the rear axles is permissible.

Road Tests

Acceleration Tests:

2.1.1) From a standing start, the apparatus shall attain a true speed of 55 km/h (35 mph) within 25 seconds for Pumpers carrying up to 3,150 litres (700 gallons) of water.

For apparatus carrying in excess of 3,150 litres (700 gallons) or apparatus equipped with aerial ladders or elevating platforms, a true speed of 55 km/h (35 mph) in 30 seconds should be attained.

2.1.2) The vehicle should attain a top speed of at least 80 km/h (50mph).

Braking Test:

The service brakes shall be capable of bringing the fully laden apparatus to a complete stop from an initial speed of 30 km/h (20 mph) in a distance not exceeding 9 metres (30 feet) by actual measurement. The test should be conducted on a dry, hard surfaced road that is free of loose material, oil and grease.

Pump Performance Tests

Hydrostatic Test

Recent evidence of hydrostatic testing of the pump for 10 minutes at a minimum pressure of 3,400 kPa (500 psi). APPLICABLE TO NEW OR REBUILT PUMPS ONLY (see 3.3).

Priming and Suction Capability Tests

Vacuum Test:

The pump priming device, with a capped suction at least 6 metres (20 feet) long, shall develop –75 kPa (22 inches of mercury) at altitudes up to 300 metres (1000 feet) and hold the vacuum with a drop of not in excess of 34 kPa (10 inches of mercury) in 10 minutes.

For every 300 metres (1000 feet) of elevation, the required vacuum shall be reduced 3.4 kPa (1 inch mercury).

The primer shall not be used after the 10-minute test period has been started. The test shall be made with discharge outlets uncapped.

Suction Capability Test:

The pump (in parallel or series) when dry, shall be capable of taking suction and discharging water with a lift of not more than 3 metres (10 feet) through 6 metres (20 feet) of suction hose of appropriate size, in not more than 30 seconds and not over 45 seconds for 6000 L/min (1320 Igpm) or larger capacity pumps. Where front or rear suction is provided on midship pumps, an additional 10 seconds priming time will be allowed. The test shall be conducted with all discharge caps removed.

Pump Performance

Capacity Test:

Consists of drafting water (preferably with a 10 feet lift) and pumping the rated capacity at 1000 kPa (150 psi) net pump pressure for a continuous period of at least 1 hour.

Pressure Test:

Under the same conditions as in 3.3.1 above pumping 50% of the rated capacity at 1700 kPa (250 psi) net pump pressure for at least ½ hour

For additional information on the above noted tests and test procedures, the following documents provide useful data:

- Underwriters Laboratories of Canada (ULC) publication titled S515 Standard for Automobile Fire Fighting Apparatus, latest edition.
- Fire Underwriters Survey (FUS) publication titled Fire Stream Tables and Testing Data latest edition.
- International Fire Service Training Association (IFSTA) publication titled Fire Department Pumping Apparatus, latest edition.
- National Fire Protection Association (NFPA) 1901 Standard for Automotive Fire Apparatus, latest edition.
- National Fire Protection Association (NFPA) 1911 Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus, latest edition.
- National Fire Protection Association (NFPA) 1912 Standard for Fire Apparatus Refurbishing, latest edition.

For further information regarding the acceptability of emergency apparatus for fire insurance grading purposes, please contact:

Western Canada	Quebec	Ontario	Atlantic Canada
Risk Management Services Fire Underwriters Survey 3999 Henning Drive Burnaby, BC V5C 6P9 1-800-665-5661	Risk Management Services Fire Underwriters Survey 1611 Crémazie Blvd. East Montreal, Quebec H2M 2P2 1-800-263-5361	Risk Management Services Fire Underwriters Survey 150 Commerce Valley Drive, West Markham, Ontario L3T 7Z3 1-800- 268-8080	Risk Management Services Fire Underwriters Survey 238 Brownlow Avenue, Suite 300 Dartmouth, Nova Scotia B3B 1Y2 1-800-639-4528

Appendix E – NFPA Standards for Fire Department Access

Standards for Fire Department Access

To minimize fire department access issues NFPA 1, Fire Code Handbook, 2012 provides details on fire department access. Excerpts from NFPA 1, Chapter 18:

18.1.3.1
Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction."

18.2.3.4.1 Dimensions

18.2.3.4.1.1 *Fire department access roads shall have an unobstructed width of not less than 20 ft (6.1 m).*

The minimum 20 ft (6.1 m) width required by 18.2.3.4.1.1 allows for two-way vehicular traffic and for one fire apparatus to pass while another is working at a fire hydrant or conducting aerial operations.

18.2.3.4.1.2 *Fire department access roads shall have an unobstructed vertical clearance of not less than 13 ft 6 in. (4.1 m).*

The minimum 13 ft 6 in. (4.1 m) vertical clearance ensures that fire apparatus can safely pass under power lines, bridges, and other obstructions. A Policy on Geometric Design of Highways and Streets, published by AASHTO, recommends a minimum 14 ft (4 m) clearance for local and collector roads. A 16 ft (5 m) clearance is recommended for rural and urban arterials. The 14 ft or 16 ft (4 m or 5 ft) recommendations allow for snow accumulation and future changes in roadway depth if additional roadway material is added.

18.2.3.4.1.2.1 *Vertical clearance shall be permitted to be reduced, provided such reduction does not impair access by fire apparatus, and approved signs are installed and maintained indicating the established vertical clearance when approved.*

One example of acceptable reduced vertical clearance would be the entrance to a parking garage. Where low clearances are permitted, the Code mandates that approved warning signs be provided to notify emergency responders of the restricted access condition.

18.2.3.4.1.2.2 *Vertical clearances or widths shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.*

An example of a need for an increased vertical clearance might be to accommodate an aircraft rescue fire-fighting (ARFF) vehicle. Many of these vehicles exceed standard apparatus dimensions and require greater vertical clearances.

18.2.3.4.2 Surface. *Fire department access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with an all-weather driving surface.*

Fire department access roads need to be able to withstand the live loads of fire apparatus, but they are not required to be constructed of any specific material. The roadway design needs to accommodate water runoff, ice, and snow accumulations. Special consideration should be given to the design of subsurface structures and their placement relative to the location of the fire department access road. Examples of such subsurface structures include drainage pipes and septic tanks. If improperly designed, these subsurface structures have the potential to collapse under standard fire apparatus loads or the load imposed by an aerial fire apparatus stabilizer. The proposed design should be in accordance with a local, state, or nationally recognized standard for roadway design.

18.2.3.4.3 Turning Radius

18.2.3.4.3.1 *The turning radius of a fire department access road shall be as approved by the AHJ.*

Previous editions of this Code required a 50 ft (15 m) centerline turning radius for fire lanes. In the 2003 edition, the specific 50 ft (15 m) requirement was deleted. Fire apparatus designs vary so widely that the 50 ft (15 m) requirement was found to be onerous for those jurisdictions with smaller apparatus and insufficient for those jurisdictions with larger apparatus. Local authorities should review their current and future apparatus needs and specifications to determine the appropriate design standard in their jurisdiction. In lieu of a specific local design requirement, the dimensions in Exhibit 18.5 (refer to NFPA 1) *should be used as a turning radius guide for most fire apparatus.*

18.2.3.4.3.2 *Turns in fire department access roads shall maintain the minimum road width.*

18.2.3.4.4 Dead Ends.
Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.
Where a fire department access road exceeds 150 ft (46 m) in length and is also a dead end, an approved turnaround is required. Appropriate turning radii must be provided for the turnaround, as indicated in 18.2.3.4.3. Acceptable turnarounds can include a cul-de-sac, as shown in Exhibit 18.5, or a T-turn or Y-turn, as shown in Exhibit 18.6 (refer to NFPA 1)."
NFPA 1 also provides details on grades for fire department access.

18.2.3.4.6 Grade.
The access road gradient should allow fire apparatus use of the fire department access road during all conditions, such as snow, ice, and rain. The grade should not be too steep to prevent a speedy response. Fire apparatus designs vary so widely that a specific requirement could be found to be burdensome for some jurisdictions and insufficient for others. Local authorities should review their current and future apparatus needs and specifications to determine a specific design standard in their jurisdiction.

18.2.3.4.6.1
The gradient for a fire department access road shall not exceed the maximum approved.

18.2.3.4.6.2*
The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.

A.18.2.3.4.6.2
The design limits of fire department apparatus should take into account mutual aid companies and other response agencies that might respond to emergencies.

The 1 in 20 slope is a reasonable design standard if the AHJ has not adopted specific design limitations based on the needs of the fire department's apparatus.

18.2.3.4.6.3
Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane."

Additionally from the BC Building Code 2012:

"9.10.20.3. Fire Department Access to Buildings
1) *Access for fire department equipment shall be provided to each building by means of a street, private roadway or yard. (See Appendix A and A-3.2.5.6.(1) in Appendix A.)*
2) *Where access to a building as required in Sentence (1) is provided by means of a roadway or yard, the design and location of such roadway or yard shall take into account connection with public thoroughfares, weight of firefighting equipment, width of roadway, radius of curves, overhead clearance, location of fire hydrants, location of fire department connections and vehicular parking."*

"A-3.2.5.6.(1) Fire Department Access Route

The design and construction of fire department access routes involves the consideration of many variables, some of which are specified in the requirements in the Code. All these variables should be considered in relation to the type and size of fire

department vehicles available in the municipality or area where the building will be constructed. It is appropriate, therefore, that the local fire department be consulted prior to the design and construction of access routes."

"A-9.10.20.3.(1) Fire Department Access Route Modification

In addition to other considerations taken into account in the planning of fire department access routes, special variations could be permitted for a house or residential building that is protected with an automatic sprinkler system. The sprinkler system must be designed in accordance with the appropriate NFPA standard and there must be assurance that water supply pressure and quantity are unlikely to fail. These considerations could apply to buildings that are located on the sides of hills and are not conveniently accessible by roads designed for firefighting equipment and also to infill housing units that are located behind other buildings on a given property."

REGIONAL DISTRICT OF NANAIMO

RDN REPORT
CAO APPROVAL
EAP
COW
FEB 17 2014
RHD
BOARD

MEMORANDUM

TO: Dennis Trudeau, General Manager
Transportation & Solid Waste Services

DATE: February 14, 2014

FROM: Larry Gardner
Solid Waste Manager

FILE: 1850-20 NRE

SUBJECT: **Nanaimo Recycling Exchange Funding Options**

PURPOSE

To update the Board on potential funding mechanisms for the proposed expansion of Nanaimo Recycling Exchange (NRE).

BACKGROUND

At the January 28, 2014 meeting, the Board received a presentation and request from NRE to provide financial support for its proposed yard waste operation, and to contribute to the construction of a new facility on their vacant lot located at 2479 Kenworth Street, Nanaimo. The funding request is as follows:

- A cash contribution in the amount of $1.2 million to facilitate the construction of the new development to be cost shared by the City of Nanaimo (CON) and the Regional District of Nanaimo (RDN).
- The CON relax works and services requirements as part of its development application, valued at approximately $800,000.
- The RDN to finance $427,000 for the construction of the yard waste drop off area.
- The RDN to enter into a service fee of $155,000/year for collecting yard waste and shipping it to Nanaimo Organics Waste Ltd. (formally International Composting Corporation).
- The RDN to pay a service fee on yard waste shipped for processing based on: Year 1 @ $20/tonne; Year 2 @ $15/tonne; and Year @ $10/tonne. (Based on current projections, year one would result in a $75,000 liability).

CON staff have stated that they believe funding for NRE's management of recyclables should rest with the RDN's solid waste function. As such, further discussion in this report of the $1.2 million request for capital upgrades is on the basis of RDN funding and not cost shared with the City. However, the $800,000 value of relaxing site development requirements rests with the City and is not discussed further in this report. At this time, it is not known whether the City will support this specific item of the NRE request.

HISTORY

In 1990, the NRE was established as a non-profit society, registered charity. It received funding from the CON to provide a public drop off for recyclable materials. Since then the recycling industry has grown into a mainstream business and the NRE continues to operate with a model that accepts materials not included in the curbside program and provides small businesses with recycling options. In addition, the NRE

partners with local community based organizations that provide a social value to the community. The work of NRE is intricately linked to providing employment and volunteer opportunities for people with barriers to employment. In addition, NRE attracts volunteers and staff who are keen proponents of recycling and provide knowledge and experience to educate the public about waste reduction.

The NRE's services comprise of a one-stop recycling centre, household hazardous waste collection, community outreach, public education, youth environmental education program, and a Community Market. To deliver these services, NRE relies on many sources of funding in addition to cash donations and volunteer staff to carry out its work.

The charity has struggled to raise funds for its construction project. As they operate as a social enterprise, the business model varies from that of a traditional business. As the recycling industry is tied to global commodity markets it is subject to market fluctuations. Unlike private sector businesses, the NRE continues to accept materials even if it costs to recycle them. For example, expanded polystyrene (Styrofoam) does not generate revenue however funds from other revenue streams are used to offset shortfalls.

The NRE began operating before there was a vibrant recycling industry. In the RDN there are now a number of businesses that handle many of the same materials as the NRE, a complete list is attached in Appendix 1. However, the NRE does collect a broader range of hard to recycle and non-stewardship items as well as offering environmental education and promoting community stewardship.

They have been instrumental in educating the public and engaging the community in responsible environmental actions. The RDN has a contract with the NRE valued at $37,500 for school education programs. Their initial education programs focused on waste reduction but have been expanded to a broader spectrum of environmental stewardship of local watersheds and ecosystems.

The NRE has been a significant contributor to the sustainability goals of the RDN's Solid Waste Management Plan and Zero Waste initiative. Further, they provide an important social dimension to the community through their employment skills training program. In 2013, working in cooperation with other community organizations, the NRE provided more than 13,000 hours of supervised volunteer and work experience opportunities.

DISCUSSION

The RDN's Solid Waste Management Plan (SWMP) requires that all single-family residential households be serviced with curbside pickup of garbage, food waste and recyclables. The NRE provides a drop off location for recyclables at no charge for those not serviced by curbside collection and as a convenience where recyclables are not set out on collection day.

According to NRE surveys, there are approximately 5,000 people that use their facility each month. The site has been established to provide recyclable material drop off in Nanaimo and the surrounding area and serves:

- Single family residents who have blue box collection but may have additional materials such as glass, yard waste that are not collected at the curb;
- Multi-family residents such as townhouse, condo and apartment dwellers who are not provided with City recycling services.
- Small businesses who self-haul their recyclables to the NRE.

The NRE also accepts household hazardous waste that is not captured by the provincial stewardship programs. It is worthy of mention that a household hazardous waste collection event held in Kamloops in 2013 cost $22,000 which was shared by the City of Kamloops and the Thompson-Nicola Regional District.

According to a recent survey, NRE estimates that 17% of the users are from outside the City and reside elsewhere in the RDN.

The funding request has come about because the NRE has determined their current site is too small and they have to vacate the premises by April 1, 2014. NRE reports that the landlord has been very cooperative and may entertain some minor accommodation on this date.

ALTERNATIVES

Option 1: That the Board directs staff to adjust the 2014 budget to fund the request of approximately $1,700,000 from the RDN Solid Waste Utility through tip fees.

Option 2: That the Board directs staff adjust the budget to fund the request of approximately $1,700,000 through tax requisition.

Option 3: That the Board deny the funding request at this time.

Option 4: That the Board provide alternate direction to staff.

FINANCIAL IMPLICATIONS

The financial implications of the above alternatives are discussed below:

Option 1

Fund the project of $1,700,000 at one hundred percent from the RDN Solid Waste Utility. This will result in an annual increase in the solid waste disposal tip fee of $12.00 per tonne (based on a 5 year borrowing @ 4.5%). The total tip fee will be $137 per tonne and have a consequential increase of $2.08/household for the RDN curbside collection utility fee. There would be a similar increase to the CON collection utility.

This option is not supported by staff in the absence of regulatory provisions for managing waste flow. Further increases to the waste disposal tip fee will further exacerbate the shipping of waste to lower cost disposal options outside of the RDN. The result is a significant loss of tip fee revenue as well as loss of waste reduction/diversion (i.e. more waste will be landfilled where it is currently recovered in the RDN).

Option 2

Fund the project of $1,700,000 at one hundred percent from tax requisition. This will result in an annual increase in the tax requisition of $620,000 per year (5 year term @ 4.5%). The 2014 requisition is $355,000 and the increase will, therefore, result in a total of $975,000. As the tax requisition is based on a combination of area population and assessment, the per property increase will range from $1.70 to $2.40 per $100,000 of assessment. Appendix 2 provides a breakdown of tax requisition implications on member municipalities and electoral areas. The overall impact of adding $620,000 on the RDN 2014 requisition for shared services is a 1.9% increase over the 2013 total RDN general services requisition. Should the board support the funding request, this option is preferred by staff over Option 1 as it will not contribute to waste being shipped out of the RDN.

Option 3

Deny the funding request. Under this option, there is no change to the current 2014 budget. However, there is potential that the financial challenges facing NRE are insurmountable and the facility could close. There would be a resultant loss of service to the community.

Option 4

Alternate direction is given to staff. Under this scenario staff could explore issuing a *Request for Proposal* (RFP) to replace the services currently provided by NRE. The financial implication of this is uncertain, however, the following considerations suggest that this may be a significantly lower cost option than the current funding request.

In terms of recyclable material managed by NRE, most materials are managed by the commercial sector as presented in Appendix 1. The notable exceptions are as follows:

- Expanded polystyrene (Styrofoam) – NRE recycled an estimated 100 tonnes in 2013 (equivalent cost for disposal at the landfill of $12,500);
- Non-container hard plastic – NRE recycled an estimated 100 tonnes in 2013 (equivalent cost for disposal at the landfill of $12,500);
- Smoke alarms – assumed be a nominal amount in terms of tonnage;
- Materials not listed in the appendix but recovered by NRE are bicycles and furniture repair. The diversion quaintly is assumed to be not significant in term of tonnage.
- Pilot projects that support zero waste include non-container glass, textiles, mattresses, carpets, diapers and cigarette waste. Tonnage is not considered to be significant.

The $1.2 million NRE facility upgrades deal with material described above (i.e. the yard waste is separate) and is expected to result in total of about 200 less tonnes of waste going to the landfill per year. The cost of borrowing $1.2 million is $391,000 per year (5 years @ 4.5%). At 200 tonnes of material handled per year, the equivalent diversion value equates to $1955/tonne. Two hundred tonnes is estimated to be 0.12% of the waste stream and within the standard of error in calculating the 68'% diversion in the RDN

Management of some or all of the above materials through contract to the private sector may not be a significant cost. It is also anticipated that NRE would respond to an RFP.

Regarding yard waste, the current RDN tip fee of $55/tonne is approaching a level where there is an adequate margin to sustain a for-profit operation without local government involvement. As an example, Nanaimo Organics Waste Ltd. charges the RDN $42/tonne for yard waste delivered to their site. Response to an RFP for managing yard waste is expected to be significantly less than the $427,000 in capital improvements and the $155,000 service fee requested by NRE. Note that NRE has also requested an additional service fee of $20/tonne of yard waste they receive, however, the basis for this request is to support recycling of other materials and should not be seen to elevate their projections for managing yard waste. An alternative option to yard waste drop off that could be reconsidered is curbside collection. For comparison purposes, response to a 2009 RFP for the RDN curbside collection program projected curbside collection annual costs between $500,000 and $1 million, dependent on level of service.

Consideration of Service Agreement

Should funding be provided to NRE as requested, the RDN should consider establishing a service agreement in return and could explore placing a lien on title of the property owned by NRE in the event of a default. The NRE currently holds a mortgage of approximately $1.2 million and it is uncertain that there would be any residual value should NRE dissolve.

STRATEGIC PLAN IMPLICATIONS

NRE's mission statement is "to promote environmental responsibility by taking a leadership role in waste elimination initiatives and sustainability" and is consistent with RDN's 2013 – 2015 Board Strategic Plan objectives. The NRE's recycling activities and education programs compliment the RDN's Solid Waste Management Plan and Zero Waste Strategy.

CUSTOMER SERVICE IMPLICATIONS

If the funding request is approved there is essentially no change in customer service. There would be some nominal benefit to customers with a new facility and it is expected that NRE would continue to explore other waste reduction initiatives which is a benefit to overall community environmental sustainability.

If funding is denied, to mitigate a loss of service, an RFP can be issued. The ultimate replacement of the service would be dictated by the response to the RFP. NRE would also be expected to be a respondent to the RFP. It is likely that some commodities that NRE currently recycles would be dropped, however in terms of tonnage, this would not be significant. Further, it is unlikely that the services that NRE provides would exist at a single location and residents accustomed to using the one-stop drop off facility would have to travel to multiple locations that accept the range of materials. Overall, it is expected that there would be a loss of service from what NRE currently provides.

SUMMARY/CONCLUSIONS

NRE provides an important social and environmental role in the community. They have been very effective in collaborating with other agencies on employment skills training and engaging the community on environmental sustainability. Their waste reduction initiatives are entirely consistent with the RDN's Zero Waste Strategy.

The NRE recovers/recycles several commodities not currently managed by the private sector and continually look for opportunities to expand the range of materials they process. In terms of additional waste diverted from landfill over that managed by the private sector, the tonnage is not significant. In terms of commitment to the Zero Waste Strategy, the NRE efforts are applauded.

NRE was recently awarded a contract with Multi-Material BC to cover residential packaging not addressed in the curbside collection program (e.g. expanded polystyrene, food & beverage glass, plastic shopping bags). This contract provides certainty on a revenue stream and a positive influence on NRE's future financial projections.

NRE provides the community a valuable service, however, their funding request is significant. In regards to waste reduction tonnage, a similar result can likely be achieved through a competitive RFP process. On this basis, staff recommends that that the Board deny the funding request at this time.

If the NRE is unable to continue operating due to the inability to finance their required move and new location development, staff recommend that the Board consider issuing an RFP to replace the service provided by NRE.

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RECOMMENDATION

That the Board deny the funding request as presented by the Nanaimo Recycling Exchange at this time.

Report Writer

General Manager Concurrence

CAO Concurrence

Program	Material	NRE	Curbside	Return-to-Retail	District 68	Alpine	BFI-10th	Cascades	DBL	Emterra	GIRO	International Composting	Nanaimo Bottle	PCWM	Reg. Landfill	Regional Recycling	Schnitzer Steel	District 69	Church Rd. Transfer Stn	Parksville Bottle Depot	Porter Wood	Qualicum Beach Bottle Depot
Packaging and Paper Products	Beverage cont.	X	X				X		X			X			X			X	X		X
	Cardboard	X	X			X	X	X	X	X	X	X		X	X			X	X		X
	Glass	X							X	X	X			X				X	X		
	Milk jugs	X	X				X		X	X	X		X		X	X		X	X		X
	Mixed paper	X	X				X	X	X	X	X				X			X			
	Newsprint	X	X				X	X	X	X	X				X			X			
	Plastic 1-7	X	X				X	X		X	X				X			X			
	Plastic bags	X						X		X			X			X			X		X
	Waxed cartons	X	X				X		X	X	X		X		X	X			X		X
	Styrofoam	X																	X		
Extended Producer Responsibility	Small appliance	X									X		X			X	X		X		
	Electronics	X									X		X			X	X		X		
	Paint/Solvent	X														X			X		
	Gasoline	X														X			X		
	Pesticide	X														X			X		
	Antifreeze	X									X					X					
	Used Oil	X									X										
	Batteries	X									X		X			X					
	Car battery	X									X				X		X	X	X	X	
	Cellphone	X											X			X					
	Fluores. Tubes	X									X										
	Lg Appliances	X							X		X				X	X	X	X	X	X	
	Medications			X																	
	Smoke alarm	X																			
	Tires	X																			
Construction/Demo	CD					X			X						X						
	Wood Waste	X				X			X		X	X		X	X			X		X	
	Yard Waste	X				X			X			X		X	X			X		X	
	Land Clearing					X			X					X						X	
	Gypsum					X			X									X			
	Asphalt Shingles					X			X					X	X			X			
Misc	Textiles*	X	X				X														
	Scrap Metal	X				X	X		X					X			X	X	X	X	

* Textiles are collected in the RDN program.