PUBLIC HEARING

GABRIOLA ISLAND LOCAL TRUST COMMITTEE

February 19, 2026
Gabriola Arts and Heritage Centre, 476 South Road, Gabriola Island

PROPOSED BYLAW NO. 321
(Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025)
AND
PROPOSED BYLAW NO. 322
(Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025)

PLRZ20240091 (Mid Island Co-operative Services Ltd.)

RELEVANT BACKGROUND INFORMATION REFERENCE BINDER

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7. REFERRAL TO INDIGENOUS GOVERNING BODIES AND AGENCIES

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9.2	2025-09-04	GABRIOLA LTC MINUTES
9.3	2025-11-09	GABRIOLA ADVISORY COMMISSION MINUTES
9.4	2026-01-22	GABRIOLA LTC MINUTES
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10. PUBLIC CORRESPONDENCE - NONE

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12. COMMUNITY CONSULTATION - NONE

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13.2	2024-06-12	ZONING AMENDMENT APPLICATION REPORT
13.3	2023-09-21	SITE PLAN
13.4	1969-10-07	SITE SURVEY

CHAIRPERSONS OPENING STATEMENT

The following is an example of an opening statement to be made by the Chairperson of the Local Trust Committee at the beginning of the Public Hearing.

"This Public Hearing is being convened pursuant to Section 465 of the Local Government Act in order to consider:

PROPOSED BYLAW NO. 321
(Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025)
AND
PROPOSED BYLAW NO. 322
(Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025)

All persons who believe that their interest in property is affected by the proposed bylaw(s) will be given a reasonable opportunity to be heard or to present written submissions respecting matters contained in the proposed bylaw(s). Those wishing to speak should commence their presentation by clearly stating their name.

Members of the Local Trust Committee may, if they wish, ask questions of you following your presentation; however, the main function of the Local Trust Committee members is to listen to the views of the public. It is not the function of Committee members to debate the merits of the proposed bylaw(s) with individual citizens.

Everyone will be given a reasonable opportunity to be heard and none should feel discouraged from presenting their views.

In considering the proposed bylaw(s), the Local Trust Committee has received documents which may influence its decision. Those documents are available for review during this hearing, as available on our website and indicated in the Public Hearing notice.

Any person who wishes to present a written submission to the Local Trust Committee may do so, and all written submissions are available for review during this hearing. Written submissions must be received by the Local Trust Committee before the close of the hearing.

Your final opportunity to comment on the proposed bylaw(s) is during this hearing, as members of the Local Trust Committee may not receive further submissions, nor discuss the proposed bylaw with the public after the close of the hearing.

After this Public Hearing has concluded, the Local Trust Committee may, without further notice, make whatever decision it deems proper with respect to the bylaw(s) that are the subject of the hearing."

Islands Trust

Print Date: February 4, 2026

Bylaw: GB-321

Trust Area: Gabriola Island Local Trust Committee
Type: Official Community Plan Bylaw
Bylaw No.: GB-321
Application No.: PLRZ20240091
Trust Initiated: No

Proofread By:

Clerk: Yes
Planner: Yes
Technical Staff: No

First Reading Date: 04-Sep-2025
Bylaw Sent to Referrals: Yes
Date Proposed Bylaw to Web: 04-Sep-2025

Resolutions:

Resolution Waiving Public Hearing: No
Resolution Authorizing Public Hearing: Yes
Resolution to Proceed no Further Date:

Secretary Signature Block:

Secretary's Signature: Mourao, Nadine
Date: 04-Feb-2026
File complete and ready for Public review: Yes

Public Hearings:

Location: Gabriola Island Community Hall
Proofread By: Mourao, Nadine

Legal Paper: Gabriola Sounder
First Publish Date: 04-Feb-2026
Second Publish Date: 11-Feb-2026

Alternate Paper: Gabriola Flying Shingle-NO LONGER IN BUSINESS
First Publish Date: 11-Feb-2026
Second Publish Date:

Mailout Date: 29-Jan-2026
Delivery Notices:
Date Public Hearing Held: 19-Feb-2026
Second Reading Date: 04-Sep-2025
Third Reading Date:

Islands Trust

Print Date: February 4, 2026

Bylaw: GB-322

Trust Area: Gabriola Island Local Trust Committee
Type: Land Use Bylaw
Bylaw No.: GB-322
Application No.: PLRZ20240091
Trust Initiated: No

Proofread By:

Clerk: Yes
Planner: Yes
Technical Staff: No

First Reading Date: 04-Sep-2025
Bylaw Sent to Referrals: Yes
Date Proposed Bylaw to Web: 04-Sep-2025

Resolutions:

Resolution Waiving Public Hearing: No
Resolution Authorizing Public Hearing: Yes
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Delivery Notices:
Date Public Hearing Held: 19-Feb-2026
Second Reading Date: 04-Sep-2025
Third Reading Date:

Gabriola Island Local Trust Committee
PUBLIC HEARING NOTICE
Proposed Bylaw Nos. 321 and 322
PLRZ20240091 (Mid Island Co-operative Services Ltd.)

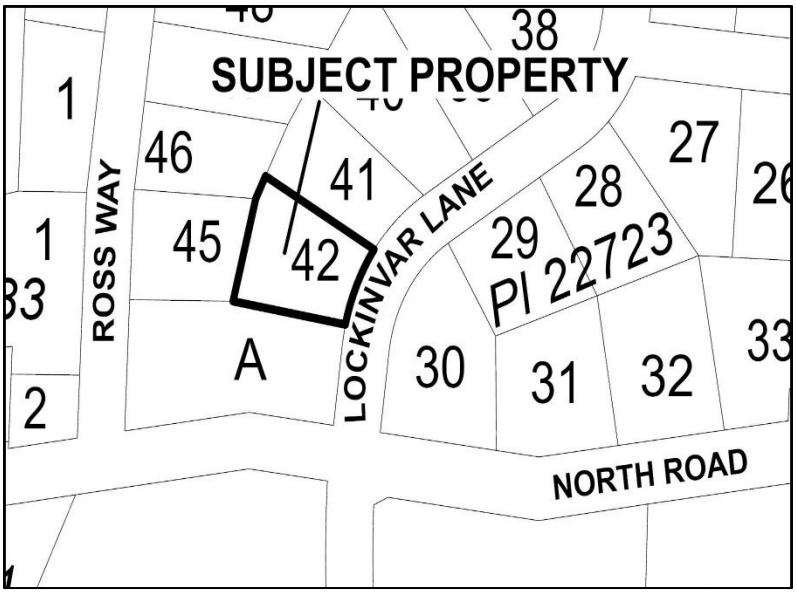
The Gabriola Island Local Trust Committee invites the public to attend a Public Hearing beginning at **10:35 am February 19, 2026, Gabriola Island Community Hall, 2200 South Road, Gabriola Island,** to hear your views regarding **Proposed Bylaw No. 321 and Proposed Bylaw No. 322**.

What are Bylaw Nos. 321 and 322 about?

Bylaw No. 321 will amend the Gabriola Island Official Community Plan (OCP) to include the subject property in the Village Commercial Land Use Designation and in the Village Centre Development Permit Area (DPA) 7. The DPA establishes objectives for form and character, water conservation and reduction of greenhouse gas emissions. The OCP amendment is in accordance policies related to the expansion of the Village Commercial designation that can be considered based on compliance with certain criteria as listed in the bylaw.

Bylaw No. 322 will amend the Gabriola Island Land Use Bylaw (LUB) to include the subject property in a new site-specific zone, Village Commercial 4 (VC4), to allow propane storage as a principal use in connection with the existing Co-op gas station business on the adjacent lot. The 0.19-hectare parcel is currently zoned Institutional 2 (IN2) which permits uses such as public schools, emergency services, library, post office, medical laboratory, etc. Following the rezoning, propane storage would also be permitted in addition to the existing uses in the new VC4 zone.

These bylaw amendments will apply to 793 Lockinvar Lane, Gabriola, legally described as: LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (PID: 002-623-463)



How Do I Get More Information?
Copies of the proposed bylaw, the Public Hearing Binder and other information is available **online** from February 9, 2026 to February 19, 2026 here: https://islandstrust.bc.ca/island-planning/gabriola/current-applications/ and at the Islands Trust Northern Office, 700 North Road, Gabriola, BC V0R 1X3 from 8:30 a.m. to 4:00 p.m., Tuesday – Thursday excluding statutory holidays.

Enquiries?
Contact the Islands Trust Northern Office, by **email:** northinfo@islandstrust.bc.ca, or **phone:** 250-247-2063.

Written submissions?
Written submissions will be accepted until 4:30 p.m., February 18, 2026 to: Islands Trust, 700 North Road, Gabriola Island, BC, V0R 1X3 or **email**: **northphsub@islandstrust.bc.ca**

Written submissions made in response to this notice will be available for public review.

NO WRITTEN OR ORAL REPRESENTATIONS WILL BE RECEIVED BY THE GABRIOLA ISLAND LOCAL TRUST COMMITTEE, OR ITS MEMBERS, AFTER THE CONCLUSION OF THE PUBLIC HEARING.

Nadine Mourao,
Deputy Secretary

PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321

A BYLAW TO AMEND GABRIOLA ISLAND OFFICIAL COMMUNITY PLAN, 1997

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

   This bylaw may be cited for all purposes as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025".

2. Gabriola Island Local Trust Committee Bylaw No. 166, cited as "Gabriola Island Official Community Plan (Gabriola) Bylaw No. 166, 1997", is amended as per Schedule "1" and Schedule "2", attached to and forming part of this bylaw

READ A FIRST TIME THIS	4TH	DAY OF	SEPTEMBER	, 2025
READ A SECOND TIME THIS	4TH	DAY OF	SEPTEMBER	, 2025
PUBLIC HEARING HELD THIS	_____	DAY OF	_____	, 202x
READ A THIRD TIME THIS	_____	DAY OF	_____	, 202x
APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS				
	_____	DAY OF	_____	, 202x
APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS AND HOUSING THIS				
	_____	DAY OF	_____	, 202x
ADOPTED THIS	_____	DAY OF	_____	, 202x

_____ _____

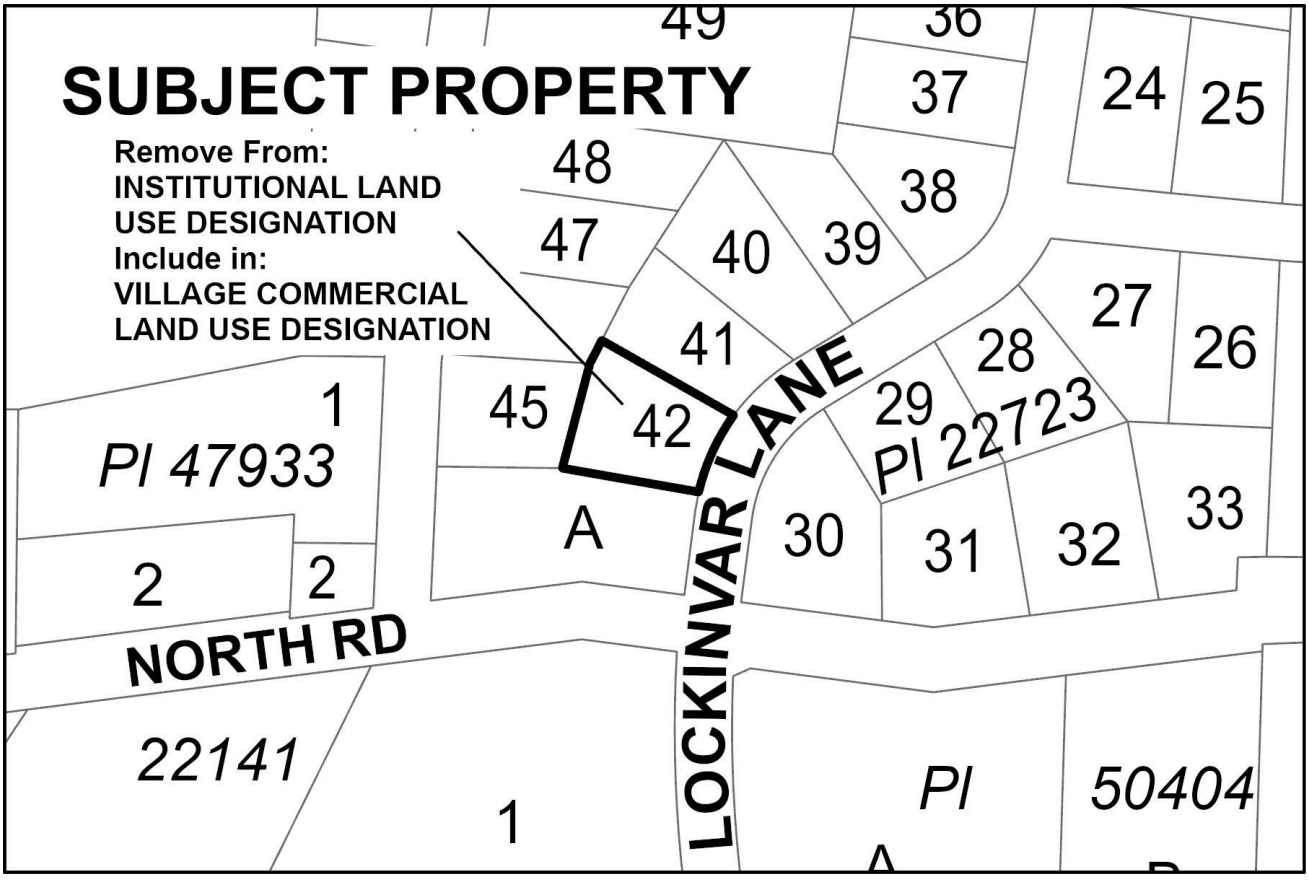
Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "1"

1. **Schedule "B"** of Gabriola Island Official Community Plan (Gabriola) Bylaw, 1997 is amended as follows:

   1.1. **Schedule "B" – Land Use Designations – North Sheet**, is amended by changing the land use designation on the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional" to "Commercial (Village)" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" as are required to effect this change.

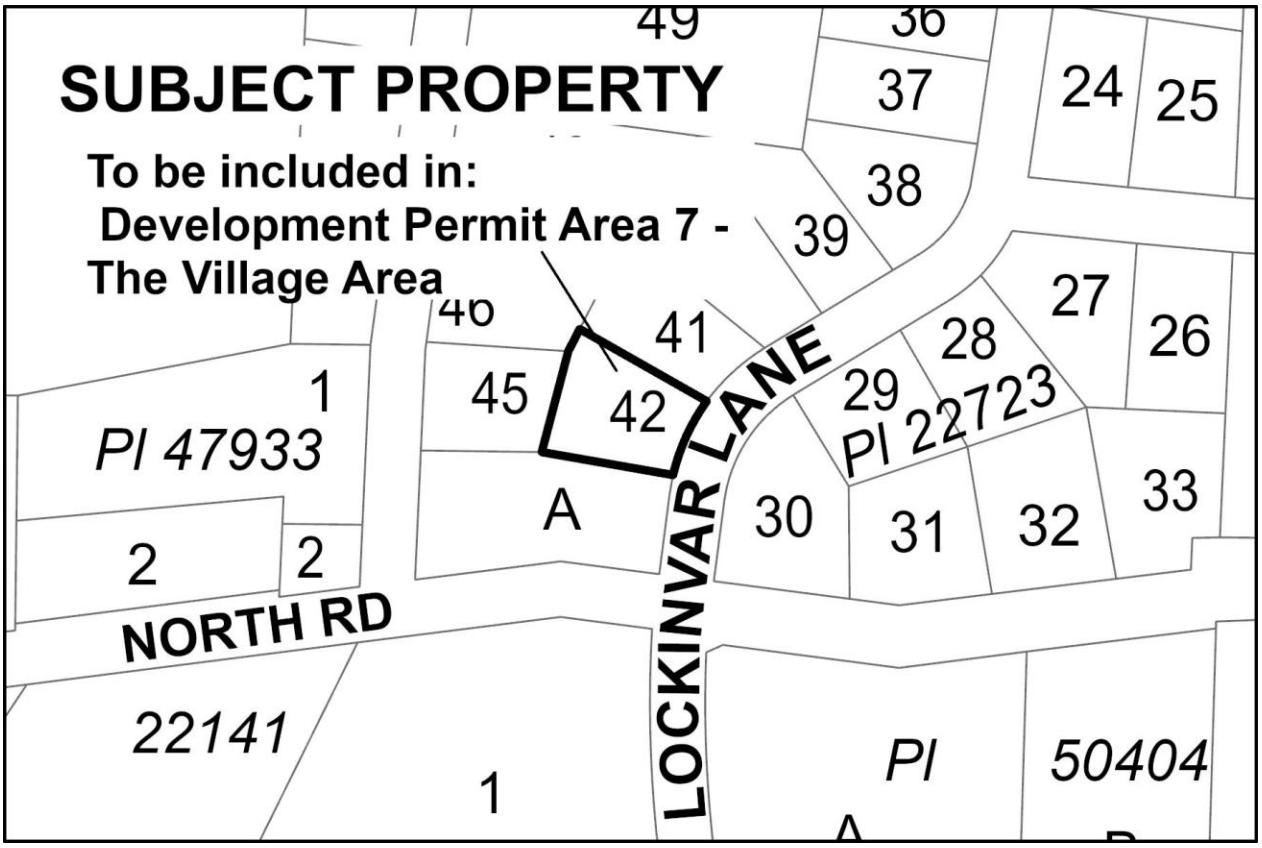
Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "2"

1. **Schedule "D" – Development Permit Areas - OCP B North Sheet**, is amended by including the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the Schedule D map for DP 7 - The Village Area, as shown on Plan No. 2 attached to and forming part of this bylaw, and by making such alterations to Schedule "D" of Bylaw No. 166 as are required to effect this change.

Plan No. 2



PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

A BYLAW TO AMEND GABRIOLA ISLAND LAND USE BYLAW, 1999

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

   This bylaw may be cited for all purposes as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025".

2. Gabriola Island Local Trust Committee Bylaw No. 177, cited as "Gabriola Island Land Use Bylaw, 1999" is amended as per Schedule "1" attached to and forming part of this bylaw.

READ A FIRST TIME THIS	4TH	DAY OF	SEPTEMBER	, 2025
READ A SECOND TIME THIS	4TH	DAY OF	SEPTEMBER	, 2025
PUBLIC HEARING HELD THIS	_____	DAY OF	_____	, 202x
READ A THIRD TIME THIS	_____	DAY OF	_____	, 202x
APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS				
	_____	DAY OF	_____	, 202x
ADOPTED THIS	_____	DAY OF	_____	, 202x

_____ _____

Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Schedule "1"

1. **Schedule "A"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   1.1 **Part B GENERAL REGULATIONS**, Section B.4 **SIGNS**, Subsection **B.4.1 Number and Total Sign Area**, Article **B.4.1.1**, Table 1 ***Sign* Regulations,** Column I is amended by adding "VC4," after "VC3, and before DC1".

   1.2 **Part C ESTABLISHMENT OF *ZONES***, Section C.1 **DIVISION INTO *ZONES***, Subsection **C.1.1 Land Based Zones**, insert new zone "Village Commercial 4 – Propane Storage" after "Village Commercial 3" and before "DC1 District Commercial 1".

   1.3 **Part D *ZONES***, Section D.3 **COMMERCIAL AND INDUSTRIAL *ZONES***, insert new Subsection **D.3.4 Village Commercial 4 (VC4)** after Subsection **D.3.3 Village Commercial 3** as shown in **Appendix 1** attached to and forming part of this bylaw; and renumber all subsequent subsections chronologically.

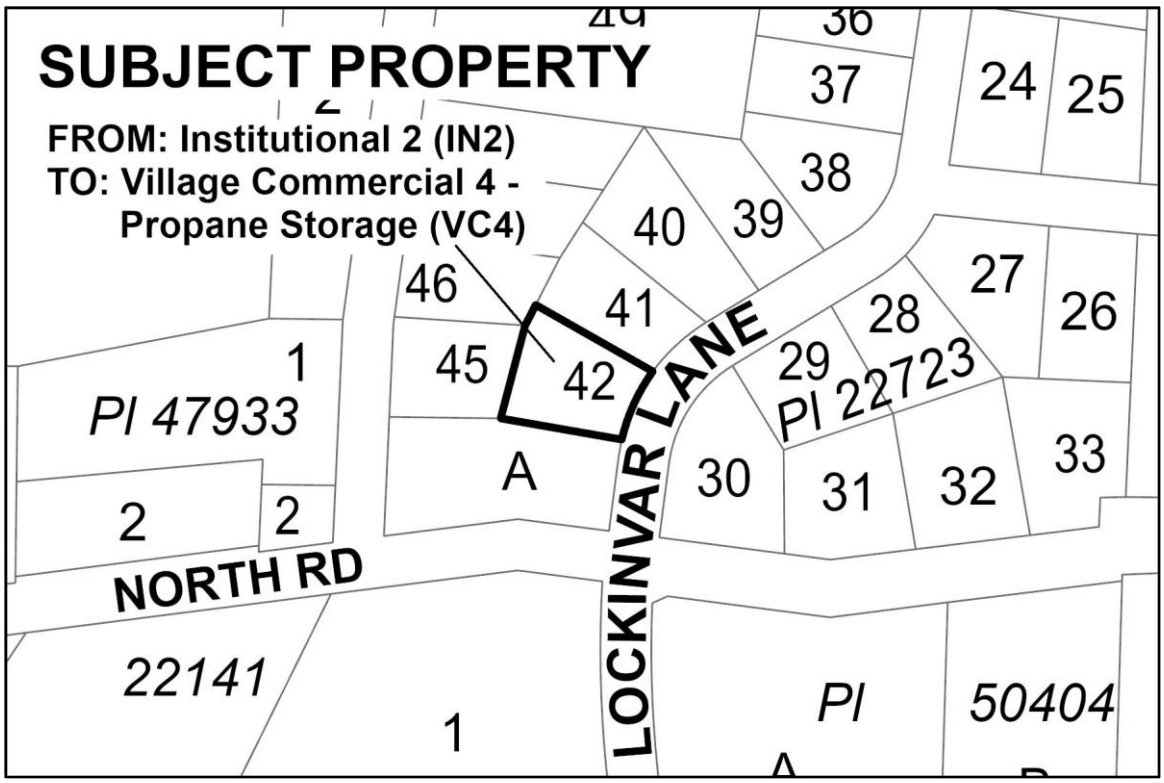
   1.4 **Part G,** Section G.1 **DEFINITIONS**, is amended by adding the following definition:

   "propane storage — the use of land, buildings, or structures for the bulk storage, containment, or handling of propane gas, whether in liquid or gaseous form, in above-ground or underground tanks, cylinders, or containers. This includes facilities for the distribution or sale of propane to the public or commercial entities. All propane storage must comply with applicable federal and provincial legislation and regulations, including but not limited to safety, environmental, and transportation standards."

2. **Schedule "B"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   2.1. Schedule "B" – North Sheet, is amended by changing the zoning classification of LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional 2" to "Village Commercial 4 – Propane Storage" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" of Bylaw No. 177 as are required to effect this change.

Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Appendix 1

D.3.4 Village Commercial 4 – Propane Storage (VC4)

D.3.4.1 Permitted Uses

The uses permitted in Article B.1.1.1, plus the following uses and no others are permitted in the Village Institutional 2 (IN2) *zone*:

a. Permitted *Principal* Uses

i *public schools*
ii *emergency services*
iii library
iv post office
v government offices
vi highway work yards
vii *urgent care medical clinic*
viii child care centre and pre-*school*
ix *propane storage*

b. Permitted *Accessory* **Uses**

i *limited public market,* subject to Subsection B.6.2

D.3.4.2 *Buildings* and *Structures*

The *buildings* and *structures* permitted in Article B.1.1.2, plus the following *buildings* and *structures* and no others are permitted in the Village Commercial 4 (VC4) *zone*:

a. Permitted *Buildings* and *Structures*

i *Buildings* and *structures* for the permitted uses set out in this zone, including tanks, containment systems, fencing, signage, and other infrastructure necessary for propane storage and distribution.

D.3.4.3 Regulations

The general regulations in Part B, plus the following regulations apply in the Village Commercial 4 (VC4) *zone*:

a. *Buildings* and *Structures* Height Limitations

i The maximum *height* of *buildings* and *structures* is 9.0 metres (29.5 feet).

Ii Propane tanks and associated safety infrastructure are exempt from maximum height limits where required by applicable safety regulations.

b. *Buildings* and *Structures* Siting Requirements

i The minimum setback for *buildings* or *structures* except a sign, fence, or pump/utility house is 6.0 metres (19.7 feet) from any lot line.

c. *Lot Coverage* Limitations

i The maximum combined *lot coverage* by *buildings* and *structures* is 25 percent of the *lot* area.

d. *Lot* Area Requirements for Subdivision

i The minimum average lot area is 1.0 hectare (2.47 acres).

ii The minimum lot area is 0.5 hectares (1.24 acres).

D.3.4.4 Conditions of Use for Propane Storage Facilities

i Propane storage operations must comply with all applicable federal and provincial regulations.

ii The operator must hold all necessary permits and certifications prior to installation and operation.

iii All outdoor lighting associated with propane storage must be fully shielded and directed downward to minimize light trespass.

iv Emergency response and spill containment plans must be prepared and maintained as per provincial requirements and provided to the Local Trust Committee upon request.

iv Where propane tanks or structures are visible from adjacent properties or public roads, screening through fencing, landscaping, or a combination shall be provided to reduce visual impact.

Islands Trust
www.islandstrust.bc.ca

Victoria Office
200 - 1627 Fort Street
Victoria, BC V8R 1H8
(250) 405-5151
southinfo@islandstrust.bc.ca
Galiano, Mayne, North Pender, Saturna, South Pender Islands

Salt Spring Office
1 – 500 Lower Ganges Road
Salt Spring Island, BC V8K 2N8
(250) 537-9144
ssiinfo@islandstrust.bc.ca
Salt Spring Island

Northern Office
700 North Road
Gabriola Island, BC V0R 1X3
(250) 247-2063
northinfo@islandstrust.bc.ca
Denman, Gabriola, Gambier, Hornby, Lasqueti, Thetis, Ballenas-Winchelsea Islands

Planning Application Authorization Form

Applicant:

Name
Bruce Buckingham

Company
Mid Island Co-op

Mailing Address
103,2517 Bowen Road

Phone
(4036330662)

Email
bruce.buckingham@midisland.crs

Declaration:

As the owner or agent authorized to act on behalf of the owner(s) of the subject property, I declare the information submitted in support of this application is true and correct in all respects.

Bruce Buckingham
Signature

Owner Authorization:

As the registered owner(s) of the subject property, I/we declare that the information submitted in support of this application is true and correct in all respects. I/we hereby authorize Islands Trust staff or their contractors to conduct site inspections of the subject property for the purpose of processing this application, and hereby authorize and appoint:

Print Name (*Complete if applicant is not the owner(s)*)

... to serve as the agent for this application, and communicate with Islands Trust staff and Islands Trust bodies on our behalf.

All registered owners on title must be listed on and sign the application. *Corporations must include a list of directors.*

Name/Company Name
Mid Island Consumer Services Cooperative

Signature
Bruce Buckingham

Mailing Address

Phone

Print Name
Bruce Buckingham

Email
bruce.buckingham@midisland.crs

Date

Name/Company Name

Signature
Bruce Buckingham

Mailing Address
103,2517 Bowen Road Nanaimo V9T3L2

Phone
4036330662

Print Name
Bruce Buckingham

Email
bruce.buckingham@midisland.crs

Date

Freedom of Information

The collection of personal information, for the purpose of processing this application, is authorized under the Local Government Act, Community Charter and section 26(c) of the Freedom of Information and Protection and Privacy Act. Enquiries may be directed to a Deputy Secretary at any of the Islands Trust Offices, as noted on page 1 of this form. A request for information, under the Freedom of Information and Protection of Privacy Act may be made to: FOI Coordinator, Islands Trust, 200-1627 Fort Street, Victoria, BC V8R 1H8, Tel. (250) 405-5151, Fax (250) 405-5155.

BYLAW REFERRAL FORM

700 North Road
Gabriola Island BC V0R 1X3
Ph: (250) 247-2063
Fax: (250) 247-7514
northinfo@islandstrust.bc.ca
www.islandstrust.bc.ca

Island: Gabriola Island Local Trust Committee **Bylaw No.:** 321 (OCP) & 322 (LUB) (PLRZ20240091) **Date:** September 8, 2025

You are requested to comment on the attached Bylaws for potential effect on your Nation/Agency's interests. We would appreciate your response within 90 days, by December 8, 2025. If you require support in reviewing this referral, our project planner is available to schedule a virtual meeting at your earliest convenience. Please contact our office directly with any questions. A Public Hearing to consider the Bylaws is anticipated prior to January, 2025.

APPLICANTS NAME / ADDRESS:
Mid Island Consumer Services Cooperative (Mid Island Co-op), 103-2517 Bowen Road, Nanaimo BC V9T 2L2

PURPOSE OF BYLAW:
To allow propane storage as a permitted use on the subject property.

GENERAL LOCATION:
Gabriola village centre

LEGAL DESCRIPTION:
LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (PID: 002-623-463)

SIZE OF PROPERTY AFFECTED:	ALR STATUS:	OFFICIAL COMMUNITY PLAN DESIGNATION:
0.19 hectares (0.48 Acres)	non	Currently Institutional, proposed to be changed to Village Commercial

OTHER INFORMATION:
The Gabriola Island Local Trust Committee gave First Reading to proposed Bylaw No. 321 & 322 on September 4, 2025. A copy of the staff report and the proposed bylaws are included in this referral for background information. All relevant background information, including staff reports and public correspondence received is posted to the Gabriola Projects webpage: https://islandstrust.bc.ca/island-planning/gabriola/current-applications/

Please direct any communications regarding this referral to Ian Cox at 250-247-2207, or by email to icox@islandstrust.bc.ca.

Please fill out the Response Summary on the back of this form. If your Nation or Agency's interests are *"Unaffected"*, no further information is necessary. In all other cases, we would appreciate receiving additional information to substantiate your position and, if necessary, outline any conditions related to your position. Please note any legislation or official government policy which would affect our consideration of this Bylaw.

(Signature)

Name: Ian Cox

Title: Planner

This referral has been sent to the following First Nations and agencies:

First Nations
Cowichan Tribes
Halalt First Nation
Lyackson First Nation
Penelakut Tribe
Semiahmoo First Nation
Snuneymuxw First Nation
Stz'uminus First Nation
Ts'uubaa-asatx First Nation

Regional Agencies
Regional District of Nanaimo
Vancouver Island Health Authority
Gabriola Advisory Planning Commission

Provincial Agencies
BC Assessment Authority
Ministry of Transportation & Infrastructure
Ministry of Water, Land and Resource Stewardship

Non-Agency Referrals
BC Ambulance Service
RCMP
Gabriola Volunteer Fire Department
BC School District 68

BYLAW REFERRAL FORM
RESPONSE SUMMARY

☐ **Approval Recommended for Reasons Outlined Below**

☐ **Approval Recommended Subject to Conditions Outlined Below**

☐ **Interests Unaffected by Bylaw**

☐ **Approval Not Recommended Due to Reason Outlined Below**

Gabriola Island Local Trust Area	321 (OCP) & 322 (LUB)
(Island)	(Bylaw Number(s))
(Your Signature)	(Print Your Name, Your Title)
(Date)	(First Nation/Agency)

PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321

A BYLAW TO AMEND GABRIOLA ISLAND OFFICIAL COMMUNITY PLAN, 1997

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

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2. Gabriola Island Local Trust Committee Bylaw No. 166, cited as "Gabriola Island Official Community Plan (Gabriola) Bylaw No. 166, 1997", is amended as per Schedule "1" and Schedule "2", attached to and forming part of this bylaw

READ A FIRST TIME THIS	4TH	DAY OF	SEPTEMBER	, 2025
READ A SECOND TIME THIS	4TH	DAY OF	SEPTEMBER	, 2025
PUBLIC HEARING HELD THIS	_____	DAY OF	_____	, 202x
READ A THIRD TIME THIS	_____	DAY OF	_____	, 202x
APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS				
	_____	DAY OF	_____	, 202x
APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS AND HOUSING THIS				
	_____	DAY OF	_____	, 202x
ADOPTED THIS	_____	DAY OF	_____	, 202x

_____ _____

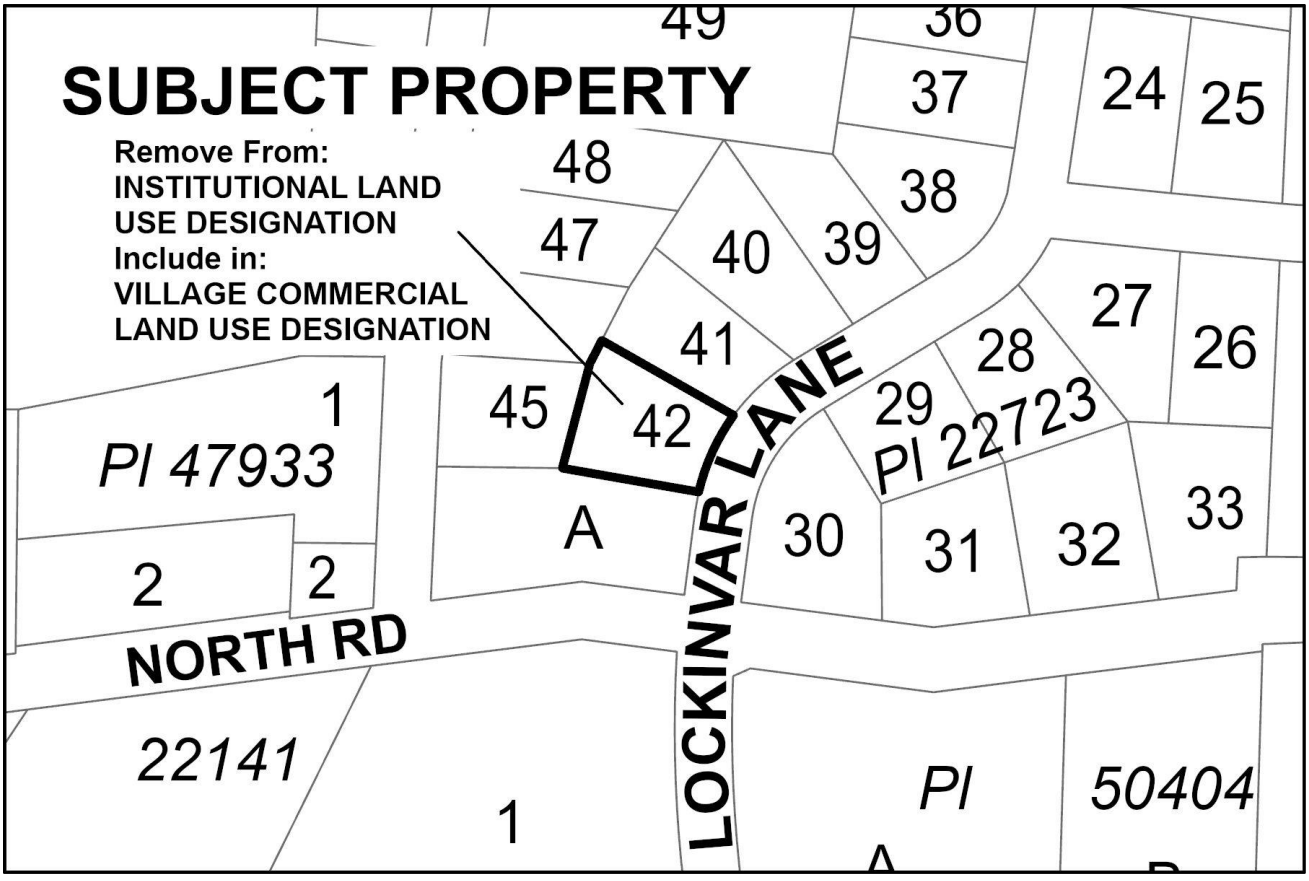
Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "1"

1. **Schedule "B"** of Gabriola Island Official Community Plan (Gabriola) Bylaw, 1997 is amended as follows:

   1.1. **Schedule "B" – Land Use Designations – North Sheet**, is amended by changing the land use designation on the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional" to "Commercial (Village)" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" as are required to effect this change.

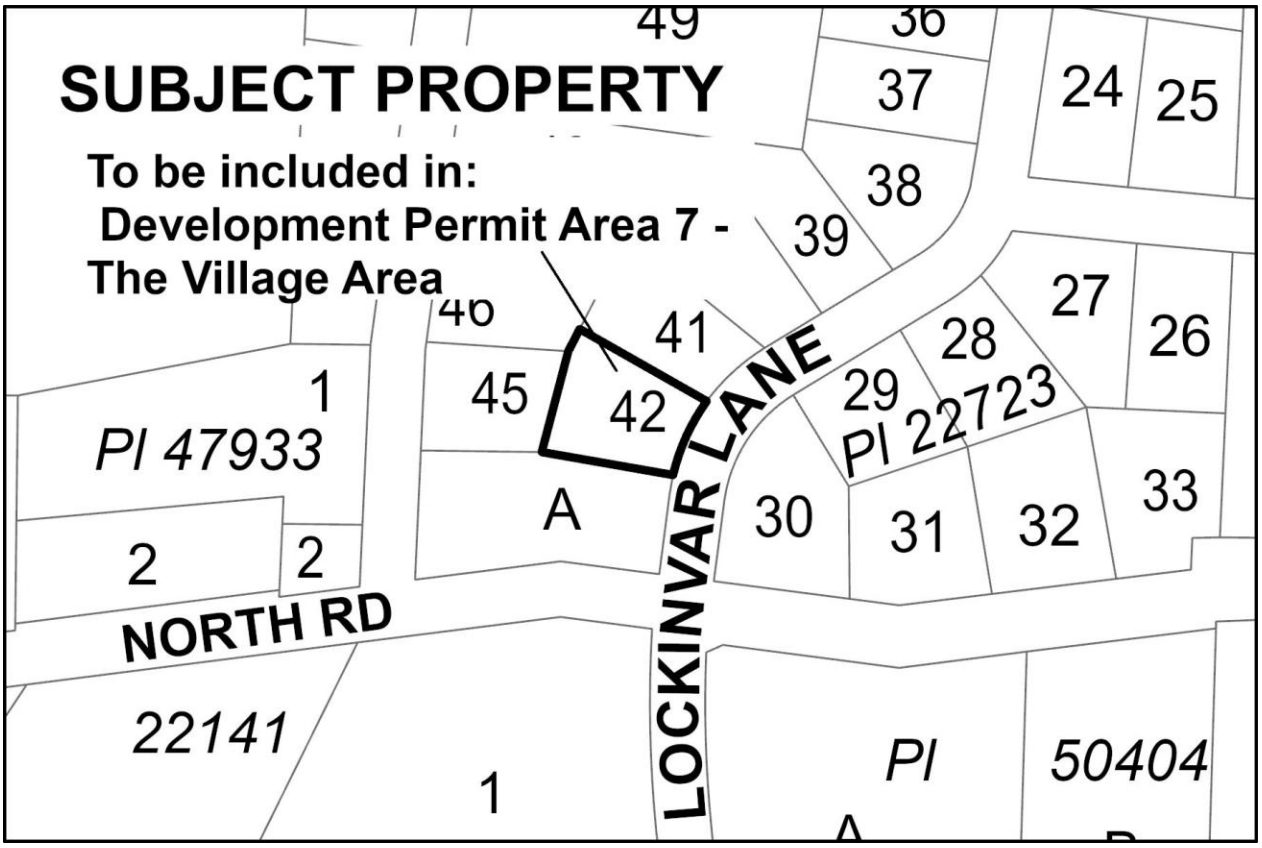
Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "2"

1. **Schedule "D" – Development Permit Areas - OCP B North Sheet**, is amended by including the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the Schedule D map for DP 7 - The Village Area, as shown on Plan No. 2 attached to and forming part of this bylaw, and by making such alterations to Schedule "D" of Bylaw No. 166 as are required to effect this change.

Plan No. 2



PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

A BYLAW TO AMEND GABRIOLA ISLAND LAND USE BYLAW, 1999

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

   This bylaw may be cited for all purposes as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025".

2. Gabriola Island Local Trust Committee Bylaw No. 177, cited as "Gabriola Island Land Use Bylaw, 1999" is amended as per Schedule "1" attached to and forming part of this bylaw.

READ A FIRST TIME THIS	5TH	DAY OF	SEPTEMBER	, 2025
READ A SECOND TIME THIS	5TH	DAY OF	SEPTEMBER	, 2025
PUBLIC HEARING HELD THIS	_____	DAY OF	_____	, 202x
READ A THIRD TIME THIS	_____	DAY OF	_____	, 202x
APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS				
	_____	DAY OF	_____	, 202x
ADOPTED THIS	_____	DAY OF	_____	, 202x

_____ _____

Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Schedule "1"

1. **Schedule "A"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   1.1 **Part B GENERAL REGULATIONS**, Section B.4 **SIGNS**, Subsection **B.4.1 Number and Total Sign Area**, Article **B.4.1.1**, Table 1 ***Sign* Regulations,** Column I is amended by adding "VC4," after "VC3, and before DC1".

   1.2 **Part C ESTABLISHMENT OF *ZONES***, Section C.1 **DIVISION INTO *ZONES***, Subsection **C.1.1 Land Based Zones**, insert new zone "Village Commercial 4 – Propane Storage" after "Village Commercial 3" and before "DC1 District Commercial 1".

   1.3 **Part D *ZONES***, Section D.3 **COMMERCIAL AND INDUSTRIAL *ZONES***, insert new Subsection **D.3.4 Village Commercial 4 (VC4)** after Subsection **D.3.3 Village Commercial 3** as shown in **Appendix 1** attached to and forming part of this bylaw; and renumber all subsequent subsections chronologically.

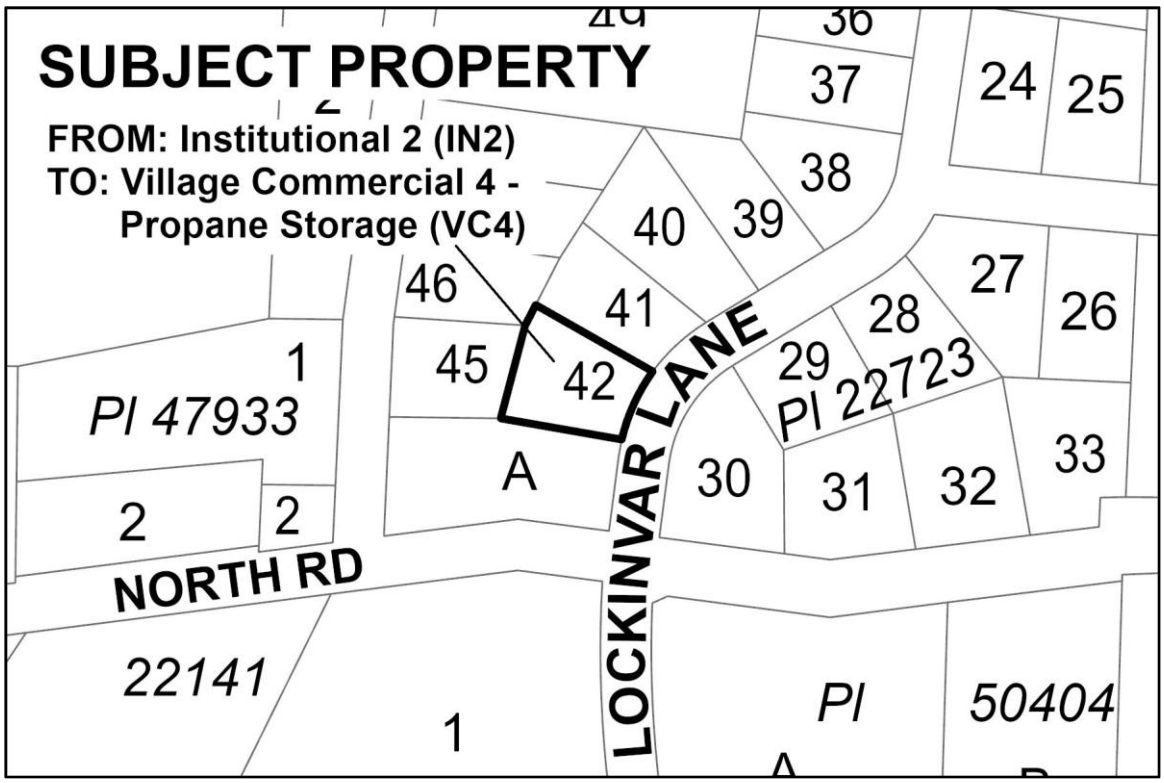
   1.4 **Part G,** Section G.1 **DEFINITIONS**, is amended by adding the following definition:

   "propane storage — the use of land, buildings, or structures for the bulk storage, containment, or handling of propane gas, whether in liquid or gaseous form, in above-ground or underground tanks, cylinders, or containers. This includes facilities for the distribution or sale of propane to the public or commercial entities. All propane storage must comply with applicable federal and provincial legislation and regulations, including but not limited to safety, environmental, and transportation standards."

2. **Schedule "B"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   2.1. Schedule "B" – North Sheet, is amended by changing the zoning classification of LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional 2" to "Village Commercial 4 – Propane Storage" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" of Bylaw No. 177 as are required to effect this change.

Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Appendix 1

D.3.4 Village Commercial 4 – Propane Storage (VC4)

D.3.4.1 Permitted Uses

The uses permitted in Article B.1.1.1, plus the following uses and no others are permitted in the Village Institutional 2 (IN2) *zone*:

a. Permitted *Principal* Uses

i *public schools*
ii *emergency services*
iii library
iv post office
v government offices
vi highway work yards
vii *urgent care medical clinic*
viii child care centre and pre-*school*
ix *propane storage*

b. Permitted *Accessory* **Uses**

i *limited public market,* subject to Subsection B.6.2

D.3.4.2 *Buildings* and *Structures*

The *buildings* and *structures* permitted in Article B.1.1.2, plus the following *buildings* and *structures* and no others are permitted in the Village Commercial 4 (VC4) *zone*:

a. Permitted *Buildings* and *Structures*

i *Buildings* and *structures* for the permitted uses set out in this zone, including tanks, containment systems, fencing, signage, and other infrastructure necessary for propane storage and distribution.

D.3.4.3 Regulations

The general regulations in Part B, plus the following regulations apply in the Village Commercial 4 (VC4) *zone*:

a. *Buildings* and *Structures* Height Limitations

i The maximum *height* of *buildings* and *structures* is 9.0 metres (29.5 feet).

Ii Propane tanks and associated safety infrastructure are exempt from maximum height limits where required by applicable safety regulations.

b. *Buildings* and *Structures* Siting Requirements

i The minimum setback for *buildings* or *structures* except a sign, fence, or pump/utility house is 6.0 metres (19.7 feet) from any lot line.

c. *Lot Coverage* Limitations

i The maximum combined *lot coverage* by *buildings* and *structures* is 25 percent of the *lot* area.

d. *Lot* Area Requirements for Subdivision

i The minimum average lot area is 1.0 hectare (2.47 acres).

ii The minimum lot area is 0.5 hectares (1.24 acres).

D.3.4.4 Conditions of Use for Propane Storage Facilities

i Propane storage operations must comply with all applicable federal and provincial regulations.

ii The operator must hold all necessary permits and certifications prior to installation and operation.

iii All outdoor lighting associated with propane storage must be fully shielded and directed downward to minimize light trespass.

iv Emergency response and spill containment plans must be prepared and maintained as per provincial requirements and provided to the Local Trust Committee upon request.

iv Where propane tanks or structures are visible from adjacent properties or public roads, screening through fencing, landscaping, or a combination shall be provided to reduce visual impact.

STAFF REPORT

File No.: PLRZ20250091 (Mid Island Co-op)

DATE OF MEETING:	September 4, 2025
TO:	Gabriola Island Local Trust Committee
FROM:	Ian Cox, Planner 2 Northern Team
SUBJECT:	PL-RZ-2024-0091 – LUB and OCP Amendment for Propane Storage at 793 Lockinvar Lane Applicant: Mid Island Consumer Services Co-operative Location: 793 Lockinvar Lane, Gabriola Island LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723

RECOMMENDATION

1. **That the Gabriola Island Local Trust Committee Bylaw No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025" be read a first time.**

2. **That the Gabriola Island Local Trust Committee Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025" be read a first time.**

3. **That the Gabriola Island Local Trust Committee Bylaw No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025" be read a second time.**

4. **That the Gabriola Island Local Trust Committee Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025" be read a second time.**

5. **That Proposed Bylaws No. 321 and 322 be referred to the following First Nations, Local Governments and agencies for comment:**

    a. **First Nations: Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, Semiahmoo First Nation, Snuneymuxw First Nation, Stz'uminus First Nation, Ts'uubaa-asatx First Nation.**

    b. **Local Governments and Agencies: Regional District of Nanaimo, Island Health Authority, Ministry of Transport and Transit, Ministry of Water, Land and Resource Stewardship, School District 68, Gabriola Volunteer Fire Department, Gabriola Advisory Planning Commission, Gabriola Housing Advisory Planning Commission.**

6. **That the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 321 cited as "Gabriola Official Community Plan Bylaw No. 166, 1997, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.**

7. **That the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw**

No. 177, 1999, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.

REPORT SUMMARY

This report introduces two draft bylaws, one to amend the Gabriola Island Official Community Plan (OCP) and the other to amend the Gabriola Island Land Use Bylaw (LUB). Staff recommend the draft bylaws be given first and second reading as presented in Attachments 1 and 2 to this report, and that referrals be sent to First Nations, local governments and other agencies as listed above in recommendation 5.

BACKGROUND

At its regular business meeting on April 17, 2025, the Gabriola Island Local Trust Committee passed the following three resolutions pertaining to this application:

GB-2025-018
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to prepare draft amendments to the Gabriola Island Official Community Plan that will include Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the 'Village Commercial' land use designation and 'Village Centre' Development Permit Area No. 7.

GB-2025-019
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to draft amendments to the Gabriola Island Land Use Bylaw to rezone Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) to a site-specific Village Commercial zone which maintains the existing uses; expands principle commercial uses consistent with the bylaw amendment application; and regulates buildings and structures, height, siting requirements including setbacks, lot coverage, parking, and subdivision.

GB-2025-020
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to provide notification to Snuneymuxw First Nation of application PLRZ20240091 describing the scope of proposed changes to the Gabriola Official Community Plan and Land Use Bylaw.

ANALYSIS

Draft Bylaw No. 321 (OCP):

Draft Bylaw No. 321 (Attachment 1) would amend the Gabriola Official Community Plan to include 793 Lockinvar Lane in the Village Commercial land use designation and in the Village Centre Development Permit Area No. 7 via two map sheet amendments: Schedule - B Land Use Designations Map, North Sheet, and Schedule D – Development Permit Areas Map, North Sheet.

Draft Bylaw No. 322 (LUB):

Draft Bylaw No. 322 (Attachment 2) would amend the LUB to create a new, site-specific Village Commercial Zone for 750 Lockinvar Lane, adding "propane storage" as a permitted use to the existing institutional uses on the property. This would be achieved through a text amendment addition to Part D – Zones, a Schedule B – North Sheet Zoning Map sheet amendment, and the addition of a definition for "propane storage" in the Part G – Definitions section, in order to clarity the scope of that use. Specifically, the new Village Commercial 4 (VC4) – Propane Storage zone would allow the following principal uses:

i public *schools*

ii *emergency services*

iii library

iv post office

v medical laboratory

vi government offices

vii highway work yards

viii *urgent care medical clinic*

ix child care centre and pre-*school*

x *propane storage*

The existing Institutional 2 (IN2) zoning provisions would remain the same for the new VC4 zone, including permitted buildings and structures, height and siting, lot coverage limitations, and lot area requirements for subdivision. This is consistent with the applicant's request and LTC direction via the resolutions for bylaw language drafting it has passed to date.

Islands Trust Policy Statement:

Staff have reviewed the bylaws against the Islands Trust Policy Statement (ITPS) Directives Only Checklist (Attachment 3 and 4) and conclude that draft bylaw no. 321 (OCP) and no. 322 (LUB) are not contrary to or at variance with the ITPS as reflected in recommendation 5 on page 1 of this report.

Density:

The existing IN2 zoning does not include residential density and none is proposed to be added as part of the application or draft bylaws.

Servicing and Environmental Impact:

As stated in the staff report that introduced the application, April 17, 20205, the proposed propane storage use does not require water or sewer services. Therefore, although a plan addressing water supply and sewage disposal is generally required for rezoning applications that seek to change or add principal uses, in this case such information is not applicable. Also included in the initial report and again here as Attachment 5 for ease of reference, the applicant has provided an Environmental Emergency Plan that addresses risk assessment, emergency equipment locations, details on prevention and mitigation for incidents and incident procedures.

Early Referral | First Nations Protocol:

An early referral notice was sent to Snuneymuxw First Nation consistent with the Islands Trust Council protocol agreement. Snuneymuxw has deferred comment on the referral, while reserving the right to re-review if new information arises during the rezoning process; particularly if activities associated with the amendments would involve ground disturbance such as removal of buildings or site excavation. Snuneymuxw requests to be engaged in this event given that an archaeological assessment may be required. Additionally, the applicant is aware that if any cultural material is observed within the subject area, all work must stop and Snuneymuxw be notified immediately. Lastly, confirmation is requested if the zoning amendments are approved.

Consultation

Following first and/or second reading of the bylaws and per the Local Government Act (LGA) requirements, staff recommend sending detailed referrals to First Nations, provincial agencies, local governments and select referral agencies per recommendation 5 found on page 1 of this report.

> ***Local Government Act***
> **475** (1) During the development of an official community plan, or the repeal or amendment of an official community plan, the proposing local government must provide one or more opportunities it considers appropriate for consultation with persons, organizations and authorities it considers will be affected.
> (2) For the purposes of subsection (1), the local government must
>
> (a) consider whether the opportunities for consultation with one or more of the persons, organizations and authorities should be early and ongoing, and
>
> (b) specifically consider whether consultation is required with the following:
>
> (i) the board of the regional district in which the area covered by the plan is located, in the case of a municipal official community plan;
>
> (ii) the board of any regional district that is adjacent to the area covered by the plan;
>
> (iii) the council of any municipality that is adjacent to the area covered by the plan;
>
> (iv) first nations;
>
> (v) boards of education, greater boards and improvement district boards;
>
> (vi) the Provincial and federal governments and their agencies

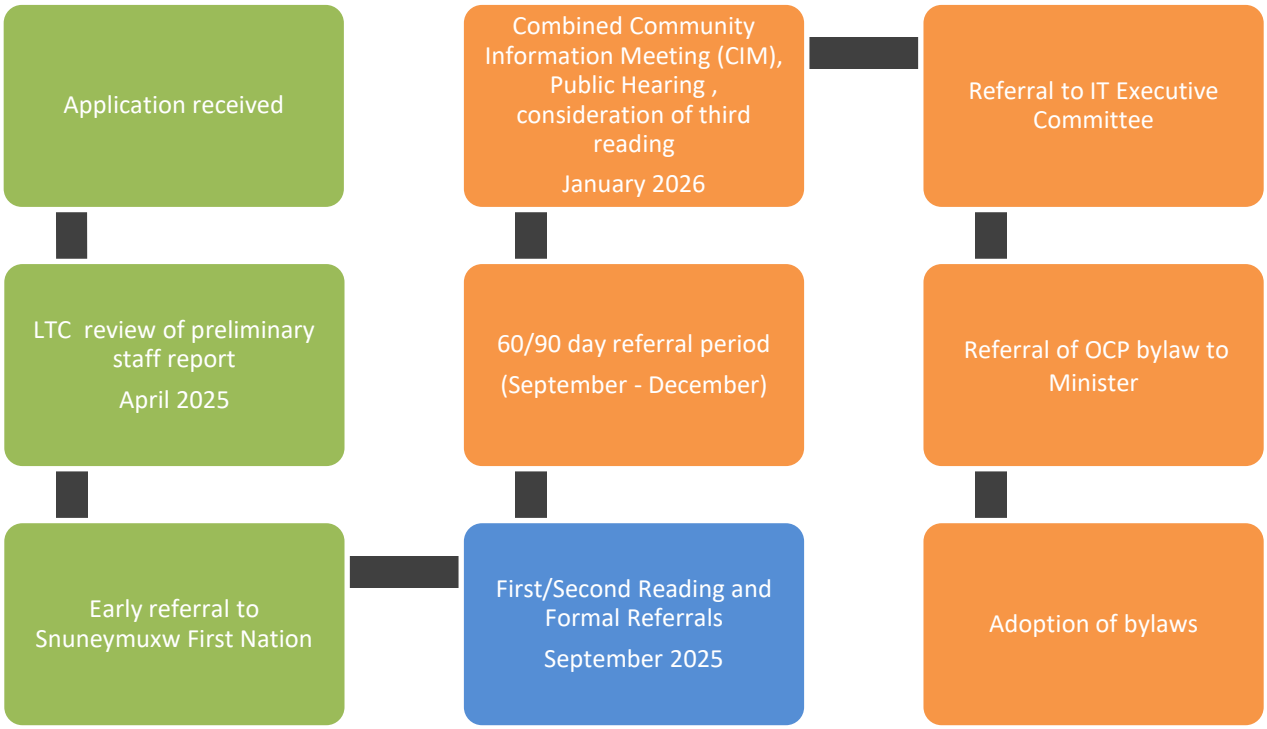
The LTC may wish to schedule a Community Information Meeting (CIM) and the required public hearing either separately or combined in the same meeting for efficiency, based on the LTC's level of confidence in support for the proposed bylaws. The options for timing of these next steps are:

- Following second reading of the proposed bylaws, a resolution could be passed to schedule a date for either or both the CIM and public hearing, under the understanding that staff would bring forward any potential issues arising from the referrals process prior to the LTC holding either.

- Wait to schedule either or both the CIM and public hearing until after the referrals period is over and any comments/issues that might arise are presented by staff and considered by the LTC.

The next possible regular LTC business meeting following the close of the 90-day referral period for First Nations is January 22, 2026.

Application Timeline



Rationale for Recommendation

Staff recommend the draft OCP and LUB bylaws be given first and second reading as staff consider them to be consistent with OCP policies, the Islands Trust Policy Statement, supported by the information supplied by the applicant, and no significant changes are anticipated prior to a community information meeting and/or public hearing given the relatively clear proposed amendments. In accordance with the LGA and Islands Trust Protocol agreements, staff recommend proposed bylaw referrals to First Nations, provincial agencies, local governments and select agencies as listed on page 1 of this report.

ALTERNATIVES

The LTC may consider the following alternatives to the recommendation:

1. **Amend the draft bylaws**

   The LTC may amend the draft bylaws prior to consideration of first reading. If this alternative is selected then the following resolution is recommended:

   That the Gabriola Island Local Trust Committee amend Draft Bylaw No. 3XX, cited as "…" with the following: [list amendments]

2. **Request additional information/defer consideration of first and/or second reading**

   The LTC may request specific additional information from staff and/or the applicant prior to consideration of first and/or reading. If this alternative is selected then the following resolution is recommended:

That the Gabriola Island Local Trust Committee request [staff/the applicant] provide the following [specify information request] prior to further consideration of Draft Bylaws No. 321 (OCP) and 322 (LUB).

3. Proceed no further

The LTC may choose to proceed no further with the application. Staff advise that the implications of this alternative are that the bylaw amendment application file will be closed and the applicant will be refunded the appropriate amount based on the Gabriola Fees Bylaw. Recommended wording for the resolution is as follows:

That the Gabriola Island Local Trust Committee proceed no further with bylaw amendment application PL-RZ-2025-0091.

NEXT STEPS

If the LTC gives first and/or second reading to the draft bylaws, staff will send referrals requesting a response within 60 and 90 days of the date for agencies and First Nations, respectively, per LTC direction via the resolutions it chooses to pass.

Submitted By:	Ian Cox, Planner 2	August 20, 2025
Concurrence:	Robert Kojima, Regional Planning Manager	August 21, 2025

ATTACHMENTS

1. Draft Bylaw No. 321 (OCP)
2. Draft Bylaw No. 322 (LUB)
3. Islands Trust Policy Statement Directive Policies (OCP BL321)
4. Islands Trust Policy Statement Directive Policies (LUB BL322)
5. Emergency Environmental Plan

ISLANDS TRUST POLICY STATEMENT
DIRECTIVES ONLY CHECKLIST

File No.: PLRZ20250091 (Mid Island Co-op)

PURPOSE

To provide staff with the Directives Only Checklist to highlight issues addressed in staff reports and as a means to ensure Local Trust Committees address certain matters in their official community plans and regulatory bylaws, and to reference any relevant sections of the Policy Statement.

POLICY STATEMENT

The Policy Statement is comprised of several parts. Parts I and II outline the purpose, the Islands Trust object, and Council's guiding principles. Parts III, IV and V contain the goals and policies relevant to ecosystem preservation and protection, stewardship of resources and sustainable communities.

There are three different kinds of policies within the Policy Statement as follows:

- Commitments of Trust Council which are statements about Council's position or philosophy on various matters;
- Recommendations of Council to other government agencies, non-government organizations, property owners, residents and visitors; and
- Directive Policies which direct Local Trust Committees and Island Municipalities to address certain matters

DIRECTIVES ONLY CHECKLIST

The Policy Statement Directives Only Checklist is based on the directive policies from the Policy Statement (Consolidated April 2003) which require Local Trust Committees to address certain matters in their official community plans and regulatory bylaws and Island Municipalities to address certain matters in their official community plans in a way that implements the policy of Trust Council.

Staff will use the Policy Statement Checklist (Directives Only) to review Local Trust Committee and Island Municipality bylaw amendment applications and proposals to ensure consistency with the Policy Statement. Staff will add the appropriate symbol to the table as follows:

✓ if the bylaw is consistent with the policy from the Policy Statement, or
× if the bylaw is inconsistent (contrary or at variance) with a policy from the Policy Statement, or
N/A if the policy is not applicable.

PART III: POLICIES FOR ECOSYSTEM PRESERVATION AND PROTECTION

CONSISTENT	NO.	DIRECTIVE POLICY
	3.1	**Ecosystems**
n/a	**3.1.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.
n/a	**3.1.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning, establishment, and maintenance of a network of protected areas that preserve the representative ecosystems of their planning area and maintain their ecological integrity.
✓	**3.1.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the regulation of land use and development to restrict emissions to land, air and water to levels not harmful to humans or other species.
	3.2	**Forest Ecosystems**
n/a	**3.2.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of unfragmented forest ecosystems within their local planning areas from potentially adverse impacts of growth, development, and land-use.
	3.3	**Freshwater and Wetland Ecosystems and Riparian Zones**
n/a	**3.3.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means to prevent further loss or degradation of freshwater bodies or watercourses, wetlands and riparian zones and to protect aquatic wildlife.
	3.4	**Coastal and Marine Ecosystems**
n/a	**3.4.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of sensitive coastal areas.
n/a	**3.4.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for and regulation of development in coastal regions to protect natural coastal processes.

PART IV: POLICIES FOR THE STEWARDSHIP OF RESOURCES

CONSISTENT	NO.	DIRECTIVE POLICY
	4.1	**Agricultural Land**
n/a	**4.1.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and preservation of agricultural land for current and future use.
n/a	**4.1.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation, protection, and encouragement of farming, the sustainability of farming, and the relationship of farming to other land uses.
n/a	**4.1.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of adjacent properties to minimize any adverse affects on agricultural land.
CONSISTENT	**NO.**	**DIRECTIVE POLICY**
n/a	**4.1.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the design of road systems and servicing corridors to avoid agricultural lands unless the need for roads outweighs agricultural considerations, in which case appropriate mitigation measures shall be required to derive a net benefit to agriculture.
n/a	**4.1.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address land uses and activities that support the economic viability of farms without compromising the agriculture capability of agricultural land.
n/a	**4.1.9**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of Crown lands for agricultural leases.
	4.2	**Forests**
n/a	**4.2.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the need to protect the ecological integrity on a scale of forest stands and landscapes.
n/a	**4.2.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the retention of large land holdings and parcel sizes for sustainable forestry use, and the location and construction of roads, and utility and communication corridors to minimize the fragmentation of forests.
n/a	**4.2.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of forest ecosystem reserves where no extraction will take place to ensure the preservation of native biological diversity.
CONSISTENT	**NO.**	**DIRECTIVE POLICY**

	4.3	**Wildlife and Vegetation**
	4.4	**Freshwater Resources**
n/a	**4.4.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater, water quality is maintained, and existing, anticipated and seasonal demands for water are considered and allowed for.
n/a	**4.4.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses
	4.5	**Coastal Areas and Marine Shorelands**
n/a	**4.5.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the needs and locations for marine dependent land uses.
n/a	**4.5.9**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the compatibility of the location, size and nature of marinas with the ecosystems and character of their local planning areas.
n/a	**4.5.10**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location of buildings and structures so as to protect public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments.
n/a	**4.5.11**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address opportunities for the sharing of facilities such as docks, wharves, floats, jetties, boat houses, board walks and causeways.
	4.6	**Soils and Other Resources**
n/a	**4.6.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of productive soils.

PART V: POLICIES FOR SUSTAINABLE COMMUNITIES

CONSISTENT	NO.	DIRECTIVE POLICY
	5.1	**Aesthetic Qualities**
n/a	**5.1 3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of views, scenic areas and distinctive features contributing to the overall visual quality and scenic value of the Trust Area.
	5.2	**Growth and Development**
✓	**5.2.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
✓	**5.2.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.
✓	**5.2.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means for achieving efficient use of the land base without exceeding any density limits defined in their official community plans.
n/a	**5.2.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of areas hazardous to development, including areas subject to flooding, erosion or slope instability, and strategies to direct development away from such hazards.
	5.3	**Transportation and Utilities**
n/a	**5.3.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of a classification system of rural roadways, including scenic or heritage road designations, in recognition of the object of the Islands Trust.
n/a	**5.3.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the impacts of road location, design, construction and systems.
n/a	**5.3.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of areas for the landing of emergency helicopters.
n/a	**5.3.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of land use patterns that encourage establishment of bicycle paths and other local and inter-community transportation systems that reduce dependency on private automobile use.
	5.4	**Disposal of Waste**
n/a	**5.4.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of acceptable locations for the disposal of solid waste.
CONSISTENT	NO.	DIRECTIVE POLICY

	5.5	**Recreation**
n/a	**5.5.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the prohibition of destination gaming facilities such as casinos and commercial bingo halls.
n/a	**5.5.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location and type of recreational facilities so as not to degrade environmentally sensitive areas, and the designation of locations for marinas, boat launches, docks and anchorages so as not to degrade sensitive marine or coastal areas.
n/a	**5.5.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of sites providing safe public access to beaches, the identification and designation of areas of recreational significance, and the designation of locations for community and public boat launches, docks and anchorages.
n/a	**5.5.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.
n/a	**5.5.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
	5.6	**Cultural and Natural Heritage**
n/a	**5.6.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification, protection, preservation and enhancement of local heritage.
n/a	**5.6.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation and protection of the heritage value and character of historic coastal settlement patterns and remains.
	5.7	**Economic Opportunities**
✓	**5.7.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
	5.8	**Health and Well-being**
✓	**5.8.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

	POLICY STATEMENT COMPLIANCE
✓	***In compliance with Trust Policy***
	Not in compliance with Trust Policy for the following reasons:

ISLANDS TRUST POLICY STATEMENT
DIRECTIVES ONLY CHECKLIST

File No.: PLRZ20250091 (Mid Island Co-op)

PURPOSE

To provide staff with the Directives Only Checklist to highlight issues addressed in staff reports and as a means to ensure Local Trust Committees address certain matters in their official community plans and regulatory bylaws, and to reference any relevant sections of the Policy Statement.

POLICY STATEMENT

The Policy Statement is comprised of several parts. Parts I and II outline the purpose, the Islands Trust object, and Council's guiding principles. Parts III, IV and V contain the goals and policies relevant to ecosystem preservation and protection, stewardship of resources and sustainable communities.

There are three different kinds of policies within the Policy Statement as follows:

- Commitments of Trust Council which are statements about Council's position or philosophy on various matters;
- Recommendations of Council to other government agencies, non-government organizations, property owners, residents and visitors; and
- Directive Policies which direct Local Trust Committees and Island Municipalities to address certain matters

DIRECTIVES ONLY CHECKLIST

The Policy Statement Directives Only Checklist is based on the directive policies from the Policy Statement (Consolidated April 2003) which require Local Trust Committees to address certain matters in their official community plans and regulatory bylaws and Island Municipalities to address certain matters in their official community plans in a way that implements the policy of Trust Council.

Staff will use the Policy Statement Checklist (Directives Only) to review Local Trust Committee and Island Municipality bylaw amendment applications and proposals to ensure consistency with the Policy Statement. Staff will add the appropriate symbol to the table as follows:

✓ if the bylaw is consistent with the policy from the Policy Statement, or
× if the bylaw is inconsistent (contrary or at variance) with a policy from the Policy Statement, or
N/A if the policy is not applicable.

PART III: POLICIES FOR ECOSYSTEM PRESERVATION AND PROTECTION

CONSISTENT	NO.	DIRECTIVE POLICY
	3.1	**Ecosystems**
n/a	**3.1.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.
n/a	**3.1.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning, establishment, and maintenance of a network of protected areas that preserve the representative ecosystems of their planning area and maintain their ecological integrity.
✓	**3.1.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the regulation of land use and development to restrict emissions to land, air and water to levels not harmful to humans or other species.
	3.2	**Forest Ecosystems**
n/a	**3.2.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of unfragmented forest ecosystems within their local planning areas from potentially adverse impacts of growth, development, and land-use.
	3.3	**Freshwater and Wetland Ecosystems and Riparian Zones**
n/a	**3.3.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means to prevent further loss or degradation of freshwater bodies or watercourses, wetlands and riparian zones and to protect aquatic wildlife.
	3.4	**Coastal and Marine Ecosystems**
n/a	**3.4.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of sensitive coastal areas.
n/a	**3.4.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for and regulation of development in coastal regions to protect natural coastal processes.

PART IV: POLICIES FOR THE STEWARDSHIP OF RESOURCES

CONSISTENT	NO.	DIRECTIVE POLICY
	4.1	**Agricultural Land**
n/a	**4.1.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and preservation of agricultural land for current and future use.
n/a	**4.1.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation, protection, and encouragement of farming, the sustainability of farming, and the relationship of farming to other land uses.
n/a	**4.1.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of adjacent properties to minimize any adverse affects on agricultural land.
CONSISTENT	**NO.**	**DIRECTIVE POLICY**
n/a	**4.1.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the design of road systems and servicing corridors to avoid agricultural lands unless the need for roads outweighs agricultural considerations, in which case appropriate mitigation measures shall be required to derive a net benefit to agriculture.
n/a	**4.1.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address land uses and activities that support the economic viability of farms without compromising the agriculture capability of agricultural land.
n/a	**4.1.9**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of Crown lands for agricultural leases.
	4.2	**Forests**
n/a	**4.2.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the need to protect the ecological integrity on a scale of forest stands and landscapes.
n/a	**4.2.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the retention of large land holdings and parcel sizes for sustainable forestry use, and the location and construction of roads, and utility and communication corridors to minimize the fragmentation of forests.
n/a	**4.2.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of forest ecosystem reserves where no extraction will take place to ensure the preservation of native biological diversity.
CONSISTENT	**NO.**	**DIRECTIVE POLICY**

	4.3	**Wildlife and Vegetation**
	4.4	**Freshwater Resources**
n/a	**4.4.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater, water quality is maintained, and existing, anticipated and seasonal demands for water are considered and allowed for.
n/a	**4.4.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses
	4.5	**Coastal Areas and Marine Shorelands**
n/a	**4.5.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the needs and locations for marine dependent land uses.
n/a	**4.5.9**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the compatibility of the location, size and nature of marinas with the ecosystems and character of their local planning areas.
n/a	**4.5.10**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location of buildings and structures so as to protect public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments.
n/a	**4.5.11**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address opportunities for the sharing of facilities such as docks, wharves, floats, jetties, boat houses, board walks and causeways.
	4.6	**Soils and Other Resources**
n/a	**4.6.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of productive soils.

PART V: POLICIES FOR SUSTAINABLE COMMUNITIES

CONSISTENT	NO.	DIRECTIVE POLICY
	5.1	**Aesthetic Qualities**
n/a	**5.1 3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of views, scenic areas and distinctive features contributing to the overall visual quality and scenic value of the Trust Area.
	5.2	**Growth and Development**
✓	**5.2.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
✓	**5.2.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.
✓	**5.2.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means for achieving efficient use of the land base without exceeding any density limits defined in their official community plans.
n/a	**5.2.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of areas hazardous to development, including areas subject to flooding, erosion or slope instability, and strategies to direct development away from such hazards.
	5.3	**Transportation and Utilities**
n/a	**5.3.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of a classification system of rural roadways, including scenic or heritage road designations, in recognition of the object of the Islands Trust.
n/a	**5.3.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the impacts of road location, design, construction and systems.
n/a	**5.3.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of areas for the landing of emergency helicopters.
n/a	**5.3.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of land use patterns that encourage establishment of bicycle paths and other local and inter-community transportation systems that reduce dependency on private automobile use.
	5.4	**Disposal of Waste**
n/a	**5.4.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of acceptable locations for the disposal of solid waste.
CONSISTENT	NO.	DIRECTIVE POLICY

	5.5	**Recreation**
n/a	**5.5.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the prohibition of destination gaming facilities such as casinos and commercial bingo halls.
n/a	**5.5.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location and type of recreational facilities so as not to degrade environmentally sensitive areas, and the designation of locations for marinas, boat launches, docks and anchorages so as not to degrade sensitive marine or coastal areas.
n/a	**5.5.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of sites providing safe public access to beaches, the identification and designation of areas of recreational significance, and the designation of locations for community and public boat launches, docks and anchorages.
n/a	**5.5.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.
n/a	**5.5.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
	5.6	**Cultural and Natural Heritage**
n/a	**5.6.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification, protection, preservation and enhancement of local heritage.
n/a	**5.6.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation and protection of the heritage value and character of historic coastal settlement patterns and remains.
	5.7	**Economic Opportunities**
✓	**5.7.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
	5.8	**Health and Well-being**
✓	**5.8.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

	POLICY STATEMENT COMPLIANCE
✓	***In compliance with Trust Policy***
	Not in compliance with Trust Policy for the following reasons:

Mid Island Consumer Services Co-operative (Mid Island Co-op)

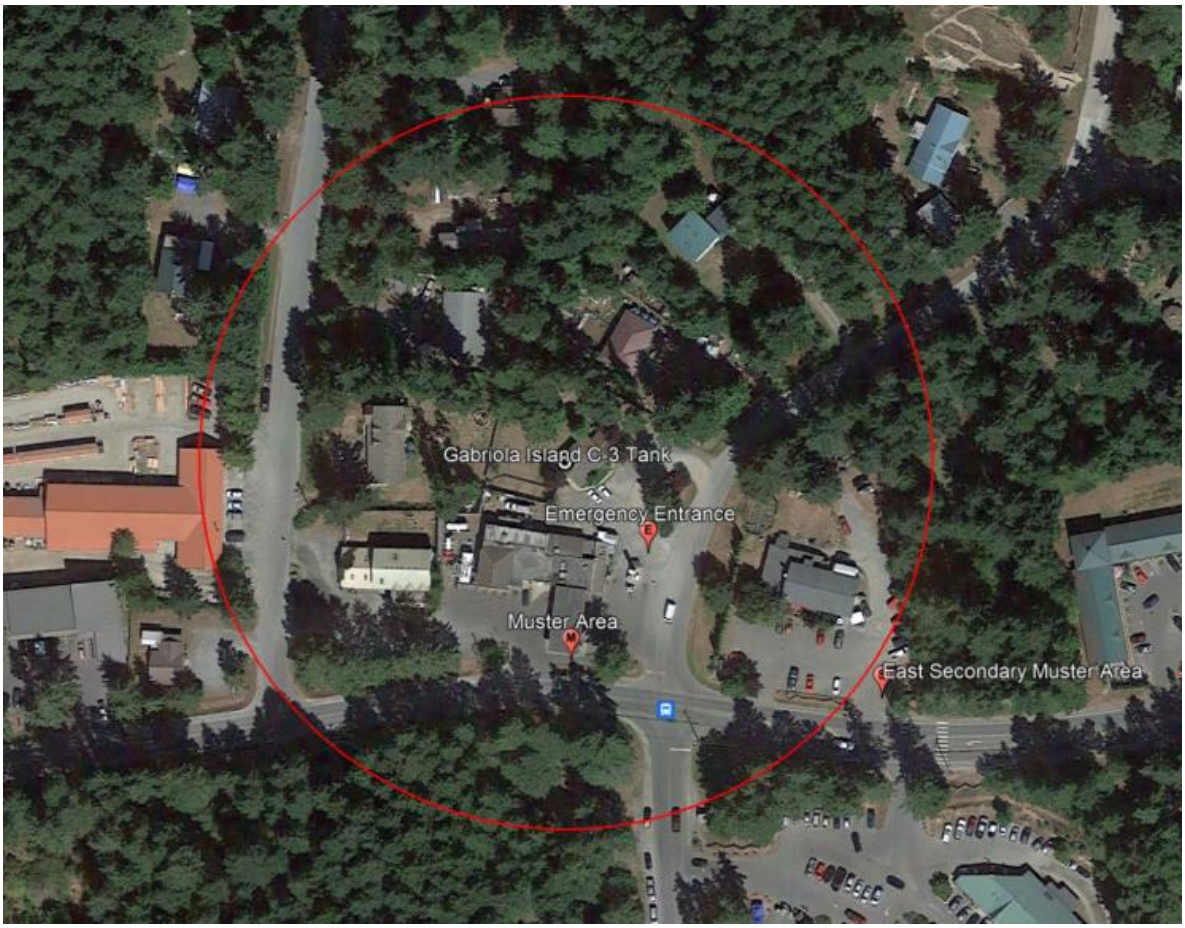
Environmental Emergency (E2) Plan

For the Propane Installation at 793 Lockinvar Lane, Gabriola Island, BC

Site Location
Emergency 1st Responder Entrance to facility: • GPS - DD (decimal degrees): 49.17439, -123.84605 • 793 Lockinvar Lane Gabriola Island BC One 9,400 USWG propane tank is located at: • Mid Island Co-op Bulk Plant • 793 Lockinvar Lane Gabriola Island BC V0R 1X0 • DD (decimal degrees): 49.17461, -123.84636 Mail to: • Head Office: 106–2517 Bowen Road Nanaimo BC V9T 3L2 E2ID# TBD

Section 1 Executive Summary

Following information is required in activating the E2 Plan: Map showing Muster Areas, 1st Responders Entrance, Emergency Information & Equipment Locations, Site Address, E2 Plan Activation and Emergency Contacts, Incident Procedures, and Emergency Notification & Communications Procedure.



Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREA	East of site on North Road

ADDRESS of Gabriola Island Propane Bulk Plant: 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

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Section 2 Introduction

2.1 CRS Health Safety and Emergency Preparedness and Response Statement

The CRS is committed to health and safety through operational integrity and effectively manages its work to identify and mitigate risks to health, safety, and the environment.

Operational integrity at the CRS means conducting all activities safely and reliably so that the public is protected, impact to the environment is minimized, the health and wellbeing of employees is safeguarded, contractors and customers are safe, and physical assets (such as facilities and equipment) are protected from damage or loss.

This Emergency Response Plan has been developed to meet or exceed the requirements of all applicable governing agencies and regulatory bodies where the CRS operates.

The following plan considers an area-specific hazard/risk analysis and outlines the necessary resources, personnel, logistics and initial actions to facilitate a prompt, coordinated and rational approach to any emergency.

2.2 Purpose

This Emergency Response/Environmental Emergency (E2) manual describes the procedures for Mid Island Co-op personnel in the event of an emergency at a company facility.

This E2 plan has been prepared in accordance with the Environmental Emergency (E2), Regulations made pursuant to the Canadian Environmental Protections Act, 1999 (CEPA 1999), reflecting the four pillars of emergency management: prevention and mitigation, preparedness, response, and recovery.

Sharing portions of information within this manual with interactive stakeholders or those residents or businesses in the proximity of effect from an emergency is encouraged.

2.3 Objectives of the E2 Plan

- Reduce the frequency and consequences of uncontrolled, unplanned, or accidental releases of propane.
- Promote the safety of workers, responders, and the public.
- Reduce the potential for destruction of goods and property.
- Minimize the effect upon the environment.
- Communicate risks associated to the facility with the local emergency response services.
- Help responders quickly determine and initiate proper remedial actions.
- Inform neighboring citizens and businesses of preparations and actions that will minimize risk to safety and health during an emergency event.
- Liaise with local municipal administrations in the context of public safety.
- Reduce recovery times and costs.

These objectives are achieved through the development, implementation, training/exercising and maintenance of this E2.

2.4 Scope of Emergency Procedures

Due to the complexity and variables of an emergency, it is difficult to determine an exact systematic process that will be effective in all situations. The common elements within responses are listed. The responder will determine the sequence and execution at the time of the incident.

This E2 Plan addresses the following list of risks:

- Propane gas release
- Propane liquid release
- Fires
- Explosions
- Threats to people, property, and goods
- Other site-specific values at risk

2.5 E2 Plan Access

An up-to-date plan shall be kept in the red plastic document holder - labelled E2/SDS - installed near emergency horn activation on North exterior wall of convenience store so as to be readily available to site personnel and 1st Responders.

2.6 Joint Responsibilities

Mid Island Co-op owns and operates this Bulk Plant on Gabriola Island BC.

2.7 Plan Consultation/References

- Canadian Environmental Protection Act, 1999 - Part 8: Environmental Matters Related to Emergencies
- Environmental Emergency Regulations SOR/2019-51
- Technical Guidelines for the Environmental Emergency Regulations, 2019 Version 2.0
- WorkSafe BC Guidelines – OHS Reg's. Part 4: Emergency Preparedness and Response
- WorkSafe BC Guidelines – OHS Reg's. Table of Exposure Limits for Chemical Substances
- CCOHS https://www.ccohs.ca/oshanswers/hsprograms/basic.html
- National Fire Code of Canada – Division B, Emergency Planning
- Federated Co-operatives Limited SDS – Propane
- CAN/CSA Z731-03 Emergency Preparedness and Response
- CAN/CSA B149.1 Natural Gas and Propane Installation Code
- CAN/CSA B149.2 Propane Storage and Handling Code
- ASME Vessel Specifications
- Canadian Electrical Code
- Provincial Boiler and Pressure Vessel Acts and Regulations
- Safeti, formerly PHAST (Process Hazard Analysis Software) Analysis Modelling from Marsh Risk Consulting
- MIACC (Major Industrial Accidents Council of Canada) is a risk-based land use planning guide (MIACC was dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering)

2.8 Record of Amendments

Record changes made to the Plan on the table below and replace applicable pages.

#	Date of amendment	Section # amended	Recorded by
1	2023	New E2 Plan	Kevin McEown - FCL and Kelli Cartwright - Mid Island Co-op

2.9 Company Profile

Nature of Business

Mid Island Co-op is a locally owned co-operative serving local communities with food and fuel.

Typical Storage Use and Delivery Activities

This Mid Island Co-op owned and operated Bulk Plant on Gabriola Island BC has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

2.10 Glossary

Active Mitigation: A safeguard system designed to mitigate the consequences of an incident that requires human intervention, external mechanisms, or energy sources. Examples include lighting, automatic and manual valves, etc.

Alternate Scenario: An environmental emergency that could reasonably be expected to occur at a facility and that would likely cause harm to the environment or constitute a danger to human life or health.

Alternate Worst-case Scenario: Means the scenario described in section 4(2)(f) of the E2 Regulations. It involves the alternate scenario that is more likely to occur than the worst-case scenario **and** that has the longest impact distance outside the boundary of the facility (if it exists).

BLEVE: (boiling liquid expanding vapor explosion) happens if a container holding a pressure liquified gas (e.g., propane) fails catastrophically. Catastrophic failure of the vessel is followed by the explosive release of boiling liquid and expanding vapour.

The BLEVE is a physical explosion where the hazards are blast and projectiles. Propane is flammable so a fireball may happen after a BLEVE if the released cloud is immediately ignited. This is usually the case if the tank failure is caused by fire impingement. If a flammable cloud is not ignited immediately then delayed ignition could lead to other fires, explosions, etc.

A BLEVE will typically occur when the steel of the tank is compromised by an external impinging fire and consequential rupture due to the combination of internal over-pressure and weakening steel strength due to overheating. A warning sign of an impending BLEVE may be intermittent or a continual flare-off from the pressure relief valve until the tank either BLEVE's or rids enough propane where flare-offs cease. The variables within the chain of events are difficult to accurately predict.

CAS Registry Number: The identification number assigned to a substance by the Chemical Abstracts Service, a division of the American Chemical Society. The Chemical Abstracts Service Registry number is the main identifier for regulated substances found in the E2 regulations. CAS number for Propane is 74-98-6.

CEPA: Canadian Environmental Protection Act, 1999.

CERCA: The Canadian Emergency Response Contractors' Alliance (CERCA) is an industry association comprised of stakeholders from all facets of the Canadian dangerous goods emergency response industry. The mission of CERCA is to foster the establishment of a sound emergency response network in Canada.

Community Emergency Systems Notification: An advisement document used to communicate avoidance and evacuation actions in the event of a vapor cloud drift, substantial release, or fire. This notification is for offer to neighboring residences and businesses that are within the harm radius of the risk model.

Container System: Any receptacle or network of receptacles that is used to contain a substance – including any connected pipelines or piping – except any part or that network that is automatically or remotely segregated from the rest of the network by shut-off valves, or other mechanisms in the event of any environmental emergency.

CRS: Co-op Retailing System.

CRS-EMRG: The Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) is a toll-free number (1-833-277-3674) to call (24/7) to report an emergency related to FCL or Co-op. A dispatcher (STARS) will ask a series of questions to gather information about the incident and will then notify the appropriate FCL Emergency Management Team (EMT).

E2 (Environmental Emergency): This refers to the Environmental Emergency Regulations that address the prevention of, preparedness for, response to and recovery from, and environmental emergency caused by uncontrolled, unplanned, or accidental releases.

E2 Plan: Environmental Emergency (E2) Plan is a document that provides guidance on actions under various emergencies and conditions.

ECCC: Environment and Climate Change Canada.

Emergency: An emergency is a potential or a real developing situation, which may cause injury, property damage, environmental damage and/or impact on corporate image and reputation.

Emergency Management Centre (EMC): The FCL EMC is where the FCL Emergency Management Team will meet in the event of an emergency involving the Propane Department will typically be located at FCL's Home Office.

Emergency Management Team (EMT): The FCL EMT is a group of subject matter experts and advisors who provide oversight and guidance to emergency response measures.

Emergency Notification System: Is an advisement document used to communicate actions in the event of a vapor cloud drift, fire, explosion, substantial release or other where proper avoidance, evacuation and muster point items are explained. This notification is for offer to neighboring residences and businesses etc. that are within the harm radius of the risk model.

Emergency Operations Manager (EOM): The FCL EOM is responsible for the FCL Emergency Management Centre and working with the Emergency Management Team initially determines Emergency Response Activation Plan activation, crisis level and owner and what support or guidance and performs duties as described within this plan.

Emergency Responders: General term for a group of individuals who have defined skills or responsibilities in an emergency.

Environmental Emergency: Means an uncontrolled, unplanned, or accidental release of an E2 substance into the environment (or the reasonable likelihood of such a release) that:

a) Has or may have an immediate or long-term harmful effect on the environment; or

b) Constitutes or may constitute a danger to the environment on which human life depends; or

c) Constitutes or may constitute a danger in Canada to human life or health.

Environmental Officer (EO): The EO as a member of FCL's Emergency Management Team initially assesses the degree of potential environmental impacts and performs duties as described in this plan.

ERAC: Emergency Response Assistance Canada formerly the Liquid Propane Gas Emergency Response Corporation is a division of the Canadian Propane Association developed to offer emergency services for the Canadian propane industry. The ERAC has Emergency Response Teams situated in various locations nationwide to respond to major propane emergencies.

ERAP: An emergency response assistance plan describes what to do in the event of a release or anticipated release of certain higher-risk dangerous goods – such as propane - while they are in transport. An ERAP requires a third-party responder agreement between FCL, and the third party listed in the ERAP – being ERAC - that will provide technical or emergency response advice, and/or provide resources to respond to a release or anticipated release on FCL's behalf.

ERC: The Emergency Response Coordinator will typically be the most senior and or qualified manager, supervisor or employee on site that is able to instruct the activities of others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

FCL: Federated Co-operatives Limited.

Fireball: Can result from an instantaneous release from a BLEVE or a release with a delayed ignition.

Full-scale Simulation Exercise: An action-based simulation exercise requiring the deployment of personnel, resources, and equipment.

HBC: The Home Base Co-ordinator is a person that is verified under CERCA to advise Local Emergency Responders, owners and their contracted Emergency Response Team on remedial activities following an incident.

Incident Action Plan (IAP): Within Incident Command System, includes the overall incident objectives, strategies and tactics established by Incident Command.

Incident Commander (IC): Within Incident Command System, has overall incident management responsibility.

Incident Command System (ICS): The ICS is a standardized on-site management system designed to enable effective, efficient incident management within a common organizational structure.

Information Officer (IO): The IO as a member of FCL's Emergency Management Team initiates and directs established communication response and performs duties as described in this plan.

Muster Area: The Muster Area is typically situated on site or adjacent to site in a safe location. Choice of location is prior to an emergency event. Posting a sign identifying the Muster Area and placing a copy of the E2 Plan there in a weatherproof container is required.

Operations Chief (OC): Within Incident Command System, directly manages all incident tactical activities and implements the Incident Action Plan.

Overpressure: The overpressure of the atmosphere due to an explosion. Probabilistic risk models used for FCL facilities base is 1-psi overpressure. Overpressure of 1 psi may cause structural damage to buildings. Levels of 3-5 psi will cause significant structural damage and cause severe or fatal injury to persons openly exposed to a pressure wave.

Passive Mitigation: A safeguard system designed to mitigate the consequences of an incident that does not require human intervention, external mechanisms, or energy sources. Examples include fencing, protection against collision damage etc.

PID: Piping and Instrumentation Diagram.

Planning Chief (PC): Within Incident Command System, oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, conducts Planning Meetings, and prepares the Incident Action Plan for each operational period.

Reasonable: Means logically valid. It is based on using sound judgement, and therefore, practical, and sensible as opposed to extreme or excessive.

RMA: The Remedial Measures Advisor is a person that is qualified under the LPGERC (ERAC) to advise Local Emergency Responders and or CPA members on remedial activities following an incident.

SAFETI: Process Hazard Analysis Software used for Analysis Modelling prepared by Marsh Risk Consulting.

Safety Officer (SO): The SO as a member of FCL's Emergency Management Team monitors incident operations and advises the Emergency Operations Manager on all matters related to operational safety and performs duties as described in this plan.

SDS: Safety Data Sheet.

Secondary Muster Area: Two Secondary Muster Area are situated a cross wind to the Muster Area and evacuated to when it is not safe to go to a Muster Area or remain at the Muster Area. Choice of location depends on wind direction.

Shelter-in-place: Means finding a safe location indoors and staying there until you are given an "all clear" or told to evacuate.

Simulation Exercise: An exercise simulating the response to an environmental emergency involving the release of an E2 substance.

Strike Team (ST): Within Incident Command System, a set number of resources of the same kind and type that have an established minimum number of personnel, common communications, and leader.

STARS: STARS Emergency Contact Centre (ECC) is a service offered by STARS Emergency Link Centre (ELC) to answer calls to the Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) for emergencies related to FCL or Co-op and provide incident notification to the appropriate FCL Emergency Management Team.

Unified Incident Command (UIC): Within Incident Command System, UIC allows agencies with different legal, geographic, functional authorities and responsibilities to work together effectively. All responsible agencies jointly provide management direction through a common set of incident objectives and strategies established by a single Incident Action Plan.

USWG: United States Water Gallon. This measurement relates to the capacity of an LPG tank based on how much water the containment can hold.

VCE: (vapor cloud explosion) is a chemical explosion and occurs when a large quantity of flammable vapor or flammable gas is ignited, and the flame propagates at a rate/speed fast enough to create an overpressure. Release or migration of flammable vapor/gas into a confined area with ignition will create a substantial overpressure and thermal event. Migration of the vapor/gas cloud will determine where and the intensity of a VCE which will be influenced by degree of congestion, terrain, and other obstructions.

Wildfire: Wildfire, also known as a forest fire, prairie fire, grass fire, or brush fire, is an unplanned, unwanted, uncontrolled fire often occurring in wildland areas, but which can also consume structures.

Worst Case Scenario: Means the scenario described in section 4(2)(e) of the E2 Regulations. It must involve the release of the maximum quantity of an E2 substance that could be contained in the container system with the largest maximum capacity at a facility, or the maximum expected quantity of the substance on-site that is not contained. The scenario does not need to be reasonable.

Section 3 Management and Administration of the E2 Plan

3.1 E2 Plan Development Evaluation Review Update and Consultation Team

The team participating in the plan development, initial review and responsible for its annual evaluation, exercise, review, updates as necessary by the following individuals within their roles:

Participant	Organization	Function and Project Role
Bruce Buckingham	Mid Island Co-op	Director of Energy Operations (Plan Approval)
Kelli Cartwright	Mid Island Co-op	Area Manager (Plan Advisory for Development, Plan Implementation, Training/Exercise and Maintenance)
Kevin McEown	Federated Co-operatives Limited - Propane	Senior Health and Safety Advisor (Plan Development, Implementation, Training/Exercise Development and Maintenance)
Darrell Rose	Marsh Risk Consulting	Senior Vice President (exempted from approvals) (Risk Engineer)

3.2 E2 Plan Distribution

The E2 Plan will be made available to all employees, emergency service providers, stakeholders, and regulatory authorities by the following:

#	Name of Person who received the ERP manual	Individual/Organization	Date Issued
1	Bruce Buckingham	Mid Island Co-op - Director of Energy Operations	2023
2	Kelli Cartwright	Mid Island Co-op - Health & Safety Coordinator	2023
3	Kevin McEown	FCL Propane - Senior Health & Safety Advisor	2023
4	XXXX	Gabriola Volunteer Fire Department - Fire Chief	2023

3.3 ECCC Notifications

On XXXX, ECCC received Schedule 2-5 notices, under CEPA's E2 Reg's, 2019.

Section 4 Risk Assessment

4.1 Propane – General Characteristics and Hazards

4.1.1 Background

The inherent properties of propane with its low boiling point make it a feasible energy source used in a variety of energy applications from heating to transportation. Propane uses include fuel for heating, cooking, automobile and forklift truck fuel, crop drying, welding, and cutting operations. Industry uses propane as a refrigerant, solvent and as a chemical feedstock.

Under normal atmospheric conditions propane is a gas, however, increasing the pressure causes the substance to condense into a liquid. This characteristic of propane allows for storage of large quantities of liquid propane inside of a pressurized container. When liquid propane vaporizes (phase changes) from its liquid state into its gaseous state it creates a refrigerating effect (cooling).

4.1.2 Properties

Propane is stable and non-reactive under normal conditions of use, storage, and transport. Conditions to avoid include heat, sparks, open flames, and other ignition sources. Avoid contact with incompatible materials, which includes any strong oxidizing agents. Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

Propane is a colorless, odorless gas in its natural state, so the addition of a stench odorant called ethyl mercaptan gives propane a distinct boiling cabbage like odor. Propane is transported and stored as a liquid in pressure vessels to a capacity of approximately 80%, which allows room for vapor expansion. When propane liquid is released from its confinement, it converts to a gas to a rate of 270:1. The speed of vaporization is dependent on ambient temperature. Most calculations are based of 15° C; however, calculations are made for differing temperatures to assure safe load weights. Below -42° C, propane will lose its ability to vaporize and remain a liquid. Installation of vaporization appliances or supply tank heaters ensure function in extremely low temperatures or in high volume demand situations. Propane is 1.6 times heavier than air and settles in lower areas if released. Propane vapors will dissipate into the atmosphere rather quickly depending on wind conditions and ambient temperature. Propane is non-toxic, however may be an asphyxiant if enough breathable air is displaced. The combustible range of propane is between 2.2% and 9.5% mixture with the atmosphere. This is a relatively low range of flammability; however, periphery zones of a vapor cloud will ignite if it falls within the flammability range mentioned.

For more information refer to 9.2.1 Safety Data Sheet.

4.1.3 Provincial Exposure Limits

Table 4.1.3 Work Safe BC Table of Exposure Limits

Substance	CAS #	Time Weighted Average Limit (TWA)		Short Term Exposure Limit (STEL)	Notations
		ppm	mg/m³		
Propane	74-98-6	N/A	N/A	Simple asphyxiant	EX

Note: The term EX means the substance is a flammable asphyxiant - updated June 1, 2021.

4.1.4 Potential Health Effects/First Aid Measures

Propane is non-toxic, but if released into a confined space or settles in lower areas it will displace the air making it difficult to breathe. It is always important to seek medical attention if you are experiencing signs and symptoms from exposure. Some of the effects of exposure:

Eye Contact: Rapidly expanding Propane can cause eye irritation and frostbite (cold burn). Permanent eye damage or blindness could result.

Inhalation: Chemical asphyxiant hazard – if accumulation occurs to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness at first but if inhaled at high concentrations, the central nervous system depresses and reduces the ability of the blood to carry oxygen to body tissues.

Skin Contact: Direct contact with liquefied propane gas can result in frostbite (cold burn).

Ingestion: Not a normal route of exposure - unlikely.

4.1.5 Summary – Potential Risks of Release for Propane

Propane has no natural odour and is non-toxic but is an asphyxiant in high concentrations. The vapour density of propane is 1.6; consequently, it will accumulate in lower areas such as ditches and sewers. To be combustible, propane needs to be within its flammable or explosive range between the Lower Explosive Limit (LEL) 2.2% and Upper Explosive Limit (UEL) 9.5% by volume in atmosphere. When liquefied propane is released into the atmosphere, it will expand up to 270 times in vapour to that of liquid.

The impact on life safety and the physical environment because of an unplanned release can be detrimental, so it is important to reduce the risk through the implementation of elimination, engineering, and administrative controls.

4.2 Facility Location, Storage, Handling, and Risk Mitigation

4.2.1 Description of Facility Property Surrounding Area Including Potential Receptors

The 9,400 USWG horizontal propane storage tank is installed above ground.

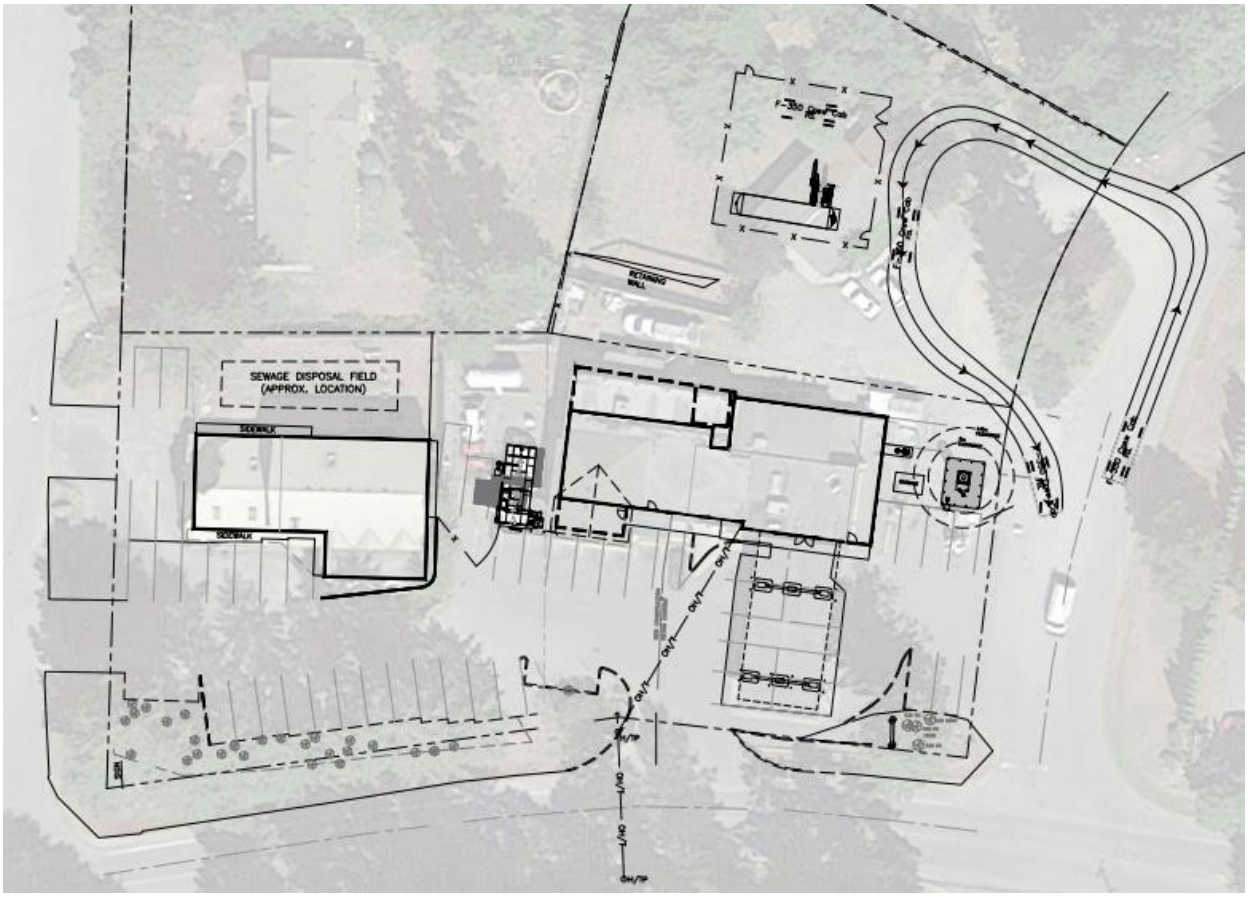
The facility located at 793 Lockinvar Lane, on Gabriola Island, within Gabriola Island Trust Area, and the Regional District of Nanaimo BC. Gabriola Island has a population of 4,500 and population density per square kilometer of 77.4 (Statistics Canada, 2021 Census).

The alternate worst-case scenario is a jet fire based on propane liquid released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario.

There is a delivery driver working from the propane bulk plant.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.2.1 Facility and Property



4.2.2 Maximum Capacity and Quantity of Propane Stored on Site

Propane is the only product on site that meets the minimum threshold requirements for developing the Environmental Emergency (E2) portions of this Plan as per Environment and Climate Change Canada's E2 Regulations. The capacity of the largest single container in which propane is stored on site is 18.0243 metric tonnes (9,400 USWG). The maximum expected quantity of propane on site at any time during the calendar year is 18.0243 metric tonnes (including piping) - the working volume limited to 80% of the capacity of the propane vessel on site to allow for expansion/contraction of propane due to changes in temperature/pressure within the vessels. **18.0243 metric tonnes are registered with ECCC using SWIM for both quantity and capacity as it is not known how much if any tanks (at up to 5% maximum) or cylinders (at up to 80%) will be stored on-site.** Since both the largest single container and maximum expected quantity both exceed 4.5 metric tonnes, an E2 Plan is required.

4.2.3 Substance Identification

Schedule 1 of Environmental Emergency Regulations, 2019 - Part 1						
Item	Column 1	Column 2	Column 3	Column 4	Column 5	
	CAS No	Name of Substance	Concentration % mass/mass	Minimum Quantity (tonnes)	Hazard Category	UN No
17	74-98-6	Propane	1	4.5	E	1978

Legend: E explosion hazard

4.2.4 Process Description

This Mid Island Co-op staffed Bulk Plant has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. At this time, Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

4.2.5 Passive Mitigation

The 9,400 USWG horizontal propane storage tank is installed above ground.

Locked non-climb-able metal fence segregate the above ground propane tank from the public.

Stationary propane tank and its associated piping are protected against collision damage by concrete filled metal posts XXXX.

4.2.6 Active Mitigation

The facility is illuminated at night.

The facility has a typical amount of portable fire extinguishers as required by the local fire code. Access for fire department equipment is good.

The propane storage tank is within reach of hose streams from outside of the facility and firefighting water is supplied by water shuttles.

The delivery trucks have driven-away protection in the form of interlocks that prevent the truck from being placed into gear with the propane loading hose attached ("refinery gates"). The tanks on the delivery trucks are outfitted with excess flow valves that will shut off flow to the atmosphere should a significant hose or pipe break occur. Trucks are outfitted with positive air shut off devices and will shut down the engine if propane gas is ingested. Drivers have an emergency remote stop device in their possession that if activated shuts off the truck, closes the ISC valves and while pumping requires the driver to manually press a button at timed intervals to continue flow. A back-check valve at the barrel fill-in point protects piping.

Manual emergency shutdown devices are provided at the above ground tank and on the North exterior wall of the convenience store. Pressure relief valves are installed on the fixed tank and delivery vehicles.

There are good controls utilizing the operating and maintenance procedures. The storage tank has no other fire systems or controls such as fire or gas detection systems.

Vandals or trespassers to the facility and propane area are dealt with by the local law enforcement fully of the law.

4.3 Frequency, Probability and Consequence Risk Assessment

Version 8.71 of the commercially available software package, Safeti (formerly Phast Risk) from DNV was used to perform a probabilistic risk assessment of this operation:

https://www.dnvgl.com/services/qra-and-risk-analysis-software-phast-and-safeti-1676

Safeti has consequence modelling software, used for developing heat radiation levels, used in accessing the fire and explosion consequences (overpressures and heat radiation) associated with the propane tanks. Safeti examines the progress of a potential incident from the initial release to far-field dispersion, including modelling of pool spreading and evaporation, and flammable and toxic effects. Safeti was used for the consequence modelling of events modelled for emergency response purposes.

Safeti allows individual receptors to be defined with specific vulnerability data providing a much more accurate picture of the risks to which those within the calculated consequence areas are exposed. The program supports a range of vulnerability models, specific to the effect type being considered. For explosion vulnerability, models are available which consider either overpressure or impulse, with the data being treated discretely or interpolated. For radiation effects, flammable probit methods based on intensity and dose are used.

The methods and vulnerabilities are based on the guidance given by the National Institute of Public Health and the Environment (RIVM) Centre for External Safety, of the Netherlands, as set out in their External Safety (Establishments) Decree (BEVI) (RIVM, 2009). This methodology is based on the former guidelines presented by TNO in their "Coloured Books", with the Guidelines for Quantitative Risk Assessment, CPR18E, or more widely known as the "Purple Book" (CPR-RE, 2005). The concepts of the other "Coloured Books" are utilized within Safeti.

- BEVI – Besluit Externe Veiligheid Inrichtingen, translates as the External Safety (Establishments) Decree of RIVM
- Purple Book - CPR 18E "Guidelines for Quantitative Risk Assessment" published by the Committee for the Prevention of Disasters department TNO, a Netherlands Organization
- RIVM – Rijksinstituut voor Volksgezondheid en Milieu, translated as the National Institute of Public Health and the Environments of the Netherlands
- TNO - Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, or the Netherlands Organization for Applied Scientific Research, out of Sdu Uitgevers, Den Haag (The Hague). Their Committee for the Prevention of Disasters publishes guidelines on quantitative risk assessment calculations.

The consequence estimating models used in this study are for risk management purposes only. As such, they are not modelling of the actual physical event. As with all models, small changes in the input parameters can significantly affect the resulting consequence estimates.

While the parameters selected in consultation with FCL are reasonable for the model and situation, it must be kept in mind that the results are not absolute. Therefore, the consequence estimates should be taken as only an indication of the extent or order of magnitude of the potential consequence. The actual consequence may be more severe than under the reasonably foreseeable conditions assumed.

SAFETI Parameters and Model Settings:

- Dispersion
    - Atmospheric Expansion - DNV Recommended
    - Modelling of Instantaneous Expansion - Old Standard Method
    - VCE - TNT, 10% yield, Ground Burst
    - Fireball - Roberts TNO Hybrid
    - BLEVE (not applicable to this site) - CCPS Second Edition

4.3.1 Frequency Analysis

As Mid Island Co-op has had no significant propane incidents in its history, we elected to use general industry data for the frequency analysis, specifically that data given in the Purple Book and BEVI methodologies. From these frequencies, combined with the consequence distances calculated for events which would reach offsite receptors, Individual Risk contours can be calculated to compare to acceptable risk criteria.

The use of this method negates the need for fault tree, event tree, and human reliability analysis, as the frequency of the end event is given directly for input into Safeti.

The probabilities of interest in this study are given as:

Table 4.3.1

Event / Installation	Events per Vessel-Year or per Hour-Operation		
Loss of Containment	Instantaneous	10 minutes Continuous	10 mm dia. Continuous
Stationary Pressure Vessel	5×10^{-7} /y	5×10^{-7} /y	1×10^{-5} /y
Loss of Containment	Instantaneous	Largest Connection, Continuous	
Pressurized Road Tankers	5×10^{-7} /y	5×10^{-7} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Hoses	4×10^{-6} /h	5×10^{-5} /h	
Loss of Containment followed by Ignition	Instantaneous	Largest Connection, Continuous	
Road Tanker on Site	1×10^{-6} /y	1×10^{-6} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Piping (nom dia. <75mm)	1×10^{-6} /m-y	5×10^{-6} /m-y	
Piping (nom dia. ≥75mm, ≤150mm)	3×10^{-7} /m-y	2×10^{-6} /m-y	
Piping (nom dia. >150mm)	1×10^{-7} /m-y	5×10^{-7} /m-y	

Safeti also utilizes the probability of ignition from the BEVI methodology for stationery and road tanker vessels. For stationary vessels, the probability of ignition is 0.2, 0.5, and 0.7 for continuous releases of 10, 10 to 100, and over 100 kg/s respectively, and for instantaneous releases of 1000, 1000 to 10,000, and over 10,000 kg respectively. Further, we have entered ignition sources at the adjacent facilities

and residential dwellings, which have gas-fired heating systems, and a linear ignition source being the roadways adjacent to the property.

We have multiplied the frequency at which a single vessel may lose containment by the number of similar vessels typically on site, by the number of hours loading hoses are used, or by the number of metres of piping which may contain propane.

An important element in the frequency at which a particular dispersion may reach a receptor is the wind direction and speed. Of slightly lower effect on the dispersion, but still somewhat significant for propane, is the atmospheric temperature, stability, and humidity. Although we have reviewed historical wind directions and speeds, and other pertinent weather parameters in the area, based on Environment Canada, we did not use this data directly in the compilation of the individual risk contours based on wind direction. Rather, we utilized the greatest possible extent of the Individual Risk contour and plotted that distance as a circle of that diameter, thus adding conservatism to the calculation based on wind direction.

We then considered the safety features of the facility, especially of the loading operations, which have the highest frequency of releases traditionally. Each of the delivery trucks are outfitted with an interlocking device, which does not allow the truck to move if the loading hose is attached to the main vessel. This feature lowers the frequency of a hose drive-away event occurring by approximately one order of magnitude.

Other typical features such as excess flow valves on delivery truck tanks, pressure relief valves, and, most importantly, management systems including operating and maintenance procedures and operator training, would be expected to lower the frequency of the postulated events by at least another order of magnitude in aggregate, virtually across the scenarios. However, within the loss data, as is typical with all frequency numbers, we do not know how many of the safety features were in place for the events that the frequency data was based on, therefore, we have assumed, conservatively, that the equipment in those losses had a reasonable number of safety features.

4.3.2 Consequence Analysis

Propane is held and dispensed from the above ground propane storage tank on the site. The vessel, hose, and piping sizes were entered in Safeti to calculate consequences of loss of containment events. In following the BEVI and TNO Purple Book methodology, and thus the remainder of the TNO Coloured Book series, we have used the vulnerability to receptors as contained in that series. Vulnerability was in relation to thermal radiation effects due to fireball, jet, and pool fires, and explosion overpressure effects.

4.3.2.1 Modelling Parameters and Weather

Weather parameters were modelled based on data provided at hourly intervals over a 5-year period. This data considers wind speeds and directions and the associated probabilities, the Pasquill atmospheric stabilities, relative humidity's, etc., and daytime and night-time conditions. This data was entered Safeti to calculate probabilities of weather-related dispersion events over the releases.

4.3.2.2 Releases in General

For each of the vessels and tank, there were common release events chosen, based on the BEVI requirements. These were a catastrophic, instantaneous release of all the mass of the vessel; a 10-minute release of the entire mass of the vessel, and a 10 mm hole in the system, releasing all the mass of the vessel over time. If vessels at this facility are connected via a common header, we postulate a release of more than one vessel through piping. In addition, when a hose connects the 9,400 USWG tank with the truck tank, there is a possibility that both tanks will empty their contents through the hose release if protection devices fail to operate. Thus, we have used the combined volumes of the two tanks in these cases.

Note that in all cases, the volume of the releases in question would be a maximum of 80% of the nominal volume of the tanks, based on maximum fill levels. However, for the consequence analysis for emergency response considerations, we have used the full 100% capacity of the propane tanks to add conservatism and to indicate worst probability scenarios.

All releases (other than catastrophic) were assumed to be released horizontally, which creates the maximum offsite consequences. The release can be directed in any direction over 360 degrees and impinges on the ground or nearby vessels and structures. Such impingement creates a larger consequence event onsite, but lesser consequences offsite. Thus, the use of a horizontal jet is conservative.

Ignition sources for the release events are essentially vehicles in the yard, vehicles on the roadways driving by the facility, heating systems and unclassified electrical equipment on any buildings around the facility. We have placed ignition sources at each of these buildings.

4.3.2.3 Vapour Cloud Explosion (VCE) – Worst Case Scenario

This event would involve a catastrophic breach with instantaneous release of the maximum quantity of propane from the largest tank and would produce:

- an overpressure of 1 psi out to 441 metres, and
- a level of 12.5 kW/m^2 m out to 307 m

According to the US Center for Chemical Process Safety, a vapor cloud explosion "is the result of a release of flammable material in the atmosphere, a subsequent dispersion phase, and, after some delay, an ignition of the vapor cloud. A flame must propagate at a considerable speed to generate blast, especially for 2-D (double plane configurations) and 3-D (dense-obstacle) environments." "In order to reach these speeds, either the flame has to accelerate, or the cloud has to be ignited very strongly, thereby producing direct initiation of a detonation." "…flame acceleration is only possible:

- in the presence of outdoor obstacles, for example, congestion due to pipe racks, weather canopies, tanks, process columns, and multilevel process structures.
- in a high-momentum release causing turbulence, for example, an explosively dispersed cloud or jet release.
- in combinations of high-momentum releases and congestion."

Thus, the use of the older TNT modelling procedure has for the most part been replaced by newer confined volume methods of VCE modelling. However, the VCE is an important scenario,

as it helps with the emergency response zone calculations for use in Environmental Emergency (E2) plans required by regulation. Thus, we present the TNT scenarios here, including the 652 m distance referenced as being the distance to 1 psi for a propane release. This uses a 10% efficiency with a TNT VCE using the EPA's RMP rule TNT calculation. Again, due to the lack of congestion around the site that would lead to large overpressure damage would dictate that the overpressure distances would be significantly smaller than these values in an actual VCE.

In the calculations for the Individual Risk calculations, we used the TNO MultiEnergy (ME) to perform overpressure calculations. The ME method is embedded in Phast Risk and was used in the calculation of overall risk. As this is a congested volume methodology, it is more representative of actual explosion overpressure events. As the calculation of individual risk is for the purpose of risk acceptability, these explosion calculations give better indication of actual risk posed.

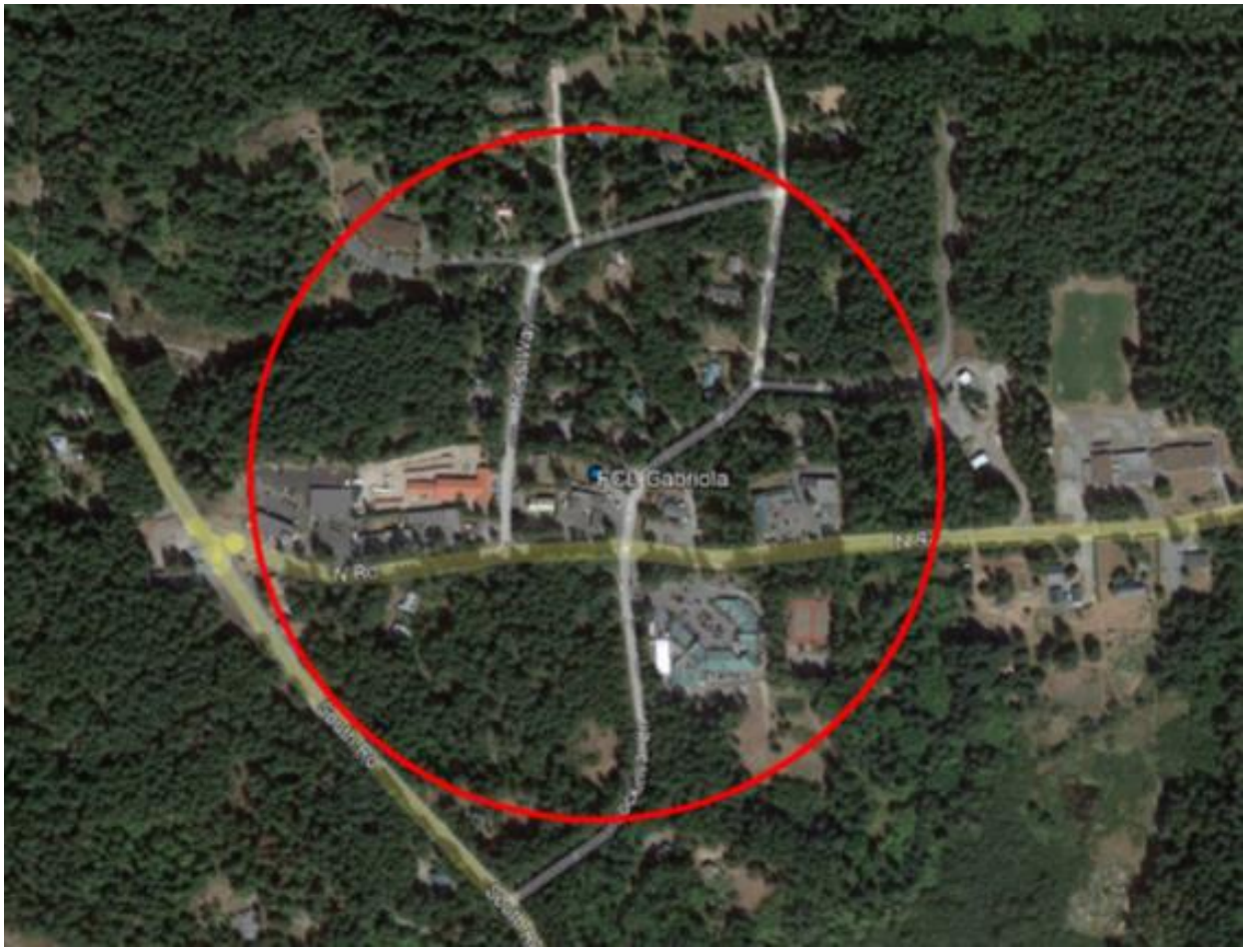
The 1-psi VCE overpressure plot is presented below. Note that the propane release is the result of a catastrophic release of all the contents of the vessel instantaneously.

Figure 4.3.2.3.1 Vapour Cloud Explosion (VCE) – Worst Case Release Scenario

The facility is in the centre and the red circle has the greatest impact distance of 1 psi out to 441 m.

In addition to overpressure, the fireball consequence of a VCE will occur. 12.5 kW/m² was chosen as the endpoint of the calculation as the distance where people without shelter could be injured in the event or, without time to seek shelter from the fire radiation.

Figure 4.3.2.3.2 Vapour Cloud Explosion (VCE) Fireball



The propane facility is in the centre and the red circle is the greatest impact distance of 12.5 kW/m² out to 307 m.

4.3.2.4 Jet Fire from a 2" Transfer Hose Rupture – Reasonable Alternate Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank. It will have an impact distance outside the boundary of the facility producing a level of 12.5 kW/m^2 m out to 76 m.

The jet fire is based on a rupture of the largest transfer hose (2" release) that may deliver liquid propane to the atmosphere. The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane at vapour pressure released through a ruptured 2" transfer hose plotted below.

Figure 4.3.2.4 Jet Fire from a 2" Transfer Hose – Reasonable Alternate Scenario

The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 76 m.

4.3.2.5 Jet Fire from a 3" Pipe Rupture – Alternate Worst Case Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank and that would have the longest impact distance outside the boundary of the facility. This event would involve a release scenario due to a rupture of a 3" pipe and would produce:

- a level of 12.5 kW/m^2 out to 100 m.

The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane liquid released through a ruptured 3" pipe plotted below.

Figure 4.3.2.5 Jet Fire from a 3" Pipe – Reasonable Alternate Scenario

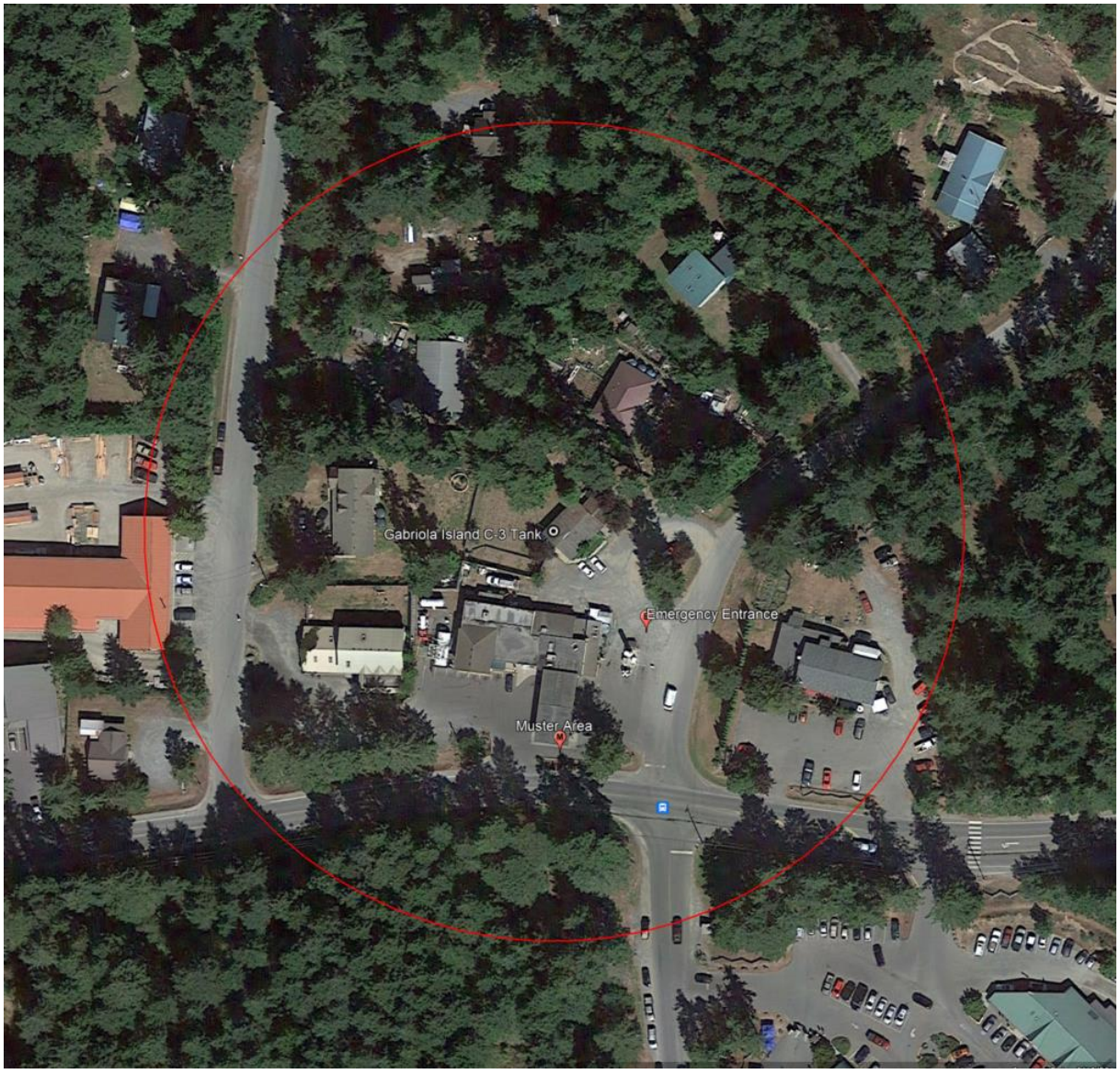
The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 100 m.

4.3.3 Identification of Public Receptors

The alternate worst-case scenario is a jet fire based on propane released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario XXXX.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.3.3 Identification of Public Receptors



The facility is in the centre <u>and</u> the red circle is the greatest impact outside the boundary of the facility of 12.5 kW/m² out to 100 m from a most likely release being a rupture of a 3" pipe that may deliver liquid propane to atmosphere.

4.3.4 Identification and Assessment of E2 Scenarios

Mid Island Co-op at 793 Lockinvar Lane Gabriola Island BC – 9,400 USWG Propane Tank (100% full)		
Worst-case Scenario		
Vapour Cloud Explosion (VCE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} VCE's per year	Probability of a VCE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of VCE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	441 m
Alternate Worst-case Scenario		
Jet Fire from a 3" Pipe Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	1×10^{-6} /m-y	Probability of jet fire occurring 1 in a million years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 Kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	100 m
Reasonable Alternate Scenarios		
Boiling Liquid Expanding Vapour Explosion (BLEVE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} BLEVE's per year	Probability of a BLEVE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of BLEVE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	138 m
Jet Fire from a 2" Transfer Hose Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	4×10^{-6} /h	Event occurring every 30 years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	76 m

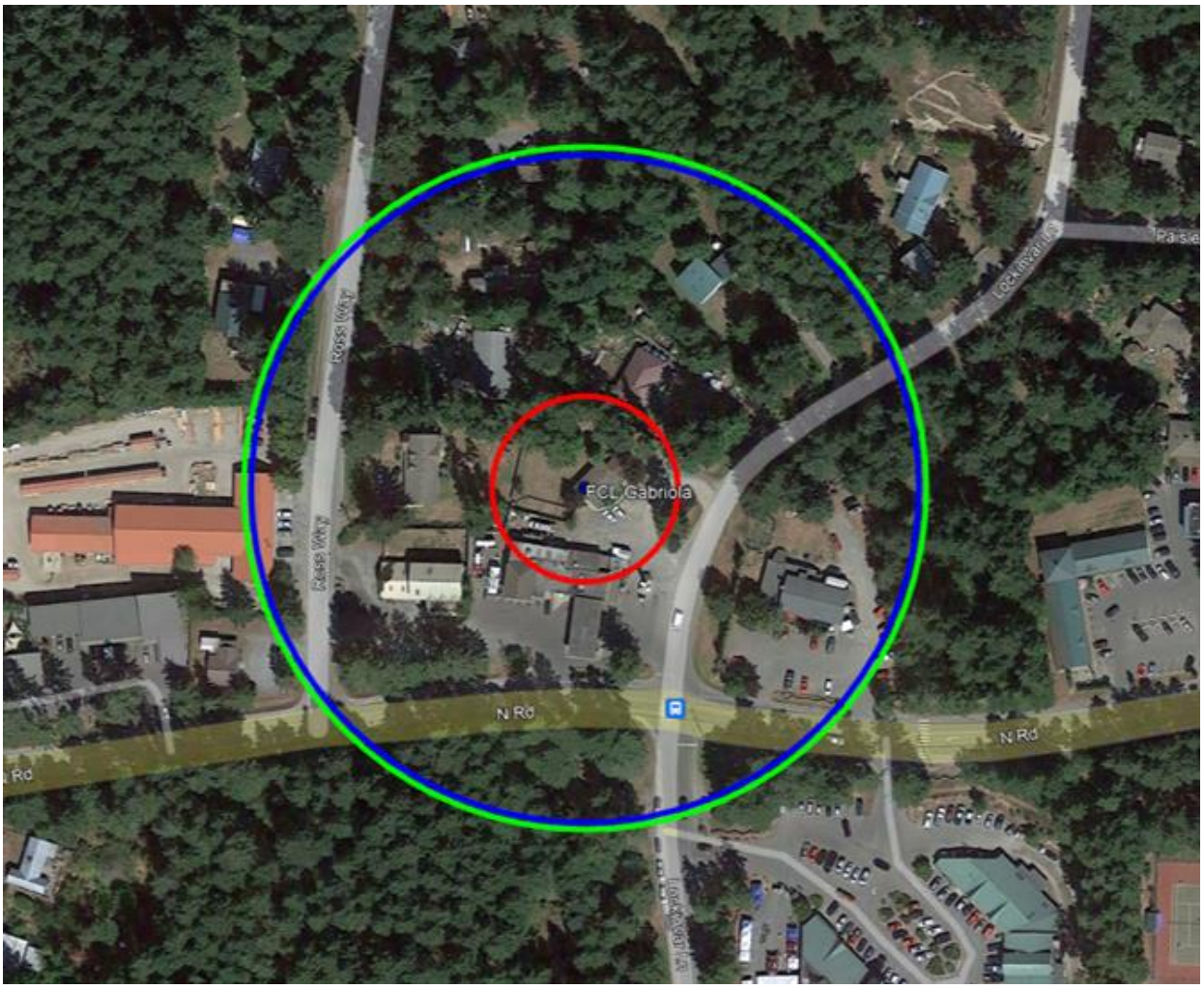
1. ***In the event of a catastrophic failure of the 9,400 USWG tank due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism the possible effect on the area would be overpressures from a blast causing structural damage and or injury as well as possible thermal damage and or injury due to a fire event as described previously in this section.***
2. ***In the event of a release from piping, leaking flange, seal, joint and transfer hoses due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism, the possible effect on the area would be thermal damage and or injury due to a fire event as described previously in this section.***
3. ***If the event were in preliminary stages an alarm would be sounded, emergency shutdowns engaged, evacuations made, traffic control measures implemented, Emergency Services, Mid Island Co-op Management, and FCL's Emergency Management Team contacted, and Incident Command established. Mid Island Co-op will assist Emergency Services. If activated by FCL, ERAC may also assist Emergency Services.***
4. ***The event model accuracy may vary due to general weather, wind speed and direction. Emergency responders would adjust evacuation and avoidance radius of effect accordingly.***
5. ***See 6.9 Environmental Emergency Simulation Exercises Scenarios A-F, and Annex 9.2.2 - Part 2 Scenarios.***

4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria

A comparison of risk estimation modelling results to risk acceptability criteria based on MIACC (Major Industrial Accidents Council of Canada) guidelines for land-use planning and siting determined the site is within risk acceptance criteria.

MIACC dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering).

Figure 4.3.5 (1) MIACC Risk Acceptability Criteria



3x10-7 – All occupancies, including sensitive populations such as schools, hospitals, etc allowed outside of this Contour
1x10-6 – High Density Residential allowed Outside of this Contour
1x10-5 – Low Density Residential and Commercial, Offices, Retail Centres allowed Outside of this Contour

Section 5 Prevention and Mitigation

5.1 Regulatory and Legal Requirements

5.1.1 Risk Management Tools

See 2.7 Plan Consultation/References for tools used to mitigate risks.

5.2 Prevention Initiatives

5.2.1 Elimination Controls

5.2.1.1 Site Selection

See 4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria.

5.2.2 Engineering Controls

5.2.2.1 Equipment

Qualified personnel conduct equipment installations, repairs, and maintenance. Applicable codes and standards for design, construction and maintenance of all vessels, piping valves and safety systems. This facility is equipped with crash protection and dry chemical fire extinguishers, which are located throughout the facility.

5.2.2.2 Emergency Shutoffs and Isolation Equipment

The propane plant has been fitted with emergency shut-offs, pressure and temperature gauges, pressure relief valves, flow indicators, electrical bonding/grounding systems, and drive-away prevention systems on the bulk delivery trucks XXXX.

5.2.3 Administrative Controls

5.2.3.1 Mechanical Integrity - Preventative Maintenance Inspections

Mid Island Co-op and FCL endeavors to maintain all equipment according to the standards set out in provincial Act and Regulation. The maintenance of the propane facility component follows the CSA B149.2-20 Propane Storage and Handling Code. Trained and competent technicians regularly inspect the facility. Defects are corrected records kept.

CSA B149.2-20 inspections:

7.22.5 Maintenance procedures

7.22.5.1

Maintenance procedures shall be appropriate to the particular facility and shall take into account, amongst other things, the following:

a) inspection of protective devices, alarms;
b) regular inspection and testing of hoses;
c) regular review of emergency procedures;
d) regular review of emergency evacuation procedures and designated safe location;
e) propane purging procedures;
f) isolation and tagging;
g) fire extinguishers and firefighting equipment;
h) piping, tubing, pumps, valves, and other propane equipment;
i) storage tanks;
j) electrical equipment;

k) fencing and security measures, signage, and notices;
l) lighting;
m) regular inspection and testing of vaporizers; and
n) any manufacturer's maintenance instructions for equipment.

7.22.5.2
Persons who perform maintenance on these propane systems shall be trained in the hazards of these systems and in the maintenance and testing procedures applicable to the facility

Note: See Dynamic Records – Equipment inspection, testing and maintenance schedules

5.2.3.2 Training

Employee and responder training that pertains to this plan is listed in Preparedness Section 6.

5.2.3.3 External Alerting and Emergency Notification System

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

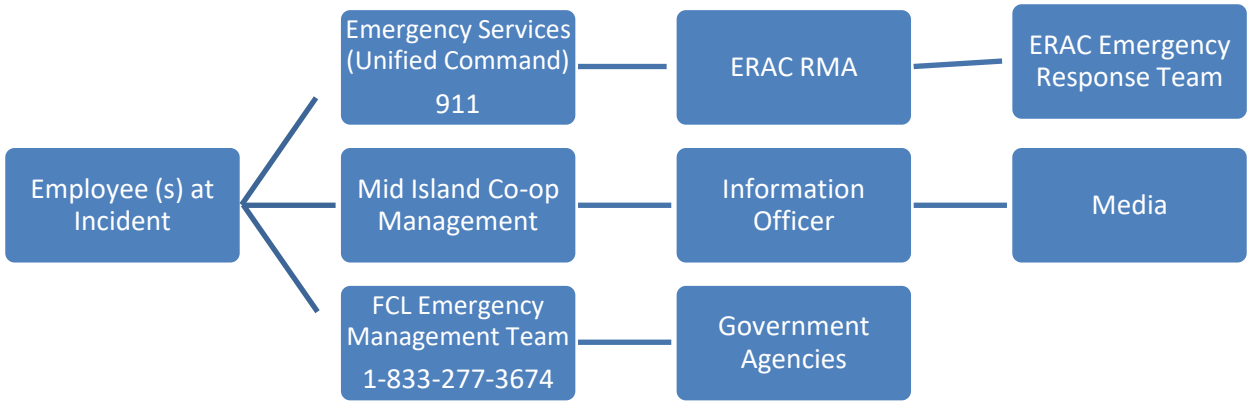
Section 6 Preparedness

6.1 Incident Management System

6.1.2 Emergency Response Management Model

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) etc. may be dispatched to scene to provide technical advice. Depending on the nature of the event, it may be a combination of the emergency service providers and may include regulatory officials who establish a Unified Incident Command at which time an Mid Island Co-op employee may participate in Unified Command at the emergency in a Unified Command or advisory role. If the event sustains over a period typically a standard Incident Command protocol will prevail which will include the establishment of operational periods; and, development of an incident action plan stating the objective/s, strategy/s, and tactics for the operational period.

FCL's Emergency Management Team is a group of subject matter experts and advisors who would provide guidance to Mid Island Co-op's emergency response measures. STARS emergency contact centre will take in Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call. Refer to 7.2.3 FCL Emergency Management Team for further information.



6.2 Mid Island Co-op/FCL Roles and Responsibilities

6.2.1 Emergency Response Coordinator (ERC)

The ERC will typically be the most senior or qualified manager, supervisor or employee on site that is able to instruct the activities or others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

Typical duties are:

- Coordinate and direct the activities of the site employees during an event.
- Using sounding an alarm, alert occupants of the event
- Assess the resources and actions required for a response.
- Ensure Emergency First Responders are notified using 911, notifying Mid Island Co-op Management and the Co-op Emergency Management Team
- Maintain communication with the Emergency First Responders and, if required, assign an Assistant Coordinator
- Ensure that all personnel are directed in any post incident activities.

6.2.2 Information Officer

In the event of an incident that may require communications with the media and our regulator, the Mid Island Co-op will assign an Information Officer. The Information Officer may be involved with the activities during a response and may be involved with remedial activities following an event.

6.2.3 FCL Emergency Management Team

This team is a group of subject matter experts and advisors who would provide oversight and guidance to the emergency response measures. STARS emergency contact centre will take in FCL, and Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call.

There are five roles within the EMT, and a list of their responsibilities follows. The EMT will work together with assignment of on-scene personnel to work toward ensuring FCL's objectives are accomplished.

Emergency Operations Manager (EOM)

- Working with the EMT, determines:
    - Whether an Emergency Response Assistance Plan should be activated
    - The crisis levels.
    - The crisis owner
    - What support or guidance may be provided?
- Accepts responsibility for the FCL Emergency Management Centre and sets over-all objectives and priorities.
- Assigns an on-scene Incident Commander (IC) or Technical Advisor who will represent FCL in Unified Incident Command (UIC) for on-scene emergency response.
- Working with FCL on-scene IC, designates or approves on-scene Information Officer (IO) to manage communications.
- Assesses and monitors crisis for appropriate level of escalation/de-escalation, in consultation with other EMT members.

- Works with and approves the following, alongside the on-scene IC:
    - Incident Action Plans (IAP) – Works with on-scene FCL IC to develop and approve on-scene IAP objectives.
    - Approves resource orders to support response measures.
    - Approves demobilization plans.

Safety Officer

- Monitor's incident operations and advises the Emergency Operations Manager on all matters related to operational safety, including the health and safety of emergency responder personnel.
- Works directly with on-scene Safety Officer or UIC (if no safety officer has been designated), to ensure a safety plan and accountability plan has been developed and implemented.
- Reviews and approves the safety and accountability plans developed by on-scene Safety Officer or UIC
- Advises on Health & Safety regulatory requirements.
- Develop an Incident Safety Plan
- Ensure incident investigation responsibilities are fulfilled.
- Communicates with Health & Safety regulators.

Information/Liaison Officer

- Initiates and directs established communication response for Level 1 and 2 crisis situations.
- Informs the Crisis Communication Lead (CCL) about crisis and determined crisis level.
- Assists in the preparation of external communication materials delivered by the CCL, including updates, press releases, media statements, key messages, etc.
- Under the direction of the CCL, prepares and delivers internal key messages and updates.
- Delivers updates to internal stakeholders through the Everbridge system, including FCL's Senior Leadership Team
- Track's media calls and requests and refers them to the CCL.

Environmental Officer

- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential environmental impacts.
- Provides technical support in the development of tactics to minimize / mitigate the environmental impacts.
- Responsible for retaining, dispatching, and managing Environmental Consultants to manage any environmental consequences of the incident or spill as required.
- Provides technical assistance to response teams, as required.
- Manage and supervise operations associated with the transfer, storage, and disposal of liquid, solid and/or hazardous wastes during emergency response operations.
- Determine the most effective methods to be employed and how to minimize the amount of waste materials generated during emergency response operations.
- Delivers updates on environmental impacts response measures and status to Emergency Operations Manager
- Reports environmental spills, releases, or potential imminent releases to federal and provincial authorities.
- Provides direction and technical advice regarding post-incident cleanup and recovery.

Secondary Support – as determined by the Emergency Operations Manager

On-scene Incident Commander/Technical Advisor

- Reports to the Emergency Operations Manager (EOM)
- Provides summary of the incident to the EOM and EMT (example ICS form 201 – Incident Briefing)
- Initiates a site activity log for the operational period (example ICS form 214)
- Working within UIC, develops on-scene IAP incident objectives and develops or approves strategies and tactics.
- Working within UIC, assigns Operations and Planning Chiefs or accepts their roles in determining strategies and tactics of IAP and supervises on-scene resources.
- Working within UIC and with Operations Chief, ensures Strike Team accomplishes strategies and tactics of the IAP.
- Provides technical expertise to the EOM and UIC on the product or commodity that is involved.
- Provides regulatory expertise such-as regulatory: compliance, reporting and liaise with regulators.
- Liaise with ERAC, as necessary.

Security Officer

- Maintains overall management and guidance to security and protection of FCL facilities.
- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential security impacts.
- Provides technical support in the development of tactics to minimize / mitigate the security impacts.
- Responsible for retaining, dispatching, and managing Security Consultants to manage any security requirements.
- Provides technical assistance to response teams, as required.
- Delivers updates on security impacts response measures and status to Emergency Operations Manager

Additional Roles

The Emergency Operations Manager will determine the need for additional support. Depending on the severity and length of the crisis, additional roles such as Finance and Logistics Officers, Legal, Insurance, Documentation, Procurement, Government Relations, Human Resources, etc. may be required.

6.3 Advance Public Notification and Communication

6.3.1 Public and Neighborhood Emergency Awareness Notifications

The process of preparation will have similarities for most areas, which will mostly be site visits and the offering of information pertaining to evacuations, propane vapor-cloud characteristics and other related safety measures. Some communities have systems organized by the local EMO Coordinators that will automatically notify areas of risk through electronic communication methods. This would involve a combined effort between Mid Island Co-op facility management and local emergency services. Mid Island Co-op offers a pamphlet (see 6.3.2 Community Emergency Notification System) to inform the neighboring businesses or community on the actions required in the event of an incident. Employers, organizations, and residents that are located within the notification zone may incorporate portions of the E2 plan into their own safety practices.

Notification of potentially impacted neighbouring occupancies and Gabriola Island Fire Rescue from the Alternate Worst-case Scenario – 4.3.2.5 Jet Fire from a 3" Pipe Rupture was accomplished. Figure 4.3.2.5 illustrates the greatest impact outside the boundary of the facility of 12.5 kW/m2 out to 100 m - see Annex 9.3.3.

Emergency Notification System

The intent of this notification is to inform all neighboring residences, businesses and organizations of actions that may be required in the unlikely event of a major propane escape or fire that would cause an emergency evacuation.

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

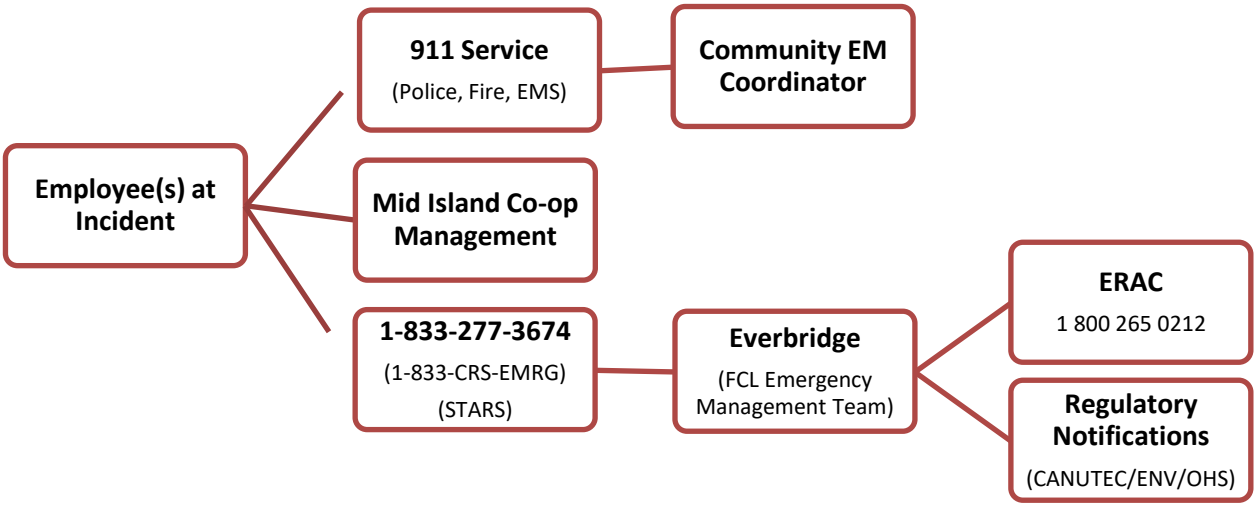
Important facts about Propane:

- Propane is non-toxic.
- Propane has an odourant added to it that makes it smell like rotten eggs or skunks.
- Flames, smoking material, sparks, and static electricity will ignite propane when mixed with the right amount of oxygen.

If you require any additional information or have any concerns, please contact Mid Island Co-op at (250)-802-1198.

6.4 External Alerting and Notification

6.4.1 Emergency Assessment and Alert Notification



For External Alerting/Notification/Resources Contact Lists refer to Annex 9.1

6.5 Evacuation and Shelter-in-place

There is potentially one outcome that can occur that affects the public. The circumstances of the event will dictate the type of instructions given to the public.

- Shelter-in-place – It may be safer for the public or neighbouring facilities to shelter-in-place to avoid exposure to a propane release depending on the quantity and modifying conditions, such as the prevailing wind.
- Evacuate – Under the direction of local emergency services, it may be necessary to evacuate to a safe distance. Instructions will be provided to the public regarding the evacuation.

6.6 Mutual Aid and Mutual Assistance

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) and where required an ERAC Emergency Response Team etc. may be dispatched to scene.

6.7 Equipment

The site is equipped with dry chemical fire extinguishers that are strategically located, and on trucks. Emergency electrical switches that shut-off electrical power to portions of the facility or, the entire facility is strategically located on site.

6.8 Training and Exercise

To ensure successful plan activation, management will ensure that employees receive adequate training to be familiar with the E2 plan requirements. Conducting regular function specific training and emergency exercises prepare personnel and ensure viability of the plan. The following is a non-exhaustive list of the training that employees receive according to their internal roles and responsibilities.

6.8.1 Employee Training

Training and testing of facility employees who have specific emergency duties ensures understanding of their roles and responsibilities listed in this E2 Plan.

All personnel handling propane hold appropriate certification of training. Personnel receive annual and/or new hire awareness training on Mid Island Co-op site-specific emergency response plans.

Some of the additional courses that would accommodate product awareness and emergency activities include WHMIS, TDG and Fire Extinguisher use.

6.8.2 E2 Plan Exercise Schedule

Training	Attendees	Frequency
E2 Plan – Awareness Workshop	All	On Hire
E2 Plan – Simulation Exercise	All	Each Year
E2 Plan – Full-scale Simulation Exercise	All	Every 5 Years

6.8.3 Responder Training

First level response training is provided internally for employees through orientations and annual Emergency Response/Environmental Emergency Plan training sessions designed to meet Federal Environmental Emergency Plan Regulation requirements.

LPGERC (Liquid Propane Gas Emergency Response Corporation) now called ERAC (Emergency Response Assistance Canada) which is a non-profit division of the CPA (Canadian Propane Association) facilitates secondary or sustained emergency response training.

FCL (Federated Co-operatives Limited) Propane and the CRC (Co-op Refinery Complex) are both participants with ERAC. TC (Transport Canada) approves secondary or sustained emergency response systems meeting TDG (Transportation of Dangerous Goods) ERAP (Emergency Assistance Plans) Regulations.

ERAC has established, HBC (Home Base Coordinators), TA's (Technical Advisors), RMA's (Remedial Measures Advisors) and ERT's (Emergency Response Teams) to help and/or advise local emergency services across Canada.

Emergency Fire Services may utilize the training offered by the ERAC specifically designed for propane fire response called PTI 911-01 LPG Awareness for Firefighters.

6.9 Environmental Emergency Simulation Exercises

Scenario A
Propane Release – no fire

Scenario B
Propane Release – with fire

Scenario C
Structural Fires – local to propane storage

Scenario D
Wildfires – local to propane storage

Scenario E
Bomb Threats/Terrorism

Scenario F
Evacuation Procedures

See Annex 9.2.2 - Exercise Documents, Part 2 Scenarios - for Scenario A-F Emergency Simulation Exercise scenario examples.

Section 7 Response

7.1 E2 Plan Activation and Emergency Contacts

ADDRESS of Gabriola Island : 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

7.2 Emergency Information & Equipment Locations

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store and Convenience store electrical room
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREAS	East of site on North Road

7.3 Emergency Notification and Communication and Procedure

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

7.4 Emergency Response Measures

7.4.1 Propane Release – no fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller – where applicable.
- Ensure all vehicles in the compound are not running or started.
- Close all doors to buildings, notify building occupants and advise an evacuation if the propane vapors have potential to travel into a building or its ventilation system.
- If the source of the release cannot be shut-off, initiate an evacuation.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist or advise Emergency Services as required.

7.4.2 Propane Release – with fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller - where applicable.
- If the fire is not propane fed, attempt to extinguish the fire.
- If the fire is propane fed and extinguishment may lead to an uncontrolled propane release do not attempt to extinguish the fire
- If the source of the release cannot be shut off and or if extinguishment is not possible, activate the emergency horn located on North exterior wall of convenience store, go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.3 Structural Fires – local to propane storage

- Notify personnel to evacuate the building.
- Do not place yourself in an area where fire entrapment can occur.
- Attempt to extinguish fire using fire extinguishers, if safe to do so.
- Close doors as you leave rooms to minimize fire spread rate.
- Leave the building using the closest safe exit.

- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Have fuel delivery units (petroleum and propane) moved, if safe to do so – where applicable.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.4 Wildfires – local to propane storage

In the event of a wildfire and an evacuation is pending:

- Alert all personnel and have any fuel delivery units (petroleum and propane) and other vehicles in the field remain away from the facility until the fire threat is over.
- If fuel delivery units (petroleum and propane) are on site upon the evacuation order have them driven off site if it is safe to do so and following the direction/permission of the Emergency Authority.
- Prior to site evacuation ensure all fuel storage systems are shut down, close all building doors.
- Drain all Bulk Plant hoses if safe to do so.
- Secure Bulk Plant by closing and locking gates.
- Report how much propane in in Bulk Storage to BC Wild Fire.

7.4.5 Bomb Threats/Terrorism

Bomb or act of terrorism threats may come in the form of a call, mail or note, electronically, verbally in person or maybe the discovery of a device either obvious or disguised.

Discovery of a suspicious device/package:

- Do not touch it or attempt to open or disarm it.
- Evacuate the location following the evacuation procedure.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go the Secondary Muster area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 778-772-9800.
- Report to 1-833-277-3674 (CRS-EMRG).

If you receive a threatening call:

- Listen to the caller in a calm and polite tone of voice.
- Start taking notes as soon as possible.
- Try to silently get the attention of a co-worker and write down the situation.

- Ask about the bomb location.
- Ask what type of bomb it is.
- Ask when and how it will explode.
- Ask the caller why they placed the bomb.
- Take note of the person's voice description such as accent, speech speed and language skills, mannerism, sex, and age.
- Take note of any background noises.
- Take note if the person seemed to be familiar with your location.
- Take note if the person's voice seemed familiar to you.
- Ask for the person's name and where they are calling from.
- When the conversation is over call 911.
- Establish communication process with police for further direction.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Complete a tally of personnel.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.6 Evacuation Procedures

When notification of a propane emergency or an evacuation order is given:

- Stop all activities.
- Eliminate all ignition sources if safe to do so.
- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.4.7 Serious Injury/Illness

- Assess the scene.
- Administer first aid as per training.
- Call 911 for assistance as warranted.
- Establish a clear pathway for EMS.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.8 Vehicle Incidents – Involving On-site Propane Delivery Units

Risk Assessment

- Determine threats to life (injuries to self or others, release or anticipated release of propane, traffic, fire, etc.).
- Identify ignition sources (shut-off engine, use vehicles electrical disconnect switch where possible).
- Inspect propane vessel, piping, valves etc. and truck to identify leaks, damage etc.

Report the Incident

- Call 911 when:
    a. You require Police, Fire or Medical personnel.
    b. There is a release or anticipated release of propane e.g.
        i. a propane delivery truck rolled over in a ditch with all four sides not visible is an example of an anticipated release.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

Secure the site.

- Deploy roadside markers and reflectors (no flares).
- Clear the area of non-essential and untrained personnel.
- If safe to do so, stop or divert traffic or public access to site.

Section 8 Recovery/Restoration

8.1 Disposal and Waste management

In the unlikely event of release that caused damage, Mid Island Co-op will endeavor to reduce and remediate any damage to the environment and will bring in the proper resources including specialized equipment and personnel to develop and implement the appropriate disposal and waste management plan. Due to the inherent characteristics and hazards of propane as described in Section 4, recovery activities may be limited to removal of debris.

8.2 Site Restoration

In consultation with public authorities, Mid Island Co-op will initiate site restoration processes as soon as possible, striving for rapid restoration from environmental damage. A specific restoration plan will be generated following an incident and will consider the specific details and circumstances of an incident.

8.3 Public Notification

In consultation with public authorities and specialized personnel, the extent of damage will be determined. Appropriate communication will be provided by public authorities and/or Mid Island Co-op to all relevant parties, including the public utilizing in person visits, local emergency services, radio, TV, automated phone messages, and social media e.g., Facebook, Twitter etc.

8.4 Stakeholder Engagement

This facility is owned and operated by Mid Island Co-op and will assist the organization of the community's resources necessary for people recovering from an emergency.

8.5 Post Incident Evaluation

8.5.1 Post Incident Review and Debrief

A post incident review and debrief will be conducted after every incident or training exercise for all personnel involved to evaluate the incident. Record and assess - using the Exercise Evaluation and Corrective Actions document found in Part 4 of Annex 9.2.2 of this plan - to ensure the activities carried out were in accordance with the plan. Replace and/or service safety equipment as required.

Section 9 Annexes

Annex 9.1 External Reporting

- 9.1.1 Environmental Reporting
- 9.1.2 Public Safety Reporting
- 9.1.3 OHS Reporting
- 9.1.4 TDG Reporting
- 9.1.5 ERAP Activation Reporting
- 9.1.6 Gas and Pressure Vessel Reporting

Annex 9.2 Documents

- 9.2.1 Safety Data Sheet
- 9.2.2 Annual and 5-Year Full-scale Simulation Exercise Document
  - Part 1 – The Exercise Plan
  - Part 2 – Scenarios
  - Part 3 – Participation List
  - Part 4 – Exercise Evaluation and Corrective Actions

Annex 9.3 Dynamic Records

- 9.3.1 Exercise Records
- 9.3.2 Preventative Maintenance Inspections Records
- 9.3.3 Community Notification Records
- 9.3.4 Plan Stakeholder Status and Acknowledgement
- 9.3.5 Facility Photos

Annex 9.4 Maps and Diagrams

- 9.4.1 Fire Services Route to Site
- 9.4.2 Emergency 1st Responders Entrance to Facility
- 9.4.3 Muster Areas
- 9.4.4 Facility Maps
- 9.4.5 Plant Schematics
- 9.4.6 P&ID drawings
- 9.4.7 Tank/s Data Plate/s

Annex 10.1 External Reporting

9.1.1 Environmental Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line.
- Submit within 30 days of the emergency response completion date of the spill.

Federal - Environment and Climate Change Canada (ECCC)

- Complete and submit a written report to Regional Director, Environmental Enforcement Directorate-ECCC-PYR ec.dale-rpn-enforcement-pnr.ec@canada.ca
    - for an environmental emergency that has or may have an immediate or long-term harmful effect on the environment,
    - constitutes or may constitute a danger to the environment on which human life depends, or
    - constitutes or may constitute a danger in Canada to human life or health.
- The written report must include the information referred to in Schedule 8 of the E2 Reg's, SOR/2019-51.

Note: ECCC has accepted Transport Canada Transport Canada 30-Day Follow-Up Form (TP16-0086E) and all other container specifications forms as fulfilling this responsibility.

9.1.2 Public Safety Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Emergency Management BC – EMBC – will make necessary provincial contacts.

9.1.3 Occupational Health & Safety Reporting

British Columbia

- Call 1-888-621-7233 (Work Safe BC 24/7) to report a serious incident or chemical release (e.g., propane) or unsafe working conditions including:
    - Serious injury to or death of a worker
    - Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation
    - Major release of a hazardous substance
    - Fire or explosion that had a potential for causing serious injury to a worker.
    - Blasting incident causing personal injury
    - Dangerous incident involving explosives, whether there is personal injury.
- Crisis Support Line (injured worker) 1-800-624-2928 (24/7)
- Critical Incident Response (witnessed to a traumatic workplace accident) 1-888-922-3700 (24/7)

9.1.4 Transportation of Dangerous Goods Reporting

British Columbia

Call 1-800-663-3456 (24/7) (Provincial Emergency Program – Emergency Management BC) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line. Submit within 30 days of the emergency response completion date of the spill.

Federal – Transport Canada

- Call 1-888-226-8832 (CAN-U-TEC 24/7), 1-613-996-6666 or *666 on cellular in the event of an emergency involving a release or anticipated release of dangerous goods, and/or to report any release of propane into the environment that could pose a danger to public safety or any sustained release of 10 minutes or more, and
- Complete a Transport Canada 30-Day Follow-Up Form (TP16-0086E) and send to the Director General, TDG at dor-rcd@tc.gc.ca utilizing TP 15294 – Guide for Reporting Dangerous Goods Incidents (where applicable, ensure to fill out a container specifications form found in Annex E of the Guide), and

Note: Confirm approval from Transport Canada prior to moving a damaged propane truck or trailer from the scene or roadway

9.1.5 Emergency Response Assistance Plan (ERAP) Reporting

Federal

- Transportation Incidents: In response to a release* or anticipated release**, FCL's Emergency Management Team will implement the Emergency Response Assistance Plan (ERAP) by:
  - Calling Emergency Response Assistance Canada (ERAC) at 1-800-265-0212 and implement Federated Co-operatives Ltd. ERP2-0010-025 to tier 1 or 2.
    - tier 1 implemented for technical or emergency response advice, but none of the emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.
    - tier 2 implemented for technical or emergency response advice, and emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.

*Release means escape of dangerous goods

**anticipated release examples: an incident has occurred, and propane will have to be transferred; propane vessel has been damaged, and propane may be released; and a tanker rolled over, with all four sides not visible

9.1.6 Gas and Pressure Vessel Reporting

Provincial

Incidents and hazards can be reported 24/7 by completing the incident form or by calling 1-866-566-7233.

Definitions

Incident: A failure of a regulated product, work or operation that caused damage or injury

Hazard: A source of potential harm to persons or potential damage to property.

https://www.technicalsafetybc.ca/contact-us/report-an-incident

SAFETY DATA SHEET

1. Identification

Product identifier PROPANE- LIQUEFIED PETROLEUM GAS

Other means of identification

Product code 127

Synonyms Unstenched Propane * Stenched Propane * HD-5 Propane * Standard Propane

Recommended use Various.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

Supplier Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

24-Hour emergency telephone (613) 996-6666 - Canutec

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
	Simple asphyxiants	Category 1

Health hazards Not classified.

Environmental hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards Contact with liquefied gas may cause frostbite.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	100

Ethanethiol	75-08-1	0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. Get medical attention if breathing difficulty persists.

Skin contact Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.

Eye contact Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 20 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Most important symptoms/effects, acute and delayed Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Water spray. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Extremely flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode. Use approved gas detectors in confined spaces.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods Evacuate area. Check oxygen content before entering area. Stop leak if you can do so without risk. Remove pressurised gas cylinders from the immediate vicinity. Turn leaking cylinder with the leak up to prevent escape of gas in liquid state. Closed containers can burst violently when heated, due to excess pressure build-up. Use water spray to keep fire-exposed containers cool. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.

General fire hazards Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition in vicinity of released gas. Evacuate all non-essential personnel to an area upwind. Stop leak if possible without any risk. Ventilate enclosed areas to prevent formation of toxic, flammable or oxygen deficient atmospheres. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Attempt to stop the gas leak, if no risk is involved.

7. Handling and storage

Precautions for safe handling

Eliminate all sources of ignition. When using do not smoke. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Valve protection caps must remain in place unless container is secured with valve outlet piping to use point. Close valve after each use and when container is empty. Do not drop, drag, slide or roll cylinders on their sides. Use a suitable hand truck to move gas containers. Use a pressure reducing regulator when connecting container to piping or systems. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. Do not use gas directly from containers. Do not heat container by any means to increase the discharge rate of product from the container. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). All equipment used when handling the product must be grounded. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Secure cylinders in an upright position at all times, close all valves when not in use. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Quebec OELs. (Ministry of Labour - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

Appropriate engineering controls Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate ventilation and minimize the risk of inhalation of gas.

Individual protection measures, such as personal protective equipment

Eye/face protection If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

Skin protection

Hand protection Wear cold insulating gloves.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Compressed liquefied gas.

Colour Colourless.

Odour Boiling cabbage if stenched.

Odour threshold 4800 ppm

pH Not available.

Melting point/freezing point -180 °C (-292 °F) / -185.89 °C (-302.6 °F)

Initial boiling point and boiling range -42 °C (-43.6 °F)

Flash point -101.1 °C (-150.0 °F) Pensky-Martens Closed Cup

Evaporation rate > 1 (Ether (anhydrous)=1)

Flammability (solid, gas) Extremely flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.2 %

Flammability limit - upper (%) 9.5 %

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure 1034.1 - 1241 kPa

Vapour density 1.6

Relative density Not available.

Solubility(ies)

Solubility (water) 6.5 % v/v in water.

Solubility temp. (water) 20 °C (68 °F)

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature	432 °C (809.6 °F)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Critical temperature	96.6 °C (205.88 °F)
Explosive properties	Not explosive.
Molecular weight	44.11 g/mol
Oxidising properties	Not oxidising.
VOC	100 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness. Inhalation of high concentrations may result in central nervous system depression and reduce the ability of the blood to carry oxygen to body tissues.
Skin contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Eye contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.

Components	Species	Test results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes

Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	None known.
Further information	Chronic effects are not expected when this product is used as intended.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Partition coefficient n-octanol / water (log Kow)	
Propane (CAS 74-98-6)	2.36
Mobility in soil	The product is slightly soluble in water.
Mobility in general	The product contains volatile substances, which may spread in the atmosphere.
Other adverse effects	The product is a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1978
UN proper shipping name	Propane
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	2F

Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	10-January-2017
Revision date	-
Version No.	01

Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Disclaimer	To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

9.2.2 Annual and 5-Year Full-scale Simulation Exercise Documents

Part 1 - The Exercise Plan

- Exercises are to be completed annually.
- All staff members must be present for the exercise.
- Make the following available to the exercise group: copy of the E2 Plan, copy of the Mid Island Co-op Safety Program, note pads and any other related material such as maps and contact lists.
- Invite an Emergency Services representative whenever possible to participate in the exercise sessions.
- Pre meeting inspection of all fire extinguishers, emergency signs, call #s and alarm system to be completed prior to exercise.
- Review the E2 Plan document with all participants (paper copies or projector)

Incident Action Plan

For the scenario/s, the reason **why** there is a need for action has been defined. The objective is to take the scenario from the beginning of the event until the incident reaches the point of recovery/restoration.

Plan and document:

- Strategies that will be used to complete the objective (How are we going to meet the objective)
- Tactics that will be used to implement the strategies including:
    - **What** needs to be accomplished?
    - **Where** they will be accomplished
    - **When** they are to be accomplished
    - **Who** will accomplish what?

In a chronological form, document: agencies, names, positions, times, contact numbers, and other applicable information related to the incidents. Attach the exercise notes to the main document.

Complete the following scenario(s) in either handwritten or printed form.

Part 2 – Scenarios

Listed below are Environmental Emergency Exercises that will be rotated on an annual basis:

- Emergency Simulation Exercise scenarios (annual tabletop), and
- Five Year Full-scale Simulation scenario that.

Propane Release – no fire

Emergency Simulation Exercise Scenario

Propane release from hoses/piping/fittings/pump – no fire

Hose rupture during propane transfer from delivery unit to bulk tank.

- The driver is unable to approach the truck or the immediate transfer area.
- It is 2:00 PM
- Light winds and +10 C
- All staff are on site.

Propane Release – with fire

Emergency Simulation Exercise Scenario

During propane transfer from delivery unit to bulk tank a leak within pumping cabinet ignited and flashed back to the point of discharge.

- The driver is unable to approach the truck or the immediate transfer area.
- It is Wednesday at noon.
- Calm winds and -5 C.
- Propane delivery driver and all staff are on site.

Structural Fire – local to propane storage

Emergency Simulation Exercise Scenario

A large amount of smoke is coming from the electrical room.

- It is 2:00 PM
- Light winds and +1 C
- All staff are on site.

Wildfires – local to propane storage

Emergency Simulation Exercise Scenario

A wildfire is approaching the facility.

- It is 3:00 PM
- Moderate winds and +30 C
- All staff are on site.

Bomb Threats/Terrorism

Emergency Simulation Exercise Scenario

Worst-case Scenario - vapour cloud explosion (VCE) vapour release from storage tank – with fire/explosion

A caller reported a bomb placed on top of the above ground propane tank and ended the call.

- It is Tuesday at 10:30 AM
- It is 25 C with wind from the northwest.
- All staff are on site.

Severe Weather

Emergency Simulation Exercise Scenario

Tornado

The customer spotted a funnel cloud.

- It is Monday at 3 PM
- +25 C with strong winds
- All staff are on site.

Emergency Simulation Exercise Scenario

Lightning

A storm is approaching with visible and audible lightning.

- It is Thursday at 1:00 PM
- +30 C strong winds
- All staff are on site.

Evacuation Procedures

Emergency Simulation Exercise Scenario

Notification of a propane emergency or an evacuation order is given:

- It is Tuesday at 8:00 AM
- -10 C light breeze
- All staff are on site.

Serious Injury/Illness

Emergency Simulation Exercise Scenario

An employee slipped and fell while outside striking their head and is unconscious. An employee has witnessed the event.

- It is Monday at 9:00 AM
- All staff are on site.

Vehicle Incidents - On-site Delivery Unit Scenario

Emergency Simulation Exercise Scenario

A delivery unit has been driven into by a customer. The driver escaped injury and the barrel appears to be damaged.

- It is Monday at 7 PM and dark.
- It is -20 C with no wind.

Jet fire

The bulk storage tanks 3” liquid bottom outlet valve has ruptured releasing propane west toward the property line. The release ignited causing a jet fire out to 100 m.

- The release is major.
- It is 1:15 pm
- Gusting winds from the east at 20 km/hr.
- +25 C
- All staff are on site.

Part 3 – Participation List

Mid Island Co-op E2 Plan Exercise Report

Date				
Exercise Facilitator				
Signature				
Position				
Facility	Gabriola Island Bulk Plant			
CRS Retail	1748			
Location	017			
Address	793 Lockinvar Lane, Gabriola Island BC - V0R 1X0			
Phone #s	Area Manager Kelli Cartwright 250-802-1198			
Storage Capacity	Tank 1	9,400 USWG	Tank 2	N/A

Participants

Print	Sign

Part 4 – Exercise Evaluation and Corrective Actions

Following the exercises, the evaluation should include completeness of the E2 Plan, reader understanding, flow, accuracy, reaching objectives, learning success, challenges, and recommendations. The evaluation should also include any other items of concern during the exercise.

Discussion Notes, Evaluation and Corrective Actions

Name of Author:		**Date:**	

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**

Exercise Facilitator	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

2023 ER.E2 Plan Review and Tabletop Exercise ppt may be found here:

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
			H
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
			H

Exercise Facilitators	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

9.3.2 Preventative Maintenance Inspections Records

Annual preventative maintenance inspections are conducted by an FCL technician with records stored electronically and can be located at I:\AA Propane Fastfield PDFs. Hard copies are printable at any given time.

9.3.3 Community Notification Records

XXXX

9.3.4 Plan Stakeholder Status and Acknowledgement

Municipal Information	
Municipality or District	Gabriola Island – Local Trust Area
Address	
Gabriola Island Trustees	Tobi Elliott 250-268-7434 telliott@islandstrust.bc.ca Susan Yates 250-247-8086 syates@islandstrust.bc.ca

Emergency Service Information	
Fire Service Name	Gabriola Volunteer Fire Department
Address Fire Hall #1	730 Church Street, Gabriola BC V0R 1X3
Address Fire Hall #2	2400 South Road 250-247-8332
Fire Chief	Will Sprogis
Fire Chief Contacts	W: 250-247-9677
DFC	XXXX
DFC Contacts	XXXX
Duty Officer	Pager: 250-755-9289
Travel Time to Facility	2 minutes travel time from Fire Hall #1 to Bulk Plant
Initial Attack Water Volume	2,000 gallons
Sustained Action Water Source	Water shuttle
Training Schedule	

Mutual Aid Agreements	
Name of Agency	Regional District of Nanaimo (RDN)
Location of Agency	6300 Hammond Bay Road, Nanaimo, BC V9T 6N2
Primary Contact Person	inquiries@rdn.bc.ca
Phone #	250-390-4111

Gabriola Volunteer Fire Department received a completed copy of the E2 plan on 2023.

I, _____ of Gabriola Volunteer Fire Department acknowledge that I have received the E2 Plan.

Position _____

Signature _____

Date _____

Mid Island Co-op Representative _____

Position _____

Signature _____

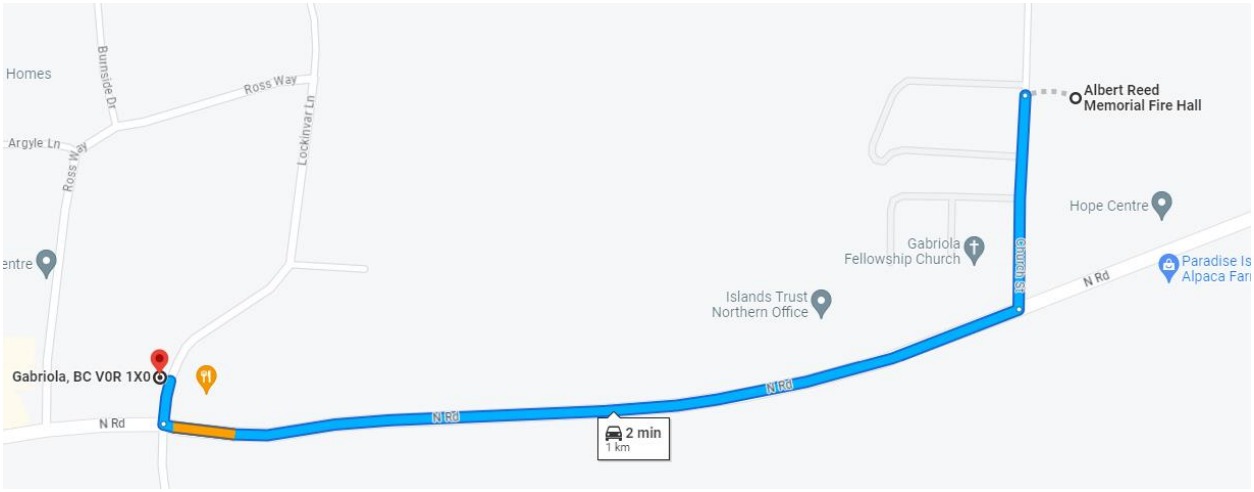
Date _____

9.3.5 Facility Photos

XXXX

Annex 10.4 Maps and Diagrams

9.4.1 Fire Service Route to Site



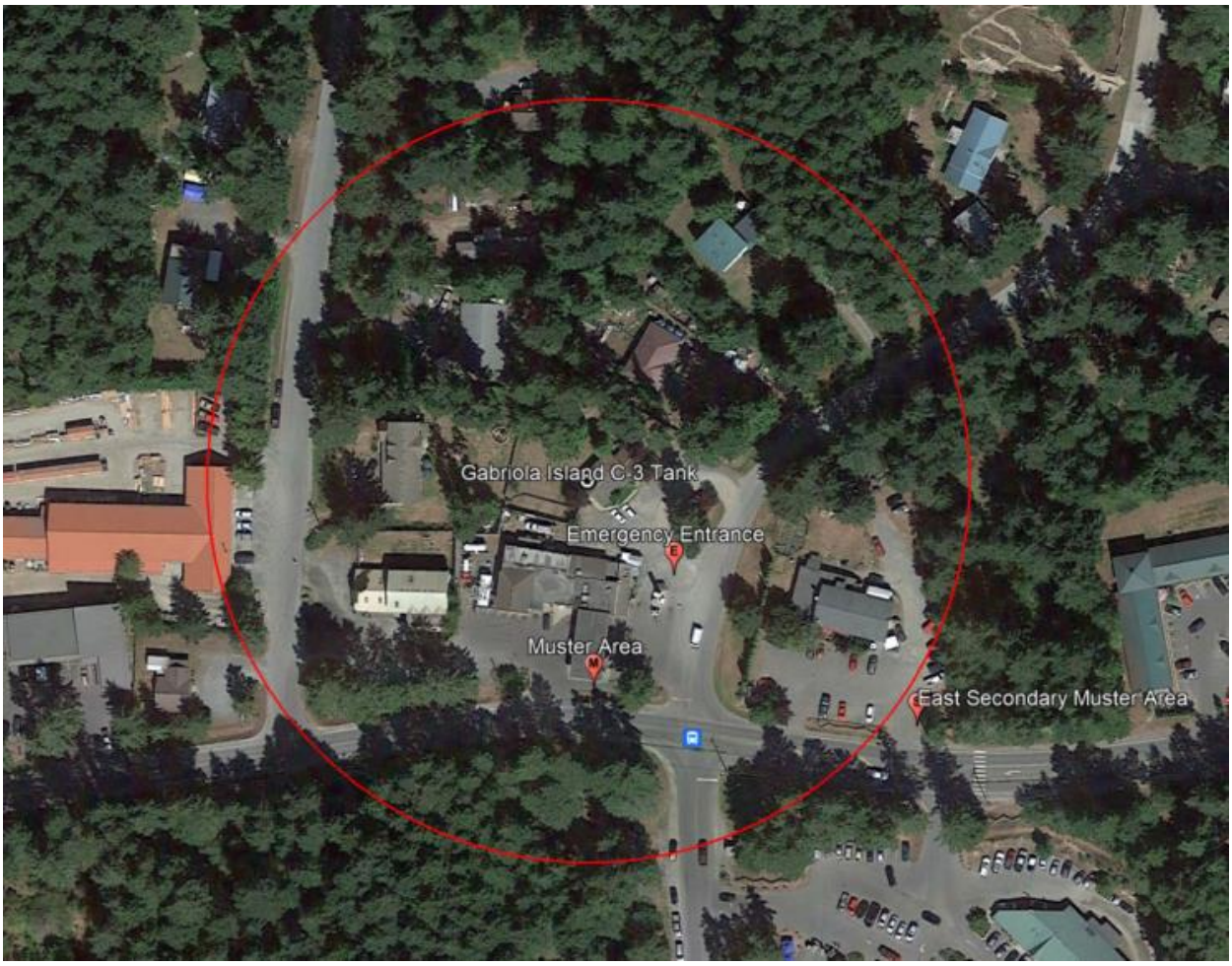
9.4.2 Emergency 1st Responder Entrance to Facility

- ***GPS - DD (decimal degrees): 49.17439, -123.84605***
- ***Road Address: 793 Lockinvar Lane Gabriola Island BC***

9.4.3.1 Muster Area

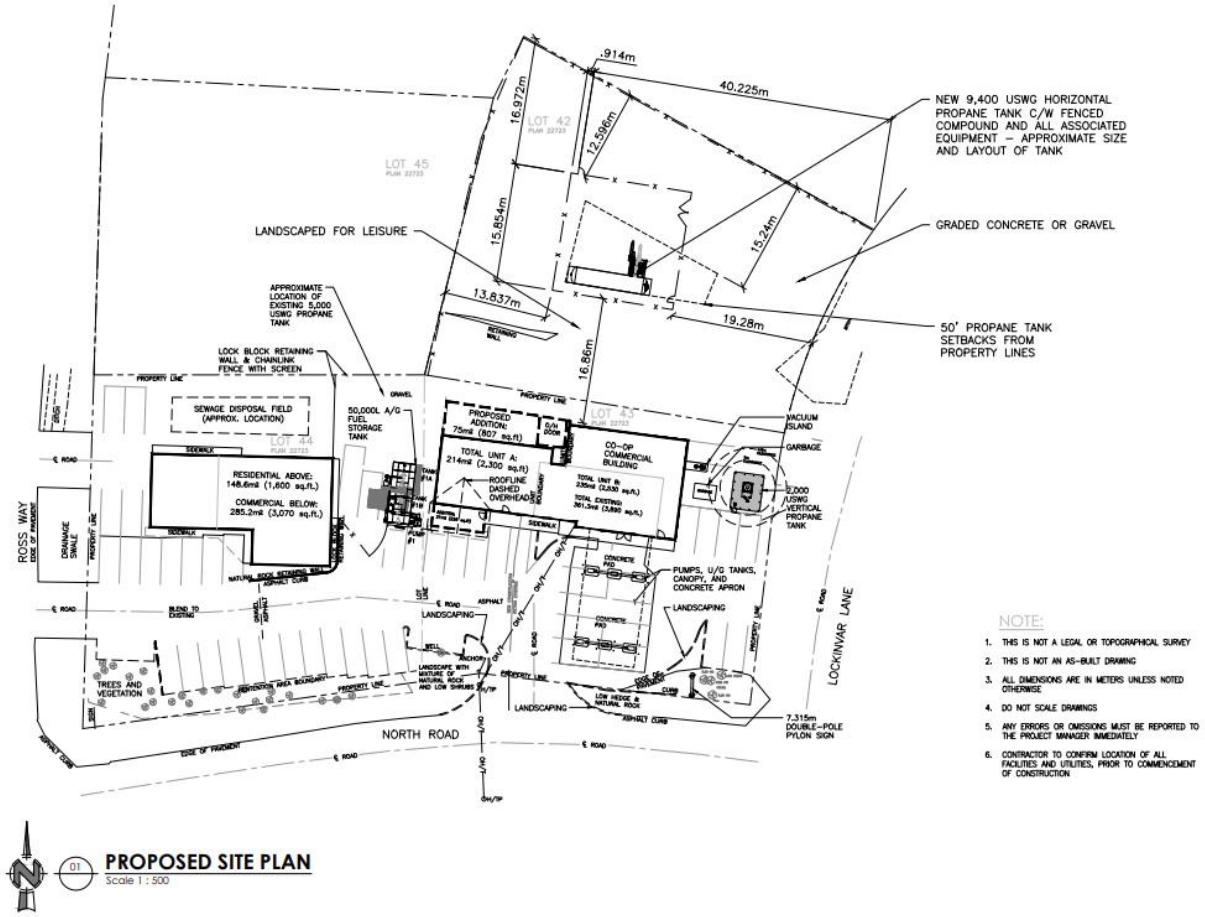
Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

9.4.3.2 Secondary Muster Area

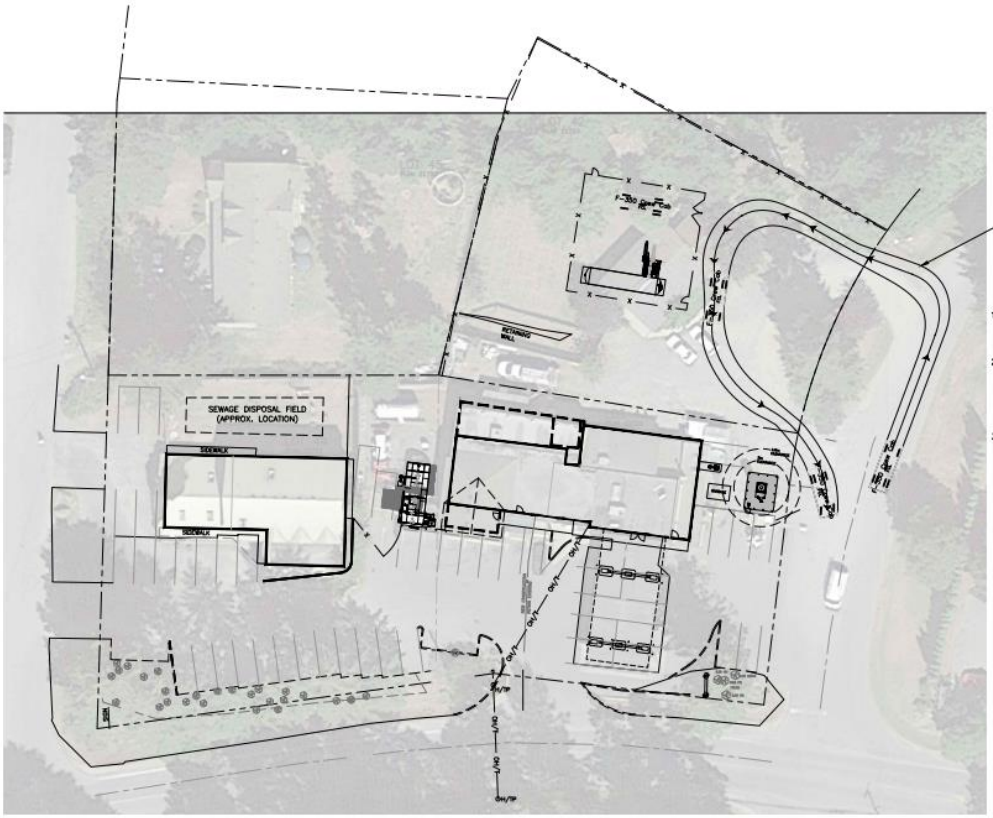


Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay go upwind or side-on to the wind out to a safe distance.

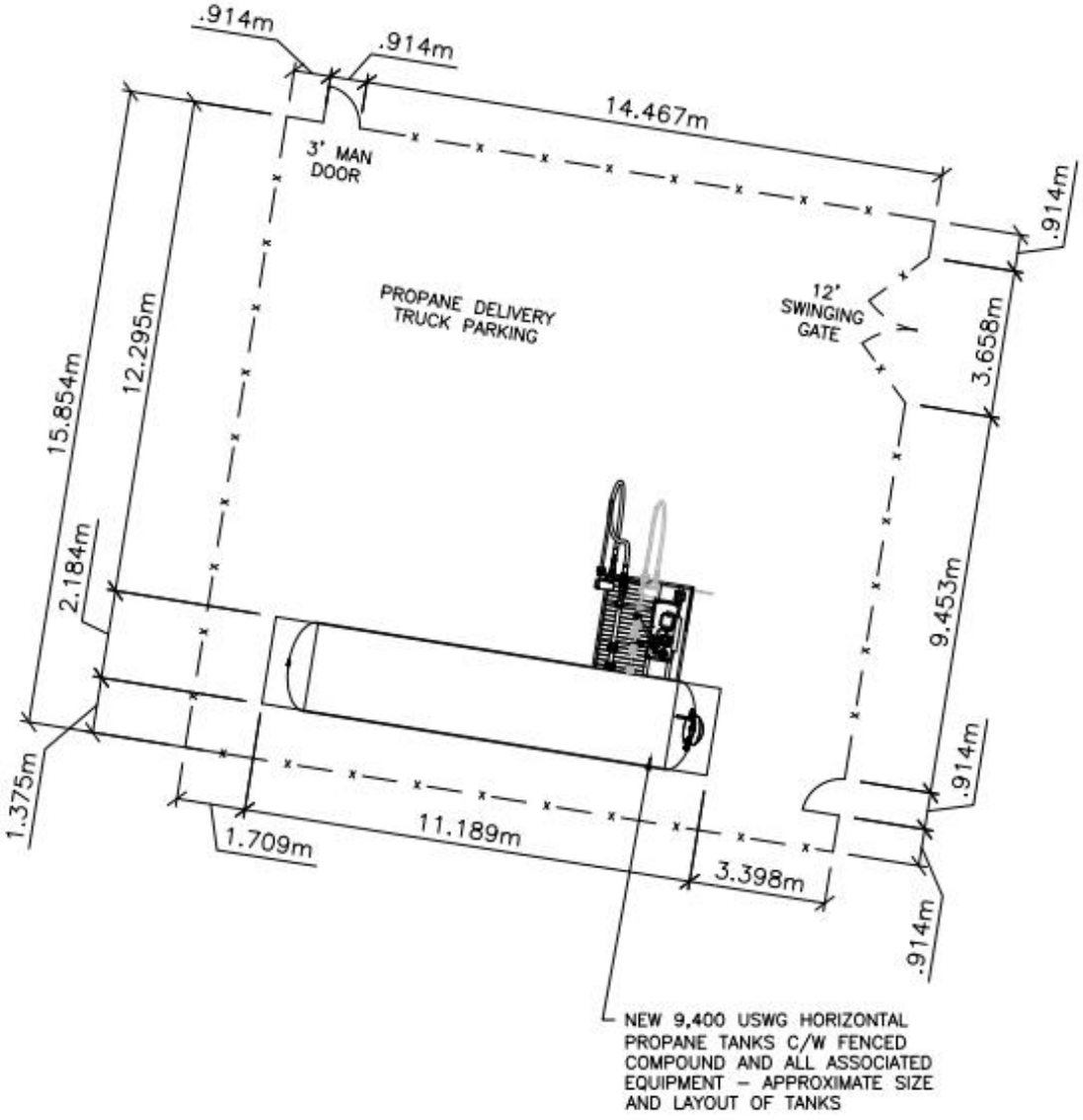
9.4.4 Facility Maps



01 **PROPOSED SITE PLAN**
Scale 1 : 500



01 **PROPANE VEHICLE PATH**
Scale 1 : 500

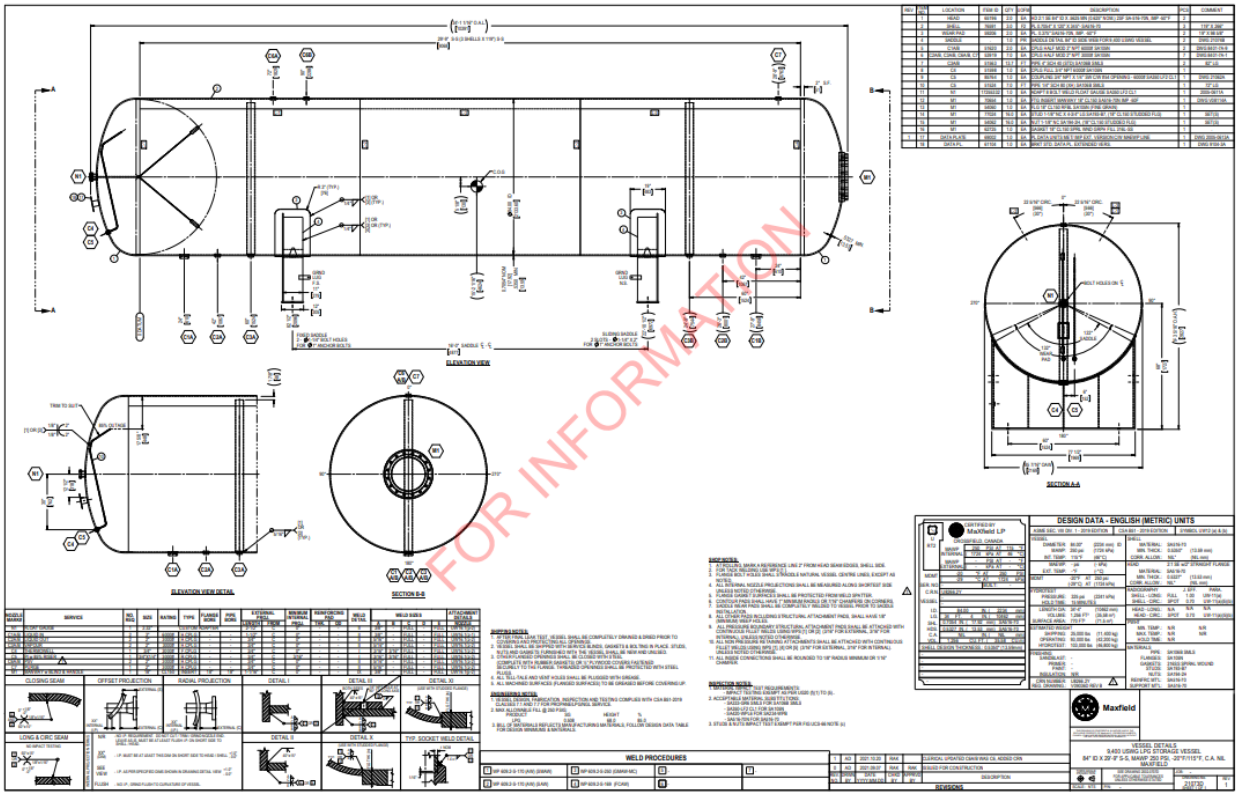


01 **PROPANE DETAIL PLAN**

Scale 1 : 150

9.4.5 Plant Schematics

9.4.5.1 Facility Specific Schematics



9.4.6 P&ID Drawings

9.4.6.1 Facility Specific Drawings

XXXX.

9.4.7 Tank/s Data Plate/s

XXXX

END

Proponent: First Nation Engagement Communication Log

FIRST NATION: Cowichan Tribes

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES) .	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S *(where available):*			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes
2025-09-12	email		Emery Sanderson	Referral	

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Cowichan Tribes

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
APPLICATION TYPE(S) AND FILE #'S *(where available):*					

Date Year/Month/Day	First Nation Contact Name	Proponent Contact Name	Interest/Concern Raised (General or Site Specific) Details	Proponents Response (How/if addressing	Interest/Concern Status (Resolved / Outstanding)	Comments
2025-09-12	***Emery***	***Ian Cox***	Cowichan Tribes defers to Snuneymuxw First Nation			
2026-02-04	Eduardo Sousa	Ian Cox	Cowichan Tribes defers to the nearby First Nation			

Da'naxda'xw First Nation confirmed no need to send them referral

Proponent: First Nation Engagement Communication Log

FIRST NATION: Da'naxda'xw First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S ***(where available):***			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Da'naxda'xw First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
APPLICATION TYPE(S) AND FILE #'S *(where available):*					

Date Year/Month/Day	First Nation Contact Name	Proponent Contact Name	Interest/Concern Raised (General or Site Specific) Details	Proponents Response (How/if addressing	Interest/Concern Status (Resolved / Outstanding)	Comments

Proponent: First Nation Engagement Communication Log

FIRST NATION: Halat First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S *(where available):*			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes
2025-09-12	email	referral coordinator	referral coordinator	referral	

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Halat First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
APPLICATION TYPE(S) AND FILE #'S *(where available):*					

Date Year/Month/Day	First Nation Contact Name	Proponent Contact Name	Interest/Concern Raised (General or Site Specific) Details	Proponents Response (How/if addressing	Interest/Concern Status (Resolved / Outstanding)	Comments

Proponent: First Nation Engagement Communication Log

FIRST NATION: Homalco First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S ***(where available):***			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Homalco First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Proponent: First Nation Engagement Communication Log

FIRST NATION: K'omoks First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: K'omoks First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Lyackson First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S *(where available):*			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes
2025-09-12	email	Ian Cox	referral coordinator	referral	

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Lyackson First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Mamalilikulla First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Mamalilikulla First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Penelakut First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S *(where available):*			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes
2025-09-12	email	Ian Cox	referral coordinator	referral	

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Penelakut First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Penelakut First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Penelakut First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Semiahmoo First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Semiahmoo First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
APPLICATION TYPE(S) AND FILE #'S *(where available):*					

Date Year/Month/Day	First Nation Contact Name	Proponent Contact Name	Interest/Concern Raised (General or Site Specific) Details	Proponents Response (How/if addressing	Interest/Concern Status (Resolved / Outstanding)	Comments

Proponent: First Nation Engagement Communication Log

FIRST NATION: Snaw-Naw-As First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Snaw-Naw-As First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Snuneymuxw First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	**Kelsey-Rae Russel, LUPRI**
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S *(where available):*			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes
2025-05-22	email	Bruce Buckingham, Mid Island Co-op Director Energy Operations	Hannah Paulson	Early referral	SFN differs comment with option to re-evaliuate if new information emerges during RZ process - particularly if activities involve ground disturbance.
2025-09-22	email		Taylor Charette, Administrator	Regarding formal referral following 1st reading	Nation contact enquiured via Snuneymuxw Connect system about why receiving second referral. Planner explained that previous was "early referral" per protocoal agreement and commitment to to providing information early in the application process. Nothing has changed since the initial application was submitted but staff will update if anything does. Also noted that staff understand the applicant has contacted SFN directly

2025-09-24	Snuneymuxw Connect		Taylor Charette, Administrator	Regarding formal referral following 1st reading	Status for referral changed to "Deferred"

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Snuneymuxw First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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2025-09-24	***Taylor Charette***	***Ian Cox***	***Thank you for keeping the Nation informed about the progress of this project and confirming that there have been no changes since the previous referral for these works. As such, the Snuneymuxw First Nation defers comment on the above-mentioned referral. Snuneymuxw's deferral is only applicable to initial notification and non-transferrable. Snuneymuxw's deferral does not mean that there are no potential impacts to Snuneymuxw's Aboriginal and Treaty rights and title, or contributions to cumulative effects, from this referral. Please feel free to contact our*** Referrals Clerk by email at SFNReferrals@snuneymuxw.ca if you have any questions.			

Proponent: First Nation Engagement Communication Log

FIRST NATION: Stz'uminus First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S *(where available):*			

Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes
2025-09-12	email	Ian Cox	Referral coordinator	referral	

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Stz'uminus First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Tla'amin First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Tla'amin First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Date Year/Month/Day	First Nation Contact Name	Proponent Contact Name	Interest/Concern Raised (General or Site Specific) Details	Proponents Response (How/if addressing	Interest/Concern Status (Resolved / Outstanding)	Comments

Proponent: First Nation Engagement Communication Log

FIRST NATION: Tlowitsis First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Tlowitsis First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Tsuubaasatx First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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2025-09-12	portal	Ian Cox	referrals coordinator	referral	

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Tsuubaasatx First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
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2025-09-15	***Monty Horton***		The project area appears to fall within the Hul'q'umi'num Statement of Intent as submitted to the BC Treaty Commission process, but outside Ts'uubaa-asatx Nation's core title area. Ts'uubaa-asatx Nation would recognize this area as being in close proximity to other Hul'q'umi'num or Nuu-chah-nulth First Nation Tumuhw (lands). As such, I would categorize this as a Level 3 rights area for Ts'uubaa-asatx Nation. Level 3 identifies that Ts'uubaa-asatx Nation had harvesting, trade and Nation to Nation relations, but not necessarily sole title and governing authorities, which would be Ts'uubaa-asatx Nation's highest S.35 interests and would require		***Resolved***	

Proponent: First Nation Engagement Communication Log

FIRST NATION: We Wai Kai First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES).	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Date Year/Month/ Day	Activity (e.g. Letter, E-mail, Phone Call, Meeting)	Proponent Contact	First Nation Contact	Purpose	Notes

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: We Wai Kai First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Proponent: First Nation Engagement Communication Log

FIRST NATION: Wei Wai Kum First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**	
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Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION: Wei Wai Kum First Nation

PROPONENT NAME:	**Gabriola Local Trust Committee**	**PROVINCIAL CONTACT/ CONSULTATION LEAD:**			
PROPONENT LEAD:	**Ian Cox**	**LOCATION (REGION/ RESOURCE DISTRICT):**	**Gabriola**		
PROPOSED PROJECT/ ACTIVITY(IES):	**PLRZ20240091 (Mid-Island Co-op)**	**DATE SUBMITTED TO PROVINCE:**			
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Proponent: First Nation Engagement Communication Log

FIRST NATION:

PROPONENT NAME:		**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:		**LOCATION (REGION/ RESOURCE DISTRICT):**	
PROPOSED PROJECT/ ACTIVITY(IES).		**DATE SUBMITTED TO PROVINCE:**	
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Date	Activity	Proponent Contact	First Nation Contact	Purpose	Notes
Year/Month/ Day	***(e.g. Letter, E-mail, Phone Call, Meeting)***				

Proponent Engagement: First Nation's Interests /Concerns Tracking

FIRST NATION:

PROPONENT NAME:		**PROVINCIAL CONTACT/ CONSULTATION LEAD:**	
PROPONENT LEAD:		**LOCATION (REGION/ RESOURCE DISTRICT):**	
PROPOSED PROJECT/ ACTIVITY(IES):		**DATE SUBMITTED TO PROVINCE:**	
APPLICATION TYPE(S) AND FILE #'S *(where available):*			

Date	First Nation	Proponent	Interest/Concern Raised (General or Site Specific)	Proponents Response	Interest/Concern Status	Comments
Year/Month/Day	***Contact Name***	***Contact Name***	***Details***	***How/if addressing concern/issue***	***Resolved / Outstanding***	***Brief Notes***

Referrals: Bylaws 321 (OCP) & 322 (LUB)

Agency	Sent	Received
Cowichan Tribes *Emery Sanderson* Comments: Cowichan Tribes defers to Snuneymuxw First Nation. (email)	2025-09-12	2025-09-15
GVFD No objection	2025-11-06	2025-11-18
Ministry of Water, Land and Resource Stewardship *Shawn Meisner* Comments: The Province has reviewed the referral package and has no objection to the proposal for allowing Mid-Island Co-op to store propane within their property, PID 002-623-463, and any amendments of bylaw as may be necessary to allow for this use.		2025-12-12
SD 68 No comments	2025-09-08	2025-10-22
Snuneymuxw early referral *Hannah Paulson* Comments: Differed, with the option to re-evaluate it if new information emerged during the rezoning process. This is particularly relevant if any activities related to the amendments involve ground disturbance, such as building removals or site excavation. (email)	2025-05-22	2025-05-23
VIHA Approval Recommended Subject to Conditions: Highlights • The proposed rezoning change is for a 0.19ha parcel currently zoned for Institutional 2 usage to allow for propane storage in connection with the existing Mid Island Consumer Services CoOperative business. Mid Island Co-Op is the owner of both properties and operates a food premises and gas store adjacent to this property. Regulatory Considerations Drinking Water • Under the Drinking Water Protection Act and Regulation, any construction, installation, alteration,	2025-09-08	2025-10-23

or extension of (a) a water supply system, or (b) works, facilities, or equipment that are intended to be a water supply system or part of a water supply system, must be issued a construction permit from our Public Health Engineer. Consultation with our Drinking Water Officer will be needed if this is to occur. Currently, the Mid Island Consumer Services Co-Operative adjacent to this property is in compliance with the Drinking Water Protection Act and its Regulation. For more information, please refer to https://www.islandhealth.ca/learn-about-health/drinkingwater/drinking-water-legislation-approval. Sewerage Disposal • Sewage disposal for the rezoning must be in compliance with the Sewerage System Regulation or the BC Municipal Wastewater Regulation. Record of Sewage System filings are a requirement for future sewerage disposal systems or connection of new building to existing disposal systems. Recommendations under Island Health's Healthy Built Environment Initiative • Island Health has no objection to the rezoning of this property to allow for propane storage in connection with the existing co-op gas station/food premises.		

STAFF REPORT

File No.: PL-RZ-2024-0091 (Mid-Island Co-op)

DATE OF MEETING:	April 17, 2025
TO:	Gabriola Island Local Trust Committee
FROM:	Stephen Baugh, Island Planner Northern Team
SUBJECT:	Application to amend the OCP and LUB to allow propane storage adjacent to the Co-op Gas Station Applicant: Bruce Buckingham Location: 793 Lockinvar Lane, Gabriola Island LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (PID 002-623-463)

RECOMMENDATIONS

1. **That the Gabriola Island Local Trust Committee request staff to prepare draft amendments to the Gabriola Island Official Community Plan that will include Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the 'Village Commercial' land use designation and 'Village Centre' Development Permit Area No. 7;**

2. **That the Gabriola Island Local Trust Committee request staff to draft amendments to the Gabriola Island Land Use Bylaw to rezone Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) to a site-specific Village Commercial zone which maintains the existing uses; expands principle commercial uses consistent with the bylaw amendment application; and regulates buildings and structures, height, siting requirements including setbacks, lot coverage, parking, and subdivision.**

3. **That the Gabriola Island Local Trust Committee request staff to provide notification to Snuneymuxw First Nation of application PLRZ20240091 describing the scope of proposed changes to the Gabriola Official Community Plan and Land Use Bylaw.**

REPORT SUMMARY

This application proposes to amend the Gabriola Island Official Community Plan Bylaw No. 166 (OCP) and Land Use Bylaw No. 177 (LUB) to enable propane storage at 793 Lockinvar Lane. The property is 0.19 hectares in area and located adjacent to the Co-op Gas Station.

The staff report provides the Gabriola Island Local Trust Committee (LTC) with a preliminary overview of the proposal, identifies OCP policies relevant to the application, and seeks direction from the LTC on next steps.

Staff recommend draft amendments to the OCP and LUB be prepared for LTC consideration.

BACKGROUND

The application proposes to amend both the OCP and LUB to enable propane storage in above ground tanks on the subject property which is currently zoned for institutional use – Institutional 2 (IN2).

The applicant has provided site plans showing the proposed changes to the property.

Figure 1. Subject Property – 793 Lockinvar Lane, Gabriola Island

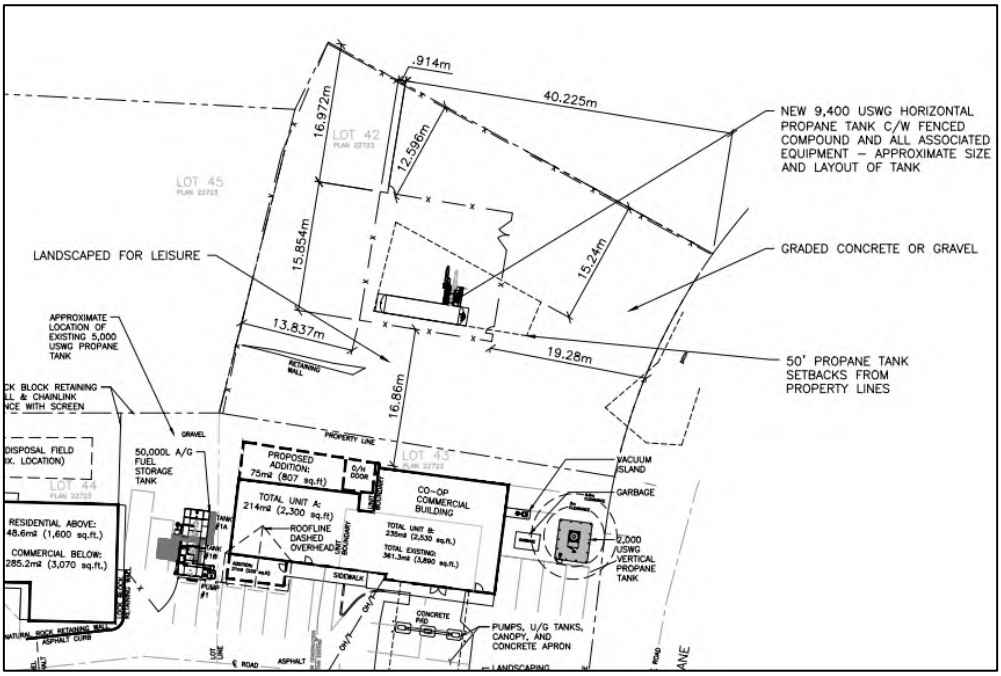


Figure 2. Proposed Site Plan – 793 Lockinvar Lane, Gabriola Island

ANALYSIS

Policy/Regulatory

A comprehensive site context analysis is provided for the subject property (Attachment 1). There are a number of OCP policies that are relevant to this proposal, detailed in Attachment 2.

Islands Trust Policy Statement:

Staff note that an ITPS Checklist (Directives Only) will be completed at the time that draft bylaw amendments are presented to the LTC. The most relevant directives related to this application are:

5.2.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
5.2.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.
5.7.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
5.8.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

Official Community Plan:

Attachment 2 of this report provides a comprehensive overview of relevant OCP policies related to this application. The subject property is designated 'Institutional' in the OCP.

OCP policy 3.2 d) states:

> *"The expansion of the Village Commercial designation shall be considered based on compliance with the following criteria:*
>
> *i) Adequate off-street parking, landscaping and pedestrian access is provided;*
> *ii) The design and site layout of the proposed development can be well integrated into the existing land use pattern in the Village Centre;*
> *iii) The parcel fronts onto a main road and access and egress to the parcel can be provided safely;*
> *iv) The additional area proposed for the Village Commercial is small in size."*

The policy references that the parcel should front onto a **main road** and safe access and egress should be provided for. The subject property fronts on Lockinvar Lane which is not mapped as a main rural or minor rural road in the Gabriola OCP. As this road is not shown on the map with road classifications, other considerations for whether the subject property meets this policy are:

- there is another property designated in the village commercial area that only fronts on to Lockinvar Lane;
- the subject property is within 40 metres of a main rural road;
- the subject property is located adjacent to a property within the village commercial area; and
- the site plan indicates that access and egress to the parcel can be provided safely.

As a result, staff consider the subject property to be consistent with the criteria listed in OCP policy 3.2 d) which would therefore justify an amendment to the OCP designation, to include the subject property in the 'Village Commercial' land use designation.

There is no development permit area (DPA) in effect for the subject property. Should the LTC concur with the staff recommendations to prepare draft bylaws, staff recommend the subject property be included in the Village Centre Development Permit Area No. 7. This is consistent with OCP policy 3.2 e):

> "*Land in the Village Commercial designation and any future additions to the Village Commercial designation shall be placed in the Village Centre development permit area so as to ensure that the form and character of development which occurs is consistent with the existing character of the Folklife Village.*"

Land Use Bylaw:

The subject property is currently zoned Institutional 2, and there is an existing building on the subject property. The principle permitted uses are institutional in nature (public schools, emergency services, library, post office, medical laboratory, government offices, highway work yards, urgent care medical clinic, child care centre and pre-school), and limited public market is permitted as an accessory use.

Should the LTC request staff to prepare draft amending bylaws, staff recommend rezoning to a corresponding site specific 'Village Commercial' zone that includes the existing principal and accessory uses and the additional propane storage as a principal use.

Environmental Impact

The applicant has submitted an Environmental Emergency Plan (Attachment 3). The plan provides a risk assessment, emergency equipment locations, details on prevention and mitigation for incidents, and incident procedures.

Groundwater and Sewage

The proposed use does not require water or sewer services, and as a result, a plan detailing how water supply and sewage disposal for the intended use is not applicable.

Development Permit Area No. 7 – The Village Centre

The Gabriola village centre area is designated as a 'Development Permit Area' (DPA) for the purposes of establishing objectives and guidelines for form and character, water conservation and reduction of greenhouse gas emissions. The designation is intended to ensure that commercial development and redevelopment will be pedestrian oriented, landscaped to conserve water resources and encourage fuel efficient vehicles and alternative modes of transportation.

As per the analysis in this report, staff recommend the subject property be included in the 'Village Commercial' land use designation and DPA. Should the LTC concur, then an amendment to Schedule D of the OCP would be required.

Consultation

Statutory Requirements

As the application involves OCP amendments, the LTC is required by the *Local Government Act* to consider opportunities for consultation with First Nations and persons, organizations and authorities it considers will be affected. The statutory process for bylaw amendments is prescribed by the *Local Government Act* and *Island Trust Act*.

Protocols

The Islands Trust Council has a protocol agreement with the Snuneymuxw First Nation (on behalf of the Gabriola Island LTC) which specifies that the Islands Trust will notify Snuneymuxw in writing of, and work in cooperation with, Snuneymuxw on applications for amendments to official community plans and land use bylaws.

Consistent with this agreement, staff recommend notification of the bylaw amendment application to the Snuneymuxw First Nation prior to LTC consideration of first reading.

Rationale for Recommendation

Staff recommend that draft OCP and LUB amending bylaws be prepared to enable the application to advance to the next stage in the application process as the application is consistent with OCP policies. It is also recommended that the LTC request staff provide early notification to Snuneymuxw First Nation of this application, consistent with the protocol agreement.

ALTERNATIVES

The LTC may consider the following alternatives to the staff recommendation:

1. **Request further information**

   The LTC may request further information prior to making a decision. If selecting this alternative, the LTC should describe the specific information needed and the rationale for this request. Recommended wording for the resolution is as follows:

   That the Gabriola Island Local Trust Committee request that the applicant submit to the Islands Trust… (specify requested information).

2. **Receive for information**

   The LTC may receive the report for information and defer consideration to a future LTC meeting date.

3. **Proceed no further**

   The LTC may proceed no further with this application, and this would indicate that the LTC does not wish to proceed with consideration of these bylaw amendments and conclude the file.

NEXT STEPS

Should the LTC concur with the recommendations, staff will send a notification of the application to Snuneymuxw First Nation and work with the applicant to prepare draft bylaw amendments for subsequent LTC consideration.

Submitted By:	Stephen Baugh, Island Planner	April 3, 2025
Concurrence:	Renée Jamurat, RPP MCIP, Regional Planning Manager	April 3, 2025

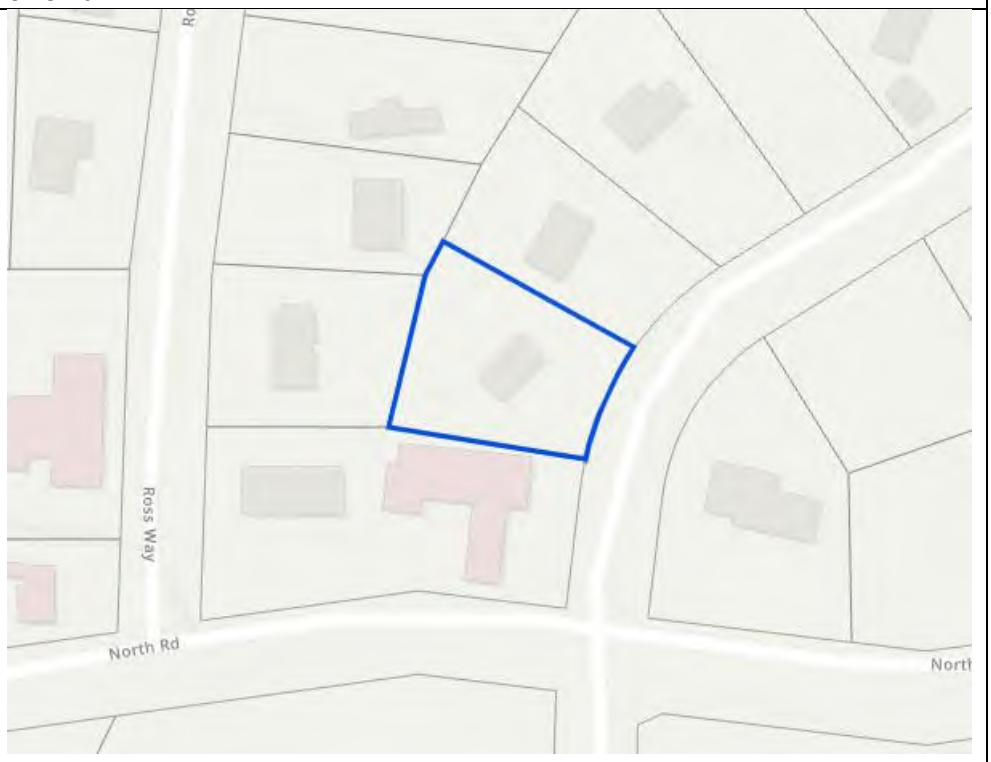
ATTACHMENTS

1. Attachment 1 Site Context
2. Attachment 2 OCP Policies

3. Environmental Emergency Plan

ATTACHMENT 1 – SITE CONTEXT GB-RZ-2022.1 (ALLEY ENTERPRISES LTD) SEPTEMBER 2022

LOCATION

Legal Description	LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723
PID	002-623-463
Civic Address	793 Lockinvar Lane
Lot Size	0.19 ha
Location	

LAND USE

Current Land Use	Institutional
Surrounding Land Use	North = Residential; East = Commercial; West = Residential; South = Gas Station

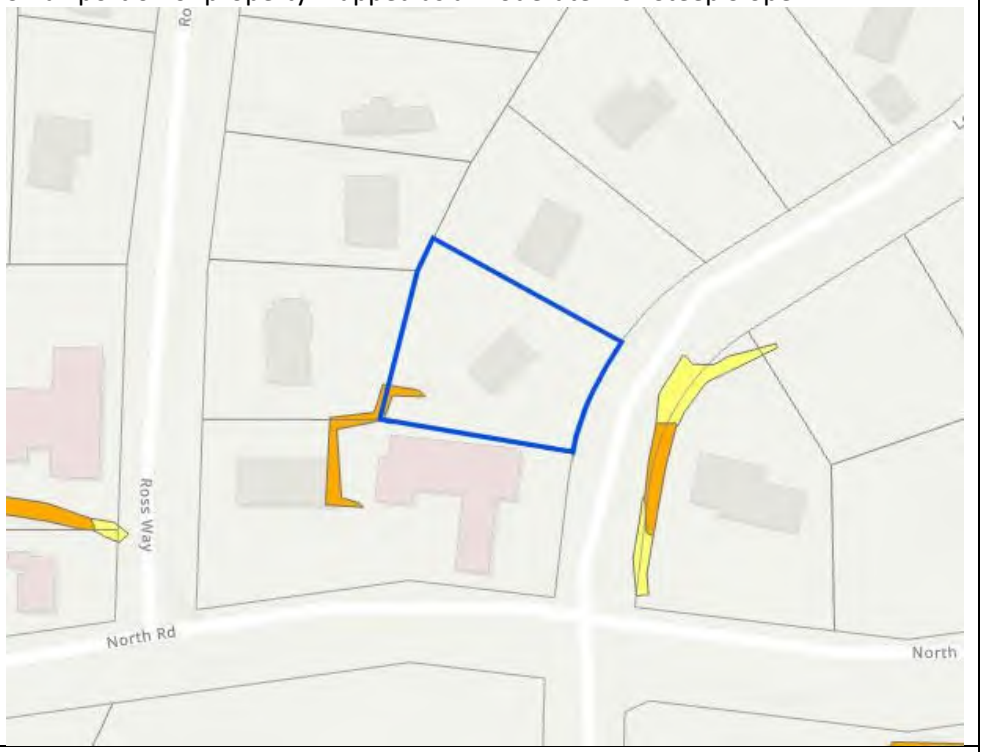
HISTORICAL ACTIVITY

File No.	Purpose
GB-RZ-1995.6	Historic rezoning application related to medical clinic.

POLICY/REGULATORY

Official Community Plan Designations	**Institutional** Change in OCP designation required. Staff recommend property be included in the Village Commercial designation. **Development Permit Area: none** Staff recommend the property be included in DPA No.7 'The Village Centre'.
Land Use Bylaw	**Institutional 2 (IN2)** Change in zoning required. Staff recommend a site specific 'Village Commercial' zone to regulate requested commercial uses.
Other Regulations	Technical Safety BC Environmental Protections Act and Environmental Emergency Regulation
Covenants	n/a
Bylaw Enforcement	None

SITE INFLUENCES

Islands Trust Conservancy	The proposal does not directly affect an Islands Trust Conservancy Board (ITC) owned property or conservation covenant, nor directly affects a property adjacent to an ITC owned property or conservation covenant. Referral to ITC for comment is not required.
Regional Conservation Strategy	Appendix II of the Regional Conservation Plan 2018-2027 indicates the relative value for conservation is Medium or Low on the subject property.
Species at Risk	None mapped.
Sensitive Ecosystems	None mapped.
Hazard Areas	Small portion of property mapped as a Moderate Risk Steep Slope. 
Archaeological Sites	None identified. Applicant has submitted a referral of application to Snuneymuxw First Nation who responded that they defer comment on the referral.

Climate Change Adaptation and Mitigation	Site preparation and construction of the proposed development are anticipated to result in associated greenhouse gas emissions.
Groundwater Vulnerability	Islands Trust mapping indicates the Aquifer Intrinsic Vulnerability for this area is Moderate.
Shoreline Classification	Not Applicable
Shoreline Data in TAPIS	Not Applicable

ATTACHMENT 2 – POLICIES (PLRZ20240091 (MID-ISLAND CO-OP))

GABRIOLA ISLAND OFFICIAL COMMUNITY PLAN BYLAW NO. 166, 1997

OCP Objective/Policy	Complies?	Planner Comments
General Land Use Policies		
2.0 f) Applications for amendment to this OCP shall be required to include: i. details concerning the potential environmental impacts of the proposed development; ii. a plan and specifications detailing how water supply and sewage disposal for the intended use are to be provided, and unless the development is residential and consists of less than five lots or dwelling units the plan and specifications must be prepared by a professional engineer; and iii. such other requirements as may reasonably be deemed necessary in adequately reviewing the application.	**YES**	The applicant has submitted an Environmental Emergency Plan with their application which describes possible scenarios and emergency response procedures. The applicant has not submitted details regarding a water or sewage disposal plan to support the intended redevelopment of the parcel. This is because the proposed use of propane storage would not require on site water or sewage facilities.
2.0 h) The Village Centre shall be recognized as the hub of the community and shall provide for a mix of uses at a scale in keeping with Gabriola's character. Since the Village Centre is surrounded by land in the Agricultural Land Reserve, considerations respecting any expansion of the Village Centre into the Agricultural Land Reserve should only be given to community-minded noncommercial uses, subject to the intended use not degrading the future agricultural capability of the land.	**YES**	The subject property is proposed to be included within the Village Centre and to be used for propane storage for delivery to properties on Gabriola. The subject property is not within the ALR.
General Commercial Policies/Village Commercial Policies		
3.1 b) A commercially designated site shall be designated as a development permit area where it is believed important to regulate the form and character of development which occurs there.	**TBD**	Staff recommend the subject parcel be included in the Village Commercial development permit area, should the application proceed.

3.2 c) The Village Commercial designation shall provide for a range of commercial uses including: retail, restaurant, personal service use, office use, institutional use, building supply sales and the servicing and fuelling of motor vehicles. The Zoning Bylaw will specify in detail the range of uses permitted.	**YES**	The application proposes institutional uses continue to be permitted and that a new use of propane storage be permitted.
3.2 d) The expansion of the Village Commercial designation shall be considered based on compliance with the following criteria: i. adequate off-street parking, landscaping and pedestrian access is provided; ii. the design and site layout of the proposed development can be well integrated into the existing land use pattern in the Village Centre; iii. the parcel fronts onto a main road and access and egress to the parcel can be provided safely; iv. the additional area proposed for Village Commercial is small in size.	**TBD**	The proposal meets all criteria to be included in the Village Commercial designation. There is sufficient area for off-street parking, landscaping and pedestrian access. The site plan indicates that access to the parcel can be provided safely, the property is within close proximity to a main rural road, and the parcel is contiguous with other Village Commercial properties. As a result, staff consider that the parcel is suitable to be considered for addition to the Village Commercial designation. The property is 0.19ha in area.
3.2 e) Land in the Village Commercial designation and any future additions to the Village Commercial designation shall be placed in the Village Centre development permit area so as to ensure that the form and character of development which occurs is consistent with the existing character of the Folklife Village.	**TBD**	Staff recommend that the subject property be included in the Village Centre DPA.
Heritage and Archaeological Resources Policies		
6.3 a) The Snuneymuxw First Nation and the Archaeology Branch should be consulted prior to the initiation of any future development which may impact on a known archaeological site on Gabriola, or an area exhibiting potential for the presence of unrecorded archaeological sites.	**YES**	The subject parcel is not in proximity to a known archaeological site nor is it identified as having potential. The applicant has submitted a referral of the application to Snuneymuxw First Nation and staff recommend that the LTC provide notification to Snuneymuxw First Nation of this application.
6.3 f) Development proponents are encouraged to consider archaeological resources during all phases of project planning, design and implementation.	**YES**	Applicant has submitted a referral of the application to the Snuneymuxw First Nation and received a response deferring comment. The applicant is advised by Snuneymuxw First Nation to obtain any required permit under the *Heritage Conservation Act*.
Land Transportation Policies		

7.1 j) Commercial, multi-dwelling developments and public facilities should provide structures for the convenient and secure parking and locking of bicycles.	**TBD**	Parking requirements can be incorporated into the proposed bylaw.
Climate Change Adaptation and Greenhouse Gas Emission Policies		
8 b) The Local Trust Committee should consider the development of new criteria for assessing official community plan or land use bylaw amendment applications from the perspective of climate change adaptation and greenhouse gas emission reduction.	**TBD**	For LTC consideration.

Mid Island Consumer Services Co-operative (Mid Island Co-op)

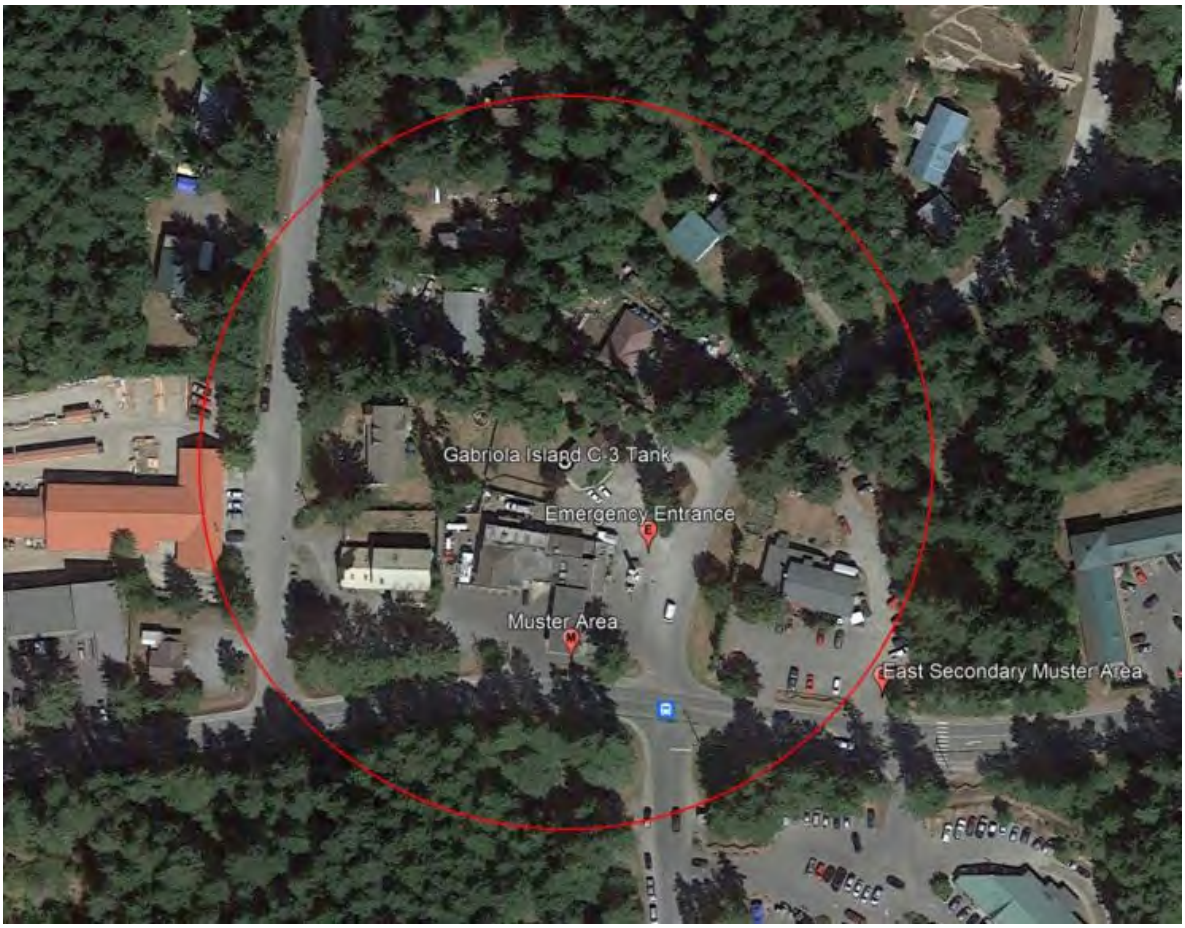
Environmental Emergency (E2) Plan

For the Propane Installation at 793 Lockinvar Lane, Gabriola Island, BC

Site Location
Emergency 1st Responder Entrance to facility: • GPS - DD (decimal degrees): 49.17439, -123.84605 • 793 Lockinvar Lane Gabriola Island BC One 9,400 USWG propane tank is located at: • Mid Island Co-op Bulk Plant • 793 Lockinvar Lane Gabriola Island BC V0R 1X0 • DD (decimal degrees): 49.17461, -123.84636 Mail to: • Head Office: 106–2517 Bowen Road Nanaimo BC V9T 3L2 E2ID# TBD

Section 1 Executive Summary

Following information is required in activating the E2 Plan: Map showing Muster Areas, 1st Responders Entrance, Emergency Information & Equipment Locations, Site Address, E2 Plan Activation and Emergency Contacts, Incident Procedures, and Emergency Notification & Communications Procedure.



Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREA	East of site on North Road

ADDRESS of Gabriola Island Propane Bulk Plant: 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

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Section 2 Introduction

2.1 CRS Health Safety and Emergency Preparedness and Response Statement

The CRS is committed to health and safety through operational integrity and effectively manages its work to identify and mitigate risks to health, safety, and the environment.

Operational integrity at the CRS means conducting all activities safely and reliably so that the public is protected, impact to the environment is minimized, the health and wellbeing of employees is safeguarded, contractors and customers are safe, and physical assets (such as facilities and equipment) are protected from damage or loss.

This Emergency Response Plan has been developed to meet or exceed the requirements of all applicable governing agencies and regulatory bodies where the CRS operates.

The following plan considers an area-specific hazard/risk analysis and outlines the necessary resources, personnel, logistics and initial actions to facilitate a prompt, coordinated and rational approach to any emergency.

2.2 Purpose

This Emergency Response/Environmental Emergency (E2) manual describes the procedures for Mid Island Co-op personnel in the event of an emergency at a company facility.

This E2 plan has been prepared in accordance with the Environmental Emergency (E2), Regulations made pursuant to the Canadian Environmental Protections Act, 1999 (CEPA 1999), reflecting the four pillars of emergency management: prevention and mitigation, preparedness, response, and recovery.

Sharing portions of information within this manual with interactive stakeholders or those residents or businesses in the proximity of effect from an emergency is encouraged.

2.3 Objectives of the E2 Plan

- Reduce the frequency and consequences of uncontrolled, unplanned, or accidental releases of propane.
- Promote the safety of workers, responders, and the public.
- Reduce the potential for destruction of goods and property.
- Minimize the effect upon the environment.
- Communicate risks associated to the facility with the local emergency response services.
- Help responders quickly determine and initiate proper remedial actions.
- Inform neighboring citizens and businesses of preparations and actions that will minimize risk to safety and health during an emergency event.
- Liaise with local municipal administrations in the context of public safety.
- Reduce recovery times and costs.

These objectives are achieved through the development, implementation, training/exercising and maintenance of this E2.

2.4 Scope of Emergency Procedures

Due to the complexity and variables of an emergency, it is difficult to determine an exact systematic process that will be effective in all situations. The common elements within responses are listed. The responder will determine the sequence and execution at the time of the incident.

This E2 Plan addresses the following list of risks:

- Propane gas release
- Propane liquid release
- Fires
- Explosions
- Threats to people, property, and goods
- Other site-specific values at risk

2.5 E2 Plan Access

An up-to-date plan shall be kept in the red plastic document holder - labelled E2/SDS - installed near emergency horn activation on North exterior wall of convenience store so as to be readily available to site personnel and 1st Responders.

2.6 Joint Responsibilities

Mid Island Co-op owns and operates this Bulk Plant on Gabriola Island BC.

2.7 Plan Consultation/References

- Canadian Environmental Protection Act, 1999 - Part 8: Environmental Matters Related to Emergencies
- Environmental Emergency Regulations SOR/2019-51
- Technical Guidelines for the Environmental Emergency Regulations, 2019 Version 2.0
- WorkSafe BC Guidelines – OHS Reg's. Part 4: Emergency Preparedness and Response
- WorkSafe BC Guidelines – OHS Reg's. Table of Exposure Limits for Chemical Substances
- CCOHS https://www.ccohs.ca/oshanswers/hsprograms/basic.html
- National Fire Code of Canada – Division B, Emergency Planning
- Federated Co-operatives Limited SDS – Propane
- CAN/CSA Z731-03 Emergency Preparedness and Response
- CAN/CSA B149.1 Natural Gas and Propane Installation Code
- CAN/CSA B149.2 Propane Storage and Handling Code
- ASME Vessel Specifications
- Canadian Electrical Code
- Provincial Boiler and Pressure Vessel Acts and Regulations
- Safeti, formerly PHAST (Process Hazard Analysis Software) Analysis Modelling from Marsh Risk Consulting
- MIACC (Major Industrial Accidents Council of Canada) is a risk-based land use planning guide (MIACC was dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering)

2.8 Record of Amendments

Record changes made to the Plan on the table below and replace applicable pages.

#	Date of amendment	Section # amended	Recorded by
1	2023	New E2 Plan	Kevin McEown - FCL and Kelli Cartwright - Mid Island Co-op

2.9 Company Profile

Nature of Business

Mid Island Co-op is a locally owned co-operative serving local communities with food and fuel.

Typical Storage Use and Delivery Activities

This Mid Island Co-op owned and operated Bulk Plant on Gabriola Island BC has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

2.10 Glossary

Active Mitigation: A safeguard system designed to mitigate the consequences of an incident that requires human intervention, external mechanisms, or energy sources. Examples include lighting, automatic and manual valves, etc.

Alternate Scenario: An environmental emergency that could reasonably be expected to occur at a facility and that would likely cause harm to the environment or constitute a danger to human life or health.

Alternate Worst-case Scenario: Means the scenario described in section 4(2)(f) of the E2 Regulations. It involves the alternate scenario that is more likely to occur than the worst-case scenario **and** that has the longest impact distance outside the boundary of the facility (if it exists).

BLEVE: (boiling liquid expanding vapor explosion) happens if a container holding a pressure liquified gas (e.g., propane) fails catastrophically. Catastrophic failure of the vessel is followed by the explosive release of boiling liquid and expanding vapour.

The BLEVE is a physical explosion where the hazards are blast and projectiles. Propane is flammable so a fireball may happen after a BLEVE if the released cloud is immediately ignited. This is usually the case if the tank failure is caused by fire impingement. If a flammable cloud is not ignited immediately then delayed ignition could lead to other fires, explosions, etc.

A BLEVE will typically occur when the steel of the tank is compromised by an external impinging fire and consequential rupture due to the combination of internal over-pressure and weakening steel strength due to overheating. A warning sign of an impending BLEVE may be intermittent or a continual flare-off from the pressure relief valve until the tank either BLEVE's or rids enough propane where flare-offs cease. The variables within the chain of events are difficult to accurately predict.

CAS Registry Number: The identification number assigned to a substance by the Chemical Abstracts Service, a division of the American Chemical Society. The Chemical Abstracts Service Registry number is the main identifier for regulated substances found in the E2 regulations. CAS number for Propane is 74-98-6.

CEPA: Canadian Environmental Protection Act, 1999.

CERCA: The Canadian Emergency Response Contractors' Alliance (CERCA) is an industry association comprised of stakeholders from all facets of the Canadian dangerous goods emergency response industry. The mission of CERCA is to foster the establishment of a sound emergency response network in Canada.

Community Emergency Systems Notification: An advisement document used to communicate avoidance and evacuation actions in the event of a vapor cloud drift, substantial release, or fire. This notification is for offer to neighboring residences and businesses that are within the harm radius of the risk model.

Container System: Any receptacle or network of receptacles that is used to contain a substance – including any connected pipelines or piping – except any part or that network that is automatically or remotely segregated from the rest of the network by shut-off valves, or other mechanisms in the event of any environmental emergency.

CRS: Co-op Retailing System.

CRS-EMRG: The Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) is a toll-free number (1-833-277-3674) to call (24/7) to report an emergency related to FCL or Co-op. A dispatcher (STARS) will ask a series of questions to gather information about the incident and will then notify the appropriate FCL Emergency Management Team (EMT).

E2 (Environmental Emergency): This refers to the Environmental Emergency Regulations that address the prevention of, preparedness for, response to and recovery from, and environmental emergency caused by uncontrolled, unplanned, or accidental releases.

E2 Plan: Environmental Emergency (E2) Plan is a document that provides guidance on actions under various emergencies and conditions.

ECCC: Environment and Climate Change Canada.

Emergency: An emergency is a potential or a real developing situation, which may cause injury, property damage, environmental damage and/or impact on corporate image and reputation.

Emergency Management Centre (EMC): The FCL EMC is where the FCL Emergency Management Team will meet in the event of an emergency involving the Propane Department will typically be located at FCL's Home Office.

Emergency Management Team (EMT): The FCL EMT is a group of subject matter experts and advisors who provide oversight and guidance to emergency response measures.

Emergency Notification System: Is an advisement document used to communicate actions in the event of a vapor cloud drift, fire, explosion, substantial release or other where proper avoidance, evacuation and muster point items are explained. This notification is for offer to neighboring residences and businesses etc. that are within the harm radius of the risk model.

Emergency Operations Manager (EOM): The FCL EOM is responsible for the FCL Emergency Management Centre and working with the Emergency Management Team initially determines Emergency Response Activation Plan activation, crisis level and owner and what support or guidance and performs duties as described within this plan.

Emergency Responders: General term for a group of individuals who have defined skills or responsibilities in an emergency.

Environmental Emergency: Means an uncontrolled, unplanned, or accidental release of an E2 substance into the environment (or the reasonable likelihood of such a release) that:

a) Has or may have an immediate or long-term harmful effect on the environment; or

b) Constitutes or may constitute a danger to the environment on which human life depends; or

c) Constitutes or may constitute a danger in Canada to human life or health.

Environmental Officer (EO): The EO as a member of FCL's Emergency Management Team initially assesses the degree of potential environmental impacts and performs duties as described in this plan.

ERAC: Emergency Response Assistance Canada formerly the Liquid Propane Gas Emergency Response Corporation is a division of the Canadian Propane Association developed to offer emergency services for the Canadian propane industry. The ERAC has Emergency Response Teams situated in various locations nationwide to respond to major propane emergencies.

ERAP: An emergency response assistance plan describes what to do in the event of a release or anticipated release of certain higher-risk dangerous goods – such as propane - while they are in transport. An ERAP requires a third-party responder agreement between FCL, and the third party listed in the ERAP – being ERAC - that will provide technical or emergency response advice, and/or provide resources to respond to a release or anticipated release on FCL's behalf.

ERC: The Emergency Response Coordinator will typically be the most senior and or qualified manager, supervisor or employee on site that is able to instruct the activities of others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

FCL: Federated Co-operatives Limited.

Fireball: Can result from an instantaneous release from a BLEVE or a release with a delayed ignition.

Full-scale Simulation Exercise: An action-based simulation exercise requiring the deployment of personnel, resources, and equipment.

HBC: The Home Base Co-ordinator is a person that is verified under CERCA to advise Local Emergency Responders, owners and their contracted Emergency Response Team on remedial activities following an incident.

Incident Action Plan (IAP): Within Incident Command System, includes the overall incident objectives, strategies and tactics established by Incident Command.

Incident Commander (IC): Within Incident Command System, has overall incident management responsibility.

Incident Command System (ICS): The ICS is a standardized on-site management system designed to enable effective, efficient incident management within a common organizational structure.

Information Officer (IO): The IO as a member of FCL's Emergency Management Team initiates and directs established communication response and performs duties as described in this plan.

Muster Area: The Muster Area is typically situated on site or adjacent to site in a safe location. Choice of location is prior to an emergency event. Posting a sign identifying the Muster Area and placing a copy of the E2 Plan there in a weatherproof container is required.

Operations Chief (OC): Within Incident Command System, directly manages all incident tactical activities and implements the Incident Action Plan.

Overpressure: The overpressure of the atmosphere due to an explosion. Probabilistic risk models used for FCL facilities base is 1-psi overpressure. Overpressure of 1 psi may cause structural damage to buildings. Levels of 3-5 psi will cause significant structural damage and cause severe or fatal injury to persons openly exposed to a pressure wave.

Passive Mitigation: A safeguard system designed to mitigate the consequences of an incident that does not require human intervention, external mechanisms, or energy sources. Examples include fencing, protection against collision damage etc.

PID: Piping and Instrumentation Diagram.

Planning Chief (PC): Within Incident Command System, oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, conducts Planning Meetings, and prepares the Incident Action Plan for each operational period.

Reasonable: Means logically valid. It is based on using sound judgement, and therefore, practical, and sensible as opposed to extreme or excessive.

RMA: The Remedial Measures Advisor is a person that is qualified under the LPGERC (ERAC) to advise Local Emergency Responders and or CPA members on remedial activities following an incident.

SAFETI: Process Hazard Analysis Software used for Analysis Modelling prepared by Marsh Risk Consulting.

Safety Officer (SO): The SO as a member of FCL's Emergency Management Team monitors incident operations and advises the Emergency Operations Manager on all matters related to operational safety and performs duties as described in this plan.

SDS: Safety Data Sheet.

Secondary Muster Area: Two Secondary Muster Area are situated a cross wind to the Muster Area and evacuated to when it is not safe to go to a Muster Area or remain at the Muster Area. Choice of location depends on wind direction.

Shelter-in-place: Means finding a safe location indoors and staying there until you are given an "all clear" or told to evacuate.

Simulation Exercise: An exercise simulating the response to an environmental emergency involving the release of an E2 substance.

Strike Team (ST): Within Incident Command System, a set number of resources of the same kind and type that have an established minimum number of personnel, common communications, and leader.

STARS: STARS Emergency Contact Centre (ECC) is a service offered by STARS Emergency Link Centre (ELC) to answer calls to the Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) for emergencies related to FCL or Co-op and provide incident notification to the appropriate FCL Emergency Management Team.

Unified Incident Command (UIC): Within Incident Command System, UIC allows agencies with different legal, geographic, functional authorities and responsibilities to work together effectively. All responsible agencies jointly provide management direction through a common set of incident objectives and strategies established by a single Incident Action Plan.

USWG: United States Water Gallon. This measurement relates to the capacity of an LPG tank based on how much water the containment can hold.

VCE: (vapor cloud explosion) is a chemical explosion and occurs when a large quantity of flammable vapor or flammable gas is ignited, and the flame propagates at a rate/speed fast enough to create an overpressure. Release or migration of flammable vapor/gas into a confined area with ignition will create a substantial overpressure and thermal event. Migration of the vapor/gas cloud will determine where and the intensity of a VCE which will be influenced by degree of congestion, terrain, and other obstructions.

Wildfire: Wildfire, also known as a forest fire, prairie fire, grass fire, or brush fire, is an unplanned, unwanted, uncontrolled fire often occurring in wildland areas, but which can also consume structures.

Worst Case Scenario: Means the scenario described in section 4(2)(e) of the E2 Regulations. It must involve the release of the maximum quantity of an E2 substance that could be contained in the container system with the largest maximum capacity at a facility, or the maximum expected quantity of the substance on-site that is not contained. The scenario does not need to be reasonable.

Section 3 Management and Administration of the E2 Plan

3.1 E2 Plan Development Evaluation Review Update and Consultation Team

The team participating in the plan development, initial review and responsible for its annual evaluation, exercise, review, updates as necessary by the following individuals within their roles:

Participant	Organization	Function and Project Role
Bruce Buckingham	Mid Island Co-op	Director of Energy Operations (Plan Approval)
Kelli Cartwright	Mid Island Co-op	Area Manager (Plan Advisory for Development, Plan Implementation, Training/Exercise and Maintenance)
Kevin McEown	Federated Co-operatives Limited - Propane	Senior Health and Safety Advisor (Plan Development, Implementation, Training/Exercise Development and Maintenance)
Darrell Rose	Marsh Risk Consulting	Senior Vice President (exempted from approvals) (Risk Engineer)

3.2 E2 Plan Distribution

The E2 Plan will be made available to all employees, emergency service providers, stakeholders, and regulatory authorities by the following:

#	Name of Person who received the ERP manual	Individual/Organization	Date Issued
1	Bruce Buckingham	Mid Island Co-op - Director of Energy Operations	2023
2	Kelli Cartwright	Mid Island Co-op - Health & Safety Coordinator	2023
3	Kevin McEown	FCL Propane - Senior Health & Safety Advisor	2023
4	XXXX	Gabriola Volunteer Fire Department - Fire Chief	2023

3.3 ECCC Notifications

On XXXX, ECCC received Schedule 2-5 notices, under CEPA's E2 Reg's, 2019.

Section 4 Risk Assessment

4.1 Propane – General Characteristics and Hazards

4.1.1 Background

The inherent properties of propane with its low boiling point make it a feasible energy source used in a variety of energy applications from heating to transportation. Propane uses include fuel for heating, cooking, automobile and forklift truck fuel, crop drying, welding, and cutting operations. Industry uses propane as a refrigerant, solvent and as a chemical feedstock.

Under normal atmospheric conditions propane is a gas, however, increasing the pressure causes the substance to condense into a liquid. This characteristic of propane allows for storage of large quantities of liquid propane inside of a pressurized container. When liquid propane vaporizes (phase changes) from its liquid state into its gaseous state it creates a refrigerating effect (cooling).

4.1.2 Properties

Propane is stable and non-reactive under normal conditions of use, storage, and transport. Conditions to avoid include heat, sparks, open flames, and other ignition sources. Avoid contact with incompatible materials, which includes any strong oxidizing agents. Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

Propane is a colorless, odorless gas in its natural state, so the addition of a stench odorant called ethyl mercaptan gives propane a distinct boiling cabbage like odor. Propane is transported and stored as a liquid in pressure vessels to a capacity of approximately 80%, which allows room for vapor expansion. When propane liquid is released from its confinement, it converts to a gas to a rate of 270:1. The speed of vaporization is dependent on ambient temperature. Most calculations are based of 15° C; however, calculations are made for differing temperatures to assure safe load weights. Below -42° C, propane will lose its ability to vaporize and remain a liquid. Installation of vaporization appliances or supply tank heaters ensure function in extremely low temperatures or in high volume demand situations. Propane is 1.6 times heavier than air and settles in lower areas if released. Propane vapors will dissipate into the atmosphere rather quickly depending on wind conditions and ambient temperature. Propane is non-toxic, however may be an asphyxiant if enough breathable air is displaced. The combustible range of propane is between 2.2% and 9.5% mixture with the atmosphere. This is a relatively low range of flammability; however, periphery zones of a vapor cloud will ignite if it falls within the flammability range mentioned.

For more information refer to 9.2.1 Safety Data Sheet.

4.1.3 Provincial Exposure Limits

Table 4.1.3 Work Safe BC Table of Exposure Limits

Substance	CAS #	Time Weighted Average Limit (TWA)		Short Term Exposure Limit (STEL)	Notations
		ppm	mg/m³		
Propane	74-98-6	N/A	N/A	Simple asphyxiant	EX

Note: The term EX means the substance is a flammable asphyxiant - updated June 1, 2021.

4.1.4 Potential Health Effects/First Aid Measures

Propane is non-toxic, but if released into a confined space or settles in lower areas it will displace the air making it difficult to breathe. It is always important to seek medical attention if you are experiencing signs and symptoms from exposure. Some of the effects of exposure:

Eye Contact: Rapidly expanding Propane can cause eye irritation and frostbite (cold burn). Permanent eye damage or blindness could result.

Inhalation: Chemical asphyxiant hazard – if accumulation occurs to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness at first but if inhaled at high concentrations, the central nervous system depresses and reduces the ability of the blood to carry oxygen to body tissues.

Skin Contact: Direct contact with liquefied propane gas can result in frostbite (cold burn).

Ingestion: Not a normal route of exposure - unlikely.

4.1.5 Summary – Potential Risks of Release for Propane

Propane has no natural odour and is non-toxic but is an asphyxiant in high concentrations. The vapour density of propane is 1.6; consequently, it will accumulate in lower areas such as ditches and sewers. To be combustible, propane needs to be within its flammable or explosive range between the Lower Explosive Limit (LEL) 2.2% and Upper Explosive Limit (UEL) 9.5% by volume in atmosphere. When liquefied propane is released into the atmosphere, it will expand up to 270 times in vapour to that of liquid.

The impact on life safety and the physical environment because of an unplanned release can be detrimental, so it is important to reduce the risk through the implementation of elimination, engineering, and administrative controls.

4.2 Facility Location, Storage, Handling, and Risk Mitigation

4.2.1 Description of Facility Property Surrounding Area Including Potential Receptors

The 9,400 USWG horizontal propane storage tank is installed above ground.

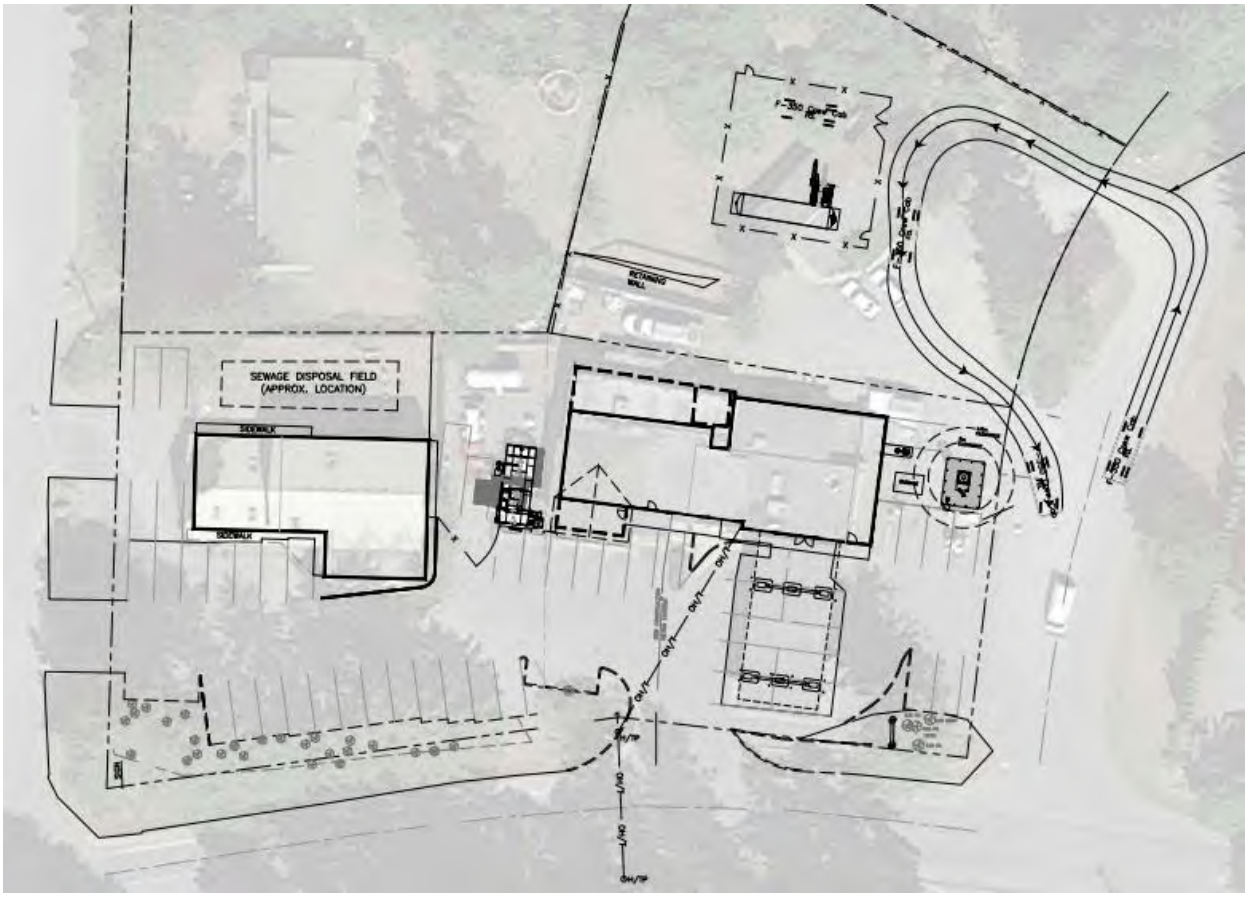
The facility located at 793 Lockinvar Lane, on Gabriola Island, within Gabriola Island Trust Area, and the Regional District of Nanaimo BC. Gabriola Island has a population of 4,500 and population density per square kilometer of 77.4 (Statistics Canada, 2021 Census).

The alternate worst-case scenario is a jet fire based on propane liquid released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario.

There is a delivery driver working from the propane bulk plant.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.2.1 Facility and Property



4.2.2 Maximum Capacity and Quantity of Propane Stored on Site

Propane is the only product on site that meets the minimum threshold requirements for developing the Environmental Emergency (E2) portions of this Plan as per Environment and Climate Change Canada's E2 Regulations. The capacity of the largest single container in which propane is stored on site is 18.0243 metric tonnes (9,400 USWG). The maximum expected quantity of propane on site at any time during the calendar year is 18.0243 metric tonnes (including piping) - the working volume limited to 80% of the capacity of the propane vessel on site to allow for expansion/contraction of propane due to changes in temperature/pressure within the vessels. **18.0243 metric tonnes are registered with ECCC using SWIM for both quantity and capacity as it is not known how much if any tanks (at up to 5% maximum) or cylinders (at up to 80%) will be stored on-site.** Since both the largest single container and maximum expected quantity both exceed 4.5 metric tonnes, an E2 Plan is required.

4.2.3 Substance Identification

Schedule 1 of Environmental Emergency Regulations, 2019 - Part 1						
Item	Column 1	Column 2	Column 3	Column 4	Column 5	
	CAS No	Name of Substance	Concentration % mass/mass	Minimum Quantity (tonnes)	Hazard Category	UN No
17	74-98-6	Propane	1	4.5	E	1978

Legend: E explosion hazard

4.2.4 Process Description

This Mid Island Co-op staffed Bulk Plant has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. At this time, Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

4.2.5 Passive Mitigation

The 9,400 USWG horizontal propane storage tank is installed above ground.

Locked non-climb-able metal fence segregate the above ground propane tank from the public.

Stationary propane tank and its associated piping are protected against collision damage by concrete filled metal posts XXXX.

4.2.6 Active Mitigation

The facility is illuminated at night.

The facility has a typical amount of portable fire extinguishers as required by the local fire code. Access for fire department equipment is good.

The propane storage tank is within reach of hose streams from outside of the facility and firefighting water is supplied by water shuttles.

The delivery trucks have driven-away protection in the form of interlocks that prevent the truck from being placed into gear with the propane loading hose attached ("refinery gates"). The tanks on the delivery trucks are outfitted with excess flow valves that will shut off flow to the atmosphere should a significant hose or pipe break occur. Trucks are outfitted with positive air shut off devices and will shut down the engine if propane gas is ingested. Drivers have an emergency remote stop device in their possession that if activated shuts off the truck, closes the ISC valves and while pumping requires the driver to manually press a button at timed intervals to continue flow. A back-check valve at the barrel fill-in point protects piping.

Manual emergency shutdown devices are provided at the above ground tank and on the North exterior wall of the convenience store. Pressure relief valves are installed on the fixed tank and delivery vehicles.

There are good controls utilizing the operating and maintenance procedures. The storage tank has no other fire systems or controls such as fire or gas detection systems.

Vandals or trespassers to the facility and propane area are dealt with by the local law enforcement fully of the law.

4.3 Frequency, Probability and Consequence Risk Assessment

Version 8.71 of the commercially available software package, Safeti (formerly Phast Risk) from DNV was used to perform a probabilistic risk assessment of this operation:

https://www.dnvgl.com/services/qra-and-risk-analysis-software-phast-and-safeti-1676

Safeti has consequence modelling software, used for developing heat radiation levels, used in accessing the fire and explosion consequences (overpressures and heat radiation) associated with the propane tanks. Safeti examines the progress of a potential incident from the initial release to far-field dispersion, including modelling of pool spreading and evaporation, and flammable and toxic effects. Safeti was used for the consequence modelling of events modelled for emergency response purposes.

Safeti allows individual receptors to be defined with specific vulnerability data providing a much more accurate picture of the risks to which those within the calculated consequence areas are exposed. The program supports a range of vulnerability models, specific to the effect type being considered. For explosion vulnerability, models are available which consider either overpressure or impulse, with the data being treated discretely or interpolated. For radiation effects, flammable probit methods based on intensity and dose are used.

The methods and vulnerabilities are based on the guidance given by the National Institute of Public Health and the Environment (RIVM) Centre for External Safety, of the Netherlands, as set out in their External Safety (Establishments) Decree (BEVI) (RIVM, 2009). This methodology is based on the former guidelines presented by TNO in their "Coloured Books", with the Guidelines for Quantitative Risk Assessment, CPR18E, or more widely known as the "Purple Book" (CPR-RE, 2005). The concepts of the other "Coloured Books" are utilized within Safeti.

- BEVI – Besluit Externe Veiligheid Inrichtingen, translates as the External Safety (Establishments) Decree of RIVM
- Purple Book - CPR 18E "Guidelines for Quantitative Risk Assessment" published by the Committee for the Prevention of Disasters department TNO, a Netherlands Organization
- RIVM – Rijksinstituut voor Volksgezondheid en Milieu, translated as the National Institute of Public Health and the Environments of the Netherlands
- TNO - Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, or the Netherlands Organization for Applied Scientific Research, out of Sdu Uitgevers, Den Haag (The Hague). Their Committee for the Prevention of Disasters publishes guidelines on quantitative risk assessment calculations.

The consequence estimating models used in this study are for risk management purposes only. As such, they are not modelling of the actual physical event. As with all models, small changes in the input parameters can significantly affect the resulting consequence estimates.

While the parameters selected in consultation with FCL are reasonable for the model and situation, it must be kept in mind that the results are not absolute. Therefore, the consequence estimates should be taken as only an indication of the extent or order of magnitude of the potential consequence. The actual consequence may be more severe than under the reasonably foreseeable conditions assumed.

SAFETI Parameters and Model Settings:

- Dispersion
    - Atmospheric Expansion - DNV Recommended
    - Modelling of Instantaneous Expansion - Old Standard Method
    - VCE - TNT, 10% yield, Ground Burst
    - Fireball - Roberts TNO Hybrid
    - BLEVE (not applicable to this site) - CCPS Second Edition

4.3.1 Frequency Analysis

As Mid Island Co-op has had no significant propane incidents in its history, we elected to use general industry data for the frequency analysis, specifically that data given in the Purple Book and BEVI methodologies. From these frequencies, combined with the consequence distances calculated for events which would reach offsite receptors, Individual Risk contours can be calculated to compare to acceptable risk criteria.

The use of this method negates the need for fault tree, event tree, and human reliability analysis, as the frequency of the end event is given directly for input into Safeti.

The probabilities of interest in this study are given as:

Table 4.3.1

Event / Installation	Events per Vessel-Year or per Hour-Operation		
Loss of Containment	Instantaneous	10 minutes Continuous	10 mm dia. Continuous
Stationary Pressure Vessel	5×10^{-7} /y	5×10^{-7} /y	1×10^{-5} /y
Loss of Containment	Instantaneous	Largest Connection, Continuous	
Pressurized Road Tankers	5×10^{-7} /y	5×10^{-7} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Hoses	4×10^{-6} /h	5×10^{-5} /h	
Loss of Containment followed by Ignition	Instantaneous	Largest Connection, Continuous	
Road Tanker on Site	1×10^{-6} /y	1×10^{-6} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Piping (nom dia. <75mm)	1×10^{-6} /m-y	5×10^{-6} /m-y	
Piping (nom dia. ≥75mm, ≤150mm)	3×10^{-7} /m-y	2×10^{-6} /m-y	
Piping (nom dia. >150mm)	1×10^{-7} /m-y	5×10^{-7} /m-y	

Safeti also utilizes the probability of ignition from the BEVI methodology for stationery and road tanker vessels. For stationary vessels, the probability of ignition is 0.2, 0.5, and 0.7 for continuous releases of 10, 10 to 100, and over 100 kg/s respectively, and for instantaneous releases of 1000, 1000 to 10,000, and over 10,000 kg respectively. Further, we have entered ignition sources at the adjacent facilities

and residential dwellings, which have gas-fired heating systems, and a linear ignition source being the roadways adjacent to the property.

We have multiplied the frequency at which a single vessel may lose containment by the number of similar vessels typically on site, by the number of hours loading hoses are used, or by the number of metres of piping which may contain propane.

An important element in the frequency at which a particular dispersion may reach a receptor is the wind direction and speed. Of slightly lower effect on the dispersion, but still somewhat significant for propane, is the atmospheric temperature, stability, and humidity. Although we have reviewed historical wind directions and speeds, and other pertinent weather parameters in the area, based on Environment Canada, we did not use this data directly in the compilation of the individual risk contours based on wind direction. Rather, we utilized the greatest possible extent of the Individual Risk contour and plotted that distance as a circle of that diameter, thus adding conservatism to the calculation based on wind direction.

We then considered the safety features of the facility, especially of the loading operations, which have the highest frequency of releases traditionally. Each of the delivery trucks are outfitted with an interlocking device, which does not allow the truck to move if the loading hose is attached to the main vessel. This feature lowers the frequency of a hose drive-away event occurring by approximately one order of magnitude.

Other typical features such as excess flow valves on delivery truck tanks, pressure relief valves, and, most importantly, management systems including operating and maintenance procedures and operator training, would be expected to lower the frequency of the postulated events by at least another order of magnitude in aggregate, virtually across the scenarios. However, within the loss data, as is typical with all frequency numbers, we do not know how many of the safety features were in place for the events that the frequency data was based on, therefore, we have assumed, conservatively, that the equipment in those losses had a reasonable number of safety features.

4.3.2 Consequence Analysis

Propane is held and dispensed from the above ground propane storage tank on the site. The vessel, hose, and piping sizes were entered in Safeti to calculate consequences of loss of containment events. In following the BEVI and TNO Purple Book methodology, and thus the remainder of the TNO Coloured Book series, we have used the vulnerability to receptors as contained in that series. Vulnerability was in relation to thermal radiation effects due to fireball, jet, and pool fires, and explosion overpressure effects.

4.3.2.1 Modelling Parameters and Weather

Weather parameters were modelled based on data provided at hourly intervals over a 5-year period. This data considers wind speeds and directions and the associated probabilities, the Pasquill atmospheric stabilities, relative humidity's, etc., and daytime and night-time conditions. This data was entered Safeti to calculate probabilities of weather-related dispersion events over the releases.

4.3.2.2 Releases in General

For each of the vessels and tank, there were common release events chosen, based on the BEVI requirements. These were a catastrophic, instantaneous release of all the mass of the vessel; a 10-minute release of the entire mass of the vessel, and a 10 mm hole in the system, releasing all the mass of the vessel over time. If vessels at this facility are connected via a common header, we postulate a release of more than one vessel through piping. In addition, when a hose connects the 9,400 USWG tank with the truck tank, there is a possibility that both tanks will empty their contents through the hose release if protection devices fail to operate. Thus, we have used the combined volumes of the two tanks in these cases.

Note that in all cases, the volume of the releases in question would be a maximum of 80% of the nominal volume of the tanks, based on maximum fill levels. However, for the consequence analysis for emergency response considerations, we have used the full 100% capacity of the propane tanks to add conservatism and to indicate worst probability scenarios.

All releases (other than catastrophic) were assumed to be released horizontally, which creates the maximum offsite consequences. The release can be directed in any direction over 360 degrees and impinges on the ground or nearby vessels and structures. Such impingement creates a larger consequence event onsite, but lesser consequences offsite. Thus, the use of a horizontal jet is conservative.

Ignition sources for the release events are essentially vehicles in the yard, vehicles on the roadways driving by the facility, heating systems and unclassified electrical equipment on any buildings around the facility. We have placed ignition sources at each of these buildings.

4.3.2.3 Vapour Cloud Explosion (VCE) – Worst Case Scenario

This event would involve a catastrophic breach with instantaneous release of the maximum quantity of propane from the largest tank and would produce:

- an overpressure of 1 psi out to 441 metres, and
- a level of 12.5 kW/m^2 m out to 307 m

According to the US Center for Chemical Process Safety, a vapor cloud explosion "is the result of a release of flammable material in the atmosphere, a subsequent dispersion phase, and, after some delay, an ignition of the vapor cloud. A flame must propagate at a considerable speed to generate blast, especially for 2-D (double plane configurations) and 3-D (dense-obstacle) environments." "In order to reach these speeds, either the flame has to accelerate, or the cloud has to be ignited very strongly, thereby producing direct initiation of a detonation." "…flame acceleration is only possible:

- in the presence of outdoor obstacles, for example, congestion due to pipe racks, weather canopies, tanks, process columns, and multilevel process structures.
- in a high-momentum release causing turbulence, for example, an explosively dispersed cloud or jet release.
- in combinations of high-momentum releases and congestion."

Thus, the use of the older TNT modelling procedure has for the most part been replaced by newer confined volume methods of VCE modelling. However, the VCE is an important scenario,

as it helps with the emergency response zone calculations for use in Environmental Emergency (E2) plans required by regulation. Thus, we present the TNT scenarios here, including the 652 m distance referenced as being the distance to 1 psi for a propane release. This uses a 10% efficiency with a TNT VCE using the EPA's RMP rule TNT calculation. Again, due to the lack of congestion around the site that would lead to large overpressure damage would dictate that the overpressure distances would be significantly smaller than these values in an actual VCE.

In the calculations for the Individual Risk calculations, we used the TNO MultiEnergy (ME) to perform overpressure calculations. The ME method is embedded in Phast Risk and was used in the calculation of overall risk. As this is a congested volume methodology, it is more representative of actual explosion overpressure events. As the calculation of individual risk is for the purpose of risk acceptability, these explosion calculations give better indication of actual risk posed.

The 1-psi VCE overpressure plot is presented below. Note that the propane release is the result of a catastrophic release of all the contents of the vessel instantaneously.

Figure 4.3.2.3.1 Vapour Cloud Explosion (VCE) – Worst Case Release Scenario

The facility is in the centre and the red circle has the greatest impact distance of 1 psi out to 441 m.

In addition to overpressure, the fireball consequence of a VCE will occur. 12.5 kW/m² was chosen as the endpoint of the calculation as the distance where people without shelter could be injured in the event or, without time to seek shelter from the fire radiation.

Figure 4.3.2.3.2 Vapour Cloud Explosion (VCE) Fireball

The propane facility is in the centre and the red circle is the greatest impact distance of 12.5 kW/m² out to 307 m.

4.3.2.4 Jet Fire from a 2" Transfer Hose Rupture – Reasonable Alternate Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank. It will have an impact distance outside the boundary of the facility producing a level of 12.5 kW/m^2 m out to 76 m.

The jet fire is based on a rupture of the largest transfer hose (2" release) that may deliver liquid propane to the atmosphere. The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane at vapour pressure released through a ruptured 2" transfer hose plotted below.

Figure 4.3.2.4 Jet Fire from a 2" Transfer Hose – Reasonable Alternate Scenario

The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 76 m.

4.3.2.5 Jet Fire from a 3" Pipe Rupture – Alternate Worst Case Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank and that would have the longest impact distance outside the boundary of the facility. This event would involve a release scenario due to a rupture of a 3" pipe and would produce:

- a level of 12.5 kW/m^2 out to 100 m.

The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane liquid released through a ruptured 3" pipe plotted below.

Figure 4.3.2.5 Jet Fire from a 3" Pipe – Reasonable Alternate Scenario

The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 100 m.

4.3.3 Identification of Public Receptors

The alternate worst-case scenario is a jet fire based on propane released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario XXXX.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.3.3 Identification of Public Receptors

The facility is in the centre <u>and</u> the red circle is the greatest impact outside the boundary of the facility of 12.5 kW/m² out to 100 m from a most likely release being a rupture of a 3" pipe that may deliver liquid propane to atmosphere.

4.3.4 Identification and Assessment of E2 Scenarios

Mid Island Co-op at 793 Lockinvar Lane Gabriola Island BC – 9,400 USWG Propane Tank (100% full)		
Worst-case Scenario		
Vapour Cloud Explosion (VCE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} VCE's per year	Probability of a VCE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of VCE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	441 m
Alternate Worst-case Scenario		
Jet Fire from a 3" Pipe Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	1×10^{-6} /m-y	Probability of jet fire occurring 1 in a million years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 Kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	100 m
Reasonable Alternate Scenarios		
Boiling Liquid Expanding Vapour Explosion (BLEVE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} BLEVE's per year	Probability of a BLEVE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of BLEVE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	138 m
Jet Fire from a 2" Transfer Hose Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	4×10^{-6} /h	Event occurring every 30 years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	76 m

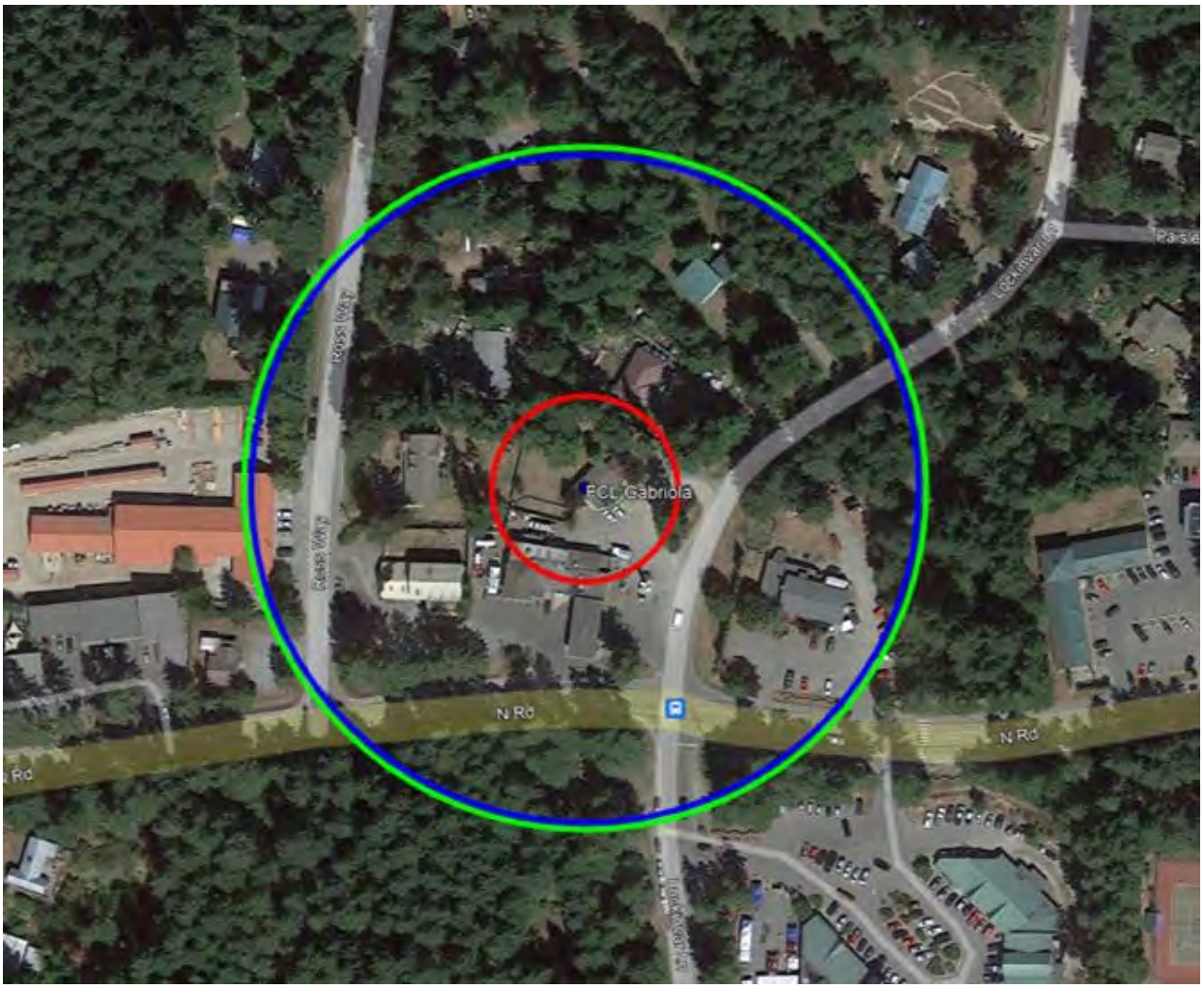
1. ***In the event of a catastrophic failure of the 9,400 USWG tank due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism the possible effect on the area would be overpressures from a blast causing structural damage and or injury as well as possible thermal damage and or injury due to a fire event as described previously in this section.***
2. ***In the event of a release from piping, leaking flange, seal, joint and transfer hoses due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism, the possible effect on the area would be thermal damage and or injury due to a fire event as described previously in this section.***
3. ***If the event were in preliminary stages an alarm would be sounded, emergency shutdowns engaged, evacuations made, traffic control measures implemented, Emergency Services, Mid Island Co-op Management, and FCL's Emergency Management Team contacted, and Incident Command established. Mid Island Co-op will assist Emergency Services. If activated by FCL, ERAC may also assist Emergency Services.***
4. ***The event model accuracy may vary due to general weather, wind speed and direction. Emergency responders would adjust evacuation and avoidance radius of effect accordingly.***
5. ***See 6.9 Environmental Emergency Simulation Exercises Scenarios A-F, and Annex 9.2.2 - Part 2 Scenarios.***

4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria

A comparison of risk estimation modelling results to risk acceptability criteria based on MIACC (Major Industrial Accidents Council of Canada) guidelines for land-use planning and siting determined the site is within risk acceptance criteria.

MIACC dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering).

Figure 4.3.5 (1) MIACC Risk Acceptability Criteria



3x10-7 – All occupancies, including sensitive populations such as schools, hospitals, etc allowed outside of this Contour
1x10-6 – High Density Residential allowed Outside of this Contour
1x10-5 – Low Density Residential and Commercial, Offices, Retail Centres allowed Outside of this Contour

Section 5 Prevention and Mitigation

5.1 Regulatory and Legal Requirements

5.1.1 Risk Management Tools

See 2.7 Plan Consultation/References for tools used to mitigate risks.

5.2 Prevention Initiatives

5.2.1 Elimination Controls

5.2.1.1 Site Selection

See 4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria.

5.2.2 Engineering Controls

5.2.2.1 Equipment

Qualified personnel conduct equipment installations, repairs, and maintenance. Applicable codes and standards for design, construction and maintenance of all vessels, piping valves and safety systems. This facility is equipped with crash protection and dry chemical fire extinguishers, which are located throughout the facility.

5.2.2.2 Emergency Shutoffs and Isolation Equipment

The propane plant has been fitted with emergency shut-offs, pressure and temperature gauges, pressure relief valves, flow indicators, electrical bonding/grounding systems, and drive-away prevention systems on the bulk delivery trucks XXXX.

5.2.3 Administrative Controls

5.2.3.1 Mechanical Integrity - Preventative Maintenance Inspections

Mid Island Co-op and FCL endeavors to maintain all equipment according to the standards set out in provincial Act and Regulation. The maintenance of the propane facility component follows the CSA B149.2-20 Propane Storage and Handling Code. Trained and competent technicians regularly inspect the facility. Defects are corrected records kept.

CSA B149.2-20 inspections:

7.22.5 Maintenance procedures

7.22.5.1
Maintenance procedures shall be appropriate to the particular facility and shall take into account, amongst other things, the following:
a) inspection of protective devices, alarms;
b) regular inspection and testing of hoses;
c) regular review of emergency procedures;
d) regular review of emergency evacuation procedures and designated safe location;
e) propane purging procedures;
f) isolation and tagging;
g) fire extinguishers and firefighting equipment;
h) piping, tubing, pumps, valves, and other propane equipment;
i) storage tanks;
j) electrical equipment;

k) fencing and security measures, signage, and notices;
l) lighting;
m) regular inspection and testing of vaporizers; and
n) any manufacturer's maintenance instructions for equipment.

7.22.5.2
Persons who perform maintenance on these propane systems shall be trained in the hazards of these systems and in the maintenance and testing procedures applicable to the facility

Note: See Dynamic Records – Equipment inspection, testing and maintenance schedules

5.2.3.2 Training

Employee and responder training that pertains to this plan is listed in Preparedness Section 6.

5.2.3.3 External Alerting and Emergency Notification System

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

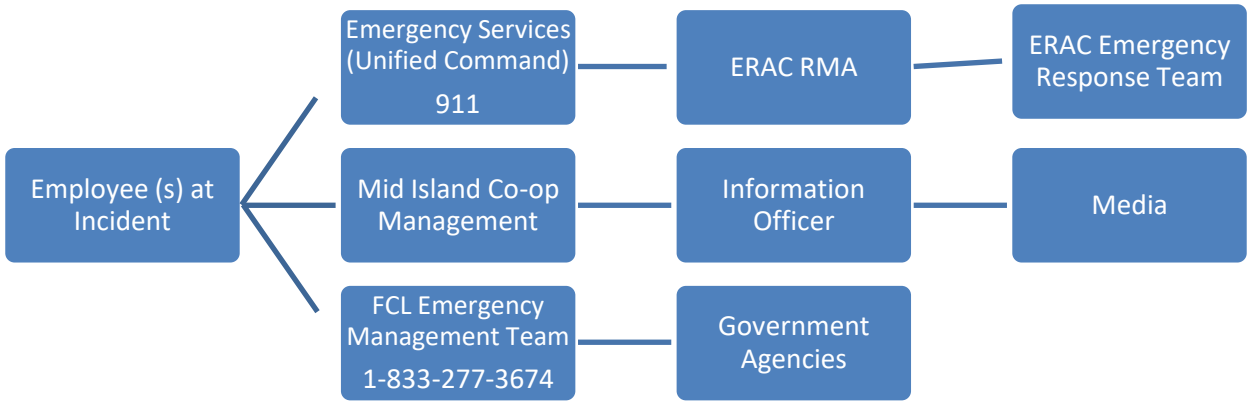
Section 6 Preparedness

6.1 Incident Management System

6.1.2 Emergency Response Management Model

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) etc. may be dispatched to scene to provide technical advice. Depending on the nature of the event, it may be a combination of the emergency service providers and may include regulatory officials who establish a Unified Incident Command at which time an Mid Island Co-op employee may participate in Unified Command at the emergency in a Unified Command or advisory role. If the event sustains over a period typically a standard Incident Command protocol will prevail which will include the establishment of operational periods; and, development of an incident action plan stating the objective/s, strategy/s, and tactics for the operational period.

FCL's Emergency Management Team is a group of subject matter experts and advisors who would provide guidance to Mid Island Co-op's emergency response measures. STARS emergency contact centre will take in Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call. Refer to 7.2.3 FCL Emergency Management Team for further information.



6.2 Mid Island Co-op/FCL Roles and Responsibilities

6.2.1 Emergency Response Coordinator (ERC)

The ERC will typically be the most senior or qualified manager, supervisor or employee on site that is able to instruct the activities or others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

Typical duties are:

- Coordinate and direct the activities of the site employees during an event.
- Using sounding an alarm, alert occupants of the event
- Assess the resources and actions required for a response.
- Ensure Emergency First Responders are notified using 911, notifying Mid Island Co-op Management and the Co-op Emergency Management Team
- Maintain communication with the Emergency First Responders and, if required, assign an Assistant Coordinator
- Ensure that all personnel are directed in any post incident activities.

6.2.2 Information Officer

In the event of an incident that may require communications with the media and our regulator, the Mid Island Co-op will assign an Information Officer. The Information Officer may be involved with the activities during a response and may be involved with remedial activities following an event.

6.2.3 FCL Emergency Management Team

This team is a group of subject matter experts and advisors who would provide oversight and guidance to the emergency response measures. STARS emergency contact centre will take in FCL, and Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call.

There are five roles within the EMT, and a list of their responsibilities follows. The EMT will work together with assignment of on-scene personnel to work toward ensuring FCL's objectives are accomplished.

Emergency Operations Manager (EOM)

- Working with the EMT, determines:
    - Whether an Emergency Response Assistance Plan should be activated
    - The crisis levels.
    - The crisis owner
    - What support or guidance may be provided?
- Accepts responsibility for the FCL Emergency Management Centre and sets over-all objectives and priorities.
- Assigns an on-scene Incident Commander (IC) or Technical Advisor who will represent FCL in Unified Incident Command (UIC) for on-scene emergency response.
- Working with FCL on-scene IC, designates or approves on-scene Information Officer (IO) to manage communications.
- Assesses and monitors crisis for appropriate level of escalation/de-escalation, in consultation with other EMT members.

- Works with and approves the following, alongside the on-scene IC:
    - Incident Action Plans (IAP) – Works with on-scene FCL IC to develop and approve on-scene IAP objectives.
    - Approves resource orders to support response measures.
    - Approves demobilization plans.

Safety Officer

- Monitor's incident operations and advises the Emergency Operations Manager on all matters related to operational safety, including the health and safety of emergency responder personnel.
- Works directly with on-scene Safety Officer or UIC (if no safety officer has been designated), to ensure a safety plan and accountability plan has been developed and implemented.
- Reviews and approves the safety and accountability plans developed by on-scene Safety Officer or UIC
- Advises on Health & Safety regulatory requirements.
- Develop an Incident Safety Plan
- Ensure incident investigation responsibilities are fulfilled.
- Communicates with Health & Safety regulators.

Information/Liaison Officer

- Initiates and directs established communication response for Level 1 and 2 crisis situations.
- Informs the Crisis Communication Lead (CCL) about crisis and determined crisis level.
- Assists in the preparation of external communication materials delivered by the CCL, including updates, press releases, media statements, key messages, etc.
- Under the direction of the CCL, prepares and delivers internal key messages and updates.
- Delivers updates to internal stakeholders through the Everbridge system, including FCL's Senior Leadership Team
- Track's media calls and requests and refers them to the CCL.

Environmental Officer

- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential environmental impacts.
- Provides technical support in the development of tactics to minimize / mitigate the environmental impacts.
- Responsible for retaining, dispatching, and managing Environmental Consultants to manage any environmental consequences of the incident or spill as required.
- Provides technical assistance to response teams, as required.
- Manage and supervise operations associated with the transfer, storage, and disposal of liquid, solid and/or hazardous wastes during emergency response operations.
- Determine the most effective methods to be employed and how to minimize the amount of waste materials generated during emergency response operations.
- Delivers updates on environmental impacts response measures and status to Emergency Operations Manager
- Reports environmental spills, releases, or potential imminent releases to federal and provincial authorities.
- Provides direction and technical advice regarding post-incident cleanup and recovery.

Secondary Support – as determined by the Emergency Operations Manager

On-scene Incident Commander/Technical Advisor

- Reports to the Emergency Operations Manager (EOM)
- Provides summary of the incident to the EOM and EMT (example ICS form 201 – Incident Briefing)
- Initiates a site activity log for the operational period (example ICS form 214)
- Working within UIC, develops on-scene IAP incident objectives and develops or approves strategies and tactics.
- Working within UIC, assigns Operations and Planning Chiefs or accepts their roles in determining strategies and tactics of IAP and supervises on-scene resources.
- Working within UIC and with Operations Chief, ensures Strike Team accomplishes strategies and tactics of the IAP.
- Provides technical expertise to the EOM and UIC on the product or commodity that is involved.
- Provides regulatory expertise such-as regulatory: compliance, reporting and liaise with regulators.
- Liaise with ERAC, as necessary.

Security Officer

- Maintains overall management and guidance to security and protection of FCL facilities.
- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential security impacts.
- Provides technical support in the development of tactics to minimize / mitigate the security impacts.
- Responsible for retaining, dispatching, and managing Security Consultants to manage any security requirements.
- Provides technical assistance to response teams, as required.
- Delivers updates on security impacts response measures and status to Emergency Operations Manager

Additional Roles

The Emergency Operations Manager will determine the need for additional support. Depending on the severity and length of the crisis, additional roles such as Finance and Logistics Officers, Legal, Insurance, Documentation, Procurement, Government Relations, Human Resources, etc. may be required.

6.3 Advance Public Notification and Communication

6.3.1 Public and Neighborhood Emergency Awareness Notifications

The process of preparation will have similarities for most areas, which will mostly be site visits and the offering of information pertaining to evacuations, propane vapor-cloud characteristics and other related safety measures. Some communities have systems organized by the local EMO Coordinators that will automatically notify areas of risk through electronic communication methods. This would involve a combined effort between Mid Island Co-op facility management and local emergency services. Mid Island Co-op offers a pamphlet (see 6.3.2 Community Emergency Notification System) to inform the neighboring businesses or community on the actions required in the event of an incident. Employers, organizations, and residents that are located within the notification zone may incorporate portions of the E2 plan into their own safety practices.

Notification of potentially impacted neighbouring occupancies and Gabriola Island Fire Rescue from the Alternate Worst-case Scenario – 4.3.2.5 Jet Fire from a 3" Pipe Rupture was accomplished. Figure 4.3.2.5 illustrates the greatest impact outside the boundary of the facility of 12.5 kW/m2 out to 100 m - see Annex 9.3.3.

Emergency Notification System

The intent of this notification is to inform all neighboring residences, businesses and organizations of actions that may be required in the unlikely event of a major propane escape or fire that would cause an emergency evacuation.

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

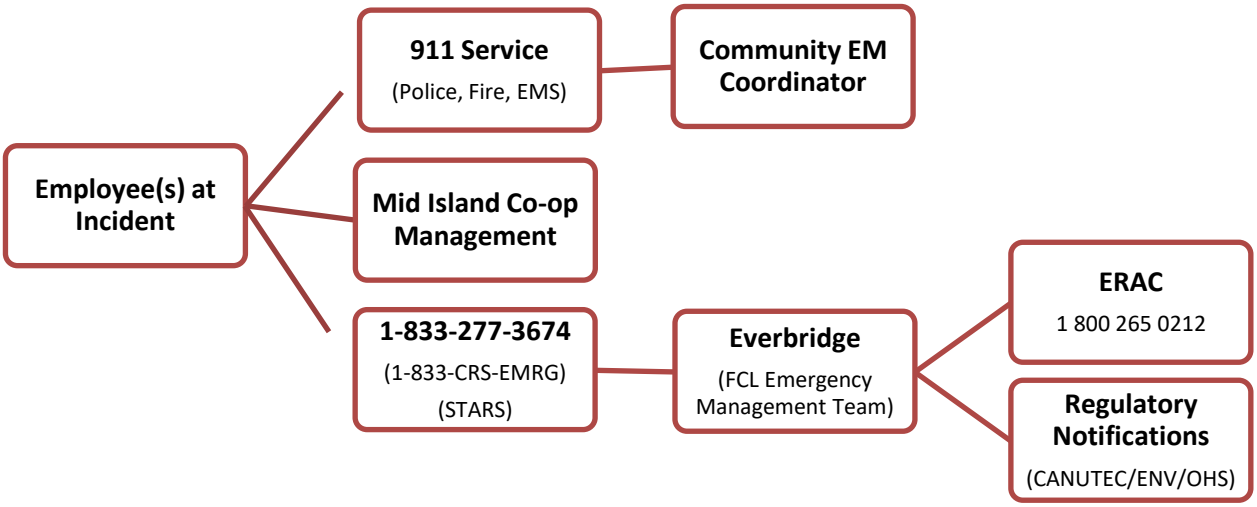
Important facts about Propane:

- Propane is non-toxic.
- Propane has an odourant added to it that makes it smell like rotten eggs or skunks.
- Flames, smoking material, sparks, and static electricity will ignite propane when mixed with the right amount of oxygen.

If you require any additional information or have any concerns, please contact Mid Island Co-op at (250)-802-1198.

6.4 External Alerting and Notification

6.4.1 Emergency Assessment and Alert Notification



For External Alerting/Notification/Resources Contact Lists refer to Annex 9.1

6.5 Evacuation and Shelter-in-place

There is potentially one outcome that can occur that affects the public. The circumstances of the event will dictate the type of instructions given to the public.

- Shelter-in-place – It may be safer for the public or neighbouring facilities to shelter-in-place to avoid exposure to a propane release depending on the quantity and modifying conditions, such as the prevailing wind.
- Evacuate – Under the direction of local emergency services, it may be necessary to evacuate to a safe distance. Instructions will be provided to the public regarding the evacuation.

6.6 Mutual Aid and Mutual Assistance

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) and where required an ERAC Emergency Response Team etc. may be dispatched to scene.

6.7 Equipment

The site is equipped with dry chemical fire extinguishers that are strategically located, and on trucks. Emergency electrical switches that shut-off electrical power to portions of the facility or, the entire facility is strategically located on site.

6.8 Training and Exercise

To ensure successful plan activation, management will ensure that employees receive adequate training to be familiar with the E2 plan requirements. Conducting regular function specific training and emergency exercises prepare personnel and ensure viability of the plan. The following is a non-exhaustive list of the training that employees receive according to their internal roles and responsibilities.

6.8.1 Employee Training

Training and testing of facility employees who have specific emergency duties ensures understanding of their roles and responsibilities listed in this E2 Plan.

All personnel handling propane hold appropriate certification of training. Personnel receive annual and/or new hire awareness training on Mid Island Co-op site-specific emergency response plans.

Some of the additional courses that would accommodate product awareness and emergency activities include WHMIS, TDG and Fire Extinguisher use.

6.8.2 E2 Plan Exercise Schedule

Training	Attendees	Frequency
E2 Plan – Awareness Workshop	All	On Hire
E2 Plan – Simulation Exercise	All	Each Year
E2 Plan – Full-scale Simulation Exercise	All	Every 5 Years

6.8.3 Responder Training

First level response training is provided internally for employees through orientations and annual Emergency Response/Environmental Emergency Plan training sessions designed to meet Federal Environmental Emergency Plan Regulation requirements.

LPGERC (Liquid Propane Gas Emergency Response Corporation) now called ERAC (Emergency Response Assistance Canada) which is a non-profit division of the CPA (Canadian Propane Association) facilitates secondary or sustained emergency response training.

FCL (Federated Co-operatives Limited) Propane and the CRC (Co-op Refinery Complex) are both participants with ERAC. TC (Transport Canada) approves secondary or sustained emergency response systems meeting TDG (Transportation of Dangerous Goods) ERAP (Emergency Assistance Plans) Regulations.

ERAC has established, HBC (Home Base Coordinators), TA's (Technical Advisors), RMA's (Remedial Measures Advisors) and ERT's (Emergency Response Teams) to help and/or advise local emergency services across Canada.

Emergency Fire Services may utilize the training offered by the ERAC specifically designed for propane fire response called PTI 911-01 LPG Awareness for Firefighters.

6.9 Environmental Emergency Simulation Exercises

Scenario A
Propane Release – no fire

Scenario B
Propane Release – with fire

Scenario C
Structural Fires – local to propane storage

Scenario D
Wildfires – local to propane storage

Scenario E
Bomb Threats/Terrorism

Scenario F
Evacuation Procedures

See Annex 9.2.2 - Exercise Documents, Part 2 Scenarios - for Scenario A-F Emergency Simulation Exercise scenario examples.

Section 7 Response

7.1 E2 Plan Activation and Emergency Contacts

ADDRESS of Gabriola Island : 793 Lockinvar Lane Gabriola Island BC First Responder Entrance - GPS in DD: 49.17439, -123.84605				
E2 PLAN ACTIVATION and EMERGENCY CONTACTS				
IN CASE OF EMERGENCY CALL:				
911				
NEXT REPORT TO MANAGEMENT AT:				
POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198
NEXT REPORT TO CO-OP EMERGENCY AT:				
1-833-277-3674 (CRS-EMRG)				
FCL PROPANE EMERGENCY CONTACTS:				
POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS		
POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES	
FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

7.2 Emergency Information & Equipment Locations

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store and Convenience store electrical room
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREAS	East of site on North Road

7.3 Emergency Notification and Communication and Procedure

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

7.4 Emergency Response Measures

7.4.1 Propane Release – no fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller – where applicable.
- Ensure all vehicles in the compound are not running or started.
- Close all doors to buildings, notify building occupants and advise an evacuation if the propane vapors have potential to travel into a building or its ventilation system.
- If the source of the release cannot be shut-off, initiate an evacuation.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist or advise Emergency Services as required.

7.4.2 Propane Release – with fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller - where applicable.
- If the fire is not propane fed, attempt to extinguish the fire.
- If the fire is propane fed and extinguishment may lead to an uncontrolled propane release do not attempt to extinguish the fire
- If the source of the release cannot be shut off and or if extinguishment is not possible, activate the emergency horn located on North exterior wall of convenience store, go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.3 Structural Fires – local to propane storage

- Notify personnel to evacuate the building.
- Do not place yourself in an area where fire entrapment can occur.
- Attempt to extinguish fire using fire extinguishers, if safe to do so.
- Close doors as you leave rooms to minimize fire spread rate.
- Leave the building using the closest safe exit.

- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Have fuel delivery units (petroleum and propane) moved, if safe to do so – where applicable.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.4 Wildfires – local to propane storage

In the event of a wildfire and an evacuation is pending:

- Alert all personnel and have any fuel delivery units (petroleum and propane) and other vehicles in the field remain away from the facility until the fire threat is over.
- If fuel delivery units (petroleum and propane) are on site upon the evacuation order have them driven off site if it is safe to do so and following the direction/permission of the Emergency Authority.
- Prior to site evacuation ensure all fuel storage systems are shut down, close all building doors.
- Drain all Bulk Plant hoses if safe to do so.
- Secure Bulk Plant by closing and locking gates.
- Report how much propane in in Bulk Storage to BC Wild Fire.

7.4.5 Bomb Threats/Terrorism

Bomb or act of terrorism threats may come in the form of a call, mail or note, electronically, verbally in person or maybe the discovery of a device either obvious or disguised.

Discovery of a suspicious device/package:

- Do not touch it or attempt to open or disarm it.
- Evacuate the location following the evacuation procedure.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go the Secondary Muster area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 778-772-9800.
- Report to 1-833-277-3674 (CRS-EMRG).

If you receive a threatening call:

- Listen to the caller in a calm and polite tone of voice.
- Start taking notes as soon as possible.
- Try to silently get the attention of a co-worker and write down the situation.

- Ask about the bomb location.
- Ask what type of bomb it is.
- Ask when and how it will explode.
- Ask the caller why they placed the bomb.
- Take note of the person's voice description such as accent, speech speed and language skills, mannerism, sex, and age.
- Take note of any background noises.
- Take note if the person seemed to be familiar with your location.
- Take note if the person's voice seemed familiar to you.
- Ask for the person's name and where they are calling from.
- When the conversation is over call 911.
- Establish communication process with police for further direction.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Complete a tally of personnel.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.6 Evacuation Procedures

When notification of a propane emergency or an evacuation order is given:

- Stop all activities.
- Eliminate all ignition sources if safe to do so.
- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.4.7 Serious Injury/Illness

- Assess the scene.
- Administer first aid as per training.
- Call 911 for assistance as warranted.
- Establish a clear pathway for EMS.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.8 Vehicle Incidents – Involving On-site Propane Delivery Units

Risk Assessment

- Determine threats to life (injuries to self or others, release or anticipated release of propane, traffic, fire, etc.).
- Identify ignition sources (shut-off engine, use vehicles electrical disconnect switch where possible).
- Inspect propane vessel, piping, valves etc. and truck to identify leaks, damage etc.

Report the Incident

- Call 911 when:
    a. You require Police, Fire or Medical personnel.
    b. There is a release or anticipated release of propane e.g.
        i. a propane delivery truck rolled over in a ditch with all four sides not visible is an example of an anticipated release.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

Secure the site.

- Deploy roadside markers and reflectors (no flares).
- Clear the area of non-essential and untrained personnel.
- If safe to do so, stop or divert traffic or public access to site.

Section 8 Recovery/Restoration

8.1 Disposal and Waste management

In the unlikely event of release that caused damage, Mid Island Co-op will endeavor to reduce and remediate any damage to the environment and will bring in the proper resources including specialized equipment and personnel to develop and implement the appropriate disposal and waste management plan. Due to the inherent characteristics and hazards of propane as described in Section 4, recovery activities may be limited to removal of debris.

8.2 Site Restoration

In consultation with public authorities, Mid Island Co-op will initiate site restoration processes as soon as possible, striving for rapid restoration from environmental damage. A specific restoration plan will be generated following an incident and will consider the specific details and circumstances of an incident.

8.3 Public Notification

In consultation with public authorities and specialized personnel, the extent of damage will be determined. Appropriate communication will be provided by public authorities and/or Mid Island Co-op to all relevant parties, including the public utilizing in person visits, local emergency services, radio, TV, automated phone messages, and social media e.g., Facebook, Twitter etc.

8.4 Stakeholder Engagement

This facility is owned and operated by Mid Island Co-op and will assist the organization of the community's resources necessary for people recovering from an emergency.

8.5 Post Incident Evaluation

8.5.1 Post Incident Review and Debrief

A post incident review and debrief will be conducted after every incident or training exercise for all personnel involved to evaluate the incident. Record and assess - using the Exercise Evaluation and Corrective Actions document found in Part 4 of Annex 9.2.2 of this plan - to ensure the activities carried out were in accordance with the plan. Replace and/or service safety equipment as required.

Section 9 Annexes

Annex 9.1 External Reporting

- 9.1.1 Environmental Reporting
- 9.1.2 Public Safety Reporting
- 9.1.3 OHS Reporting
- 9.1.4 TDG Reporting
- 9.1.5 ERAP Activation Reporting
- 9.1.6 Gas and Pressure Vessel Reporting

Annex 9.2 Documents

- 9.2.1 Safety Data Sheet
- 9.2.2 Annual and 5-Year Full-scale Simulation Exercise Document
  - Part 1 – The Exercise Plan
  - Part 2 – Scenarios
  - Part 3 – Participation List
  - Part 4 – Exercise Evaluation and Corrective Actions

Annex 9.3 Dynamic Records

- 9.3.1 Exercise Records
- 9.3.2 Preventative Maintenance Inspections Records
- 9.3.3 Community Notification Records
- 9.3.4 Plan Stakeholder Status and Acknowledgement
- 9.3.5 Facility Photos

Annex 9.4 Maps and Diagrams

- 9.4.1 Fire Services Route to Site
- 9.4.2 Emergency 1st Responders Entrance to Facility
- 9.4.3 Muster Areas
- 9.4.4 Facility Maps
- 9.4.5 Plant Schematics
- 9.4.6 P&ID drawings
- 9.4.7 Tank/s Data Plate/s

Annex 10.1 External Reporting

9.1.1 Environmental Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line.
- Submit within 30 days of the emergency response completion date of the spill.

Federal - Environment and Climate Change Canada (ECCC)

- Complete and submit a written report to Regional Director, Environmental Enforcement Directorate-ECCC-PYR ec.dale-rpn-enforcement-pnr.ec@canada.ca
    - for an environmental emergency that has or may have an immediate or long-term harmful effect on the environment,
    - constitutes or may constitute a danger to the environment on which human life depends, or
    - constitutes or may constitute a danger in Canada to human life or health.
- The written report must include the information referred to in Schedule 8 of the E2 Reg's, SOR/2019-51.

Note: ECCC has accepted Transport Canada Transport Canada 30-Day Follow-Up Form (TP16-0086E) and all other container specifications forms as fulfilling this responsibility.

9.1.2 Public Safety Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Emergency Management BC – EMBC – will make necessary provincial contacts.

9.1.3 Occupational Health & Safety Reporting

British Columbia

- Call 1-888-621-7233 (Work Safe BC 24/7) to report a serious incident or chemical release (e.g., propane) or unsafe working conditions including:
    - Serious injury to or death of a worker
    - Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation
    - Major release of a hazardous substance
    - Fire or explosion that had a potential for causing serious injury to a worker.
    - Blasting incident causing personal injury
    - Dangerous incident involving explosives, whether there is personal injury.
- Crisis Support Line (injured worker) 1-800-624-2928 (24/7)
- Critical Incident Response (witnessed to a traumatic workplace accident) 1-888-922-3700 (24/7)

9.1.4 Transportation of Dangerous Goods Reporting

British Columbia

Call 1-800-663-3456 (24/7) (Provincial Emergency Program – Emergency Management BC) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line. Submit within 30 days of the emergency response completion date of the spill.

Federal – Transport Canada

- Call 1-888-226-8832 (CAN-U-TEC 24/7), 1-613-996-6666 or *666 on cellular in the event of an emergency involving a release or anticipated release of dangerous goods, and/or to report any release of propane into the environment that could pose a danger to public safety or any sustained release of 10 minutes or more, and
- Complete a Transport Canada 30-Day Follow-Up Form (TP16-0086E) and send to the Director General, TDG at dor-rcd@tc.gc.ca utilizing TP 15294 – Guide for Reporting Dangerous Goods Incidents (where applicable, ensure to fill out a container specifications form found in Annex E of the Guide), and

Note: Confirm approval from Transport Canada prior to moving a damaged propane truck or trailer from the scene or roadway

9.1.5 Emergency Response Assistance Plan (ERAP) Reporting

Federal

- Transportation Incidents: In response to a release* or anticipated release**, FCL's Emergency Management Team will implement the Emergency Response Assistance Plan (ERAP) by:
  - Calling Emergency Response Assistance Canada (ERAC) at 1-800-265-0212 and implement Federated Co-operatives Ltd. ERP2-0010-025 to tier 1 or 2.
    - tier 1 implemented for technical or emergency response advice, but none of the emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.
    - tier 2 implemented for technical or emergency response advice, and emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.

*Release means escape of dangerous goods

**anticipated release examples: an incident has occurred, and propane will have to be transferred; propane vessel has been damaged, and propane may be released; and a tanker rolled over, with all four sides not visible

9.1.6 Gas and Pressure Vessel Reporting

Provincial

Incidents and hazards can be reported 24/7 by completing the incident form or by calling 1-866-566-7233.

Definitions

Incident: A failure of a regulated product, work or operation that caused damage or injury

Hazard: A source of potential harm to persons or potential damage to property.

https://www.technicalsafetybc.ca/contact-us/report-an-incident

SAFETY DATA SHEET

1. Identification

Product identifier	**PROPANE- LIQUEFIED PETROLEUM GAS**
Other means of identification	
Product code	127
Synonyms	Unstenched Propane * Stenched Propane * HD-5 Propane * Standard Propane
Recommended use	Various.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer	Consumers' Co-operative Refineries Limited
Address	P.O. Box 260; 9th Avenue North Regina, SK S4P 3A1 Canada
Telephone	(306) 719-4353
Supplier	Consumers' Co-operative Refineries Limited
Address	P.O. Box 260; 9th Avenue North Regina, SK S4P 3A1 Canada
Telephone	(306) 719-4353
24-Hour emergency telephone	(613) 996-6666 - Canutec

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
	Simple asphyxiants	Category 1
Health hazards	Not classified.	
Environmental hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.
Precautionary statements	
Prevention	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection.
Response	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	Protect from sunlight. Store in a well-ventilated place.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Other hazards	Contact with liquefied gas may cause frostbite.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	100

Ethanethiol	75-08-1	0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. Get medical attention if breathing difficulty persists.

Skin contact Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.

Eye contact Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 20 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Most important symptoms/effects, acute and delayed Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Water spray. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Extremely flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode. Use approved gas detectors in confined spaces.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods Evacuate area. Check oxygen content before entering area. Stop leak if you can do so without risk. Remove pressurised gas cylinders from the immediate vicinity. Turn leaking cylinder with the leak up to prevent escape of gas in liquid state. Closed containers can burst violently when heated, due to excess pressure build-up. Use water spray to keep fire-exposed containers cool. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.

General fire hazards Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Eliminate all sources of ignition in vicinity of released gas. Evacuate all non-essential personnel to an area upwind. Stop leak if possible without any risk. Ventilate enclosed areas to prevent formation of toxic, flammable or oxygen deficient atmospheres. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Attempt to stop the gas leak, if no risk is involved.

7. Handling and storage

Precautions for safe handling	Eliminate all sources of ignition. When using do not smoke. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Valve protection caps must remain in place unless container is secured with valve outlet piping to use point. Close valve after each use and when container is empty. Do not drop, drag, slide or roll cylinders on their sides. Use a suitable hand truck to move gas containers. Use a pressure reducing regulator when connecting container to piping or systems. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. Do not use gas directly from containers. Do not heat container by any means to increase the discharge rate of product from the container. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). All equipment used when handling the product must be grounded. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Secure cylinders in an upright position at all times, close all valves when not in use. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Quebec OELs. (Ministry of Labour - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

Appropriate engineering controls Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate ventilation and minimize the risk of inhalation of gas.

Individual protection measures, such as personal protective equipment

Eye/face protection If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

Skin protection

Hand protection Wear cold insulating gloves.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Compressed liquefied gas.

Colour Colourless.

Odour Boiling cabbage if stenched.

Odour threshold 4800 ppm

pH Not available.

Melting point/freezing point -180 °C (-292 °F) / -185.89 °C (-302.6 °F)

Initial boiling point and boiling range -42 °C (-43.6 °F)

Flash point -101.1 °C (-150.0 °F) Pensky-Martens Closed Cup

Evaporation rate > 1 (Ether (anhydrous)=1)

Flammability (solid, gas) Extremely flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.2 %

Flammability limit - upper (%) 9.5 %

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure 1034.1 - 1241 kPa

Vapour density 1.6

Relative density Not available.

Solubility(ies)

Solubility (water) 6.5 % v/v in water.

Solubility temp. (water) 20 °C (68 °F)

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature	432 °C (809.6 °F)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Critical temperature	96.6 °C (205.88 °F)
Explosive properties	Not explosive.
Molecular weight	44.11 g/mol
Oxidising properties	Not oxidising.
VOC	100 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness. Inhalation of high concentrations may result in central nervous system depression and reduce the ability of the blood to carry oxygen to body tissues.
Skin contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Eye contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.

Components	Species	Test results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes

Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	None known.
Further information	Chronic effects are not expected when this product is used as intended.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Partition coefficient n-octanol / water (log Kow)	
Propane (CAS 74-98-6)	2.36
Mobility in soil	The product is slightly soluble in water.
Mobility in general	The product contains volatile substances, which may spread in the atmosphere.
Other adverse effects	The product is a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1978
UN proper shipping name	Propane
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	2F

Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	10-January-2017
Revision date	-
Version No.	01

Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Disclaimer	To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

9.2.2 Annual and 5-Year Full-scale Simulation Exercise Documents

Part 1 - The Exercise Plan

- Exercises are to be completed annually.
- All staff members must be present for the exercise.
- Make the following available to the exercise group: copy of the E2 Plan, copy of the Mid Island Co-op Safety Program, note pads and any other related material such as maps and contact lists.
- Invite an Emergency Services representative whenever possible to participate in the exercise sessions.
- Pre meeting inspection of all fire extinguishers, emergency signs, call #s and alarm system to be completed prior to exercise.
- Review the E2 Plan document with all participants (paper copies or projector)

Incident Action Plan

For the scenario/s, the reason **why** there is a need for action has been defined. The objective is to take the scenario from the beginning of the event until the incident reaches the point of recovery/restoration.

Plan and document:

- Strategies that will be used to complete the objective (How are we going to meet the objective)
- Tactics that will be used to implement the strategies including:
    - **What** needs to be accomplished?
    - **Where** they will be accomplished
    - **When** they are to be accomplished
    - **Who** will accomplish what?

In a chronological form, document: agencies, names, positions, times, contact numbers, and other applicable information related to the incidents. Attach the exercise notes to the main document.

Complete the following scenario(s) in either handwritten or printed form.

Part 2 – Scenarios

Listed below are Environmental Emergency Exercises that will be rotated on an annual basis:

- Emergency Simulation Exercise scenarios (annual tabletop), and
- Five Year Full-scale Simulation scenario that.

Propane Release – no fire

Emergency Simulation Exercise Scenario

Propane release from hoses/piping/fittings/pump – no fire

Hose rupture during propane transfer from delivery unit to bulk tank.

- The driver is unable to approach the truck or the immediate transfer area.
- It is 2:00 PM
- Light winds and +10 C
- All staff are on site.

Propane Release – with fire

Emergency Simulation Exercise Scenario

During propane transfer from delivery unit to bulk tank a leak within pumping cabinet ignited and flashed back to the point of discharge.

- The driver is unable to approach the truck or the immediate transfer area.
- It is Wednesday at noon.
- Calm winds and -5 C.
- Propane delivery driver and all staff are on site.

Structural Fire – local to propane storage

Emergency Simulation Exercise Scenario

A large amount of smoke is coming from the electrical room.

- It is 2:00 PM
- Light winds and +1 C
- All staff are on site.

Wildfires – local to propane storage

Emergency Simulation Exercise Scenario

A wildfire is approaching the facility.

- It is 3:00 PM
- Moderate winds and +30 C
- All staff are on site.

Bomb Threats/Terrorism

Emergency Simulation Exercise Scenario

Worst-case Scenario - vapour cloud explosion (VCE) vapour release from storage tank – with fire/explosion

A caller reported a bomb placed on top of the above ground propane tank and ended the call.

- It is Tuesday at 10:30 AM
- It is 25 C with wind from the northwest.
- All staff are on site.

Severe Weather

Emergency Simulation Exercise Scenario

Tornado

The customer spotted a funnel cloud.

- It is Monday at 3 PM
- +25 C with strong winds
- All staff are on site.

Emergency Simulation Exercise Scenario

Lightning

A storm is approaching with visible and audible lightning.

- It is Thursday at 1:00 PM
- +30 C strong winds
- All staff are on site.

Evacuation Procedures

Emergency Simulation Exercise Scenario

Notification of a propane emergency or an evacuation order is given:

- It is Tuesday at 8:00 AM
- -10 C light breeze
- All staff are on site.

Serious Injury/Illness

Emergency Simulation Exercise Scenario

An employee slipped and fell while outside striking their head and is unconscious. An employee has witnessed the event.

- It is Monday at 9:00 AM
- All staff are on site.

Vehicle Incidents - On-site Delivery Unit Scenario

Emergency Simulation Exercise Scenario

A delivery unit has been driven into by a customer. The driver escaped injury and the barrel appears to be damaged.

- It is Monday at 7 PM and dark.
- It is -20 C with no wind.

Jet fire

The bulk storage tanks 3” liquid bottom outlet valve has ruptured releasing propane west toward the property line. The release ignited causing a jet fire out to 100 m.

- The release is major.
- It is 1:15 pm
- Gusting winds from the east at 20 km/hr.
- +25 C
- All staff are on site.

Part 3 – Participation List

Mid Island Co-op E2 Plan Exercise Report

Date				
Exercise Facilitator				
Signature				
Position				
Facility	Gabriola Island Bulk Plant			
CRS Retail	1748			
Location	017			
Address	793 Lockinvar Lane, Gabriola Island BC - V0R 1X0			
Phone #s	Area Manager Kelli Cartwright 250-802-1198			
Storage Capacity	Tank 1	9,400 USWG	Tank 2	N/A

Participants

Print	Sign

Part 4 – Exercise Evaluation and Corrective Actions

Following the exercises, the evaluation should include completeness of the E2 Plan, reader understanding, flow, accuracy, reaching objectives, learning success, challenges, and recommendations. The evaluation should also include any other items of concern during the exercise.

Discussion Notes, Evaluation and Corrective Actions

Name of Author:		**Date:**	

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**

Exercise Facilitator	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

2023 ER.E2 Plan Review and Tabletop Exercise ppt may be found here:

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
			H
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
			H

Exercise Facilitators	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

9.3.2 Preventative Maintenance Inspections Records

Annual preventative maintenance inspections are conducted by an FCL technician with records stored electronically and can be located at I:\AA Propane Fastfield PDFs. Hard copies are printable at any given time.

9.3.3 Community Notification Records

XXXX

9.3.4 Plan Stakeholder Status and Acknowledgement

Municipal Information	
Municipality or District	Gabriola Island – Local Trust Area
Address	
Gabriola Island Trustees	Tobi Elliott 250-268-7434 telliott@islandstrust.bc.ca Susan Yates 250-247-8086 syates@islandstrust.bc.ca

Emergency Service Information	
Fire Service Name	Gabriola Volunteer Fire Department
Address Fire Hall #1	730 Church Street, Gabriola BC V0R 1X3
Address Fire Hall #2	2400 South Road 250-247-8332
Fire Chief	Will Sprogis
Fire Chief Contacts	W: 250-247-9677
DFC	XXXX
DFC Contacts	XXXX
Duty Officer	Pager: 250-755-9289
Travel Time to Facility	2 minutes travel time from Fire Hall #1 to Bulk Plant
Initial Attack Water Volume	2,000 gallons
Sustained Action Water Source	Water shuttle
Training Schedule	

Mutual Aid Agreements	
Name of Agency	Regional District of Nanaimo (RDN)
Location of Agency	6300 Hammond Bay Road, Nanaimo, BC V9T 6N2
Primary Contact Person	inquiries@rdn.bc.ca
Phone #	250-390-4111

Gabriola Volunteer Fire Department received a completed copy of the E2 plan on 2023.

I, _____ of Gabriola Volunteer Fire Department acknowledge that I have received the E2 Plan.

Position _____

Signature _____

Date _____

Mid Island Co-op Representative _____

Position _____

Signature _____

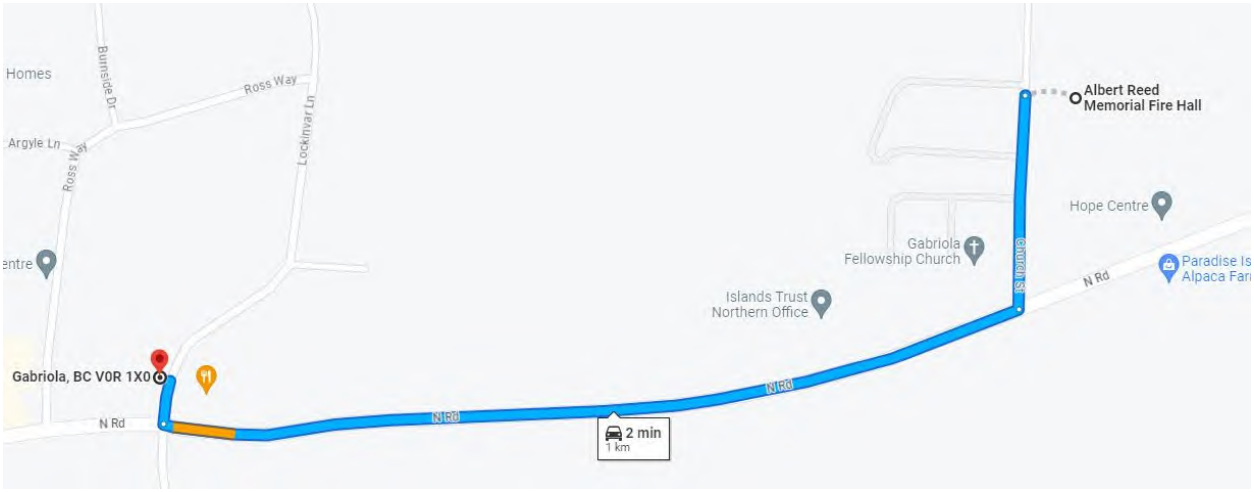
Date _____

9.3.5 Facility Photos

XXXX

Annex 10.4 Maps and Diagrams

9.4.1 Fire Service Route to Site



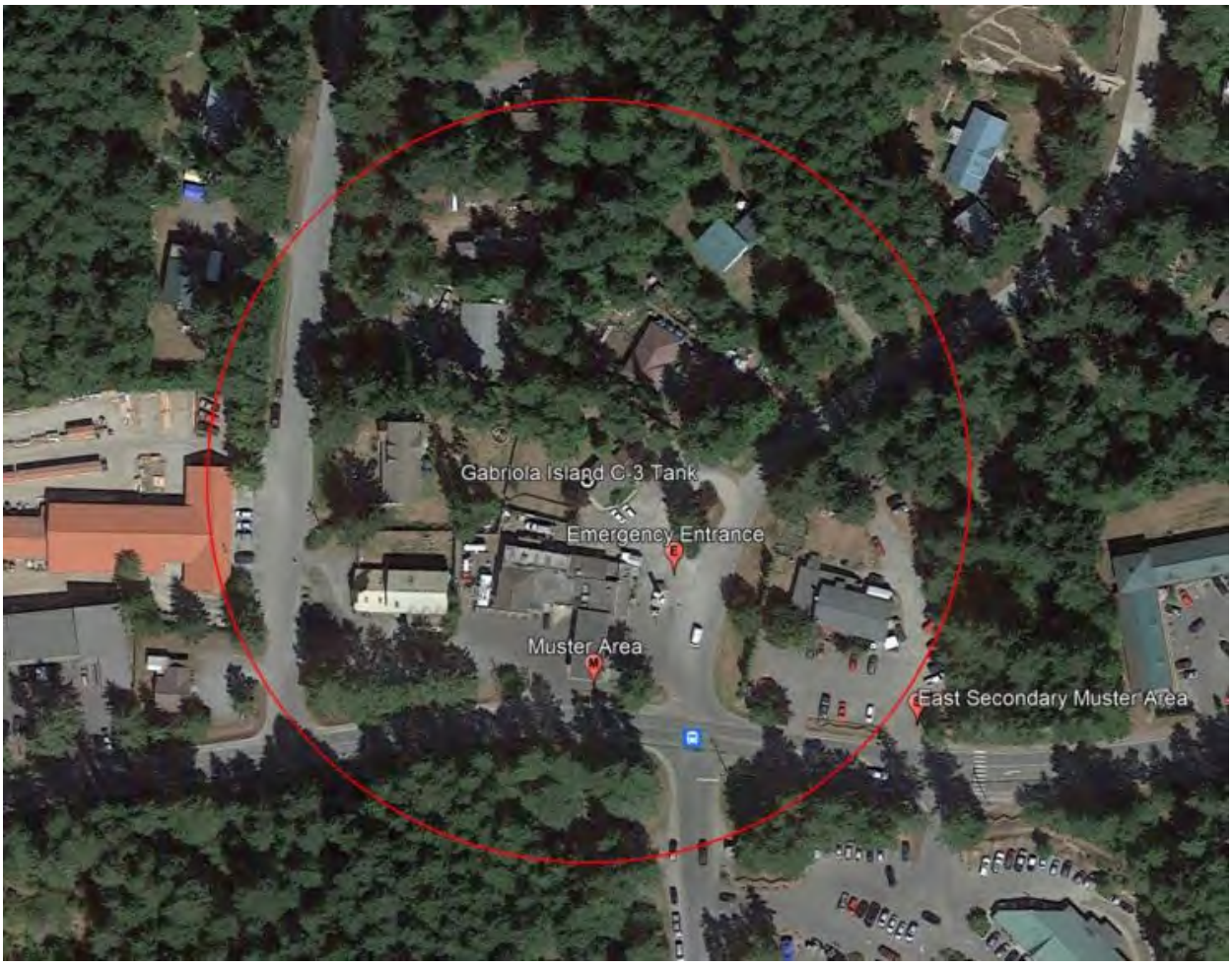
9.4.2 Emergency 1st Responder Entrance to Facility

- ***GPS - DD (decimal degrees): 49.17439, -123.84605***
- ***Road Address: 793 Lockinvar Lane Gabriola Island BC***

9.4.3.1 Muster Area

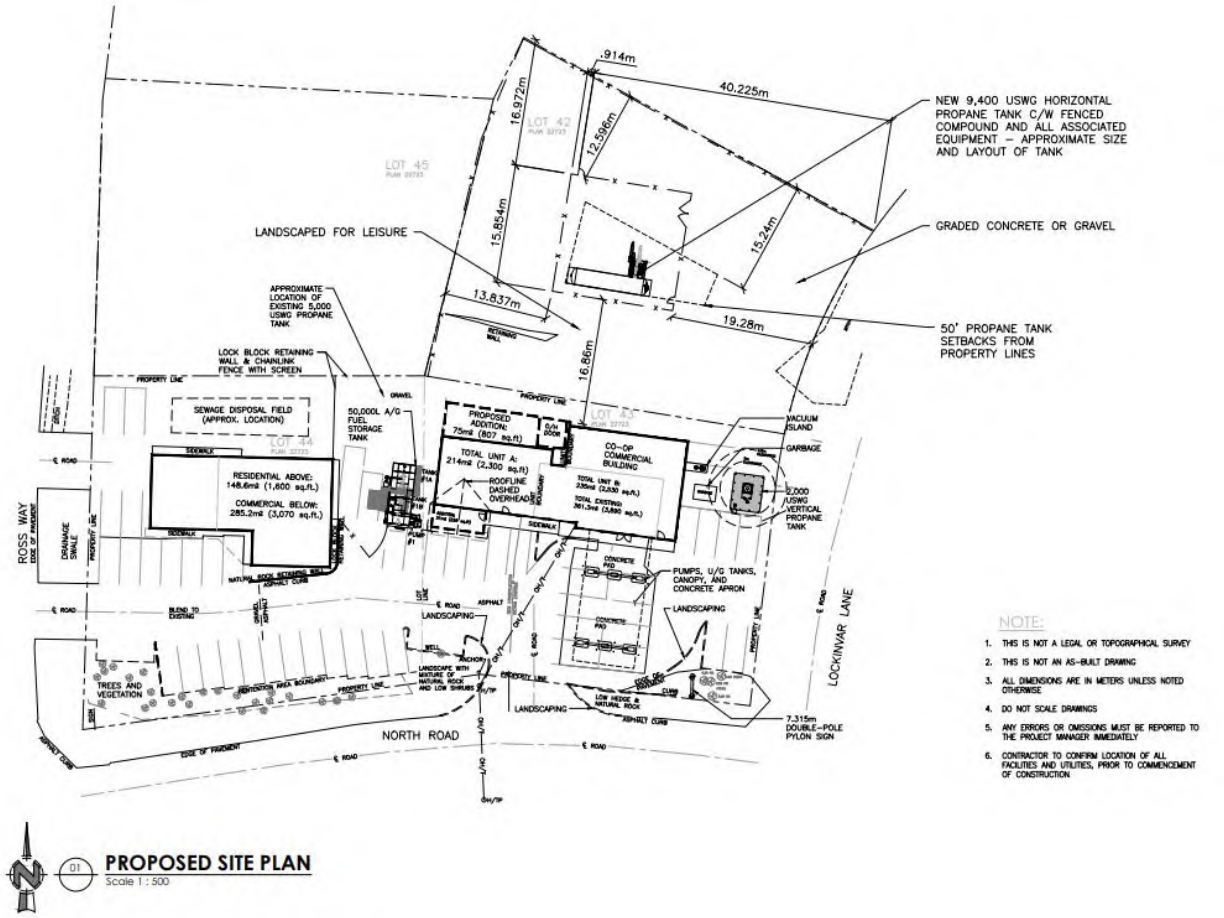
Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

9.4.3.2 Secondary Muster Area

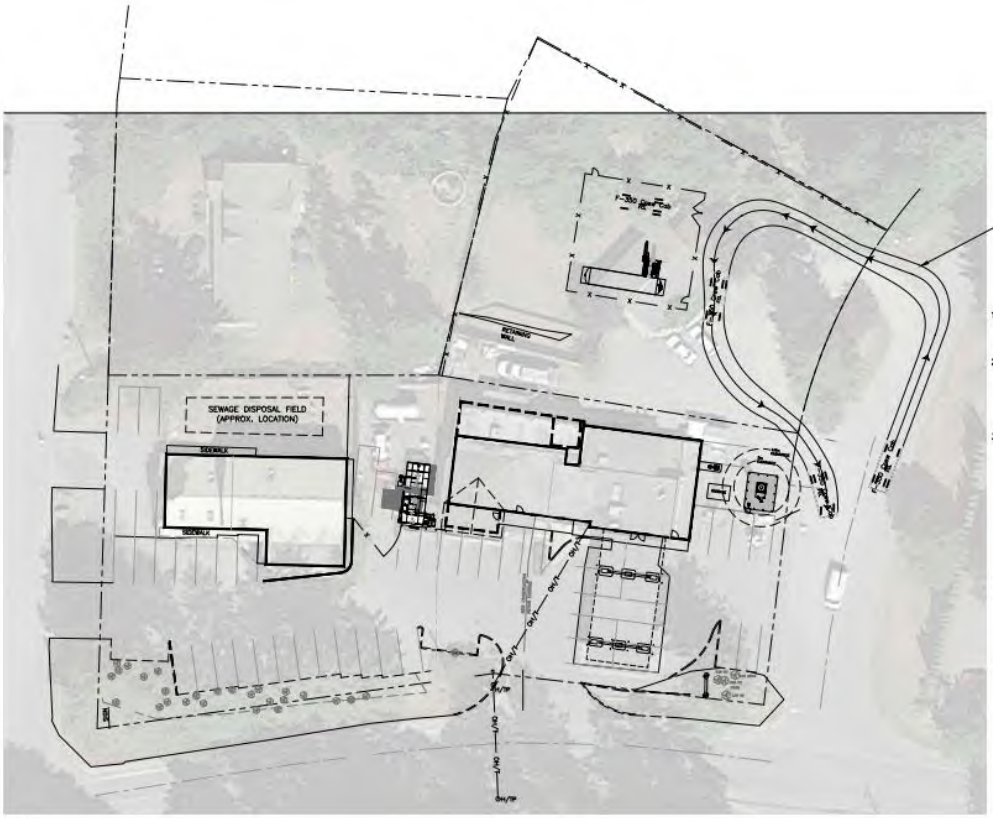


Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay go upwind or side-on to the wind out to a safe distance.

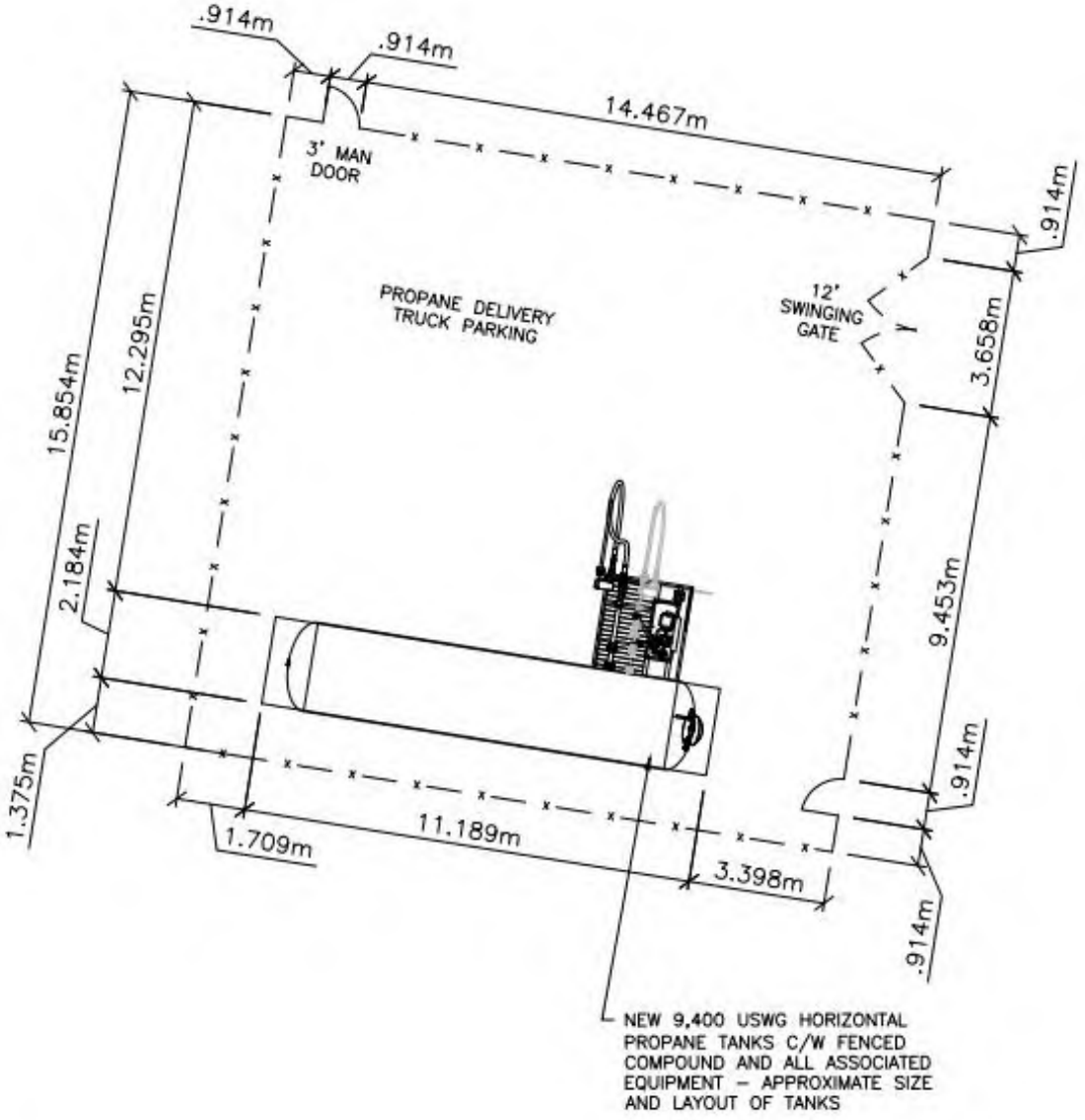
9.4.4 Facility Maps



01 **PROPOSED SITE PLAN**
Scale 1 : 500



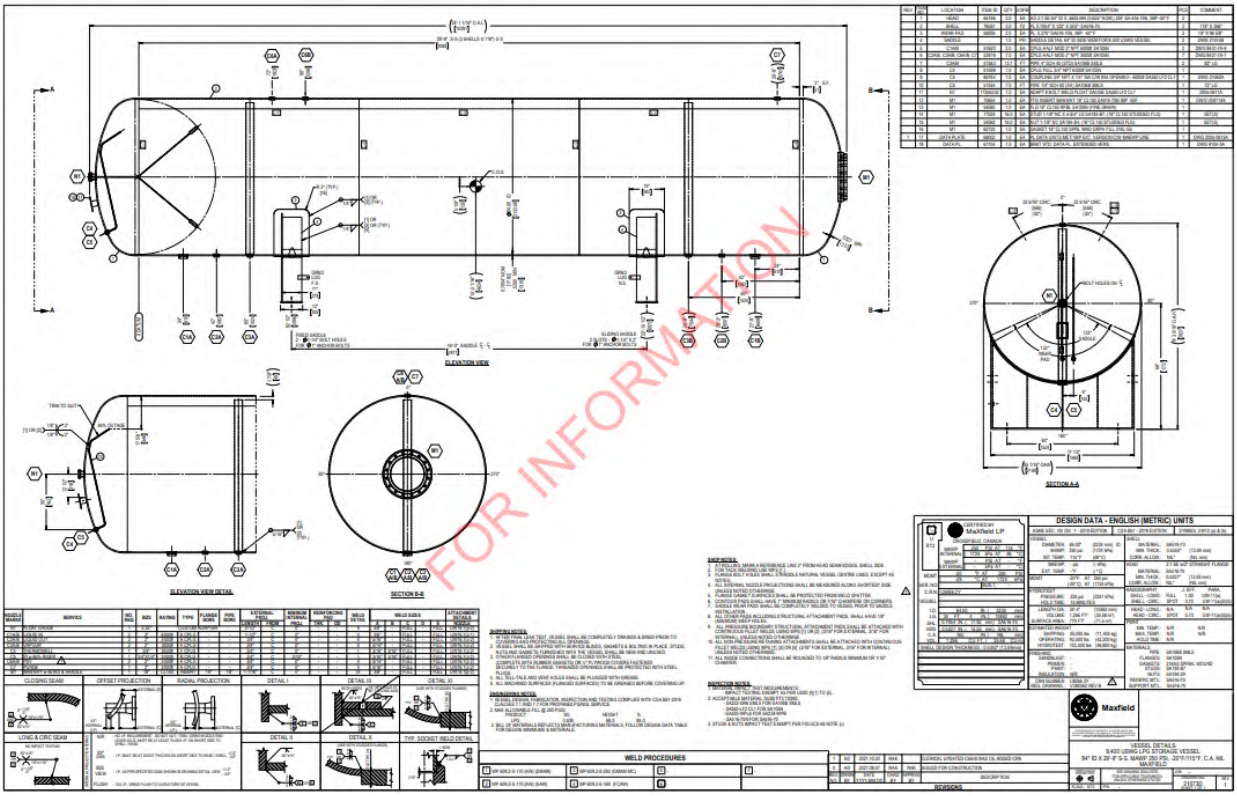
01 **PROPANE VEHICLE PATH**
Scale 1 : 500



01 **PROPANE DETAIL PLAN**
Scale 1 : 150

9.4.5 Plant Schematics

9.4.5.1 Facility Specific Schematics



9.4.6 P&ID Drawings

9.4.6.1 Facility Specific Drawings

XXXX.

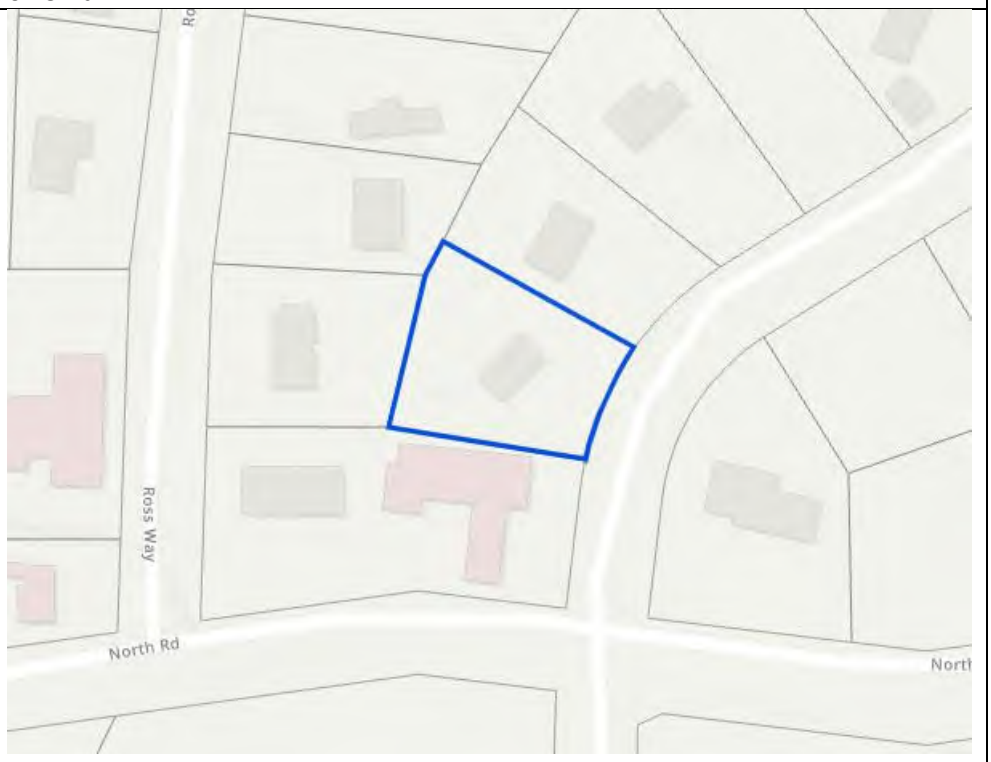
9.4.7 Tank/s Data Plate/s

XXXX

END

ATTACHMENT 1 – SITE CONTEXT GB-RZ-2022.1 (ALLEY ENTERPRISES LTD) SEPTEMBER 2022

LOCATION

Legal Description	LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723
PID	002-623-463
Civic Address	793 Lockinvar Lane
Lot Size	0.19 ha
Location	

LAND USE

Current Land Use	Institutional
Surrounding Land Use	North = Residential; East = Commercial; West = Residential; South = Gas Station

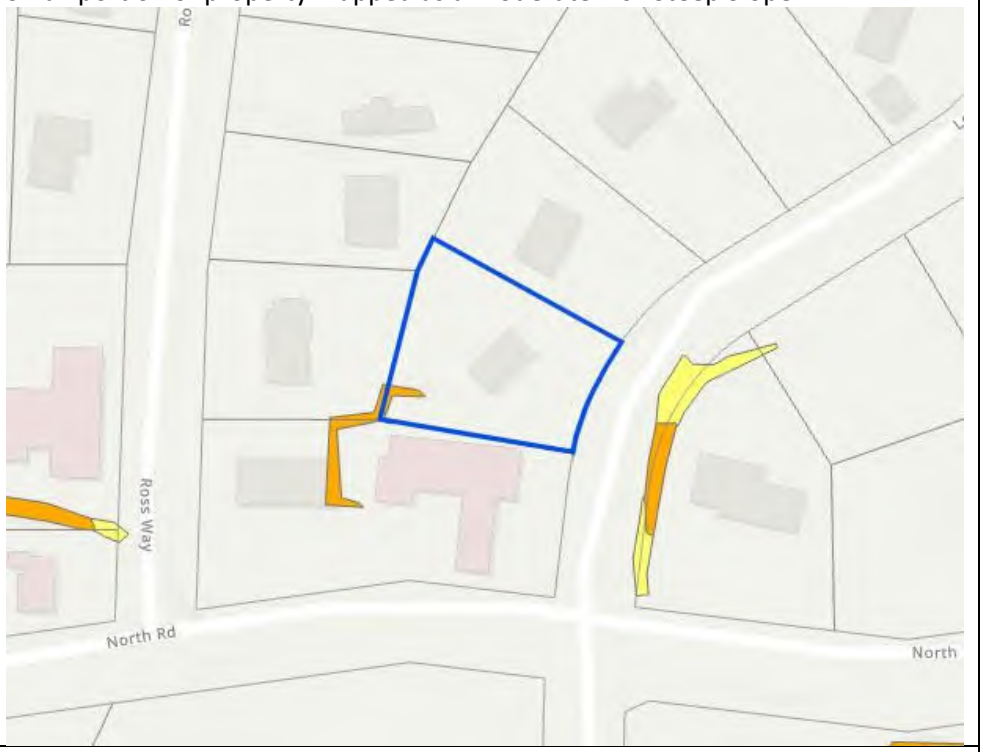
HISTORICAL ACTIVITY

File No.	Purpose
GB-RZ-1995.6	Historic rezoning application related to medical clinic.

POLICY/REGULATORY

Official Community Plan Designations	**Institutional** Change in OCP designation required. Staff recommend property be included in the Village Commercial designation. **Development Permit Area: none** Staff recommend the property be included in DPA No.7 'The Village Centre'.
Land Use Bylaw	**Institutional 2 (IN2)** Change in zoning required. Staff recommend a site specific 'Village Commercial' zone to regulate requested commercial uses.
Other Regulations	Technical Safety BC Environmental Protections Act and Environmental Emergency Regulation
Covenants	n/a
Bylaw Enforcement	None

SITE INFLUENCES

Islands Trust Conservancy	The proposal does not directly affect an Islands Trust Conservancy Board (ITC) owned property or conservation covenant, nor directly affects a property adjacent to an ITC owned property or conservation covenant. Referral to ITC for comment is not required.
Regional Conservation Strategy	Appendix II of the Regional Conservation Plan 2018-2027 indicates the relative value for conservation is Medium or Low on the subject property.
Species at Risk	None mapped.
Sensitive Ecosystems	None mapped.
Hazard Areas	Small portion of property mapped as a Moderate Risk Steep Slope. 
Archaeological Sites	None identified. Applicant has submitted a referral of application to Snuneymuxw First Nation who responded that they defer comment on the referral.

Climate Change Adaptation and Mitigation	Site preparation and construction of the proposed development are anticipated to result in associated greenhouse gas emissions.
Groundwater Vulnerability	Islands Trust mapping indicates the Aquifer Intrinsic Vulnerability for this area is Moderate.
Shoreline Classification	Not Applicable
Shoreline Data in TAPIS	Not Applicable

ATTACHMENT 2 – POLICIES (PLRZ20240091 (MID-ISLAND CO-OP))

GABRIOLA ISLAND OFFICIAL COMMUNITY PLAN BYLAW NO. 166, 1997

OCP Objective/Policy	Complies?	Planner Comments
General Land Use Policies		
2.0 f) Applications for amendment to this OCP shall be required to include: i. details concerning the potential environmental impacts of the proposed development; ii. a plan and specifications detailing how water supply and sewage disposal for the intended use are to be provided, and unless the development is residential and consists of less than five lots or dwelling units the plan and specifications must be prepared by a professional engineer; and iii. such other requirements as may reasonably be deemed necessary in adequately reviewing the application.	**YES**	The applicant has submitted an Environmental Emergency Plan with their application which describes possible scenarios and emergency response procedures. The applicant has not submitted details regarding a water or sewage disposal plan to support the intended redevelopment of the parcel. This is because the proposed use of propane storage would not require on site water or sewage facilities.
2.0 h) The Village Centre shall be recognized as the hub of the community and shall provide for a mix of uses at a scale in keeping with Gabriola's character. Since the Village Centre is surrounded by land in the Agricultural Land Reserve, considerations respecting any expansion of the Village Centre into the Agricultural Land Reserve should only be given to community-minded noncommercial uses, subject to the intended use not degrading the future agricultural capability of the land.	**YES**	The subject property is proposed to be included within the Village Centre and to be used for propane storage for delivery to properties on Gabriola. The subject property is not within the ALR.
General Commercial Policies/Village Commercial Policies		
3.1 b) A commercially designated site shall be designated as a development permit area where it is believed important to regulate the form and character of development which occurs there.	**TBD**	Staff recommend the subject parcel be included in the Village Commercial development permit area, should the application proceed.

3.2 c) The Village Commercial designation shall provide for a range of commercial uses including: retail, restaurant, personal service use, office use, institutional use, building supply sales and the servicing and fuelling of motor vehicles. The Zoning Bylaw will specify in detail the range of uses permitted.	**YES**	The application proposes institutional uses continue to be permitted and that a new use of propane storage be permitted.
3.2 d) The expansion of the Village Commercial designation shall be considered based on compliance with the following criteria: i. adequate off-street parking, landscaping and pedestrian access is provided; ii. the design and site layout of the proposed development can be well integrated into the existing land use pattern in the Village Centre; iii. the parcel fronts onto a main road and access and egress to the parcel can be provided safely; iv. the additional area proposed for Village Commercial is small in size.	**TBD**	The proposal meets all criteria to be included in the Village Commercial designation. There is sufficient area for off-street parking, landscaping and pedestrian access. The site plan indicates that access to the parcel can be provided safely, the property is within close proximity to a main rural road, and the parcel is contiguous with other Village Commercial properties. As a result, staff consider that the parcel is suitable to be considered for addition to the Village Commercial designation. The property is 0.19ha in area.
3.2 e) Land in the Village Commercial designation and any future additions to the Village Commercial designation shall be placed in the Village Centre development permit area so as to ensure that the form and character of development which occurs is consistent with the existing character of the Folklife Village.	**TBD**	Staff recommend that the subject property be included in the Village Centre DPA.
Heritage and Archaeological Resources Policies		
6.3 a) The Snuneymuxw First Nation and the Archaeology Branch should be consulted prior to the initiation of any future development which may impact on a known archaeological site on Gabriola, or an area exhibiting potential for the presence of unrecorded archaeological sites.	**YES**	The subject parcel is not in proximity to a known archaeological site nor is it identified as having potential. The applicant has submitted a referral of the application to Snuneymuxw First Nation and staff recommend that the LTC provide notification to Snuneymuxw First Nation of this application.
6.3 f) Development proponents are encouraged to consider archaeological resources during all phases of project planning, design and implementation.	**YES**	Applicant has submitted a referral of the application to the Snuneymuxw First Nation and received a response deferring comment. The applicant is advised by Snuneymuxw First Nation to obtain any required permit under the *Heritage Conservation Act*.
Land Transportation Policies		

7.1 j) Commercial, multi-dwelling developments and public facilities should provide structures for the convenient and secure parking and locking of bicycles.	**TBD**	Parking requirements can be incorporated into the proposed bylaw.
Climate Change Adaptation and Greenhouse Gas Emission Policies		
8 b) The Local Trust Committee should consider the development of new criteria for assessing official community plan or land use bylaw amendment applications from the perspective of climate change adaptation and greenhouse gas emission reduction.	**TBD**	For LTC consideration.

Mid Island Consumer Services Co-operative (Mid Island Co-op)

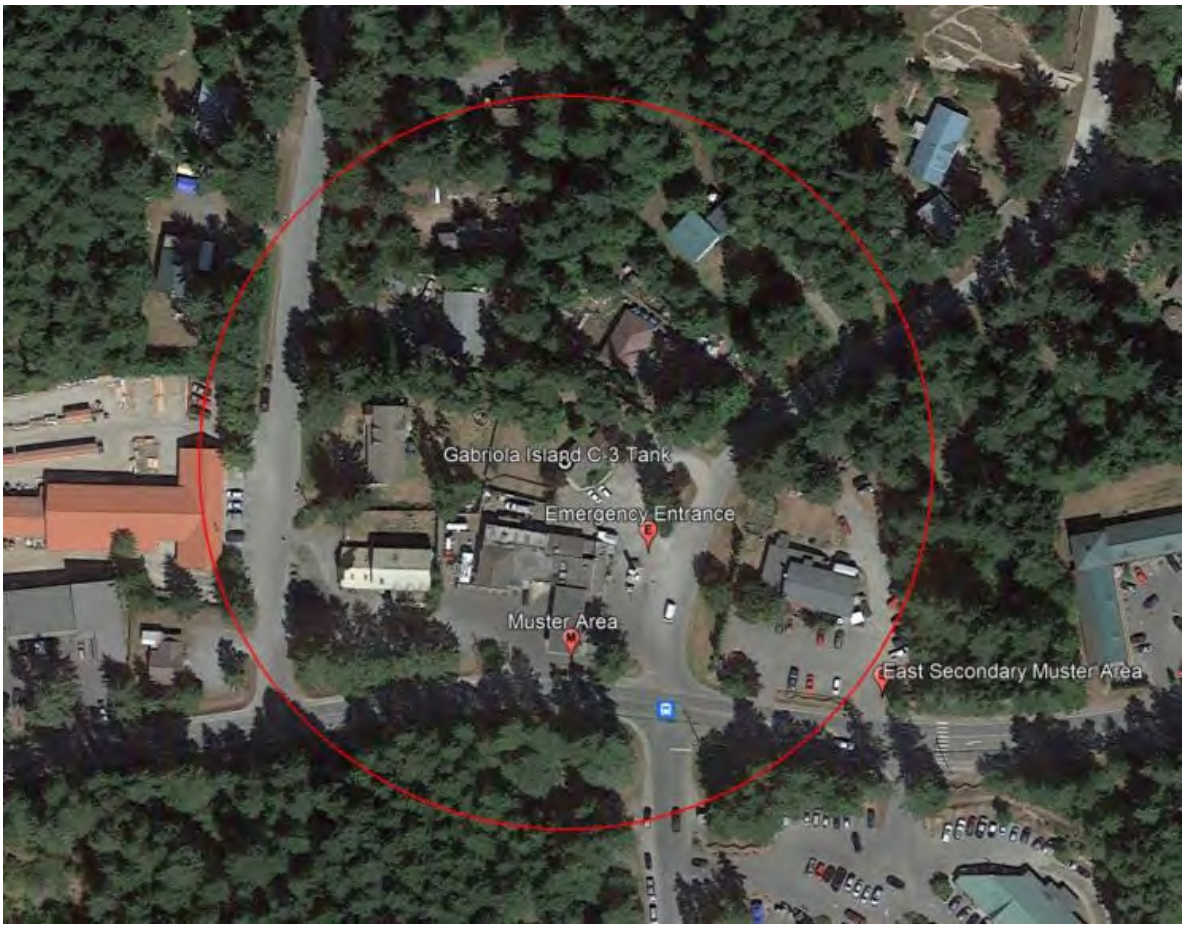
Environmental Emergency (E2) Plan

For the Propane Installation at 793 Lockinvar Lane, Gabriola Island, BC

Site Location
Emergency 1st Responder Entrance to facility: • GPS - DD (decimal degrees): 49.17439, -123.84605 • 793 Lockinvar Lane Gabriola Island BC One 9,400 USWG propane tank is located at: • Mid Island Co-op Bulk Plant • 793 Lockinvar Lane Gabriola Island BC V0R 1X0 • DD (decimal degrees): 49.17461, -123.84636 Mail to: • Head Office: 106–2517 Bowen Road Nanaimo BC V9T 3L2 E2ID# TBD

Section 1 Executive Summary

Following information is required in activating the E2 Plan: Map showing Muster Areas, 1st Responders Entrance, Emergency Information & Equipment Locations, Site Address, E2 Plan Activation and Emergency Contacts, Incident Procedures, and Emergency Notification & Communications Procedure.



Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREA	East of site on North Road

ADDRESS of Gabriola Island Propane Bulk Plant: 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

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Section 2 Introduction

2.1 CRS Health Safety and Emergency Preparedness and Response Statement

The CRS is committed to health and safety through operational integrity and effectively manages its work to identify and mitigate risks to health, safety, and the environment.

Operational integrity at the CRS means conducting all activities safely and reliably so that the public is protected, impact to the environment is minimized, the health and wellbeing of employees is safeguarded, contractors and customers are safe, and physical assets (such as facilities and equipment) are protected from damage or loss.

This Emergency Response Plan has been developed to meet or exceed the requirements of all applicable governing agencies and regulatory bodies where the CRS operates.

The following plan considers an area-specific hazard/risk analysis and outlines the necessary resources, personnel, logistics and initial actions to facilitate a prompt, coordinated and rational approach to any emergency.

2.2 Purpose

This Emergency Response/Environmental Emergency (E2) manual describes the procedures for Mid Island Co-op personnel in the event of an emergency at a company facility.

This E2 plan has been prepared in accordance with the Environmental Emergency (E2), Regulations made pursuant to the Canadian Environmental Protections Act, 1999 (CEPA 1999), reflecting the four pillars of emergency management: prevention and mitigation, preparedness, response, and recovery.

Sharing portions of information within this manual with interactive stakeholders or those residents or businesses in the proximity of effect from an emergency is encouraged.

2.3 Objectives of the E2 Plan

- Reduce the frequency and consequences of uncontrolled, unplanned, or accidental releases of propane.
- Promote the safety of workers, responders, and the public.
- Reduce the potential for destruction of goods and property.
- Minimize the effect upon the environment.
- Communicate risks associated to the facility with the local emergency response services.
- Help responders quickly determine and initiate proper remedial actions.
- Inform neighboring citizens and businesses of preparations and actions that will minimize risk to safety and health during an emergency event.
- Liaise with local municipal administrations in the context of public safety.
- Reduce recovery times and costs.

These objectives are achieved through the development, implementation, training/exercising and maintenance of this E2.

2.4 Scope of Emergency Procedures

Due to the complexity and variables of an emergency, it is difficult to determine an exact systematic process that will be effective in all situations. The common elements within responses are listed. The responder will determine the sequence and execution at the time of the incident.

This E2 Plan addresses the following list of risks:

- Propane gas release
- Propane liquid release
- Fires
- Explosions
- Threats to people, property, and goods
- Other site-specific values at risk

2.5 E2 Plan Access

An up-to-date plan shall be kept in the red plastic document holder - labelled E2/SDS - installed near emergency horn activation on North exterior wall of convenience store so as to be readily available to site personnel and 1st Responders.

2.6 Joint Responsibilities

Mid Island Co-op owns and operates this Bulk Plant on Gabriola Island BC.

2.7 Plan Consultation/References

- Canadian Environmental Protection Act, 1999 - Part 8: Environmental Matters Related to Emergencies
- Environmental Emergency Regulations SOR/2019-51
- Technical Guidelines for the Environmental Emergency Regulations, 2019 Version 2.0
- WorkSafe BC Guidelines – OHS Reg's. Part 4: Emergency Preparedness and Response
- WorkSafe BC Guidelines – OHS Reg's. Table of Exposure Limits for Chemical Substances
- CCOHS https://www.ccohs.ca/oshanswers/hsprograms/basic.html
- National Fire Code of Canada – Division B, Emergency Planning
- Federated Co-operatives Limited SDS – Propane
- CAN/CSA Z731-03 Emergency Preparedness and Response
- CAN/CSA B149.1 Natural Gas and Propane Installation Code
- CAN/CSA B149.2 Propane Storage and Handling Code
- ASME Vessel Specifications
- Canadian Electrical Code
- Provincial Boiler and Pressure Vessel Acts and Regulations
- Safeti, formerly PHAST (Process Hazard Analysis Software) Analysis Modelling from Marsh Risk Consulting
- MIACC (Major Industrial Accidents Council of Canada) is a risk-based land use planning guide (MIACC was dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering)

2.8 Record of Amendments

Record changes made to the Plan on the table below and replace applicable pages.

#	Date of amendment	Section # amended	Recorded by
1	2023	New E2 Plan	Kevin McEown - FCL and Kelli Cartwright - Mid Island Co-op

2.9 Company Profile

Nature of Business

Mid Island Co-op is a locally owned co-operative serving local communities with food and fuel.

Typical Storage Use and Delivery Activities

This Mid Island Co-op owned and operated Bulk Plant on Gabriola Island BC has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

2.10 Glossary

Active Mitigation: A safeguard system designed to mitigate the consequences of an incident that requires human intervention, external mechanisms, or energy sources. Examples include lighting, automatic and manual valves, etc.

Alternate Scenario: An environmental emergency that could reasonably be expected to occur at a facility and that would likely cause harm to the environment or constitute a danger to human life or health.

Alternate Worst-case Scenario: Means the scenario described in section 4(2)(f) of the E2 Regulations. It involves the alternate scenario that is more likely to occur than the worst-case scenario **and** that has the longest impact distance outside the boundary of the facility (if it exists).

BLEVE: (boiling liquid expanding vapor explosion) happens if a container holding a pressure liquified gas (e.g., propane) fails catastrophically. Catastrophic failure of the vessel is followed by the explosive release of boiling liquid and expanding vapour.

The BLEVE is a physical explosion where the hazards are blast and projectiles. Propane is flammable so a fireball may happen after a BLEVE if the released cloud is immediately ignited. This is usually the case if the tank failure is caused by fire impingement. If a flammable cloud is not ignited immediately then delayed ignition could lead to other fires, explosions, etc.

A BLEVE will typically occur when the steel of the tank is compromised by an external impinging fire and consequential rupture due to the combination of internal over-pressure and weakening steel strength due to overheating. A warning sign of an impending BLEVE may be intermittent or a continual flare-off from the pressure relief valve until the tank either BLEVE's or rids enough propane where flare-offs cease. The variables within the chain of events are difficult to accurately predict.

CAS Registry Number: The identification number assigned to a substance by the Chemical Abstracts Service, a division of the American Chemical Society. The Chemical Abstracts Service Registry number is the main identifier for regulated substances found in the E2 regulations. CAS number for Propane is 74-98-6.

CEPA: Canadian Environmental Protection Act, 1999.

CERCA: The Canadian Emergency Response Contractors' Alliance (CERCA) is an industry association comprised of stakeholders from all facets of the Canadian dangerous goods emergency response industry. The mission of CERCA is to foster the establishment of a sound emergency response network in Canada.

Community Emergency Systems Notification: An advisement document used to communicate avoidance and evacuation actions in the event of a vapor cloud drift, substantial release, or fire. This notification is for offer to neighboring residences and businesses that are within the harm radius of the risk model.

Container System: Any receptacle or network of receptacles that is used to contain a substance – including any connected pipelines or piping – except any part or that network that is automatically or remotely segregated from the rest of the network by shut-off valves, or other mechanisms in the event of any environmental emergency.

CRS: Co-op Retailing System.

CRS-EMRG: The Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) is a toll-free number (1-833-277-3674) to call (24/7) to report an emergency related to FCL or Co-op. A dispatcher (STARS) will ask a series of questions to gather information about the incident and will then notify the appropriate FCL Emergency Management Team (EMT).

E2 (Environmental Emergency): This refers to the Environmental Emergency Regulations that address the prevention of, preparedness for, response to and recovery from, and environmental emergency caused by uncontrolled, unplanned, or accidental releases.

E2 Plan: Environmental Emergency (E2) Plan is a document that provides guidance on actions under various emergencies and conditions.

ECCC: Environment and Climate Change Canada.

Emergency: An emergency is a potential or a real developing situation, which may cause injury, property damage, environmental damage and/or impact on corporate image and reputation.

Emergency Management Centre (EMC): The FCL EMC is where the FCL Emergency Management Team will meet in the event of an emergency involving the Propane Department will typically be located at FCL's Home Office.

Emergency Management Team (EMT): The FCL EMT is a group of subject matter experts and advisors who provide oversight and guidance to emergency response measures.

Emergency Notification System: Is an advisement document used to communicate actions in the event of a vapor cloud drift, fire, explosion, substantial release or other where proper avoidance, evacuation and muster point items are explained. This notification is for offer to neighboring residences and businesses etc. that are within the harm radius of the risk model.

Emergency Operations Manager (EOM): The FCL EOM is responsible for the FCL Emergency Management Centre and working with the Emergency Management Team initially determines Emergency Response Activation Plan activation, crisis level and owner and what support or guidance and performs duties as described within this plan.

Emergency Responders: General term for a group of individuals who have defined skills or responsibilities in an emergency.

Environmental Emergency: Means an uncontrolled, unplanned, or accidental release of an E2 substance into the environment (or the reasonable likelihood of such a release) that:

a) Has or may have an immediate or long-term harmful effect on the environment; or

b) Constitutes or may constitute a danger to the environment on which human life depends; or

c) Constitutes or may constitute a danger in Canada to human life or health.

Environmental Officer (EO): The EO as a member of FCL's Emergency Management Team initially assesses the degree of potential environmental impacts and performs duties as described in this plan.

ERAC: Emergency Response Assistance Canada formerly the Liquid Propane Gas Emergency Response Corporation is a division of the Canadian Propane Association developed to offer emergency services for the Canadian propane industry. The ERAC has Emergency Response Teams situated in various locations nationwide to respond to major propane emergencies.

ERAP: An emergency response assistance plan describes what to do in the event of a release or anticipated release of certain higher-risk dangerous goods – such as propane - while they are in transport. An ERAP requires a third-party responder agreement between FCL, and the third party listed in the ERAP – being ERAC - that will provide technical or emergency response advice, and/or provide resources to respond to a release or anticipated release on FCL's behalf.

ERC: The Emergency Response Coordinator will typically be the most senior and or qualified manager, supervisor or employee on site that is able to instruct the activities of others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

FCL: Federated Co-operatives Limited.

Fireball: Can result from an instantaneous release from a BLEVE or a release with a delayed ignition.

Full-scale Simulation Exercise: An action-based simulation exercise requiring the deployment of personnel, resources, and equipment.

HBC: The Home Base Co-ordinator is a person that is verified under CERCA to advise Local Emergency Responders, owners and their contracted Emergency Response Team on remedial activities following an incident.

Incident Action Plan (IAP): Within Incident Command System, includes the overall incident objectives, strategies and tactics established by Incident Command.

Incident Commander (IC): Within Incident Command System, has overall incident management responsibility.

Incident Command System (ICS): The ICS is a standardized on-site management system designed to enable effective, efficient incident management within a common organizational structure.

Information Officer (IO): The IO as a member of FCL's Emergency Management Team initiates and directs established communication response and performs duties as described in this plan.

Muster Area: The Muster Area is typically situated on site or adjacent to site in a safe location. Choice of location is prior to an emergency event. Posting a sign identifying the Muster Area and placing a copy of the E2 Plan there in a weatherproof container is required.

Operations Chief (OC): Within Incident Command System, directly manages all incident tactical activities and implements the Incident Action Plan.

Overpressure: The overpressure of the atmosphere due to an explosion. Probabilistic risk models used for FCL facilities base is 1-psi overpressure. Overpressure of 1 psi may cause structural damage to buildings. Levels of 3-5 psi will cause significant structural damage and cause severe or fatal injury to persons openly exposed to a pressure wave.

Passive Mitigation: A safeguard system designed to mitigate the consequences of an incident that does not require human intervention, external mechanisms, or energy sources. Examples include fencing, protection against collision damage etc.

PID: Piping and Instrumentation Diagram.

Planning Chief (PC): Within Incident Command System, oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, conducts Planning Meetings, and prepares the Incident Action Plan for each operational period.

Reasonable: Means logically valid. It is based on using sound judgement, and therefore, practical, and sensible as opposed to extreme or excessive.

RMA: The Remedial Measures Advisor is a person that is qualified under the LPGERC (ERAC) to advise Local Emergency Responders and or CPA members on remedial activities following an incident.

SAFETI: Process Hazard Analysis Software used for Analysis Modelling prepared by Marsh Risk Consulting.

Safety Officer (SO): The SO as a member of FCL's Emergency Management Team monitors incident operations and advises the Emergency Operations Manager on all matters related to operational safety and performs duties as described in this plan.

SDS: Safety Data Sheet.

Secondary Muster Area: Two Secondary Muster Area are situated a cross wind to the Muster Area and evacuated to when it is not safe to go to a Muster Area or remain at the Muster Area. Choice of location depends on wind direction.

Shelter-in-place: Means finding a safe location indoors and staying there until you are given an "all clear" or told to evacuate.

Simulation Exercise: An exercise simulating the response to an environmental emergency involving the release of an E2 substance.

Strike Team (ST): Within Incident Command System, a set number of resources of the same kind and type that have an established minimum number of personnel, common communications, and leader.

STARS: STARS Emergency Contact Centre (ECC) is a service offered by STARS Emergency Link Centre (ELC) to answer calls to the Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) for emergencies related to FCL or Co-op and provide incident notification to the appropriate FCL Emergency Management Team.

Unified Incident Command (UIC): Within Incident Command System, UIC allows agencies with different legal, geographic, functional authorities and responsibilities to work together effectively. All responsible agencies jointly provide management direction through a common set of incident objectives and strategies established by a single Incident Action Plan.

USWG: United States Water Gallon. This measurement relates to the capacity of an LPG tank based on how much water the containment can hold.

VCE: (vapor cloud explosion) is a chemical explosion and occurs when a large quantity of flammable vapor or flammable gas is ignited, and the flame propagates at a rate/speed fast enough to create an overpressure. Release or migration of flammable vapor/gas into a confined area with ignition will create a substantial overpressure and thermal event. Migration of the vapor/gas cloud will determine where and the intensity of a VCE which will be influenced by degree of congestion, terrain, and other obstructions.

Wildfire: Wildfire, also known as a forest fire, prairie fire, grass fire, or brush fire, is an unplanned, unwanted, uncontrolled fire often occurring in wildland areas, but which can also consume structures.

Worst Case Scenario: Means the scenario described in section 4(2)(e) of the E2 Regulations. It must involve the release of the maximum quantity of an E2 substance that could be contained in the container system with the largest maximum capacity at a facility, or the maximum expected quantity of the substance on-site that is not contained. The scenario does not need to be reasonable.

Section 3 Management and Administration of the E2 Plan

3.1 E2 Plan Development Evaluation Review Update and Consultation Team

The team participating in the plan development, initial review and responsible for its annual evaluation, exercise, review, updates as necessary by the following individuals within their roles:

Participant	Organization	Function and Project Role
Bruce Buckingham	Mid Island Co-op	Director of Energy Operations (Plan Approval)
Kelli Cartwright	Mid Island Co-op	Area Manager (Plan Advisory for Development, Plan Implementation, Training/Exercise and Maintenance)
Kevin McEown	Federated Co-operatives Limited - Propane	Senior Health and Safety Advisor (Plan Development, Implementation, Training/Exercise Development and Maintenance)
Darrell Rose	Marsh Risk Consulting	Senior Vice President (exempted from approvals) (Risk Engineer)

3.2 E2 Plan Distribution

The E2 Plan will be made available to all employees, emergency service providers, stakeholders, and regulatory authorities by the following:

#	Name of Person who received the ERP manual	Individual/Organization	Date Issued
1	Bruce Buckingham	Mid Island Co-op - Director of Energy Operations	2023
2	Kelli Cartwright	Mid Island Co-op - Health & Safety Coordinator	2023
3	Kevin McEown	FCL Propane - Senior Health & Safety Advisor	2023
4	XXXX	Gabriola Volunteer Fire Department - Fire Chief	2023

3.3 ECCC Notifications

On XXXX, ECCC received Schedule 2-5 notices, under CEPA's E2 Reg's, 2019.

Section 4 Risk Assessment

4.1 Propane – General Characteristics and Hazards

4.1.1 Background

The inherent properties of propane with its low boiling point make it a feasible energy source used in a variety of energy applications from heating to transportation. Propane uses include fuel for heating, cooking, automobile and forklift truck fuel, crop drying, welding, and cutting operations. Industry uses propane as a refrigerant, solvent and as a chemical feedstock.

Under normal atmospheric conditions propane is a gas, however, increasing the pressure causes the substance to condense into a liquid. This characteristic of propane allows for storage of large quantities of liquid propane inside of a pressurized container. When liquid propane vaporizes (phase changes) from its liquid state into its gaseous state it creates a refrigerating effect (cooling).

4.1.2 Properties

Propane is stable and non-reactive under normal conditions of use, storage, and transport. Conditions to avoid include heat, sparks, open flames, and other ignition sources. Avoid contact with incompatible materials, which includes any strong oxidizing agents. Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

Propane is a colorless, odorless gas in its natural state, so the addition of a stench odorant called ethyl mercaptan gives propane a distinct boiling cabbage like odor. Propane is transported and stored as a liquid in pressure vessels to a capacity of approximately 80%, which allows room for vapor expansion. When propane liquid is released from its confinement, it converts to a gas to a rate of 270:1. The speed of vaporization is dependent on ambient temperature. Most calculations are based of 15° C; however, calculations are made for differing temperatures to assure safe load weights. Below -42° C, propane will lose its ability to vaporize and remain a liquid. Installation of vaporization appliances or supply tank heaters ensure function in extremely low temperatures or in high volume demand situations. Propane is 1.6 times heavier than air and settles in lower areas if released. Propane vapors will dissipate into the atmosphere rather quickly depending on wind conditions and ambient temperature. Propane is non-toxic, however may be an asphyxiant if enough breathable air is displaced. The combustible range of propane is between 2.2% and 9.5% mixture with the atmosphere. This is a relatively low range of flammability; however, periphery zones of a vapor cloud will ignite if it falls within the flammability range mentioned.

For more information refer to 9.2.1 Safety Data Sheet.

4.1.3 Provincial Exposure Limits

Table 4.1.3 Work Safe BC Table of Exposure Limits

Substance	CAS #	Time Weighted Average Limit (TWA)		Short Term Exposure Limit (STEL)	Notations
		ppm	mg/m³		
Propane	74-98-6	N/A	N/A	Simple asphyxiant	EX

Note: The term EX means the substance is a flammable asphyxiant - updated June 1, 2021.

4.1.4 Potential Health Effects/First Aid Measures

Propane is non-toxic, but if released into a confined space or settles in lower areas it will displace the air making it difficult to breathe. It is always important to seek medical attention if you are experiencing signs and symptoms from exposure. Some of the effects of exposure:

Eye Contact: Rapidly expanding Propane can cause eye irritation and frostbite (cold burn). Permanent eye damage or blindness could result.

Inhalation: Chemical asphyxiant hazard – if accumulation occurs to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness at first but if inhaled at high concentrations, the central nervous system depresses and reduces the ability of the blood to carry oxygen to body tissues.

Skin Contact: Direct contact with liquefied propane gas can result in frostbite (cold burn).

Ingestion: Not a normal route of exposure - unlikely.

4.1.5 Summary – Potential Risks of Release for Propane

Propane has no natural odour and is non-toxic but is an asphyxiant in high concentrations. The vapour density of propane is 1.6; consequently, it will accumulate in lower areas such as ditches and sewers. To be combustible, propane needs to be within its flammable or explosive range between the Lower Explosive Limit (LEL) 2.2% and Upper Explosive Limit (UEL) 9.5% by volume in atmosphere. When liquefied propane is released into the atmosphere, it will expand up to 270 times in vapour to that of liquid.

The impact on life safety and the physical environment because of an unplanned release can be detrimental, so it is important to reduce the risk through the implementation of elimination, engineering, and administrative controls.

4.2 Facility Location, Storage, Handling, and Risk Mitigation

4.2.1 Description of Facility Property Surrounding Area Including Potential Receptors

The 9,400 USWG horizontal propane storage tank is installed above ground.

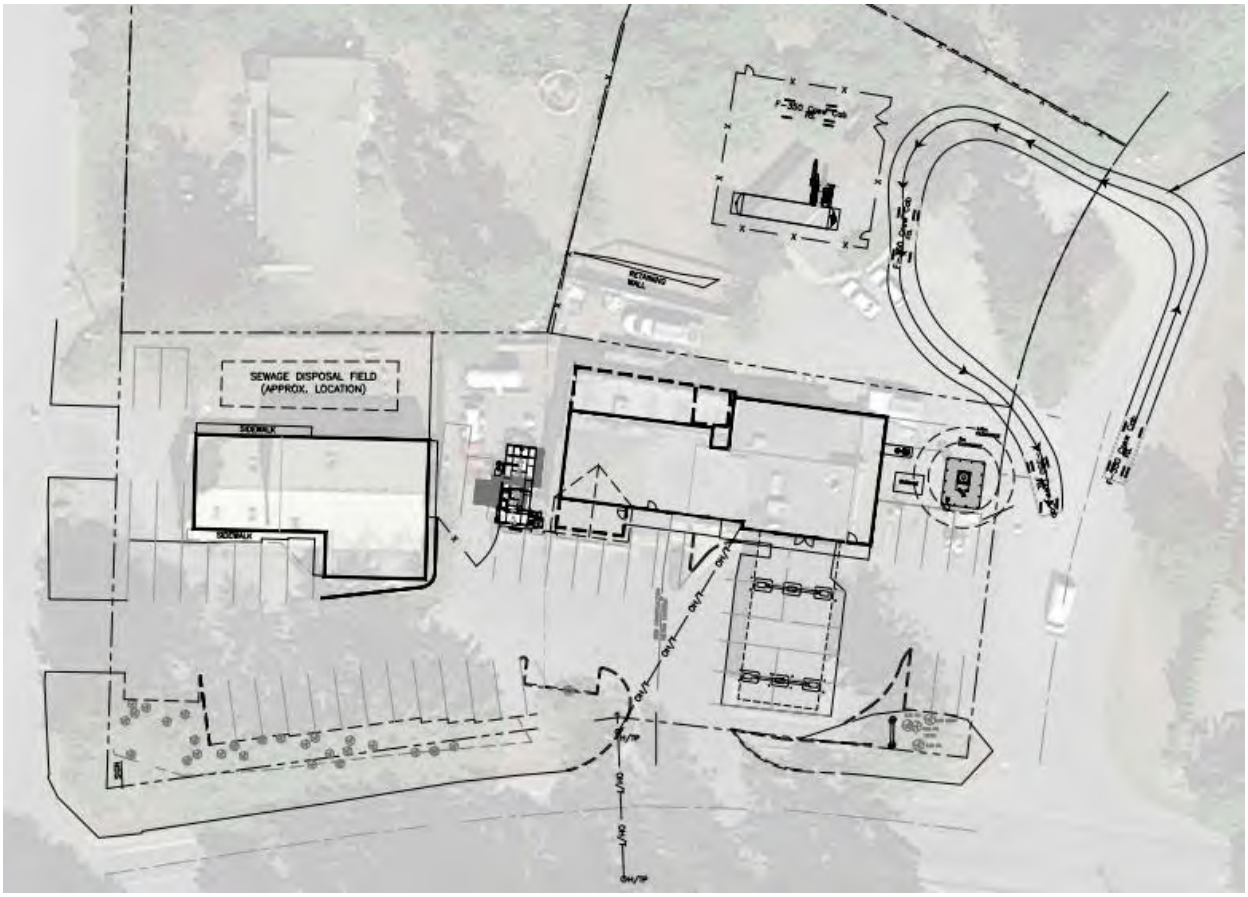
The facility located at 793 Lockinvar Lane, on Gabriola Island, within Gabriola Island Trust Area, and the Regional District of Nanaimo BC. Gabriola Island has a population of 4,500 and population density per square kilometer of 77.4 (Statistics Canada, 2021 Census).

The alternate worst-case scenario is a jet fire based on propane liquid released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario.

There is a delivery driver working from the propane bulk plant.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.2.1 Facility and Property



4.2.2 Maximum Capacity and Quantity of Propane Stored on Site

Propane is the only product on site that meets the minimum threshold requirements for developing the Environmental Emergency (E2) portions of this Plan as per Environment and Climate Change Canada's E2 Regulations. The capacity of the largest single container in which propane is stored on site is 18.0243 metric tonnes (9,400 USWG). The maximum expected quantity of propane on site at any time during the calendar year is 18.0243 metric tonnes (including piping) - the working volume limited to 80% of the capacity of the propane vessel on site to allow for expansion/contraction of propane due to changes in temperature/pressure within the vessels. **18.0243 metric tonnes are registered with ECCC using SWIM for both quantity and capacity as it is not known how much if any tanks (at up to 5% maximum) or cylinders (at up to 80%) will be stored on-site.** Since both the largest single container and maximum expected quantity both exceed 4.5 metric tonnes, an E2 Plan is required.

4.2.3 Substance Identification

Schedule 1 of Environmental Emergency Regulations, 2019 - Part 1						
Item	Column 1	Column 2	Column 3	Column 4	Column 5	
	CAS No	Name of Substance	Concentration % mass/mass	Minimum Quantity (tonnes)	Hazard Category	UN No
17	74-98-6	Propane	1	4.5	E	1978

Legend: E explosion hazard

4.2.4 Process Description

This Mid Island Co-op staffed Bulk Plant has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. At this time, Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

4.2.5 Passive Mitigation

The 9,400 USWG horizontal propane storage tank is installed above ground.

Locked non-climb-able metal fence segregate the above ground propane tank from the public.

Stationary propane tank and its associated piping are protected against collision damage by concrete filled metal posts XXXX.

4.2.6 Active Mitigation

The facility is illuminated at night.

The facility has a typical amount of portable fire extinguishers as required by the local fire code. Access for fire department equipment is good.

The propane storage tank is within reach of hose streams from outside of the facility and firefighting water is supplied by water shuttles.

The delivery trucks have driven-away protection in the form of interlocks that prevent the truck from being placed into gear with the propane loading hose attached ("refinery gates"). The tanks on the delivery trucks are outfitted with excess flow valves that will shut off flow to the atmosphere should a significant hose or pipe break occur. Trucks are outfitted with positive air shut off devices and will shut down the engine if propane gas is ingested. Drivers have an emergency remote stop device in their possession that if activated shuts off the truck, closes the ISC valves and while pumping requires the driver to manually press a button at timed intervals to continue flow. A back-check valve at the barrel fill-in point protects piping.

Manual emergency shutdown devices are provided at the above ground tank and on the North exterior wall of the convenience store. Pressure relief valves are installed on the fixed tank and delivery vehicles.

There are good controls utilizing the operating and maintenance procedures. The storage tank has no other fire systems or controls such as fire or gas detection systems.

Vandals or trespassers to the facility and propane area are dealt with by the local law enforcement fully of the law.

4.3 Frequency, Probability and Consequence Risk Assessment

Version 8.71 of the commercially available software package, Safeti (formerly Phast Risk) from DNV was used to perform a probabilistic risk assessment of this operation:

https://www.dnvgl.com/services/qra-and-risk-analysis-software-phast-and-safeti-1676

Safeti has consequence modelling software, used for developing heat radiation levels, used in accessing the fire and explosion consequences (overpressures and heat radiation) associated with the propane tanks. Safeti examines the progress of a potential incident from the initial release to far-field dispersion, including modelling of pool spreading and evaporation, and flammable and toxic effects. Safeti was used for the consequence modelling of events modelled for emergency response purposes.

Safeti allows individual receptors to be defined with specific vulnerability data providing a much more accurate picture of the risks to which those within the calculated consequence areas are exposed. The program supports a range of vulnerability models, specific to the effect type being considered. For explosion vulnerability, models are available which consider either overpressure or impulse, with the data being treated discretely or interpolated. For radiation effects, flammable probit methods based on intensity and dose are used.

The methods and vulnerabilities are based on the guidance given by the National Institute of Public Health and the Environment (RIVM) Centre for External Safety, of the Netherlands, as set out in their External Safety (Establishments) Decree (BEVI) (RIVM, 2009). This methodology is based on the former guidelines presented by TNO in their "Coloured Books", with the Guidelines for Quantitative Risk Assessment, CPR18E, or more widely known as the "Purple Book" (CPR-RE, 2005). The concepts of the other "Coloured Books" are utilized within Safeti.

- BEVI – Besluit Externe Veiligheid Inrichtingen, translates as the External Safety (Establishments) Decree of RIVM
- Purple Book - CPR 18E "Guidelines for Quantitative Risk Assessment" published by the Committee for the Prevention of Disasters department TNO, a Netherlands Organization
- RIVM – Rijksinstituut voor Volksgezondheid en Milieu, translated as the National Institute of Public Health and the Environments of the Netherlands
- TNO - Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, or the Netherlands Organization for Applied Scientific Research, out of Sdu Uitgevers, Den Haag (The Hague). Their Committee for the Prevention of Disasters publishes guidelines on quantitative risk assessment calculations.

The consequence estimating models used in this study are for risk management purposes only. As such, they are not modelling of the actual physical event. As with all models, small changes in the input parameters can significantly affect the resulting consequence estimates.

While the parameters selected in consultation with FCL are reasonable for the model and situation, it must be kept in mind that the results are not absolute. Therefore, the consequence estimates should be taken as only an indication of the extent or order of magnitude of the potential consequence. The actual consequence may be more severe than under the reasonably foreseeable conditions assumed.

SAFETI Parameters and Model Settings:

- Dispersion
    - Atmospheric Expansion - DNV Recommended
    - Modelling of Instantaneous Expansion - Old Standard Method
    - VCE - TNT, 10% yield, Ground Burst
    - Fireball - Roberts TNO Hybrid
    - BLEVE (not applicable to this site) - CCPS Second Edition

4.3.1 Frequency Analysis

As Mid Island Co-op has had no significant propane incidents in its history, we elected to use general industry data for the frequency analysis, specifically that data given in the Purple Book and BEVI methodologies. From these frequencies, combined with the consequence distances calculated for events which would reach offsite receptors, Individual Risk contours can be calculated to compare to acceptable risk criteria.

The use of this method negates the need for fault tree, event tree, and human reliability analysis, as the frequency of the end event is given directly for input into Safeti.

The probabilities of interest in this study are given as:

Table 4.3.1

Event / Installation	Events per Vessel-Year or per Hour-Operation		
Loss of Containment	Instantaneous	10 minutes Continuous	10 mm dia. Continuous
Stationary Pressure Vessel	5×10^{-7} /y	5×10^{-7} /y	1×10^{-5} /y
Loss of Containment	Instantaneous	Largest Connection, Continuous	
Pressurized Road Tankers	5×10^{-7} /y	5×10^{-7} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Hoses	4×10^{-6} /h	5×10^{-5} /h	
Loss of Containment followed by Ignition	Instantaneous	Largest Connection, Continuous	
Road Tanker on Site	1×10^{-6} /y	1×10^{-6} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Piping (nom dia. <75mm)	1×10^{-6} /m-y	5×10^{-6} /m-y	
Piping (nom dia. ≥75mm, ≤150mm)	3×10^{-7} /m-y	2×10^{-6} /m-y	
Piping (nom dia. >150mm)	1×10^{-7} /m-y	5×10^{-7} /m-y	

Safeti also utilizes the probability of ignition from the BEVI methodology for stationery and road tanker vessels. For stationary vessels, the probability of ignition is 0.2, 0.5, and 0.7 for continuous releases of 10, 10 to 100, and over 100 kg/s respectively, and for instantaneous releases of 1000, 1000 to 10,000, and over 10,000 kg respectively. Further, we have entered ignition sources at the adjacent facilities

and residential dwellings, which have gas-fired heating systems, and a linear ignition source being the roadways adjacent to the property.

We have multiplied the frequency at which a single vessel may lose containment by the number of similar vessels typically on site, by the number of hours loading hoses are used, or by the number of metres of piping which may contain propane.

An important element in the frequency at which a particular dispersion may reach a receptor is the wind direction and speed. Of slightly lower effect on the dispersion, but still somewhat significant for propane, is the atmospheric temperature, stability, and humidity. Although we have reviewed historical wind directions and speeds, and other pertinent weather parameters in the area, based on Environment Canada, we did not use this data directly in the compilation of the individual risk contours based on wind direction. Rather, we utilized the greatest possible extent of the Individual Risk contour and plotted that distance as a circle of that diameter, thus adding conservatism to the calculation based on wind direction.

We then considered the safety features of the facility, especially of the loading operations, which have the highest frequency of releases traditionally. Each of the delivery trucks are outfitted with an interlocking device, which does not allow the truck to move if the loading hose is attached to the main vessel. This feature lowers the frequency of a hose drive-away event occurring by approximately one order of magnitude.

Other typical features such as excess flow valves on delivery truck tanks, pressure relief valves, and, most importantly, management systems including operating and maintenance procedures and operator training, would be expected to lower the frequency of the postulated events by at least another order of magnitude in aggregate, virtually across the scenarios. However, within the loss data, as is typical with all frequency numbers, we do not know how many of the safety features were in place for the events that the frequency data was based on, therefore, we have assumed, conservatively, that the equipment in those losses had a reasonable number of safety features.

4.3.2 Consequence Analysis

Propane is held and dispensed from the above ground propane storage tank on the site. The vessel, hose, and piping sizes were entered in Safeti to calculate consequences of loss of containment events. In following the BEVI and TNO Purple Book methodology, and thus the remainder of the TNO Coloured Book series, we have used the vulnerability to receptors as contained in that series. Vulnerability was in relation to thermal radiation effects due to fireball, jet, and pool fires, and explosion overpressure effects.

4.3.2.1 Modelling Parameters and Weather

Weather parameters were modelled based on data provided at hourly intervals over a 5-year period. This data considers wind speeds and directions and the associated probabilities, the Pasquill atmospheric stabilities, relative humidity's, etc., and daytime and night-time conditions. This data was entered Safeti to calculate probabilities of weather-related dispersion events over the releases.

4.3.2.2 Releases in General

For each of the vessels and tank, there were common release events chosen, based on the BEVI requirements. These were a catastrophic, instantaneous release of all the mass of the vessel; a 10-minute release of the entire mass of the vessel, and a 10 mm hole in the system, releasing all the mass of the vessel over time. If vessels at this facility are connected via a common header, we postulate a release of more than one vessel through piping. In addition, when a hose connects the 9,400 USWG tank with the truck tank, there is a possibility that both tanks will empty their contents through the hose release if protection devices fail to operate. Thus, we have used the combined volumes of the two tanks in these cases.

Note that in all cases, the volume of the releases in question would be a maximum of 80% of the nominal volume of the tanks, based on maximum fill levels. However, for the consequence analysis for emergency response considerations, we have used the full 100% capacity of the propane tanks to add conservatism and to indicate worst probability scenarios.

All releases (other than catastrophic) were assumed to be released horizontally, which creates the maximum offsite consequences. The release can be directed in any direction over 360 degrees and impinges on the ground or nearby vessels and structures. Such impingement creates a larger consequence event onsite, but lesser consequences offsite. Thus, the use of a horizontal jet is conservative.

Ignition sources for the release events are essentially vehicles in the yard, vehicles on the roadways driving by the facility, heating systems and unclassified electrical equipment on any buildings around the facility. We have placed ignition sources at each of these buildings.

4.3.2.3 Vapour Cloud Explosion (VCE) – Worst Case Scenario

This event would involve a catastrophic breach with instantaneous release of the maximum quantity of propane from the largest tank and would produce:

- an overpressure of 1 psi out to 441 metres, and
- a level of 12.5 kW/m^2 m out to 307 m

According to the US Center for Chemical Process Safety, a vapor cloud explosion "is the result of a release of flammable material in the atmosphere, a subsequent dispersion phase, and, after some delay, an ignition of the vapor cloud. A flame must propagate at a considerable speed to generate blast, especially for 2-D (double plane configurations) and 3-D (dense-obstacle) environments." "In order to reach these speeds, either the flame has to accelerate, or the cloud has to be ignited very strongly, thereby producing direct initiation of a detonation." "…flame acceleration is only possible:

- in the presence of outdoor obstacles, for example, congestion due to pipe racks, weather canopies, tanks, process columns, and multilevel process structures.
- in a high-momentum release causing turbulence, for example, an explosively dispersed cloud or jet release.
- in combinations of high-momentum releases and congestion."

Thus, the use of the older TNT modelling procedure has for the most part been replaced by newer confined volume methods of VCE modelling. However, the VCE is an important scenario,

as it helps with the emergency response zone calculations for use in Environmental Emergency (E2) plans required by regulation. Thus, we present the TNT scenarios here, including the 652 m distance referenced as being the distance to 1 psi for a propane release. This uses a 10% efficiency with a TNT VCE using the EPA's RMP rule TNT calculation. Again, due to the lack of congestion around the site that would lead to large overpressure damage would dictate that the overpressure distances would be significantly smaller than these values in an actual VCE.

In the calculations for the Individual Risk calculations, we used the TNO MultiEnergy (ME) to perform overpressure calculations. The ME method is embedded in Phast Risk and was used in the calculation of overall risk. As this is a congested volume methodology, it is more representative of actual explosion overpressure events. As the calculation of individual risk is for the purpose of risk acceptability, these explosion calculations give better indication of actual risk posed.

The 1-psi VCE overpressure plot is presented below. Note that the propane release is the result of a catastrophic release of all the contents of the vessel instantaneously.

Figure 4.3.2.3.1 Vapour Cloud Explosion (VCE) – Worst Case Release Scenario

The facility is in the centre and the red circle has the greatest impact distance of 1 psi out to 441 m.

In addition to overpressure, the fireball consequence of a VCE will occur. 12.5 kW/m² was chosen as the endpoint of the calculation as the distance where people without shelter could be injured in the event or, without time to seek shelter from the fire radiation.

Figure 4.3.2.3.2 Vapour Cloud Explosion (VCE) Fireball

The propane facility is in the centre and the red circle is the greatest impact distance of 12.5 kW/m² out to 307 m.

4.3.2.4 Jet Fire from a 2" Transfer Hose Rupture – Reasonable Alternate Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank. It will have an impact distance outside the boundary of the facility producing a level of 12.5 kW/m^2 m out to 76 m.

The jet fire is based on a rupture of the largest transfer hose (2" release) that may deliver liquid propane to the atmosphere. The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane at vapour pressure released through a ruptured 2" transfer hose plotted below.

Figure 4.3.2.4 Jet Fire from a 2" Transfer Hose – Reasonable Alternate Scenario

The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 76 m.

4.3.2.5 Jet Fire from a 3" Pipe Rupture – Alternate Worst Case Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank and that would have the longest impact distance outside the boundary of the facility. This event would involve a release scenario due to a rupture of a 3" pipe and would produce:

- a level of 12.5 kW/m^2 out to 100 m.

The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane liquid released through a ruptured 3" pipe plotted below.

Figure 4.3.2.5 Jet Fire from a 3" Pipe – Reasonable Alternate Scenario

The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 100 m.

4.3.3 Identification of Public Receptors

The alternate worst-case scenario is a jet fire based on propane released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario XXXX.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.3.3 Identification of Public Receptors

The facility is in the centre <u>and</u> the red circle is the greatest impact outside the boundary of the facility of 12.5 kW/m² out to 100 m from a most likely release being a rupture of a 3" pipe that may deliver liquid propane to atmosphere.

4.3.4 Identification and Assessment of E2 Scenarios

Mid Island Co-op at 793 Lockinvar Lane Gabriola Island BC – 9,400 USWG Propane Tank (100% full)		
Worst-case Scenario		
Vapour Cloud Explosion (VCE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} VCE's per year	Probability of a VCE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of VCE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	441 m
Alternate Worst-case Scenario		
Jet Fire from a 3" Pipe Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	1×10^{-6} /m-y	Probability of jet fire occurring 1 in a million years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 Kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	100 m
Reasonable Alternate Scenarios		
Boiling Liquid Expanding Vapour Explosion (BLEVE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} BLEVE's per year	Probability of a BLEVE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of BLEVE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	138 m
Jet Fire from a 2" Transfer Hose Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	4×10^{-6} /h	Event occurring every 30 years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	76 m

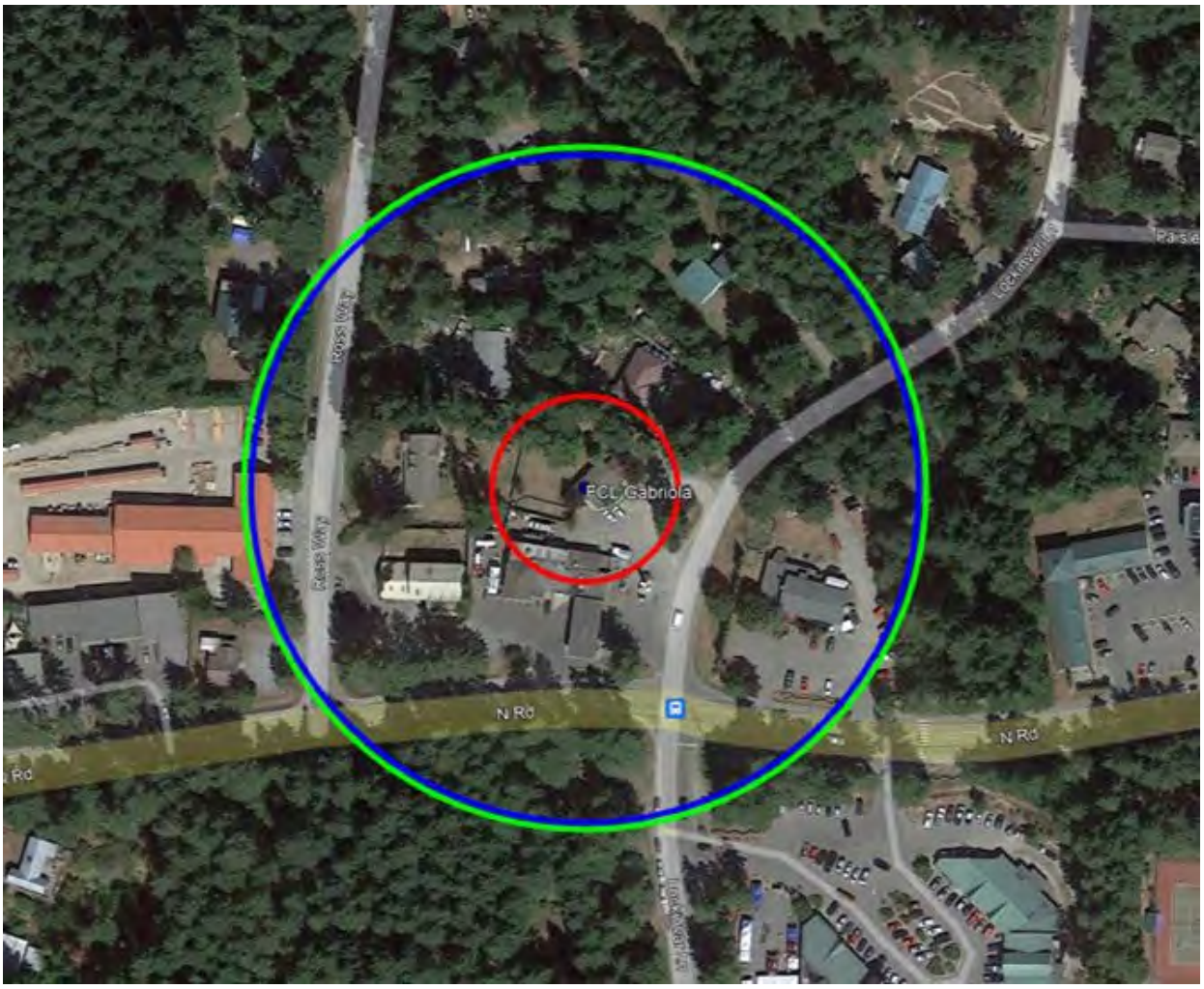
1. ***In the event of a catastrophic failure of the 9,400 USWG tank due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism the possible effect on the area would be overpressures from a blast causing structural damage and or injury as well as possible thermal damage and or injury due to a fire event as described previously in this section.***
2. ***In the event of a release from piping, leaking flange, seal, joint and transfer hoses due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism, the possible effect on the area would be thermal damage and or injury due to a fire event as described previously in this section.***
3. ***If the event were in preliminary stages an alarm would be sounded, emergency shutdowns engaged, evacuations made, traffic control measures implemented, Emergency Services, Mid Island Co-op Management, and FCL's Emergency Management Team contacted, and Incident Command established. Mid Island Co-op will assist Emergency Services. If activated by FCL, ERAC may also assist Emergency Services.***
4. ***The event model accuracy may vary due to general weather, wind speed and direction. Emergency responders would adjust evacuation and avoidance radius of effect accordingly.***
5. ***See 6.9 Environmental Emergency Simulation Exercises Scenarios A-F, and Annex 9.2.2 - Part 2 Scenarios.***

4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria

A comparison of risk estimation modelling results to risk acceptability criteria based on MIACC (Major Industrial Accidents Council of Canada) guidelines for land-use planning and siting determined the site is within risk acceptance criteria.

MIACC dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering).

Figure 4.3.5 (1) MIACC Risk Acceptability Criteria



3x10-7 – All occupancies, including sensitive populations such as schools, hospitals, etc allowed outside of this Contour
1x10-6 – High Density Residential allowed Outside of this Contour
1x10-5 – Low Density Residential and Commercial, Offices, Retail Centres allowed Outside of this Contour

Section 5 Prevention and Mitigation

5.1 Regulatory and Legal Requirements

5.1.1 Risk Management Tools

See 2.7 Plan Consultation/References for tools used to mitigate risks.

5.2 Prevention Initiatives

5.2.1 Elimination Controls

5.2.1.1 Site Selection

See 4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria.

5.2.2 Engineering Controls

5.2.2.1 Equipment

Qualified personnel conduct equipment installations, repairs, and maintenance. Applicable codes and standards for design, construction and maintenance of all vessels, piping valves and safety systems. This facility is equipped with crash protection and dry chemical fire extinguishers, which are located throughout the facility.

5.2.2.2 Emergency Shutoffs and Isolation Equipment

The propane plant has been fitted with emergency shut-offs, pressure and temperature gauges, pressure relief valves, flow indicators, electrical bonding/grounding systems, and drive-away prevention systems on the bulk delivery trucks XXXX.

5.2.3 Administrative Controls

5.2.3.1 Mechanical Integrity - Preventative Maintenance Inspections

Mid Island Co-op and FCL endeavors to maintain all equipment according to the standards set out in provincial Act and Regulation. The maintenance of the propane facility component follows the CSA B149.2-20 Propane Storage and Handling Code. Trained and competent technicians regularly inspect the facility. Defects are corrected records kept.

CSA B149.2-20 inspections:

7.22.5 Maintenance procedures

7.22.5.1
Maintenance procedures shall be appropriate to the particular facility and shall take into account, amongst other things, the following:
a) inspection of protective devices, alarms;
b) regular inspection and testing of hoses;
c) regular review of emergency procedures;
d) regular review of emergency evacuation procedures and designated safe location;
e) propane purging procedures;
f) isolation and tagging;
g) fire extinguishers and firefighting equipment;
h) piping, tubing, pumps, valves, and other propane equipment;
i) storage tanks;
j) electrical equipment;

k) fencing and security measures, signage, and notices;
l) lighting;
m) regular inspection and testing of vaporizers; and
n) any manufacturer's maintenance instructions for equipment.

7.22.5.2
Persons who perform maintenance on these propane systems shall be trained in the hazards of these systems and in the maintenance and testing procedures applicable to the facility

Note: See Dynamic Records – Equipment inspection, testing and maintenance schedules

5.2.3.2 Training

Employee and responder training that pertains to this plan is listed in Preparedness Section 6.

5.2.3.3 External Alerting and Emergency Notification System

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

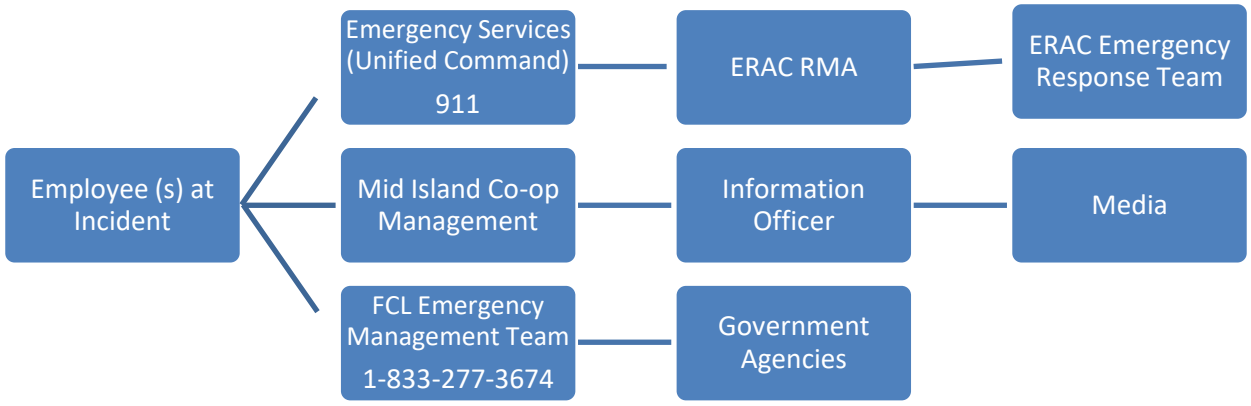
Section 6 Preparedness

6.1 Incident Management System

6.1.2 Emergency Response Management Model

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) etc. may be dispatched to scene to provide technical advice. Depending on the nature of the event, it may be a combination of the emergency service providers and may include regulatory officials who establish a Unified Incident Command at which time an Mid Island Co-op employee may participate in Unified Command at the emergency in a Unified Command or advisory role. If the event sustains over a period typically a standard Incident Command protocol will prevail which will include the establishment of operational periods; and, development of an incident action plan stating the objective/s, strategy/s, and tactics for the operational period.

FCL's Emergency Management Team is a group of subject matter experts and advisors who would provide guidance to Mid Island Co-op's emergency response measures. STARS emergency contact centre will take in Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call. Refer to 7.2.3 FCL Emergency Management Team for further information.



6.2 Mid Island Co-op/FCL Roles and Responsibilities

6.2.1 Emergency Response Coordinator (ERC)

The ERC will typically be the most senior or qualified manager, supervisor or employee on site that is able to instruct the activities or others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

Typical duties are:

- Coordinate and direct the activities of the site employees during an event.
- Using sounding an alarm, alert occupants of the event
- Assess the resources and actions required for a response.
- Ensure Emergency First Responders are notified using 911, notifying Mid Island Co-op Management and the Co-op Emergency Management Team
- Maintain communication with the Emergency First Responders and, if required, assign an Assistant Coordinator
- Ensure that all personnel are directed in any post incident activities.

6.2.2 Information Officer

In the event of an incident that may require communications with the media and our regulator, the Mid Island Co-op will assign an Information Officer. The Information Officer may be involved with the activities during a response and may be involved with remedial activities following an event.

6.2.3 FCL Emergency Management Team

This team is a group of subject matter experts and advisors who would provide oversight and guidance to the emergency response measures. STARS emergency contact centre will take in FCL, and Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call.

There are five roles within the EMT, and a list of their responsibilities follows. The EMT will work together with assignment of on-scene personnel to work toward ensuring FCL's objectives are accomplished.

Emergency Operations Manager (EOM)

- Working with the EMT, determines:
    - Whether an Emergency Response Assistance Plan should be activated
    - The crisis levels.
    - The crisis owner
    - What support or guidance may be provided?
- Accepts responsibility for the FCL Emergency Management Centre and sets over-all objectives and priorities.
- Assigns an on-scene Incident Commander (IC) or Technical Advisor who will represent FCL in Unified Incident Command (UIC) for on-scene emergency response.
- Working with FCL on-scene IC, designates or approves on-scene Information Officer (IO) to manage communications.
- Assesses and monitors crisis for appropriate level of escalation/de-escalation, in consultation with other EMT members.

- Works with and approves the following, alongside the on-scene IC:
    - Incident Action Plans (IAP) – Works with on-scene FCL IC to develop and approve on-scene IAP objectives.
    - Approves resource orders to support response measures.
    - Approves demobilization plans.

Safety Officer

- Monitor's incident operations and advises the Emergency Operations Manager on all matters related to operational safety, including the health and safety of emergency responder personnel.
- Works directly with on-scene Safety Officer or UIC (if no safety officer has been designated), to ensure a safety plan and accountability plan has been developed and implemented.
- Reviews and approves the safety and accountability plans developed by on-scene Safety Officer or UIC
- Advises on Health & Safety regulatory requirements.
- Develop an Incident Safety Plan
- Ensure incident investigation responsibilities are fulfilled.
- Communicates with Health & Safety regulators.

Information/Liaison Officer

- Initiates and directs established communication response for Level 1 and 2 crisis situations.
- Informs the Crisis Communication Lead (CCL) about crisis and determined crisis level.
- Assists in the preparation of external communication materials delivered by the CCL, including updates, press releases, media statements, key messages, etc.
- Under the direction of the CCL, prepares and delivers internal key messages and updates.
- Delivers updates to internal stakeholders through the Everbridge system, including FCL's Senior Leadership Team
- Track's media calls and requests and refers them to the CCL.

Environmental Officer

- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential environmental impacts.
- Provides technical support in the development of tactics to minimize / mitigate the environmental impacts.
- Responsible for retaining, dispatching, and managing Environmental Consultants to manage any environmental consequences of the incident or spill as required.
- Provides technical assistance to response teams, as required.
- Manage and supervise operations associated with the transfer, storage, and disposal of liquid, solid and/or hazardous wastes during emergency response operations.
- Determine the most effective methods to be employed and how to minimize the amount of waste materials generated during emergency response operations.
- Delivers updates on environmental impacts response measures and status to Emergency Operations Manager
- Reports environmental spills, releases, or potential imminent releases to federal and provincial authorities.
- Provides direction and technical advice regarding post-incident cleanup and recovery.

Secondary Support – as determined by the Emergency Operations Manager

On-scene Incident Commander/Technical Advisor

- Reports to the Emergency Operations Manager (EOM)
- Provides summary of the incident to the EOM and EMT (example ICS form 201 – Incident Briefing)
- Initiates a site activity log for the operational period (example ICS form 214)
- Working within UIC, develops on-scene IAP incident objectives and develops or approves strategies and tactics.
- Working within UIC, assigns Operations and Planning Chiefs or accepts their roles in determining strategies and tactics of IAP and supervises on-scene resources.
- Working within UIC and with Operations Chief, ensures Strike Team accomplishes strategies and tactics of the IAP.
- Provides technical expertise to the EOM and UIC on the product or commodity that is involved.
- Provides regulatory expertise such-as regulatory: compliance, reporting and liaise with regulators.
- Liaise with ERAC, as necessary.

Security Officer

- Maintains overall management and guidance to security and protection of FCL facilities.
- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential security impacts.
- Provides technical support in the development of tactics to minimize / mitigate the security impacts.
- Responsible for retaining, dispatching, and managing Security Consultants to manage any security requirements.
- Provides technical assistance to response teams, as required.
- Delivers updates on security impacts response measures and status to Emergency Operations Manager

Additional Roles

The Emergency Operations Manager will determine the need for additional support. Depending on the severity and length of the crisis, additional roles such as Finance and Logistics Officers, Legal, Insurance, Documentation, Procurement, Government Relations, Human Resources, etc. may be required.

6.3 Advance Public Notification and Communication

6.3.1 Public and Neighborhood Emergency Awareness Notifications

The process of preparation will have similarities for most areas, which will mostly be site visits and the offering of information pertaining to evacuations, propane vapor-cloud characteristics and other related safety measures. Some communities have systems organized by the local EMO Coordinators that will automatically notify areas of risk through electronic communication methods. This would involve a combined effort between Mid Island Co-op facility management and local emergency services. Mid Island Co-op offers a pamphlet (see 6.3.2 Community Emergency Notification System) to inform the neighboring businesses or community on the actions required in the event of an incident. Employers, organizations, and residents that are located within the notification zone may incorporate portions of the E2 plan into their own safety practices.

Notification of potentially impacted neighbouring occupancies and Gabriola Island Fire Rescue from the Alternate Worst-case Scenario – 4.3.2.5 Jet Fire from a 3" Pipe Rupture was accomplished. Figure 4.3.2.5 illustrates the greatest impact outside the boundary of the facility of 12.5 kW/m2 out to 100 m - see Annex 9.3.3.

Emergency Notification System

The intent of this notification is to inform all neighboring residences, businesses and organizations of actions that may be required in the unlikely event of a major propane escape or fire that would cause an emergency evacuation.

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

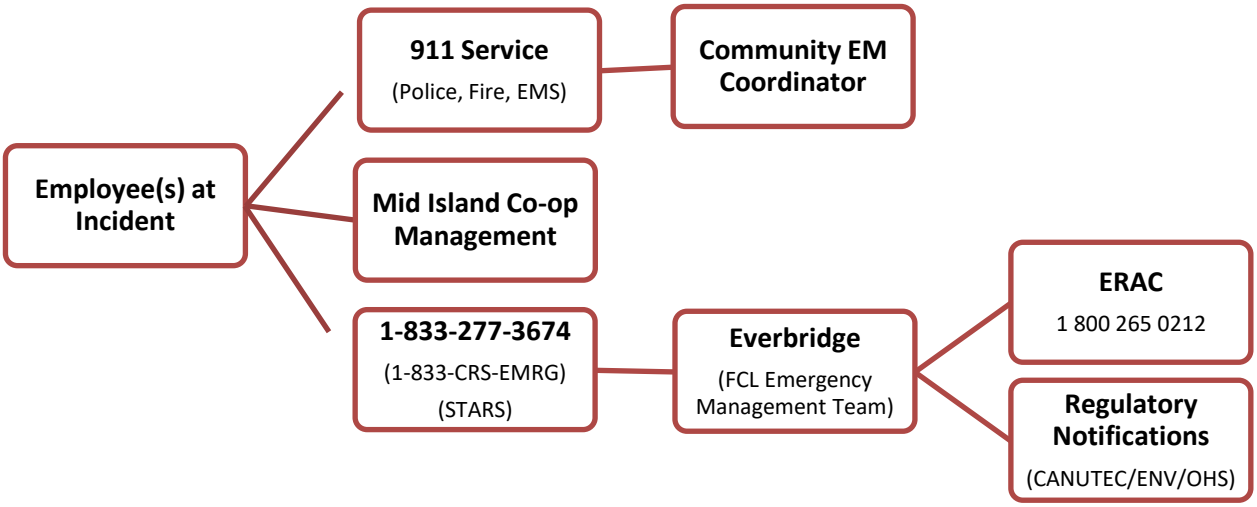
Important facts about Propane:

- Propane is non-toxic.
- Propane has an odourant added to it that makes it smell like rotten eggs or skunks.
- Flames, smoking material, sparks, and static electricity will ignite propane when mixed with the right amount of oxygen.

If you require any additional information or have any concerns, please contact Mid Island Co-op at (250)-802-1198.

6.4 External Alerting and Notification

6.4.1 Emergency Assessment and Alert Notification



For External Alerting/Notification/Resources Contact Lists refer to Annex 9.1

6.5 Evacuation and Shelter-in-place

There is potentially one outcome that can occur that affects the public. The circumstances of the event will dictate the type of instructions given to the public.

- Shelter-in-place – It may be safer for the public or neighbouring facilities to shelter-in-place to avoid exposure to a propane release depending on the quantity and modifying conditions, such as the prevailing wind.
- Evacuate – Under the direction of local emergency services, it may be necessary to evacuate to a safe distance. Instructions will be provided to the public regarding the evacuation.

6.6 Mutual Aid and Mutual Assistance

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) and where required an ERAC Emergency Response Team etc. may be dispatched to scene.

6.7 Equipment

The site is equipped with dry chemical fire extinguishers that are strategically located, and on trucks. Emergency electrical switches that shut-off electrical power to portions of the facility or, the entire facility is strategically located on site.

6.8 Training and Exercise

To ensure successful plan activation, management will ensure that employees receive adequate training to be familiar with the E2 plan requirements. Conducting regular function specific training and emergency exercises prepare personnel and ensure viability of the plan. The following is a non-exhaustive list of the training that employees receive according to their internal roles and responsibilities.

6.8.1 Employee Training

Training and testing of facility employees who have specific emergency duties ensures understanding of their roles and responsibilities listed in this E2 Plan.

All personnel handling propane hold appropriate certification of training. Personnel receive annual and/or new hire awareness training on Mid Island Co-op site-specific emergency response plans.

Some of the additional courses that would accommodate product awareness and emergency activities include WHMIS, TDG and Fire Extinguisher use.

6.8.2 E2 Plan Exercise Schedule

Training	Attendees	Frequency
E2 Plan – Awareness Workshop	All	On Hire
E2 Plan – Simulation Exercise	All	Each Year
E2 Plan – Full-scale Simulation Exercise	All	Every 5 Years

6.8.3 Responder Training

First level response training is provided internally for employees through orientations and annual Emergency Response/Environmental Emergency Plan training sessions designed to meet Federal Environmental Emergency Plan Regulation requirements.

LPGERC (Liquid Propane Gas Emergency Response Corporation) now called ERAC (Emergency Response Assistance Canada) which is a non-profit division of the CPA (Canadian Propane Association) facilitates secondary or sustained emergency response training.

FCL (Federated Co-operatives Limited) Propane and the CRC (Co-op Refinery Complex) are both participants with ERAC. TC (Transport Canada) approves secondary or sustained emergency response systems meeting TDG (Transportation of Dangerous Goods) ERAP (Emergency Assistance Plans) Regulations.

ERAC has established, HBC (Home Base Coordinators), TA's (Technical Advisors), RMA's (Remedial Measures Advisors) and ERT's (Emergency Response Teams) to help and/or advise local emergency services across Canada.

Emergency Fire Services may utilize the training offered by the ERAC specifically designed for propane fire response called PTI 911-01 LPG Awareness for Firefighters.

6.9 Environmental Emergency Simulation Exercises

Scenario A
Propane Release – no fire

Scenario B
Propane Release – with fire

Scenario C
Structural Fires – local to propane storage

Scenario D
Wildfires – local to propane storage

Scenario E
Bomb Threats/Terrorism

Scenario F
Evacuation Procedures

See Annex 9.2.2 - Exercise Documents, Part 2 Scenarios - for Scenario A-F Emergency Simulation Exercise scenario examples.

Section 7 Response

7.1 E2 Plan Activation and Emergency Contacts

ADDRESS of Gabriola Island : 793 Lockinvar Lane Gabriola Island BC First Responder Entrance - GPS in DD: 49.17439, -123.84605				
E2 PLAN ACTIVATION and EMERGENCY CONTACTS				
IN CASE OF EMERGENCY CALL:				
911				
NEXT REPORT TO MANAGEMENT AT:				
POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198
NEXT REPORT TO CO-OP EMERGENCY AT:				
1-833-277-3674 (CRS-EMRG)				
FCL PROPANE EMERGENCY CONTACTS:				
POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS		
POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES	
FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

7.2 Emergency Information & Equipment Locations

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store and Convenience store electrical room
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREAS	East of site on North Road

7.3 Emergency Notification and Communication and Procedure

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

7.4 Emergency Response Measures

7.4.1 Propane Release – no fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller – where applicable.
- Ensure all vehicles in the compound are not running or started.
- Close all doors to buildings, notify building occupants and advise an evacuation if the propane vapors have potential to travel into a building or its ventilation system.
- If the source of the release cannot be shut-off, initiate an evacuation.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist or advise Emergency Services as required.

7.4.2 Propane Release – with fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller - where applicable.
- If the fire is not propane fed, attempt to extinguish the fire.
- If the fire is propane fed and extinguishment may lead to an uncontrolled propane release do not attempt to extinguish the fire
- If the source of the release cannot be shut off and or if extinguishment is not possible, activate the emergency horn located on North exterior wall of convenience store, go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.3 Structural Fires – local to propane storage

- Notify personnel to evacuate the building.
- Do not place yourself in an area where fire entrapment can occur.
- Attempt to extinguish fire using fire extinguishers, if safe to do so.
- Close doors as you leave rooms to minimize fire spread rate.
- Leave the building using the closest safe exit.

- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Have fuel delivery units (petroleum and propane) moved, if safe to do so – where applicable.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.4 Wildfires – local to propane storage

In the event of a wildfire and an evacuation is pending:

- Alert all personnel and have any fuel delivery units (petroleum and propane) and other vehicles in the field remain away from the facility until the fire threat is over.
- If fuel delivery units (petroleum and propane) are on site upon the evacuation order have them driven off site if it is safe to do so and following the direction/permission of the Emergency Authority.
- Prior to site evacuation ensure all fuel storage systems are shut down, close all building doors.
- Drain all Bulk Plant hoses if safe to do so.
- Secure Bulk Plant by closing and locking gates.
- Report how much propane in in Bulk Storage to BC Wild Fire.

7.4.5 Bomb Threats/Terrorism

Bomb or act of terrorism threats may come in the form of a call, mail or note, electronically, verbally in person or maybe the discovery of a device either obvious or disguised.

Discovery of a suspicious device/package:

- Do not touch it or attempt to open or disarm it.
- Evacuate the location following the evacuation procedure.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go the Secondary Muster area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 778-772-9800.
- Report to 1-833-277-3674 (CRS-EMRG).

If you receive a threatening call:

- Listen to the caller in a calm and polite tone of voice.
- Start taking notes as soon as possible.
- Try to silently get the attention of a co-worker and write down the situation.

- Ask about the bomb location.
- Ask what type of bomb it is.
- Ask when and how it will explode.
- Ask the caller why they placed the bomb.
- Take note of the person's voice description such as accent, speech speed and language skills, mannerism, sex, and age.
- Take note of any background noises.
- Take note if the person seemed to be familiar with your location.
- Take note if the person's voice seemed familiar to you.
- Ask for the person's name and where they are calling from.
- When the conversation is over call 911.
- Establish communication process with police for further direction.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Complete a tally of personnel.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.6 Evacuation Procedures

When notification of a propane emergency or an evacuation order is given:

- Stop all activities.
- Eliminate all ignition sources if safe to do so.
- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.4.7 Serious Injury/Illness

- Assess the scene.
- Administer first aid as per training.
- Call 911 for assistance as warranted.
- Establish a clear pathway for EMS.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.8 Vehicle Incidents – Involving On-site Propane Delivery Units

Risk Assessment

- Determine threats to life (injuries to self or others, release or anticipated release of propane, traffic, fire, etc.).
- Identify ignition sources (shut-off engine, use vehicles electrical disconnect switch where possible).
- Inspect propane vessel, piping, valves etc. and truck to identify leaks, damage etc.

Report the Incident

- Call 911 when:
    a. You require Police, Fire or Medical personnel.
    b. There is a release or anticipated release of propane e.g.
        i. a propane delivery truck rolled over in a ditch with all four sides not visible is an example of an anticipated release.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

Secure the site.

- Deploy roadside markers and reflectors (no flares).
- Clear the area of non-essential and untrained personnel.
- If safe to do so, stop or divert traffic or public access to site.

Section 8 Recovery/Restoration

8.1 Disposal and Waste management

In the unlikely event of release that caused damage, Mid Island Co-op will endeavor to reduce and remediate any damage to the environment and will bring in the proper resources including specialized equipment and personnel to develop and implement the appropriate disposal and waste management plan. Due to the inherent characteristics and hazards of propane as described in Section 4, recovery activities may be limited to removal of debris.

8.2 Site Restoration

In consultation with public authorities, Mid Island Co-op will initiate site restoration processes as soon as possible, striving for rapid restoration from environmental damage. A specific restoration plan will be generated following an incident and will consider the specific details and circumstances of an incident.

8.3 Public Notification

In consultation with public authorities and specialized personnel, the extent of damage will be determined. Appropriate communication will be provided by public authorities and/or Mid Island Co-op to all relevant parties, including the public utilizing in person visits, local emergency services, radio, TV, automated phone messages, and social media e.g., Facebook, Twitter etc.

8.4 Stakeholder Engagement

This facility is owned and operated by Mid Island Co-op and will assist the organization of the community's resources necessary for people recovering from an emergency.

8.5 Post Incident Evaluation

8.5.1 Post Incident Review and Debrief

A post incident review and debrief will be conducted after every incident or training exercise for all personnel involved to evaluate the incident. Record and assess - using the Exercise Evaluation and Corrective Actions document found in Part 4 of Annex 9.2.2 of this plan - to ensure the activities carried out were in accordance with the plan. Replace and/or service safety equipment as required.

Section 9 Annexes

Annex 9.1 External Reporting

- 9.1.1 Environmental Reporting
- 9.1.2 Public Safety Reporting
- 9.1.3 OHS Reporting
- 9.1.4 TDG Reporting
- 9.1.5 ERAP Activation Reporting
- 9.1.6 Gas and Pressure Vessel Reporting

Annex 9.2 Documents

- 9.2.1 Safety Data Sheet
- 9.2.2 Annual and 5-Year Full-scale Simulation Exercise Document
  - Part 1 – The Exercise Plan
  - Part 2 – Scenarios
  - Part 3 – Participation List
  - Part 4 – Exercise Evaluation and Corrective Actions

Annex 9.3 Dynamic Records

- 9.3.1 Exercise Records
- 9.3.2 Preventative Maintenance Inspections Records
- 9.3.3 Community Notification Records
- 9.3.4 Plan Stakeholder Status and Acknowledgement
- 9.3.5 Facility Photos

Annex 9.4 Maps and Diagrams

- 9.4.1 Fire Services Route to Site
- 9.4.2 Emergency 1st Responders Entrance to Facility
- 9.4.3 Muster Areas
- 9.4.4 Facility Maps
- 9.4.5 Plant Schematics
- 9.4.6 P&ID drawings
- 9.4.7 Tank/s Data Plate/s

Annex 10.1 External Reporting

9.1.1 Environmental Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line.
- Submit within 30 days of the emergency response completion date of the spill.

Federal - Environment and Climate Change Canada (ECCC)

- Complete and submit a written report to Regional Director, Environmental Enforcement Directorate-ECCC-PYR ec.dale-rpn-enforcement-pnr.ec@canada.ca
    - for an environmental emergency that has or may have an immediate or long-term harmful effect on the environment,
    - constitutes or may constitute a danger to the environment on which human life depends, or
    - constitutes or may constitute a danger in Canada to human life or health.
- The written report must include the information referred to in Schedule 8 of the E2 Reg's, SOR/2019-51.

Note: ECCC has accepted Transport Canada Transport Canada 30-Day Follow-Up Form (TP16-0086E) and all other container specifications forms as fulfilling this responsibility.

9.1.2 Public Safety Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Emergency Management BC – EMBC – will make necessary provincial contacts.

9.1.3 Occupational Health & Safety Reporting

British Columbia

- Call 1-888-621-7233 (Work Safe BC 24/7) to report a serious incident or chemical release (e.g., propane) or unsafe working conditions including:
    - Serious injury to or death of a worker
    - Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation
    - Major release of a hazardous substance
    - Fire or explosion that had a potential for causing serious injury to a worker.
    - Blasting incident causing personal injury
    - Dangerous incident involving explosives, whether there is personal injury.
- Crisis Support Line (injured worker) 1-800-624-2928 (24/7)
- Critical Incident Response (witnessed to a traumatic workplace accident) 1-888-922-3700 (24/7)

9.1.4 Transportation of Dangerous Goods Reporting

British Columbia

Call 1-800-663-3456 (24/7) (Provincial Emergency Program – Emergency Management BC) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line. Submit within 30 days of the emergency response completion date of the spill.

Federal – Transport Canada

- Call 1-888-226-8832 (CAN-U-TEC 24/7), 1-613-996-6666 or *666 on cellular in the event of an emergency involving a release or anticipated release of dangerous goods, and/or to report any release of propane into the environment that could pose a danger to public safety or any sustained release of 10 minutes or more, and
- Complete a Transport Canada 30-Day Follow-Up Form (TP16-0086E) and send to the Director General, TDG at dor-rcd@tc.gc.ca utilizing TP 15294 – Guide for Reporting Dangerous Goods Incidents (where applicable, ensure to fill out a container specifications form found in Annex E of the Guide), and

Note: Confirm approval from Transport Canada prior to moving a damaged propane truck or trailer from the scene or roadway

9.1.5 Emergency Response Assistance Plan (ERAP) Reporting

Federal

- Transportation Incidents: In response to a release* or anticipated release**, FCL's Emergency Management Team will implement the Emergency Response Assistance Plan (ERAP) by:
  - Calling Emergency Response Assistance Canada (ERAC) at 1-800-265-0212 and implement Federated Co-operatives Ltd. ERP2-0010-025 to tier 1 or 2.
    - tier 1 implemented for technical or emergency response advice, but none of the emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.
    - tier 2 implemented for technical or emergency response advice, and emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.

*Release means escape of dangerous goods

**anticipated release examples: an incident has occurred, and propane will have to be transferred; propane vessel has been damaged, and propane may be released; and a tanker rolled over, with all four sides not visible

9.1.6 Gas and Pressure Vessel Reporting

Provincial

Incidents and hazards can be reported 24/7 by completing the incident form or by calling 1-866-566-7233.

Definitions

Incident: A failure of a regulated product, work or operation that caused damage or injury

Hazard: A source of potential harm to persons or potential damage to property.

https://www.technicalsafetybc.ca/contact-us/report-an-incident

SAFETY DATA SHEET

1. Identification

Product identifier PROPANE- LIQUEFIED PETROLEUM GAS

Other means of identification

Product code 127

Synonyms Unstenched Propane * Stenched Propane * HD-5 Propane * Standard Propane

Recommended use Various.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

Supplier Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

24-Hour emergency telephone (613) 996-6666 - Canutec

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
	Simple asphyxiants	Category 1
Health hazards	Not classified.	
Environmental hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards Contact with liquefied gas may cause frostbite.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	100

Ethanethiol	75-08-1	0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. Get medical attention if breathing difficulty persists.

Skin contact Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.

Eye contact Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 20 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Most important symptoms/effects, acute and delayed Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Water spray. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Extremely flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode. Use approved gas detectors in confined spaces.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods Evacuate area. Check oxygen content before entering area. Stop leak if you can do so without risk. Remove pressurised gas cylinders from the immediate vicinity. Turn leaking cylinder with the leak up to prevent escape of gas in liquid state. Closed containers can burst violently when heated, due to excess pressure build-up. Use water spray to keep fire-exposed containers cool. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.

General fire hazards Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Eliminate all sources of ignition in vicinity of released gas. Evacuate all non-essential personnel to an area upwind. Stop leak if possible without any risk. Ventilate enclosed areas to prevent formation of toxic, flammable or oxygen deficient atmospheres. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Attempt to stop the gas leak, if no risk is involved.

7. Handling and storage

Precautions for safe handling	Eliminate all sources of ignition. When using do not smoke. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Valve protection caps must remain in place unless container is secured with valve outlet piping to use point. Close valve after each use and when container is empty. Do not drop, drag, slide or roll cylinders on their sides. Use a suitable hand truck to move gas containers. Use a pressure reducing regulator when connecting container to piping or systems. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. Do not use gas directly from containers. Do not heat container by any means to increase the discharge rate of product from the container. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). All equipment used when handling the product must be grounded. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Secure cylinders in an upright position at all times, close all valves when not in use. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Quebec OELs. (Ministry of Labour - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

Appropriate engineering controls Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate ventilation and minimize the risk of inhalation of gas.

Individual protection measures, such as personal protective equipment

Eye/face protection If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

Skin protection

Hand protection Wear cold insulating gloves.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Compressed liquefied gas.

Colour Colourless.

Odour Boiling cabbage if stenched.

Odour threshold 4800 ppm

pH Not available.

Melting point/freezing point -180 °C (-292 °F) / -185.89 °C (-302.6 °F)

Initial boiling point and boiling range -42 °C (-43.6 °F)

Flash point -101.1 °C (-150.0 °F) Pensky-Martens Closed Cup

Evaporation rate > 1 (Ether (anhydrous)=1)

Flammability (solid, gas) Extremely flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.2 %

Flammability limit - upper (%) 9.5 %

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure 1034.1 - 1241 kPa

Vapour density 1.6

Relative density Not available.

Solubility(ies)

Solubility (water) 6.5 % v/v in water.

Solubility temp. (water) 20 °C (68 °F)

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature	432 °C (809.6 °F)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Critical temperature	96.6 °C (205.88 °F)
Explosive properties	Not explosive.
Molecular weight	44.11 g/mol
Oxidising properties	Not oxidising.
VOC	100 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness. Inhalation of high concentrations may result in central nervous system depression and reduce the ability of the blood to carry oxygen to body tissues.
Skin contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Eye contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.

Components	**Species**	**Test results**
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes

Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	None known.
Further information	Chronic effects are not expected when this product is used as intended.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Partition coefficient n-octanol / water (log Kow)	
Propane (CAS 74-98-6)	2.36
Mobility in soil	The product is slightly soluble in water.
Mobility in general	The product contains volatile substances, which may spread in the atmosphere.
Other adverse effects	The product is a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1978
UN proper shipping name	Propane
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	2F

Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	10-January-2017
Revision date	-
Version No.	01

Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Disclaimer	To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

9.2.2 Annual and 5-Year Full-scale Simulation Exercise Documents

Part 1 - The Exercise Plan

- Exercises are to be completed annually.
- All staff members must be present for the exercise.
- Make the following available to the exercise group: copy of the E2 Plan, copy of the Mid Island Co-op Safety Program, note pads and any other related material such as maps and contact lists.
- Invite an Emergency Services representative whenever possible to participate in the exercise sessions.
- Pre meeting inspection of all fire extinguishers, emergency signs, call #s and alarm system to be completed prior to exercise.
- Review the E2 Plan document with all participants (paper copies or projector)

Incident Action Plan

For the scenario/s, the reason **why** there is a need for action has been defined. The objective is to take the scenario from the beginning of the event until the incident reaches the point of recovery/restoration.

Plan and document:

- Strategies that will be used to complete the objective (How are we going to meet the objective)
- Tactics that will be used to implement the strategies including:
    - **What** needs to be accomplished?
    - **Where** they will be accomplished
    - **When** they are to be accomplished
    - **Who** will accomplish what?

In a chronological form, document: agencies, names, positions, times, contact numbers, and other applicable information related to the incidents. Attach the exercise notes to the main document.

Complete the following scenario(s) in either handwritten or printed form.

Part 2 – Scenarios

Listed below are Environmental Emergency Exercises that will be rotated on an annual basis:

- Emergency Simulation Exercise scenarios (annual tabletop), and
- Five Year Full-scale Simulation scenario that.

Propane Release – no fire

Emergency Simulation Exercise Scenario

Propane release from hoses/piping/fittings/pump – no fire

Hose rupture during propane transfer from delivery unit to bulk tank.

- The driver is unable to approach the truck or the immediate transfer area.
- It is 2:00 PM
- Light winds and +10 C
- All staff are on site.

Propane Release – with fire

Emergency Simulation Exercise Scenario

During propane transfer from delivery unit to bulk tank a leak within pumping cabinet ignited and flashed back to the point of discharge.

- The driver is unable to approach the truck or the immediate transfer area.
- It is Wednesday at noon.
- Calm winds and -5 C.
- Propane delivery driver and all staff are on site.

Structural Fire – local to propane storage

Emergency Simulation Exercise Scenario

A large amount of smoke is coming from the electrical room.

- It is 2:00 PM
- Light winds and +1 C
- All staff are on site.

Wildfires – local to propane storage

Emergency Simulation Exercise Scenario

A wildfire is approaching the facility.

- It is 3:00 PM
- Moderate winds and +30 C
- All staff are on site.

Bomb Threats/Terrorism

Emergency Simulation Exercise Scenario

Worst-case Scenario - vapour cloud explosion (VCE) vapour release from storage tank – with fire/explosion

A caller reported a bomb placed on top of the above ground propane tank and ended the call.

- It is Tuesday at 10:30 AM
- It is 25 C with wind from the northwest.
- All staff are on site.

Severe Weather

Emergency Simulation Exercise Scenario

Tornado

The customer spotted a funnel cloud.

- It is Monday at 3 PM
- +25 C with strong winds
- All staff are on site.

Emergency Simulation Exercise Scenario

Lightning

A storm is approaching with visible and audible lightning.

- It is Thursday at 1:00 PM
- +30 C strong winds
- All staff are on site.

Evacuation Procedures

Emergency Simulation Exercise Scenario

Notification of a propane emergency or an evacuation order is given:

- It is Tuesday at 8:00 AM
- -10 C light breeze
- All staff are on site.

Serious Injury/Illness

Emergency Simulation Exercise Scenario

An employee slipped and fell while outside striking their head and is unconscious. An employee has witnessed the event.

- It is Monday at 9:00 AM
- All staff are on site.

Vehicle Incidents - On-site Delivery Unit Scenario

Emergency Simulation Exercise Scenario

A delivery unit has been driven into by a customer. The driver escaped injury and the barrel appears to be damaged.

- It is Monday at 7 PM and dark.
- It is -20 C with no wind.

Jet fire

The bulk storage tanks 3” liquid bottom outlet valve has ruptured releasing propane west toward the property line. The release ignited causing a jet fire out to 100 m.

- The release is major.
- It is 1:15 pm
- Gusting winds from the east at 20 km/hr.
- +25 C
- All staff are on site.

Part 3 – Participation List

Mid Island Co-op E2 Plan Exercise Report

Date				
Exercise Facilitator				
Signature				
Position				
Facility	Gabriola Island Bulk Plant			
CRS Retail	1748			
Location	017			
Address	793 Lockinvar Lane, Gabriola Island BC - V0R 1X0			
Phone #s	Area Manager Kelli Cartwright 250-802-1198			
Storage Capacity	Tank 1	9,400 USWG	Tank 2	N/A

Participants

Print	Sign

Part 4 – Exercise Evaluation and Corrective Actions

Following the exercises, the evaluation should include completeness of the E2 Plan, reader understanding, flow, accuracy, reaching objectives, learning success, challenges, and recommendations. The evaluation should also include any other items of concern during the exercise.

Discussion Notes, Evaluation and Corrective Actions

Name of Author:		**Date:**	

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**

Exercise Facilitator	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

2023 ER.E2 Plan Review and Tabletop Exercise ppt may be found here:

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
			H
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
			H

Exercise Facilitators	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

9.3.2 Preventative Maintenance Inspections Records

Annual preventative maintenance inspections are conducted by an FCL technician with records stored electronically and can be located at I:\AA Propane Fastfield PDFs. Hard copies are printable at any given time.

9.3.3 Community Notification Records

XXXX

9.3.4 Plan Stakeholder Status and Acknowledgement

Municipal Information	
Municipality or District	Gabriola Island – Local Trust Area
Address	
Gabriola Island Trustees	Tobi Elliott 250-268-7434 telliott@islandstrust.bc.ca Susan Yates 250-247-8086 syates@islandstrust.bc.ca

Emergency Service Information	
Fire Service Name	Gabriola Volunteer Fire Department
Address Fire Hall #1	730 Church Street, Gabriola BC V0R 1X3
Address Fire Hall #2	2400 South Road 250-247-8332
Fire Chief	Will Sprogis
Fire Chief Contacts	W: 250-247-9677
DFC	XXXX
DFC Contacts	XXXX
Duty Officer	Pager: 250-755-9289
Travel Time to Facility	2 minutes travel time from Fire Hall #1 to Bulk Plant
Initial Attack Water Volume	2,000 gallons
Sustained Action Water Source	Water shuttle
Training Schedule	

Mutual Aid Agreements	
Name of Agency	Regional District of Nanaimo (RDN)
Location of Agency	6300 Hammond Bay Road, Nanaimo, BC V9T 6N2
Primary Contact Person	inquiries@rdn.bc.ca
Phone #	250-390-4111

Gabriola Volunteer Fire Department received a completed copy of the E2 plan on 2023.

I, _____ of Gabriola Volunteer Fire Department acknowledge that I have received the E2 Plan.

Position _____

Signature _____

Date _____

Mid Island Co-op Representative _____

Position _____

Signature _____

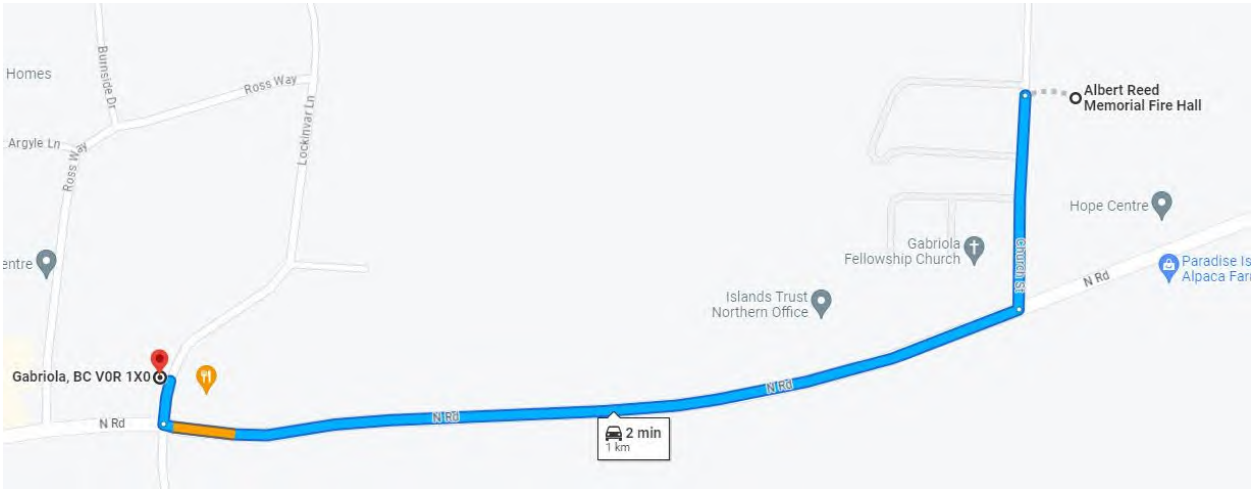
Date _____

9.3.5 Facility Photos

XXXX

Annex 10.4 Maps and Diagrams

9.4.1 Fire Service Route to Site



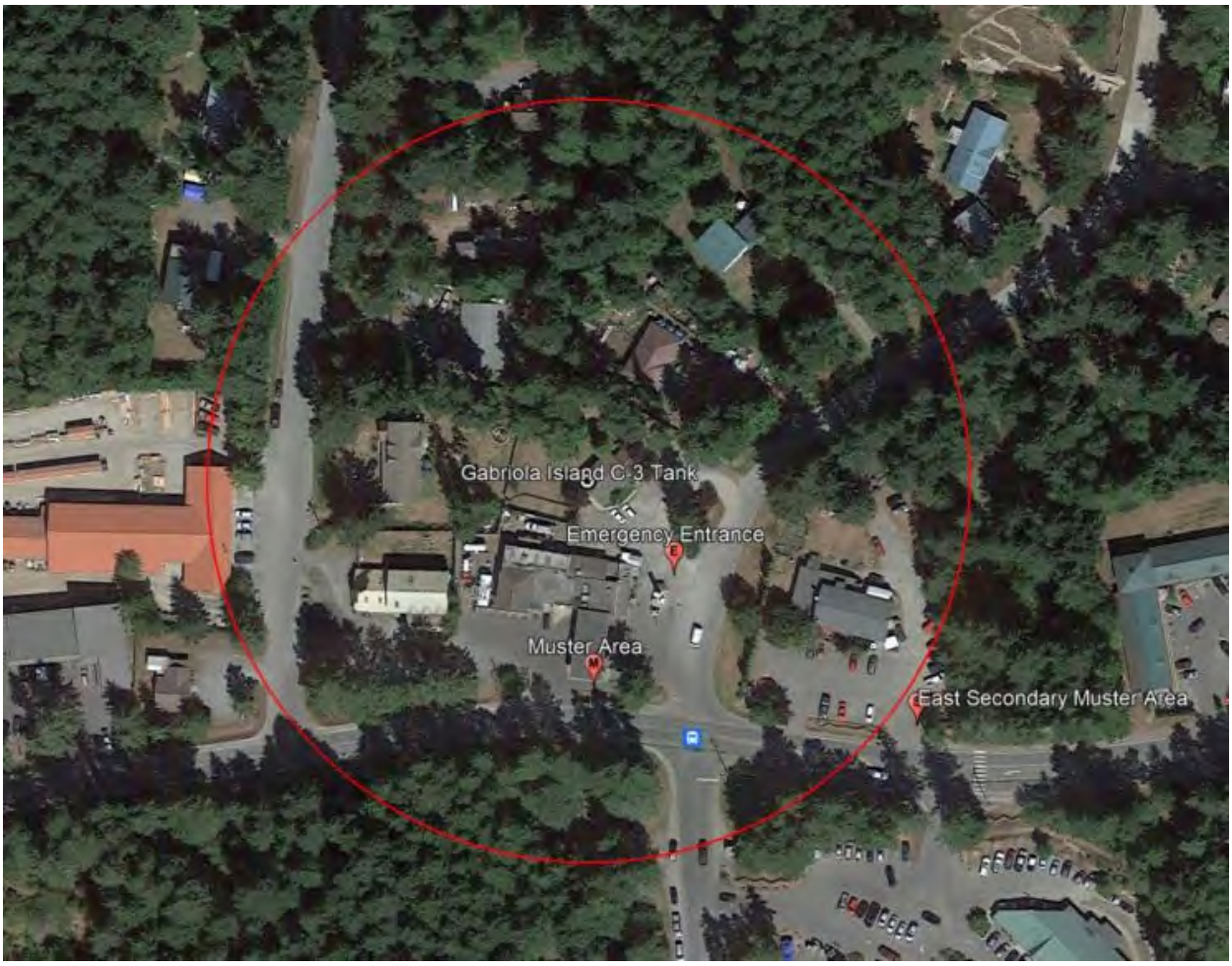
9.4.2 Emergency 1st Responder Entrance to Facility

- ***GPS - DD (decimal degrees): 49.17439, -123.84605***
- ***Road Address: 793 Lockinvar Lane Gabriola Island BC***

9.4.3.1 Muster Area

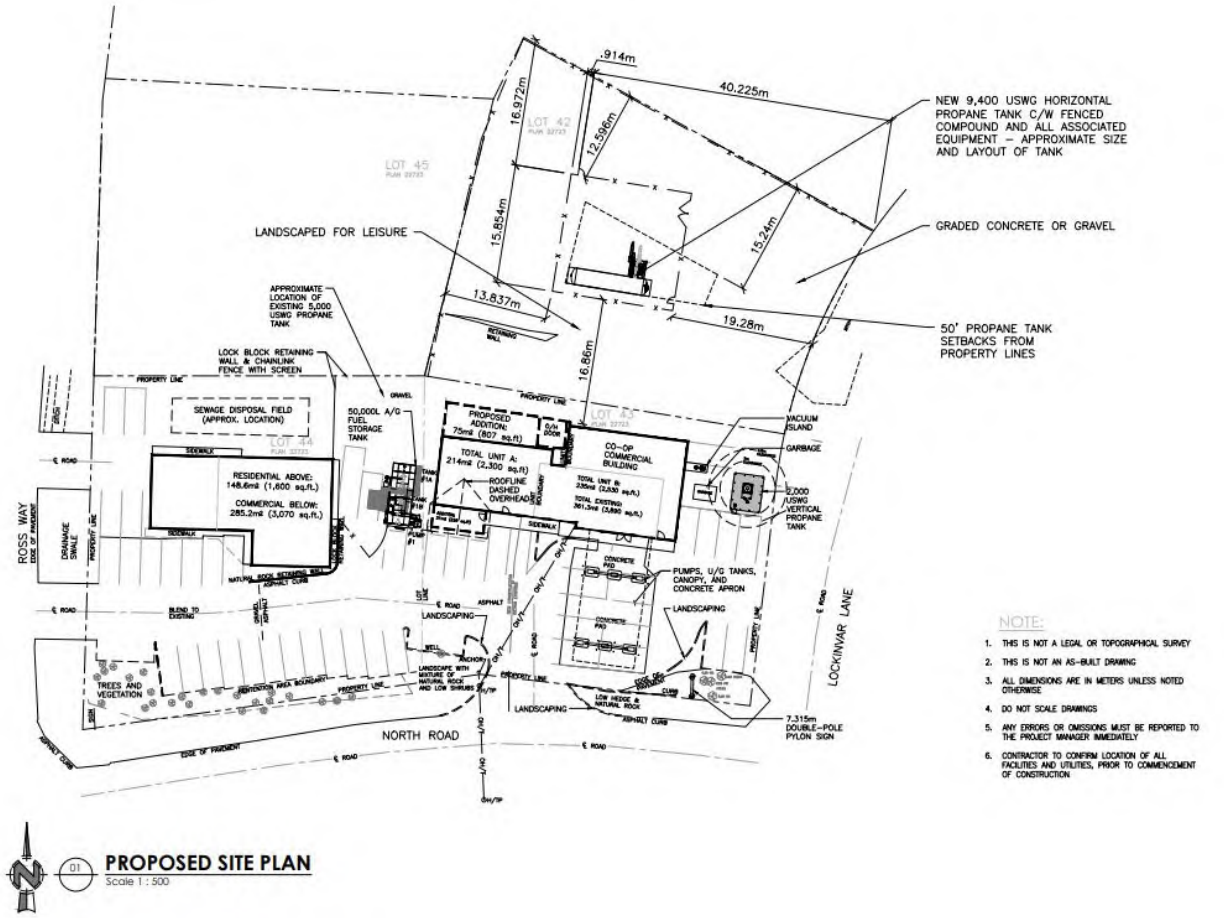
Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

9.4.3.2 Secondary Muster Area

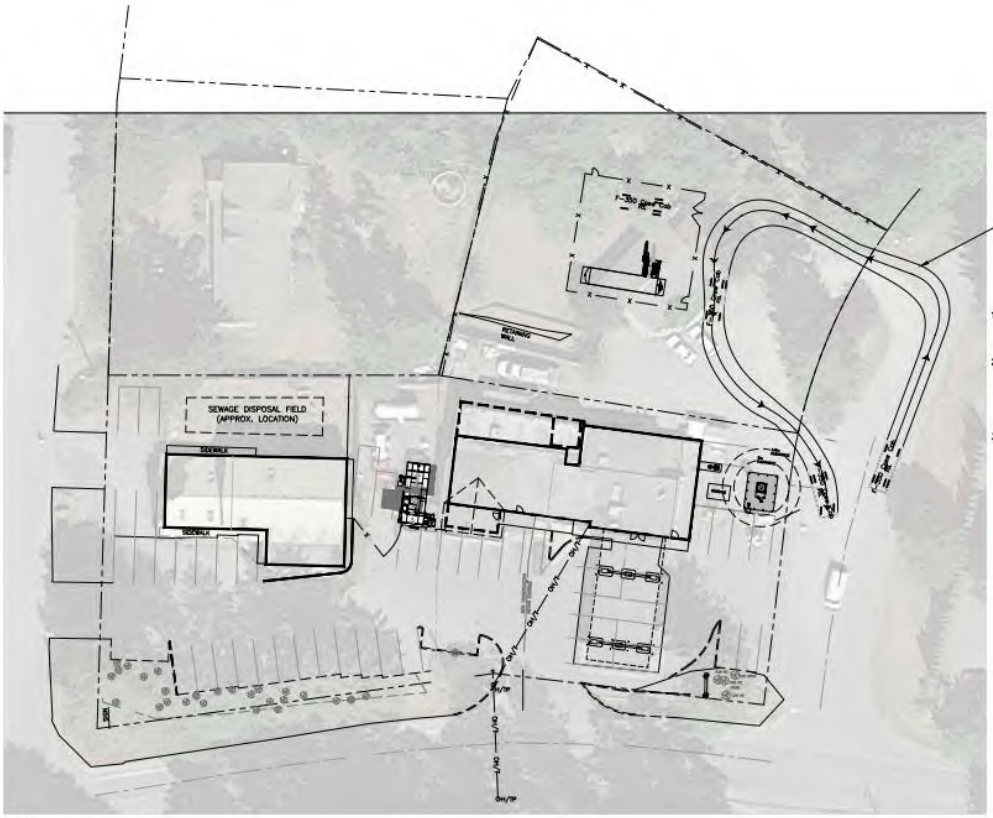


Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay go upwind or side-on to the wind out to a safe distance.

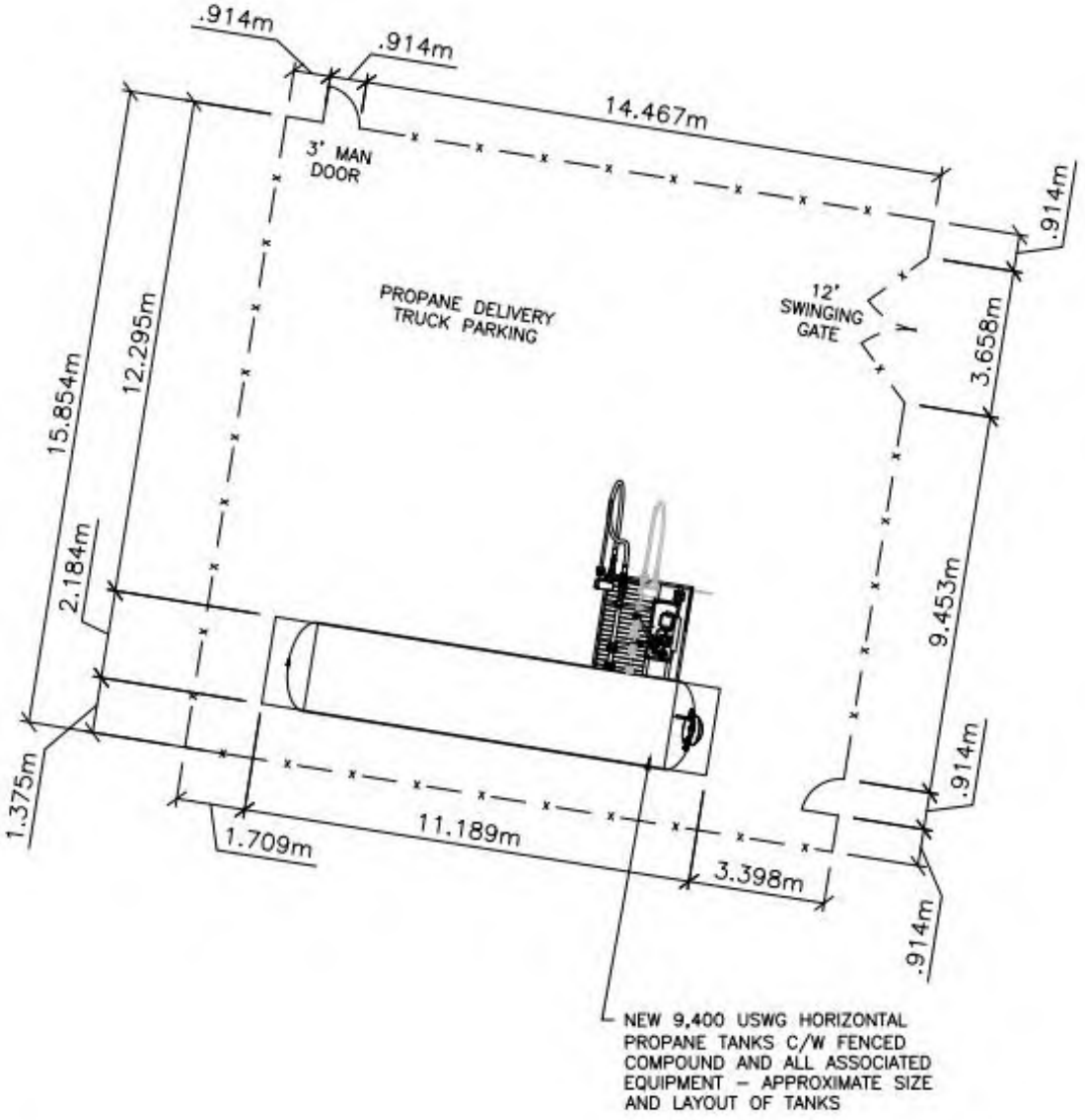
9.4.4 Facility Maps



01 **PROPOSED SITE PLAN**
Scale 1 : 500



01 **PROPANE VEHICLE PATH**
Scale 1 : 500

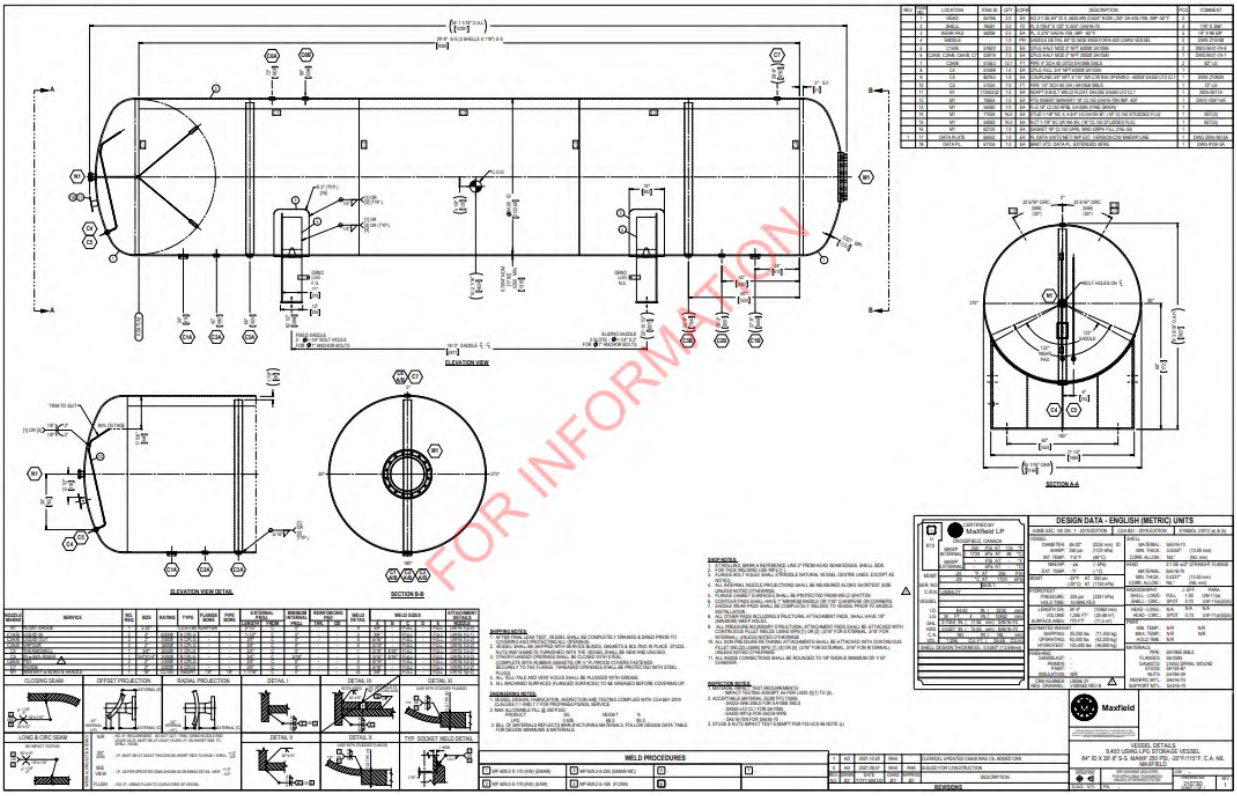


01 **PROPANE DETAIL PLAN**

Scale 1 : 150

9.4.5 Plant Schematics

9.4.5.1 Facility Specific Schematics



9.4.6 P&ID Drawings

9.4.6.1 Facility Specific Drawings

XXXX.

9.4.7 Tank/s Data Plate/s

XXXX

END

STAFF REPORT

File No.: PLRZ20250091 (Mid Island Co-op)

DATE OF MEETING:	September 4, 2025
TO:	Gabriola Island Local Trust Committee
FROM:	Ian Cox, Planner 2 Northern Team
SUBJECT:	PL-RZ-2024-0091 – LUB and OCP Amendment for Propane Storage at 793 Lockinvar Lane Applicant: Mid Island Consumer Services Co-operative Location: 793 Lockinvar Lane, Gabriola Island LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723

RECOMMENDATION

1. **That the Gabriola Island Local Trust Committee Bylaw No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025" be read a first time.**

2. **That the Gabriola Island Local Trust Committee Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025" be read a first time.**

3. **That the Gabriola Island Local Trust Committee Bylaw No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025" be read a second time.**

4. **That the Gabriola Island Local Trust Committee Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025" be read a second time.**

5. **That Proposed Bylaws No. 321 and 322 be referred to the following First Nations, Local Governments and agencies for comment:**

    a. **First Nations: Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, Semiahmoo First Nation, Snuneymuxw First Nation, Stz'uminus First Nation, Ts'uubaa-asatx First Nation.**

    b. **Local Governments and Agencies: Regional District of Nanaimo, Island Health Authority, Ministry of Transport and Transit, Ministry of Water, Land and Resource Stewardship, School District 68, Gabriola Volunteer Fire Department, Gabriola Advisory Planning Commission, Gabriola Housing Advisory Planning Commission.**

6. **That the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 321 cited as "Gabriola Official Community Plan Bylaw No. 166, 1997, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.**

7. **That the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw**

No. 177, 1999, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.

REPORT SUMMARY

This report introduces two draft bylaws, one to amend the Gabriola Island Official Community Plan (OCP) and the other to amend the Gabriola Island Land Use Bylaw (LUB). Staff recommend the draft bylaws be given first and second reading as presented in Attachments 1 and 2 to this report, and that referrals be sent to First Nations, local governments and other agencies as listed above in recommendation 5.

BACKGROUND

At its regular business meeting on April 17, 2025, the Gabriola Island Local Trust Committee passed the following three resolutions pertaining to this application:

GB-2025-018
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to prepare draft amendments to the Gabriola Island Official Community Plan that will include Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the 'Village Commercial' land use designation and 'Village Centre' Development Permit Area No. 7.

GB-2025-019
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to draft amendments to the Gabriola Island Land Use Bylaw to rezone Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) to a site-specific Village Commercial zone which maintains the existing uses; expands principle commercial uses consistent with the bylaw amendment application; and regulates buildings and structures, height, siting requirements including setbacks, lot coverage, parking, and subdivision.

GB-2025-020
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to provide notification to Snuneymuxw First Nation of application PLRZ20240091 describing the scope of proposed changes to the Gabriola Official Community Plan and Land Use Bylaw.

ANALYSIS

Draft Bylaw No. 321 (OCP):

Draft Bylaw No. 321 (Attachment 1) would amend the Gabriola Official Community Plan to include 793 Lockinvar Lane in the Village Commercial land use designation and in the Village Centre Development Permit Area No. 7 via two map sheet amendments: Schedule - B Land Use Designations Map, North Sheet, and Schedule D – Development Permit Areas Map, North Sheet.

Draft Bylaw No. 322 (LUB):

Draft Bylaw No. 322 (Attachment 2) would amend the LUB to create a new, site-specific Village Commercial Zone for 750 Lockinvar Lane, adding "propane storage" as a permitted use to the existing institutional uses on the property. This would be achieved through a text amendment addition to Part D – Zones, a Schedule B – North Sheet Zoning Map sheet amendment, and the addition of a definition for "propane storage" in the Part G – Definitions section, in order to clarity the scope of that use. Specifically, the new Village Commercial 4 (VC4) – Propane Storage zone would allow the following principal uses:

i public *schools*

ii *emergency services*

iii library

iv post office

v medical laboratory

vi government offices

vii highway work yards

viii *urgent care medical clinic*

ix child care centre and pre-*school*

x *propane storage*

The existing Institutional 2 (IN2) zoning provisions would remain the same for the new VC4 zone, including permitted buildings and structures, height and siting, lot coverage limitations, and lot area requirements for subdivision. This is consistent with the applicant's request and LTC direction via the resolutions for bylaw language drafting it has passed to date.

Islands Trust Policy Statement:

Staff have reviewed the bylaws against the Islands Trust Policy Statement (ITPS) Directives Only Checklist (Attachment 3 and 4) and conclude that draft bylaw no. 321 (OCP) and no. 322 (LUB) are not contrary to or at variance with the ITPS as reflected in recommendation 5 on page 1 of this report.

Density:

The existing IN2 zoning does not include residential density and none is proposed to be added as part of the application or draft bylaws.

Servicing and Environmental Impact:

As stated in the staff report that introduced the application, April 17, 20205, the proposed propane storage use does not require water or sewer services. Therefore, although a plan addressing water supply and sewage disposal is generally required for rezoning applications that seek to change or add principal uses, in this case such information is not applicable. Also included in the initial report and again here as Attachment 5 for ease of reference, the applicant has provided an Environmental Emergency Plan that addresses risk assessment, emergency equipment locations, details on prevention and mitigation for incidents and incident procedures.

Early Referral | First Nations Protocol:

An early referral notice was sent to Snuneymuxw First Nation consistent with the Islands Trust Council protocol agreement. Snuneymuxw has deferred comment on the referral, while reserving the right to re-review if new information arises during the rezoning process; particularly if activities associated with the amendments would involve ground disturbance such as removal of buildings or site excavation. Snuneymuxw requests to be engaged in this event given that an archaeological assessment may be required. Additionally, the applicant is aware that if any cultural material is observed within the subject area, all work must stop and Snuneymuxw be notified immediately. Lastly, confirmation is requested if the zoning amendments are approved.

Consultation

Following first and/or second reading of the bylaws and per the Local Government Act (LGA) requirements, staff recommend sending detailed referrals to First Nations, provincial agencies, local governments and select referral agencies per recommendation 5 found on page 1 of this report.

> ***Local Government Act***
> **475** (1) During the development of an official community plan, or the repeal or amendment of an official community plan, the proposing local government must provide one or more opportunities it considers appropriate for consultation with persons, organizations and authorities it considers will be affected.
> (2) For the purposes of subsection (1), the local government must
>
> (a) consider whether the opportunities for consultation with one or more of the persons, organizations and authorities should be early and ongoing, and
>
> (b) specifically consider whether consultation is required with the following:
>
> (i) the board of the regional district in which the area covered by the plan is located, in the case of a municipal official community plan;
>
> (ii) the board of any regional district that is adjacent to the area covered by the plan;
>
> (iii) the council of any municipality that is adjacent to the area covered by the plan;
>
> (iv) first nations;
>
> (v) boards of education, greater boards and improvement district boards;
>
> (vi) the Provincial and federal governments and their agencies

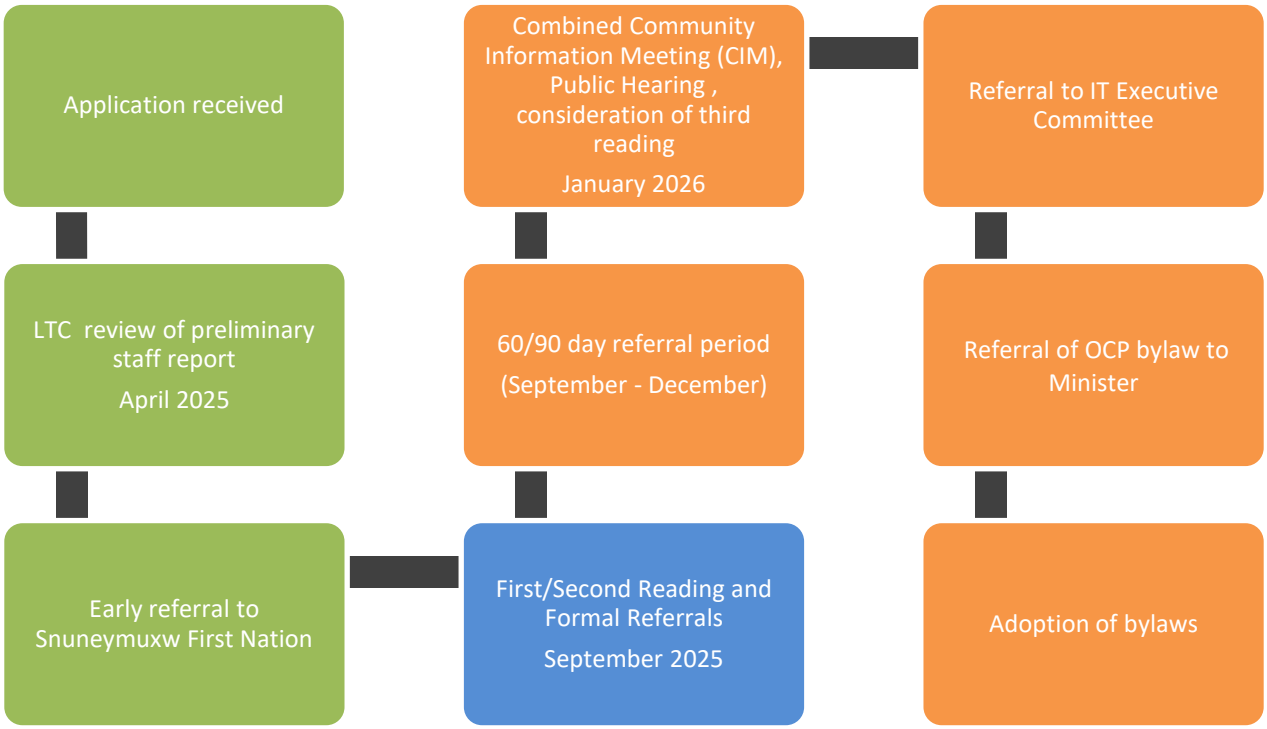
The LTC may wish to schedule a Community Information Meeting (CIM) and the required public hearing either separately or combined in the same meeting for efficiency, based on the LTC's level of confidence in support for the proposed bylaws. The options for timing of these next steps are:

- Following second reading of the proposed bylaws, a resolution could be passed to schedule a date for either or both the CIM and public hearing, under the understanding that staff would bring forward any potential issues arising from the referrals process prior to the LTC holding either.

- Wait to schedule either or both the CIM and public hearing until after the referrals period is over and any comments/issues that might arise are presented by staff and considered by the LTC.

The next possible regular LTC business meeting following the close of the 90-day referral period for First Nations is January 22, 2026.

Application Timeline



Rationale for Recommendation

Staff recommend the draft OCP and LUB bylaws be given first and second reading as staff consider them to be consistent with OCP policies, the Islands Trust Policy Statement, supported by the information supplied by the applicant, and no significant changes are anticipated prior to a community information meeting and/or public hearing given the relatively clear proposed amendments. In accordance with the LGA and Islands Trust Protocol agreements, staff recommend proposed bylaw referrals to First Nations, provincial agencies, local governments and select agencies as listed on page 1 of this report.

ALTERNATIVES

The LTC may consider the following alternatives to the recommendation:

1. **Amend the draft bylaws**

   The LTC may amend the draft bylaws prior to consideration of first reading. If this alternative is selected then the following resolution is recommended:

   That the Gabriola Island Local Trust Committee amend Draft Bylaw No. 3XX, cited as "…" with the following: [list amendments]

2. **Request additional information/defer consideration of first and/or second reading**

   The LTC may request specific additional information from staff and/or the applicant prior to consideration of first and/or reading. If this alternative is selected then the following resolution is recommended:

That the Gabriola Island Local Trust Committee request [staff/the applicant] provide the following [specify information request] prior to further consideration of Draft Bylaws No. 321 (OCP) and 322 (LUB).

3. Proceed no further

The LTC may choose to proceed no further with the application. Staff advise that the implications of this alternative are that the bylaw amendment application file will be closed and the applicant will be refunded the appropriate amount based on the Gabriola Fees Bylaw. Recommended wording for the resolution is as follows:

That the Gabriola Island Local Trust Committee proceed no further with bylaw amendment application PL-RZ-2025-0091.

NEXT STEPS

If the LTC gives first and/or second reading to the draft bylaws, staff will send referrals requesting a response within 60 and 90 days of the date for agencies and First Nations, respectively, per LTC direction via the resolutions it chooses to pass.

Submitted By:	Ian Cox, Planner 2	August 20, 2025
Concurrence:	Robert Kojima, Regional Planning Manager	August 21, 2025

ATTACHMENTS

1. Draft Bylaw No. 321 (OCP)
2. Draft Bylaw No. 322 (LUB)
3. Islands Trust Policy Statement Directive Policies (OCP BL321)
4. Islands Trust Policy Statement Directive Policies (LUB BL322)
5. Emergency Environmental Plan

PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321

A BYLAW TO AMEND GABRIOLA ISLAND OFFICIAL COMMUNITY PLAN, 1997

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

   This bylaw may be cited for all purposes as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025".

2. Gabriola Island Local Trust Committee Bylaw No. 166, cited as "Gabriola Island Official Community Plan (Gabriola) Bylaw No. 166, 1997", is amended as per Schedule "1" and Schedule "2", attached to and forming part of this bylaw

READ A FIRST TIME THIS _____ DAY OF _____ , 2025

READ A SECOND TIME THIS _____ DAY OF _____ , 202x

PUBLIC HEARING HELD THIS _____ DAY OF _____ , 202x

READ A THIRD TIME THIS _____ DAY OF _____ , 202x

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS

_____ DAY OF _____ , 202x

APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS AND HOUSING THIS

_____ DAY OF _____ , 202x

ADOPTED THIS _____ DAY OF _____ , 202x

_____ _____

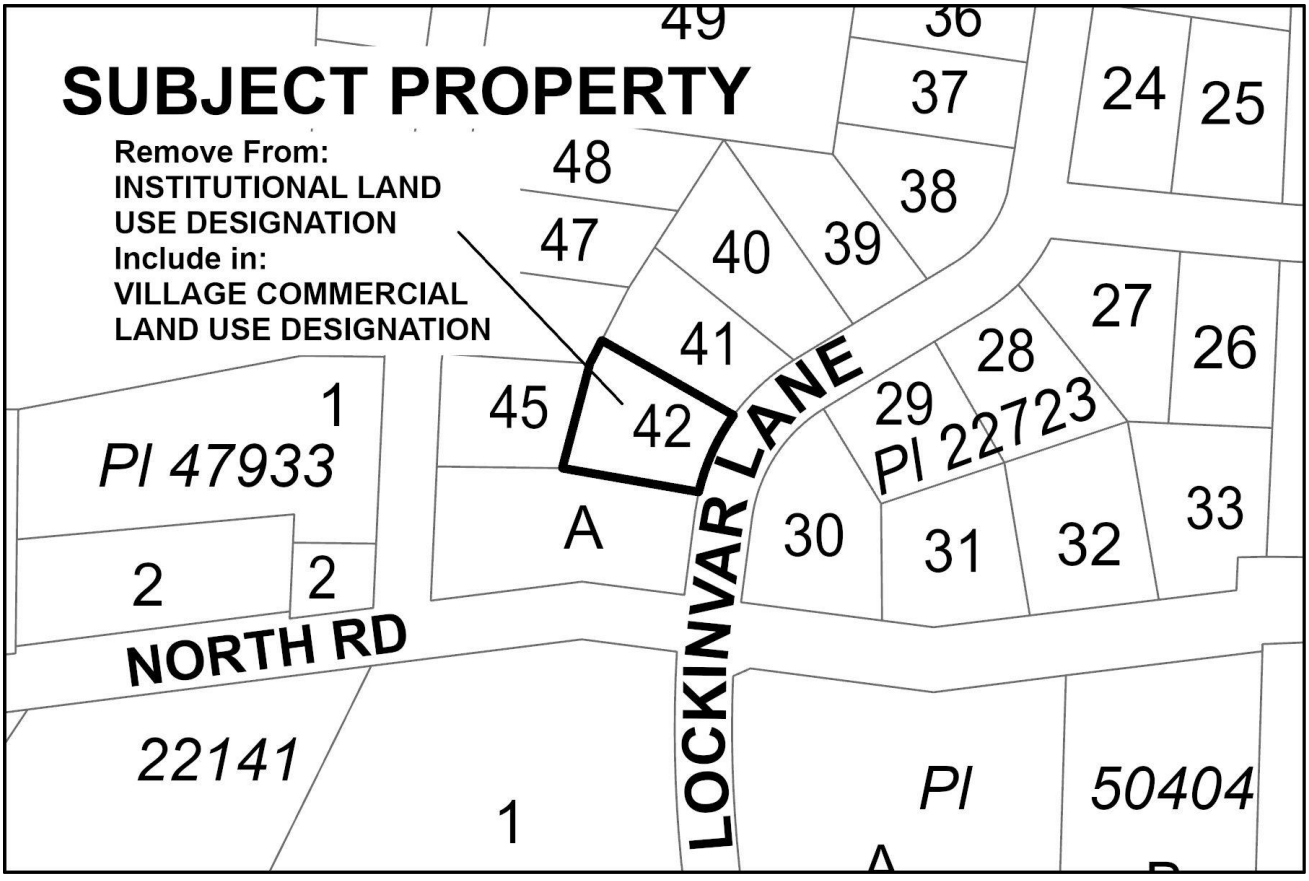
Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "1"

1. **Schedule "B"** of Gabriola Island Official Community Plan (Gabriola) Bylaw, 1997 is amended as follows:

   1.1. **Schedule "B" – Land Use Designations – North Sheet**, is amended by changing the land use designation on the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional" to "Commercial (Village)" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" as are required to effect this change.

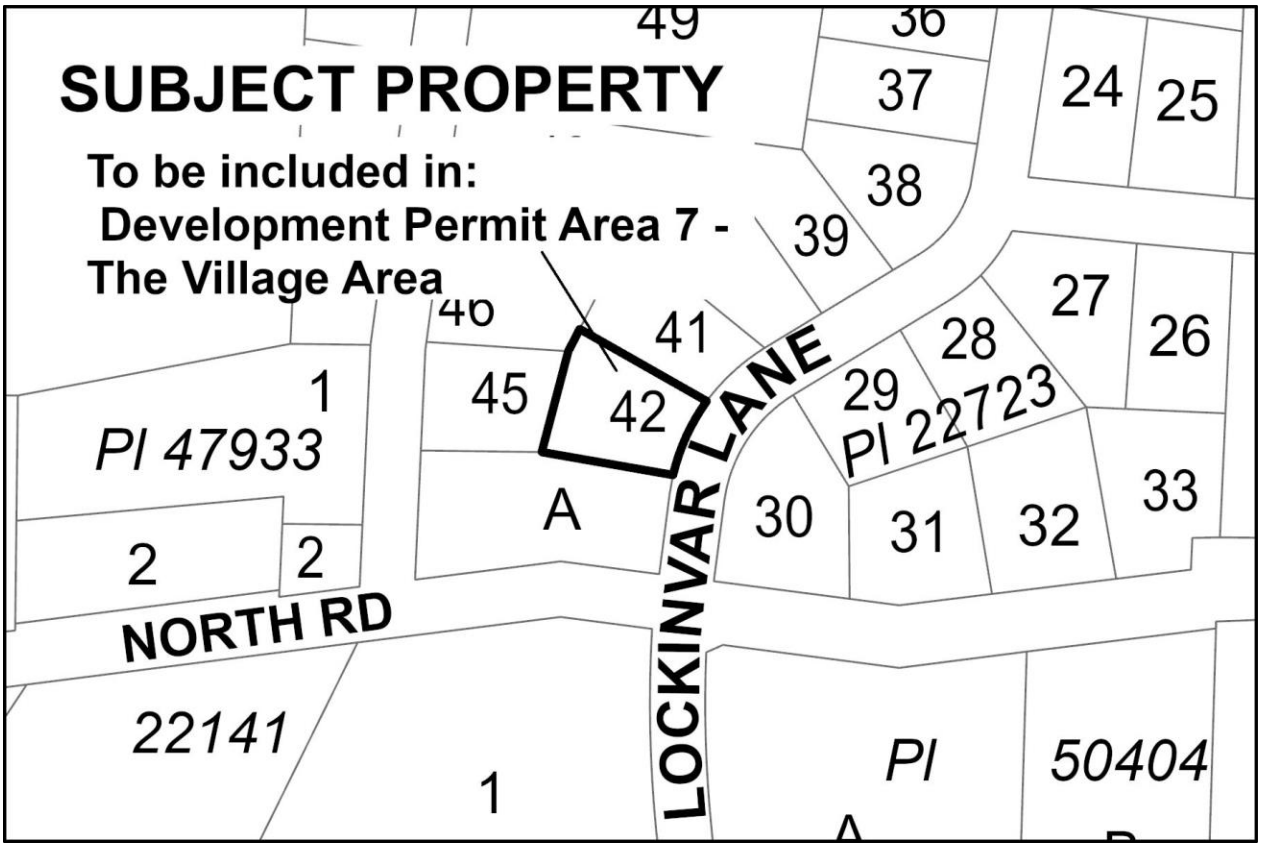
Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "2"

1. **Schedule "D" – Development Permit Areas - OCP B North Sheet**, is amended by including the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the Schedule D map for DP 7 - The Village Area, as shown on Plan No. 2 attached to and forming part of this bylaw, and by making such alterations to Schedule "D" of Bylaw No. 166 as are required to effect this change.

Plan No. 2



PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

A BYLAW TO AMEND GABRIOLA ISLAND LAND USE BYLAW, 1999

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

   This bylaw may be cited for all purposes as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025".

2. Gabriola Island Local Trust Committee Bylaw No. 177, cited as "Gabriola Island Land Use Bylaw, 1999" is amended as per Schedule "1" attached to and forming part of this bylaw.

READ A FIRST TIME THIS _____ DAY OF _____ , 2025

READ A SECOND TIME THIS _____ DAY OF _____ , 202x

PUBLIC HEARING HELD THIS _____ DAY OF _____ , 202x

READ A THIRD TIME THIS _____ DAY OF _____ , 202x

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS

_____ DAY OF _____ , 202x

ADOPTED THIS _____ DAY OF _____ , 202x

_____ _____

Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Schedule "1"

1. **Schedule "A"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   1.1 **Part B GENERAL REGULATIONS**, Section B.4 **SIGNS**, Subsection **B.4.1 Number and Total Sign Area**, Article **B.4.1.1**, Table 1 ***Sign* Regulations,** Column I is amended by adding "VC4," after "VC3, and before DC1".

   1.2 **Part C ESTABLISHMENT OF *ZONES***, Section C.1 **DIVISION INTO *ZONES***, Subsection **C.1.1 Land Based Zones**, insert new zone "Village Commercial 4 – Propane Storage" after "Village Commercial 3" and before "DC1 District Commercial 1".

   1.3 **Part D *ZONES***, Section D.3 **COMMERCIAL AND INDUSTRIAL *ZONES***, insert new Subsection **D.3.4 Village Commercial 4 (VC4)** after Subsection **D.3.3 Village Commercial 3** as shown in **Appendix 1** attached to and forming part of this bylaw; and renumber all subsequent subsections chronologically.

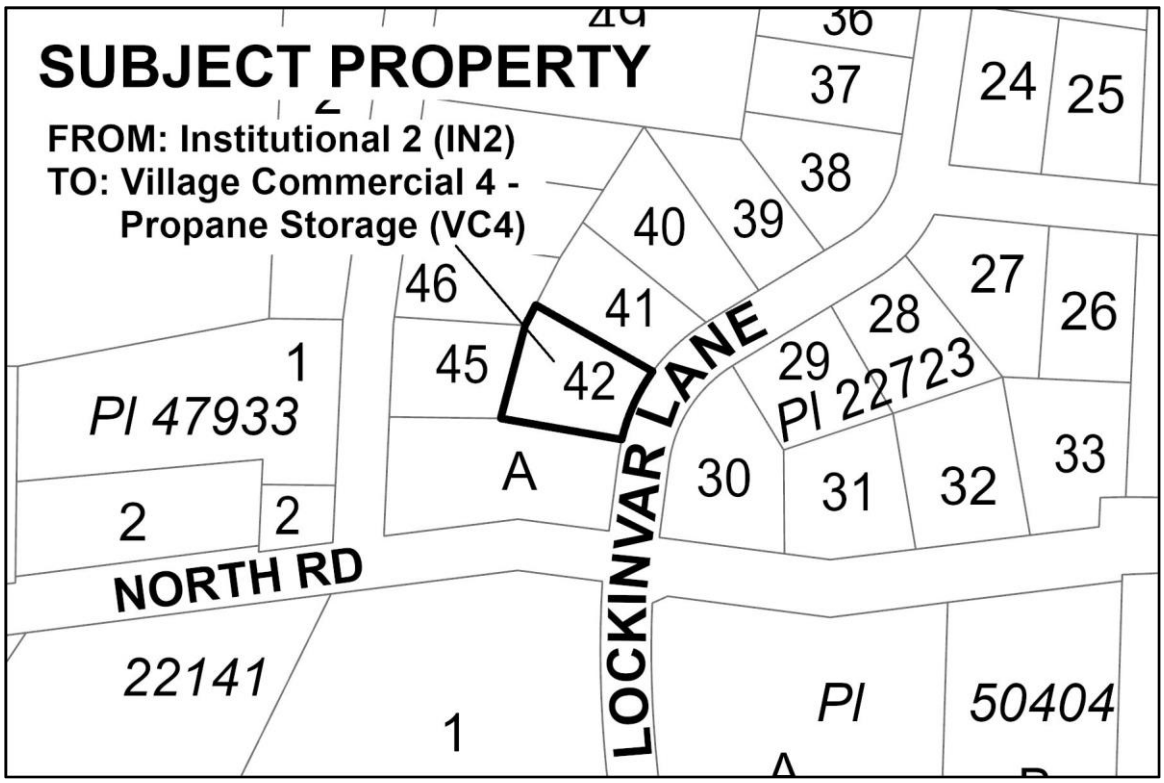
   1.4 **Part G,** Section G.1 **DEFINITIONS**, is amended by adding the following definition:

   "propane storage — the use of land, buildings, or structures for the bulk storage, containment, or handling of propane gas, whether in liquid or gaseous form, in above-ground or underground tanks, cylinders, or containers. This includes facilities for the distribution or sale of propane to the public or commercial entities. All propane storage must comply with applicable federal and provincial legislation and regulations, including but not limited to safety, environmental, and transportation standards."

2. **Schedule "B"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   2.1. Schedule "B" – North Sheet, is amended by changing the zoning classification of LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional 2" to "Village Commercial 4 – Propane Storage" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" of Bylaw No. 177 as are required to effect this change.

Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Appendix 1

D.3.4 Village Commercial 4 – Propane Storage (VC4)

D.3.4.1 Permitted Uses

The uses permitted in Article B.1.1.1, plus the following uses and no others are permitted in the Village Institutional 2 (IN2) *zone*:

a. Permitted *Principal* Uses

i *public schools*
ii *emergency services*
iii library
iv post office
v government offices
vi highway work yards
vii *urgent care medical clinic*
viii child care centre and pre-*school*
ix *propane storage*

b. Permitted *Accessory* **Uses**

i *limited public market,* subject to Subsection B.6.2

D.3.4.2 *Buildings* and *Structures*

The *buildings* and *structures* permitted in Article B.1.1.2, plus the following *buildings* and *structures* and no others are permitted in the Village Commercial 4 (VC4) *zone*:

a. Permitted *Buildings* and *Structures*

i *Buildings* and *structures* for the permitted uses set out in this zone, including tanks, containment systems, fencing, signage, and other infrastructure necessary for propane storage and distribution.

D.3.4.3 Regulations

The general regulations in Part B, plus the following regulations apply in the Village Commercial 4 (VC4) *zone*:

a. *Buildings* and *Structures* Height Limitations

i The maximum *height* of *buildings* and *structures* is 9.0 metres (29.5 feet).

Ii Propane tanks and associated safety infrastructure are exempt from maximum height limits where required by applicable safety regulations.

b. *Buildings* and *Structures* Siting Requirements

i The minimum setback for *buildings* or *structures* except a sign, fence, or pump/utility house is 6.0 metres (19.7 feet) from any lot line.

c. *Lot Coverage* Limitations

i The maximum combined *lot coverage* by *buildings* and *structures* is 25 percent of the *lot* area.

d. *Lot* Area Requirements for Subdivision

i The minimum average lot area is 1.0 hectare (2.47 acres).

ii The minimum lot area is 0.5 hectares (1.24 acres).

D.3.4.4 Conditions of Use for Propane Storage Facilities

i Propane storage operations must comply with all applicable federal and provincial regulations.

ii The operator must hold all necessary permits and certifications prior to installation and operation.

iii All outdoor lighting associated with propane storage must be fully shielded and directed downward to minimize light trespass.

iv Emergency response and spill containment plans must be prepared and maintained as per provincial requirements and provided to the Local Trust Committee upon request.

iv Where propane tanks or structures are visible from adjacent properties or public roads, screening through fencing, landscaping, or a combination shall be provided to reduce visual impact.

ISLANDS TRUST POLICY STATEMENT
DIRECTIVES ONLY CHECKLIST

File No.: PLRZ20250091 (Mid Island Co-op)

PURPOSE

To provide staff with the Directives Only Checklist to highlight issues addressed in staff reports and as a means to ensure Local Trust Committees address certain matters in their official community plans and regulatory bylaws, and to reference any relevant sections of the Policy Statement.

POLICY STATEMENT

The Policy Statement is comprised of several parts. Parts I and II outline the purpose, the Islands Trust object, and Council's guiding principles. Parts III, IV and V contain the goals and policies relevant to ecosystem preservation and protection, stewardship of resources and sustainable communities.

There are three different kinds of policies within the Policy Statement as follows:

- Commitments of Trust Council which are statements about Council's position or philosophy on various matters;
- Recommendations of Council to other government agencies, non-government organizations, property owners, residents and visitors; and
- Directive Policies which direct Local Trust Committees and Island Municipalities to address certain matters

DIRECTIVES ONLY CHECKLIST

The Policy Statement Directives Only Checklist is based on the directive policies from the Policy Statement (Consolidated April 2003) which require Local Trust Committees to address certain matters in their official community plans and regulatory bylaws and Island Municipalities to address certain matters in their official community plans in a way that implements the policy of Trust Council.

Staff will use the Policy Statement Checklist (Directives Only) to review Local Trust Committee and Island Municipality bylaw amendment applications and proposals to ensure consistency with the Policy Statement. Staff will add the appropriate symbol to the table as follows:

✓ if the bylaw is consistent with the policy from the Policy Statement, or
× if the bylaw is inconsistent (contrary or at variance) with a policy from the Policy Statement, or
N/A if the policy is not applicable.

PART III: POLICIES FOR ECOSYSTEM PRESERVATION AND PROTECTION

CONSISTENT	NO.	DIRECTIVE POLICY
	3.1	**Ecosystems**
n/a	**3.1.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.
n/a	**3.1.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning, establishment, and maintenance of a network of protected areas that preserve the representative ecosystems of their planning area and maintain their ecological integrity.
✓	**3.1.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the regulation of land use and development to restrict emissions to land, air and water to levels not harmful to humans or other species.
	3.2	**Forest Ecosystems**
n/a	**3.2.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of unfragmented forest ecosystems within their local planning areas from potentially adverse impacts of growth, development, and land-use.
	3.3	**Freshwater and Wetland Ecosystems and Riparian Zones**
n/a	**3.3.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means to prevent further loss or degradation of freshwater bodies or watercourses, wetlands and riparian zones and to protect aquatic wildlife.
	3.4	**Coastal and Marine Ecosystems**
n/a	**3.4.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of sensitive coastal areas.
n/a	**3.4.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for and regulation of development in coastal regions to protect natural coastal processes.

PART IV: POLICIES FOR THE STEWARDSHIP OF RESOURCES

CONSISTENT	NO.	DIRECTIVE POLICY
	4.1	**Agricultural Land**
n/a	**4.1.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and preservation of agricultural land for current and future use.
n/a	**4.1.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation, protection, and encouragement of farming, the sustainability of farming, and the relationship of farming to other land uses.
n/a	**4.1.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of adjacent properties to minimize any adverse affects on agricultural land.
CONSISTENT	**NO.**	**DIRECTIVE POLICY**
n/a	**4.1.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the design of road systems and servicing corridors to avoid agricultural lands unless the need for roads outweighs agricultural considerations, in which case appropriate mitigation measures shall be required to derive a net benefit to agriculture.
n/a	**4.1.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address land uses and activities that support the economic viability of farms without compromising the agriculture capability of agricultural land.
n/a	**4.1.9**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of Crown lands for agricultural leases.
	4.2	**Forests**
n/a	**4.2.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the need to protect the ecological integrity on a scale of forest stands and landscapes.
n/a	**4.2.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the retention of large land holdings and parcel sizes for sustainable forestry use, and the location and construction of roads, and utility and communication corridors to minimize the fragmentation of forests.
n/a	**4.2.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of forest ecosystem reserves where no extraction will take place to ensure the preservation of native biological diversity.
CONSISTENT	**NO.**	**DIRECTIVE POLICY**

	4.3	**Wildlife and Vegetation**
	4.4	**Freshwater Resources**
n/a	**4.4.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater, water quality is maintained, and existing, anticipated and seasonal demands for water are considered and allowed for.
n/a	**4.4.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses
	4.5	**Coastal Areas and Marine Shorelands**
n/a	**4.5.8**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the needs and locations for marine dependent land uses.
n/a	**4.5.9**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the compatibility of the location, size and nature of marinas with the ecosystems and character of their local planning areas.
n/a	**4.5.10**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location of buildings and structures so as to protect public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments.
n/a	**4.5.11**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address opportunities for the sharing of facilities such as docks, wharves, floats, jetties, boat houses, board walks and causeways.
	4.6	**Soils and Other Resources**
n/a	**4.6.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of productive soils.

PART V: POLICIES FOR SUSTAINABLE COMMUNITIES

CONSISTENT	NO.	DIRECTIVE POLICY
	5.1	**Aesthetic Qualities**
n/a	**5.1 3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of views, scenic areas and distinctive features contributing to the overall visual quality and scenic value of the Trust Area.
	5.2	**Growth and Development**
✓	**5.2.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
✓	**5.2.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.
✓	**5.2.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means for achieving efficient use of the land base without exceeding any density limits defined in their official community plans.
n/a	**5.2.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of areas hazardous to development, including areas subject to flooding, erosion or slope instability, and strategies to direct development away from such hazards.
	5.3	**Transportation and Utilities**
n/a	**5.3.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of a classification system of rural roadways, including scenic or heritage road designations, in recognition of the object of the Islands Trust.
n/a	**5.3.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the impacts of road location, design, construction and systems.
n/a	**5.3.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of areas for the landing of emergency helicopters.
n/a	**5.3.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of land use patterns that encourage establishment of bicycle paths and other local and inter-community transportation systems that reduce dependency on private automobile use.
	5.4	**Disposal of Waste**
n/a	**5.4.4**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of acceptable locations for the disposal of solid waste.
CONSISTENT	NO.	DIRECTIVE POLICY

	5.5	**Recreation**
n/a	**5.5.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the prohibition of destination gaming facilities such as casinos and commercial bingo halls.
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n/a	**5.5.5**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of sites providing safe public access to beaches, the identification and designation of areas of recreational significance, and the designation of locations for community and public boat launches, docks and anchorages.
n/a	**5.5.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.
n/a	**5.5.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
	5.6	**Cultural and Natural Heritage**
n/a	**5.6.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification, protection, preservation and enhancement of local heritage.
n/a	**5.6.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation and protection of the heritage value and character of historic coastal settlement patterns and remains.
	5.7	**Economic Opportunities**
✓	**5.7.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
	5.8	**Health and Well-being**
✓	**5.8.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

	POLICY STATEMENT COMPLIANCE
✓	***In compliance with Trust Policy***
	Not in compliance with Trust Policy for the following reasons:

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CONSISTENT	NO.	DIRECTIVE POLICY

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n/a	**5.5.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the prohibition of destination gaming facilities such as casinos and commercial bingo halls.
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n/a	**5.5.7**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
	5.6	**Cultural and Natural Heritage**
n/a	**5.6.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification, protection, preservation and enhancement of local heritage.
n/a	**5.6.3**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation and protection of the heritage value and character of historic coastal settlement patterns and remains.
	5.7	**Economic Opportunities**
✓	**5.7.2**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
	5.8	**Health and Well-being**
✓	**5.8.6**	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

	POLICY STATEMENT COMPLIANCE
✓	***In compliance with Trust Policy***
	Not in compliance with Trust Policy for the following reasons:

Mid Island Consumer Services Co-operative (Mid Island Co-op)

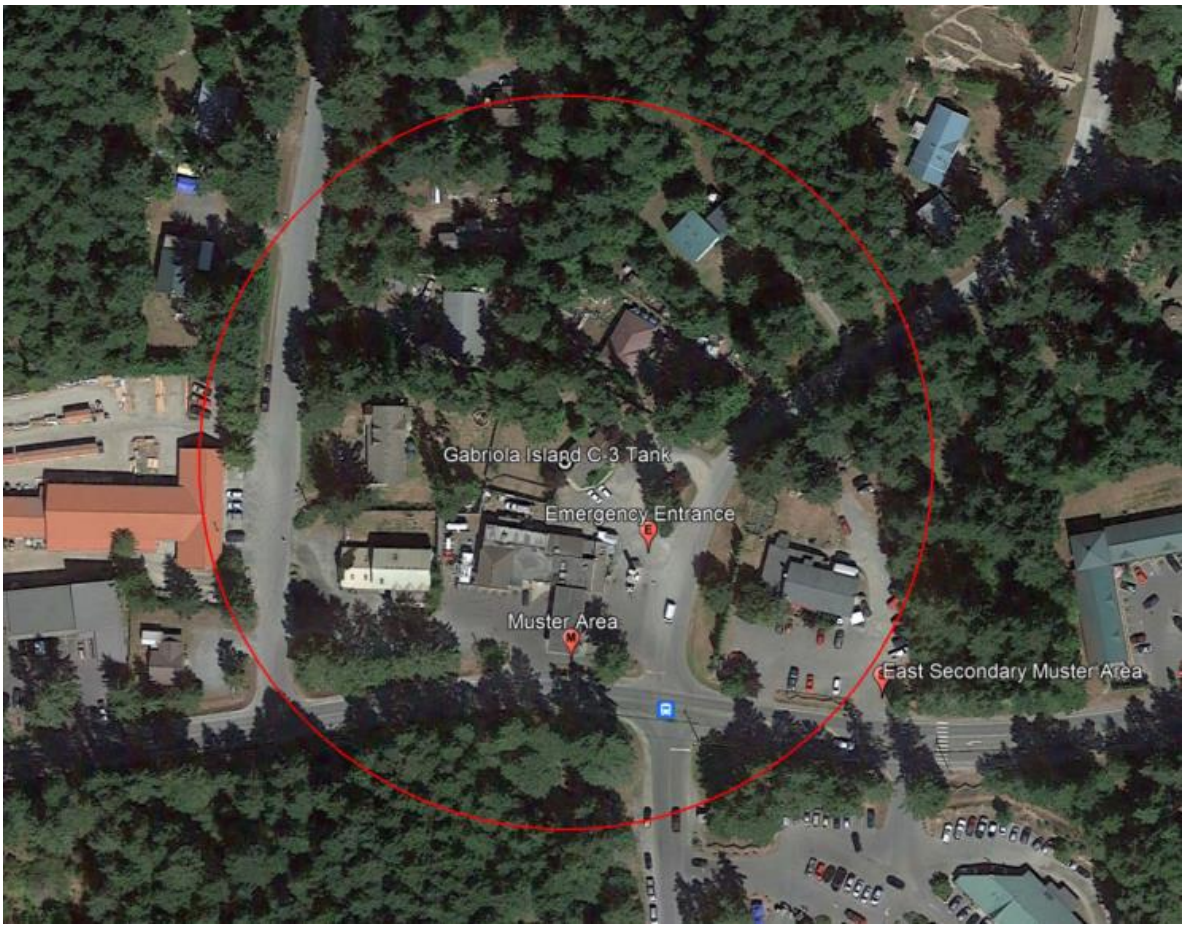
Environmental Emergency (E2) Plan

For the Propane Installation at 793 Lockinvar Lane, Gabriola Island, BC

Site Location
Emergency 1st Responder Entrance to facility: • GPS - DD (decimal degrees): 49.17439, -123.84605 • 793 Lockinvar Lane Gabriola Island BC One 9,400 USWG propane tank is located at: • Mid Island Co-op Bulk Plant • 793 Lockinvar Lane Gabriola Island BC V0R 1X0 • DD (decimal degrees): 49.17461, -123.84636 Mail to: • Head Office: 106–2517 Bowen Road Nanaimo BC V9T 3L2 E2ID# TBD

Section 1 Executive Summary

Following information is required in activating the E2 Plan: Map showing Muster Areas, 1st Responders Entrance, Emergency Information & Equipment Locations, Site Address, E2 Plan Activation and Emergency Contacts, Incident Procedures, and Emergency Notification & Communications Procedure.



Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREA	East of site on North Road

ADDRESS of Gabriola Island Propane Bulk Plant: 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

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Section 2 Introduction

2.1 CRS Health Safety and Emergency Preparedness and Response Statement

The CRS is committed to health and safety through operational integrity and effectively manages its work to identify and mitigate risks to health, safety, and the environment.

Operational integrity at the CRS means conducting all activities safely and reliably so that the public is protected, impact to the environment is minimized, the health and wellbeing of employees is safeguarded, contractors and customers are safe, and physical assets (such as facilities and equipment) are protected from damage or loss.

This Emergency Response Plan has been developed to meet or exceed the requirements of all applicable governing agencies and regulatory bodies where the CRS operates.

The following plan considers an area-specific hazard/risk analysis and outlines the necessary resources, personnel, logistics and initial actions to facilitate a prompt, coordinated and rational approach to any emergency.

2.2 Purpose

This Emergency Response/Environmental Emergency (E2) manual describes the procedures for Mid Island Co-op personnel in the event of an emergency at a company facility.

This E2 plan has been prepared in accordance with the Environmental Emergency (E2), Regulations made pursuant to the Canadian Environmental Protections Act, 1999 (CEPA 1999), reflecting the four pillars of emergency management: prevention and mitigation, preparedness, response, and recovery.

Sharing portions of information within this manual with interactive stakeholders or those residents or businesses in the proximity of effect from an emergency is encouraged.

2.3 Objectives of the E2 Plan

- Reduce the frequency and consequences of uncontrolled, unplanned, or accidental releases of propane.
- Promote the safety of workers, responders, and the public.
- Reduce the potential for destruction of goods and property.
- Minimize the effect upon the environment.
- Communicate risks associated to the facility with the local emergency response services.
- Help responders quickly determine and initiate proper remedial actions.
- Inform neighboring citizens and businesses of preparations and actions that will minimize risk to safety and health during an emergency event.
- Liaise with local municipal administrations in the context of public safety.
- Reduce recovery times and costs.

These objectives are achieved through the development, implementation, training/exercising and maintenance of this E2.

2.4 Scope of Emergency Procedures

Due to the complexity and variables of an emergency, it is difficult to determine an exact systematic process that will be effective in all situations. The common elements within responses are listed. The responder will determine the sequence and execution at the time of the incident.

This E2 Plan addresses the following list of risks:

- Propane gas release
- Propane liquid release
- Fires
- Explosions
- Threats to people, property, and goods
- Other site-specific values at risk

2.5 E2 Plan Access

An up-to-date plan shall be kept in the red plastic document holder - labelled E2/SDS - installed near emergency horn activation on North exterior wall of convenience store so as to be readily available to site personnel and 1st Responders.

2.6 Joint Responsibilities

Mid Island Co-op owns and operates this Bulk Plant on Gabriola Island BC.

2.7 Plan Consultation/References

- Canadian Environmental Protection Act, 1999 - Part 8: Environmental Matters Related to Emergencies
- Environmental Emergency Regulations SOR/2019-51
- Technical Guidelines for the Environmental Emergency Regulations, 2019 Version 2.0
- WorkSafe BC Guidelines – OHS Reg's. Part 4: Emergency Preparedness and Response
- WorkSafe BC Guidelines – OHS Reg's. Table of Exposure Limits for Chemical Substances
- CCOHS https://www.ccohs.ca/oshanswers/hsprograms/basic.html
- National Fire Code of Canada – Division B, Emergency Planning
- Federated Co-operatives Limited SDS – Propane
- CAN/CSA Z731-03 Emergency Preparedness and Response
- CAN/CSA B149.1 Natural Gas and Propane Installation Code
- CAN/CSA B149.2 Propane Storage and Handling Code
- ASME Vessel Specifications
- Canadian Electrical Code
- Provincial Boiler and Pressure Vessel Acts and Regulations
- Safeti, formerly PHAST (Process Hazard Analysis Software) Analysis Modelling from Marsh Risk Consulting
- MIACC (Major Industrial Accidents Council of Canada) is a risk-based land use planning guide (MIACC was dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering)

2.8 Record of Amendments

Record changes made to the Plan on the table below and replace applicable pages.

#	Date of amendment	Section # amended	Recorded by
1	2023	New E2 Plan	Kevin McEown - FCL and Kelli Cartwright - Mid Island Co-op

2.9 Company Profile

Nature of Business

Mid Island Co-op is a locally owned co-operative serving local communities with food and fuel.

Typical Storage Use and Delivery Activities

This Mid Island Co-op owned and operated Bulk Plant on Gabriola Island BC has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

2.10 Glossary

Active Mitigation: A safeguard system designed to mitigate the consequences of an incident that requires human intervention, external mechanisms, or energy sources. Examples include lighting, automatic and manual valves, etc.

Alternate Scenario: An environmental emergency that could reasonably be expected to occur at a facility and that would likely cause harm to the environment or constitute a danger to human life or health.

Alternate Worst-case Scenario: Means the scenario described in section 4(2)(f) of the E2 Regulations. It involves the alternate scenario that is more likely to occur than the worst-case scenario **and** that has the longest impact distance outside the boundary of the facility (if it exists).

BLEVE: (boiling liquid expanding vapor explosion) happens if a container holding a pressure liquified gas (e.g., propane) fails catastrophically. Catastrophic failure of the vessel is followed by the explosive release of boiling liquid and expanding vapour.

The BLEVE is a physical explosion where the hazards are blast and projectiles. Propane is flammable so a fireball may happen after a BLEVE if the released cloud is immediately ignited. This is usually the case if the tank failure is caused by fire impingement. If a flammable cloud is not ignited immediately then delayed ignition could lead to other fires, explosions, etc.

A BLEVE will typically occur when the steel of the tank is compromised by an external impinging fire and consequential rupture due to the combination of internal over-pressure and weakening steel strength due to overheating. A warning sign of an impending BLEVE may be intermittent or a continual flare-off from the pressure relief valve until the tank either BLEVE's or rids enough propane where flare-offs cease. The variables within the chain of events are difficult to accurately predict.

CAS Registry Number: The identification number assigned to a substance by the Chemical Abstracts Service, a division of the American Chemical Society. The Chemical Abstracts Service Registry number is the main identifier for regulated substances found in the E2 regulations. CAS number for Propane is 74-98-6.

CEPA: Canadian Environmental Protection Act, 1999.

CERCA: The Canadian Emergency Response Contractors' Alliance (CERCA) is an industry association comprised of stakeholders from all facets of the Canadian dangerous goods emergency response industry. The mission of CERCA is to foster the establishment of a sound emergency response network in Canada.

Community Emergency Systems Notification: An advisement document used to communicate avoidance and evacuation actions in the event of a vapor cloud drift, substantial release, or fire. This notification is for offer to neighboring residences and businesses that are within the harm radius of the risk model.

Container System: Any receptacle or network of receptacles that is used to contain a substance – including any connected pipelines or piping – except any part or that network that is automatically or remotely segregated from the rest of the network by shut-off valves, or other mechanisms in the event of any environmental emergency.

CRS: Co-op Retailing System.

CRS-EMRG: The Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) is a toll-free number (1-833-277-3674) to call (24/7) to report an emergency related to FCL or Co-op. A dispatcher (STARS) will ask a series of questions to gather information about the incident and will then notify the appropriate FCL Emergency Management Team (EMT).

E2 (Environmental Emergency): This refers to the Environmental Emergency Regulations that address the prevention of, preparedness for, response to and recovery from, and environmental emergency caused by uncontrolled, unplanned, or accidental releases.

E2 Plan: Environmental Emergency (E2) Plan is a document that provides guidance on actions under various emergencies and conditions.

ECCC: Environment and Climate Change Canada.

Emergency: An emergency is a potential or a real developing situation, which may cause injury, property damage, environmental damage and/or impact on corporate image and reputation.

Emergency Management Centre (EMC): The FCL EMC is where the FCL Emergency Management Team will meet in the event of an emergency involving the Propane Department will typically be located at FCL's Home Office.

Emergency Management Team (EMT): The FCL EMT is a group of subject matter experts and advisors who provide oversight and guidance to emergency response measures.

Emergency Notification System: Is an advisement document used to communicate actions in the event of a vapor cloud drift, fire, explosion, substantial release or other where proper avoidance, evacuation and muster point items are explained. This notification is for offer to neighboring residences and businesses etc. that are within the harm radius of the risk model.

Emergency Operations Manager (EOM): The FCL EOM is responsible for the FCL Emergency Management Centre and working with the Emergency Management Team initially determines Emergency Response Activation Plan activation, crisis level and owner and what support or guidance and performs duties as described within this plan.

Emergency Responders: General term for a group of individuals who have defined skills or responsibilities in an emergency.

Environmental Emergency: Means an uncontrolled, unplanned, or accidental release of an E2 substance into the environment (or the reasonable likelihood of such a release) that:

a) Has or may have an immediate or long-term harmful effect on the environment; or

b) Constitutes or may constitute a danger to the environment on which human life depends; or

c) Constitutes or may constitute a danger in Canada to human life or health.

Environmental Officer (EO): The EO as a member of FCL's Emergency Management Team initially assesses the degree of potential environmental impacts and performs duties as described in this plan.

ERAC: Emergency Response Assistance Canada formerly the Liquid Propane Gas Emergency Response Corporation is a division of the Canadian Propane Association developed to offer emergency services for the Canadian propane industry. The ERAC has Emergency Response Teams situated in various locations nationwide to respond to major propane emergencies.

ERAP: An emergency response assistance plan describes what to do in the event of a release or anticipated release of certain higher-risk dangerous goods – such as propane - while they are in transport. An ERAP requires a third-party responder agreement between FCL, and the third party listed in the ERAP – being ERAC - that will provide technical or emergency response advice, and/or provide resources to respond to a release or anticipated release on FCL's behalf.

ERC: The Emergency Response Coordinator will typically be the most senior and or qualified manager, supervisor or employee on site that is able to instruct the activities of others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

FCL: Federated Co-operatives Limited.

Fireball: Can result from an instantaneous release from a BLEVE or a release with a delayed ignition.

Full-scale Simulation Exercise: An action-based simulation exercise requiring the deployment of personnel, resources, and equipment.

HBC: The Home Base Co-ordinator is a person that is verified under CERCA to advise Local Emergency Responders, owners and their contracted Emergency Response Team on remedial activities following an incident.

Incident Action Plan (IAP): Within Incident Command System, includes the overall incident objectives, strategies and tactics established by Incident Command.

Incident Commander (IC): Within Incident Command System, has overall incident management responsibility.

Incident Command System (ICS): The ICS is a standardized on-site management system designed to enable effective, efficient incident management within a common organizational structure.

Information Officer (IO): The IO as a member of FCL's Emergency Management Team initiates and directs established communication response and performs duties as described in this plan.

Muster Area: The Muster Area is typically situated on site or adjacent to site in a safe location. Choice of location is prior to an emergency event. Posting a sign identifying the Muster Area and placing a copy of the E2 Plan there in a weatherproof container is required.

Operations Chief (OC): Within Incident Command System, directly manages all incident tactical activities and implements the Incident Action Plan.

Overpressure: The overpressure of the atmosphere due to an explosion. Probabilistic risk models used for FCL facilities base is 1-psi overpressure. Overpressure of 1 psi may cause structural damage to buildings. Levels of 3-5 psi will cause significant structural damage and cause severe or fatal injury to persons openly exposed to a pressure wave.

Passive Mitigation: A safeguard system designed to mitigate the consequences of an incident that does not require human intervention, external mechanisms, or energy sources. Examples include fencing, protection against collision damage etc.

PID: Piping and Instrumentation Diagram.

Planning Chief (PC): Within Incident Command System, oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, conducts Planning Meetings, and prepares the Incident Action Plan for each operational period.

Reasonable: Means logically valid. It is based on using sound judgement, and therefore, practical, and sensible as opposed to extreme or excessive.

RMA: The Remedial Measures Advisor is a person that is qualified under the LPGERC (ERAC) to advise Local Emergency Responders and or CPA members on remedial activities following an incident.

SAFETI: Process Hazard Analysis Software used for Analysis Modelling prepared by Marsh Risk Consulting.

Safety Officer (SO): The SO as a member of FCL's Emergency Management Team monitors incident operations and advises the Emergency Operations Manager on all matters related to operational safety and performs duties as described in this plan.

SDS: Safety Data Sheet.

Secondary Muster Area: Two Secondary Muster Area are situated a cross wind to the Muster Area and evacuated to when it is not safe to go to a Muster Area or remain at the Muster Area. Choice of location depends on wind direction.

Shelter-in-place: Means finding a safe location indoors and staying there until you are given an "all clear" or told to evacuate.

Simulation Exercise: An exercise simulating the response to an environmental emergency involving the release of an E2 substance.

Strike Team (ST): Within Incident Command System, a set number of resources of the same kind and type that have an established minimum number of personnel, common communications, and leader.

STARS: STARS Emergency Contact Centre (ECC) is a service offered by STARS Emergency Link Centre (ELC) to answer calls to the Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) for emergencies related to FCL or Co-op and provide incident notification to the appropriate FCL Emergency Management Team.

Unified Incident Command (UIC): Within Incident Command System, UIC allows agencies with different legal, geographic, functional authorities and responsibilities to work together effectively. All responsible agencies jointly provide management direction through a common set of incident objectives and strategies established by a single Incident Action Plan.

USWG: United States Water Gallon. This measurement relates to the capacity of an LPG tank based on how much water the containment can hold.

VCE: (vapor cloud explosion) is a chemical explosion and occurs when a large quantity of flammable vapor or flammable gas is ignited, and the flame propagates at a rate/speed fast enough to create an overpressure. Release or migration of flammable vapor/gas into a confined area with ignition will create a substantial overpressure and thermal event. Migration of the vapor/gas cloud will determine where and the intensity of a VCE which will be influenced by degree of congestion, terrain, and other obstructions.

Wildfire: Wildfire, also known as a forest fire, prairie fire, grass fire, or brush fire, is an unplanned, unwanted, uncontrolled fire often occurring in wildland areas, but which can also consume structures.

Worst Case Scenario: Means the scenario described in section 4(2)(e) of the E2 Regulations. It must involve the release of the maximum quantity of an E2 substance that could be contained in the container system with the largest maximum capacity at a facility, or the maximum expected quantity of the substance on-site that is not contained. The scenario does not need to be reasonable.

Section 3 Management and Administration of the E2 Plan

3.1 E2 Plan Development Evaluation Review Update and Consultation Team

The team participating in the plan development, initial review and responsible for its annual evaluation, exercise, review, updates as necessary by the following individuals within their roles:

Participant	Organization	Function and Project Role
Bruce Buckingham	Mid Island Co-op	Director of Energy Operations (Plan Approval)
Kelli Cartwright	Mid Island Co-op	Area Manager (Plan Advisory for Development, Plan Implementation, Training/Exercise and Maintenance)
Kevin McEown	Federated Co-operatives Limited - Propane	Senior Health and Safety Advisor (Plan Development, Implementation, Training/Exercise Development and Maintenance)
Darrell Rose	Marsh Risk Consulting	Senior Vice President (exempted from approvals) (Risk Engineer)

3.2 E2 Plan Distribution

The E2 Plan will be made available to all employees, emergency service providers, stakeholders, and regulatory authorities by the following:

#	Name of Person who received the ERP manual	Individual/Organization	Date Issued
1	Bruce Buckingham	Mid Island Co-op - Director of Energy Operations	2023
2	Kelli Cartwright	Mid Island Co-op - Health & Safety Coordinator	2023
3	Kevin McEown	FCL Propane - Senior Health & Safety Advisor	2023
4	XXXX	Gabriola Volunteer Fire Department - Fire Chief	2023

3.3 ECCC Notifications

On XXXX, ECCC received Schedule 2-5 notices, under CEPA's E2 Reg's, 2019.

Section 4 Risk Assessment

4.1 Propane – General Characteristics and Hazards

4.1.1 Background

The inherent properties of propane with its low boiling point make it a feasible energy source used in a variety of energy applications from heating to transportation. Propane uses include fuel for heating, cooking, automobile and forklift truck fuel, crop drying, welding, and cutting operations. Industry uses propane as a refrigerant, solvent and as a chemical feedstock.

Under normal atmospheric conditions propane is a gas, however, increasing the pressure causes the substance to condense into a liquid. This characteristic of propane allows for storage of large quantities of liquid propane inside of a pressurized container. When liquid propane vaporizes (phase changes) from its liquid state into its gaseous state it creates a refrigerating effect (cooling).

4.1.2 Properties

Propane is stable and non-reactive under normal conditions of use, storage, and transport. Conditions to avoid include heat, sparks, open flames, and other ignition sources. Avoid contact with incompatible materials, which includes any strong oxidizing agents. Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

Propane is a colorless, odorless gas in its natural state, so the addition of a stench odorant called ethyl mercaptan gives propane a distinct boiling cabbage like odor. Propane is transported and stored as a liquid in pressure vessels to a capacity of approximately 80%, which allows room for vapor expansion. When propane liquid is released from its confinement, it converts to a gas to a rate of 270:1. The speed of vaporization is dependent on ambient temperature. Most calculations are based of 15° C; however, calculations are made for differing temperatures to assure safe load weights. Below -42° C, propane will lose its ability to vaporize and remain a liquid. Installation of vaporization appliances or supply tank heaters ensure function in extremely low temperatures or in high volume demand situations. Propane is 1.6 times heavier than air and settles in lower areas if released. Propane vapors will dissipate into the atmosphere rather quickly depending on wind conditions and ambient temperature. Propane is non-toxic, however may be an asphyxiant if enough breathable air is displaced. The combustible range of propane is between 2.2% and 9.5% mixture with the atmosphere. This is a relatively low range of flammability; however, periphery zones of a vapor cloud will ignite if it falls within the flammability range mentioned.

For more information refer to 9.2.1 Safety Data Sheet.

4.1.3 Provincial Exposure Limits

Table 4.1.3 Work Safe BC Table of Exposure Limits

Substance	CAS #	Time Weighted Average Limit (TWA)		Short Term Exposure Limit (STEL)	Notations
		ppm	mg/m³		
Propane	74-98-6	N/A	N/A	Simple asphyxiant	EX

Note: The term EX means the substance is a flammable asphyxiant - updated June 1, 2021.

4.1.4 Potential Health Effects/First Aid Measures

Propane is non-toxic, but if released into a confined space or settles in lower areas it will displace the air making it difficult to breathe. It is always important to seek medical attention if you are experiencing signs and symptoms from exposure. Some of the effects of exposure:

Eye Contact: Rapidly expanding Propane can cause eye irritation and frostbite (cold burn). Permanent eye damage or blindness could result.

Inhalation: Chemical asphyxiant hazard – if accumulation occurs to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness at first but if inhaled at high concentrations, the central nervous system depresses and reduces the ability of the blood to carry oxygen to body tissues.

Skin Contact: Direct contact with liquefied propane gas can result in frostbite (cold burn).

Ingestion: Not a normal route of exposure - unlikely.

4.1.5 Summary – Potential Risks of Release for Propane

Propane has no natural odour and is non-toxic but is an asphyxiant in high concentrations. The vapour density of propane is 1.6; consequently, it will accumulate in lower areas such as ditches and sewers. To be combustible, propane needs to be within its flammable or explosive range between the Lower Explosive Limit (LEL) 2.2% and Upper Explosive Limit (UEL) 9.5% by volume in atmosphere. When liquefied propane is released into the atmosphere, it will expand up to 270 times in vapour to that of liquid.

The impact on life safety and the physical environment because of an unplanned release can be detrimental, so it is important to reduce the risk through the implementation of elimination, engineering, and administrative controls.

4.2 Facility Location, Storage, Handling, and Risk Mitigation

4.2.1 Description of Facility Property Surrounding Area Including Potential Receptors

The 9,400 USWG horizontal propane storage tank is installed above ground.

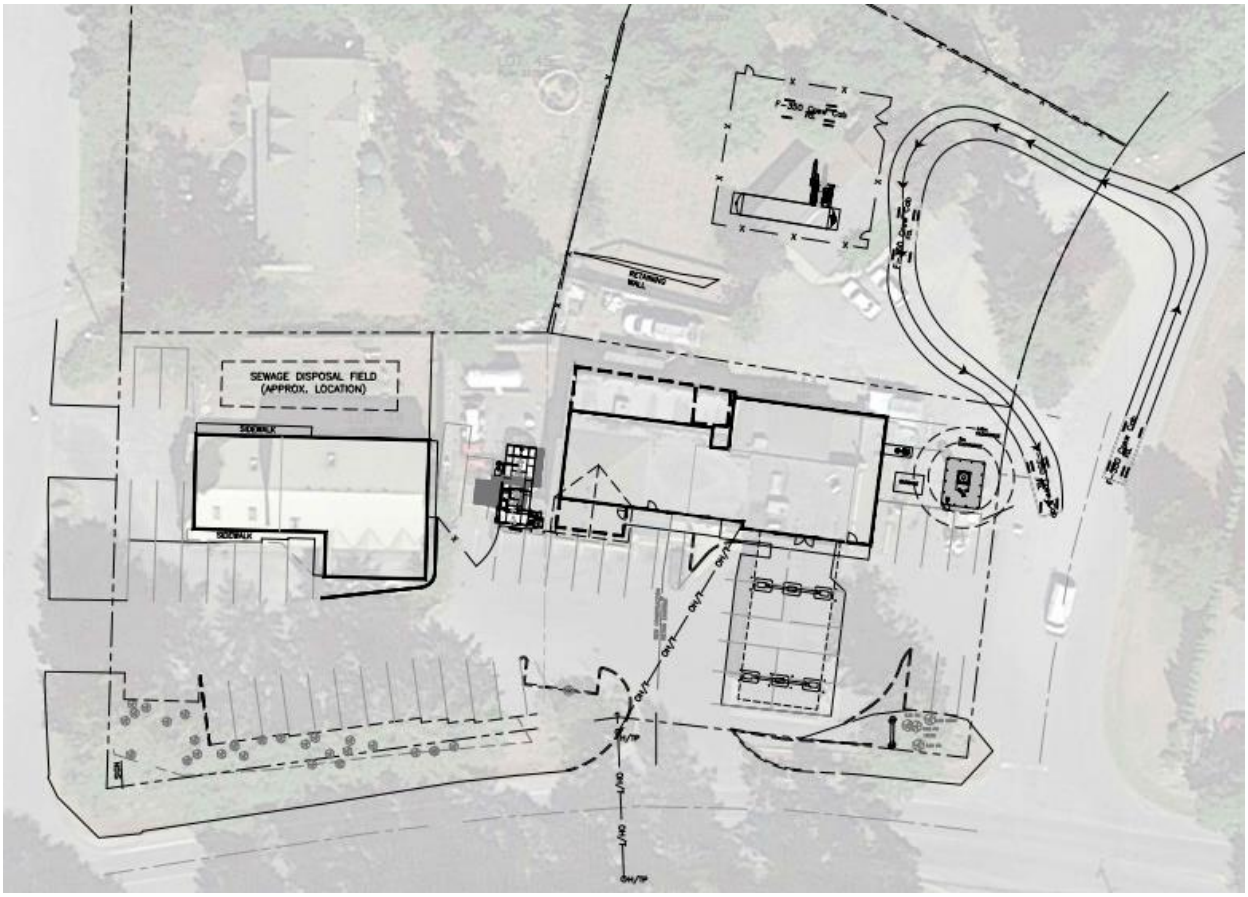
The facility located at 793 Lockinvar Lane, on Gabriola Island, within Gabriola Island Trust Area, and the Regional District of Nanaimo BC. Gabriola Island has a population of 4,500 and population density per square kilometer of 77.4 (Statistics Canada, 2021 Census).

The alternate worst-case scenario is a jet fire based on propane liquid released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario.

There is a delivery driver working from the propane bulk plant.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.2.1 Facility and Property



4.2.2 Maximum Capacity and Quantity of Propane Stored on Site

Propane is the only product on site that meets the minimum threshold requirements for developing the Environmental Emergency (E2) portions of this Plan as per Environment and Climate Change Canada's E2 Regulations. The capacity of the largest single container in which propane is stored on site is 18.0243 metric tonnes (9,400 USWG). The maximum expected quantity of propane on site at any time during the calendar year is 18.0243 metric tonnes (including piping) - the working volume limited to 80% of the capacity of the propane vessel on site to allow for expansion/contraction of propane due to changes in temperature/pressure within the vessels. **18.0243 metric tonnes are registered with ECCC using SWIM for both quantity and capacity as it is not known how much if any tanks (at up to 5% maximum) or cylinders (at up to 80%) will be stored on-site.** Since both the largest single container and maximum expected quantity both exceed 4.5 metric tonnes, an E2 Plan is required.

4.2.3 Substance Identification

Schedule 1 of Environmental Emergency Regulations, 2019 - Part 1						
Item	Column 1	Column 2	Column 3	Column 4	Column 5	
	CAS No	Name of Substance	Concentration % mass/mass	Minimum Quantity (tonnes)	Hazard Category	UN No
17	74-98-6	Propane	1	4.5	E	1978

Legend: E explosion hazard

4.2.4 Process Description

This Mid Island Co-op staffed Bulk Plant has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. At this time, Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

4.2.5 Passive Mitigation

The 9,400 USWG horizontal propane storage tank is installed above ground.

Locked non-climb-able metal fence segregate the above ground propane tank from the public.

Stationary propane tank and its associated piping are protected against collision damage by concrete filled metal posts XXXX.

4.2.6 Active Mitigation

The facility is illuminated at night.

The facility has a typical amount of portable fire extinguishers as required by the local fire code. Access for fire department equipment is good.

The propane storage tank is within reach of hose streams from outside of the facility and firefighting water is supplied by water shuttles.

The delivery trucks have driven-away protection in the form of interlocks that prevent the truck from being placed into gear with the propane loading hose attached ("refinery gates"). The tanks on the delivery trucks are outfitted with excess flow valves that will shut off flow to the atmosphere should a significant hose or pipe break occur. Trucks are outfitted with positive air shut off devices and will shut down the engine if propane gas is ingested. Drivers have an emergency remote stop device in their possession that if activated shuts off the truck, closes the ISC valves and while pumping requires the driver to manually press a button at timed intervals to continue flow. A back-check valve at the barrel fill-in point protects piping.

Manual emergency shutdown devices are provided at the above ground tank and on the North exterior wall of the convenience store. Pressure relief valves are installed on the fixed tank and delivery vehicles.

There are good controls utilizing the operating and maintenance procedures. The storage tank has no other fire systems or controls such as fire or gas detection systems.

Vandals or trespassers to the facility and propane area are dealt with by the local law enforcement fully of the law.

4.3 Frequency, Probability and Consequence Risk Assessment

Version 8.71 of the commercially available software package, Safeti (formerly Phast Risk) from DNV was used to perform a probabilistic risk assessment of this operation:

https://www.dnvgl.com/services/qra-and-risk-analysis-software-phast-and-safeti-1676

Safeti has consequence modelling software, used for developing heat radiation levels, used in accessing the fire and explosion consequences (overpressures and heat radiation) associated with the propane tanks. Safeti examines the progress of a potential incident from the initial release to far-field dispersion, including modelling of pool spreading and evaporation, and flammable and toxic effects. Safeti was used for the consequence modelling of events modelled for emergency response purposes.

Safeti allows individual receptors to be defined with specific vulnerability data providing a much more accurate picture of the risks to which those within the calculated consequence areas are exposed. The program supports a range of vulnerability models, specific to the effect type being considered. For explosion vulnerability, models are available which consider either overpressure or impulse, with the data being treated discretely or interpolated. For radiation effects, flammable probit methods based on intensity and dose are used.

The methods and vulnerabilities are based on the guidance given by the National Institute of Public Health and the Environment (RIVM) Centre for External Safety, of the Netherlands, as set out in their External Safety (Establishments) Decree (BEVI) (RIVM, 2009). This methodology is based on the former guidelines presented by TNO in their "Coloured Books", with the Guidelines for Quantitative Risk Assessment, CPR18E, or more widely known as the "Purple Book" (CPR-RE, 2005). The concepts of the other "Coloured Books" are utilized within Safeti.

- BEVI – Besluit Externe Veiligheid Inrichtingen, translates as the External Safety (Establishments) Decree of RIVM
- Purple Book - CPR 18E "Guidelines for Quantitative Risk Assessment" published by the Committee for the Prevention of Disasters department TNO, a Netherlands Organization
- RIVM – Rijksinstituut voor Volksgezondheid en Milieu, translated as the National Institute of Public Health and the Environments of the Netherlands
- TNO - Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, or the Netherlands Organization for Applied Scientific Research, out of Sdu Uitgevers, Den Haag (The Hague). Their Committee for the Prevention of Disasters publishes guidelines on quantitative risk assessment calculations.

The consequence estimating models used in this study are for risk management purposes only. As such, they are not modelling of the actual physical event. As with all models, small changes in the input parameters can significantly affect the resulting consequence estimates.

While the parameters selected in consultation with FCL are reasonable for the model and situation, it must be kept in mind that the results are not absolute. Therefore, the consequence estimates should be taken as only an indication of the extent or order of magnitude of the potential consequence. The actual consequence may be more severe than under the reasonably foreseeable conditions assumed.

SAFETI Parameters and Model Settings:

- Dispersion
    - Atmospheric Expansion - DNV Recommended
    - Modelling of Instantaneous Expansion - Old Standard Method
    - VCE - TNT, 10% yield, Ground Burst
    - Fireball - Roberts TNO Hybrid
    - BLEVE (not applicable to this site) - CCPS Second Edition

4.3.1 Frequency Analysis

As Mid Island Co-op has had no significant propane incidents in its history, we elected to use general industry data for the frequency analysis, specifically that data given in the Purple Book and BEVI methodologies. From these frequencies, combined with the consequence distances calculated for events which would reach offsite receptors, Individual Risk contours can be calculated to compare to acceptable risk criteria.

The use of this method negates the need for fault tree, event tree, and human reliability analysis, as the frequency of the end event is given directly for input into Safeti.

The probabilities of interest in this study are given as:

Table 4.3.1

Event / Installation	Events per Vessel-Year or per Hour-Operation		
Loss of Containment	Instantaneous	10 minutes Continuous	10 mm dia. Continuous
Stationary Pressure Vessel	5×10^{-7} /y	5×10^{-7} /y	1×10^{-5} /y
Loss of Containment	Instantaneous	Largest Connection, Continuous	
Pressurized Road Tankers	5×10^{-7} /y	5×10^{-7} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Hoses	4×10^{-6} /h	5×10^{-5} /h	
Loss of Containment followed by Ignition	Instantaneous	Largest Connection, Continuous	
Road Tanker on Site	1×10^{-6} /y	1×10^{-6} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Piping (nom dia. <75mm)	1×10^{-6} /m-y	5×10^{-6} /m-y	
Piping (nom dia. ≥75mm, ≤150mm)	3×10^{-7} /m-y	2×10^{-6} /m-y	
Piping (nom dia. >150mm)	1×10^{-7} /m-y	5×10^{-7} /m-y	

Safeti also utilizes the probability of ignition from the BEVI methodology for stationery and road tanker vessels. For stationary vessels, the probability of ignition is 0.2, 0.5, and 0.7 for continuous releases of 10, 10 to 100, and over 100 kg/s respectively, and for instantaneous releases of 1000, 1000 to 10,000, and over 10,000 kg respectively. Further, we have entered ignition sources at the adjacent facilities

and residential dwellings, which have gas-fired heating systems, and a linear ignition source being the roadways adjacent to the property.

We have multiplied the frequency at which a single vessel may lose containment by the number of similar vessels typically on site, by the number of hours loading hoses are used, or by the number of metres of piping which may contain propane.

An important element in the frequency at which a particular dispersion may reach a receptor is the wind direction and speed. Of slightly lower effect on the dispersion, but still somewhat significant for propane, is the atmospheric temperature, stability, and humidity. Although we have reviewed historical wind directions and speeds, and other pertinent weather parameters in the area, based on Environment Canada, we did not use this data directly in the compilation of the individual risk contours based on wind direction. Rather, we utilized the greatest possible extent of the Individual Risk contour and plotted that distance as a circle of that diameter, thus adding conservatism to the calculation based on wind direction.

We then considered the safety features of the facility, especially of the loading operations, which have the highest frequency of releases traditionally. Each of the delivery trucks are outfitted with an interlocking device, which does not allow the truck to move if the loading hose is attached to the main vessel. This feature lowers the frequency of a hose drive-away event occurring by approximately one order of magnitude.

Other typical features such as excess flow valves on delivery truck tanks, pressure relief valves, and, most importantly, management systems including operating and maintenance procedures and operator training, would be expected to lower the frequency of the postulated events by at least another order of magnitude in aggregate, virtually across the scenarios. However, within the loss data, as is typical with all frequency numbers, we do not know how many of the safety features were in place for the events that the frequency data was based on, therefore, we have assumed, conservatively, that the equipment in those losses had a reasonable number of safety features.

4.3.2 Consequence Analysis

Propane is held and dispensed from the above ground propane storage tank on the site. The vessel, hose, and piping sizes were entered in Safeti to calculate consequences of loss of containment events. In following the BEVI and TNO Purple Book methodology, and thus the remainder of the TNO Coloured Book series, we have used the vulnerability to receptors as contained in that series. Vulnerability was in relation to thermal radiation effects due to fireball, jet, and pool fires, and explosion overpressure effects.

4.3.2.1 Modelling Parameters and Weather

Weather parameters were modelled based on data provided at hourly intervals over a 5-year period. This data considers wind speeds and directions and the associated probabilities, the Pasquill atmospheric stabilities, relative humidity's, etc., and daytime and night-time conditions. This data was entered Safeti to calculate probabilities of weather-related dispersion events over the releases.

4.3.2.2 Releases in General

For each of the vessels and tank, there were common release events chosen, based on the BEVI requirements. These were a catastrophic, instantaneous release of all the mass of the vessel; a 10-minute release of the entire mass of the vessel, and a 10 mm hole in the system, releasing all the mass of the vessel over time. If vessels at this facility are connected via a common header, we postulate a release of more than one vessel through piping. In addition, when a hose connects the 9,400 USWG tank with the truck tank, there is a possibility that both tanks will empty their contents through the hose release if protection devices fail to operate. Thus, we have used the combined volumes of the two tanks in these cases.

Note that in all cases, the volume of the releases in question would be a maximum of 80% of the nominal volume of the tanks, based on maximum fill levels. However, for the consequence analysis for emergency response considerations, we have used the full 100% capacity of the propane tanks to add conservatism and to indicate worst probability scenarios.

All releases (other than catastrophic) were assumed to be released horizontally, which creates the maximum offsite consequences. The release can be directed in any direction over 360 degrees and impinges on the ground or nearby vessels and structures. Such impingement creates a larger consequence event onsite, but lesser consequences offsite. Thus, the use of a horizontal jet is conservative.

Ignition sources for the release events are essentially vehicles in the yard, vehicles on the roadways driving by the facility, heating systems and unclassified electrical equipment on any buildings around the facility. We have placed ignition sources at each of these buildings.

4.3.2.3 Vapour Cloud Explosion (VCE) – Worst Case Scenario

This event would involve a catastrophic breach with instantaneous release of the maximum quantity of propane from the largest tank and would produce:

- an overpressure of 1 psi out to 441 metres, and
- a level of 12.5 kW/m^2 m out to 307 m

According to the US Center for Chemical Process Safety, a vapor cloud explosion "is the result of a release of flammable material in the atmosphere, a subsequent dispersion phase, and, after some delay, an ignition of the vapor cloud. A flame must propagate at a considerable speed to generate blast, especially for 2-D (double plane configurations) and 3-D (dense-obstacle) environments." "In order to reach these speeds, either the flame has to accelerate, or the cloud has to be ignited very strongly, thereby producing direct initiation of a detonation." "…flame acceleration is only possible:

- in the presence of outdoor obstacles, for example, congestion due to pipe racks, weather canopies, tanks, process columns, and multilevel process structures.
- in a high-momentum release causing turbulence, for example, an explosively dispersed cloud or jet release.
- in combinations of high-momentum releases and congestion."

Thus, the use of the older TNT modelling procedure has for the most part been replaced by newer confined volume methods of VCE modelling. However, the VCE is an important scenario,

as it helps with the emergency response zone calculations for use in Environmental Emergency (E2) plans required by regulation. Thus, we present the TNT scenarios here, including the 652 m distance referenced as being the distance to 1 psi for a propane release. This uses a 10% efficiency with a TNT VCE using the EPA's RMP rule TNT calculation. Again, due to the lack of congestion around the site that would lead to large overpressure damage would dictate that the overpressure distances would be significantly smaller than these values in an actual VCE.

In the calculations for the Individual Risk calculations, we used the TNO MultiEnergy (ME) to perform overpressure calculations. The ME method is embedded in Phast Risk and was used in the calculation of overall risk. As this is a congested volume methodology, it is more representative of actual explosion overpressure events. As the calculation of individual risk is for the purpose of risk acceptability, these explosion calculations give better indication of actual risk posed.

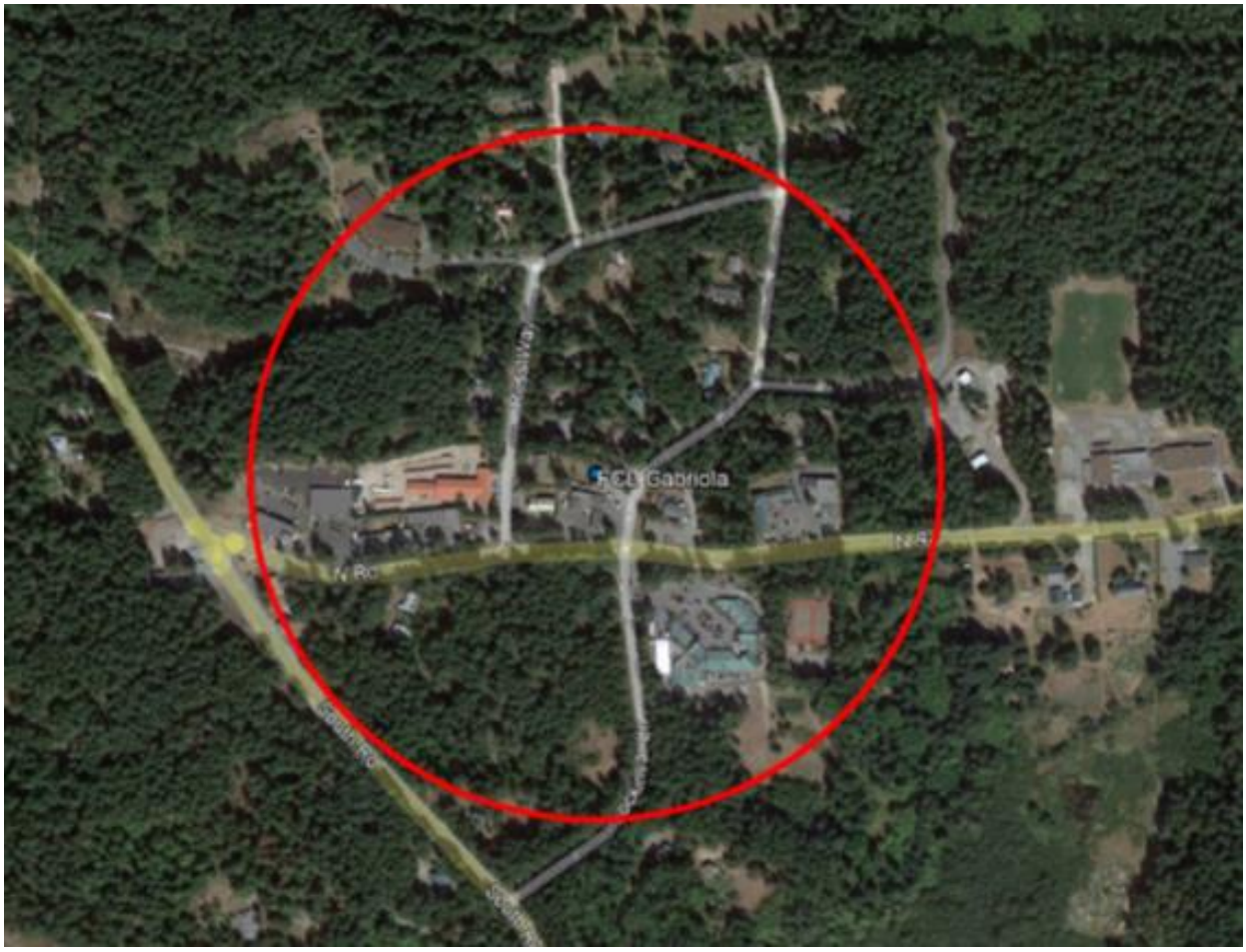
The 1-psi VCE overpressure plot is presented below. Note that the propane release is the result of a catastrophic release of all the contents of the vessel instantaneously.

Figure 4.3.2.3.1 Vapour Cloud Explosion (VCE) – Worst Case Release Scenario

The facility is in the centre and the red circle has the greatest impact distance of 1 psi out to 441 m.

In addition to overpressure, the fireball consequence of a VCE will occur. 12.5 kW/m² was chosen as the endpoint of the calculation as the distance where people without shelter could be injured in the event or, without time to seek shelter from the fire radiation.

Figure 4.3.2.3.2 Vapour Cloud Explosion (VCE) Fireball



The propane facility is in the centre and the red circle is the greatest impact distance of 12.5 kW/m² out to 307 m.

4.3.2.4 Jet Fire from a 2" Transfer Hose Rupture – Reasonable Alternate Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank. It will have an impact distance outside the boundary of the facility producing a level of 12.5 kW/m^2 m out to 76 m.

The jet fire is based on a rupture of the largest transfer hose (2" release) that may deliver liquid propane to the atmosphere. The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane at vapour pressure released through a ruptured 2" transfer hose plotted below.

Figure 4.3.2.4 Jet Fire from a 2" Transfer Hose – Reasonable Alternate Scenario

The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 76 m.

4.3.2.5 Jet Fire from a 3" Pipe Rupture – Alternate Worst Case Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank and that would have the longest impact distance outside the boundary of the facility. This event would involve a release scenario due to a rupture of a 3" pipe and would produce:

- a level of 12.5 kW/m^2 out to 100 m.

The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane liquid released through a ruptured 3" pipe plotted below.

Figure 4.3.2.5 Jet Fire from a 3" Pipe – Reasonable Alternate Scenario

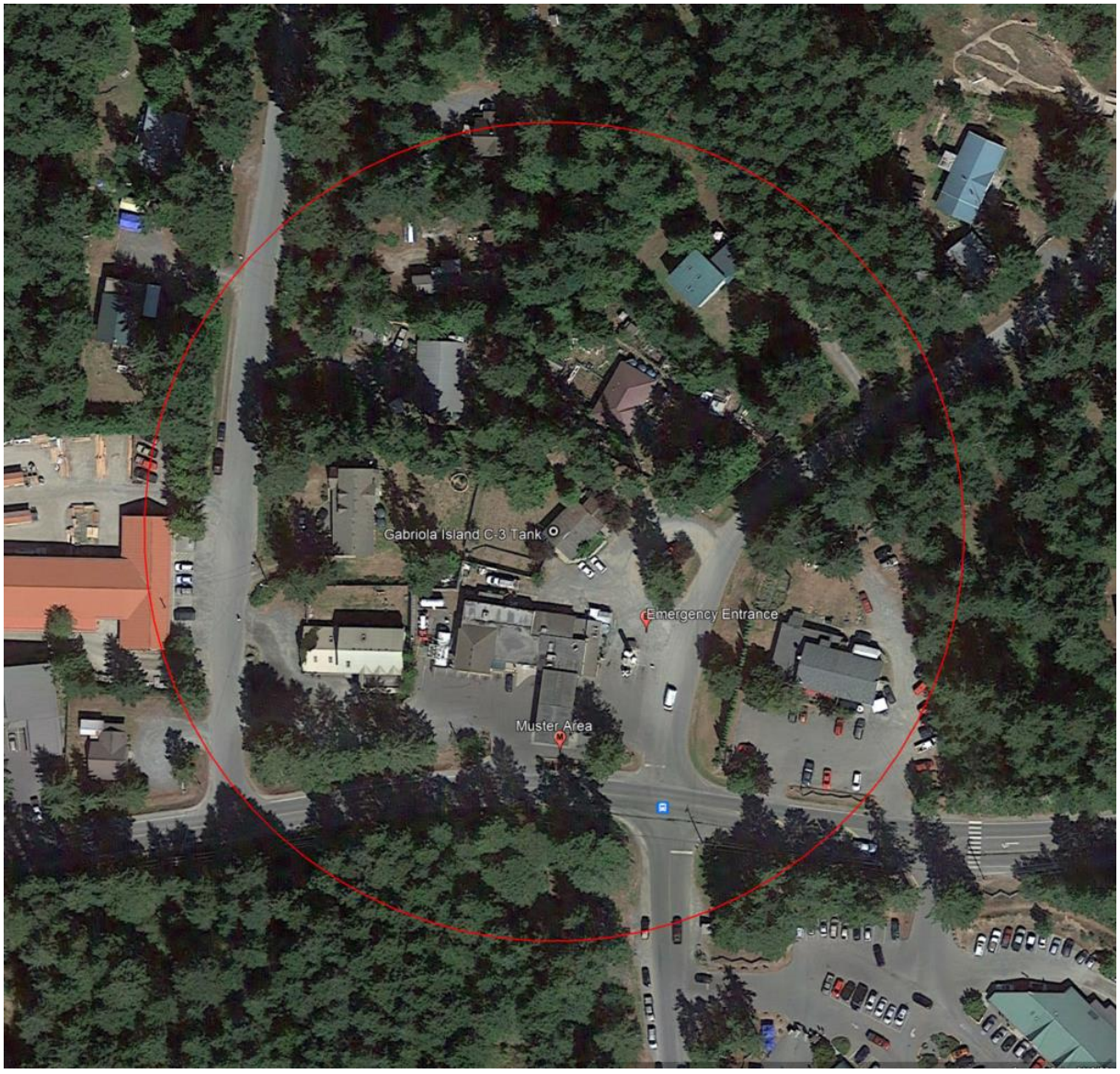
The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 100 m.

4.3.3 Identification of Public Receptors

The alternate worst-case scenario is a jet fire based on propane released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario XXXX.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.3.3 Identification of Public Receptors



The facility is in the centre <u>and</u> the red circle is the greatest impact outside the boundary of the facility of 12.5 kW/m² out to 100 m from a most likely release being a rupture of a 3" pipe that may deliver liquid propane to atmosphere.

4.3.4 Identification and Assessment of E2 Scenarios

Mid Island Co-op at 793 Lockinvar Lane Gabriola Island BC – 9,400 USWG Propane Tank (100% full)		
Worst-case Scenario		
Vapour Cloud Explosion (VCE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} VCE's per year	Probability of a VCE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of VCE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	441 m
Alternate Worst-case Scenario		
Jet Fire from a 3" Pipe Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	1×10^{-6} /m-y	Probability of jet fire occurring 1 in a million years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 Kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	100 m
Reasonable Alternate Scenarios		
Boiling Liquid Expanding Vapour Explosion (BLEVE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} BLEVE's per year	Probability of a BLEVE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of BLEVE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	138 m
Jet Fire from a 2" Transfer Hose Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	4×10^{-6} /h	Event occurring every 30 years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	76 m

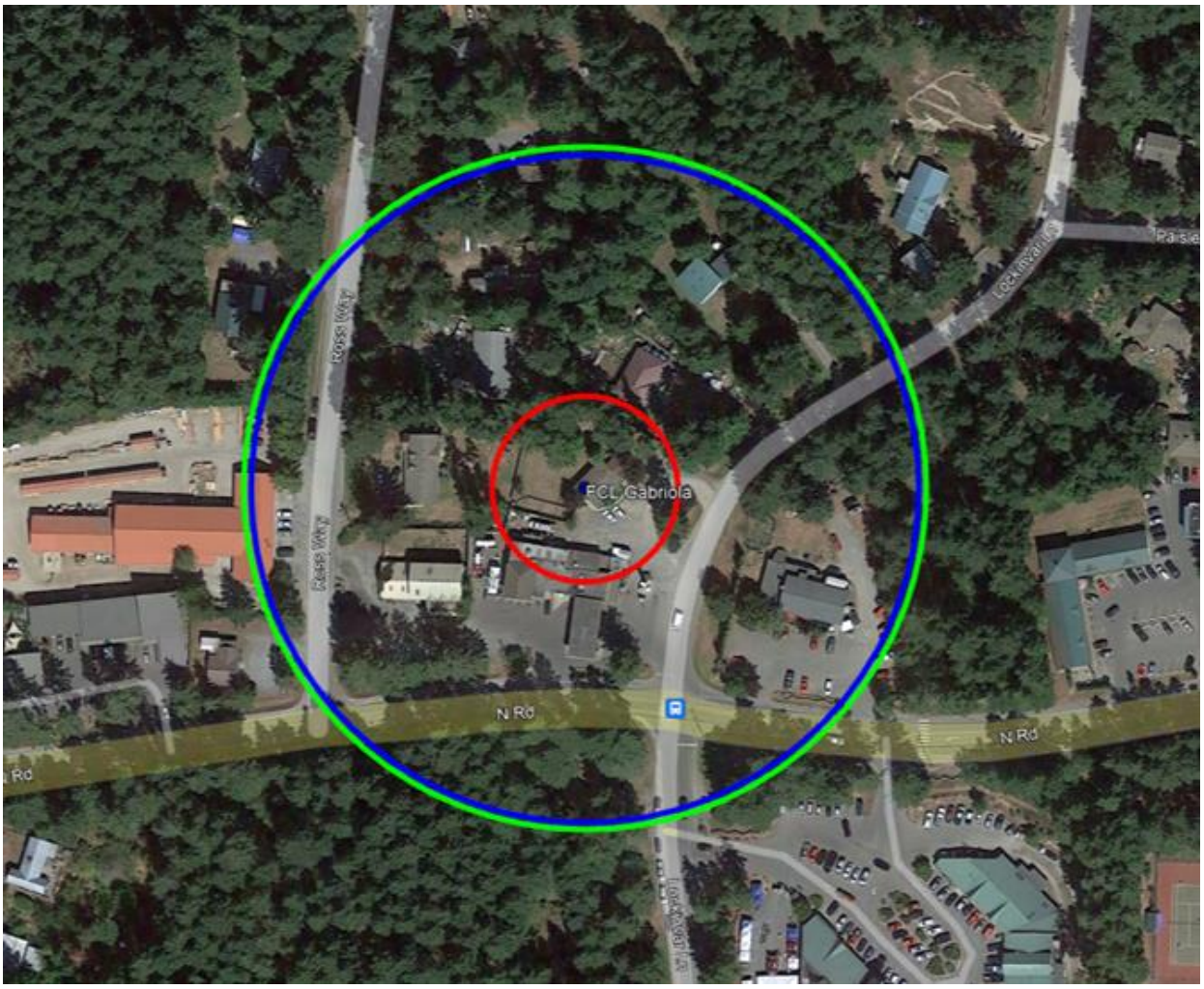
1. ***In the event of a catastrophic failure of the 9,400 USWG tank due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism the possible effect on the area would be overpressures from a blast causing structural damage and or injury as well as possible thermal damage and or injury due to a fire event as described previously in this section.***
2. ***In the event of a release from piping, leaking flange, seal, joint and transfer hoses due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism, the possible effect on the area would be thermal damage and or injury due to a fire event as described previously in this section.***
3. ***If the event were in preliminary stages an alarm would be sounded, emergency shutdowns engaged, evacuations made, traffic control measures implemented, Emergency Services, Mid Island Co-op Management, and FCL's Emergency Management Team contacted, and Incident Command established. Mid Island Co-op will assist Emergency Services. If activated by FCL, ERAC may also assist Emergency Services.***
4. ***The event model accuracy may vary due to general weather, wind speed and direction. Emergency responders would adjust evacuation and avoidance radius of effect accordingly.***
5. ***See 6.9 Environmental Emergency Simulation Exercises Scenarios A-F, and Annex 9.2.2 - Part 2 Scenarios.***

4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria

A comparison of risk estimation modelling results to risk acceptability criteria based on MIACC (Major Industrial Accidents Council of Canada) guidelines for land-use planning and siting determined the site is within risk acceptance criteria.

MIACC dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering).

Figure 4.3.5 (1) MIACC Risk Acceptability Criteria



3x10-7 – All occupancies, including sensitive populations such as schools, hospitals, etc allowed outside of this Contour
1x10-6 – High Density Residential allowed Outside of this Contour
1x10-5 – Low Density Residential and Commercial, Offices, Retail Centres allowed Outside of this Contour

Section 5 Prevention and Mitigation

5.1 Regulatory and Legal Requirements

5.1.1 Risk Management Tools

See 2.7 Plan Consultation/References for tools used to mitigate risks.

5.2 Prevention Initiatives

5.2.1 Elimination Controls

5.2.1.1 Site Selection

See 4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria.

5.2.2 Engineering Controls

5.2.2.1 Equipment

Qualified personnel conduct equipment installations, repairs, and maintenance. Applicable codes and standards for design, construction and maintenance of all vessels, piping valves and safety systems. This facility is equipped with crash protection and dry chemical fire extinguishers, which are located throughout the facility.

5.2.2.2 Emergency Shutoffs and Isolation Equipment

The propane plant has been fitted with emergency shut-offs, pressure and temperature gauges, pressure relief valves, flow indicators, electrical bonding/grounding systems, and drive-away prevention systems on the bulk delivery trucks XXXX.

5.2.3 Administrative Controls

5.2.3.1 Mechanical Integrity - Preventative Maintenance Inspections

Mid Island Co-op and FCL endeavors to maintain all equipment according to the standards set out in provincial Act and Regulation. The maintenance of the propane facility component follows the CSA B149.2-20 Propane Storage and Handling Code. Trained and competent technicians regularly inspect the facility. Defects are corrected records kept.

CSA B149.2-20 inspections:

7.22.5 Maintenance procedures

7.22.5.1

Maintenance procedures shall be appropriate to the particular facility and shall take into account, amongst other things, the following:

a) inspection of protective devices, alarms;
b) regular inspection and testing of hoses;
c) regular review of emergency procedures;
d) regular review of emergency evacuation procedures and designated safe location;
e) propane purging procedures;
f) isolation and tagging;
g) fire extinguishers and firefighting equipment;
h) piping, tubing, pumps, valves, and other propane equipment;
i) storage tanks;
j) electrical equipment;

k) fencing and security measures, signage, and notices;
l) lighting;
m) regular inspection and testing of vaporizers; and
n) any manufacturer's maintenance instructions for equipment.

7.22.5.2
Persons who perform maintenance on these propane systems shall be trained in the hazards of these systems and in the maintenance and testing procedures applicable to the facility

Note: See Dynamic Records – Equipment inspection, testing and maintenance schedules

5.2.3.2 Training

Employee and responder training that pertains to this plan is listed in Preparedness Section 6.

5.2.3.3 External Alerting and Emergency Notification System

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

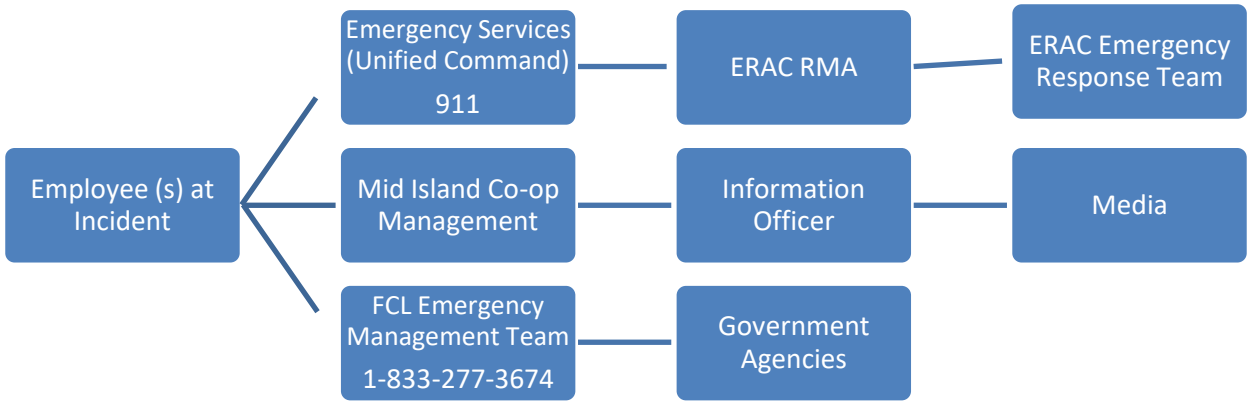
Section 6 Preparedness

6.1 Incident Management System

6.1.2 Emergency Response Management Model

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) etc. may be dispatched to scene to provide technical advice. Depending on the nature of the event, it may be a combination of the emergency service providers and may include regulatory officials who establish a Unified Incident Command at which time an Mid Island Co-op employee may participate in Unified Command at the emergency in a Unified Command or advisory role. If the event sustains over a period typically a standard Incident Command protocol will prevail which will include the establishment of operational periods; and, development of an incident action plan stating the objective/s, strategy/s, and tactics for the operational period.

FCL's Emergency Management Team is a group of subject matter experts and advisors who would provide guidance to Mid Island Co-op's emergency response measures. STARS emergency contact centre will take in Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call. Refer to 7.2.3 FCL Emergency Management Team for further information.



6.2 Mid Island Co-op/FCL Roles and Responsibilities

6.2.1 Emergency Response Coordinator (ERC)

The ERC will typically be the most senior or qualified manager, supervisor or employee on site that is able to instruct the activities or others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

Typical duties are:

- Coordinate and direct the activities of the site employees during an event.
- Using sounding an alarm, alert occupants of the event
- Assess the resources and actions required for a response.
- Ensure Emergency First Responders are notified using 911, notifying Mid Island Co-op Management and the Co-op Emergency Management Team
- Maintain communication with the Emergency First Responders and, if required, assign an Assistant Coordinator
- Ensure that all personnel are directed in any post incident activities.

6.2.2 Information Officer

In the event of an incident that may require communications with the media and our regulator, the Mid Island Co-op will assign an Information Officer. The Information Officer may be involved with the activities during a response and may be involved with remedial activities following an event.

6.2.3 FCL Emergency Management Team

This team is a group of subject matter experts and advisors who would provide oversight and guidance to the emergency response measures. STARS emergency contact centre will take in FCL, and Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call.

There are five roles within the EMT, and a list of their responsibilities follows. The EMT will work together with assignment of on-scene personnel to work toward ensuring FCL's objectives are accomplished.

Emergency Operations Manager (EOM)

- Working with the EMT, determines:
    - Whether an Emergency Response Assistance Plan should be activated
    - The crisis levels.
    - The crisis owner
    - What support or guidance may be provided?
- Accepts responsibility for the FCL Emergency Management Centre and sets over-all objectives and priorities.
- Assigns an on-scene Incident Commander (IC) or Technical Advisor who will represent FCL in Unified Incident Command (UIC) for on-scene emergency response.
- Working with FCL on-scene IC, designates or approves on-scene Information Officer (IO) to manage communications.
- Assesses and monitors crisis for appropriate level of escalation/de-escalation, in consultation with other EMT members.

- Works with and approves the following, alongside the on-scene IC:
    - Incident Action Plans (IAP) – Works with on-scene FCL IC to develop and approve on-scene IAP objectives.
    - Approves resource orders to support response measures.
    - Approves demobilization plans.

Safety Officer

- Monitor's incident operations and advises the Emergency Operations Manager on all matters related to operational safety, including the health and safety of emergency responder personnel.
- Works directly with on-scene Safety Officer or UIC (if no safety officer has been designated), to ensure a safety plan and accountability plan has been developed and implemented.
- Reviews and approves the safety and accountability plans developed by on-scene Safety Officer or UIC
- Advises on Health & Safety regulatory requirements.
- Develop an Incident Safety Plan
- Ensure incident investigation responsibilities are fulfilled.
- Communicates with Health & Safety regulators.

Information/Liaison Officer

- Initiates and directs established communication response for Level 1 and 2 crisis situations.
- Informs the Crisis Communication Lead (CCL) about crisis and determined crisis level.
- Assists in the preparation of external communication materials delivered by the CCL, including updates, press releases, media statements, key messages, etc.
- Under the direction of the CCL, prepares and delivers internal key messages and updates.
- Delivers updates to internal stakeholders through the Everbridge system, including FCL's Senior Leadership Team
- Track's media calls and requests and refers them to the CCL.

Environmental Officer

- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential environmental impacts.
- Provides technical support in the development of tactics to minimize / mitigate the environmental impacts.
- Responsible for retaining, dispatching, and managing Environmental Consultants to manage any environmental consequences of the incident or spill as required.
- Provides technical assistance to response teams, as required.
- Manage and supervise operations associated with the transfer, storage, and disposal of liquid, solid and/or hazardous wastes during emergency response operations.
- Determine the most effective methods to be employed and how to minimize the amount of waste materials generated during emergency response operations.
- Delivers updates on environmental impacts response measures and status to Emergency Operations Manager
- Reports environmental spills, releases, or potential imminent releases to federal and provincial authorities.
- Provides direction and technical advice regarding post-incident cleanup and recovery.

Secondary Support – as determined by the Emergency Operations Manager

On-scene Incident Commander/Technical Advisor

- Reports to the Emergency Operations Manager (EOM)
- Provides summary of the incident to the EOM and EMT (example ICS form 201 – Incident Briefing)
- Initiates a site activity log for the operational period (example ICS form 214)
- Working within UIC, develops on-scene IAP incident objectives and develops or approves strategies and tactics.
- Working within UIC, assigns Operations and Planning Chiefs or accepts their roles in determining strategies and tactics of IAP and supervises on-scene resources.
- Working within UIC and with Operations Chief, ensures Strike Team accomplishes strategies and tactics of the IAP.
- Provides technical expertise to the EOM and UIC on the product or commodity that is involved.
- Provides regulatory expertise such-as regulatory: compliance, reporting and liaise with regulators.
- Liaise with ERAC, as necessary.

Security Officer

- Maintains overall management and guidance to security and protection of FCL facilities.
- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential security impacts.
- Provides technical support in the development of tactics to minimize / mitigate the security impacts.
- Responsible for retaining, dispatching, and managing Security Consultants to manage any security requirements.
- Provides technical assistance to response teams, as required.
- Delivers updates on security impacts response measures and status to Emergency Operations Manager

Additional Roles

The Emergency Operations Manager will determine the need for additional support. Depending on the severity and length of the crisis, additional roles such as Finance and Logistics Officers, Legal, Insurance, Documentation, Procurement, Government Relations, Human Resources, etc. may be required.

6.3 Advance Public Notification and Communication

6.3.1 Public and Neighborhood Emergency Awareness Notifications

The process of preparation will have similarities for most areas, which will mostly be site visits and the offering of information pertaining to evacuations, propane vapor-cloud characteristics and other related safety measures. Some communities have systems organized by the local EMO Coordinators that will automatically notify areas of risk through electronic communication methods. This would involve a combined effort between Mid Island Co-op facility management and local emergency services. Mid Island Co-op offers a pamphlet (see 6.3.2 Community Emergency Notification System) to inform the neighboring businesses or community on the actions required in the event of an incident. Employers, organizations, and residents that are located within the notification zone may incorporate portions of the E2 plan into their own safety practices.

Notification of potentially impacted neighbouring occupancies and Gabriola Island Fire Rescue from the Alternate Worst-case Scenario – 4.3.2.5 Jet Fire from a 3" Pipe Rupture was accomplished. Figure 4.3.2.5 illustrates the greatest impact outside the boundary of the facility of 12.5 kW/m2 out to 100 m - see Annex 9.3.3.

Emergency Notification System

The intent of this notification is to inform all neighboring residences, businesses and organizations of actions that may be required in the unlikely event of a major propane escape or fire that would cause an emergency evacuation.

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

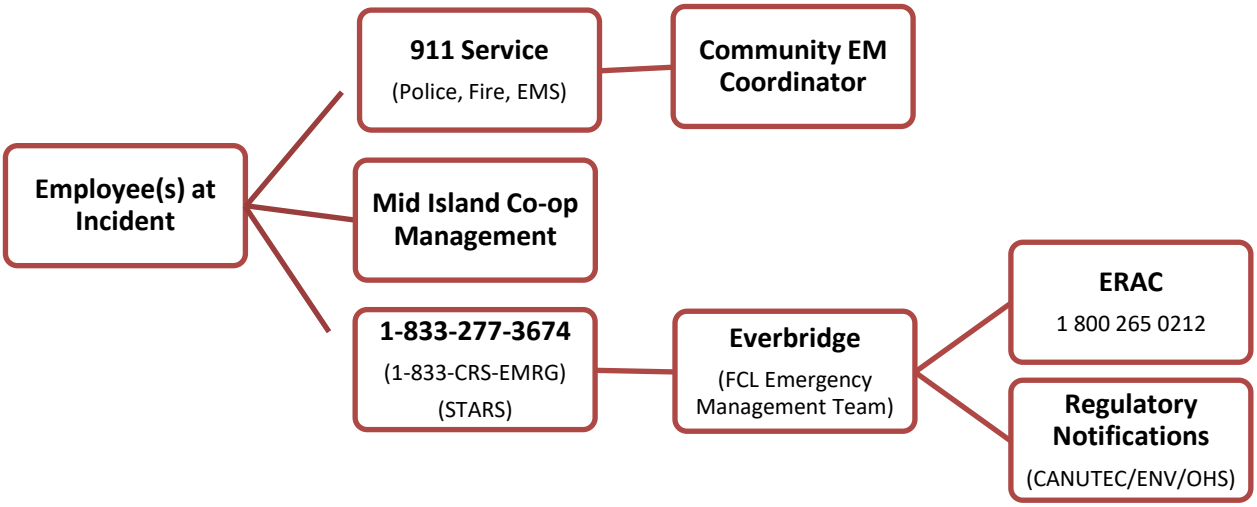
Important facts about Propane:

- Propane is non-toxic.
- Propane has an odourant added to it that makes it smell like rotten eggs or skunks.
- Flames, smoking material, sparks, and static electricity will ignite propane when mixed with the right amount of oxygen.

If you require any additional information or have any concerns, please contact Mid Island Co-op at (250)-802-1198.

6.4 External Alerting and Notification

6.4.1 Emergency Assessment and Alert Notification



For External Alerting/Notification/Resources Contact Lists refer to Annex 9.1

6.5 Evacuation and Shelter-in-place

There is potentially one outcome that can occur that affects the public. The circumstances of the event will dictate the type of instructions given to the public.

- Shelter-in-place – It may be safer for the public or neighbouring facilities to shelter-in-place to avoid exposure to a propane release depending on the quantity and modifying conditions, such as the prevailing wind.
- Evacuate – Under the direction of local emergency services, it may be necessary to evacuate to a safe distance. Instructions will be provided to the public regarding the evacuation.

6.6 Mutual Aid and Mutual Assistance

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) and where required an ERAC Emergency Response Team etc. may be dispatched to scene.

6.7 Equipment

The site is equipped with dry chemical fire extinguishers that are strategically located, and on trucks. Emergency electrical switches that shut-off electrical power to portions of the facility or, the entire facility is strategically located on site.

6.8 Training and Exercise

To ensure successful plan activation, management will ensure that employees receive adequate training to be familiar with the E2 plan requirements. Conducting regular function specific training and emergency exercises prepare personnel and ensure viability of the plan. The following is a non-exhaustive list of the training that employees receive according to their internal roles and responsibilities.

6.8.1 Employee Training

Training and testing of facility employees who have specific emergency duties ensures understanding of their roles and responsibilities listed in this E2 Plan.

All personnel handling propane hold appropriate certification of training. Personnel receive annual and/or new hire awareness training on Mid Island Co-op site-specific emergency response plans.

Some of the additional courses that would accommodate product awareness and emergency activities include WHMIS, TDG and Fire Extinguisher use.

6.8.2 E2 Plan Exercise Schedule

Training	Attendees	Frequency
E2 Plan – Awareness Workshop	All	On Hire
E2 Plan – Simulation Exercise	All	Each Year
E2 Plan – Full-scale Simulation Exercise	All	Every 5 Years

6.8.3 Responder Training

First level response training is provided internally for employees through orientations and annual Emergency Response/Environmental Emergency Plan training sessions designed to meet Federal Environmental Emergency Plan Regulation requirements.

LPGERC (Liquid Propane Gas Emergency Response Corporation) now called ERAC (Emergency Response Assistance Canada) which is a non-profit division of the CPA (Canadian Propane Association) facilitates secondary or sustained emergency response training.

FCL (Federated Co-operatives Limited) Propane and the CRC (Co-op Refinery Complex) are both participants with ERAC. TC (Transport Canada) approves secondary or sustained emergency response systems meeting TDG (Transportation of Dangerous Goods) ERAP (Emergency Assistance Plans) Regulations.

ERAC has established, HBC (Home Base Coordinators), TA's (Technical Advisors), RMA's (Remedial Measures Advisors) and ERT's (Emergency Response Teams) to help and/or advise local emergency services across Canada.

Emergency Fire Services may utilize the training offered by the ERAC specifically designed for propane fire response called PTI 911-01 LPG Awareness for Firefighters.

6.9 Environmental Emergency Simulation Exercises

Scenario A
Propane Release – no fire

Scenario B
Propane Release – with fire

Scenario C
Structural Fires – local to propane storage

Scenario D
Wildfires – local to propane storage

Scenario E
Bomb Threats/Terrorism

Scenario F
Evacuation Procedures

See Annex 9.2.2 - Exercise Documents, Part 2 Scenarios - for Scenario A-F Emergency Simulation Exercise scenario examples.

Section 7 Response

7.1 E2 Plan Activation and Emergency Contacts

ADDRESS of Gabriola Island : 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

7.2 Emergency Information & Equipment Locations

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store and Convenience store electrical room
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREAS	East of site on North Road

7.3 Emergency Notification and Communication and Procedure

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

7.4 Emergency Response Measures

7.4.1 Propane Release – no fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller – where applicable.
- Ensure all vehicles in the compound are not running or started.
- Close all doors to buildings, notify building occupants and advise an evacuation if the propane vapors have potential to travel into a building or its ventilation system.
- If the source of the release cannot be shut-off, initiate an evacuation.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist or advise Emergency Services as required.

7.4.2 Propane Release – with fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller - where applicable.
- If the fire is not propane fed, attempt to extinguish the fire.
- If the fire is propane fed and extinguishment may lead to an uncontrolled propane release do not attempt to extinguish the fire
- If the source of the release cannot be shut off and or if extinguishment is not possible, activate the emergency horn located on North exterior wall of convenience store, go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.3 Structural Fires – local to propane storage

- Notify personnel to evacuate the building.
- Do not place yourself in an area where fire entrapment can occur.
- Attempt to extinguish fire using fire extinguishers, if safe to do so.
- Close doors as you leave rooms to minimize fire spread rate.
- Leave the building using the closest safe exit.

- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Have fuel delivery units (petroleum and propane) moved, if safe to do so – where applicable.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.4 Wildfires – local to propane storage

In the event of a wildfire and an evacuation is pending:

- Alert all personnel and have any fuel delivery units (petroleum and propane) and other vehicles in the field remain away from the facility until the fire threat is over.
- If fuel delivery units (petroleum and propane) are on site upon the evacuation order have them driven off site if it is safe to do so and following the direction/permission of the Emergency Authority.
- Prior to site evacuation ensure all fuel storage systems are shut down, close all building doors.
- Drain all Bulk Plant hoses if safe to do so.
- Secure Bulk Plant by closing and locking gates.
- Report how much propane in in Bulk Storage to BC Wild Fire.

7.4.5 Bomb Threats/Terrorism

Bomb or act of terrorism threats may come in the form of a call, mail or note, electronically, verbally in person or maybe the discovery of a device either obvious or disguised.

Discovery of a suspicious device/package:

- Do not touch it or attempt to open or disarm it.
- Evacuate the location following the evacuation procedure.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go the Secondary Muster area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 778-772-9800.
- Report to 1-833-277-3674 (CRS-EMRG).

If you receive a threatening call:

- Listen to the caller in a calm and polite tone of voice.
- Start taking notes as soon as possible.
- Try to silently get the attention of a co-worker and write down the situation.

- Ask about the bomb location.
- Ask what type of bomb it is.
- Ask when and how it will explode.
- Ask the caller why they placed the bomb.
- Take note of the person's voice description such as accent, speech speed and language skills, mannerism, sex, and age.
- Take note of any background noises.
- Take note if the person seemed to be familiar with your location.
- Take note if the person's voice seemed familiar to you.
- Ask for the person's name and where they are calling from.
- When the conversation is over call 911.
- Establish communication process with police for further direction.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Complete a tally of personnel.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.6 Evacuation Procedures

When notification of a propane emergency or an evacuation order is given:

- Stop all activities.
- Eliminate all ignition sources if safe to do so.
- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.4.7 Serious Injury/Illness

- Assess the scene.
- Administer first aid as per training.
- Call 911 for assistance as warranted.
- Establish a clear pathway for EMS.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.8 Vehicle Incidents – Involving On-site Propane Delivery Units

Risk Assessment

- Determine threats to life (injuries to self or others, release or anticipated release of propane, traffic, fire, etc.).
- Identify ignition sources (shut-off engine, use vehicles electrical disconnect switch where possible).
- Inspect propane vessel, piping, valves etc. and truck to identify leaks, damage etc.

Report the Incident

- Call 911 when:
    a. You require Police, Fire or Medical personnel.
    b. There is a release or anticipated release of propane e.g.
        i. a propane delivery truck rolled over in a ditch with all four sides not visible is an example of an anticipated release.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

Secure the site.

- Deploy roadside markers and reflectors (no flares).
- Clear the area of non-essential and untrained personnel.
- If safe to do so, stop or divert traffic or public access to site.

Section 8 Recovery/Restoration

8.1 Disposal and Waste management

In the unlikely event of release that caused damage, Mid Island Co-op will endeavor to reduce and remediate any damage to the environment and will bring in the proper resources including specialized equipment and personnel to develop and implement the appropriate disposal and waste management plan. Due to the inherent characteristics and hazards of propane as described in Section 4, recovery activities may be limited to removal of debris.

8.2 Site Restoration

In consultation with public authorities, Mid Island Co-op will initiate site restoration processes as soon as possible, striving for rapid restoration from environmental damage. A specific restoration plan will be generated following an incident and will consider the specific details and circumstances of an incident.

8.3 Public Notification

In consultation with public authorities and specialized personnel, the extent of damage will be determined. Appropriate communication will be provided by public authorities and/or Mid Island Co-op to all relevant parties, including the public utilizing in person visits, local emergency services, radio, TV, automated phone messages, and social media e.g., Facebook, Twitter etc.

8.4 Stakeholder Engagement

This facility is owned and operated by Mid Island Co-op and will assist the organization of the community's resources necessary for people recovering from an emergency.

8.5 Post Incident Evaluation

8.5.1 Post Incident Review and Debrief

A post incident review and debrief will be conducted after every incident or training exercise for all personnel involved to evaluate the incident. Record and assess - using the Exercise Evaluation and Corrective Actions document found in Part 4 of Annex 9.2.2 of this plan - to ensure the activities carried out were in accordance with the plan. Replace and/or service safety equipment as required.

Section 9 Annexes

Annex 9.1 External Reporting

- 9.1.1 Environmental Reporting
- 9.1.2 Public Safety Reporting
- 9.1.3 OHS Reporting
- 9.1.4 TDG Reporting
- 9.1.5 ERAP Activation Reporting
- 9.1.6 Gas and Pressure Vessel Reporting

Annex 9.2 Documents

- 9.2.1 Safety Data Sheet
- 9.2.2 Annual and 5-Year Full-scale Simulation Exercise Document
  - Part 1 – The Exercise Plan
  - Part 2 – Scenarios
  - Part 3 – Participation List
  - Part 4 – Exercise Evaluation and Corrective Actions

Annex 9.3 Dynamic Records

- 9.3.1 Exercise Records
- 9.3.2 Preventative Maintenance Inspections Records
- 9.3.3 Community Notification Records
- 9.3.4 Plan Stakeholder Status and Acknowledgement
- 9.3.5 Facility Photos

Annex 9.4 Maps and Diagrams

- 9.4.1 Fire Services Route to Site
- 9.4.2 Emergency 1st Responders Entrance to Facility
- 9.4.3 Muster Areas
- 9.4.4 Facility Maps
- 9.4.5 Plant Schematics
- 9.4.6 P&ID drawings
- 9.4.7 Tank/s Data Plate/s

Annex 10.1 External Reporting

9.1.1 Environmental Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line.
- Submit within 30 days of the emergency response completion date of the spill.

Federal - Environment and Climate Change Canada (ECCC)

- Complete and submit a written report to Regional Director, Environmental Enforcement Directorate-ECCC-PYR ec.dale-rpn-enforcement-pnr.ec@canada.ca
    - for an environmental emergency that has or may have an immediate or long-term harmful effect on the environment,
    - constitutes or may constitute a danger to the environment on which human life depends, or
    - constitutes or may constitute a danger in Canada to human life or health.
- The written report must include the information referred to in Schedule 8 of the E2 Reg's, SOR/2019-51.

Note: ECCC has accepted Transport Canada Transport Canada 30-Day Follow-Up Form (TP16-0086E) and all other container specifications forms as fulfilling this responsibility.

9.1.2 Public Safety Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Emergency Management BC – EMBC – will make necessary provincial contacts.

9.1.3 Occupational Health & Safety Reporting

British Columbia

- Call 1-888-621-7233 (Work Safe BC 24/7) to report a serious incident or chemical release (e.g., propane) or unsafe working conditions including:
    - Serious injury to or death of a worker
    - Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation
    - Major release of a hazardous substance
    - Fire or explosion that had a potential for causing serious injury to a worker.
    - Blasting incident causing personal injury
    - Dangerous incident involving explosives, whether there is personal injury.
- Crisis Support Line (injured worker) 1-800-624-2928 (24/7)
- Critical Incident Response (witnessed to a traumatic workplace accident) 1-888-922-3700 (24/7)

9.1.4 Transportation of Dangerous Goods Reporting

British Columbia

Call 1-800-663-3456 (24/7) (Provincial Emergency Program – Emergency Management BC) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line. Submit within 30 days of the emergency response completion date of the spill.

Federal – Transport Canada

- Call 1-888-226-8832 (CAN-U-TEC 24/7), 1-613-996-6666 or *666 on cellular in the event of an emergency involving a release or anticipated release of dangerous goods, and/or to report any release of propane into the environment that could pose a danger to public safety or any sustained release of 10 minutes or more, and
- Complete a Transport Canada 30-Day Follow-Up Form (TP16-0086E) and send to the Director General, TDG at dor-rcd@tc.gc.ca utilizing TP 15294 – Guide for Reporting Dangerous Goods Incidents (where applicable, ensure to fill out a container specifications form found in Annex E of the Guide), and

Note: Confirm approval from Transport Canada prior to moving a damaged propane truck or trailer from the scene or roadway

9.1.5 Emergency Response Assistance Plan (ERAP) Reporting

Federal

- Transportation Incidents: In response to a release* or anticipated release**, FCL's Emergency Management Team will implement the Emergency Response Assistance Plan (ERAP) by:
  - Calling Emergency Response Assistance Canada (ERAC) at 1-800-265-0212 and implement Federated Co-operatives Ltd. ERP2-0010-025 to tier 1 or 2.
    - tier 1 implemented for technical or emergency response advice, but none of the emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.
    - tier 2 implemented for technical or emergency response advice, and emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.

*Release means escape of dangerous goods

**anticipated release examples: an incident has occurred, and propane will have to be transferred; propane vessel has been damaged, and propane may be released; and a tanker rolled over, with all four sides not visible

9.1.6 Gas and Pressure Vessel Reporting

Provincial

Incidents and hazards can be reported 24/7 by completing the incident form or by calling 1-866-566-7233.

Definitions

Incident: A failure of a regulated product, work or operation that caused damage or injury

Hazard: A source of potential harm to persons or potential damage to property.

https://www.technicalsafetybc.ca/contact-us/report-an-incident

SAFETY DATA SHEET

1. Identification

Product identifier PROPANE- LIQUEFIED PETROLEUM GAS

Other means of identification

Product code 127

Synonyms Unstenched Propane * Stenched Propane * HD-5 Propane * Standard Propane

Recommended use Various.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

Supplier Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

24-Hour emergency telephone (613) 996-6666 - Canutec

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
	Simple asphyxiants	Category 1

Health hazards Not classified.

Environmental hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards Contact with liquefied gas may cause frostbite.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	100

Ethanethiol	75-08-1	0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. Get medical attention if breathing difficulty persists.

Skin contact Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.

Eye contact Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 20 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Most important symptoms/effects, acute and delayed Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Water spray. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Extremely flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode. Use approved gas detectors in confined spaces.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods Evacuate area. Check oxygen content before entering area. Stop leak if you can do so without risk. Remove pressurised gas cylinders from the immediate vicinity. Turn leaking cylinder with the leak up to prevent escape of gas in liquid state. Closed containers can burst violently when heated, due to excess pressure build-up. Use water spray to keep fire-exposed containers cool. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.

General fire hazards Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition in vicinity of released gas. Evacuate all non-essential personnel to an area upwind. Stop leak if possible without any risk. Ventilate enclosed areas to prevent formation of toxic, flammable or oxygen deficient atmospheres. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Attempt to stop the gas leak, if no risk is involved.

7. Handling and storage

Precautions for safe handling

Eliminate all sources of ignition. When using do not smoke. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Valve protection caps must remain in place unless container is secured with valve outlet piping to use point. Close valve after each use and when container is empty. Do not drop, drag, slide or roll cylinders on their sides. Use a suitable hand truck to move gas containers. Use a pressure reducing regulator when connecting container to piping or systems. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. Do not use gas directly from containers. Do not heat container by any means to increase the discharge rate of product from the container. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). All equipment used when handling the product must be grounded. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Secure cylinders in an upright position at all times, close all valves when not in use. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Quebec OELs. (Ministry of Labour - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

Appropriate engineering controls Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate ventilation and minimize the risk of inhalation of gas.

Individual protection measures, such as personal protective equipment

Eye/face protection If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

Skin protection

Hand protection Wear cold insulating gloves.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Compressed liquefied gas.

Colour Colourless.

Odour Boiling cabbage if stenched.

Odour threshold 4800 ppm

pH Not available.

Melting point/freezing point -180 °C (-292 °F) / -185.89 °C (-302.6 °F)

Initial boiling point and boiling range -42 °C (-43.6 °F)

Flash point -101.1 °C (-150.0 °F) Pensky-Martens Closed Cup

Evaporation rate > 1 (Ether (anhydrous)=1)

Flammability (solid, gas) Extremely flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.2 %

Flammability limit - upper (%) 9.5 %

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure 1034.1 - 1241 kPa

Vapour density 1.6

Relative density Not available.

Solubility(ies)

Solubility (water) 6.5 % v/v in water.

Solubility temp. (water) 20 °C (68 °F)

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature	432 °C (809.6 °F)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Critical temperature	96.6 °C (205.88 °F)
Explosive properties	Not explosive.
Molecular weight	44.11 g/mol
Oxidising properties	Not oxidising.
VOC	100 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness. Inhalation of high concentrations may result in central nervous system depression and reduce the ability of the blood to carry oxygen to body tissues.
Skin contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Eye contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.

Components	Species	Test results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes

Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	None known.
Further information	Chronic effects are not expected when this product is used as intended.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Partition coefficient n-octanol / water (log Kow)	
Propane (CAS 74-98-6)	2.36
Mobility in soil	The product is slightly soluble in water.
Mobility in general	The product contains volatile substances, which may spread in the atmosphere.
Other adverse effects	The product is a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1978
UN proper shipping name	Propane
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	2F

Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	10-January-2017
Revision date	-
Version No.	01

Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Disclaimer	To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

9.2.2 Annual and 5-Year Full-scale Simulation Exercise Documents

Part 1 - The Exercise Plan

- Exercises are to be completed annually.
- All staff members must be present for the exercise.
- Make the following available to the exercise group: copy of the E2 Plan, copy of the Mid Island Co-op Safety Program, note pads and any other related material such as maps and contact lists.
- Invite an Emergency Services representative whenever possible to participate in the exercise sessions.
- Pre meeting inspection of all fire extinguishers, emergency signs, call #s and alarm system to be completed prior to exercise.
- Review the E2 Plan document with all participants (paper copies or projector)

Incident Action Plan

For the scenario/s, the reason **why** there is a need for action has been defined. The objective is to take the scenario from the beginning of the event until the incident reaches the point of recovery/restoration.

Plan and document:

- Strategies that will be used to complete the objective (How are we going to meet the objective)
- Tactics that will be used to implement the strategies including:
    - **What** needs to be accomplished?
    - **Where** they will be accomplished
    - **When** they are to be accomplished
    - **Who** will accomplish what?

In a chronological form, document: agencies, names, positions, times, contact numbers, and other applicable information related to the incidents. Attach the exercise notes to the main document.

Complete the following scenario(s) in either handwritten or printed form.

Part 2 – Scenarios

Listed below are Environmental Emergency Exercises that will be rotated on an annual basis:

- Emergency Simulation Exercise scenarios (annual tabletop), and
- Five Year Full-scale Simulation scenario that.

Propane Release – no fire

Emergency Simulation Exercise Scenario

Propane release from hoses/piping/fittings/pump – no fire

Hose rupture during propane transfer from delivery unit to bulk tank.

- The driver is unable to approach the truck or the immediate transfer area.
- It is 2:00 PM
- Light winds and +10 C
- All staff are on site.

Propane Release – with fire

Emergency Simulation Exercise Scenario

During propane transfer from delivery unit to bulk tank a leak within pumping cabinet ignited and flashed back to the point of discharge.

- The driver is unable to approach the truck or the immediate transfer area.
- It is Wednesday at noon.
- Calm winds and -5 C.
- Propane delivery driver and all staff are on site.

Structural Fire – local to propane storage

Emergency Simulation Exercise Scenario

A large amount of smoke is coming from the electrical room.

- It is 2:00 PM
- Light winds and +1 C
- All staff are on site.

Wildfires – local to propane storage

Emergency Simulation Exercise Scenario

A wildfire is approaching the facility.

- It is 3:00 PM
- Moderate winds and +30 C
- All staff are on site.

Bomb Threats/Terrorism

Emergency Simulation Exercise Scenario

Worst-case Scenario - vapour cloud explosion (VCE) vapour release from storage tank – with fire/explosion

A caller reported a bomb placed on top of the above ground propane tank and ended the call.

- It is Tuesday at 10:30 AM
- It is 25 C with wind from the northwest.
- All staff are on site.

Severe Weather

Emergency Simulation Exercise Scenario

Tornado

The customer spotted a funnel cloud.

- It is Monday at 3 PM
- +25 C with strong winds
- All staff are on site.

Emergency Simulation Exercise Scenario

Lightning

A storm is approaching with visible and audible lightning.

- It is Thursday at 1:00 PM
- +30 C strong winds
- All staff are on site.

Evacuation Procedures

Emergency Simulation Exercise Scenario

Notification of a propane emergency or an evacuation order is given:

- It is Tuesday at 8:00 AM
- -10 C light breeze
- All staff are on site.

Serious Injury/Illness

Emergency Simulation Exercise Scenario

An employee slipped and fell while outside striking their head and is unconscious. An employee has witnessed the event.

- It is Monday at 9:00 AM
- All staff are on site.

Vehicle Incidents - On-site Delivery Unit Scenario

Emergency Simulation Exercise Scenario

A delivery unit has been driven into by a customer. The driver escaped injury and the barrel appears to be damaged.

- It is Monday at 7 PM and dark.
- It is -20 C with no wind.

Jet fire

The bulk storage tanks 3” liquid bottom outlet valve has ruptured releasing propane west toward the property line. The release ignited causing a jet fire out to 100 m.

- The release is major.
- It is 1:15 pm
- Gusting winds from the east at 20 km/hr.
- +25 C
- All staff are on site.

Part 3 – Participation List

Mid Island Co-op E2 Plan Exercise Report

Date				
Exercise Facilitator				
Signature				
Position				
Facility	Gabriola Island Bulk Plant			
CRS Retail	1748			
Location	017			
Address	793 Lockinvar Lane, Gabriola Island BC - V0R 1X0			
Phone #s	Area Manager Kelli Cartwright 250-802-1198			
Storage Capacity	Tank 1	9,400 USWG	Tank 2	N/A

Participants

Print	Sign

Part 4 – Exercise Evaluation and Corrective Actions

Following the exercises, the evaluation should include completeness of the E2 Plan, reader understanding, flow, accuracy, reaching objectives, learning success, challenges, and recommendations. The evaluation should also include any other items of concern during the exercise.

Discussion Notes, Evaluation and Corrective Actions

Name of Author:		**Date:**	

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**

Exercise Facilitator	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

2023 ER.E2 Plan Review and Tabletop Exercise ppt may be found here:

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
			H
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
			H

Exercise Facilitators	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

9.3.2 Preventative Maintenance Inspections Records

Annual preventative maintenance inspections are conducted by an FCL technician with records stored electronically and can be located at I:\AA Propane Fastfield PDFs. Hard copies are printable at any given time.

9.3.3 Community Notification Records

XXXX

9.3.4 Plan Stakeholder Status and Acknowledgement

Municipal Information	
Municipality or District	Gabriola Island – Local Trust Area
Address	
Gabriola Island Trustees	Tobi Elliott 250-268-7434 telliott@islandstrust.bc.ca Susan Yates 250-247-8086 syates@islandstrust.bc.ca

Emergency Service Information	
Fire Service Name	Gabriola Volunteer Fire Department
Address Fire Hall #1	730 Church Street, Gabriola BC V0R 1X3
Address Fire Hall #2	2400 South Road 250-247-8332
Fire Chief	Will Sprogis
Fire Chief Contacts	W: 250-247-9677
DFC	XXXX
DFC Contacts	XXXX
Duty Officer	Pager: 250-755-9289
Travel Time to Facility	2 minutes travel time from Fire Hall #1 to Bulk Plant
Initial Attack Water Volume	2,000 gallons
Sustained Action Water Source	Water shuttle
Training Schedule	

Mutual Aid Agreements	
Name of Agency	Regional District of Nanaimo (RDN)
Location of Agency	6300 Hammond Bay Road, Nanaimo, BC V9T 6N2
Primary Contact Person	inquiries@rdn.bc.ca
Phone #	250-390-4111

Gabriola Volunteer Fire Department received a completed copy of the E2 plan on 2023.

I, _____ of Gabriola Volunteer Fire Department acknowledge that I have received the E2 Plan.

Position _____

Signature _____

Date _____

Mid Island Co-op Representative _____

Position _____

Signature _____

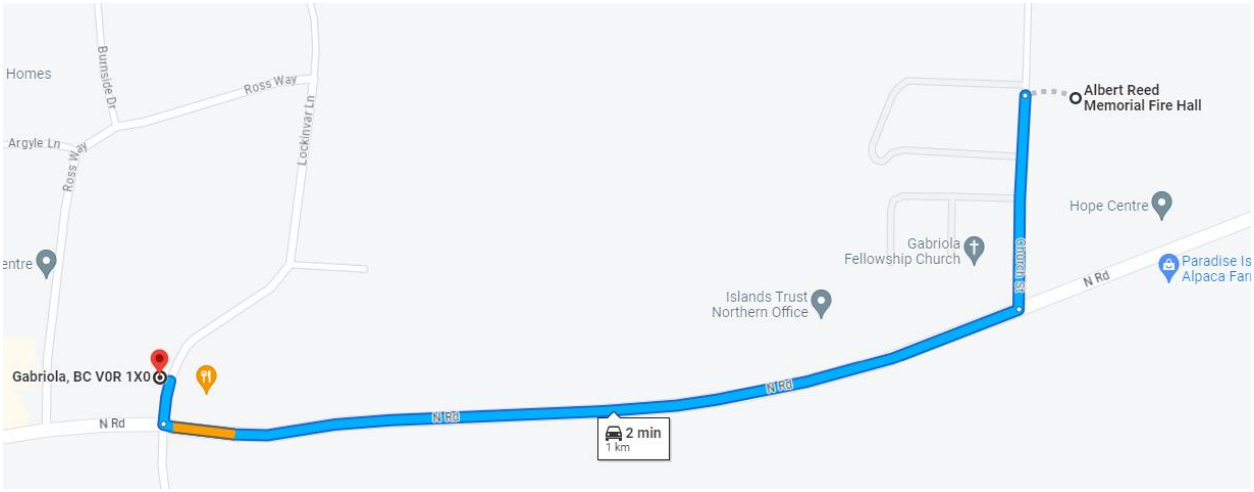
Date _____

9.3.5 Facility Photos

XXXX

Annex 10.4 Maps and Diagrams

9.4.1 Fire Service Route to Site



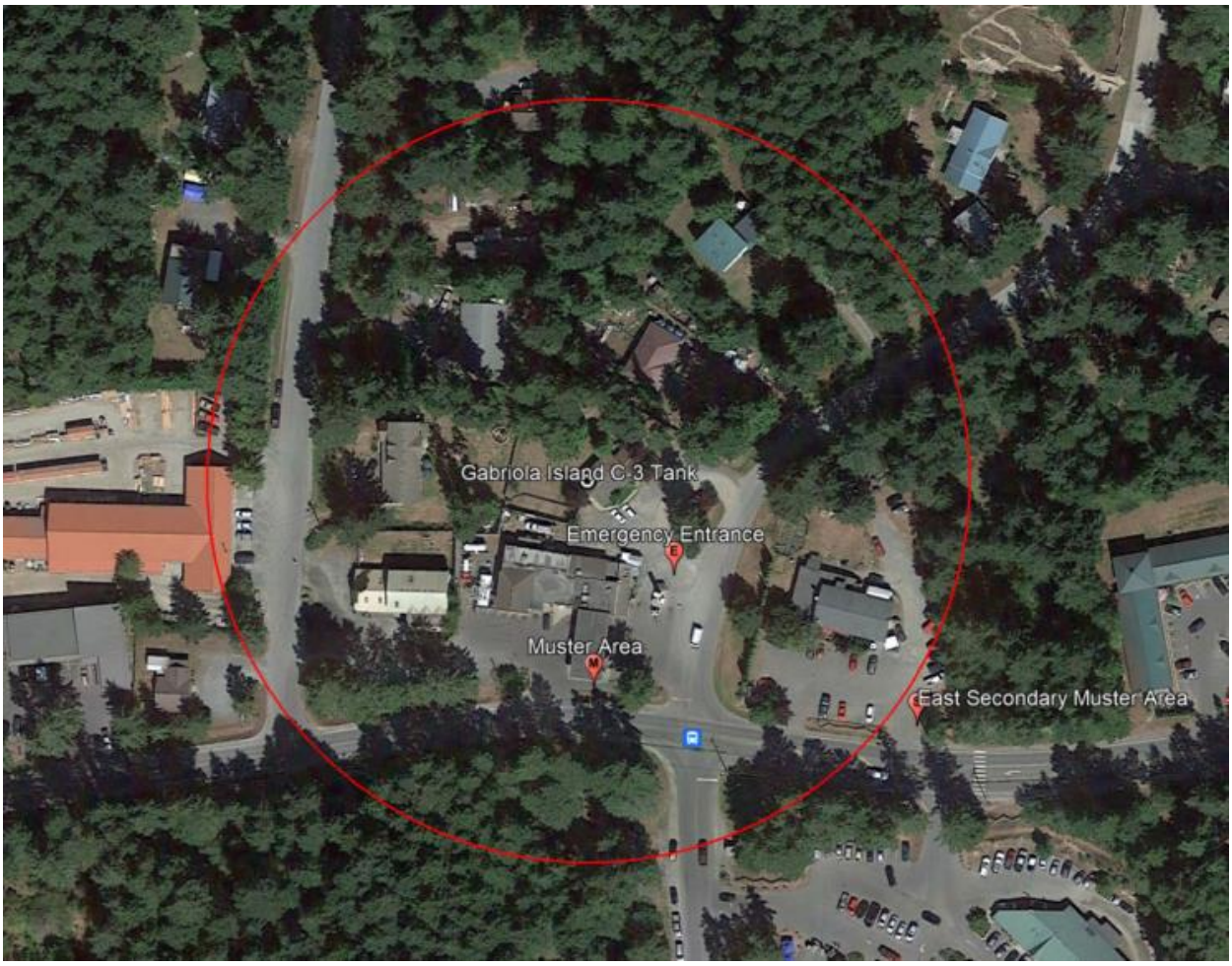
9.4.2 Emergency 1st Responder Entrance to Facility

- ***GPS - DD (decimal degrees): 49.17439, -123.84605***
- ***Road Address: 793 Lockinvar Lane Gabriola Island BC***

9.4.3.1 Muster Area

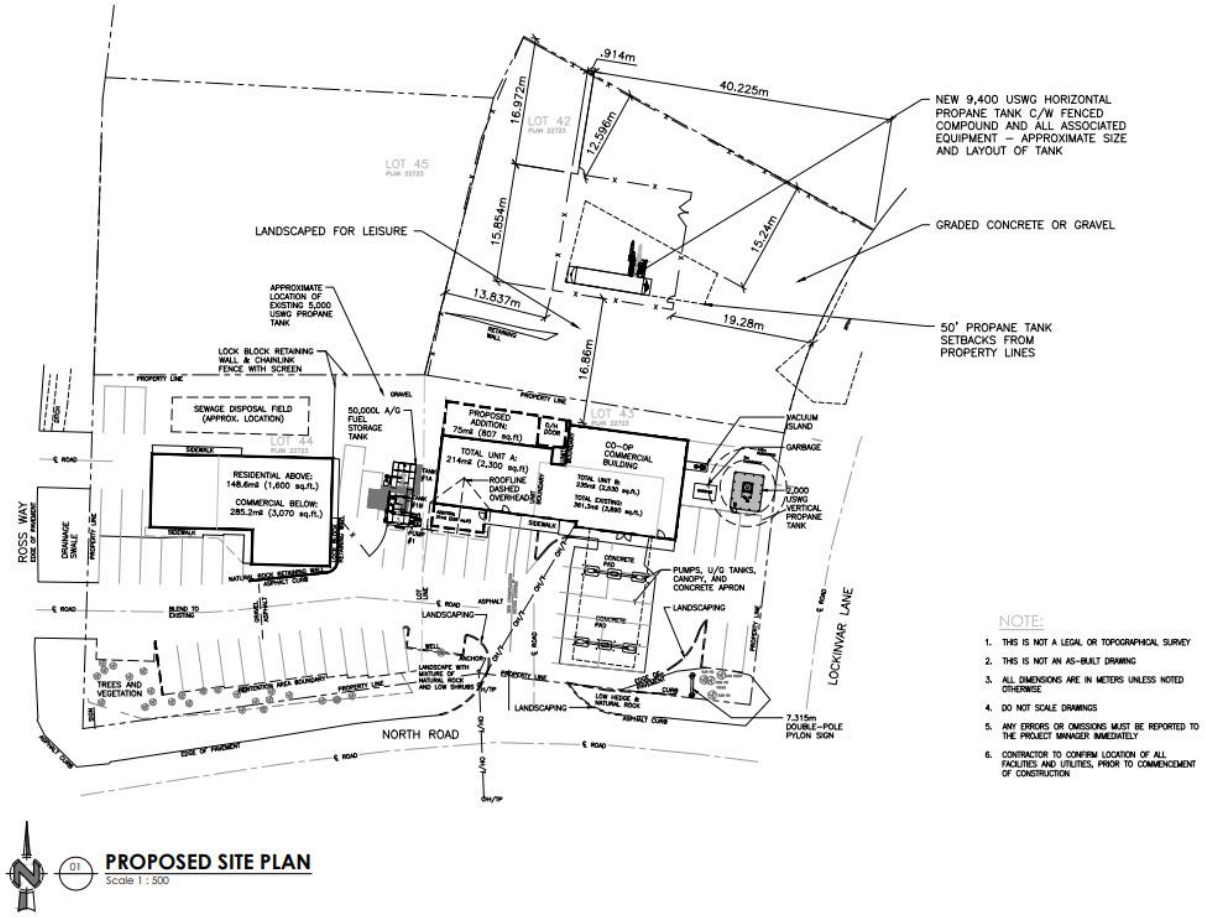
Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

9.4.3.2 Secondary Muster Area

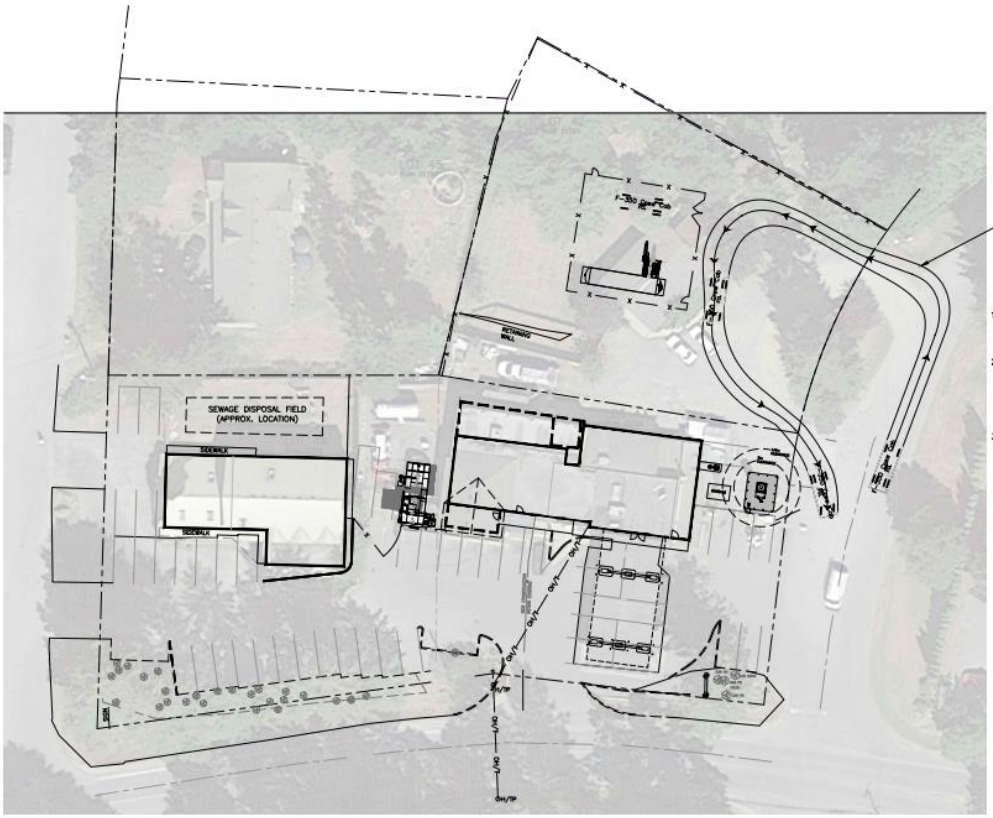


Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay go upwind or side-on to the wind out to a safe distance.

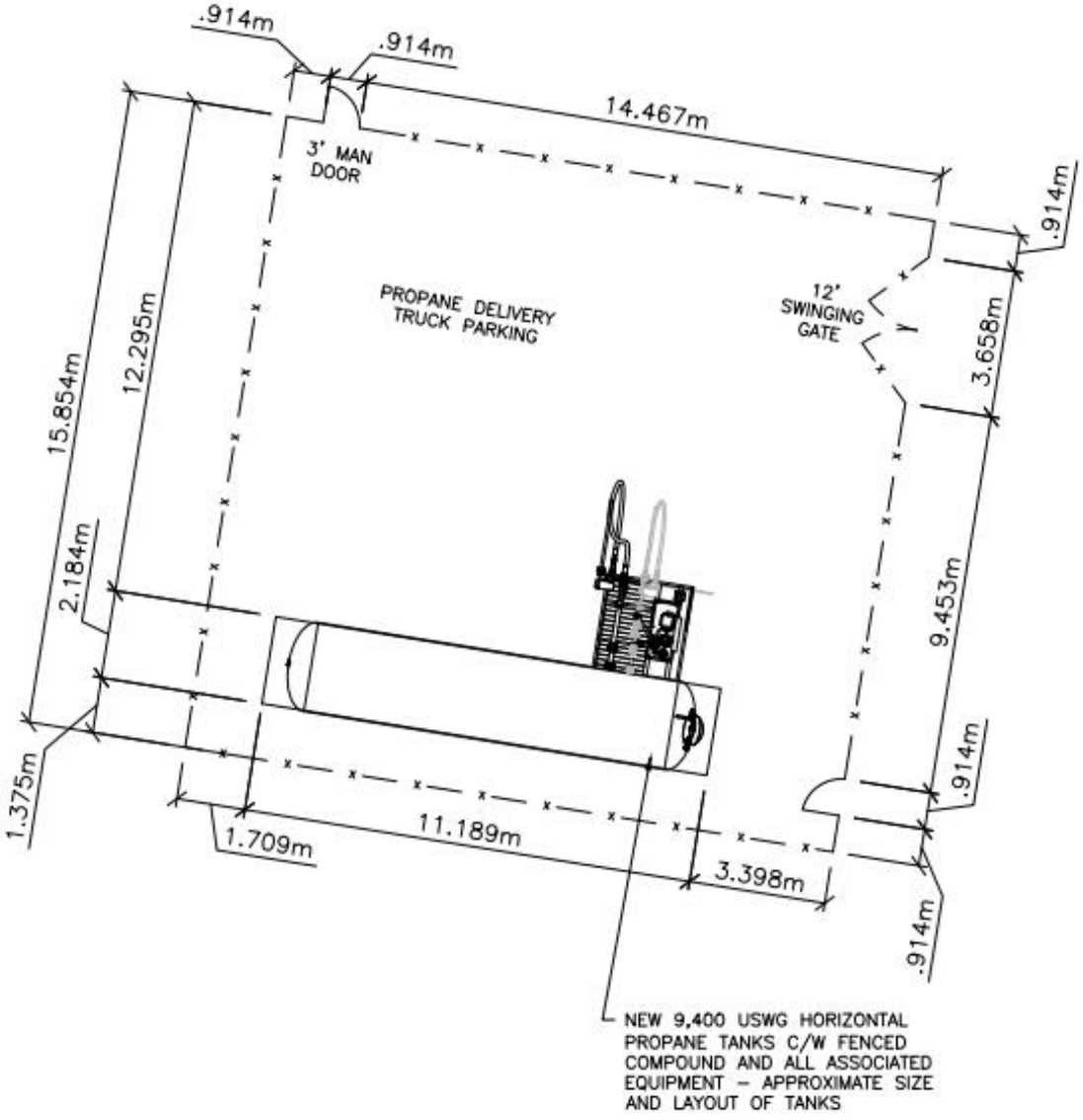
9.4.4 Facility Maps



01 **PROPOSED SITE PLAN**
Scale 1 : 500



01 **PROPANE VEHICLE PATH**
Scale 1 : 500

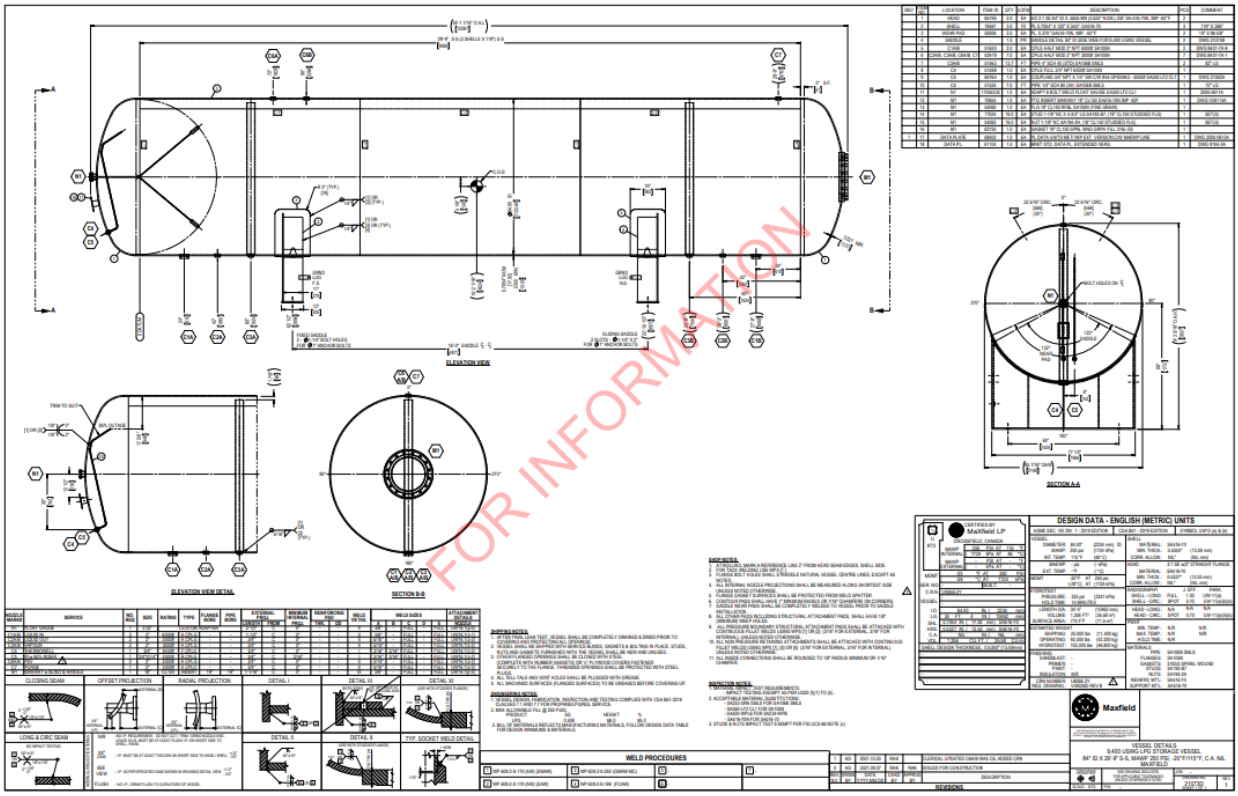


01 **PROPANE DETAIL PLAN**

Scale 1 : 150

9.4.5 Plant Schematics

9.4.5.1 Facility Specific Schematics



9.4.6 P&ID Drawings

9.4.6.1 Facility Specific Drawings

XXXX.

9.4.7 Tank/s Data Plate/s

XXXX

END

STAFF REPORT

File No.: PLRZ20240091 (Mid Island Co-op)

DATE OF MEETING:	January 22, 2026
TO:	Gabriola Island Local Trust Committee
FROM:	Ian Cox, Planner 2 Northern Team
SUBJECT:	OCP/LUB Rezoning application – fuel storage use Applicant: Mid Island Co-operative Services Ltd. (Bruce Buckingham, Agent) Location: Lockinvar Lane, Gabriola Island

RECOMMENDATION

1. **That the Gabriola Island Local Trust Committee request staff schedule a Public Hearing for Bylaws No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No., 2024" and Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No., 2024", on February 19, 2026 during its regular business meeting.**

2. **That the Gabriola Island Local Trust Committee request staff schedule a stand-alone, electronic Community Information Meeting prior to the Public Hearing and request attendance from the applicant's expert in fire and risk.**

REPORT SUMMARY

This is the third report to the Gabriola Island Local Trust Committee (LTC) related to bylaw amendment application PLRZ20240091 (Mid Island Co-operative Services Ltd.). It recommends that the LTC proceed with a Community Information Meeting and Public Hearing as next steps for the rezoning of 793 Lockinvar Lane to allow propane storage as a principal use on the lot. The report summarizes First Nations, Agency, and Gabriola Advisory Planning Commission (APC) comments received in response to the bylaw referrals as sent in September and October 2025 per the LTC resolutions as passed and listed below.

BACKGROUND

At its meeting on September 4th, 2025, the LTC passed the following resolutions:

GB-2025-070

that Proposed Bylaws No. 321 and 322 be referred for comment to the following First Nations for a 90-day period, Local Governments and agencies for a 60-day period:

a. First Nations: Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, Semiahmoo First Nation, Snuneymuxw First Nation, Stz'uminus First Nation, Ts'uubaa-asatx First Nation.
b. Local Governments and Agencies: Regional District of Nanaimo, Island Health Authority, Ministry of Transport and Transit, Ministry of Water, Land and Resource

Stewardship, School District 68, Gabriola Volunteer Fire Department, Gabriola Advisory Planning Commission.

CARRIED

GB-2025-071

that the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 321 cited as "Gabriola Official Community Plan Bylaw No. 166, 1997, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.

CARRIED

GB-2025-072

that the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw No. 177, 1999, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.

CARRIED

The 60-day and 90-day Agency and First Nations referral periods have now concluded, respectively, and staff recommend proceeding with scheduling a CIM and Public Hearing as the next steps to complete the public consultation portion of the bylaw amendment process.

ANALYSIS

OCP and LUB Amendments

No changes to the proposed bylaws have been requested by the LTC or recommended by staff since second readings of both were given on September 4, 2025. As drafted, the bylaws will redesignate the property as Village Commercial in the OCP, include it within the Village Centre Development Permit Area 7 (DPA7), and rezone the property from Institutional 2 (IN2) to Village Commercial 4 (VC4) in the LUB (**Attachment 1**). Rationale and implications for this are included in the staff reports relating to the application dated April 17, 2025 and September 4, 2025. Once a Public Hearing is conducted, any potential changes the LTC wishes to make - if any - that are substantive as related to use or density, would require re-notification to the public and holding an additional Public Hearing for the bylaws as amended prior to Third Reading.

Advisory Planning Commission

The Gabriola Advisory Planning Commission (APC) met on November 19, 2025 to discuss the application per the above LTC resolution and provided the following recommendations contained in the (draft) meeting minutes found in this agenda package for the LTC regular business meeting, January 22, 2026:

GB-APC-2025-002
It was Moved and Seconded,

that the Gabriola Island Advisory Planning Commission recommends to the Local Trust Committee to consider the impact on the neighbourhood and the neighbours of the proponent; that they

consider the impact on future developments of the village core and how this change may constrain future use; and that the additional safety risks, specifically fire, be considered.

CARRIED

GB-APC-2025-003
It was Moved and Seconded,
that the Gabriola Island Advisory Planning Commission recommends to the Local Trust Committee that there is an additional referral of the application to the Gabriola Fire Protection and Improvement District.

CARRIED

GB-APC-2025-004
It was Moved and Seconded,
that the Gabriola Island Advisory Planning Commission recommends to the Local Trust Committee that they request that the proponent provide their expert in fire and risk at any community discussion that they schedule and hold.

CARRIED

GB-APC-2025-005
It was Moved and Seconded,

that the Gabriola Island Advisory Planning Commission additionally recommends that the Local Trust Committee consider the establishment of light industrial zoning to accommodate this type of land use.

CARRIED

The first APC recommendation is understood to be for the LTC's general consideration of the application and how the redesignation of the property could impact the village area and adjacent properties now and into the future. Staff consider the bylaws as drafted to be in accordance with OCP policies supporting the expansion of the village commercial area as described in previous reports.

Although a referral response has been received from the Gabriola Volunteer Fire Department Chief, the draft bylaws could be referred to the Gabriola Fire Improvement District Board as recommended by the APC. This has not been included in the staff recommendations but is an option for the LTC to consider. Any additional referrals would require a delay in scheduling the CIM and Public Hearing. The reasons for the APC recommendation are found in the minutes.

The third APC recommendation has been incorporated into staff Recommendation #2 found on page 1 of this report.

The final recommendation is also something which the LTC can consider. There is currently no light industrial property within the village core area. There is only one parcel on Gabriola that carries the LUB Industrial – Light (I) zone designation, which allows industry not requiring sanitary sewer for disposal of industrial waste, warehousing and storage, contractors' workshops, offices and storage areas, and hydro-electric power

generation. In order to consider an alternative to the Village Commercial designation for rezoning as drafted, staff would recommend additional analysis of the implications related to including light industrial uses in the village centre as the "I" zone currently permits, and/or drafting modifications for a site-specific light industrial zone which included fuel storage.

Community Information Meeting | Public Hearing

Staff recommend a CIM be scheduled prior to a Public Hearing for the proposed bylaws. This will allow interested community members to ask questions and seek clarification about the application in advance of expressing their views in the formal Public Hearing setting. Staff recommend the CIM take place as an electronic, stand-alone meeting on a separate day from the public hearing to avoid confusion between the two types of engagement opportunities. The electronic format would allow participation for those unable to attend an in-person meeting on the island, and potentially allow the applicant and technical/safety representative to attend more easily. Possible dates as of this report are February 2nd or 10th. If no separate date and time can be arranged, the LTC could choose to hold the CIM in person during its regular business meeting on February 19th prior to the Public Hearing.

Referral Responses

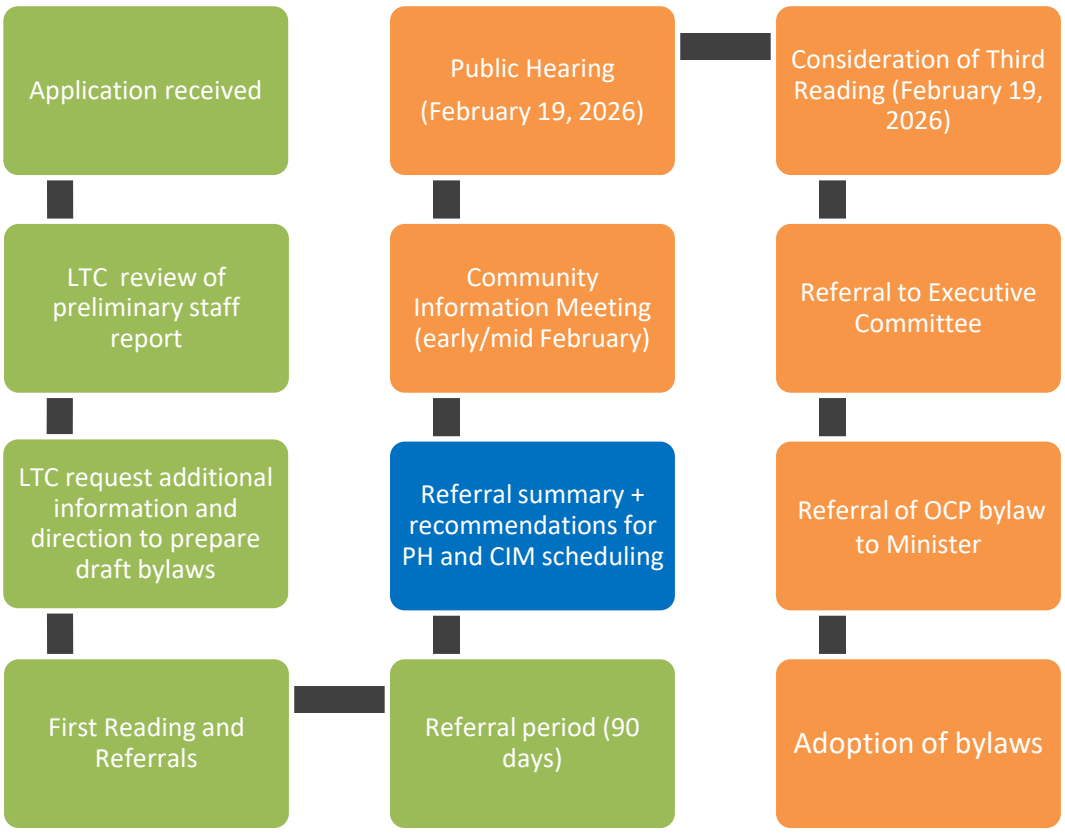
As stated, the 30-day and 90-day Agency and First Nations referral periods have concluded. The following is a summary of the total responses received and the complete documentation will be included in the Public Hearing binder. No additional staff comments are provided in the table given that without exception, all responses indicate either a deferral or no comment.

Agency | First Nation	Response Summary
Snuneymuxw First Nation	No changes to response since the previous early referral, which states: • If activities associated with the Zoning Amendment Application require ground disturbance, such as removal of buildings or site excavation, SFN must be engaged as an archaeological assessment may be required. • Additionally, if the applicant observes any cultural material within the subject area, all work must stop and SFN will be notified immediately. • Confirmation of zoning amendment approval is requested. As such, Snuneymuxw First Nation defers comment on the referral dated September 12, 2025. The Nation reserves the right to provide comment if changes to the proposal take place.
Cowichan Tribes	At this time Cowichan Tribes defers to Snuneymuxw First Nation.
Ts'uubaa-asatx Nation	General deferral to the First Nation(s) whose traditional territory fronts this area due to being outside Ts'uubaa-asatx Nation's core title area. However, should Ts'uubaa-asatx Nation identify greater interests in the future, the

	Nation retains the right to revise this assessment. At this time, deference to any Nation(s) whose title and governing authorities are directly affected.
School District 68	No comment
Island Health	No objection to rezoning. Highlights that if water or septic systems are needed in connection to the uses, the pertinent Drinking Water Protection Act and Sewerage System Regulation apply.
Gabriola Volunteer Fire Department (Fire Chief)	The proposed zoning changes, road access, and water supply all appear appropriate for both locations. The area is protected within the commercial zone under GVFD's Fire Underwriters Survey. Based on this, the locations seem suitable for rezoning within their designated fire protection area.

Timeline

The current stage in the application process is represented in blue in the timeline diagram below.



Rationale for Recommendation

The CIM and Public Hearing meetings are recommended to be scheduled on separate days to provide ample opportunity for public input on the proposed bylaws and to reduce confusion as to the purpose of each. The LTC is not obligated to conduct a CIM. However, the application is a major bylaw amendment involving

changes to both the OCP and LUB, and further, in light of the APC recommendations requesting further information regarding safety implications for adjacent properties and the surrounding area generally, staff recommends this consultation component be included. At minimum, the LTC must hold the statutory Public Hearing for OCP amendments not directly related to housing and prior to consideration of third reading.

ALTERNATIVES

The LTC may consider the following alternatives to the staff recommendation:

1. **Proceed with an alternative Public Hearing/Community Information Meeting schedule**

   The LTC may proceed with the application and choose a different date for the Public Hearing and/or Community Information Meeting based on Trustee and staff availability or other pertinent reasons. A specific date should be identified in the LTC resolution at least for the Public Hearing if different from that included in the recommended Resolution #1.

2. **Request additional information**

   The LTC may request further information from the applicant before proceeding further with the application. Recommended wording is as follows:

   That the Gabriola Island Local Trust Committee request that the applicant provide information in the form of [insert information request] in support of application PLRZ20240091 before considering the application further.

3. **Proceed No Further**

   The LTC may proceed no further with the application. If this option is chosen, a portion of the application fee will be returned according to the Gabriola Fees Bylaw No. 311 for an application where no public hearing has yet been held. Recommended wording for the resolution is as follows:

   That the Gabriola Island Local Trust Committee proceed no further with bylaw amendment application PLRZ20240091 for the following reasons [provide reasons].

NEXT STEPS

Staff will schedule a CIM and the Public Hearing as recommended on page 1 of this report if the LTC elects to pass the recommended resolutions, or on an alternately specified date(s).

Submitted By:	Ian Cox, Planner 2	January 14, 2026
Concurrence:	Renee Jamurat, RPP MCIP, Regional Planning Manager	January 14, 2026

ATTACHMENTS

1. Proposed Bylaws 321 and 322

ATTACHMENT 1
PLRZ20240091
Staff Report 2026-01-22

PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321

A BYLAW TO AMEND GABRIOLA ISLAND OFFICIAL COMMUNITY PLAN, 1997

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

   This bylaw may be cited for all purposes as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025".

2. Gabriola Island Local Trust Committee Bylaw No. 166, cited as "Gabriola Island Official Community Plan (Gabriola) Bylaw No. 166, 1997", is amended as per Schedule "1" and Schedule "2", attached to and forming part of this bylaw

READ A FIRST TIME THIS _____ DAY OF _____ , 2025

READ A SECOND TIME THIS _____ DAY OF _____ , 202x

PUBLIC HEARING HELD THIS _____ DAY OF _____ , 202x

READ A THIRD TIME THIS _____ DAY OF _____ , 202x

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS

_____ DAY OF _____ , 202x

APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS AND HOUSING THIS

_____ DAY OF _____ , 202x

ADOPTED THIS _____ DAY OF _____ , 202x

_____ _____

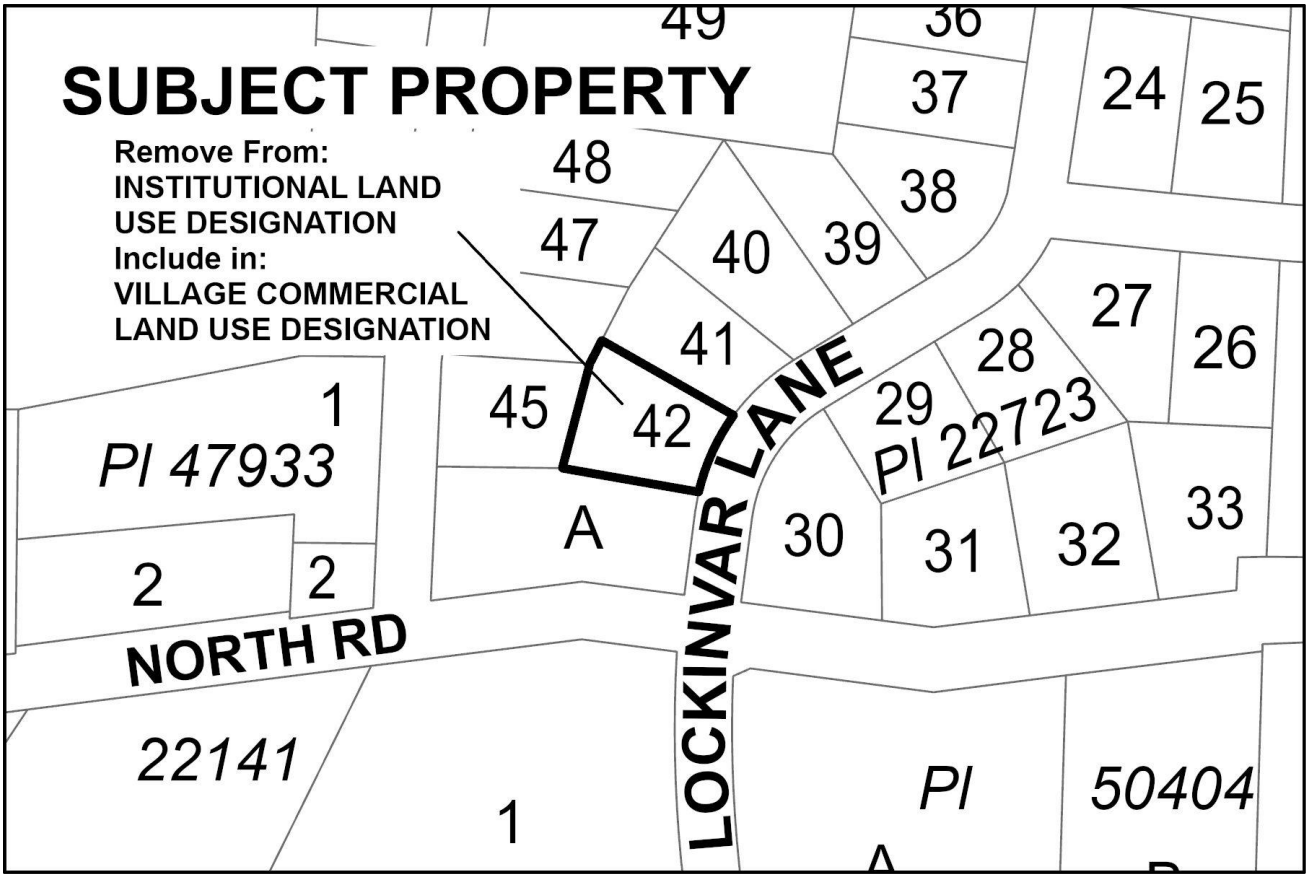
Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "1"

1. **Schedule "B"** of Gabriola Island Official Community Plan (Gabriola) Bylaw, 1997 is amended as follows:

   1.1. **Schedule "B" – Land Use Designations – North Sheet**, is amended by changing the land use designation on the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional" to "Commercial (Village)" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" as are required to effect this change.

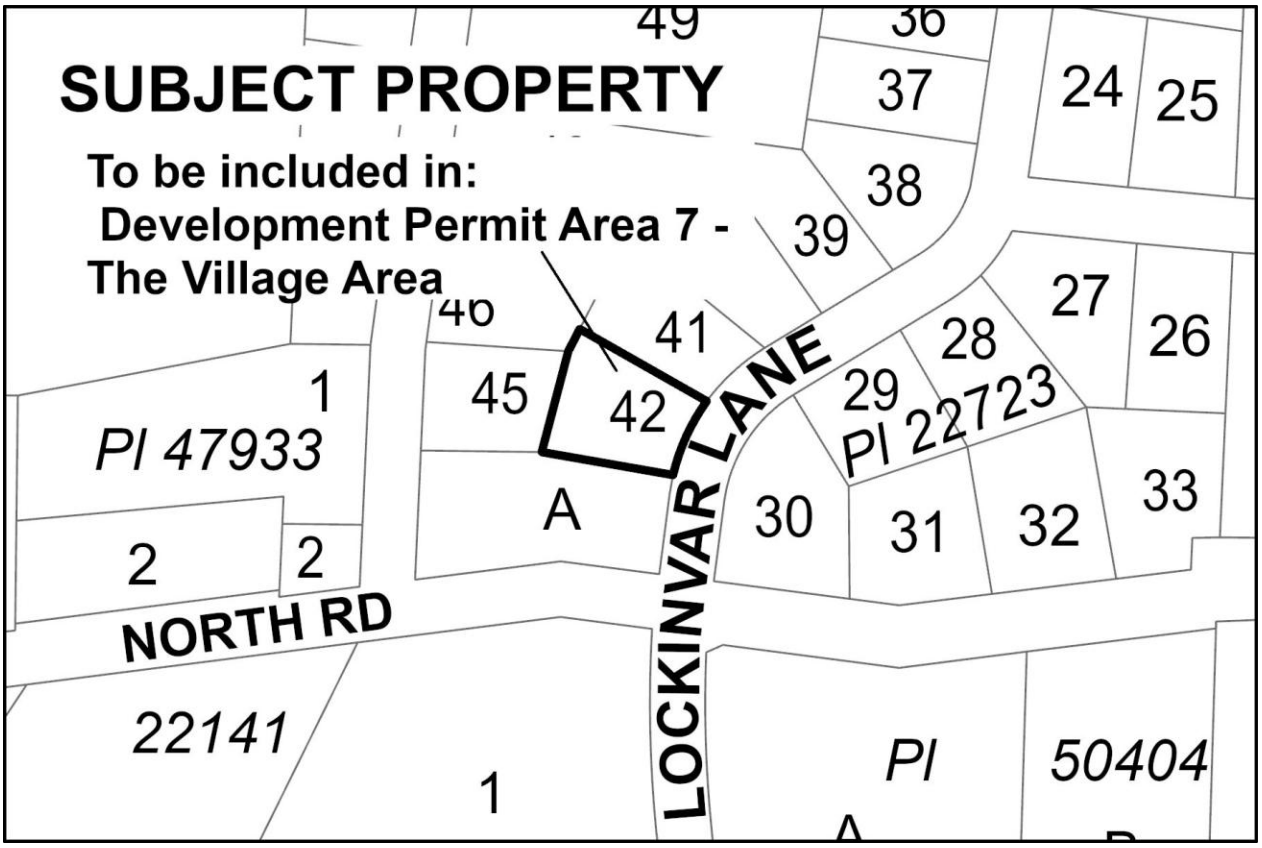
Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 321
Schedule "2"

1. **Schedule "D" – Development Permit Areas - OCP B North Sheet**, is amended by including the lands described as LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the Schedule D map for DP 7 - The Village Area, as shown on Plan No. 2 attached to and forming part of this bylaw, and by making such alterations to Schedule "D" of Bylaw No. 166 as are required to effect this change.

Plan No. 2



PROPOSED

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

A BYLAW TO AMEND GABRIOLA ISLAND LAND USE BYLAW, 1999

The Gabriola Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Gabriola Island Local Trust Area under the *Islands Trust Act,* enacts as follows:

1. Citation

   This bylaw may be cited for all purposes as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025".

2. Gabriola Island Local Trust Committee Bylaw No. 177, cited as "Gabriola Island Land Use Bylaw, 1999" is amended as per Schedule "1" attached to and forming part of this bylaw.

READ A FIRST TIME THIS _____ DAY OF _____ , 2025

READ A SECOND TIME THIS _____ DAY OF _____ , 202x

PUBLIC HEARING HELD THIS _____ DAY OF _____ , 202x

READ A THIRD TIME THIS _____ DAY OF _____ , 202x

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS

_____ DAY OF _____ , 202x

ADOPTED THIS _____ DAY OF _____ , 202x

_____ _____

Chair **Secretary**

GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Schedule "1"

1. **Schedule "A"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   1.1 **Part B GENERAL REGULATIONS**, Section B.4 **SIGNS**, Subsection **B.4.1 Number and Total Sign Area**, Article **B.4.1.1**, Table 1 ***Sign* Regulations,** Column I is amended by adding "VC4," after "VC3, and before DC1".

   1.2 **Part C ESTABLISHMENT OF *ZONES***, Section C.1 **DIVISION INTO *ZONES***, Subsection **C.1.1 Land Based Zones**, insert new zone "Village Commercial 4 – Propane Storage" after "Village Commercial 3" and before "DC1 District Commercial 1".

   1.3 **Part D *ZONES***, Section D.3 **COMMERCIAL AND INDUSTRIAL *ZONES***, insert new Subsection **D.3.4 Village Commercial 4 (VC4)** after Subsection **D.3.3 Village Commercial 3** as shown in **Appendix 1** attached to and forming part of this bylaw; and renumber all subsequent subsections chronologically.

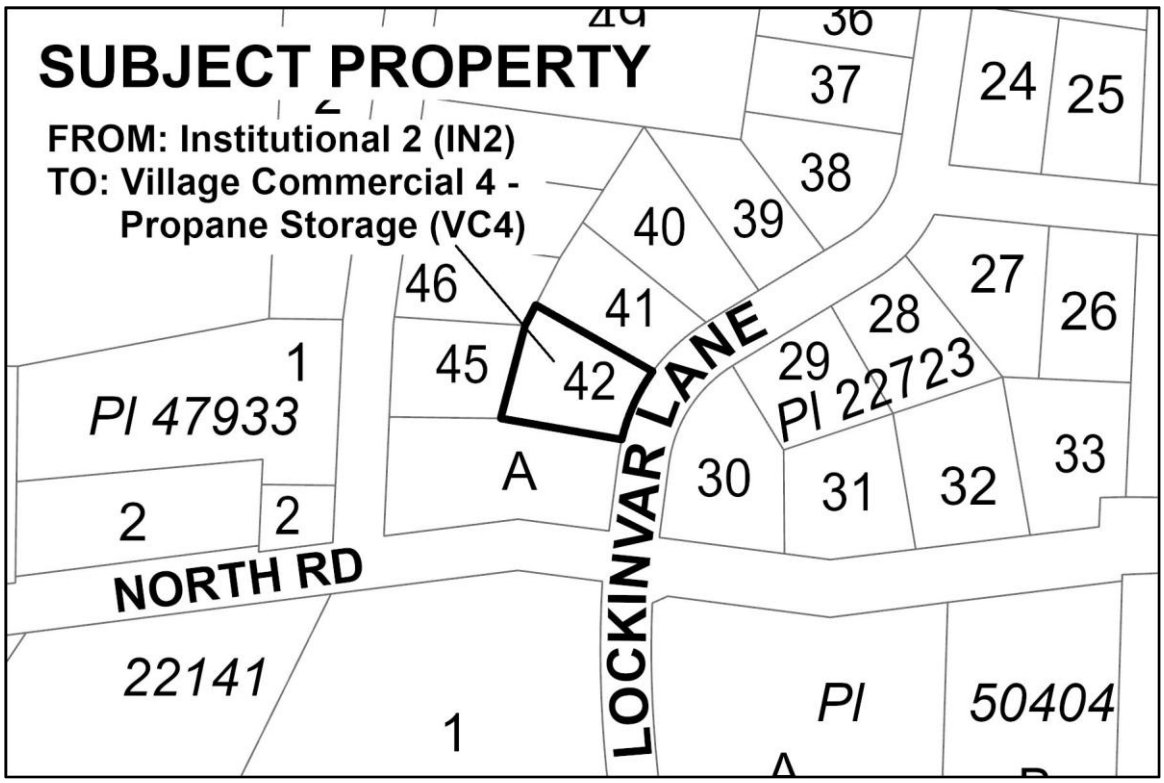
   1.4 **Part G,** Section G.1 **DEFINITIONS**, is amended by adding the following definition:

   "propane storage — the use of land, buildings, or structures for the bulk storage, containment, or handling of propane gas, whether in liquid or gaseous form, in above-ground or underground tanks, cylinders, or containers. This includes facilities for the distribution or sale of propane to the public or commercial entities. All propane storage must comply with applicable federal and provincial legislation and regulations, including but not limited to safety, environmental, and transportation standards."

2. **Schedule "B"** of Gabriola Island Land Use Bylaw, 1999 is amended as follows:

   2.1. Schedule "B" – North Sheet, is amended by changing the zoning classification of LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) from "Institutional 2" to "Village Commercial 4 – Propane Storage" as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" of Bylaw No. 177 as are required to effect this change.

Plan No. 1



GABRIOLA ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 322

Appendix 1

D.3.4 Village Commercial 4 – Propane Storage (VC4)

D.3.4.1 Permitted Uses

The uses permitted in Article B.1.1.1, plus the following uses and no others are permitted in the Village Institutional 2 (IN2) *zone*:

a. Permitted *Principal* Uses

i *public schools*
ii *emergency services*
iii library
iv post office
v government offices
vi highway work yards
vii *urgent care medical clinic*
viii child care centre and pre-*school*
ix *propane storage*

b. Permitted *Accessory* **Uses**

i *limited public market,* subject to Subsection B.6.2

D.3.4.2 *Buildings* and *Structures*

The *buildings* and *structures* permitted in Article B.1.1.2, plus the following *buildings* and *structures* and no others are permitted in the Village Commercial 4 (VC4) *zone*:

a. Permitted *Buildings* and *Structures*

i *Buildings* and *structures* for the permitted uses set out in this zone, including tanks, containment systems, fencing, signage, and other infrastructure necessary for propane storage and distribution.

D.3.4.3 Regulations

The general regulations in Part B, plus the following regulations apply in the Village Commercial 4 (VC4) *zone*:

a. *Buildings* and *Structures* Height Limitations

i The maximum *height* of *buildings* and *structures* is 9.0 metres (29.5 feet).

Ii Propane tanks and associated safety infrastructure are exempt from maximum height limits where required by applicable safety regulations.

b. *Buildings* and *Structures* Siting Requirements

i The minimum setback for *buildings* or *structures* except a sign, fence, or pump/utility house is 6.0 metres (19.7 feet) from any lot line.

c. *Lot Coverage* Limitations

i The maximum combined *lot coverage* by *buildings* and *structures* is 25 percent of the *lot* area.

d. *Lot* Area Requirements for Subdivision

i The minimum average lot area is 1.0 hectare (2.47 acres).

ii The minimum lot area is 0.5 hectares (1.24 acres).

D.3.4.4 Conditions of Use for Propane Storage Facilities

i Propane storage operations must comply with all applicable federal and provincial regulations.

ii The operator must hold all necessary permits and certifications prior to installation and operation.

iii All outdoor lighting associated with propane storage must be fully shielded and directed downward to minimize light trespass.

iv Emergency response and spill containment plans must be prepared and maintained as per provincial requirements and provided to the Local Trust Committee upon request.

iv Where propane tanks or structures are visible from adjacent properties or public roads, screening through fencing, landscaping, or a combination shall be provided to reduce visual impact.

Gabriola Island Local Trust Committee
Minutes of Regular Meeting

Date: April 17, 2025
Location: Gabriola Arts & Heritage Centre
476 South Road, Gabriola Island, BC

Members Present: Laura Patrick, Chair
Tobi Elliott, Trustee
Susan Yates, Trustee

Staff Present: Renée Jamurat, Regional Planning Manager (electronic)
Stephen Baugh, Island Planner
Marlis McCargar, Island Planner
Narissa Chadwick, Island Planner
Warren Dingman, Bylaw Compliance & Enforcement Manager
Lisa Millard, Meeting Administrator/Recorder

Others Present: There were approximately 8 members of the public in attendance.

1. CALL TO ORDER

"Please note, the order of agenda items may be modified during the meeting. Times are provided for convenience only and are subject to change."

Chair Patrick called the meeting to order at 10:30 am.

2. TERRITORIAL ACKNOWLEDGEMENT

Chair Patrick acknowledged that the meeting was held on the territory of the Snuneymuxw and Coast Salish First Nations.

3. APPROVAL OF AGENDA

By general consent, the agenda was approved as presented.

4. DELEGATIONS

4.1 Gabriola Health Care Foundation regarding their Strategic Plan 2024 – 2029

Jeff Malmgren, President of the Gabriola Health Care Foundation, provided a presentation and highlighted the following:

- The community can not rely wholly on the external healthcare system to meet local needs due to pressure on the system, lack of understanding of rural health needs, and a medical approach that treats people when they get sick instead of considering overall health and well-being;
- The Foundation can advocate for overall wellness and provide support but can not be the holder of the system which needs to be built collectively;
- The Foundation will be undertaking an engagement process on their new strategic plan to provide the community an opportunity to understand what a well-designed system of collectively held health and well-being can look like;

- They ask the Local Trust Committee consider health and well-being in their mandate and embed the collective responsibility for such in the Official Community Plan; and
- There is an opportunity to partner with other organizations that have a strong desire to take responsibility.

The Trustees agreed, if there is a collective commitment for a system of health and wellbeing, the responsibility for delivering on it would be held by many agencies and noted there is a place within the Official Community Plan preamble to include statements about cooperating and collaborating with other agencies.

5. REPORTS

5.1 Trustee Reports

Trustee Elliott reported the following:

- Attended two special meetings to hear results of the Official Community Plan focus group discussions;
- Held two Trustee-facilitated open houses in March for discussion on the Official Community plan;
- The annual budget allocated $50,000 for Reconciliation activities and the Islands Trust Senior Indigenous Relations Advisor is booking sessions for cultural safety training and Indigenous engagement sessions for Trustees and staff;
- Attended the Lasqueti Island screening of the film Dust n' Bones which was attended by Elders Kim Recalma-Clutesi and Bill White;
- Attended Nanaimo Awards in Culture to celebrate Snuneymuxw First Nation Tsatassaya White receiving the Honour in Culture award;
- Ongoing participation in Culturally Committed group;
- Attended Rural Economic Partnership Forum and Southern Gulf Islands Forum;
- Attended Association of Vancouver Island Coastal Communities conference and presented the results of the tiny house on wheels technical group recommendations for enablement in the Trust Area; and
- Noted appreciation for Islands Trust staff and their dedication to the mandate and work of the Trust.

Trustee Yates reported the following:

- The Local Trust Committee held two special meetings to hear summaries of feedback provided by Official Community Plan focus groups and will be holding more open houses and facilitating other engagement activities;
- Attended Regional District Parks and Recreation Master Plan meeting and the work is in the final stages;
- Attended Trust Programs Committee meetings to work on the draft Trust Policy Statement; and
- Travelled to Salt Spring, Pender, Mayne and Galiano Islands in the past week and spoke with a Mayne Island Trustee regarding their flexible housing zoning.

5.2 Chair's Report

Chair Patrick reported the following:

- Thanked Trustee Elliott for her work on the tiny homes on wheels project;
- Trust Council approved the annual budget and details can be found on the Islands Trust website; and
- Attended a cross-border meeting with San Juan County elected officials and the parties are working on having a joint forum focussing on marine issues.

5.3 Electoral Area Director's Report - none

5.4 First Nations Reports - none

6. PUBLIC COMMENTS

Three members of the public spoke to a decommissioned RMCP patrol vessel relocating to Degnan Bay and the following comments were made:

- There are ongoing problems with derelict vessels in the bay;
- The boat has no means of propulsion and will be moored on concrete blocks which have been placed in an area containing eelgrass;
- The Vancouver Maritime Museum held ownership title on the vessel and a previous Museum Director told them the boat was given away based on a statement of public benefit and the new owner indicated they plan to repower the catamaran and make it available for marine contract work, chartering contracts, and spill response;
- The community does not envision commercial operations as being desirable in Degnan Bay and Islands Trust bylaws indicate the use is a contravention;
- The concrete blocks represent a harmful alteration and destruction of fish habitat and they will be pursuing this with the Department of Fisheries and Oceans; and
- Asked the Local Trust Committee to take an advocacy position and make a statement that the bay should not be used for commercial or industrial purposes.

7. MINUTES

7.1 Local Trust Committee Minutes dated February 20, 2025 – for adoption

By general consent, the Local Trust Committee meeting minutes of February 20, 2025 were adopted.

7.2 Section 26 Resolutions-Without-Meeting Report - none

7.3 Advisory Planning Commission Minutes dated February 12, 2025 - for receipt
Received for information.

7.4 Housing Advisory Planning Commission Minutes dated March 19, 2025 - for receipt
Received for information.

8. BUSINESS ARISING FROM MINUTES

8.1 Follow-up Action List dated April 9, 2025
Received for information.

9. APPLICATIONS AND REFERRALS

9.1 PL-RZ-2024-0091 (Mid-Island Co-op) - Staff Report

The Planner summarized the staff report and highlighted the following:

- The rezoning application seeks to amend the Gabriola Official Community Plan and Land Use Bylaw to permit propane storage as a use at 793 Lockinvar Lane;
- The subject property is adjacent to the Mid Island Co-op Gas Station and residential properties;
- The applicant is requesting that the existing permitted uses be maintained; and
- An environmental Emergency Plan specific to the proposed propane storage facility has been provided.

The applicant was in attendance and stated Tech Safety BC is the governing body that regulates storage tanks and the current tank no longer meets requirements based on its location. They stated if no approved storage location is in place by the end of the year the business will no longer be able to provide the essential service of propane delivery to Gabriola users.

Discussion ensued and Trustees had no questions for the Planner or applicant.

GB-2025-018
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to prepare draft amendments to the Gabriola Island Official Community Plan that will include Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) in the 'Village Commercial' land use designation and 'Village Centre' Development Permit Area No. 7.

CARRIED

GB-2025-019
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to draft amendments to the Gabriola Island Land Use Bylaw to rezone Lot 42, Section 20, Gabriola Island, Nanaimo District, Plan 22723 (793 Lockinvar Lane, Gabriola Island PID 002-623-463) to a site-specific Village Commercial zone which maintains the existing uses; expands principle commercial uses consistent with the bylaw amendment application; and regulates buildings and structures, height, siting requirements including setbacks, lot coverage, parking, and subdivision.

CARRIED

GB-2025-020
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to provide notification to Snuneymuxw First Nation of application PLRZ20240091 describing the scope of proposed changes to the Gabriola Official Community Plan and Land Use Bylaw.

CARRIED

9.2 PL-TUP-2024-0310 (McNally) - Staff Report

The Planner summarized the staff report and highlighted the following:

- The Local Trust Committee first approved a Temporary Use Permit for the operation of a commercial vacation rental in an accessory dwelling unit in 2022;
- The applicant has applied for a three-year renewal of the permit;
- There have been no formal concerns raised during the operation to date;
- The applicant confirmed the property is their full-time residence;
- The operation has complied with all relevant zoning and land use regulations.

The applicant was in attendance.

Trustees had no questions for the applicant or Planner and requested that the applicant update the information provided to guests about First Nations by directing them to the Snuneymuxw First Nation website.

GB-2025-021
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee approve issuance of PL-TUP-2024-0310, a renewal of GB-TUP-2022.2, for a period of three years.

CARRIED

9.3 PL-DP-2025-0069 (Rutgers) - Staff Report

The Planner summarized the staff reported and highlighted the following:

- The application seeks a development permit for the proposed removal of a single tree located within Development Permit Area 6 Escarpment Areas due to slope sensitivity;
- A Geotechnical Field Review identifies no negative impacts to the stability of the slope by removal of the tree;
- The application meets all of the guidelines for Development Permit Area 6; and
- Staff are recommending a broader review of guidelines for the Development Permit Area.

Discussion ensued and the following comments were noted:

- The Planner noted Development Permit Area mapping is out of date, model guidelines are in place, and there is opportunity to use those guidelines with existing mapping as part of the Official Community Plan review process; however, if new mapping is required, then, the project length of time will need to be considered;
- There are opportunities to bring the mapping component to the attention of the Regional Planning Committee; and
- There is a decision-making point within the Official Community Plan process regarding how each Development Permit Area is going to be managed.

The applicant confirmed many trees remain on the slope and noted previously, while doing tree removal on non-sloped area of the property, they had a tree on the slope topped. They had not been aware of the Development Permit Area requirements for the sloped area the tree topping resulted in a violation.

GB-2025-022
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee approve issuance of Development Permit PL-DP-2025-0069.

CARRIED

10. LOCAL TRUST COMMITTEE PROJECTS

10.1 Major Project: Gabriola Island Comprehensive Official Community Plan and Land Use Planning Review - Options for Community Engagement Next Steps - Staff Report

The Planner summarized the staff report and highlighted the following:

- The Project Charter has been revised to reflect updated timelines based on the implementation of the next steps of community engagement;
- The fall/winter engagement process extended into the spring and included social media and website posts, a public survey, and focus group meetings;
- Input from the focus groups and the public pointed to interest in an extended period of time to review draft policy language;
- The intention is to review all feedback and summarize it for next steps of engagement;
- Goals and objectives within each topic area will be revised and brought back to the Local Trust Committee for input and direction;
- The upcoming Freshwater Footprint webinars and information meetings are parallel to the Official Community Plan review work.

Discussion ensued and the following comments were recorded:

- The Community Information Profile is a compilation of discussion guides and a companion to the Official Community Plan and it can be updated independent of the Official Community Plan;
- Community members have indicated they would like to see proposed language to facilitate discussion; however, additional focus group meetings for general feedback are not necessary;
- Pre-draft bylaw language identifying goals, objectives, and policies can be developed for community input;
- There are opposing views about housing and growth and Trustees would like a facilitated meeting to discuss issues of growth management and housing and bring community members on each end of the spectrum together in conversation;
- The community conversation can explore what responsible sustainable growth management strategies look like on particular lots with owners that are interested in developing housing in an environmental co-ownership model as well as other uses that might be allowed in different types of residential zones;
- It is necessary to have conversation to hear community concerns and address them; and
- Staff can explore resources available for engagement including the addition of a focused meeting on housing options and growth management.

GB-2025-023
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee direct staff to schedule a Community Information Meeting to share the outcomes of the Gabriola Freshwater Footprint project.

CARRIED

GB-2025-024
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee direct staff to proceed with "Option 1: Community Review Existing Draft Policies" as the next step in the community engagement process for the Official Community Plan (OCP) with the addition of a community meeting on Housing Options and Growth Management.

CARRIED

GB-2025-025
It was MOVED and SECONDED,
that the Gabriola Local Trust Committee request staff to develop options for a community meeting focused on Housing Options and Growth Management as part of summer engagement.

CARRIED

GB-2025-026
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee endorse the revised Project Charter for the Gabriola Island Official Community Plan (OCP) and Land Use Bylaw (LUB) Review Project (Phase 2).

CARRIED

The meeting was recessed for a break at 12:53 p.m. and reconvened at 1:30 p.m.

11. CORRESPONDENCE

(Correspondence received concerning current applications or projects is posted to the LTC webpage)

11.1 Letter dated February 10, 2025 from Elizabeth May, Member of Parliament regarding Southern Gulf Islands Forum

Received for information.

11.2 Email dated March 10, 2025 from K Palmer Gordon & M Bombois regarding Request to Review Non-Enforcement Policy

Consideration of the email will be undertaken during discussion at Item 13.2.

11.3 Email dated March 17, 2025 from A Hodson Deggan regarding Water Budget Study Gabriola

It was clarified that the information contained within the Water Budget Study would be considered as part of the Official Community Plan review.

11.4 Email dated April 2, 2025 from B Nixon regarding Proposed Commercial/Industrial Use of Degnen Bay

11.5 Email dated April 1, 2025 from G. Coford regarding Transfer of Catamaran PV Nadon to Degnen Bay, Gabriola

Discussion ensued regarding correspondence Items 11.4 and 11.5 and the Bylaw Compliance and Enforcement Manager made the following comments:

- The Vancouver Maritime Museum has provided Bylaw Compliance and Enforcement contact information to the new owner of the vessel;
- The vessel was de-registered by the museum and the new owner has not registered the vessel yet;
- Once an owner is identified, they can address potential bylaw issues;
- The use of blocks to anchor the vessel is permitted if the vessel owner is a resident of Gabriola;
- Commercial and industrial uses would not be permitted; and
- Residents should contact the Department of Fisheries and Oceans directly if there are concerns about eelgrass or fish habitat.

12. NEW BUSINESS - none

13. STAFF REPORTS

13.1 Gabriola Housing Advisory Planning Commission Terms Expiring April 25, 2025 - Staff Report

GB-2025-027
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff to send letters to members of the Housing Advisory Planning Commission whose terms will expire on May 11, 2025, thanking them for their participation and inviting their expressions of interest for reappointment for another two-year term; and advertise for public expressions of interest for new members.

CARRIED

13.2 Bylaw Compliance & Enforcement Policy Review - Staff Report

The Bylaw Compliance and Enforcement Manager summarized the staff report and noted the following:

- The report speaks to current compliance and enforcement policies, standing resolutions, and specific policies regarding non compliant dwellings;
- There are 23 total files for non-compliant dwellings which include 39 dwellings on 24 properties;
- Two files have been opened since the policy to not enforce on non-compliant dwellings was put in place;
- Several of the properties have multiple non-compliant dwellings which are typically travel trailers; and
- The Local Trust Committee can rescind standing resolutions that have been replaced with a policy document.

Discussion ensued and the following comments were recorded:

- Trustees can request a report regarding non-compliant dwellings and then determine if they wish to continue to defer enforcement on a case-by-case basis or direct that compliance and enforcement be commenced;

- A Trustee noted, if a property owner is planning on building a home, there should not be a need for more than one non-compliant dwelling;
- It is difficult to determine if there is true housing need or if someone is living in a travel trailer because they don't want to get a permit to build a home;
- The lack of housing and economic reality creates the need for housing;
- Residents are concerned that there are situations where someone has purchased property with no intention to build a compliant dwelling;
- One can prove intent to build a house by applying for a building permit;
- In a neighbourhood where a concern was identified, two of the property owners have a building permit, one has applied for a permit, and another is questionable;
- Enforcement continues to be deferred because the conditions remain that result in people struggling to find legitimate housing due to minimal housing stock; and
- If there is a demonstrated issue of neighbourhood impacts, illegal activity, or other legitimate concerns, the Local Trust Committee would look at these situations on a case-by-case basis.

GB-2025-028
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee rescind the following three Standing Resolutions: GB-LTC-2022-089 – Standing Resolution on Enforcement of Non-Compliant Dwellings; GB-LTC-2020-053 – Standing Resolution authorizing proactive enforcement on unlawful short-term vacation rentals; and GBLTC-2019-038 – Standing Resolution deferring enforcement for limited public markets operating indoors.

CARRIED

A Trustee noted for the record that the above resolution removes duplicate standing resolutions and there is still policy in place regarding non-enforcement on non-compliant dwellings.

GB-2025-029
It was MOVED and SECONDED,
that the Gabriola Island Local Trust Committee request staff report back for an in-camera discussion with a report on all bylaw enforcement files that have two or more non-compliant dwellings or travel trailers on a property.

CARRIED

GB-2025-030
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee adopt the following amendment to the Gabriola Island Bylaw Compliance & Enforcement Policy with the following: Replace the current section 4.2 with the following: Enforcement on non-compliant dwellings will be deferred unless there are contraventions in development permit areas; or other environmentally sensitive areas; or if there are concerns about health and safety; or the lack of approved sewage disposal systems; or if it is determined that there is contamination of wells or other drinking sources;

or if there is more than one non-compliant dwelling or travel trailer used as residences on a property.

DEFEATED

Discussion continued regarding the Local Trust Committee's ability to consider issues on a case-by-case basis rather than providing broad scale direction. The Bylaw Compliance and Enforcement Manager qualified that the Local Trust Committee establishes the policies on how Bylaw Officers undertake enforcement and compliance and these policies are not bylaws.

GB-2025-031
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff to prepare amendments to the "Gabriola Island Local Trust Committee Bylaw Enforcement Notification Bylaw No. 263, 2011" for consideration.

CARRIED

13.3 Trust Conservancy Highlights of January 21, 2025 Board Meeting
Received for information.

13.4 Applications Report dated April 10, 2025
Received for information.

13.5 Trustee and Local Expense Report dated February, 2025
Received for information.

13.6 Adopted Policies and Standing Resolutions
Received for information.

13.7 First Nations Relationship Building Update – none

13.8 Climate Change Action Update - none

13.9 Local Trust Committee Webpage
No updates required at this time.

14. WORK PROGRAM

14.1 Active Projects Report dated April 9, 2025
Received for information.

14.2 Future Projects Report dated April 9, 2025
Received for information.

15. UPCOMING MEETINGS

15.1 Next Regular Meeting Scheduled for Thursday, June 26, 2025 at 10:30 am at the Gabriola Arts and Heritage Centre

16. ADJOURNMENT

By general consent, the meeting was adjourned at 2:30 p.m.

_____

Laura Patrick, Chair

Certified Correct:

_____

Lisa Millard, Meeting Administrator/Recorder

Gabriola Island Local Trust Committee

Minutes of Regular Meeting

Date: September 4, 2025
Location: Gabriola Arts & Heritage Centre
476 South Road, Gabriola Island, BC

Members Present: Laura Patrick, Chair
Tobi Elliott, Trustee
Susan Yates, Trustee

Staff Present: Stephen Baugh, Island Planner
Ian Cox, Planner 2 (electronic)
Narissa Chadwick, Island Planner (electronic)
Shalini Nakai, Planning Team Assistant
Lisa Millard, Meeting Administrator/Recorder

Others Present: There were approximately 4 members of the public in attendance.

1. CALL TO ORDER

Chair Patrick called the meeting to order at 10:30 am.

2. TERRITORIAL ACKNOWLEDGEMENT

Chair Patrick acknowledged that the meeting was held on the territory of the Coast Salish First Nations.

3. APPROVAL OF AGENDA

By general consent, the agenda was approved as presented.

4. REPORTS

4.1 Trustee Reports

Trustee Yates reported the following:

- Upcoming attendance, as a representative of the local Gabriola Ferry Advocacy Committee, at a meeting for ferry dependent communities organized by the Bowen Island Mayor's office;
- A new electric bus, funded by the Rural Transit Solutions Fund, will be arriving on Gabriola this week; and
- Met with the Cortes Island community economic representative and discussed buses, ferries, and investment cooperatives.

Trustee Elliott reported the following:

- Continued attendance at Culturally Committed discussion group;
- Will be attending upcoming Islands Trust session on cultural safety;

- The Regional Planning Committee is considering 2026/27 business cases;
- The Regional Planning Committee will be considering a joint project with the Trust Programs Committee related to the indicators of health;
- The Executive Committee supported a Trust Conservancy resolution to prioritize resources for enhancing the Geographic Information System to improve mapping; and
- Attended a Heritage Conservation Act stakeholder information webinar for local government officials.

4.2 Chair's Report

Chair Patrick reported the following:

- The draft Trust Policy Statement was given first reading in July, a mailout has been sent to community members within the Trust Area regarding engagement opportunities which include an online survey, an electronic Town Hall and webinar on September 10, as well as Local Trust Area engagement sessions;
- The next Trust Council meeting will be held on Gabriola from September 16-19.

4.3 Electoral Area Director's Report - none

4.4 First Nations Reports - none

5. PUBLIC COMMENTS

A member of the public spoke to the GB-RZ-2022.1 rezoning application and recommended the following for the proposed OCP amendment Bylaw:

- It would be simpler to add a few words to the existing language in item (k) instead of deleting it in its entirety and replacing it; and
- A grammar error was noted in item (k) and the word "for" should be added to read "and for two dwellings".

A member of the public spoke to a motor home that has been parked on the side of the road beside the Village Centre for the past year and, while not objecting to an individual living in a motor home, inquired if this was an appropriate location for a dwelling.

A Trustee noted there had previously been two motor homes parked at said location, one of the vehicles was removed as a result of a bylaw compliance complaint, the speaker should contact Bylaw Compliance and Enforcement to note their concerns, there is a standing resolution to not enforce on non-compliant dwellings but this does not mean that action will not be taken if there are health or safety issues, and the motor home is parked on the Ministry of Transportation and Transit right-of-way and this matter might also fall under the Ministry's jurisdiction.

6. MINUTES

6.1 Local Trust Committee Minutes dated July 31, 2025 – for adoption

The following amendments to the minutes were presented for consideration:

- On page 2 of the minutes in the First Nations Reports change 7000 acres to 700 hectares;

- On page 4 of the minutes, second paragraph, amend the Trustee reply to read "A Trustee replied complaints of trucking and dumping of soil have been received but the activity is not in contravention of the bylaw as there is no Soil Deposit Bylaw in place at this time; however, a bylaw enforcement investigation is continuing and activity is being monitored."

By general consent, the Local Trust Committee minutes dated July 31, 2025 were adopted as amended.

6.2 Section 26 Resolutions-Without-Meeting Report - none

6.3 Advisory Planning Commission Minutes - none

7. BUSINESS ARISING FROM MINUTES

7.1 Follow-up Action List dated August 28, 2025

Updates to the Follow-up Action List were noted as follows:

- A community engagement session on balancing housing interests with preserving and protecting the environment has been scheduled to be held at the Haven on September 14;
- Staff are working with Snuneymuxw First Nation staff to develop a process that will help facilitate engagement on the Official Community Plan review;
- Staff are in consistent conversation with Snuneymuxw First Nation staff about the development of a heritage conservation area;
- The advocacy initiative to send a joint Local Trust Committee / Regional District of Nanaimo letter to Nav Canada and the Nanaimo Airport Authority is outside of the requirement that Local Trust Committee advocacy letters be related to land use planning; however, there is potential for a Trustee to write a letter as an individual not representing the Local Trust Committee;
- The Department of Fisheries and Oceans has been contacted regarding Brickyard Beach survey results but staff have not heard back from them yet.

GB-2025-065
IT WAS MOVED AND SECONDED
that the Gabriola Island Local Trust Committee request staff remove item 5 and 6 from the July 31, 2025 Local Trust Committee meeting from the Follow-Up Action list.

CARRIED

8. DELEGATIONS - none

9. APPLICATIONS AND REFERRALS

9.1 PL-RZ-2024-0091 (Mid-Island Co-op) - Staff Report

The Planner summarized the staff report and highlighted the following:

- The application seeks to amend the Official Community Plan to include the subject property in the Village Commercial land use designation and Village Centre Development Permit Area No. 7 and amend the Land Use Bylaw to create

a new site-specific Village Commercial Zone and add propane storage as a principal permitted use to the existing institutional uses on the property;
- The draft bylaws are not contrary to or at variance with the Islands Trust Policy Statement;
- Early referral was sent to Snuneymuxw First Nation consistent with the Islands Trust protocol agreement and at the request of the Local Trust Committee;
- The buildings and structures essentially remain the same and the addition of fencing and other requirements have been included for safe storage of propane;
- A conditions of use section provides criteria to allow the storage of propane, the requirement that outdoor lighting associated with the facility be shielded or directed downwards, provision for screening to minimize visual impact, and the necessity for emergency response plans to be prepared and shared with the Local Trust Committee;
- The bylaw will include a definition for propane storage; and
- There is a provisional height exemption for structures that are required for safety related to fuel storage as dictated by other regulatory bodies;

The applicant was in attendance and stated they will invite the Federated Cooperative Limited Senior Health and Safety Advisor to the Community Information Meeting and they will be available to answer any questions related to propane storage.

Discussion ensued and the following comments were noted:
- The current zoning for the subject property does not include residential density and none is proposed to be added; and
- The Community Information Meeting and Public Hearing could be scheduled to be held at the same time once feedback is received and the referral period ends.

GB-2025-066
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025" be read a first time.

CARRIED

GB-2025-067
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025" be read a first time.

CARRIED

GB-2025-068
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025" be read a second time.

CARRIED

GB-2025-069
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025" be read a second time.

CARRIED

GB-2025-070
It was MOVED and SECONDED
that Proposed Bylaws No. 321 and 322 be referred for comment to the following First Nations for a 90-day period, Local Governments and agencies for a 60-day period:

a. First Nations: Cowichan Tribes, Halalt First Nation, Lyackson First Nation, Penelakut Tribe, Semiahmoo First Nation, Snuneymuxw First Nation, Stz'uminus First Nation, Ts'uubaa-asatx First Nation.
b. Local Governments and Agencies: Regional District of Nanaimo, Island Health Authority, Ministry of Transport and Transit, Ministry of Water, Land and Resource Stewardship, School District 68, Gabriola Volunteer Fire Department, Gabriola Advisory Planning Commission.

CARRIED

GB-2025-071
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 321 cited as "Gabriola Official Community Plan Bylaw No. 166, 1997, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.

CARRIED

GB-2025-072
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee has reviewed the Islands Trust Policy Statement Directives Only Checklist and determined that Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw No. 177, 1999, Amendment No. 1, 2025" is not contrary to or at variance with the Islands Trust Policy Statement.

CARRIED

9.2 GB-RZ-2022.1 (Moen) - Staff Report

The Planner summarized the staff report and highlighted the following:

- The application is coming back to the Local Trust Committee following direction to provide amending language to the proposed bylaws that would tie the housing density to the commercial redevelopment of the property and that a housing agreement not be required for this application; and
- Options to tie the housing density and construction of the dwelling units to the commercial development of the subject property have been provided for consideration.

The applicant was in attendance and noted the purpose of the application was to expand the commercial use of the property to allow for some growth, residential uses were not initially considered but were encouraged and the bylaw now allows up to two residential units with size and location restrictions, and any further restrictions on the commercial use based on the residential units might cause reconsideration of the commercial expansion.

Discussion ensued and the following comments and clarifications were noted:

- The zoning is drafted specifically for the subject property;
- The Local Trust Committee has expressed a desire to see future commercial development in the village core tied to residential density and if the applicant has no intention of including residential uses, then the Trustees need to consider that in terms of the application;
- Options include allowing, or requiring, residential use;
- Expanding commercial uses will benefit the property owner and the Local Trust Committee seeks to understand how benefits to the community will be realized;
- Sizes and options for any additions are not related to policy and are at the discretion of the Local Trust Committee; and
- Following a Public Hearing the Local Trust Committee can not increase the commercial floor area but could decrease it;

The meeting was recessed for a break at 12:35 p.m. and reconvened at 1:05 p.m.

GB-2025-073
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee amend Bylaw No. 318, cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2024", as follows:

a. Schedule 1, Section 1 is amended by adding a new subsection 1.1 as follows:

1.1 Section 2 – General Land Use and Residential Development, Subsection 2.0 General Land Use, Clause 2.0.k) is deleted and replaced with the following text:

"k) This Plan only supports the realization of additional residential density without subdivision when used for Affordable Housing for Special Needs residents, Seniors, multiple-dwelling affordable housing, and for two dwellings (with no restrictions on their tenancy or affordability) on the following parcel: LOT B SECTION 19 GABRIOLA ISLAND NANAIMO DISTRICT PLAN VIP60373."

and renumbering all subsequent subsections chronologically.

CARRIED

GB-2025-074
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 318 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2024" be read a first time, as amended.

CARRIED

GB-2025-075
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 318 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2024" be read a second time.

CARRIED

GB-2025-076
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee amend Bylaw No. 319, cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2024", as follows:

a. Appendix 1 is amended by adding the following at the end:
   "f. Conditions of Use
      i. The floor area of commercial use on the lot shall not be expanded, and no building or structure greater than 100 square metres shall be constructed, increased in floor area, or occupied for different commercial use, unless:
         - one dwelling unit for residential use has been constructed on the lot;
           or
         - a dwelling unit is constructed as part of the construction or expansion of commercial use on the lot.
      ii. The floor area of commercial use on the lot shall not be expanded, and no building or structure greater than 200 square metres shall be constructed, increased in floor area, or occupied for different commercial use, unless:
         - two dwelling units for residential use have been constructed on the lot;
           or
         - two dwelling units are constructed as part of the construction or expansion of commercial use on the lot."

CARRIED

GB-2025-077
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 319 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2024" be read a first time, as amended.

CARRIED

GB-2025-078
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee Bylaw No. 319 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2024" be read a second time.

CARRIED

GB-2025-079
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff schedule a stand-alone, electronic Community Information Meeting prior to the public hearing.

CARRIED

GB-2025-080
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff schedule a Public Hearing for Bylaws No. 318 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2024" and Bylaw No. 319 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2024" on November 20, 2025.

CARRIED

10. LOCAL TRUST COMMITTEE PROJECTS

10.1 Mudge Island Land Use Bylaw Amendment Project Charter - Staff Report

The Planner summarized the staff report and highlighted the following:

- The draft Project Charter includes as many priorities identified within the Mudge Island survey conducted by the Mudge Island Community Association as possible while keeping the project scope within that of a minor project;
- Capacity to initiate this minor project without disruptions to the existing workplan for the Gabriola Official Community Plan project is limited; therefore, it is recommended the minor project be initiated in April, 2026; and
- Expressions of interest for a Mudge Advisory Planning Commission should be sought prior to the project being initiated.

Discussion ensued and the following comments and clarifications were recorded:

- The items included in the scope of the Project Charter are all topics identified by the Mudge Island Community Association as priorities;
- Derelict vehicles were noted as a concern as indicated by the survey but were not identified within the top priorities;
- Consideration of allowing accessory structures without principal use would necessitate a definition of accessory;
- The Mudge community has opportunity to provide feedback regarding the items identified within the scope of the Project Charter and the Local Trust Committee can amend the scope if they choose; and
- The proposed Project Charter can be sent to Snuneymuxw First Nation to inform them and provide and opportunity for feedback in a timely manner.

GB-2025-081
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee endorse the attached project charter for the Mudge Island Targeted Land Use Bylaw Amendment Project.

CARRIED

GB-2025-082
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff communicate with Snuneymuxw First Nation regarding the scope and Project Charter of the proposed Mudge Island Targeted Land Use Bylaw project.

CARRIED

GB-2025-083
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee advertise for public expressions of interest for members of a new Mudge Island Advisory Planning Commission**.**

CARRIED

11. CORRESPONDENCE

(Correspondence received concerning current applications or projects is posted to the LTC webpage)

11.1 Letter dated August 5, 2025 from M.Delahunt regarding lot owned by Clark Excavating, McCollum Road

GB-2025-084
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee refer correspondence from M. Delahunt dated August 5, 2025 to bylaw enforcement for Gabriola Island Local Trust Area.

CARRIED

12. NEW BUSINESS - none

13. STAFF REPORTS

13.1 Trust Council Bylaw 183 - Policy Statement Referral - Memorandum

The Senior Policy Advisor highlighted a date change for referral responses from October 10, 2025 due to timing of local engagement events. A public Town Hall session will take place during the October 9, 2025 regular business meeting.

GB-2025-085
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee advise it will return a referral response to proposed Bylaw No. 183 Islands Trust Policy Statement Bylaw at the November, 2025 meeting.

CARRIED

13.2 Removing or Transferring Densities from Heritage Areas - Memorandum

The Planner summarized the memorandum and highlighted the following:

- The Local Trust Committee can remove or transfer densities using zoning abilities granted by the province through the *Local Government Act* and *Islands Trust Act*;

- There are a number of implications to consider and the Local Trust Committee may wish to seek legal advice prior to directing a project to remove or transfer densities.

Discussion ensued and the following comments were noted:

- The Planner will review the discussion guides that were part of the focus group engagement sessions as this concept might have been included as one of several considerations;
- Staff have been engaging with Snuneymuxw First Nation staff throughout the Official Community Plan project and the Nation is aware subdivision of the subject property is being discussed;
- The Suitable Land Analysis captures sensitive cultural heritage areas;
- The upcoming community conversation could include a question specifically related to subdivision on lands that have cultural heritage areas;
- Advice is to seek legal opinion regarding risks of downzoning on a specific property based on a subdivision application in process;
- Subdivision has not been approved as yet and there are conditions and outstanding issues;
- Rezoning could be considered as part of the next phase of the Official Community Plan Review project or as a minor project;
- The next minor project has been identified and amending the Land Use Bylaw would also be considered a minor project; therefore, the overall workplan would need to be evaluated;
- If rezoning is to be considered as part of the Official Community Plan Review project it would need to be included in the scope of the Project Charter; and
- Understanding risks might be prudent prior to initiating the work.

GB-2025-086
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff to include a question in the growth management survey regarding subdivision potential on heritage areas.

CARRIED

GB-2025-087
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff to advise on a request for legal advice on downzoning PID: 003-134-806 by the next meeting.

CARRIED

13.3 Gabriola Advisory Planning Commission Appointments - Staff Report

The Planning Team Assistant noted the term of the current Advisory Planning Commission expires November 30, 2025 and the Local Trust Committee is asked to considered recruiting for appointments at this time.

GB-2025-088
It was MOVED and SECONDED

that the Gabriola Island Local Trust Committee request that staff advertise for expressions of interest for the Gabriola Island Advisory Planning Commission.

CARRIED

GB-2025-089
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request that staff send letters to members of the Advisory Planning Commission whose terms will expire on November 30, 2025, inviting their expressions of interest for reappointment to the Advisory Planning Commission for another two-year term, and thanking them for their participation.

CARRIED

13.4 Trust Conservancy Report - none

13.5 Applications Report dated August 28, 2025

The Planner provided an update on the Applications Report.

13.6 Trustee and Local Expense Report dated June, 2025

Received for information.

13.7 Adopted Policies and Standing Resolutions

Received for information.

13.8 First Nations Relationship Building Update - none

13.9 Climate Change Action Update - none

13.10 Local Trust Committee Webpage - none

14. WORK PROGRAM

14.1 Active Projects Report dated August 28, 2025

Received for information.

14.2 Future Projects Report dated August 28, 2025

Received for information.

15. UPCOMING MEETINGS

15.1 Next Regular Meeting Scheduled for Thursday, October 9, 2025 at 10:30 am at the Gabriola Arts and Heritage Centre

16. ADJOURNMENT

By general consent, the meeting was adjourned at 2:56 p.m.

_____

Laura Patrick, Chair

Certified Correct:

_____

Lisa Millard, Meeting Administrator/Recorder

Minutes of the Gabriola Island Advisory Planning Commission

Date of Meeting:	**Wednesday, November 19, 2025**
Location:	**Islands Trust Northern Office Boardroom** **700 North Road, Gabriola Island, BC**
APC Members Present:	**David Reid, Chair** **Howard Bashaw** **Burtt Fidler (electronic)** **Rick Mitchell** **Lisa Webster (electronic)**
Regrets:	**Jennifer Laidley** **Burtt Fidler** **Carly McMahon**
Staff Present:	**Ian Cox, Planner 2** **Shalini Nakai, Meeting Administrator** **Katherine Vogt, Meeting Recorder (electronic)**

1. CALL TO ORDER

Chair Reid called the meeting to order at 2:09 p.m.

2. APPROVAL OF AGENDA

By general consent, the agenda was approved as presented.

3. MINUTES

By general consent, the Gabriola Advisory Planning Commission minutes dated February 12, 2025 were approved as presented.

4. Referral from the Local Trust Committee regarding the rezoning application (PL-RZ-2024-0091) and associated bylaw amendments to allow for upgraded propane storage at the business of Mid Island Consumer Services Co-operative located at 793 Lockinvar Lane

The Planner provided a summary of the referral, noting the following:

- The applicants have requested the rezoning due to their current insufficient capacity to keep up with growing customer fuel demand; and to be compliant with updated fuel storage and fuel transport regulations.
- The application involves a Land Use Bylaw (LUB) amendment; and a major amendment to the Official Community Plan (OCP) to add the applicant property to the 'Village Centre' Development Permit Area No. 7; thereby changing the property's existing 'Institutional' zone designation to a 'Village Commercial' zone designation.
- Referral responses of no concern have been received by the Gabriola Fire Department and the Vancouver Island Health Authority; Cowichan Tribes and Snuneymuxw First Nation have responded with no comment but want to have the opportunity to comment at a later stage of the project.

Advisory Planning Commission (APC) members asked or noted the following:

- The distance requirements between fuel tanks and existing or future multi-family residential housing in the limited Village Centre area is a concern. Future development potential could be limited by this current propane storage proposal.
    - The planner noted that such distances are federally regulated and could be researched by planning staff.
    - The planner added that the applicant's had noted that it should be relatively easy, in the future, to remove the propane storage permission from the property, if the property was sold, because 'Industrial' or 'Light Industrial' zoning had not been asked for.
- The risk assessment plans for possible environmental emergencies arising from propane storage, as presented in the staff report, appear insufficient.
    - The planner noted that the Gabriola Fire Department Chief had recently responded to the referral and had not expressed any concerns with the application.
- Neighboring residents should be individually notified of the application.
    - The planner responded that there was a public notification and public hearing requirement for the bylaw amendments to go through. A Community Information Meeting (CIM) will also likely be held sometime after the new year. Also, individual correspondence responses are posted to the website if the responder agrees to make their correspondence public.
- Neighboring property values could be at risk.
- The worst-case scenario blast radius diagrams as shown in the staff report attachment on page 56 could create public concerns; and it could be helpful for the applicant to have a technical advisor to respond to questions raised at a future CIM.
- What are the current and projected vehicle and pedestrian traffic concerns at the Co-op?

    - The planner responded that the proposed upgrading of the propane site will make conditions safer by reducing regular traffic around the storage area.
- What about septic and water concerns at this Co-op site?
    - The planner responded that because the proposal only involves propane storage, that there is no proposed increase in water or septic use.
- Extra water on site should be required to deal with unexpected medical or other emergency needs.
- An open house with the Fire Department for questions and answers regarding fire hazards of the propane proposal would be valuable.
- Potential problems related to the unhoused in the area needs to be considered.
- Possibilities of terrorism, interface fires, radiant heat from surrounding structure fires, and evaporating vapor explosions are significant considerations.
- Does the proposal involve increasing the volume of propane being stored on site?
    - The planner responded that there would be an increased volume of stored propane.
- Possibilities for an alternative propane storage area should be considered.
- The application proposal should be referred to the Fire Protection District, in addition to the local Fire Chief.
- There is a need for light industrial zoning on Gabriola Island. If such a zone were currently available, the propane storage could have been proposed to be sited there.
- The insurability of the sit and surrounding areas are a concern.

Chair Reid asked APC members if they were in general support of the proposal. Four APC members were in general support of the proposal; one APC member was not in support of the proposal; and one member expressed that his support of the proposal was informal and contingent on APC recommendations being followed through.

The Planner added that the applicant had indicated a need for the propane upgrade based on dangerous cargo ferry runs considerations and the identified needs of their customers.

The chair offered that general approval or disapproval of the application could be put aside; so that the following recommendations could be considered:

GB-APC-2025-002
It was Moved and Seconded,
that the Gabriola Island Advisory Planning Commission recommends to the Local Trust Committee to consider the impact on the neighborhood and the neighbors of the proponent; that they consider the impact on future

developments of the village core and how this change may constrain future use; and that the additional safety risks, specifically fire, be considered.

CARRIED

GB-APC-2025-003
It was Moved and Seconded,
that the Gabriola Island Advisory Planning Commission recommends to the Local Trust Committee that there is an additional referral of the application to the Gabriola Fire Protection and Improvement District.

CARRIED

GB-APC-2025-004
It was Moved and Seconded,
that the Gabriola Island Advisory Planning Commission recommends to the Local Trust Committee that they request that the proponent provide their expert in fire and risk at any community discussion that they schedule and hold.

CARRIED

GB-APC-2025-005
It was Moved and Seconded,
that the Gabriola Island Advisory Planning Commission additionally recommends that the Local Trust Committee consider the establishment of light industrial zoning to accommodate this type of land use.

CARRIED

5. Next Meeting Time and Adjournment

By general consent, the meeting was adjourned at 3:43 p.m.

_____

David Reid, Chair

Certified Correct:

_____

Katherine Vogt, Recorder

Gabriola Island Local Trust Committee

Minutes of Regular Meeting

Date: January 22, 2026
Location: Gabriola Arts & Heritage Centre
476 South Road, Gabriola Island, BC

Members Present: Laura Patrick, Chair
Tobi Elliott, Trustee
Susan Yates, Trustee

Staff Present: Renée Jamurat, Regional Planning Manager
Joe Elliott, Senior Indigenous Advisor
Warren Dingman, Bylaw Compliance & Enforcement Manager (electronic)
Stephen Baugh, Island Planner
Narissa Chadwick, Island Planner
Lisa Millard, Meeting Administrator/Recorder

Others Present: There were approximately 67 members of the public in attendance.

1. CALL TO ORDER

Snuneymuxw First Nation Elder C'tasi:a, Geraldine Manson opened the meeting and spoke to the importance of working together to steward and protect the traditional lands of the Snuneymuxw First Nation, the historical presence of the Nation on the Island, and the need to speak to concerns within protocols of respect.

Chair Patrick called the meeting to order at 10:40 am.

2. TERRITORIAL ACKNOWLEDGEMENT

Chair Patrick acknowledged that the meeting was held on the territory of the Coast Salish First Nations.

3. APPROVAL OF AGENDA

A re-ordering of the agenda was presented for consideration as follows:

Item 10 will be heard before item 9.

By general consent, the agenda was approved as amended.

4. REPORTS

4.1 Trustee Reports

Trustee Elliott reported the following:

- Attended the Cowichan Tribes Case Commentary virtual session hosted by the Association of Vancouver Island Coastal Communities;

- Held an "ask me anything" session to hear questions and clarify issues about the shoreline buffer area following the unapproved distribution of Islands Trust mapping and noted many concerns raised were related to the implications of the Cowichan Tribe's court decision which is an issue outside of Islands Trust jurisdiction;
- Attended a ceremony during which the King's Coronation Medal was awarded to Brenda Fowler;
- Attended Trust Council and highlighted the session with Island Coastal Economic Trust and joint meeting with San Juan Islands Council;
- Attended Southern Gulf Islands Forum;
- Attended Regional Planning Committee meeting to review business cases for the upcoming fiscal period;
- Attended joint Executive Committee and Islands Trust Conservancy Board meeting during which a presentation was given by a Cowichan Tribes governance representative on approaching First Nations to work together on mutual goals;
- Attended meeting with BC Hydro representatives regarding work related to the electrification of the ferry terminal;
- Attended Climate Caucus call and learned about the federal commitment to fund Youth Climate Core program;
- Attended Islands Trust Conservancy Board meeting during which the Chair and Vice Chair were acclaimed for one more year;
- Attended Financial Planning Committee meeting which focussed on reducing the draft budget.

Trustee Yates reported the following:

- Attended Gabriola Health and Wellbeing Collaborative meeting;
- Attended Gabriola Transportation Society meeting to discuss sending a letter requesting the Right Honourable Mark Carney to maintain the oil tanker ban for the North Pacific Coast;
- Attended Islands Trust Stewardship Webinar about protecting the shoreline which featured guest speakers Kyla Sheehan with the Pacific Salmon Foundation, Kelly Loch with the Stewardship Centre for BC, and Meghan Tomlin and Steven Henry from the Malahat Nation;
- Met with BC Hydro representatives for an overview of ferry terminal upgrades which will entail the installation of approximately 115 hydro poles;
- Attended Islands Trust Conservancy Board meeting during which Lisa Gauvreau was re-elected as Chair and Timothy Tanner was re-elected as Vice Chair;
- Attended Financial Planning Committee meeting to discuss the fiscal budget and noted the discretionary budget amounts to 3% of total budget.

4.2 Chair's Report

Chair Patrick reported the following:

- Upcoming attendance at a Committee of the Whole meeting being held to discuss the budget prior to it being advanced to Trust Council in March;
- Noted the draft Trust Policy Statement is in the referral stages and there remains opportunity to fill in the online survey.

4.3 Electoral Area Director's Report

Director Craig reported the following:

- The Regional District Board received the "Our Changing Coast Erosion Hazard Report" and the "Coastal Risk Assessment Overview Report" and noted some areas in Area B were identified as having very high coastal vulnerability including Brickyard Beach, the stretch of road through Gabriola Sands Provincial Park, and an area on Mudge Island across from the El Verano beach access;
- Decommissioning activities continue for the existing Coats Marsh weir with the concrete dam structure being fully removed with the next phase involving the construction of a naturalized weir;
- A feasibility study for a safer pathway along ferry hill will start in 2026 and any work done would be in collaboration with the Ministry of Transportation and Transit;
- Work is being done to identify a potential location for a future multipurpose facility and/or soccer field and will occur in conjunction with considerations of a Cox Park Master Plan;
- Consideration of the potential to build a cartop boat launch on Mudge Island continues;
- The Regional District Board and the City of Nanaimo approved a plan to include residents of Area B for consideration for awards through the city's Civic Sports Merit Award and Arts and Culture Merit Awards programs.

4.4 First Nations Reports - none

5. PUBLIC COMMENTS

The Chair spoke to public concerns regarding land ownership and land tenure that are occurring as a result of the Cowichan Tribe court decision and noted the matter is outside of Islands Trust jurisdiction; therefore, the Local Trust Committee is unable to speak to the issue.

Several members of the public spoke concerns about a 200-metre shoreline buffer zone and the following comments were noted:

- In response to a question asking why stakeholders who live within the shoreline buffer zone were not informed about it, the Chair noted that no draft bylaws on a proposed buffer zone had been presented to the Local Trust Committee for consideration and the topic had not been discussed; however, should draft bylaws be presented the Trustees would review them, revise as necessary, and then put them to the community for input through the Community Information Meeting and Public Hearing process;
- The concept of the buffer zone should be shelved until after the election, there is need to educate community members about the inherent rights of the Snuneymuxw First Nation and land tenures, Trustees need to explain how lands are held in BC, landholders need to understand both Snuneymuxw First Nation and governmental processes, the bylaws are not working to protect archeological sites on Gabriola, Trustees need to consider how to help landholders be supportive of protection of heritage resources, the highest impediment to protection of archaeological resources is funding and collaborative approaches need to be undertaken as coming up with another bylaw that won't be enforced will not result in protections;

- A Trustee noted the concept of a buffer zone was floated as a conversation as part of a public engagement session on housing options which looked at areas where secondary suites or additional dwelling units might be suitable and have the least amount of impact with the foreshore being identified as likely not being the best place for additional units, and there will be many opportunities for public input before any decisions on suitable areas for additional dwelling options are made;
- It appears the designation of a 200-metre buffer is random and it should be considered on a lot-by-lot basis;
- The topic has gone too far without community input and is being pushed forward before anyone has heard about it;
- What is being discussed is violating charter rights and everyone is concerned about losing their homes;
- People are scared and it is important to put fear aside as no one is taking away homes, the community needs to move forward together and ask questions that are inclusive and Island Trust should look at ways of creating more clarity about what has been put out on social media without context;
- The proposed zone has significant impacts and is causing uncertainty and fear and there is need to wait until the Provincial review of the Heritage Cultural Act is complete before any further consideration are taken;
- The Planner noted that the buffer zone is not a setback, each property has setbacks as designated in the Land Use Bylaw, and there are already setbacks from the sea. The buffer was not to be a regulatory tool and was introduced as a lens of perspective. The community is in the process of revising the Official Community Plan and has identified values including the need for a variety of housing option, there has been discussion about how to create more housing, and there is need not to permit more housing than what is already allowed within the shoreline area;
- There has been impact to community members and this impact needs to be addressed, there is need to understand how the impact occurred, how the information was shared, and how to alleviate stress with an apology given;
- Society is in a time of change and is trying to deconstruct colonial views and it is important to understand things will seem frightening; but there is need to come together with a deeper understanding of Indigenous views and work together;
- Due to the Cowichan decision, there is fear that one will wake up and be told they no longer own their land;
- A Trustee noted Islands Trust does not have power to alter land tenure or title;
- A member of the public purchased a property with a home built within the setback and a Trustee noted the home would be considered legal non-conforming and the property owner could undertake renovations or rebuild within the same footprint;
- The zone should not cover the entire island and should be looked at in a site-specific way;
- When decisions are being made property owners should be notified directly through the mail;
- Commonly asked questions should be answered and posted on the website;
- A Snuneymuxw First Nation community member noted it is community's responsibility to seek out experts to learn from, to educate themselves, and to hear different perspectives;

- The land is everyone's responsibility and bylaws will not protect the land;
- A member of the public spoke to respecting the land they live on and asked everyone to raise the collective will to address pollution coming from air traffic;
- Settlers have been on the land for 150 years and have built shipyards, quarried stone, built ferry terminals and roads, dug ditches, and put in septic tanks in the 200-metre zone and it wasn't until Island Trust was formed that people started paying attention to the importance of protecting the land;
- There is support to go forward with protecting the island and the speaker was not surprised Islands Trust brought forward ideas that protect the land;
- Government often starts discussion and makes rules regardless of what the public wants and the existing setback rules are adequate.

A member of the public spoke to the draft Trust Policy Statement and noted the policy has always included a Trust Council policy that no island in the Trust Area be connected to the mainland or Vancouver Island by a bridge or tunnel and they are concerned this statement is not in the new draft, climate change is the greatest challenge that humans face and item 3.5.5 notes nature-based solutions be considered and this statement is weak and vague.

A member of the public spoke to a group trying to have a meeting at the library recently with the local Member of Parliament; however, the library cancelled the meeting because the librarian was phoned and told the meeting was going to be disrupted.

A member of the public spoke to the 200-metre shoreline buffer zone and stated it is actually a 700 acres additional cultural heritage protection zone and stated the Local Trust Committee has created a process that has created division and the tools being discussed can be used in a negative way.

The member of the public noted the Official Community Plan review includes a statement about simple fee ownership and they believe there is an underlying element that that will remove fee simple ownership.

6. MINUTES

6.1 Local Trust Committee Special Meeting Minutes dated November 17, 2025 - for adoption

By general consent, the Gabriola Local Trust Committee meeting minutes of November 17, 2025 were adopted.

6.2 Local Trust Committee Minutes dated November 20, 2025 – for adoption

The following amendments to the minutes were presented for consideration:

- Page 3 second paragraph should say does *not* specify a percentage

By general consent, the Gabriola Local Trust Committee minutes of November 20, 2025 were adopted as amended.

6.3 Local Trust Committee Public Hearing Record dated November 20, 2025 - for information

Received for information.

6.4 Advisory Planning Commission Minutes dated November 9, 2025 - for information

Received for information.

6.5 Section 26 Resolutions-Without-Meeting Report dated January 15, 2026

Received for information.

7. BUSINESS ARISING FROM MINUTES

7.1 Follow-up Action List dated January 15, 2026

The Planner provided an update to the Follow-Up Action List and noted the Department of Fisheries and Oceans has indicated they did not conduct a shellfish survey at Brickyard Beach last summer.

Discussion ensued regarding an invitation to Regional District of Nanaimo staff to engage in discussions on policy options and items to be included on the agenda of an upcoming protocol meeting.

GB-2026-001
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff to explore dates for a Regional District of Nanaimo and Local Trust Committee protocol meeting and add "policy options and approach on housing specific to Gabriola Island" as an item of discussion.

CARRIED

8. DELEGATIONS

8.1 Gabriola Island Memorial Society regarding Inclusion of Provisions for a Green Burial Cemetery

The delegation spoke to the following points:

- Background on the Gabriola Island Memorial Society;
- Values of green burial;
- The existing Gabriola cemetery faces challenges of erosion, grave displacement, and limited space for full body burial;
- The society has been working on finding suitable land to acquire for the burial site;
- A three-to-five-hectare site is required and any property that would be under consideration would be subject to a geotechnical assessment;
- The delegation requested the Local Trust Committee include provisions for a new cemetery that supports green and natural burial practices in the Official Community Plan under the Institutional zone.

The agenda was reordered and item 10 was heard following item 8

10. LOCAL TRUST COMMITTEE PROJECTS

10.1 Major Project: Gabriola Island Comprehensive Official Community Plan and Land Use Bylaw Review - Verbal Update

The Planner provided a verbal update and highlighted the following:

- Apologized to the public for the confusion and fear that developed regarding the shoreline buffer zone maps and shared appreciation for comments received from the public during the Public Comments session;
- The perspective of a 200-metre buffer zone is only being considered as part of a discussion about potentially permitting additional dwellings on properties above the number of dwellings that are already allowed in the Official Community Plan;
- The Official Community Plan engagement process has been ongoing for two years with process details and summaries available on the website;
- Staff are taking all of the information received and putting it into a coherent plan and are now in the phase of developing a draft Official Community Plan;
- There will be a period of time that the draft Official Community Plan goes out to the public for input before the Local Trust Committee considers first reading;
- First reading triggers further engagement with the community and referrals to First Nations and other agencies;
- There are points where the Land Use Bylaw will be misaligned with the Official Community Plan and revision options to the Land Use Bylaw as well as a Development Approval Information (DAI) Bylaw would come back to the Local Trust Committee with a revised project charter that would integrate these pieces into the project;
- There remains potential of getting to first reading before the end of the current term.

Discussion ensued and the following comments were noted:

- Community engagement on Development Permit Areas has not begun yet;
- Freshwater analysis mapping, which provides data showing where it is more, and less, hazardous to put additional development, has been completed and a report on the data and mapping will be coming to the Local Trust Committee at their February meeting;
- The project does not include budget for Development Permit Area mapping;
- The Chair indicated a resolution had been passed previously requesting that staff reports feature project timelines and this practice should be reinstated as it informs the public where the Local Trust Committee is in the project and what is coming forward.

GB-2026-002
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff to discontinue use of the term “shoreline buffer zone” for this current stage in drafting policies for the updated Official Community Plan, and instead, demonstrate with maps that show areas of vulnerability where development is not desired.

CARRIED

GB-2026-003

It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff to return with a revised project charter for the review of the Official Community Plan that scopes in a Development Approval Information Bylaw and Land Use Bylaw update to ensure consistency with the draft Official Community Plan.

CARRIED

The meeting was recessed for a break at 1:00 p.m. and reconvened at 1:35 p.m.

9. APPLICATIONS AND REFERRALS

9.1 PL-SUB-2024-0307 - Covenant Request

The Planner summarized the staff report and highlighted the following:

- The report introduces a request by the Ministry of Transportation and Transit that the Local Trust Committee become signatories of a covenant for 381 and 391 Spruce Avenue which are both subject to an existing boundary adjustment application;
- Ministry staff have indicated that it is preferred the Local Government be a signatory on covenants as they are the local authority who review land use applications and covenants can provide some additional authority to ensure the water quality is suitable for the land use of a parcel;
- It is being recommended that the Local Trust Committee become signatories of the covenant because the covenant will ensure future land owners are aware of the water treatment requirements, allow the Local Trust Committee to ensure the water quality is suitable for the land use, and will permit the boundary adjustment application to proceed which addresses a land use conflict of a structure encroaching on an adjacent lot.

A Trustee asked if the covenant restricts water to well use only or if a rain water catchment is permitted and the Planner indicated it was not clear.

GB-2026-004
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee authorize that Trustee Susan Yates and Trustee Tobi Elliott to be signatories on behalf of the Gabriola Island Local Trust Committee for the Covenant attached to the staff report dated January 22, 2026 and associated with file PL-SUB-2024-0307.

CARRIED

9.2 PLRZ20240091 (Mid-Island Co-op) - Staff Report

The Planner summarized the staff report and highlighted the following:

- The Local Trust Committee has given Bylaw No. 321 and 322 first and second reading and the bylaws were referred to First Nations, Local Governments, and agencies;
- The report summarizes the referral responses received to date;
- Staff are recommending a Public Hearing for Bylaw No 321 and 322 be held on February 19, 2026 during the regular business meeting, and that a Community

Information Meeting be scheduled in advance of the Public Hearing and that the applicant's expert in fire and risk be invited to attend.

The applicant was in attendance and available for questions.

Discussion ensued and the following comments were noted:

- The application was not referred to neighbouring property owners;
- Neighbouring property owners can provide commentary during the public hearing and will receive notice of the upcoming pubic hearing;
- There is potential to create a light industrial zone but this is outside of the context of this application and could be done through a project or the Official Community Plan review.

GB-2026-005
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff schedule a Public Hearing for Bylaws No. 321 cited as "Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025" and Bylaw No. 322 cited as "Gabriola Island Land Use Bylaw, 1999, Amendment No. 1 2025", on February 19, 2026 during its regular business meeting.

CARRIED

GB-2026-006
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff schedule a stand-alone, electronic Community Information Meeting prior to the Public Hearing and request attendance from the applicant's expert in fire and risk.

CARRIED

9.3 Trust Council Bylaw 183 - Policy Statement Referral - Memorandum

Proposed Bylaw No. 183 has been referred to the Local Trust Committee for response.

A Trustee provided a summary of what had been heard from community members and the following comments were noted:

- Provide a context statement about Islands Trust jurisdiction;
- A guiding principle related to Climate change, and stronger policies to direct communities to adapt to and mitigate impacts of Climate Change, should be included;
- A guiding principle regarding upholding the Mandate through advocacy for limitations on tree cutting and eliminating clear cutting of old growth should be included;
- There are competing calls for stronger, and less strong, language for inclusion of First Nations in decision making resulting in uncertain implications;
- Item 2.1.5 *Taking Guidance from Precautionary Principle* should be also a Directive policy;
- Item 2.1.2. *Prioritize Environmental and Indigenous Cultural Heritage Protection* is confusing due to two separate elements of prioritization;

- Terminology in item 3.1.3 regarding land back relates to an amenity contribution which is a voluntary contribution in exchange for densities which can be directed to either the community or to First Nations; however, the term land back is misleading;
- Item 2.3.3 *Work Towards Collaborative Governance with Indigenous Governing Bodies* has garnered mixed support, the language works toward building foundations and is passive;
- There is strong support for items 3.2.1 to 3.2.3 *Identification and Protection of Indigenous Cultural and Harvesting Sites;*
- There is general support for Directive Policies for Ecosystem Integrity although some feel there should be stronger language for protected area networks in one policy with sensitive ecosystems listed as being prioritized;
- Items 3.4.12 and 3.4.13 related to housing diversity and clustered small dwellings generally had strong support;
- Item 3.4.14 garnered a recommendation to amend the Directive to "Set floor area and lot coverage limits for residential development to reduce maximum dwelling sizes and lot coverage to minimize negative impacts on the natural environment";
- Goal 4 language should be strengthened in terms of limiting negative impacts to the natural environment;
- The term "aesthetic" is vague in item 3.4.3, as opposed to item 5.1.3 in the current policy which state "address the protection of views, scenic areas and distinctive features contributing to the overall visual quality and scenic value of the Trust Area"
- The policy related to discouragement of a bridge or fixed link to the mainland or Vancouver Island has been removed;
- Policy 3.5.7 related to freshwater storage should be a directive policy;
- The term environment should be defined as referring to the natural environment;
- Items 3.5.8 to 3.5.10 Forest Policies contain policies within Islands Trust jurisdiction; however, there is call to include advocacy policies or advisory policies related to tree cutting and sustainable regenerative small-scale forestry.

GB-2026-007
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee recommend to the Islands Trust Council that proposed Bylaw No. 183 proceed, subject to the following recommendations:

- A new Guiding Principle related to climate change adaptation and mitigation be added;
- A new Guiding Principle related to protecting a minimum of 30% of the land and waters in the planning areas of each Local Trust Area;
- Consider adding a new section, such as commitments of Trust Council, that list longstanding Trust Council advocacy positions such as no fixed links between Vancouver Island and Mainland and the islands in the Trust Area notwithstanding the bridge connecting North and South Pender Island, the elimination of clear-cut logging of old growth forests,

opposition to anchorages in the Salish Sea, and stronger tools for protection of biodiversity;
- Advisory policy 3.1.3 (Land Back) to clarify or better define amenity contributions;
- Amend draft policy 3.4.5 with some language to include language similar to the following: "Implement planning and land use management strategies such as preservation of forests, preservation of natural wetlands, and concentrating residential density within walking distance of transit routes and amenity areas, and promote both human and nature-based solutions, to minimize greenhouse gas emissions, and adapt to climate change-related vulnerabilities."
- Stronger language in Goal Four about the purpose being limiting negative impact to the natural environment;
- Clarify language in 3.4.3 re: Aesthetic and refer to current policy 5.1.3;
- Add directive policy on Freshwater Storage, with a focus on requiring freshwater storage where groundwater supplies are known to be of poor quality or quantity;
- Add advisory policy on Freshwater Conservation and storage;
- Advisory policy that supports the creation of Community Forests to support sustainable, regenerative and small-scale forest harvesting activities, and;
- that an implementation plan be developed as part of the Policy Statement.

CARRIED

GB-2026-008
It was MOVED and SECONDED
that the Gabriola Local Trust Committee considers that policies and principles relating to Trust Council's reconciliation commitments and working towards collaborative governance with Indigenous Governing Bodies [Guiding Principles 2.1.1, 2.1.2, Reconciliation Principles, and Cooperation Principle 2.3.3] are well within the Islands Trust's Mandate, jurisdiction and interest of Trust Council to advance.

CARRIED

11. CORRESPONDENCE - none

(Correspondence received concerning current applications or projects is posted to the LTC webpage)

12. NEW BUSINESS - none

13. STAFF REPORTS

13.1 Gabriola Island Local Trust Committee Meeting Procedures Repeal Bylaw No. 323 - Request for Decision

Trustees had no questions related to the request for decision.

GB-2026-009
It was MOVED and SECONDED

that the Gabriola Island Local Trust Committee Bylaw 323, cited as "Gabriola Island Local Trust Committee Meeting Procedures Repeal Bylaw No. 323, 2025" be adopted.

CARRIED

13.2 Trust Conservancy Report - none

13.3 Applications Report dated January 15, 2026

The Planner provided an update on applications related to properties on The Strand, 0 South Road, and BC Ferries.

13.4 Trustee and Local Expense Report dated November, 2025

Received for information.

13.5 Adopted Policies and Standing Resolutions

Received for information.

13.6 First Nations Relationship Building Update - none

13.7 Climate Change Action Update - none

13.8 Local Trust Committee Webpage - none

14. WORK PROGRAM

14.1 Active Projects Report dated January 15, 2026

Received for information.

14.2 Future Projects Report dated January 15, 2026

A project charter has been approved to initiate a minor project in April and it remains on the future projects list as the project has not started yet.

15. UPCOMING MEETINGS

15.1 Next Regular Meeting Scheduled for Thursday, February 19, 2026 at 10:30 am at the Gabriola Arts and Heritage Centre

GB-2026-010
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff to explore options for a larger venue for the February 19, 2026 Local Trust Committee meeting.

CARRIED

15.2 Change to Electronic Meeting for December - Verbal Update

During the December 17 Executive Committee meeting logistical concern was noted regarding 13 Local Trust Committee meetings scheduled in a three-week period between November and December 2026 Trust Council meetings as a new Executive Committee will have just been formed the week prior and chair

assignments made and it will be logistically difficult for Executive Committee members to travel to various back-to-back Local Trust Committee meetings

GB-2025-011
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff change the meeting location of the December 3, 2026 regular meeting from in-person to electronic.

CARRIED

16. CLOSED MEETING

16.1 Motion to Close the Meeting

GB-2026-012
It was MOVED and SECONDED
that the meeting be closed to the public in accordance with the Community Charter, Part 4, Division 3, s.90 (1) (a), (f), (i) for the purpose of considering:

- (a)personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the municipality or another position appointed by the municipality;
- (f)law enforcement, if the council considers that disclosure could reasonably be expected to harm the conduct of an investigation under or enforcement of an enactment;
- (i)the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose;

and that the recorder and staff attend the meeting.

CARRIED

The meeting was closed to the public at 3:17 p.m.

16.2 Recall to Order

The meeting was recalled to order at 3:45 p.m.

16.3 Rise and Report

Chair Patrick rose and reported the adoption of the November 20, 2025 in-camera meeting minutes and the appointment of Nigel Stoodley to the Mudge Island Advisory Planning Commission commencing immediately until November 20, 2027.

17. ADJOURNMENT

By general consent, the meeting was adjourned at 3:37 p.m.

_____

Laura Patrick, Chair

Certified Correct:

_____

Lisa Millard, Meeting Administrator/Recorder

DRAFT

Gabriola Island Local Trust Committee

Minutes of Special Meeting

Date: February 2, 2026
Location: Electronic Meeting with a location to view the livestream at Islands Trust Northern Office 700 North Road, Gabriola Island, BC

Members Present: Laura Patrick, Chair
Tobi Elliott, Trustee
Susan Yates, Trustee

Staff Present: Renée Jamurat, RPP MCIP, Regional Planning Manager
Stephen Baugh, Island Planner
Ian Cox, Planner 1
Lisa Millard, Meeting Administrator/Recorder

Others Present: There were approximately 1 members of the public in attendance.

1. CALL TO ORDER

Chair Patrick called the meeting to order at 2:30 p.m.

2. TERRITORIAL ACKNOWLEDGEMENT

Chair Patrick acknowledged that the meeting was held on the territory of the Coast Salish First Nations.

3. APPROVAL OF AGENDA

By general consent the agenda was approved as presented.

4. BUSINESS ITEMS

4.1 Planner Presentation on Proposed Bylaw Nos. 321 and 322

The Planner provided a presentation and highlighted the following:

- The subject property is located within the Institutional zone and is currently used for staff parking with a vacant building on the lot;
- Amendments to proposed Bylaw No. 321 (Official Community Plan) would change the zoning from Institutional to Village Commercial, include the property in the Village Center Development Permit Area, and enable the property to be used commercially;
- Amendments to proposed Bylaw No. 322 (Land Use Bylaw) would maintain the existing uses and include the additional use of propane storage;
- Propane storage must comply to federal and provincial regulations;

- Referrals were sent to First Nations, other agencies, and the Gabriola Advisory Planning Commission;
- The referral responses were summarized.

4.2 Question & Answer Period

- A Trustee noted the Advisory Planning Commission recommended the Local Trust Committee consider the impact of neighbours and staff indicated notice would be given to all neighbouring property owners about the Public Hearing.
  - The Public Hearing will be advertised in the Gabriola Sounder and notice sent to all property owners within 100 metres of the property. Community members can attend the public hearing being held February 19 at the Gabriola Community Hall and written submissions can be sent in advance of the Public Hearing.
- A member of the public, who was on the Advisory Planning Commission, stated that one of the recommendations from the Advisory Planning Commission was that the proposed bylaws be sent to the Gabriola Fire Protection Improvement District Board and asked if that had occurred as this is not the same group as the Gabriola Volunteer Fire Department.
  - The Planners noted a referral was made to the Gabriola Volunteer Fire Department and the Advisory Planning Commission report indicated the referral to the Fire Protection Commission was listed as an option but not as a recommendation.
- A Trustee noted that the Gabriola Fire Protection District Board is aware of the application and they should be informed of the Public Hearing, that the response received from the Fire Department was thorough, and they do believe it essential to have a referral from the Board.
  - The Planner noted the turn around time was short for a referral.
- A Trustee asked if a full plan for mitigation of fire risk will be presented at the Public Hearing.
  - The Planner replied this information will be included in the Public Hearing binder.

GB-LTC-013
It was MOVED and SECONDED
that the Gabriola Island Local Trust Committee request staff advise the Chair of the Gabriola Fire Improvement District of the Public Hearing on February 19, 2026 regarding proposed Bylaws No. 321 and 322.

CARRIED

5. ADJOURNMENT

By general consent the meeting was adjourned at 2:57 p.m.

_____

Laura Patrick, Chair

Certified Correct:

_____

Lisa Millard, Recorder

DRAFT

PUBLIC HEARING

GABRIOLA ISLAND LOCAL TRUST COMMITTEE

February 19, 2026
Gabriola Arts and Heritage Centre, 476 South Road, Gabriola Island

PROPOSED BYLAW NO. 321

(Gabriola Official Community Plan (Gabriola) Bylaw No. 166, 1997, Amendment No. 1, 2025)

AND

PROPOSED BYLAW NO. 322

(Gabriola Island Land Use Bylaw, 1999, Amendment No. 1, 2025)

PLRZ20240091 (Mid Island Co-operative Services Ltd.)

Public Hearing Submissions Placeholder

From: GERRIT VERSTRAETE
Sent: Thursday, February 5, 2026 10:48 AM
To: northphsub
Subject: Public Hearing Feb. 19, 2026

Re: Proposed Bylaw No. 321 and 322 hearing February 19, 2026.
To: Gabriola Island Local Trust Committee
From: Gerrit Verstraete, Gabriola Island

I will not be able to attend the above mentioned meeting, but I am a resident just two lots over from the CO-OP station on Lockinvar.
I therefore submit to the Hearing two essential matters to be taken into considering in the amendments to bylaws 321and 322 in keeping with proposed plans to expand Village Commercial Designation and Land Use, meaning the increase of CO-OP's footprint and especially the relocation and enlargement of propane storage.

Matter 1 - Traffic
The intersection at Lockinvar and North Road has been and continues to be a very dangerous intersection where proper traffic flow is violated daily by careless drivers who access CO-OP without due consideration of proper turns considering there are currently 6 entrances and exits within a 100 yard radius of CO-OP property (1 - North Road eastbound, 2 - North Road Westbound, 3 - Lockinvar Northbound, 4 - Lockinvar Southbound, 5 - Lockinvar entrance and exit to CO-OP parking. propane, air hose, etc., 6 - North Road entrance and exit to Groundup Parking (note: Groundup exit is just feet from the intersection as is the gas's station's exit to Lockinvar directly into the intersection) yet with no proper traffic signals and signs to better control and manage traffic flow.
Therefore: what steps will be taken by CO-OP during any proposed construction and traffic pattern changes (and thereafter) once bylaw amendments have been amended and construction and relocation of propane storage begin, to ensure
a) improved traffic flow management
b) traffic considerations when the propane storage tank(s) is (are) being being filled.
c) notwithstanding the increase of traffic on Lockinvar because of Paisley Place (need I say more about the endless convoys of dump trucks, construction and service vehicles. etc., that have accessed Paisley Place during construction and will in part continue to service the area).

Matter 2 - Safety and Security
Residents in the area should not and cannot be concerned daily about safety at the CO-OP and resulting anxieties about potential emergencies because propane will be relocated and stored so close to their houses. That includes safety protocols for loading and unloading and round-the-clock security personnel onsite (cameras just won't do anymore, because the residents in the area will no doubt be increasingly concerned about any suspicious activities onsite), as well as security fencing, safety barriers, etc. To remember that *prevention before* any such incident is better than *response after* the incident, even though both are essential.
Needless to say what measures will be in place for possible spill control and any emergency to unload - or "burn-off" off propane (I witness that a few years ago when the CO-OP propane tank was emptied by burning off, and the heat as well as roaring flames were frightening).

To conclude, I do not object to amending bylaws 321 and 322, provided all traffic, safety, and security matters, are duly considered and acted upon.

Respectfully submitted
February 5, 2026

Gerrit Verstraete

From: Alix Hodson Deggan
Sent: Friday, February 6, 2026 9:32 AM
To: northphsub
Subject: Lot 42 rezoning

To our Gabriola Staff and Trustees,

Considering that this is a densely populated area have the safety issues been considered in the approval of this application. Major propane yard explosions often occur at the intersection of industrial zones and residential areas, leading to mass evacuations and significant property damage.

Notable Neighborhoods Impacted

- **Keele & Wilson (Toronto, ON):** The 2008 Sunrise Propane explosion forced the evacuation of thousands of residents in the **North York** area within a 1.6-kilometre radius.
- **SE Calgary (Calgary, AB):** In 1999, a series of explosions at a propane facility rocked neighborhoods near **17th Ave and 52nd St SE**, with shockwaves felt several kilometers away in areas like **Stoney Trail**.
- **Harewood (Nanaimo, BC):** This neighborhood has experienced significant disruptions and evacuations following gas-related explosions, leading to local traffic chaos and home destruction.
- **Downtown Eastside (Vancouver, BC):** Multiple incidents involving exploding propane cylinders at encampments near **Hastings and Main Streets** have damaged adjacent buildings and prompted emergency safety calls.
- **Maple View Drive (Barrie, ON):** The south end of Barrie near the **Superior Propane**facility was rocked by fire and explosions in 2021.
- **Port Kells/Highway 17 (Surrey, BC):** A major propane facility fire in 2018 caused the closure of Highway 17 and impacted surrounding industrial and residential borders.

Safety & Hazard Radius

- **Projectile Range:** Debris and "missiles" from a propane tank explosion can travel up to **2,500 feet** (approx. 760 metres) in any direction.

- **Evacuation Zones:** For large-scale industrial propane fires, authorities typically establish an immediate evacuation perimeter of at least **1.6 kilometres** to protect against secondary blasts.

We have to ask if locating additional propane storage tanks in a densely populated residential area is this advisable? Why was permission granted for the 500lb tank that is currently above ground and was this approved by the community? Why was this tank not placed underground or in a less developed area?

I think the safety of Lockinvar residents and the village businesses must be considered here in the approval process.

Thankyou,
Alix Hodson and Andrew Deggan

From: H Blokhuizen <[redacted]>
Sent: Friday, February 13, 2026 12:11 PM
To: northphsub
Subject: Bylaws #321 and #322

Gabriola Feb 13

Islands Trust Northern Office
700 North Road
Gabriola BC V0R1X3

To whom it may concern:

Regarding bylaws #321 and #322 , I am opposed unless the drainage is properly realized.

I am the owner of the adjacent (and downstream) property identified as lot #45 in your recent letter (copy attached).

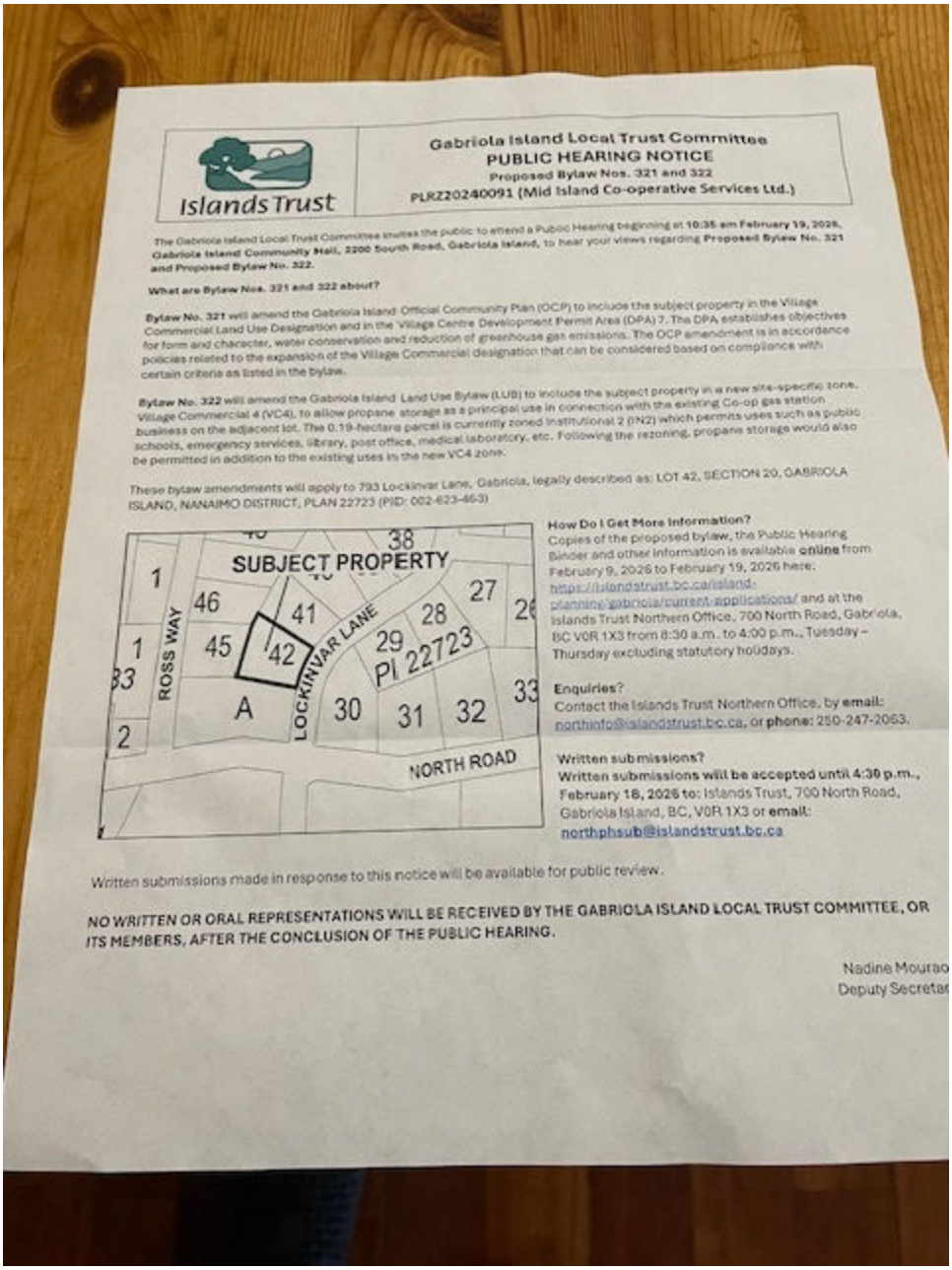
I have many problems with water runoff from lot #42 requiring me to slow the destructive flow, temporarily capturing , and diverting the flow away from my building foundation drains. The legacy drainage infrastructure on Lockinvar Lane ends at lot 42 and the owner ,or proxy have added an ad hoc system of pipes and ditches to conduct this water directly into my property under their fence.

A thoughtful change or repair to the drainage in front of 793 Lockinvar Lane will stop this problem. I would be happy to illustrate this to interested parties.

Regards,

Hendrikus Blokhuizen

[redacted]
Gabriola BC
[redacted]
[redacted]



Islands Trust

Gabriola Island Local Trust Committee
PUBLIC HEARING NOTICE
Proposed Bylaw Nos. 321 and 322
PLRZ20240091 (Mid Island Co-operative Services Ltd.)

The Gabriola Island Local Trust Committee invites the public to attend a Public Hearing beginning at **10:35 am February 19, 2026, Gabriola Island Community Hall, 2200 South Road, Gabriola Island,** to hear your views regarding **Proposed Bylaw No. 321 and Proposed Bylaw No. 322.**

What are Bylaw Nos. 321 and 322 about?

Bylaw No. 321 will amend the Gabriola Island Official Community Plan (OCP) to include the subject property in the Village Commercial Land Use Designation and in the Village Centre Development Permit Area (DPA) 7. The DPA establishes objectives for form and character, water conservation and reduction of greenhouse gas emissions. The OCP amendment is in accordance policies related to the expansion of the Village Commercial designation that can be considered based on compliance with certain criteria as listed in the bylaw.

Bylaw No. 322 will amend the Gabriola Island Land Use Bylaw (LUB) to include the subject property in a new site-specific zone, Village Commercial 4 (VC4), to allow propane storage as a principal use in connection with the existing Co-op gas station business on the adjacent lot. The 0.19-hectare parcel is currently zoned Institutional 2 (IN2) which permits uses such as public schools, emergency services, library, post office, medical laboratory, etc. Following the rezoning, propane storage would also be permitted in addition to the existing uses in the new VC4 zone.

These bylaw amendments will apply to 793 Lockinvar Lane, Gabriola, legally described as: LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723 (PID: 002-623-463)

How Do I Get More Information?
Copies of the proposed bylaw, the Public Hearing Binder and other information is available **online** from February 9, 2026 to February 19, 2026 here: https://islandstrust.bc.ca/island-planning/gabriola/current-applications/ and at the Islands Trust Northern Office, 700 North Road, Gabriola, BC V0R 1X3 from 8:30 a.m. to 4:00 p.m., Tuesday – Thursday excluding statutory holidays.

Enquiries?
Contact the Islands Trust Northern Office, by **email:** northinfo@islandstrust.bc.ca, or **phone:** 250-247-2063.

Written submissions?
Written submissions will be accepted until 4:30 p.m., February 18, 2026 to: Islands Trust, 700 North Road, Gabriola Island, BC, V0R 1X3 or **email:** northphsub@islandstrust.bc.ca

Written submissions made in response to this notice will be available for public review.

NO WRITTEN OR ORAL REPRESENTATIONS WILL BE RECEIVED BY THE GABRIOLA ISLAND LOCAL TRUST COMMITTEE, OR ITS MEMBERS, AFTER THE CONCLUSION OF THE PUBLIC HEARING.

Nadine Mourao
Deputy Secretar

Bylaws #321 and #322

Mid Island Consumer Services Co-operative (Mid Island Co-op)

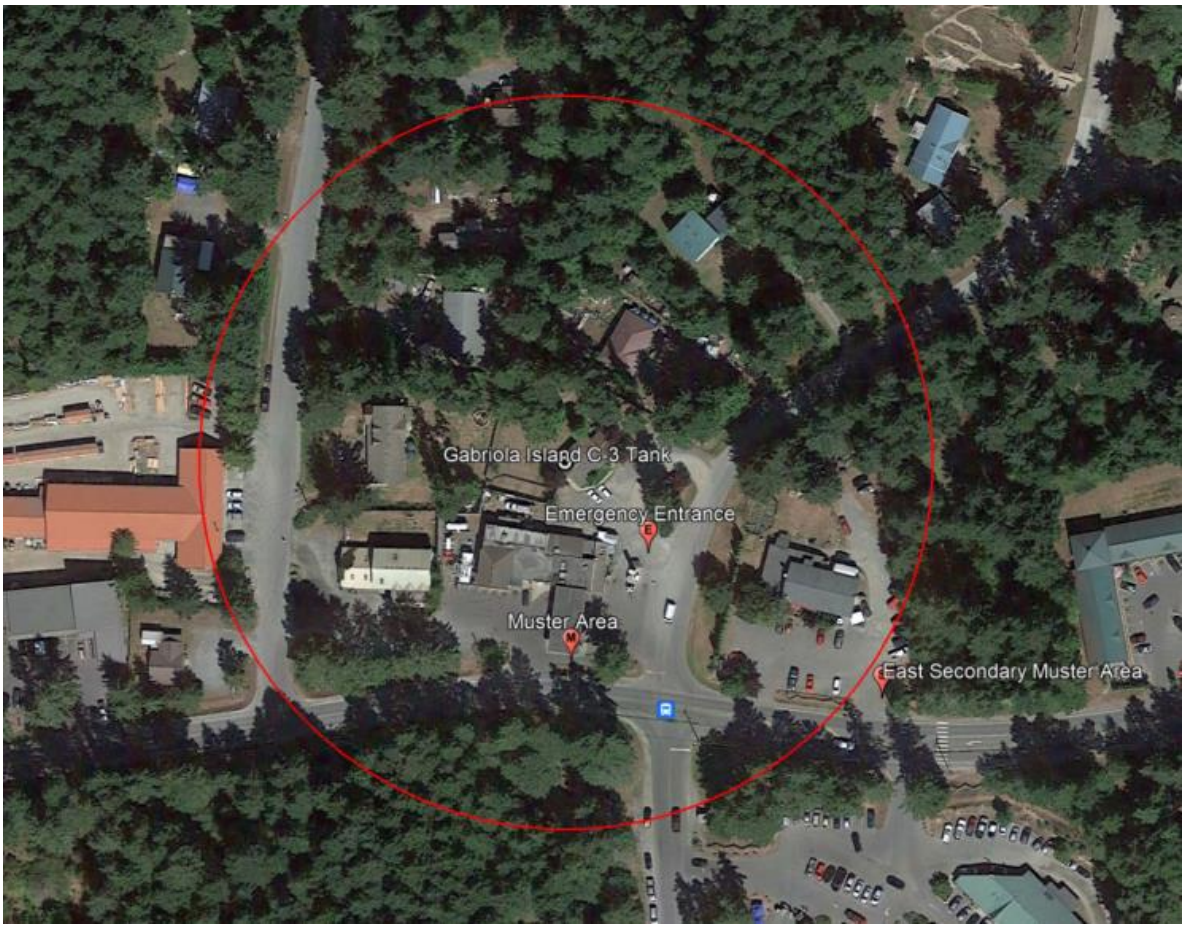
Environmental Emergency (E2) Plan

For the Propane Installation at 793 Lockinvar Lane, Gabriola Island, BC

Site Location
Emergency 1st Responder Entrance to facility: • GPS - DD (decimal degrees): 49.17439, -123.84605 • 793 Lockinvar Lane Gabriola Island BC One 9,400 USWG propane tank is located at: • Mid Island Co-op Bulk Plant • 793 Lockinvar Lane Gabriola Island BC V0R 1X0 • DD (decimal degrees): 49.17461, -123.84636 Mail to: • Head Office: 106–2517 Bowen Road Nanaimo BC V9T 3L2 E2ID# TBD

Section 1 Executive Summary

Following information is required in activating the E2 Plan: Map showing Muster Areas, 1st Responders Entrance, Emergency Information & Equipment Locations, Site Address, E2 Plan Activation and Emergency Contacts, Incident Procedures, and Emergency Notification & Communications Procedure.



Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREA	East of site on North Road

ADDRESS of Gabriola Island Propane Bulk Plant: 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

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Section 2 Introduction

2.1 CRS Health Safety and Emergency Preparedness and Response Statement

The CRS is committed to health and safety through operational integrity and effectively manages its work to identify and mitigate risks to health, safety, and the environment.

Operational integrity at the CRS means conducting all activities safely and reliably so that the public is protected, impact to the environment is minimized, the health and wellbeing of employees is safeguarded, contractors and customers are safe, and physical assets (such as facilities and equipment) are protected from damage or loss.

This Emergency Response Plan has been developed to meet or exceed the requirements of all applicable governing agencies and regulatory bodies where the CRS operates.

The following plan considers an area-specific hazard/risk analysis and outlines the necessary resources, personnel, logistics and initial actions to facilitate a prompt, coordinated and rational approach to any emergency.

2.2 Purpose

This Emergency Response/Environmental Emergency (E2) manual describes the procedures for Mid Island Co-op personnel in the event of an emergency at a company facility.

This E2 plan has been prepared in accordance with the Environmental Emergency (E2), Regulations made pursuant to the Canadian Environmental Protections Act, 1999 (CEPA 1999), reflecting the four pillars of emergency management: prevention and mitigation, preparedness, response, and recovery.

Sharing portions of information within this manual with interactive stakeholders or those residents or businesses in the proximity of effect from an emergency is encouraged.

2.3 Objectives of the E2 Plan

- Reduce the frequency and consequences of uncontrolled, unplanned, or accidental releases of propane.
- Promote the safety of workers, responders, and the public.
- Reduce the potential for destruction of goods and property.
- Minimize the effect upon the environment.
- Communicate risks associated to the facility with the local emergency response services.
- Help responders quickly determine and initiate proper remedial actions.
- Inform neighboring citizens and businesses of preparations and actions that will minimize risk to safety and health during an emergency event.
- Liaise with local municipal administrations in the context of public safety.
- Reduce recovery times and costs.

These objectives are achieved through the development, implementation, training/exercising and maintenance of this E2.

2.4 Scope of Emergency Procedures

Due to the complexity and variables of an emergency, it is difficult to determine an exact systematic process that will be effective in all situations. The common elements within responses are listed. The responder will determine the sequence and execution at the time of the incident.

This E2 Plan addresses the following list of risks:

- Propane gas release
- Propane liquid release
- Fires
- Explosions
- Threats to people, property, and goods
- Other site-specific values at risk

2.5 E2 Plan Access

An up-to-date plan shall be kept in the red plastic document holder - labelled E2/SDS - installed near emergency horn activation on North exterior wall of convenience store so as to be readily available to site personnel and 1st Responders.

2.6 Joint Responsibilities

Mid Island Co-op owns and operates this Bulk Plant on Gabriola Island BC.

2.7 Plan Consultation/References

- Canadian Environmental Protection Act, 1999 - Part 8: Environmental Matters Related to Emergencies
- Environmental Emergency Regulations SOR/2019-51
- Technical Guidelines for the Environmental Emergency Regulations, 2019 Version 2.0
- WorkSafe BC Guidelines – OHS Reg's. Part 4: Emergency Preparedness and Response
- WorkSafe BC Guidelines – OHS Reg's. Table of Exposure Limits for Chemical Substances
- CCOHS https://www.ccohs.ca/oshanswers/hsprograms/basic.html
- National Fire Code of Canada – Division B, Emergency Planning
- Federated Co-operatives Limited SDS – Propane
- CAN/CSA Z731-03 Emergency Preparedness and Response
- CAN/CSA B149.1 Natural Gas and Propane Installation Code
- CAN/CSA B149.2 Propane Storage and Handling Code
- ASME Vessel Specifications
- Canadian Electrical Code
- Provincial Boiler and Pressure Vessel Acts and Regulations
- Safeti, formerly PHAST (Process Hazard Analysis Software) Analysis Modelling from Marsh Risk Consulting
- MIACC (Major Industrial Accidents Council of Canada) is a risk-based land use planning guide (MIACC was dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering)

2.8 Record of Amendments

Record changes made to the Plan on the table below and replace applicable pages.

#	Date of amendment	Section # amended	Recorded by
1	2023	New E2 Plan	Kevin McEown - FCL and Kelli Cartwright - Mid Island Co-op

2.9 Company Profile

Nature of Business

Mid Island Co-op is a locally owned co-operative serving local communities with food and fuel.

Typical Storage Use and Delivery Activities

This Mid Island Co-op owned and operated Bulk Plant on Gabriola Island BC has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

2.10 Glossary

Active Mitigation: A safeguard system designed to mitigate the consequences of an incident that requires human intervention, external mechanisms, or energy sources. Examples include lighting, automatic and manual valves, etc.

Alternate Scenario: An environmental emergency that could reasonably be expected to occur at a facility and that would likely cause harm to the environment or constitute a danger to human life or health.

Alternate Worst-case Scenario: Means the scenario described in section 4(2)(f) of the E2 Regulations. It involves the alternate scenario that is more likely to occur than the worst-case scenario **and** that has the longest impact distance outside the boundary of the facility (if it exists).

BLEVE: (boiling liquid expanding vapor explosion) happens if a container holding a pressure liquified gas (e.g., propane) fails catastrophically. Catastrophic failure of the vessel is followed by the explosive release of boiling liquid and expanding vapour.

The BLEVE is a physical explosion where the hazards are blast and projectiles. Propane is flammable so a fireball may happen after a BLEVE if the released cloud is immediately ignited. This is usually the case if the tank failure is caused by fire impingement. If a flammable cloud is not ignited immediately then delayed ignition could lead to other fires, explosions, etc.

A BLEVE will typically occur when the steel of the tank is compromised by an external impinging fire and consequential rupture due to the combination of internal over-pressure and weakening steel strength due to overheating. A warning sign of an impending BLEVE may be intermittent or a continual flare-off from the pressure relief valve until the tank either BLEVE's or rids enough propane where flare-offs cease. The variables within the chain of events are difficult to accurately predict.

CAS Registry Number: The identification number assigned to a substance by the Chemical Abstracts Service, a division of the American Chemical Society. The Chemical Abstracts Service Registry number is the main identifier for regulated substances found in the E2 regulations. CAS number for Propane is 74-98-6.

CEPA: Canadian Environmental Protection Act, 1999.

CERCA: The Canadian Emergency Response Contractors' Alliance (CERCA) is an industry association comprised of stakeholders from all facets of the Canadian dangerous goods emergency response industry. The mission of CERCA is to foster the establishment of a sound emergency response network in Canada.

Community Emergency Systems Notification: An advisement document used to communicate avoidance and evacuation actions in the event of a vapor cloud drift, substantial release, or fire. This notification is for offer to neighboring residences and businesses that are within the harm radius of the risk model.

Container System: Any receptacle or network of receptacles that is used to contain a substance – including any connected pipelines or piping – except any part or that network that is automatically or remotely segregated from the rest of the network by shut-off valves, or other mechanisms in the event of any environmental emergency.

CRS: Co-op Retailing System.

CRS-EMRG: The Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) is a toll-free number (1-833-277-3674) to call (24/7) to report an emergency related to FCL or Co-op. A dispatcher (STARS) will ask a series of questions to gather information about the incident and will then notify the appropriate FCL Emergency Management Team (EMT).

E2 (Environmental Emergency): This refers to the Environmental Emergency Regulations that address the prevention of, preparedness for, response to and recovery from, and environmental emergency caused by uncontrolled, unplanned, or accidental releases.

E2 Plan: Environmental Emergency (E2) Plan is a document that provides guidance on actions under various emergencies and conditions.

ECCC: Environment and Climate Change Canada.

Emergency: An emergency is a potential or a real developing situation, which may cause injury, property damage, environmental damage and/or impact on corporate image and reputation.

Emergency Management Centre (EMC): The FCL EMC is where the FCL Emergency Management Team will meet in the event of an emergency involving the Propane Department will typically be located at FCL's Home Office.

Emergency Management Team (EMT): The FCL EMT is a group of subject matter experts and advisors who provide oversight and guidance to emergency response measures.

Emergency Notification System: Is an advisement document used to communicate actions in the event of a vapor cloud drift, fire, explosion, substantial release or other where proper avoidance, evacuation and muster point items are explained. This notification is for offer to neighboring residences and businesses etc. that are within the harm radius of the risk model.

Emergency Operations Manager (EOM): The FCL EOM is responsible for the FCL Emergency Management Centre and working with the Emergency Management Team initially determines Emergency Response Activation Plan activation, crisis level and owner and what support or guidance and performs duties as described within this plan.

Emergency Responders: General term for a group of individuals who have defined skills or responsibilities in an emergency.

Environmental Emergency: Means an uncontrolled, unplanned, or accidental release of an E2 substance into the environment (or the reasonable likelihood of such a release) that:

a) Has or may have an immediate or long-term harmful effect on the environment; or

b) Constitutes or may constitute a danger to the environment on which human life depends; or

c) Constitutes or may constitute a danger in Canada to human life or health.

Environmental Officer (EO): The EO as a member of FCL's Emergency Management Team initially assesses the degree of potential environmental impacts and performs duties as described in this plan.

ERAC: Emergency Response Assistance Canada formerly the Liquid Propane Gas Emergency Response Corporation is a division of the Canadian Propane Association developed to offer emergency services for the Canadian propane industry. The ERAC has Emergency Response Teams situated in various locations nationwide to respond to major propane emergencies.

ERAP: An emergency response assistance plan describes what to do in the event of a release or anticipated release of certain higher-risk dangerous goods – such as propane - while they are in transport. An ERAP requires a third-party responder agreement between FCL, and the third party listed in the ERAP – being ERAC - that will provide technical or emergency response advice, and/or provide resources to respond to a release or anticipated release on FCL's behalf.

ERC: The Emergency Response Coordinator will typically be the most senior and or qualified manager, supervisor or employee on site that is able to instruct the activities of others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

FCL: Federated Co-operatives Limited.

Fireball: Can result from an instantaneous release from a BLEVE or a release with a delayed ignition.

Full-scale Simulation Exercise: An action-based simulation exercise requiring the deployment of personnel, resources, and equipment.

HBC: The Home Base Co-ordinator is a person that is verified under CERCA to advise Local Emergency Responders, owners and their contracted Emergency Response Team on remedial activities following an incident.

Incident Action Plan (IAP): Within Incident Command System, includes the overall incident objectives, strategies and tactics established by Incident Command.

Incident Commander (IC): Within Incident Command System, has overall incident management responsibility.

Incident Command System (ICS): The ICS is a standardized on-site management system designed to enable effective, efficient incident management within a common organizational structure.

Information Officer (IO): The IO as a member of FCL's Emergency Management Team initiates and directs established communication response and performs duties as described in this plan.

Muster Area: The Muster Area is typically situated on site or adjacent to site in a safe location. Choice of location is prior to an emergency event. Posting a sign identifying the Muster Area and placing a copy of the E2 Plan there in a weatherproof container is required.

Operations Chief (OC): Within Incident Command System, directly manages all incident tactical activities and implements the Incident Action Plan.

Overpressure: The overpressure of the atmosphere due to an explosion. Probabilistic risk models used for FCL facilities base is 1-psi overpressure. Overpressure of 1 psi may cause structural damage to buildings. Levels of 3-5 psi will cause significant structural damage and cause severe or fatal injury to persons openly exposed to a pressure wave.

Passive Mitigation: A safeguard system designed to mitigate the consequences of an incident that does not require human intervention, external mechanisms, or energy sources. Examples include fencing, protection against collision damage etc.

PID: Piping and Instrumentation Diagram.

Planning Chief (PC): Within Incident Command System, oversees all incident-related data gathering and analysis regarding incident operations and assigned resources, conducts Planning Meetings, and prepares the Incident Action Plan for each operational period.

Reasonable: Means logically valid. It is based on using sound judgement, and therefore, practical, and sensible as opposed to extreme or excessive.

RMA: The Remedial Measures Advisor is a person that is qualified under the LPGERC (ERAC) to advise Local Emergency Responders and or CPA members on remedial activities following an incident.

SAFETI: Process Hazard Analysis Software used for Analysis Modelling prepared by Marsh Risk Consulting.

Safety Officer (SO): The SO as a member of FCL's Emergency Management Team monitors incident operations and advises the Emergency Operations Manager on all matters related to operational safety and performs duties as described in this plan.

SDS: Safety Data Sheet.

Secondary Muster Area: Two Secondary Muster Area are situated a cross wind to the Muster Area and evacuated to when it is not safe to go to a Muster Area or remain at the Muster Area. Choice of location depends on wind direction.

Shelter-in-place: Means finding a safe location indoors and staying there until you are given an "all clear" or told to evacuate.

Simulation Exercise: An exercise simulating the response to an environmental emergency involving the release of an E2 substance.

Strike Team (ST): Within Incident Command System, a set number of resources of the same kind and type that have an established minimum number of personnel, common communications, and leader.

STARS: STARS Emergency Contact Centre (ECC) is a service offered by STARS Emergency Link Centre (ELC) to answer calls to the Co-op Retail System (CRS) Emergency Hotline (CRS-EMRG) for emergencies related to FCL or Co-op and provide incident notification to the appropriate FCL Emergency Management Team.

Unified Incident Command (UIC): Within Incident Command System, UIC allows agencies with different legal, geographic, functional authorities and responsibilities to work together effectively. All responsible agencies jointly provide management direction through a common set of incident objectives and strategies established by a single Incident Action Plan.

USWG: United States Water Gallon. This measurement relates to the capacity of an LPG tank based on how much water the containment can hold.

VCE: (vapor cloud explosion) is a chemical explosion and occurs when a large quantity of flammable vapor or flammable gas is ignited, and the flame propagates at a rate/speed fast enough to create an overpressure. Release or migration of flammable vapor/gas into a confined area with ignition will create a substantial overpressure and thermal event. Migration of the vapor/gas cloud will determine where and the intensity of a VCE which will be influenced by degree of congestion, terrain, and other obstructions.

Wildfire: Wildfire, also known as a forest fire, prairie fire, grass fire, or brush fire, is an unplanned, unwanted, uncontrolled fire often occurring in wildland areas, but which can also consume structures.

Worst Case Scenario: Means the scenario described in section 4(2)(e) of the E2 Regulations. It must involve the release of the maximum quantity of an E2 substance that could be contained in the container system with the largest maximum capacity at a facility, or the maximum expected quantity of the substance on-site that is not contained. The scenario does not need to be reasonable.

Section 3 Management and Administration of the E2 Plan

3.1 E2 Plan Development Evaluation Review Update and Consultation Team

The team participating in the plan development, initial review and responsible for its annual evaluation, exercise, review, updates as necessary by the following individuals within their roles:

Participant	Organization	Function and Project Role
Bruce Buckingham	Mid Island Co-op	Director of Energy Operations (Plan Approval)
Kelli Cartwright	Mid Island Co-op	Area Manager (Plan Advisory for Development, Plan Implementation, Training/Exercise and Maintenance)
Kevin McEown	Federated Co-operatives Limited - Propane	Senior Health and Safety Advisor (Plan Development, Implementation, Training/Exercise Development and Maintenance)
Darrell Rose	Marsh Risk Consulting	Senior Vice President (exempted from approvals) (Risk Engineer)

3.2 E2 Plan Distribution

The E2 Plan will be made available to all employees, emergency service providers, stakeholders, and regulatory authorities by the following:

#	Name of Person who received the ERP manual	Individual/Organization	Date Issued
1	Bruce Buckingham	Mid Island Co-op - Director of Energy Operations	2023
2	Kelli Cartwright	Mid Island Co-op - Health & Safety Coordinator	2023
3	Kevin McEown	FCL Propane - Senior Health & Safety Advisor	2023
4	XXXX	Gabriola Volunteer Fire Department - Fire Chief	2023

3.3 ECCC Notifications

On XXXX, ECCC received Schedule 2-5 notices, under CEPA's E2 Reg's, 2019.

Section 4 Risk Assessment

4.1 Propane – General Characteristics and Hazards

4.1.1 Background

The inherent properties of propane with its low boiling point make it a feasible energy source used in a variety of energy applications from heating to transportation. Propane uses include fuel for heating, cooking, automobile and forklift truck fuel, crop drying, welding, and cutting operations. Industry uses propane as a refrigerant, solvent and as a chemical feedstock.

Under normal atmospheric conditions propane is a gas, however, increasing the pressure causes the substance to condense into a liquid. This characteristic of propane allows for storage of large quantities of liquid propane inside of a pressurized container. When liquid propane vaporizes (phase changes) from its liquid state into its gaseous state it creates a refrigerating effect (cooling).

4.1.2 Properties

Propane is stable and non-reactive under normal conditions of use, storage, and transport. Conditions to avoid include heat, sparks, open flames, and other ignition sources. Avoid contact with incompatible materials, which includes any strong oxidizing agents. Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

Propane is a colorless, odorless gas in its natural state, so the addition of a stench odorant called ethyl mercaptan gives propane a distinct boiling cabbage like odor. Propane is transported and stored as a liquid in pressure vessels to a capacity of approximately 80%, which allows room for vapor expansion. When propane liquid is released from its confinement, it converts to a gas to a rate of 270:1. The speed of vaporization is dependent on ambient temperature. Most calculations are based of 15° C; however, calculations are made for differing temperatures to assure safe load weights. Below -42° C, propane will lose its ability to vaporize and remain a liquid. Installation of vaporization appliances or supply tank heaters ensure function in extremely low temperatures or in high volume demand situations. Propane is 1.6 times heavier than air and settles in lower areas if released. Propane vapors will dissipate into the atmosphere rather quickly depending on wind conditions and ambient temperature. Propane is non-toxic, however may be an asphyxiant if enough breathable air is displaced. The combustible range of propane is between 2.2% and 9.5% mixture with the atmosphere. This is a relatively low range of flammability; however, periphery zones of a vapor cloud will ignite if it falls within the flammability range mentioned.

For more information refer to 9.2.1 Safety Data Sheet.

4.1.3 Provincial Exposure Limits

Table 4.1.3 Work Safe BC Table of Exposure Limits

Substance	CAS #	Time Weighted Average Limit (TWA)		Short Term Exposure Limit (STEL)	Notations
		ppm	mg/m³		
Propane	74-98-6	N/A	N/A	Simple asphyxiant	EX

Note: The term EX means the substance is a flammable asphyxiant - updated June 1, 2021.

4.1.4 Potential Health Effects/First Aid Measures

Propane is non-toxic, but if released into a confined space or settles in lower areas it will displace the air making it difficult to breathe. It is always important to seek medical attention if you are experiencing signs and symptoms from exposure. Some of the effects of exposure:

Eye Contact: Rapidly expanding Propane can cause eye irritation and frostbite (cold burn). Permanent eye damage or blindness could result.

Inhalation: Chemical asphyxiant hazard – if accumulation occurs to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness at first but if inhaled at high concentrations, the central nervous system depresses and reduces the ability of the blood to carry oxygen to body tissues.

Skin Contact: Direct contact with liquefied propane gas can result in frostbite (cold burn).

Ingestion: Not a normal route of exposure - unlikely.

4.1.5 Summary – Potential Risks of Release for Propane

Propane has no natural odour and is non-toxic but is an asphyxiant in high concentrations. The vapour density of propane is 1.6; consequently, it will accumulate in lower areas such as ditches and sewers. To be combustible, propane needs to be within its flammable or explosive range between the Lower Explosive Limit (LEL) 2.2% and Upper Explosive Limit (UEL) 9.5% by volume in atmosphere. When liquefied propane is released into the atmosphere, it will expand up to 270 times in vapour to that of liquid.

The impact on life safety and the physical environment because of an unplanned release can be detrimental, so it is important to reduce the risk through the implementation of elimination, engineering, and administrative controls.

4.2 Facility Location, Storage, Handling, and Risk Mitigation

4.2.1 Description of Facility Property Surrounding Area Including Potential Receptors

The 9,400 USWG horizontal propane storage tank is installed above ground.

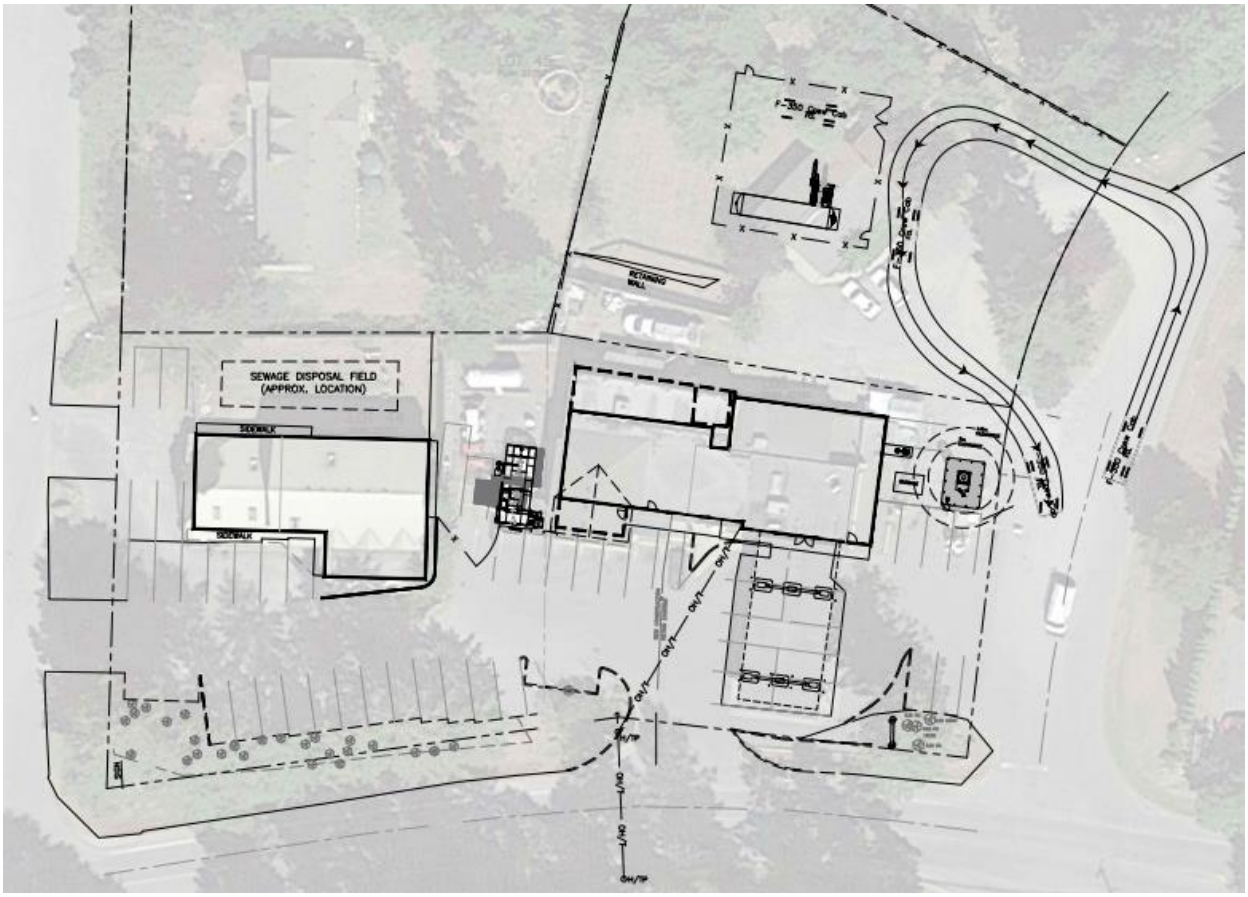
The facility located at 793 Lockinvar Lane, on Gabriola Island, within Gabriola Island Trust Area, and the Regional District of Nanaimo BC. Gabriola Island has a population of 4,500 and population density per square kilometer of 77.4 (Statistics Canada, 2021 Census).

The alternate worst-case scenario is a jet fire based on propane liquid released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario.

There is a delivery driver working from the propane bulk plant.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.2.1 Facility and Property



4.2.2 Maximum Capacity and Quantity of Propane Stored on Site

Propane is the only product on site that meets the minimum threshold requirements for developing the Environmental Emergency (E2) portions of this Plan as per Environment and Climate Change Canada's E2 Regulations. The capacity of the largest single container in which propane is stored on site is 18.0243 metric tonnes (9,400 USWG). The maximum expected quantity of propane on site at any time during the calendar year is 18.0243 metric tonnes (including piping) - the working volume limited to 80% of the capacity of the propane vessel on site to allow for expansion/contraction of propane due to changes in temperature/pressure within the vessels. **18.0243 metric tonnes are registered with ECCC using SWIM for both quantity and capacity as it is not known how much if any tanks (at up to 5% maximum) or cylinders (at up to 80%) will be stored on-site.** Since both the largest single container and maximum expected quantity both exceed 4.5 metric tonnes, an E2 Plan is required.

4.2.3 Substance Identification

Schedule 1 of Environmental Emergency Regulations, 2019 - Part 1						
Item	Column 1	Column 2	Column 3	Column 4	Column 5	
	CAS No	Name of Substance	Concentration % mass/mass	Minimum Quantity (tonnes)	Hazard Category	UN No
17	74-98-6	Propane	1	4.5	E	1978

Legend: E explosion hazard

4.2.4 Process Description

This Mid Island Co-op staffed Bulk Plant has a 9,400 USWG horizontal above ground propane storage tank supplying a 3,400 XXXX USWG delivery truck. At this time, Propane is replenished by Federated Co-operatives Limited (FCL) Propane department 5,950 USWG delivery units. Depending on seasonal demands, the tank is replenished ~once weekly (winter) and ~once every two weeks (summer). Deliveries to the tank take approximately 60 minutes to off-load.

4.2.5 Passive Mitigation

The 9,400 USWG horizontal propane storage tank is installed above ground.

Locked non-climb-able metal fence segregate the above ground propane tank from the public.

Stationary propane tank and its associated piping are protected against collision damage by concrete filled metal posts XXXX.

4.2.6 Active Mitigation

The facility is illuminated at night.

The facility has a typical amount of portable fire extinguishers as required by the local fire code. Access for fire department equipment is good.

The propane storage tank is within reach of hose streams from outside of the facility and firefighting water is supplied by water shuttles.

The delivery trucks have driven-away protection in the form of interlocks that prevent the truck from being placed into gear with the propane loading hose attached ("refinery gates"). The tanks on the delivery trucks are outfitted with excess flow valves that will shut off flow to the atmosphere should a significant hose or pipe break occur. Trucks are outfitted with positive air shut off devices and will shut down the engine if propane gas is ingested. Drivers have an emergency remote stop device in their possession that if activated shuts off the truck, closes the ISC valves and while pumping requires the driver to manually press a button at timed intervals to continue flow. A back-check valve at the barrel fill-in point protects piping.

Manual emergency shutdown devices are provided at the above ground tank and on the North exterior wall of the convenience store. Pressure relief valves are installed on the fixed tank and delivery vehicles.

There are good controls utilizing the operating and maintenance procedures. The storage tank has no other fire systems or controls such as fire or gas detection systems.

Vandals or trespassers to the facility and propane area are dealt with by the local law enforcement fully of the law.

4.3 Frequency, Probability and Consequence Risk Assessment

Version 8.71 of the commercially available software package, Safeti (formerly Phast Risk) from DNV was used to perform a probabilistic risk assessment of this operation:

https://www.dnvgl.com/services/qra-and-risk-analysis-software-phast-and-safeti-1676

Safeti has consequence modelling software, used for developing heat radiation levels, used in accessing the fire and explosion consequences (overpressures and heat radiation) associated with the propane tanks. Safeti examines the progress of a potential incident from the initial release to far-field dispersion, including modelling of pool spreading and evaporation, and flammable and toxic effects. Safeti was used for the consequence modelling of events modelled for emergency response purposes.

Safeti allows individual receptors to be defined with specific vulnerability data providing a much more accurate picture of the risks to which those within the calculated consequence areas are exposed. The program supports a range of vulnerability models, specific to the effect type being considered. For explosion vulnerability, models are available which consider either overpressure or impulse, with the data being treated discretely or interpolated. For radiation effects, flammable probit methods based on intensity and dose are used.

The methods and vulnerabilities are based on the guidance given by the National Institute of Public Health and the Environment (RIVM) Centre for External Safety, of the Netherlands, as set out in their External Safety (Establishments) Decree (BEVI) (RIVM, 2009). This methodology is based on the former guidelines presented by TNO in their "Coloured Books", with the Guidelines for Quantitative Risk Assessment, CPR18E, or more widely known as the "Purple Book" (CPR-RE, 2005). The concepts of the other "Coloured Books" are utilized within Safeti.

- BEVI – Besluit Externe Veiligheid Inrichtingen, translates as the External Safety (Establishments) Decree of RIVM
- Purple Book - CPR 18E "Guidelines for Quantitative Risk Assessment" published by the Committee for the Prevention of Disasters department TNO, a Netherlands Organization
- RIVM – Rijksinstituut voor Volksgezondheid en Milieu, translated as the National Institute of Public Health and the Environments of the Netherlands
- TNO - Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, or the Netherlands Organization for Applied Scientific Research, out of Sdu Uitgevers, Den Haag (The Hague). Their Committee for the Prevention of Disasters publishes guidelines on quantitative risk assessment calculations.

The consequence estimating models used in this study are for risk management purposes only. As such, they are not modelling of the actual physical event. As with all models, small changes in the input parameters can significantly affect the resulting consequence estimates.

While the parameters selected in consultation with FCL are reasonable for the model and situation, it must be kept in mind that the results are not absolute. Therefore, the consequence estimates should be taken as only an indication of the extent or order of magnitude of the potential consequence. The actual consequence may be more severe than under the reasonably foreseeable conditions assumed.

SAFETI Parameters and Model Settings:

- Dispersion
    - Atmospheric Expansion - DNV Recommended
    - Modelling of Instantaneous Expansion - Old Standard Method
    - VCE - TNT, 10% yield, Ground Burst
    - Fireball - Roberts TNO Hybrid
    - BLEVE (not applicable to this site) - CCPS Second Edition

4.3.1 Frequency Analysis

As Mid Island Co-op has had no significant propane incidents in its history, we elected to use general industry data for the frequency analysis, specifically that data given in the Purple Book and BEVI methodologies. From these frequencies, combined with the consequence distances calculated for events which would reach offsite receptors, Individual Risk contours can be calculated to compare to acceptable risk criteria.

The use of this method negates the need for fault tree, event tree, and human reliability analysis, as the frequency of the end event is given directly for input into Safeti.

The probabilities of interest in this study are given as:

Table 4.3.1

Event / Installation	Events per Vessel-Year or per Hour-Operation		
Loss of Containment	Instantaneous	10 minutes Continuous	10 mm dia. Continuous
Stationary Pressure Vessel	5×10^{-7} /y	5×10^{-7} /y	1×10^{-5} /y
Loss of Containment	Instantaneous	Largest Connection, Continuous	
Pressurized Road Tankers	5×10^{-7} /y	5×10^{-7} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Hoses	4×10^{-6} /h	5×10^{-5} /h	
Loss of Containment followed by Ignition	Instantaneous	Largest Connection, Continuous	
Road Tanker on Site	1×10^{-6} /y	1×10^{-6} /y	
Loss of Containment	Full Bore	10% Nominal Diameter Release	
Piping (nom dia. <75mm)	1×10^{-6} /m-y	5×10^{-6} /m-y	
Piping (nom dia. ≥75mm, ≤150mm)	3×10^{-7} /m-y	2×10^{-6} /m-y	
Piping (nom dia. >150mm)	1×10^{-7} /m-y	5×10^{-7} /m-y	

Safeti also utilizes the probability of ignition from the BEVI methodology for stationery and road tanker vessels. For stationary vessels, the probability of ignition is 0.2, 0.5, and 0.7 for continuous releases of 10, 10 to 100, and over 100 kg/s respectively, and for instantaneous releases of 1000, 1000 to 10,000, and over 10,000 kg respectively. Further, we have entered ignition sources at the adjacent facilities

and residential dwellings, which have gas-fired heating systems, and a linear ignition source being the roadways adjacent to the property.

We have multiplied the frequency at which a single vessel may lose containment by the number of similar vessels typically on site, by the number of hours loading hoses are used, or by the number of metres of piping which may contain propane.

An important element in the frequency at which a particular dispersion may reach a receptor is the wind direction and speed. Of slightly lower effect on the dispersion, but still somewhat significant for propane, is the atmospheric temperature, stability, and humidity. Although we have reviewed historical wind directions and speeds, and other pertinent weather parameters in the area, based on Environment Canada, we did not use this data directly in the compilation of the individual risk contours based on wind direction. Rather, we utilized the greatest possible extent of the Individual Risk contour and plotted that distance as a circle of that diameter, thus adding conservatism to the calculation based on wind direction.

We then considered the safety features of the facility, especially of the loading operations, which have the highest frequency of releases traditionally. Each of the delivery trucks are outfitted with an interlocking device, which does not allow the truck to move if the loading hose is attached to the main vessel. This feature lowers the frequency of a hose drive-away event occurring by approximately one order of magnitude.

Other typical features such as excess flow valves on delivery truck tanks, pressure relief valves, and, most importantly, management systems including operating and maintenance procedures and operator training, would be expected to lower the frequency of the postulated events by at least another order of magnitude in aggregate, virtually across the scenarios. However, within the loss data, as is typical with all frequency numbers, we do not know how many of the safety features were in place for the events that the frequency data was based on, therefore, we have assumed, conservatively, that the equipment in those losses had a reasonable number of safety features.

4.3.2 Consequence Analysis

Propane is held and dispensed from the above ground propane storage tank on the site. The vessel, hose, and piping sizes were entered in Safeti to calculate consequences of loss of containment events. In following the BEVI and TNO Purple Book methodology, and thus the remainder of the TNO Coloured Book series, we have used the vulnerability to receptors as contained in that series. Vulnerability was in relation to thermal radiation effects due to fireball, jet, and pool fires, and explosion overpressure effects.

4.3.2.1 Modelling Parameters and Weather

Weather parameters were modelled based on data provided at hourly intervals over a 5-year period. This data considers wind speeds and directions and the associated probabilities, the Pasquill atmospheric stabilities, relative humidity's, etc., and daytime and night-time conditions. This data was entered Safeti to calculate probabilities of weather-related dispersion events over the releases.

4.3.2.2 Releases in General

For each of the vessels and tank, there were common release events chosen, based on the BEVI requirements. These were a catastrophic, instantaneous release of all the mass of the vessel; a 10-minute release of the entire mass of the vessel, and a 10 mm hole in the system, releasing all the mass of the vessel over time. If vessels at this facility are connected via a common header, we postulate a release of more than one vessel through piping. In addition, when a hose connects the 9,400 USWG tank with the truck tank, there is a possibility that both tanks will empty their contents through the hose release if protection devices fail to operate. Thus, we have used the combined volumes of the two tanks in these cases.

Note that in all cases, the volume of the releases in question would be a maximum of 80% of the nominal volume of the tanks, based on maximum fill levels. However, for the consequence analysis for emergency response considerations, we have used the full 100% capacity of the propane tanks to add conservatism and to indicate worst probability scenarios.

All releases (other than catastrophic) were assumed to be released horizontally, which creates the maximum offsite consequences. The release can be directed in any direction over 360 degrees and impinges on the ground or nearby vessels and structures. Such impingement creates a larger consequence event onsite, but lesser consequences offsite. Thus, the use of a horizontal jet is conservative.

Ignition sources for the release events are essentially vehicles in the yard, vehicles on the roadways driving by the facility, heating systems and unclassified electrical equipment on any buildings around the facility. We have placed ignition sources at each of these buildings.

4.3.2.3 Vapour Cloud Explosion (VCE) – Worst Case Scenario

This event would involve a catastrophic breach with instantaneous release of the maximum quantity of propane from the largest tank and would produce:

- an overpressure of 1 psi out to 441 metres, and
- a level of 12.5 kW/m^2 m out to 307 m

According to the US Center for Chemical Process Safety, a vapor cloud explosion "is the result of a release of flammable material in the atmosphere, a subsequent dispersion phase, and, after some delay, an ignition of the vapor cloud. A flame must propagate at a considerable speed to generate blast, especially for 2-D (double plane configurations) and 3-D (dense-obstacle) environments." "In order to reach these speeds, either the flame has to accelerate, or the cloud has to be ignited very strongly, thereby producing direct initiation of a detonation." "…flame acceleration is only possible:

- in the presence of outdoor obstacles, for example, congestion due to pipe racks, weather canopies, tanks, process columns, and multilevel process structures.
- in a high-momentum release causing turbulence, for example, an explosively dispersed cloud or jet release.
- in combinations of high-momentum releases and congestion."

Thus, the use of the older TNT modelling procedure has for the most part been replaced by newer confined volume methods of VCE modelling. However, the VCE is an important scenario,

as it helps with the emergency response zone calculations for use in Environmental Emergency (E2) plans required by regulation. Thus, we present the TNT scenarios here, including the 652 m distance referenced as being the distance to 1 psi for a propane release. This uses a 10% efficiency with a TNT VCE using the EPA's RMP rule TNT calculation. Again, due to the lack of congestion around the site that would lead to large overpressure damage would dictate that the overpressure distances would be significantly smaller than these values in an actual VCE.

In the calculations for the Individual Risk calculations, we used the TNO MultiEnergy (ME) to perform overpressure calculations. The ME method is embedded in Phast Risk and was used in the calculation of overall risk. As this is a congested volume methodology, it is more representative of actual explosion overpressure events. As the calculation of individual risk is for the purpose of risk acceptability, these explosion calculations give better indication of actual risk posed.

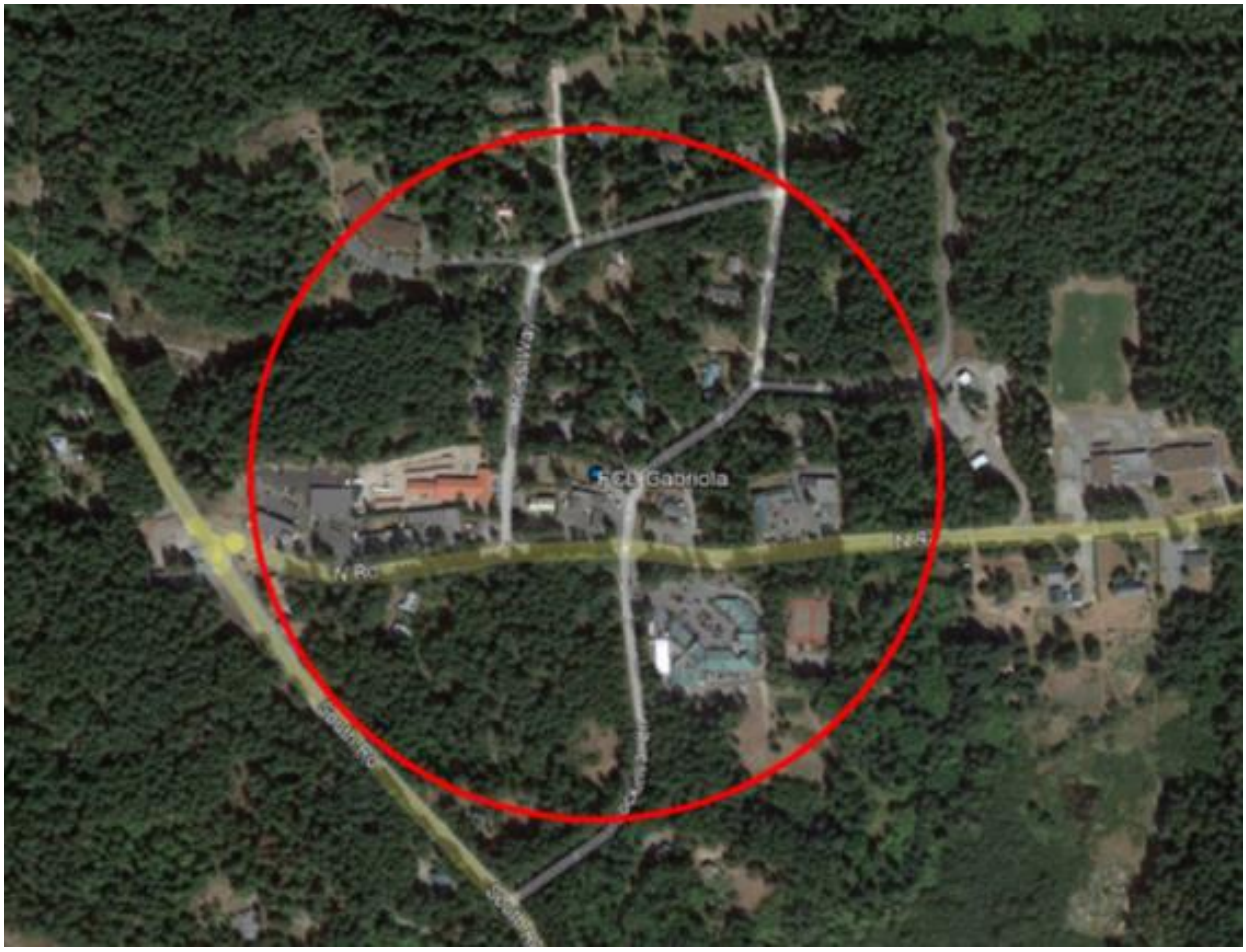
The 1-psi VCE overpressure plot is presented below. Note that the propane release is the result of a catastrophic release of all the contents of the vessel instantaneously.

Figure 4.3.2.3.1 Vapour Cloud Explosion (VCE) – Worst Case Release Scenario

The facility is in the centre and the red circle has the greatest impact distance of 1 psi out to 441 m.

In addition to overpressure, the fireball consequence of a VCE will occur. 12.5 kW/m² was chosen as the endpoint of the calculation as the distance where people without shelter could be injured in the event or, without time to seek shelter from the fire radiation.

Figure 4.3.2.3.2 Vapour Cloud Explosion (VCE) Fireball



The propane facility is in the centre and the red circle is the greatest impact distance of 12.5 kW/m² out to 307 m.

4.3.2.4 Jet Fire from a 2" Transfer Hose Rupture – Reasonable Alternate Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank. It will have an impact distance outside the boundary of the facility producing a level of 12.5 kW/m^2 m out to 76 m.

The jet fire is based on a rupture of the largest transfer hose (2" release) that may deliver liquid propane to the atmosphere. The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane at vapour pressure released through a ruptured 2" transfer hose plotted below.

Figure 4.3.2.4 Jet Fire from a 2" Transfer Hose – Reasonable Alternate Scenario

The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 76 m.

4.3.2.5 Jet Fire from a 3" Pipe Rupture – Alternate Worst Case Scenario

This event is a release scenario that is more likely to occur than the release of the maximum quantity of propane from the largest tank and that would have the longest impact distance outside the boundary of the facility. This event would involve a release scenario due to a rupture of a 3" pipe and would produce:

- a level of 12.5 kW/m^2 out to 100 m.

The direction of flow is horizontal, as this gives the greatest effect distances. The pressure of this flow is the vapour pressure at a relatively high normal liquid temperature, in this case being 30°C. Phast calculates the propane/air concentrations of the release, and the values between the Upper and Lower Explosion Limits (UEL and LEL) are considered to be burning. The heat radiation from this burning jet is calculated and plotted to a radiation level of 12.5 kW/m^2 for reasons described earlier.

A propane jet fire based on propane liquid released through a ruptured 3" pipe plotted below.

Figure 4.3.2.5 Jet Fire from a 3" Pipe – Reasonable Alternate Scenario

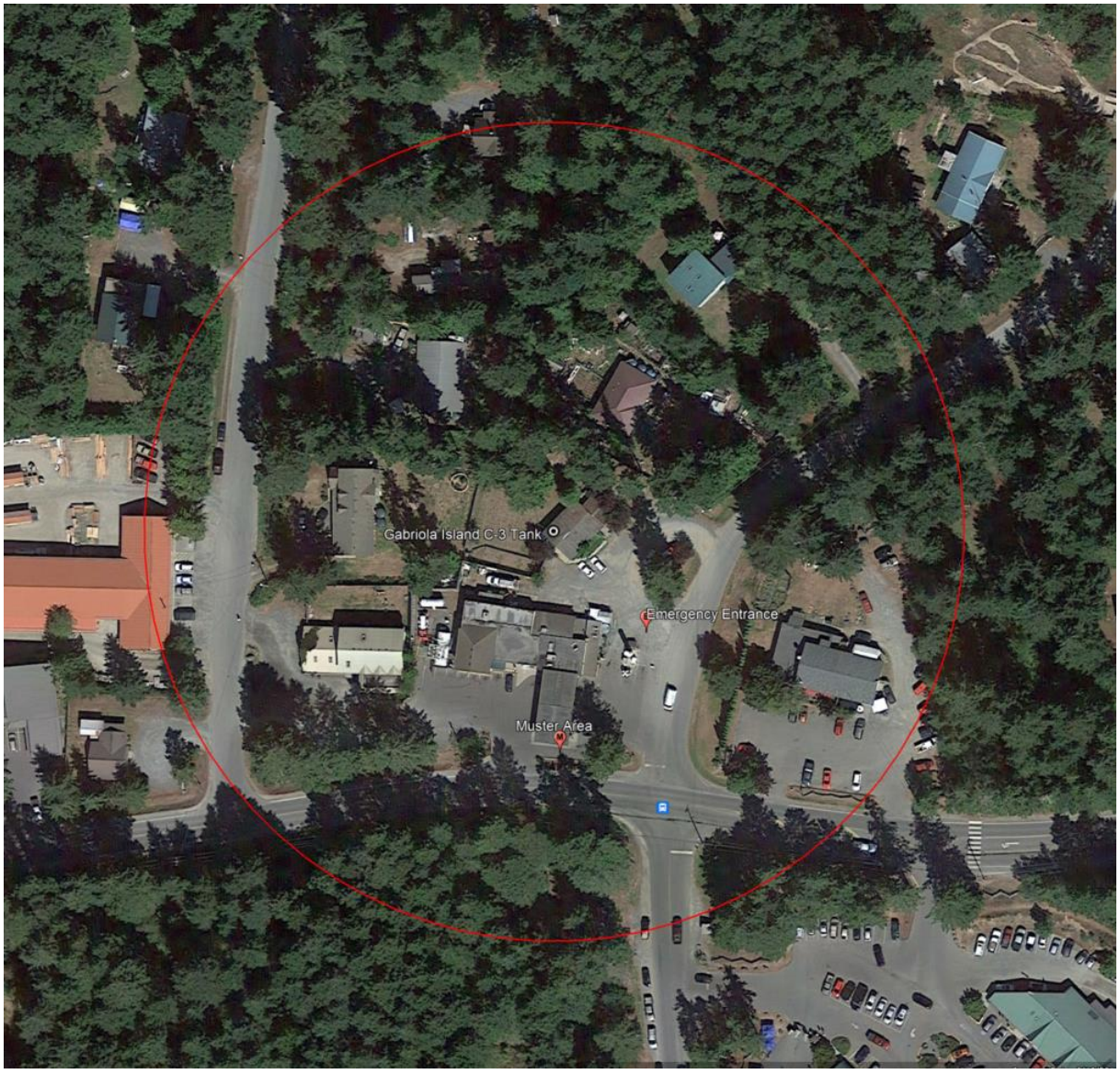
The propane tank is in the centre and the red circle is the greatest impact distance of 12.5 kW/m^2 out to 100 m.

4.3.3 Identification of Public Receptors

The alternate worst-case scenario is a jet fire based on propane released through a ruptured 3" pipe with an impact of 12.5 kW/m² at 100 metres. Ross Way is located 72 metres west, North Road 58 metres south, and Lockinvar Lane 35 metres east of the propane bulk plant. Seven residences, a restaurant, an office and two commercial occupancies are within the alternate worst-case scenario XXXX.

If an environmental release were to occur, impacts to the environment could result in consequences to the surrounding area, pending the amount of release and scale of the incident.

Figure 4.3.3 Identification of Public Receptors



The facility is in the centre <u>and</u> the red circle is the greatest impact outside the boundary of the facility of 12.5 kW/m² out to 100 m from a most likely release being a rupture of a 3" pipe that may deliver liquid propane to atmosphere.

4.3.4 Identification and Assessment of E2 Scenarios

Mid Island Co-op at 793 Lockinvar Lane Gabriola Island BC – 9,400 USWG Propane Tank (100% full)		
Worst-case Scenario		
Vapour Cloud Explosion (VCE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} VCE's per year	Probability of a VCE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of VCE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	441 m
Alternate Worst-case Scenario		
Jet Fire from a 3" Pipe Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	1×10^{-6} /m-y	Probability of jet fire occurring 1 in a million years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 Kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	100 m
Reasonable Alternate Scenarios		
Boiling Liquid Expanding Vapour Explosion (BLEVE)[1][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Instantaneous Loss of Containment	5×10^{-7} BLEVE's per year	Probability of a BLEVE occurring every 2 million years
Probability of Ignition		
Probability of Ignition for Instantaneous Loss of Containment	>10,000 kg	70%
Consequence		
Fireball (Result of BLEVE) [1][3][4]	12.5 kW/m²	307 m
Overpressure	1 psi	138 m
Jet Fire from a 2" Transfer Hose Rupture [2][3][4]		
Frequency of Loss of Containment (See Table 4.3.1)		
Loss of Containment – Full Bore	4×10^{-6} /h	Event occurring every 30 years
Probability of Ignition		
Probability of Ignition for Continuous Release	10 kg	20%
Consequence		
Heat Radiation from Burning Jet	12.5 kW/m²	76 m

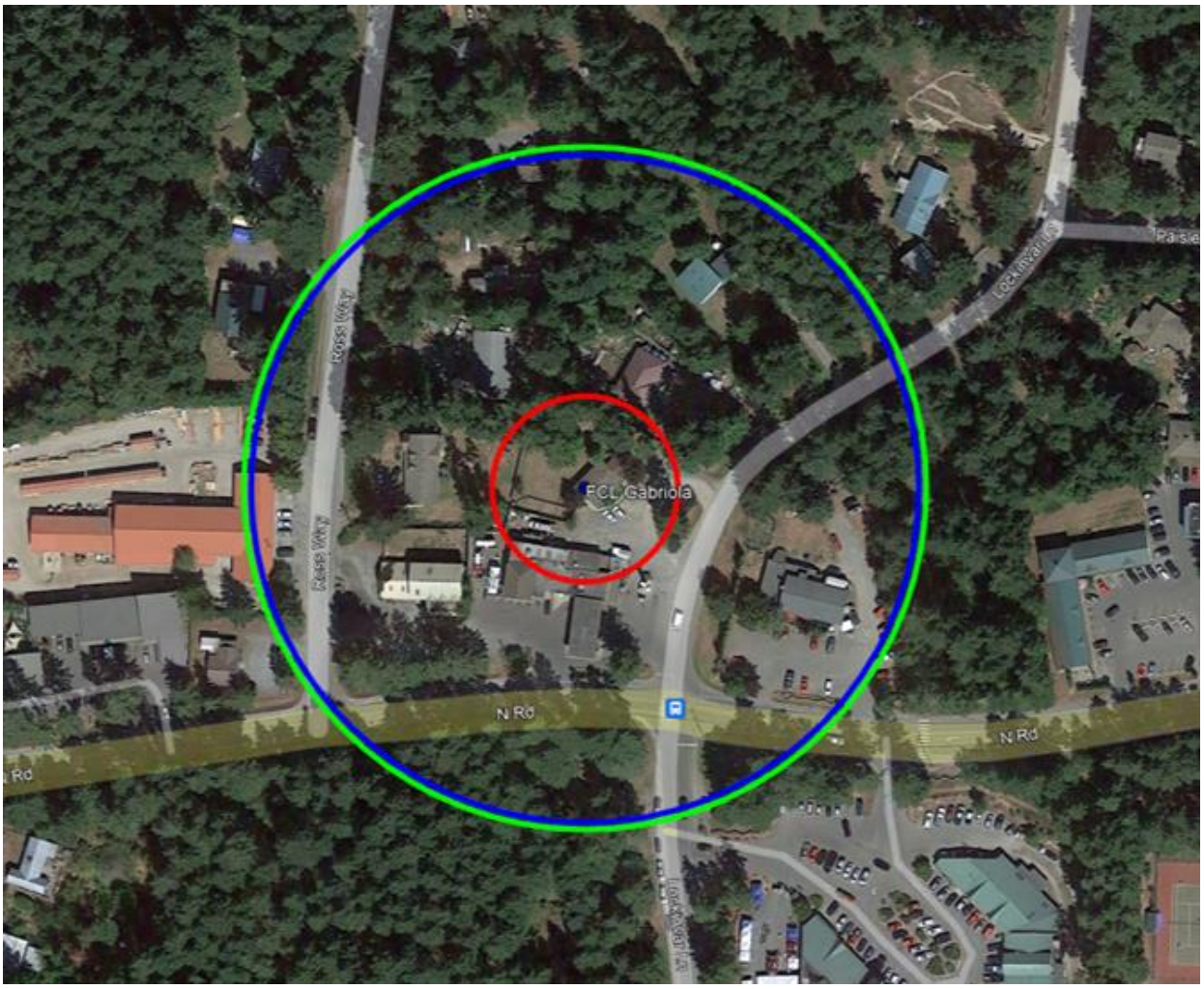
1. ***In the event of a catastrophic failure of the 9,400 USWG tank due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism the possible effect on the area would be overpressures from a blast causing structural damage and or injury as well as possible thermal damage and or injury due to a fire event as described previously in this section.***
2. ***In the event of a release from piping, leaking flange, seal, joint and transfer hoses due to human operating errors, unforeseen defects, natural occurring events or acts of terrorism, the possible effect on the area would be thermal damage and or injury due to a fire event as described previously in this section.***
3. ***If the event were in preliminary stages an alarm would be sounded, emergency shutdowns engaged, evacuations made, traffic control measures implemented, Emergency Services, Mid Island Co-op Management, and FCL's Emergency Management Team contacted, and Incident Command established. Mid Island Co-op will assist Emergency Services. If activated by FCL, ERAC may also assist Emergency Services.***
4. ***The event model accuracy may vary due to general weather, wind speed and direction. Emergency responders would adjust evacuation and avoidance radius of effect accordingly.***
5. ***See 6.9 Environmental Emergency Simulation Exercises Scenarios A-F, and Annex 9.2.2 - Part 2 Scenarios.***

4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria

A comparison of risk estimation modelling results to risk acceptability criteria based on MIACC (Major Industrial Accidents Council of Canada) guidelines for land-use planning and siting determined the site is within risk acceptance criteria.

MIACC dissolved in November 1999 with its works transferred to the Process Safety Management division of CSChE (Canadian Society for Chemical Engineering).

Figure 4.3.5 (1) MIACC Risk Acceptability Criteria



3x10-7 – All occupancies, including sensitive populations such as schools, hospitals, etc allowed outside of this Contour
1x10-6 – High Density Residential allowed Outside of this Contour
1x10-5 – Low Density Residential and Commercial, Offices, Retail Centres allowed Outside of this Contour

Section 5 Prevention and Mitigation

5.1 Regulatory and Legal Requirements

5.1.1 Risk Management Tools

See 2.7 Plan Consultation/References for tools used to mitigate risks.

5.2 Prevention Initiatives

5.2.1 Elimination Controls

5.2.1.1 Site Selection

See 4.3.5 Risk Estimation Evaluation and Comparison with Risk Acceptance Criteria.

5.2.2 Engineering Controls

5.2.2.1 Equipment

Qualified personnel conduct equipment installations, repairs, and maintenance. Applicable codes and standards for design, construction and maintenance of all vessels, piping valves and safety systems. This facility is equipped with crash protection and dry chemical fire extinguishers, which are located throughout the facility.

5.2.2.2 Emergency Shutoffs and Isolation Equipment

The propane plant has been fitted with emergency shut-offs, pressure and temperature gauges, pressure relief valves, flow indicators, electrical bonding/grounding systems, and drive-away prevention systems on the bulk delivery trucks XXXX.

5.2.3 Administrative Controls

5.2.3.1 Mechanical Integrity - Preventative Maintenance Inspections

Mid Island Co-op and FCL endeavors to maintain all equipment according to the standards set out in provincial Act and Regulation. The maintenance of the propane facility component follows the CSA B149.2-20 Propane Storage and Handling Code. Trained and competent technicians regularly inspect the facility. Defects are corrected records kept.

CSA B149.2-20 inspections:

7.22.5 Maintenance procedures

7.22.5.1

Maintenance procedures shall be appropriate to the particular facility and shall take into account, amongst other things, the following:

a) inspection of protective devices, alarms;
b) regular inspection and testing of hoses;
c) regular review of emergency procedures;
d) regular review of emergency evacuation procedures and designated safe location;
e) propane purging procedures;
f) isolation and tagging;
g) fire extinguishers and firefighting equipment;
h) piping, tubing, pumps, valves, and other propane equipment;
i) storage tanks;
j) electrical equipment;

k) fencing and security measures, signage, and notices;
l) lighting;
m) regular inspection and testing of vaporizers; and
n) any manufacturer's maintenance instructions for equipment.

7.22.5.2
Persons who perform maintenance on these propane systems shall be trained in the hazards of these systems and in the maintenance and testing procedures applicable to the facility

Note: See Dynamic Records – Equipment inspection, testing and maintenance schedules

5.2.3.2 Training

Employee and responder training that pertains to this plan is listed in Preparedness Section 6.

5.2.3.3 External Alerting and Emergency Notification System

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

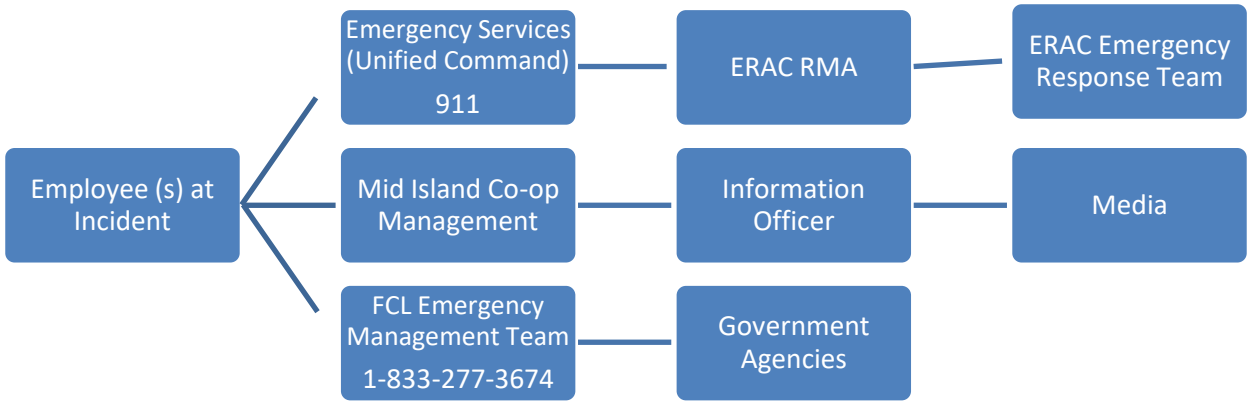
Section 6 Preparedness

6.1 Incident Management System

6.1.2 Emergency Response Management Model

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) etc. may be dispatched to scene to provide technical advice. Depending on the nature of the event, it may be a combination of the emergency service providers and may include regulatory officials who establish a Unified Incident Command at which time an Mid Island Co-op employee may participate in Unified Command at the emergency in a Unified Command or advisory role. If the event sustains over a period typically a standard Incident Command protocol will prevail which will include the establishment of operational periods; and, development of an incident action plan stating the objective/s, strategy/s, and tactics for the operational period.

FCL's Emergency Management Team is a group of subject matter experts and advisors who would provide guidance to Mid Island Co-op's emergency response measures. STARS emergency contact centre will take in Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call. Refer to 7.2.3 FCL Emergency Management Team for further information.



6.2 Mid Island Co-op/FCL Roles and Responsibilities

6.2.1 Emergency Response Coordinator (ERC)

The ERC will typically be the most senior or qualified manager, supervisor or employee on site that is able to instruct the activities or others in the event of an emergency. The ERC will assume emergency response coordination of the situation until Emergency Services assume command. The ERC may still be required to assist or advise the Local Emergency Service during an event.

Typical duties are:

- Coordinate and direct the activities of the site employees during an event.
- Using sounding an alarm, alert occupants of the event
- Assess the resources and actions required for a response.
- Ensure Emergency First Responders are notified using 911, notifying Mid Island Co-op Management and the Co-op Emergency Management Team
- Maintain communication with the Emergency First Responders and, if required, assign an Assistant Coordinator
- Ensure that all personnel are directed in any post incident activities.

6.2.2 Information Officer

In the event of an incident that may require communications with the media and our regulator, the Mid Island Co-op will assign an Information Officer. The Information Officer may be involved with the activities during a response and may be involved with remedial activities following an event.

6.2.3 FCL Emergency Management Team

This team is a group of subject matter experts and advisors who would provide oversight and guidance to the emergency response measures. STARS emergency contact centre will take in FCL, and Co-op emergency calls then will provide a report to this team that outlines the details of the emergency call.

There are five roles within the EMT, and a list of their responsibilities follows. The EMT will work together with assignment of on-scene personnel to work toward ensuring FCL's objectives are accomplished.

Emergency Operations Manager (EOM)

- Working with the EMT, determines:
    - Whether an Emergency Response Assistance Plan should be activated
    - The crisis levels.
    - The crisis owner
    - What support or guidance may be provided?
- Accepts responsibility for the FCL Emergency Management Centre and sets over-all objectives and priorities.
- Assigns an on-scene Incident Commander (IC) or Technical Advisor who will represent FCL in Unified Incident Command (UIC) for on-scene emergency response.
- Working with FCL on-scene IC, designates or approves on-scene Information Officer (IO) to manage communications.
- Assesses and monitors crisis for appropriate level of escalation/de-escalation, in consultation with other EMT members.

- Works with and approves the following, alongside the on-scene IC:
    - Incident Action Plans (IAP) – Works with on-scene FCL IC to develop and approve on-scene IAP objectives.
    - Approves resource orders to support response measures.
    - Approves demobilization plans.

Safety Officer

- Monitor's incident operations and advises the Emergency Operations Manager on all matters related to operational safety, including the health and safety of emergency responder personnel.
- Works directly with on-scene Safety Officer or UIC (if no safety officer has been designated), to ensure a safety plan and accountability plan has been developed and implemented.
- Reviews and approves the safety and accountability plans developed by on-scene Safety Officer or UIC
- Advises on Health & Safety regulatory requirements.
- Develop an Incident Safety Plan
- Ensure incident investigation responsibilities are fulfilled.
- Communicates with Health & Safety regulators.

Information/Liaison Officer

- Initiates and directs established communication response for Level 1 and 2 crisis situations.
- Informs the Crisis Communication Lead (CCL) about crisis and determined crisis level.
- Assists in the preparation of external communication materials delivered by the CCL, including updates, press releases, media statements, key messages, etc.
- Under the direction of the CCL, prepares and delivers internal key messages and updates.
- Delivers updates to internal stakeholders through the Everbridge system, including FCL's Senior Leadership Team
- Track's media calls and requests and refers them to the CCL.

Environmental Officer

- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential environmental impacts.
- Provides technical support in the development of tactics to minimize / mitigate the environmental impacts.
- Responsible for retaining, dispatching, and managing Environmental Consultants to manage any environmental consequences of the incident or spill as required.
- Provides technical assistance to response teams, as required.
- Manage and supervise operations associated with the transfer, storage, and disposal of liquid, solid and/or hazardous wastes during emergency response operations.
- Determine the most effective methods to be employed and how to minimize the amount of waste materials generated during emergency response operations.
- Delivers updates on environmental impacts response measures and status to Emergency Operations Manager
- Reports environmental spills, releases, or potential imminent releases to federal and provincial authorities.
- Provides direction and technical advice regarding post-incident cleanup and recovery.

Secondary Support – as determined by the Emergency Operations Manager

On-scene Incident Commander/Technical Advisor

- Reports to the Emergency Operations Manager (EOM)
- Provides summary of the incident to the EOM and EMT (example ICS form 201 – Incident Briefing)
- Initiates a site activity log for the operational period (example ICS form 214)
- Working within UIC, develops on-scene IAP incident objectives and develops or approves strategies and tactics.
- Working within UIC, assigns Operations and Planning Chiefs or accepts their roles in determining strategies and tactics of IAP and supervises on-scene resources.
- Working within UIC and with Operations Chief, ensures Strike Team accomplishes strategies and tactics of the IAP.
- Provides technical expertise to the EOM and UIC on the product or commodity that is involved.
- Provides regulatory expertise such-as regulatory: compliance, reporting and liaise with regulators.
- Liaise with ERAC, as necessary.

Security Officer

- Maintains overall management and guidance to security and protection of FCL facilities.
- Liaison with initial Response Personal / Incident Commander / Emergency Operations Manager to assess the degree of potential security impacts.
- Provides technical support in the development of tactics to minimize / mitigate the security impacts.
- Responsible for retaining, dispatching, and managing Security Consultants to manage any security requirements.
- Provides technical assistance to response teams, as required.
- Delivers updates on security impacts response measures and status to Emergency Operations Manager

Additional Roles

The Emergency Operations Manager will determine the need for additional support. Depending on the severity and length of the crisis, additional roles such as Finance and Logistics Officers, Legal, Insurance, Documentation, Procurement, Government Relations, Human Resources, etc. may be required.

6.3 Advance Public Notification and Communication

6.3.1 Public and Neighborhood Emergency Awareness Notifications

The process of preparation will have similarities for most areas, which will mostly be site visits and the offering of information pertaining to evacuations, propane vapor-cloud characteristics and other related safety measures. Some communities have systems organized by the local EMO Coordinators that will automatically notify areas of risk through electronic communication methods. This would involve a combined effort between Mid Island Co-op facility management and local emergency services. Mid Island Co-op offers a pamphlet (see 6.3.2 Community Emergency Notification System) to inform the neighboring businesses or community on the actions required in the event of an incident. Employers, organizations, and residents that are located within the notification zone may incorporate portions of the E2 plan into their own safety practices.

Notification of potentially impacted neighbouring occupancies and Gabriola Island Fire Rescue from the Alternate Worst-case Scenario – 4.3.2.5 Jet Fire from a 3" Pipe Rupture was accomplished. Figure 4.3.2.5 illustrates the greatest impact outside the boundary of the facility of 12.5 kW/m2 out to 100 m - see Annex 9.3.3.

Emergency Notification System

The intent of this notification is to inform all neighboring residences, businesses and organizations of actions that may be required in the unlikely event of a major propane escape or fire that would cause an emergency evacuation.

The following is a general guideline in the event of a major propane escape or fire.

- Escaped propane vapours will form a white cloud and travel at ground level in the direction of the wind.
- Do not enter a propane vapour cloud.
- If an alarm is sounded or if you observe a propane escape, prepare for a quick evacuation.
- If a propane vapour cloud or fire approaches, travel upwind to a safer location.
- As you leave, turn off ignition sources such as vehicles if safe to do so.
- Local emergency services may direct you to a safe location.
- Local emergency services and/or Mid Island Co-op will inform you when it is safe to return either in person or using public and/or social media and where possible electronic communication methods.
- Communicate and post this information with all people at your residence, business, or organization.

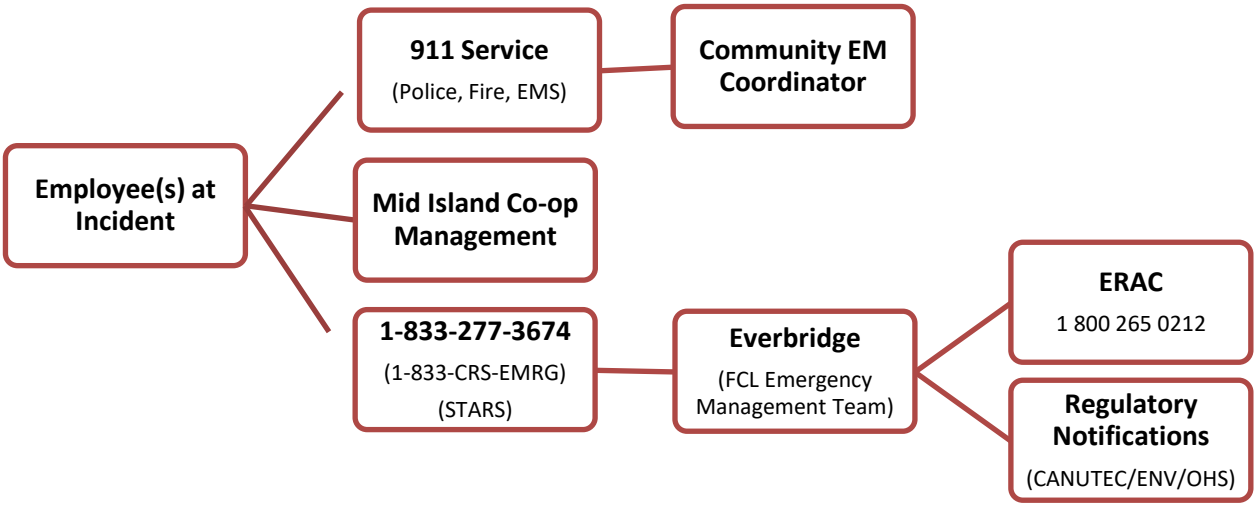
Important facts about Propane:

- Propane is non-toxic.
- Propane has an odourant added to it that makes it smell like rotten eggs or skunks.
- Flames, smoking material, sparks, and static electricity will ignite propane when mixed with the right amount of oxygen.

If you require any additional information or have any concerns, please contact Mid Island Co-op at (250)-802-1198.

6.4 External Alerting and Notification

6.4.1 Emergency Assessment and Alert Notification



For External Alerting/Notification/Resources Contact Lists refer to Annex 9.1

6.5 Evacuation and Shelter-in-place

There is potentially one outcome that can occur that affects the public. The circumstances of the event will dictate the type of instructions given to the public.

- Shelter-in-place – It may be safer for the public or neighbouring facilities to shelter-in-place to avoid exposure to a propane release depending on the quantity and modifying conditions, such as the prevailing wind.
- Evacuate – Under the direction of local emergency services, it may be necessary to evacuate to a safe distance. Instructions will be provided to the public regarding the evacuation.

6.6 Mutual Aid and Mutual Assistance

Mid Island Co-op employees are the first line of response in an emergency. They will transfer responsibility of the scene to the appropriate emergency service provider when they assume Incident Command of the event. The appropriate emergency service provider may include but not be limited to a local fire department, police department, EMO Coordinator, etc. A Remedial Measures Advisor (RMA) as designated by Emergency Response Assistance Canada (ERAC) and where required an ERAC Emergency Response Team etc. may be dispatched to scene.

6.7 Equipment

The site is equipped with dry chemical fire extinguishers that are strategically located, and on trucks. Emergency electrical switches that shut-off electrical power to portions of the facility or, the entire facility is strategically located on site.

6.8 Training and Exercise

To ensure successful plan activation, management will ensure that employees receive adequate training to be familiar with the E2 plan requirements. Conducting regular function specific training and emergency exercises prepare personnel and ensure viability of the plan. The following is a non-exhaustive list of the training that employees receive according to their internal roles and responsibilities.

6.8.1 Employee Training

Training and testing of facility employees who have specific emergency duties ensures understanding of their roles and responsibilities listed in this E2 Plan.

All personnel handling propane hold appropriate certification of training. Personnel receive annual and/or new hire awareness training on Mid Island Co-op site-specific emergency response plans.

Some of the additional courses that would accommodate product awareness and emergency activities include WHMIS, TDG and Fire Extinguisher use.

6.8.2 E2 Plan Exercise Schedule

Training	Attendees	Frequency
E2 Plan – Awareness Workshop	All	On Hire
E2 Plan – Simulation Exercise	All	Each Year
E2 Plan – Full-scale Simulation Exercise	All	Every 5 Years

6.8.3 Responder Training

First level response training is provided internally for employees through orientations and annual Emergency Response/Environmental Emergency Plan training sessions designed to meet Federal Environmental Emergency Plan Regulation requirements.

LPGERC (Liquid Propane Gas Emergency Response Corporation) now called ERAC (Emergency Response Assistance Canada) which is a non-profit division of the CPA (Canadian Propane Association) facilitates secondary or sustained emergency response training.

FCL (Federated Co-operatives Limited) Propane and the CRC (Co-op Refinery Complex) are both participants with ERAC. TC (Transport Canada) approves secondary or sustained emergency response systems meeting TDG (Transportation of Dangerous Goods) ERAP (Emergency Assistance Plans) Regulations.

ERAC has established, HBC (Home Base Coordinators), TA's (Technical Advisors), RMA's (Remedial Measures Advisors) and ERT's (Emergency Response Teams) to help and/or advise local emergency services across Canada.

Emergency Fire Services may utilize the training offered by the ERAC specifically designed for propane fire response called PTI 911-01 LPG Awareness for Firefighters.

6.9 Environmental Emergency Simulation Exercises

Scenario A
Propane Release – no fire

Scenario B
Propane Release – with fire

Scenario C
Structural Fires – local to propane storage

Scenario D
Wildfires – local to propane storage

Scenario E
Bomb Threats/Terrorism

Scenario F
Evacuation Procedures

See Annex 9.2.2 - Exercise Documents, Part 2 Scenarios - for Scenario A-F Emergency Simulation Exercise scenario examples.

Section 7 Response

7.1 E2 Plan Activation and Emergency Contacts

ADDRESS of Gabriola Island : 793 Lockinvar Lane Gabriola Island BC
First Responder Entrance - GPS in DD: 49.17439, -123.84605

E2 PLAN ACTIVATION and EMERGENCY CONTACTS

IN CASE OF EMERGENCY CALL:

911

NEXT REPORT TO MANAGEMENT AT:

POSITION	NAME	LOCATION	BUS #	CELL #
CO-OP AREA MANAGER	KELLI CARTWRIGHT	NANAIMO	250-802-1198	250-802-1198

NEXT REPORT TO CO-OP EMERGENCY AT:

1-833-277-3674 (CRS-EMRG)

FCL PROPANE EMERGENCY CONTACTS:

POSITION	NAME	LOCATION	BUS #	CELL #
24 HOUR ON-CALL	TECHNICIAN	CHEMAINUS	250-668-9876	
AREA MANAGER	JOHN SLATTERY	ARMSTRONG	236-940-2063	250-938-3313

EXTERNAL EMERGENCY CONTACTS

POLICE/FIRE/AMBULANCE	EMERGENCIES	911
BC ENVIRONMENT	PROPANE RELEASE	1-800-663-3456
BC OH&S	WORKER INJURY	1-888-621-7233
BC EMERGENCY MANAGEMENT	PUBLIC SAFETY	1-800-663-3456
CO-OP EMERGENCY	EMERGENCY RESPONSE TEAM	1-833-277-3674 (CRS-EMRG)

INCIDENT PROCEDURES

FIRE OR EXPLOSION	CALL 911. If the event is beyond the control of staff, then the discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
MAJOR PROPANE RELEASE	CALL 911. The discovering staff member shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation. All staff will go to the Muster Area and if it is not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. Station Road Marshalls if the release is a threat to traffic, at the Secondary Muster Areas to attempt to stop traffic from entering the area until the arrival of Fire and/or Police personnel.
BOMB THREAT	Observe and take note of all details of the call. Immediately notify the **ERC** (Emergency Response Coordinator who will be Management or the most senior and or most qualified staff member on site). Call 911. Notify all other staff, go to a Muster Area, and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
SERIOUS INJURY/ILLNESS	Assess the scene and administer first aid as per training. Call 911 for assistance as warranted. Establish a clear pathway for EMS.
EVACUATION PROCEDURES	The **ERC** shall coordinate the activities during the evacuation such as alarms, searches, and emergency shutdowns and the accounting for all staff at the Muster Area and, if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
EMERGENCY REPORTING	After calling 911 and as soon as possible, the ERC shall report to Management then 1-833-277-3674 to activate the FCL Emergency Management Team.

7.2 Emergency Information & Equipment Locations

EMERGENCY INFORMATION & EQUIPMENT LOCATIONS	
FIRST AID/EYE WASH	In convenience store
E2 PLAN with SDS	In convenience store
FIRE EXTINGUISHERS	Propane Plant and Vehicles
TRUCK KEYS	In truck or with driver
EMERGENCY ALARM SYSTEM	Nitrogen powered horn activated on North exterior wall of convenience store
PROPANE PLANT ELECTRICAL SHUT-OFF	North exterior wall of convenience store and Convenience store electrical room
PROPANE PLANT PROPANE SHUT-OFF	North exterior wall of convenience store
MUSTER AREA	South of petroleum pumps
SECONDARY MUSTER AREAS	East of site on North Road

7.3 Emergency Notification and Communication and Procedure

EMERGENCY NOTIFICATION & COMMUNICATIONS PROCEDURE	
1	In the event of an uncontrolled propane release with or without fire or the reasonable likelihood of such a release, the discovering employee shall activate the emergency horn located on North exterior wall of convenience store to initiate an evacuation.
2	All personnel on site will go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route and the **ERC** (Emergency Response Coordinator) who will be Management or the most senior and or most qualified staff member on site) shall account for all staff.
3	The **ERC** shall call 911 to report the event and the appropriate emergency provider will assume the role of Incident Command upon their arrival.
4	The **ERC** shall report to Management then 1-833-277-3674 (1-833 CRS EMRG) to activate the FCL Emergency Management Team.
5	FCL Emergency Management Team shall ensure the notification of the Local Police if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment.
6	FCL Emergency Management Team shall contact **ERAC** (Emergency Response Assistance Canada) if the event involves an uncontrolled, unplanned, or accidental release of propane into the environment; or the reasonable likelihood of such a release into the environment that is beyond the capabilities of staff. The ERAC HBC (Home Base Coordinator), TA (Technical Advisor) or RMA (Remedial Measures Advisor) may advise the FCL Emergency Management Team, the ERC, or the Emergency Service IC (Incident Command) of any required actions.
7	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan activation) in response to a release or anticipated release to **tier 1**: the Emergency Management Team will monitor the release or anticipated release and will be actively involved in the conversations and decisions that involve the dangerous goods and/or the means of containment. None of the emergency response resources found in the ERAP are brought to the site of the incident during tier 1.
8	If the FCL Emergency Management Team implements the **ERAP** (Emergency Response Assistance Plan) in response to a release or anticipated release to **tier 2**: an RMA (Remedial Measures Advisor) will be assigned to further assess the incident and an ERT (Emergency Response Team) may be assigned to the incident. The RMA and ERT will suggest, implement, or coordinate activities with IC (Emergency Service Incident Command). The ERT is equipped to conduct emergency procedures and repairs of the propane tank or system. **Note**: IC (Incident Command) needs to communicate with ERAC.
9	Upon assessment of the incident, IC (Incident Command) will determine the extent and length of evacuations and shall coordinate the evacuation.
10	FCL Emergency Management Team shall make a report to – where required - the Provincial and/or Federal Authorities listed in the Annex - External Reporting Section - of the E2 Plan for: Public Safety, Environmental, Health and Safety, Gas and Pressure Vessel, and Transportation of Dangerous Goods.

7.4 Emergency Response Measures

7.4.1 Propane Release – no fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller – where applicable.
- Ensure all vehicles in the compound are not running or started.
- Close all doors to buildings, notify building occupants and advise an evacuation if the propane vapors have potential to travel into a building or its ventilation system.
- If the source of the release cannot be shut-off, initiate an evacuation.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist or advise Emergency Services as required.

7.4.2 Propane Release – with fire

If safe to do so, use the following procedures, as they are applicable to the situation:

- Activate emergency shutdowns (propane valves, Bulk Plant, electrical etc.) – where applicable.
- Shutdown propane delivery truck using the remote controller - where applicable.
- If the fire is not propane fed, attempt to extinguish the fire.
- If the fire is propane fed and extinguishment may lead to an uncontrolled propane release do not attempt to extinguish the fire
- If the source of the release cannot be shut off and or if extinguishment is not possible, activate the emergency horn located on North exterior wall of convenience store, go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.3 Structural Fires – local to propane storage

- Notify personnel to evacuate the building.
- Do not place yourself in an area where fire entrapment can occur.
- Attempt to extinguish fire using fire extinguishers, if safe to do so.
- Close doors as you leave rooms to minimize fire spread rate.
- Leave the building using the closest safe exit.

- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Have fuel delivery units (petroleum and propane) moved, if safe to do so – where applicable.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).
- Assist Emergency Services as required.

7.4.4 Wildfires – local to propane storage

In the event of a wildfire and an evacuation is pending:

- Alert all personnel and have any fuel delivery units (petroleum and propane) and other vehicles in the field remain away from the facility until the fire threat is over.
- If fuel delivery units (petroleum and propane) are on site upon the evacuation order have them driven off site if it is safe to do so and following the direction/permission of the Emergency Authority.
- Prior to site evacuation ensure all fuel storage systems are shut down, close all building doors.
- Drain all Bulk Plant hoses if safe to do so.
- Secure Bulk Plant by closing and locking gates.
- Report how much propane in in Bulk Storage to BC Wild Fire.

7.4.5 Bomb Threats/Terrorism

Bomb or act of terrorism threats may come in the form of a call, mail or note, electronically, verbally in person or maybe the discovery of a device either obvious or disguised.

Discovery of a suspicious device/package:

- Do not touch it or attempt to open or disarm it.
- Evacuate the location following the evacuation procedure.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go the Secondary Muster area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 778-772-9800.
- Report to 1-833-277-3674 (CRS-EMRG).

If you receive a threatening call:

- Listen to the caller in a calm and polite tone of voice.
- Start taking notes as soon as possible.
- Try to silently get the attention of a co-worker and write down the situation.

- Ask about the bomb location.
- Ask what type of bomb it is.
- Ask when and how it will explode.
- Ask the caller why they placed the bomb.
- Take note of the person's voice description such as accent, speech speed and language skills, mannerism, sex, and age.
- Take note of any background noises.
- Take note if the person seemed to be familiar with your location.
- Take note if the person's voice seemed familiar to you.
- Ask for the person's name and where they are calling from.
- When the conversation is over call 911.
- Establish communication process with police for further direction.
- Go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route.
- Complete a tally of personnel.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.6 Evacuation Procedures

When notification of a propane emergency or an evacuation order is given:

- Stop all activities.
- Eliminate all ignition sources if safe to do so.
- As you evacuate a building and/or property look for others that may not have heard the evacuation call/alarm such as washrooms, vehicles, or noisy areas.
- Close doors as you leave buildings.
- Go to a Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. A more distant evacuation may occur if conditions warrant.
- Complete a tally of personnel.
- Call 911.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.4.7 Serious Injury/Illness

- Assess the scene.
- Administer first aid as per training.
- Call 911 for assistance as warranted.
- Establish a clear pathway for EMS.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

7.6.8 Vehicle Incidents – Involving On-site Propane Delivery Units

Risk Assessment

- Determine threats to life (injuries to self or others, release or anticipated release of propane, traffic, fire, etc.).
- Identify ignition sources (shut-off engine, use vehicles electrical disconnect switch where possible).
- Inspect propane vessel, piping, valves etc. and truck to identify leaks, damage etc.

Report the Incident

- Call 911 when:
    a. You require Police, Fire or Medical personnel.
    b. There is a release or anticipated release of propane e.g.
        i. a propane delivery truck rolled over in a ditch with all four sides not visible is an example of an anticipated release.
- Contact Management at 250-802-1198.
- Report to 1-833-277-3674 (CRS-EMRG).

Secure the site.

- Deploy roadside markers and reflectors (no flares).
- Clear the area of non-essential and untrained personnel.
- If safe to do so, stop or divert traffic or public access to site.

Section 8 Recovery/Restoration

8.1 Disposal and Waste management

In the unlikely event of release that caused damage, Mid Island Co-op will endeavor to reduce and remediate any damage to the environment and will bring in the proper resources including specialized equipment and personnel to develop and implement the appropriate disposal and waste management plan. Due to the inherent characteristics and hazards of propane as described in Section 4, recovery activities may be limited to removal of debris.

8.2 Site Restoration

In consultation with public authorities, Mid Island Co-op will initiate site restoration processes as soon as possible, striving for rapid restoration from environmental damage. A specific restoration plan will be generated following an incident and will consider the specific details and circumstances of an incident.

8.3 Public Notification

In consultation with public authorities and specialized personnel, the extent of damage will be determined. Appropriate communication will be provided by public authorities and/or Mid Island Co-op to all relevant parties, including the public utilizing in person visits, local emergency services, radio, TV, automated phone messages, and social media e.g., Facebook, Twitter etc.

8.4 Stakeholder Engagement

This facility is owned and operated by Mid Island Co-op and will assist the organization of the community's resources necessary for people recovering from an emergency.

8.5 Post Incident Evaluation

8.5.1 Post Incident Review and Debrief

A post incident review and debrief will be conducted after every incident or training exercise for all personnel involved to evaluate the incident. Record and assess - using the Exercise Evaluation and Corrective Actions document found in Part 4 of Annex 9.2.2 of this plan - to ensure the activities carried out were in accordance with the plan. Replace and/or service safety equipment as required.

Section 9 Annexes

Annex 9.1 External Reporting

- 9.1.1 Environmental Reporting
- 9.1.2 Public Safety Reporting
- 9.1.3 OHS Reporting
- 9.1.4 TDG Reporting
- 9.1.5 ERAP Activation Reporting
- 9.1.6 Gas and Pressure Vessel Reporting

Annex 9.2 Documents

- 9.2.1 Safety Data Sheet
- 9.2.2 Annual and 5-Year Full-scale Simulation Exercise Document
  - Part 1 – The Exercise Plan
  - Part 2 – Scenarios
  - Part 3 – Participation List
  - Part 4 – Exercise Evaluation and Corrective Actions

Annex 9.3 Dynamic Records

- 9.3.1 Exercise Records
- 9.3.2 Preventative Maintenance Inspections Records
- 9.3.3 Community Notification Records
- 9.3.4 Plan Stakeholder Status and Acknowledgement
- 9.3.5 Facility Photos

Annex 9.4 Maps and Diagrams

- 9.4.1 Fire Services Route to Site
- 9.4.2 Emergency 1st Responders Entrance to Facility
- 9.4.3 Muster Areas
- 9.4.4 Facility Maps
- 9.4.5 Plant Schematics
- 9.4.6 P&ID drawings
- 9.4.7 Tank/s Data Plate/s

Annex 10.1 External Reporting

9.1.1 Environmental Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line.
- Submit within 30 days of the emergency response completion date of the spill.

Federal - Environment and Climate Change Canada (ECCC)

- Complete and submit a written report to Regional Director, Environmental Enforcement Directorate-ECCC-PYR ec.dale-rpn-enforcement-pnr.ec@canada.ca
    - for an environmental emergency that has or may have an immediate or long-term harmful effect on the environment,
    - constitutes or may constitute a danger to the environment on which human life depends, or
    - constitutes or may constitute a danger in Canada to human life or health.
- The written report must include the information referred to in Schedule 8 of the E2 Reg's, SOR/2019-51.

Note: ECCC has accepted Transport Canada Transport Canada 30-Day Follow-Up Form (TP16-0086E) and all other container specifications forms as fulfilling this responsibility.

9.1.2 Public Safety Reporting

British Columbia

Call 1-800-663-3456 (Emergency Management BC – EMBC 24/7) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Emergency Management BC – EMBC – will make necessary provincial contacts.

9.1.3 Occupational Health & Safety Reporting

British Columbia

- Call 1-888-621-7233 (Work Safe BC 24/7) to report a serious incident or chemical release (e.g., propane) or unsafe working conditions including:
    - Serious injury to or death of a worker
    - Major structural failure or collapse of a building, bridge, tower, crane, hoist, temporary construction support system, or excavation
    - Major release of a hazardous substance
    - Fire or explosion that had a potential for causing serious injury to a worker.
    - Blasting incident causing personal injury
    - Dangerous incident involving explosives, whether there is personal injury.
- Crisis Support Line (injured worker) 1-800-624-2928 (24/7)
- Critical Incident Response (witnessed to a traumatic workplace accident) 1-888-922-3700 (24/7)

9.1.4 Transportation of Dangerous Goods Reporting

British Columbia

Call 1-800-663-3456 (24/7) (Provincial Emergency Program – Emergency Management BC) to report a spill or imminent spill and/or for propane: if a propane spill exceeds 20 litres (10 kg/5 USWG/22 lbs.).

- Complete an End of Spill Report as outlined in section 6 of the Spill Reporting Regulation and submit to SpillReports@gov.bc.ca stating the Dangerous Goods Incident Report (DGIR) number and 'End-of-Spill Report' in the subject line. Submit within 30 days of the emergency response completion date of the spill.

Federal – Transport Canada

- Call 1-888-226-8832 (CAN-U-TEC 24/7), 1-613-996-6666 or *666 on cellular in the event of an emergency involving a release or anticipated release of dangerous goods, and/or to report any release of propane into the environment that could pose a danger to public safety or any sustained release of 10 minutes or more, and
- Complete a Transport Canada 30-Day Follow-Up Form (TP16-0086E) and send to the Director General, TDG at dor-rcd@tc.gc.ca utilizing TP 15294 – Guide for Reporting Dangerous Goods Incidents (where applicable, ensure to fill out a container specifications form found in Annex E of the Guide), and

Note: Confirm approval from Transport Canada prior to moving a damaged propane truck or trailer from the scene or roadway

9.1.5 Emergency Response Assistance Plan (ERAP) Reporting

Federal

- Transportation Incidents: In response to a release* or anticipated release**, FCL's Emergency Management Team will implement the Emergency Response Assistance Plan (ERAP) by:
  - Calling Emergency Response Assistance Canada (ERAC) at 1-800-265-0212 and implement Federated Co-operatives Ltd. ERP2-0010-025 to tier 1 or 2.
    - tier 1 implemented for technical or emergency response advice, but none of the emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.
    - tier 2 implemented for technical or emergency response advice, and emergency response resources listed in the ERAP are mobilized to the site of release or anticipated release.

*Release means escape of dangerous goods

**anticipated release examples: an incident has occurred, and propane will have to be transferred; propane vessel has been damaged, and propane may be released; and a tanker rolled over, with all four sides not visible

9.1.6 Gas and Pressure Vessel Reporting

Provincial

Incidents and hazards can be reported 24/7 by completing the incident form or by calling 1-866-566-7233.

Definitions

Incident: A failure of a regulated product, work or operation that caused damage or injury

Hazard: A source of potential harm to persons or potential damage to property.

https://www.technicalsafetybc.ca/contact-us/report-an-incident

SAFETY DATA SHEET

1. Identification

Product identifier PROPANE- LIQUEFIED PETROLEUM GAS

Other means of identification

Product code 127

Synonyms Unstenched Propane * Stenched Propane * HD-5 Propane * Standard Propane

Recommended use Various.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

Supplier Consumers' Co-operative Refineries Limited

Address P.O. Box 260; 9th Avenue North
Regina, SK S4P 3A1 Canada

Telephone (306) 719-4353

24-Hour emergency telephone (613) 996-6666 - Canutec

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
	Simple asphyxiants	Category 1

Health hazards Not classified.

Environmental hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Wear respiratory protection.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards Contact with liquefied gas may cause frostbite.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	100

Ethanethiol	75-08-1	0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory tract irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation. Get medical attention if breathing difficulty persists.

Skin contact Not likely, due to the form of the product. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately.

Eye contact Not likely, due to the form of the product. If frostbite occurs, immediately flush eyes with plenty of warm water (not exceeding 105°F/41°C) for at least 20 minutes. If easy to do, remove contact lenses. Get medical attention promptly if symptoms persist or occur after washing.

Ingestion This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Most important symptoms/effects, acute and delayed Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Water spray. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical Extremely flammable gas. Contents under pressure. Pressurised container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with full face-piece operated in positive pressure mode. Use approved gas detectors in confined spaces.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods Evacuate area. Check oxygen content before entering area. Stop leak if you can do so without risk. Remove pressurised gas cylinders from the immediate vicinity. Turn leaking cylinder with the leak up to prevent escape of gas in liquid state. Closed containers can burst violently when heated, due to excess pressure build-up. Use water spray to keep fire-exposed containers cool. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes.

General fire hazards Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Eliminate all sources of ignition in vicinity of released gas. Evacuate all non-essential personnel to an area upwind. Stop leak if possible without any risk. Ventilate enclosed areas to prevent formation of toxic, flammable or oxygen deficient atmospheres. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Attempt to stop the gas leak, if no risk is involved.

7. Handling and storage

Precautions for safe handling

Eliminate all sources of ignition. When using do not smoke. Before entering storage tanks and commencing any operation in a confined area, check the atmosphere for oxygen content and flammability. Valve protection caps must remain in place unless container is secured with valve outlet piping to use point. Close valve after each use and when container is empty. Do not drop, drag, slide or roll cylinders on their sides. Use a suitable hand truck to move gas containers. Use a pressure reducing regulator when connecting container to piping or systems. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. Do not use gas directly from containers. Do not heat container by any means to increase the discharge rate of product from the container. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not enter storage areas or confined spaces unless adequately ventilated. Use only outdoors or in a well-ventilated area. Oxygen concentration should not fall below 19.5 % at sea level (pO2 = 135 mmHg). All equipment used when handling the product must be grounded. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Secure cylinders in an upright position at all times, close all valves when not in use. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Material	Type	Value
PROPANE- LIQUEFIED PETROLEUM GAS (CAS Mixture)	TWA	1000 ppm

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1000 ppm

Canada. Quebec OELs. (Ministry of Labour - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

Appropriate engineering controls Explosion proof exhaust ventilation should be used. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Provide adequate ventilation and minimize the risk of inhalation of gas.

Individual protection measures, such as personal protective equipment

Eye/face protection If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

Skin protection

Hand protection Wear cold insulating gloves.

Other Wear suitable protective clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Gas.

Form Compressed liquefied gas.

Colour Colourless.

Odour Boiling cabbage if stenched.

Odour threshold 4800 ppm

pH Not available.

Melting point/freezing point -180 °C (-292 °F) / -185.89 °C (-302.6 °F)

Initial boiling point and boiling range -42 °C (-43.6 °F)

Flash point -101.1 °C (-150.0 °F) Pensky-Martens Closed Cup

Evaporation rate > 1 (Ether (anhydrous)=1)

Flammability (solid, gas) Extremely flammable gas.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) 2.2 %

Flammability limit - upper (%) 9.5 %

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure 1034.1 - 1241 kPa

Vapour density 1.6

Relative density Not available.

Solubility(ies)

Solubility (water) 6.5 % v/v in water.

Solubility temp. (water) 20 °C (68 °F)

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature	432 °C (809.6 °F)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Critical temperature	96.6 °C (205.88 °F)
Explosive properties	Not explosive.
Molecular weight	44.11 g/mol
Oxidising properties	Not oxidising.
VOC	100 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Prolonged inhalation may be harmful. May cause drowsiness or dizziness. Inhalation of high concentrations may result in central nervous system depression and reduce the ability of the blood to carry oxygen to body tissues.
Skin contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Eye contact	Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").
Ingestion	This material is a gas under normal atmospheric conditions and ingestion is unlikely.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped. Continued exposure can lead to hypoxia (inadequate oxygen), cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn").

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.

Components	Species	Test results
Propane (CAS 74-98-6)		
Acute		
Inhalation		
Gas		
LC50	Rat	> 80000 ppm, 15 Minutes

Skin corrosion/irritation	Contact with liquefied gas might cause frostbites, in some cases with tissue damage.
Serious eye damage/eye irritation	Direct contact with liquefied gas may cause eye damage from frostbite.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not likely, due to the form of the product.
Chronic effects	None known.
Further information	Chronic effects are not expected when this product is used as intended.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Partition coefficient n-octanol / water (log Kow)	
Propane (CAS 74-98-6)	2.36
Mobility in soil	The product is slightly soluble in water.
Mobility in general	The product contains volatile substances, which may spread in the atmosphere.
Other adverse effects	The product is a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1978
UN proper shipping name	Propane
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1978
UN proper shipping name	PROPANE
Transport hazard class(es)	
Class	2.1
Subsidiary risk	2F

Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

Canadian regulations

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	10-January-2017
Revision date	-
Version No.	01

Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Disclaimer	To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

9.2.2 Annual and 5-Year Full-scale Simulation Exercise Documents

Part 1 - The Exercise Plan

- Exercises are to be completed annually.
- All staff members must be present for the exercise.
- Make the following available to the exercise group: copy of the E2 Plan, copy of the Mid Island Co-op Safety Program, note pads and any other related material such as maps and contact lists.
- Invite an Emergency Services representative whenever possible to participate in the exercise sessions.
- Pre meeting inspection of all fire extinguishers, emergency signs, call #s and alarm system to be completed prior to exercise.
- Review the E2 Plan document with all participants (paper copies or projector)

Incident Action Plan

For the scenario/s, the reason **why** there is a need for action has been defined. The objective is to take the scenario from the beginning of the event until the incident reaches the point of recovery/restoration.

Plan and document:

- Strategies that will be used to complete the objective (How are we going to meet the objective)
- Tactics that will be used to implement the strategies including:
    - **What** needs to be accomplished?
    - **Where** they will be accomplished
    - **When** they are to be accomplished
    - **Who** will accomplish what?

In a chronological form, document: agencies, names, positions, times, contact numbers, and other applicable information related to the incidents. Attach the exercise notes to the main document.

Complete the following scenario(s) in either handwritten or printed form.

Part 2 – Scenarios

Listed below are Environmental Emergency Exercises that will be rotated on an annual basis:

- Emergency Simulation Exercise scenarios (annual tabletop), and
- Five Year Full-scale Simulation scenario that.

Propane Release – no fire

Emergency Simulation Exercise Scenario

Propane release from hoses/piping/fittings/pump – no fire

Hose rupture during propane transfer from delivery unit to bulk tank.

- The driver is unable to approach the truck or the immediate transfer area.
- It is 2:00 PM
- Light winds and +10 C
- All staff are on site.

Propane Release – with fire

Emergency Simulation Exercise Scenario

During propane transfer from delivery unit to bulk tank a leak within pumping cabinet ignited and flashed back to the point of discharge.

- The driver is unable to approach the truck or the immediate transfer area.
- It is Wednesday at noon.
- Calm winds and -5 C.
- Propane delivery driver and all staff are on site.

Structural Fire – local to propane storage

Emergency Simulation Exercise Scenario

A large amount of smoke is coming from the electrical room.

- It is 2:00 PM
- Light winds and +1 C
- All staff are on site.

Wildfires – local to propane storage

Emergency Simulation Exercise Scenario

A wildfire is approaching the facility.

- It is 3:00 PM
- Moderate winds and +30 C
- All staff are on site.

Bomb Threats/Terrorism

Emergency Simulation Exercise Scenario

Worst-case Scenario - vapour cloud explosion (VCE) vapour release from storage tank – with fire/explosion

A caller reported a bomb placed on top of the above ground propane tank and ended the call.

- It is Tuesday at 10:30 AM
- It is 25 C with wind from the northwest.
- All staff are on site.

Severe Weather

Emergency Simulation Exercise Scenario

Tornado

The customer spotted a funnel cloud.

- It is Monday at 3 PM
- +25 C with strong winds
- All staff are on site.

Emergency Simulation Exercise Scenario

Lightning

A storm is approaching with visible and audible lightning.

- It is Thursday at 1:00 PM
- +30 C strong winds
- All staff are on site.

Evacuation Procedures

Emergency Simulation Exercise Scenario

Notification of a propane emergency or an evacuation order is given:

- It is Tuesday at 8:00 AM
- -10 C light breeze
- All staff are on site.

Serious Injury/Illness

Emergency Simulation Exercise Scenario

An employee slipped and fell while outside striking their head and is unconscious. An employee has witnessed the event.

- It is Monday at 9:00 AM
- All staff are on site.

Vehicle Incidents - On-site Delivery Unit Scenario

Emergency Simulation Exercise Scenario

A delivery unit has been driven into by a customer. The driver escaped injury and the barrel appears to be damaged.

- It is Monday at 7 PM and dark.
- It is -20 C with no wind.

Jet fire

The bulk storage tanks 3” liquid bottom outlet valve has ruptured releasing propane west toward the property line. The release ignited causing a jet fire out to 100 m.

- The release is major.
- It is 1:15 pm
- Gusting winds from the east at 20 km/hr.
- +25 C
- All staff are on site.

Part 3 – Participation List

Mid Island Co-op E2 Plan Exercise Report

Date				
Exercise Facilitator				
Signature				
Position				
Facility	Gabriola Island Bulk Plant			
CRS Retail	1748			
Location	017			
Address	793 Lockinvar Lane, Gabriola Island BC - V0R 1X0			
Phone #s	Area Manager Kelli Cartwright 250-802-1198			
Storage Capacity	Tank 1	9,400 USWG	Tank 2	N/A

Participants

Print	Sign

Part 4 – Exercise Evaluation and Corrective Actions

Following the exercises, the evaluation should include completeness of the E2 Plan, reader understanding, flow, accuracy, reaching objectives, learning success, challenges, and recommendations. The evaluation should also include any other items of concern during the exercise.

Discussion Notes, Evaluation and Corrective Actions

Name of Author:		**Date:**	

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**

Exercise Facilitator	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

2023 ER.E2 Plan Review and Tabletop Exercise ppt may be found here:

Corrective Actions

Assigned Person	Required Action	Completion Date (YYYY/MM/DD)	Priority (H/M/L)
			H
Assigned Person	**Required Action**	**Completion Date (YYYY/MM/DD)**	**Priority (H/M/L)**
			H

Exercise Facilitators	
Facilitator Title	

Agencies Attending the event:

Note: The environmental emergency plan for this facility was updated in accordance with section 10 of the Regulations and includes the full-scale simulation exercise.

9.3.2 Preventative Maintenance Inspections Records

Annual preventative maintenance inspections are conducted by an FCL technician with records stored electronically and can be located at I:\AA Propane Fastfield PDFs. Hard copies are printable at any given time.

9.3.3 Community Notification Records

XXXX

9.3.4 Plan Stakeholder Status and Acknowledgement

Municipal Information	
Municipality or District	Gabriola Island – Local Trust Area
Address	
Gabriola Island Trustees	Tobi Elliott 250-268-7434 telliott@islandstrust.bc.ca Susan Yates 250-247-8086 syates@islandstrust.bc.ca

Emergency Service Information	
Fire Service Name	Gabriola Volunteer Fire Department
Address Fire Hall #1	730 Church Street, Gabriola BC V0R 1X3
Address Fire Hall #2	2400 South Road 250-247-8332
Fire Chief	Will Sprogis
Fire Chief Contacts	W: 250-247-9677
DFC	XXXX
DFC Contacts	XXXX
Duty Officer	Pager: 250-755-9289
Travel Time to Facility	2 minutes travel time from Fire Hall #1 to Bulk Plant
Initial Attack Water Volume	2,000 gallons
Sustained Action Water Source	Water shuttle
Training Schedule	

Mutual Aid Agreements	
Name of Agency	Regional District of Nanaimo (RDN)
Location of Agency	6300 Hammond Bay Road, Nanaimo, BC V9T 6N2
Primary Contact Person	inquiries@rdn.bc.ca
Phone #	250-390-4111

Gabriola Volunteer Fire Department received a completed copy of the E2 plan on 2023.

I, _____ of Gabriola Volunteer Fire Department acknowledge that I have received the E2 Plan.

Position _____

Signature _____

Date _____

Mid Island Co-op Representative _____

Position _____

Signature _____

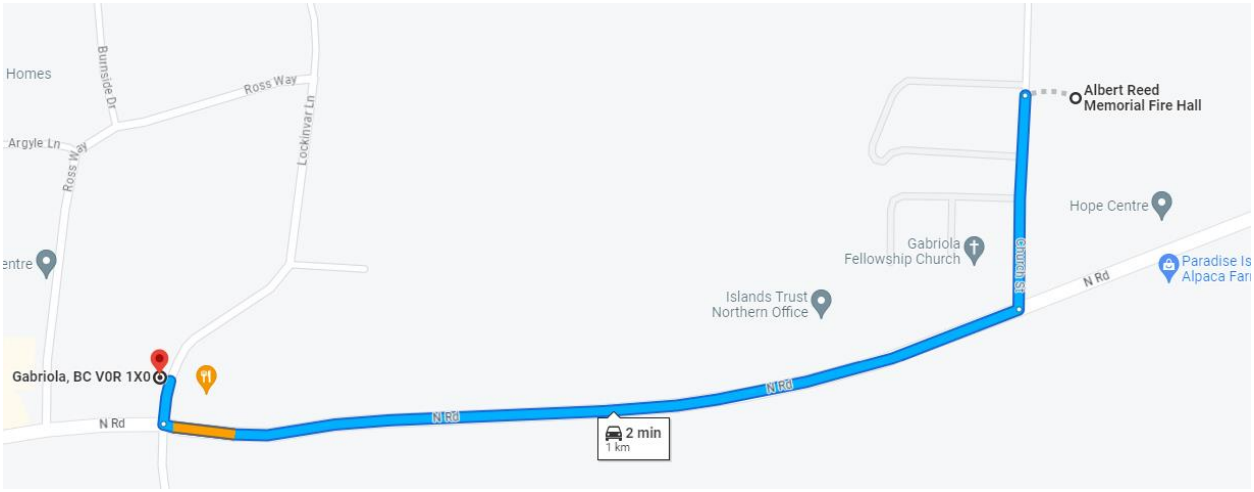
Date _____

9.3.5 Facility Photos

XXXX

Annex 10.4 Maps and Diagrams

9.4.1 Fire Service Route to Site



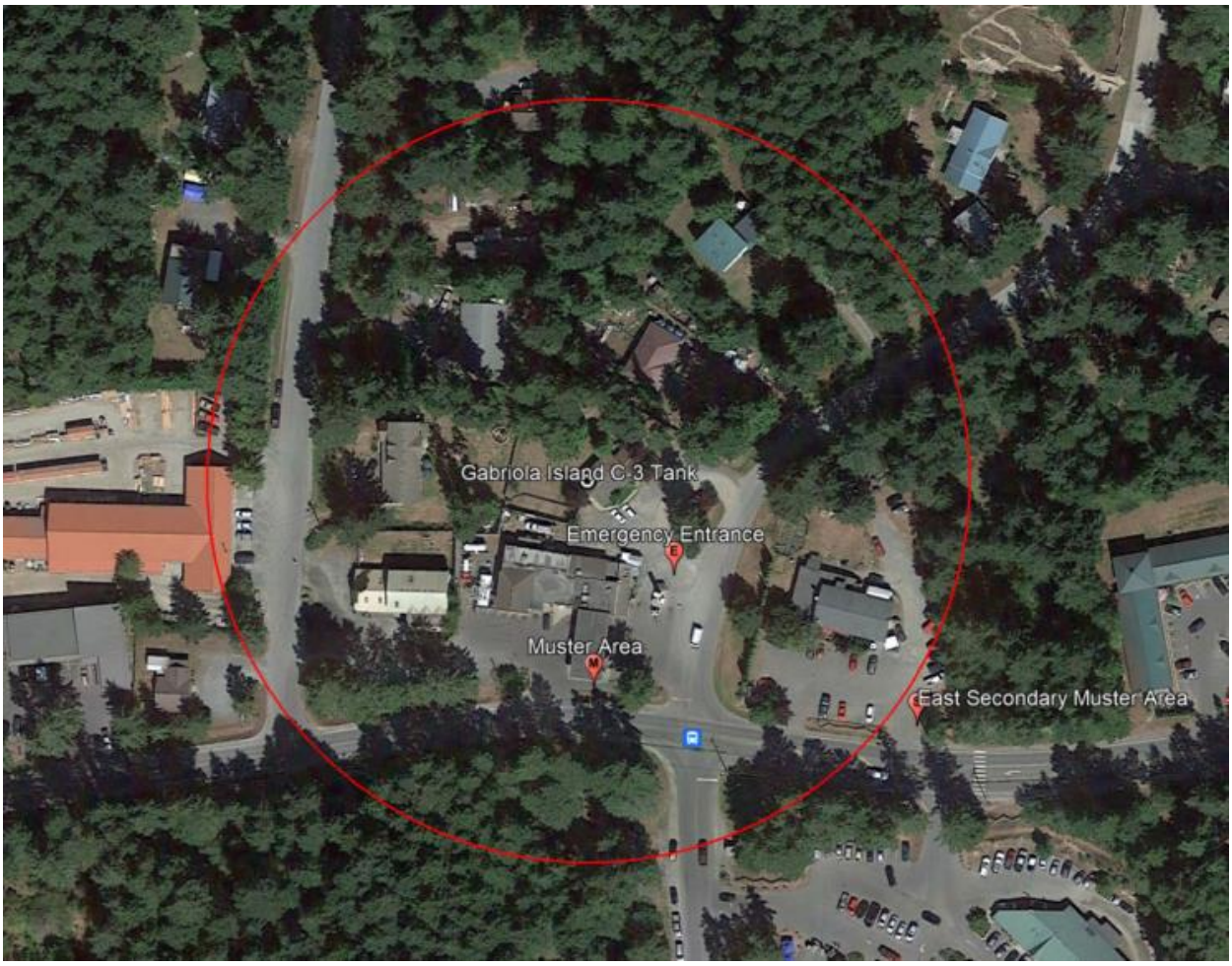
9.4.2 Emergency 1st Responder Entrance to Facility

- ***GPS - DD (decimal degrees): 49.17439, -123.84605***
- ***Road Address: 793 Lockinvar Lane Gabriola Island BC***

9.4.3.1 Muster Area

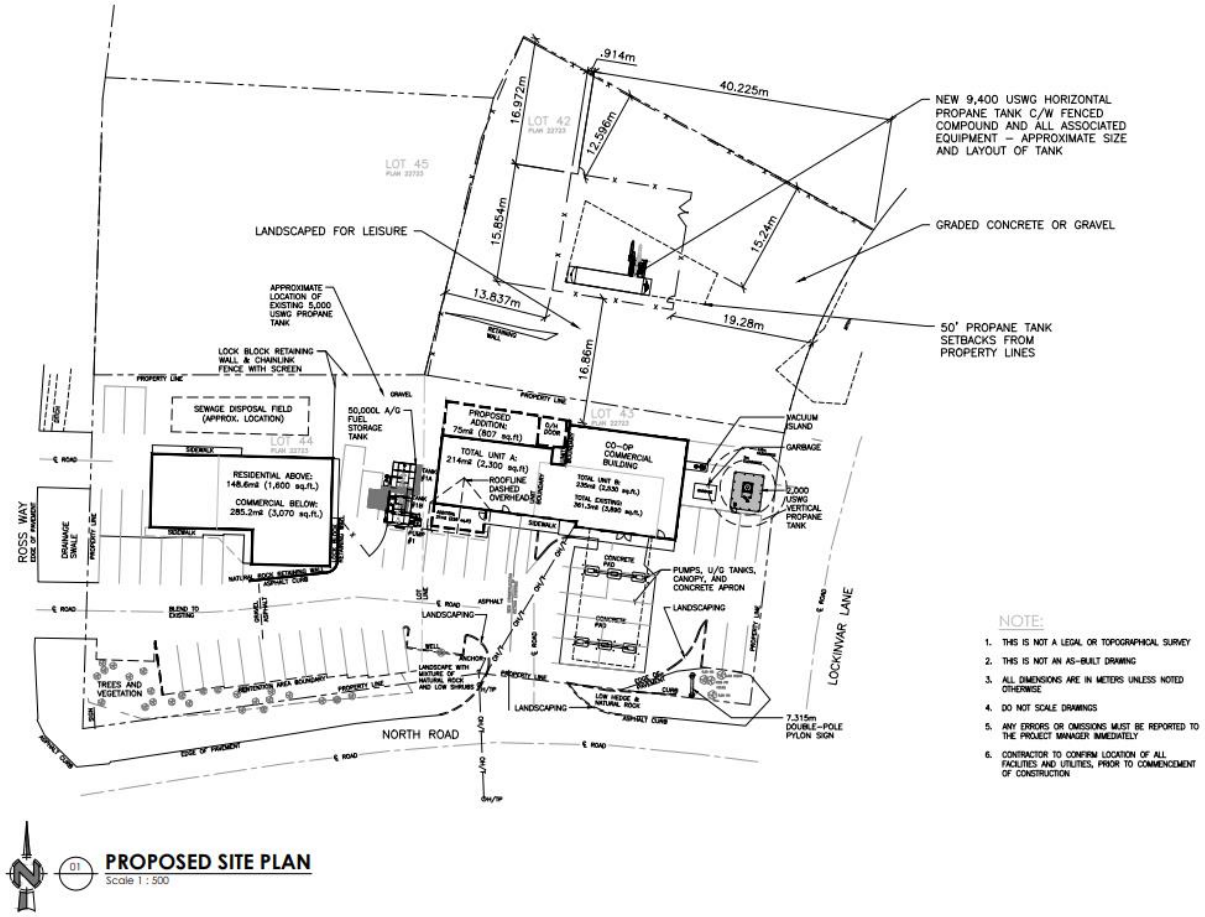
Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay, go upwind or side-on to the wind out to a safe distance.

9.4.3.2 Secondary Muster Area

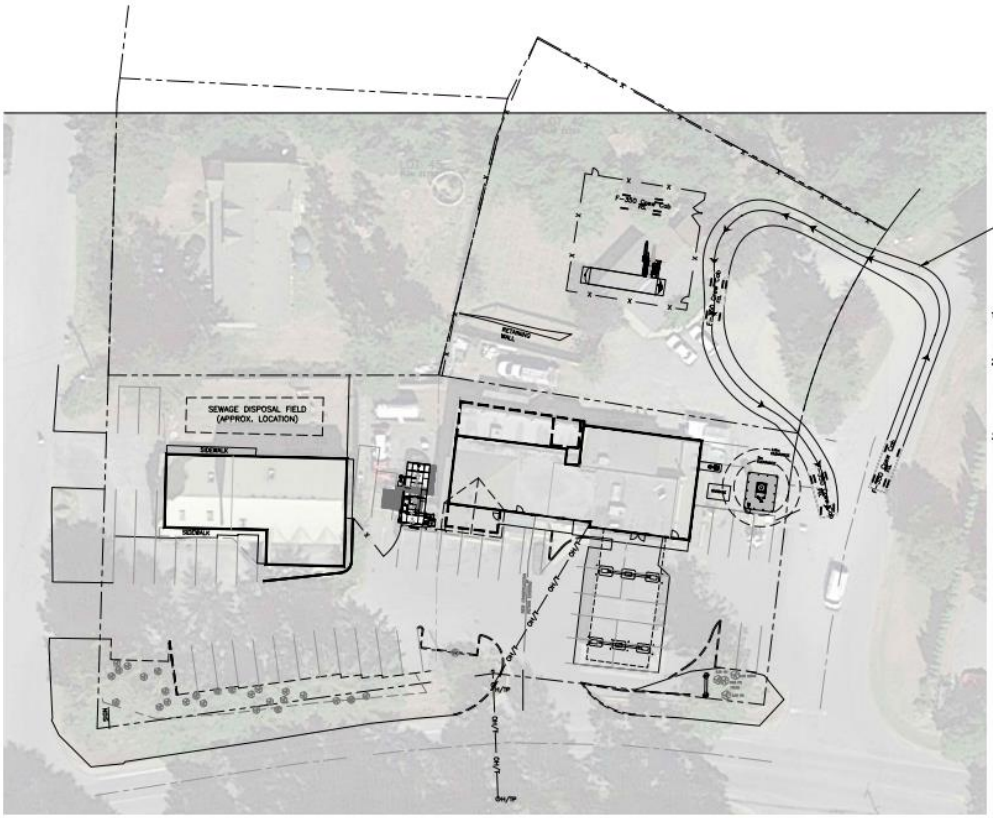


Muster Areas: In case of emergency involving propane, all staff will go to the Muster Area and if not safe to meet/stay at the Muster Area go to the east Secondary Muster Area using the closest safe route. If the Muster Areas are not safe to meet/stay go upwind or side-on to the wind out to a safe distance.

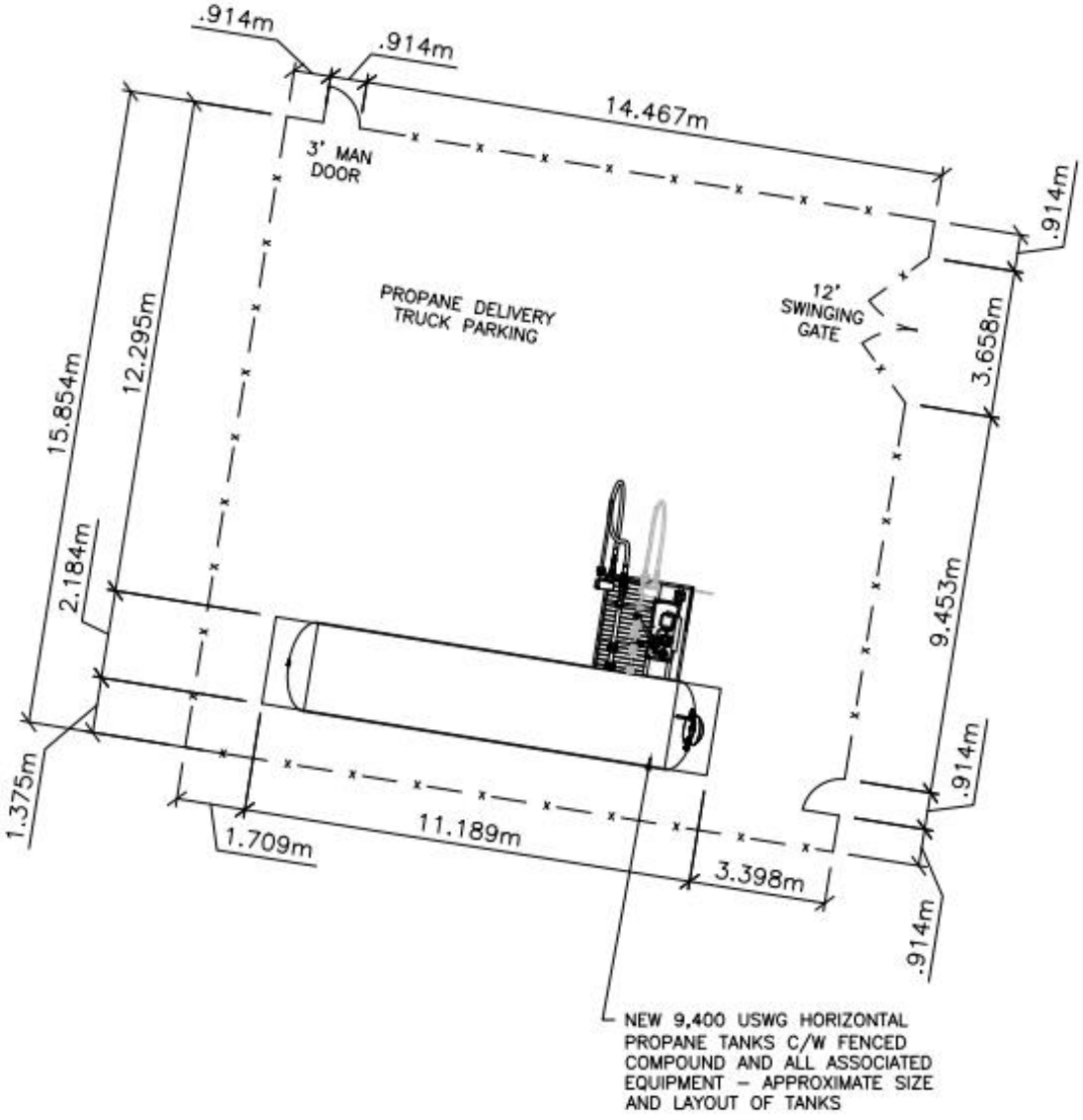
9.4.4 Facility Maps



01 **PROPOSED SITE PLAN**
Scale 1 : 500



01 **PROPANE VEHICLE PATH**
Scale 1 : 500

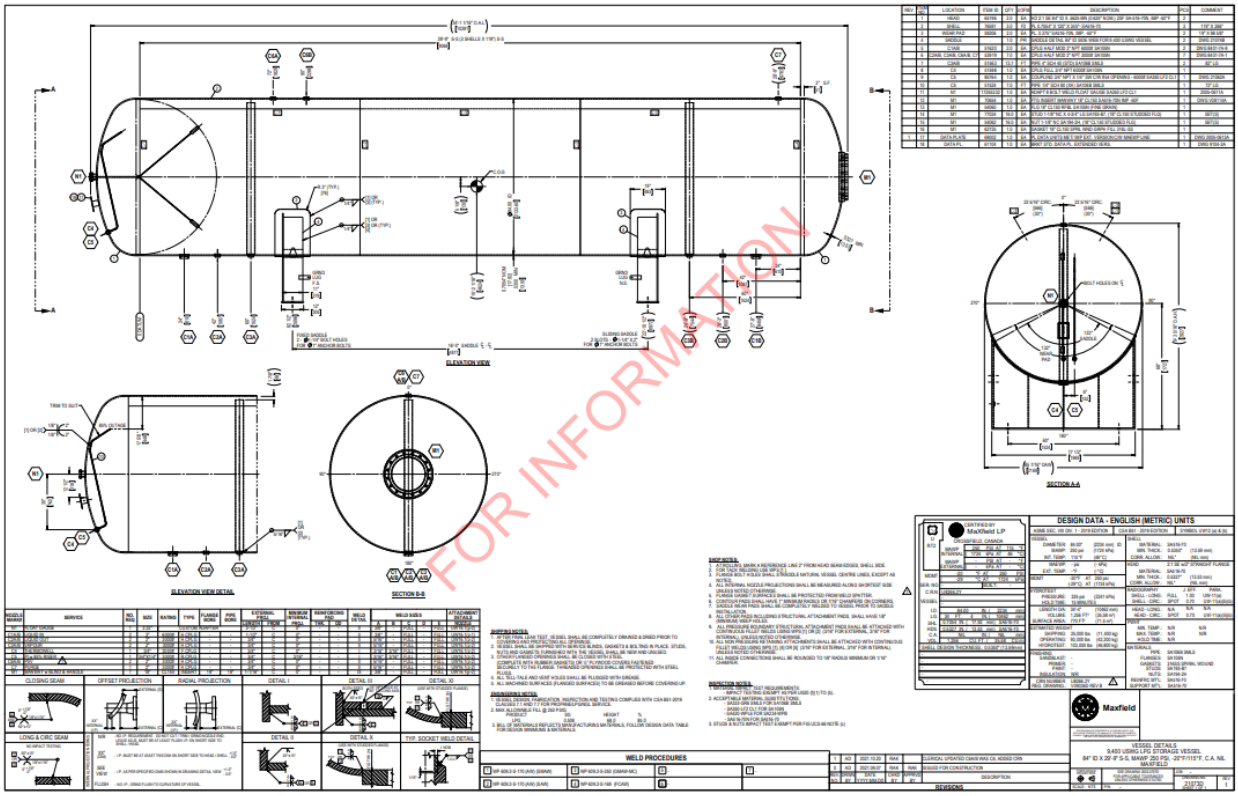


01 **PROPANE DETAIL PLAN**

Scale 1 : 150

9.4.5 Plant Schematics

9.4.5.1 Facility Specific Schematics



9.4.6 P&ID Drawings

9.4.6.1 Facility Specific Drawings

XXXX.

9.4.7 Tank/s Data Plate/s

XXXX

END

793 Lockinvar Lane, Gabriola Island

Zoning Amendment Application Report

PREPARED FOR:

MID ISLAND CONSUMER SERVICES COOPERATIVE

106 - 2517 BOWEN ROAD,

NANAIMO, BC, V9T 3L2

TEL. 250.802.1198

EMAIL. kelli.cartwright@midisland.crs

macdonald gray

MACDONALD GRAY CONSULTANTS INC.

814 SHOREWOOD DRIVE,

PARKSVILLE, BC V9P 1S1 CANADA

TEL. (250) 248-3089

EMAIL. info@macdonaldgray.ca

June 12, 2024

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1.0 INTRODUCTION

The intent of this Zoning Amendment Application is to amend the current Institutional 2 (IN2) Zoning District aligned with the policies and priorities expressed within the Official Community Plan (OCP) Bylaw. There is specific policy support for expansion existing commercial services of the Lockinvar Triangle. Lockinvar Triangle is identified as the main commercial centre for the island where the CO-OP is located.

Increased demand and a number of logistical constraints including unexpected ferry service disruptions have resulted in the need for additional storage in order to provide adequate supply (an additional weeks' worth) to Island(s) customers. This is a logical and pragmatic expansion of existing services provided on the adjacent 548 North Road CO-OP location required to adequately meet the needs of island residents.

Mid Island Consumer Services Cooperative (CO-OP) is applying for a Zoning Amendment Application to add **'Propane Storage'** as a site specific permitted land use for 793 Lockinvar Lane under the current **IN2 Zoning District**.

The following application report is an analysis of the current and long-range planning framework applicable to 'the land' described as:

793 LOCKINVAR LANE
Lot 42 Plan VIP22723 Section 20 Land District 32 GABRIOLA ISLAND
PID: 002-623-463
Size: 126 x 167ft. (BC Assessment Data)

A conceptual land use exhibit has been prepared by Mid Island CO-OP at this stage to illustrate the findings of the opportunities and constraint analysis and a proposed development framework. MacDonald Gray Consultants Inc. continues to support the logical and pragmatic evolution of west coast communities with land use proposals that are clearly aligned with goals, objectives, and policies of the jurisdiction. We are looking forward to continued collaboration with Islands Trust Staff to facilitate the proposed land use change.

Figure 1 – Islands Trust Map Gabriola Island Aerial Imagery Excerpt (CO-OP properties shown in red)

2.0 SITE HISTORY

The property has been previously developed and currently contains an unused medical building that appears to be a repurposed residential structure.

3.0 LOCATION IN RELATION TO COMMUNITY FACILITES

3.1 FIRE PROTECTION

The Albert Reed Memorial Fire Hall is located at 730 Church Street. The Fire Hall is 1.0kilometres or a 2-minute drive from the site.

3.2 POLICE

The Royal Canadian Mounted Police detachment is located at 525 South Road. The Detachment is 500metres or a 1-minute drive from the site.

3.3 HEALTH

A BC Ambulance Station is located at 725 Church Street. The Station is 1.1kilometres or a 2-minute drive from the site.

The Gabriola Medical Clinic is located at 695 Church Street. The clinic is 1.1kilometres or a 2-minute drive from the site.

3.4 TRANSPORTATION ROUTES

The site is located 1.0kilometres east of the Gabriola Island Ferry Terminal on North Road. North Road functions as the primary east-west roadway on the Island.

3.5 PUBLIC TRANSPORTATION

Gabriola's Community Bus (GERTIE) is a flag down bus system. There is a bus stop at the village centre near the corner of Lochinvar and North Road adjacent to the site.

3.6 COMMERCIAL SERVICES

The Properties are ideally located within Gabriola Island's Village Commercial Centre.

4.0 EXISTING LAND USE

4.1 GABRIOLA LAND USE BYLAW NO. 177, 1999

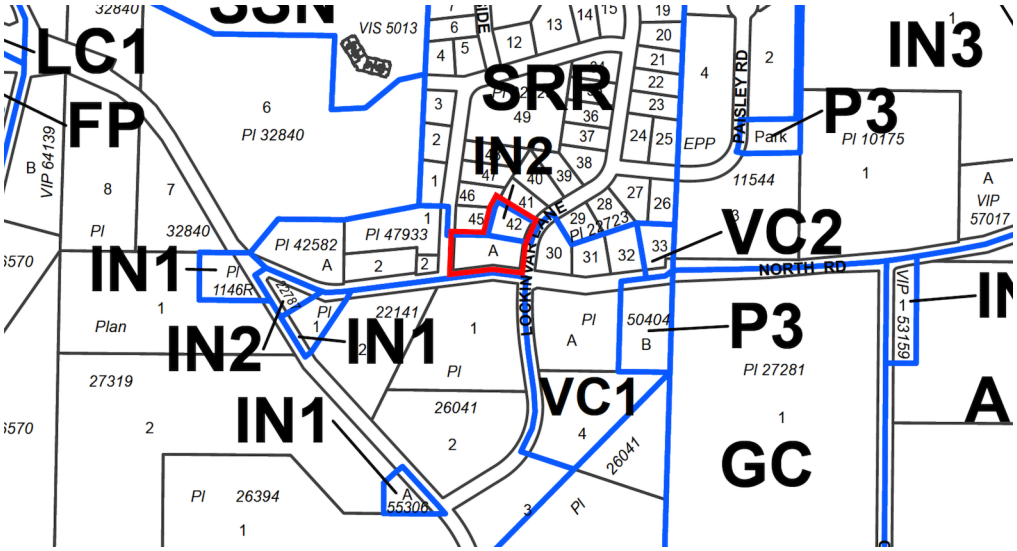

Figure 2 –Zoning Map Excerpt (CO-OP properties outlined in red)

The Zoning Districts are: **IN2 – Institutional 2**
VC1 – Village Commercial 1

793 LOCKINVAR LANE
548 NORTH ROAD (CO-OP)

Table 1: Existing Zoning & Land Use

Zoning Districts	Permitted Land Uses	Maximum Number	Minimum Parcel Size	Maximum Coverage / FAR
IN2 – Institutional 2	Public Schools Emergency Services Library Post Office Medical Laboratory Government Offices Highway Work Yards Medical Clinic Child Care / Preschool	N/A	0.5ha.	20% Lot Coverage

5.0 ADJACENT LAND USE

5.1 GABRIOLA ISLAND LAND USE BYLAW NO. 177, 1999

Table 2 below, provides a brief overview of adjacent land uses and densities.

Table 2: Adjacent Zoning & Land Use

Zoning Districts	Permitted Land Uses	Maximum Number	Minimum Parcel Size	Maximum Coverage
VC1 – Village Commercial 1	Retail Sales and Rentals Offices Personal Services Restaurants Public Market Medical and Dental Clinics Bakeries Repair Shops Building Material Supply Private Clubs and Lodges Indoor Recreation Libraries Laundromats Automotive Service and Sales Gasoline Sales Household Storage Shopping Centre Accessory Single Family Residential	N/A 1	0.5ha.	40% Lot Coverage 0.25 FAR
SRR – Small Rural Residential	Single Family Residential Horticulture Home Occupation Secondary Suites	1 1	0.5ha	20% Lot Coverage

Zoning Districts	Permitted Land Uses	Maximum Number	Minimum Parcel Size	Maximum Coverage
IN1 – Institutional 1	Public Assembly And Recreation Personal Care Facilities Library Museum Child Day Care Centre Recreation Camp Recycling Centre Cemetery Community Resource Centre	N/A	0.5ha.	20% Lot Coverage

6.0 REGULATORY STATUS

6.1 GABRIOLA ISLAND OFFICIAL COMMUNITY PLAN BYLAW NO. 166, 1997 (OCP) LAND USE

The land use designations for the subject property is:

IN – Institutional **793 LOCKINVAR LANE**

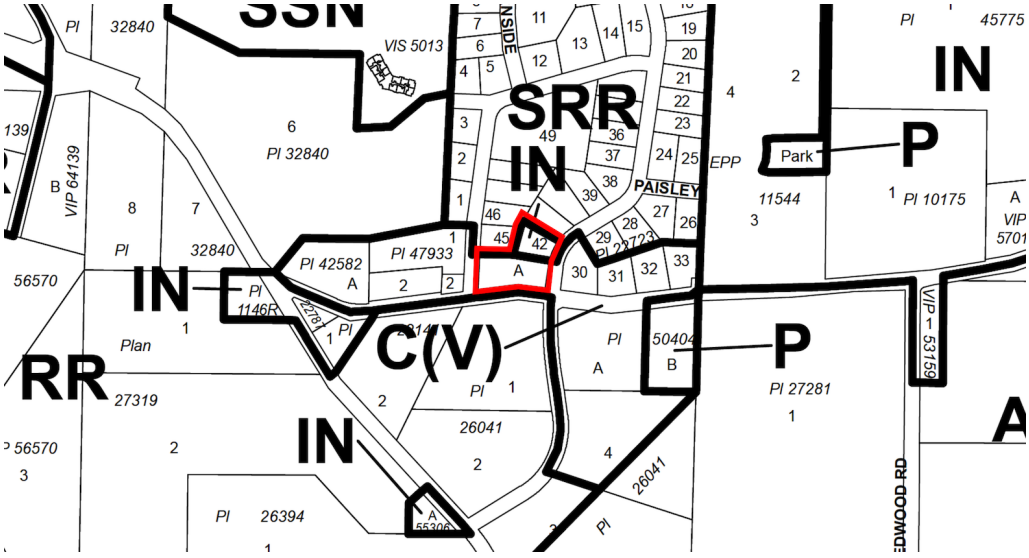

Figure 3 – Gabriola Island OCP Land Use Map Excerpt (CO-OP properties outlined in red)

"Institutional uses play an important role in the community and in many cases serve as a focal point for community life. For purposes of this plan, Institutional Uses includes facilities, services and uses which are operated by government or a non-profit society and include medical clinics open for community use." (OCP excerpt, Section 4.1, Pg. 28)

6.2 OCP SECTION 4 – (RELEVANT) INSTITUTIONAL POLICIES

6.2.1 SECTION 4.1 – INSTITUTIONAL USE POLICIES

a) *Existing institutional uses identified above shall be designated on the Plan Map (Schedule B).*
b) *A health care use shall be permitted as an institutional use.*
c) *The minimum parcel size shall be 0.5 hectares (1.235 acres) and the average parcel size shall be no less than 1.0 hectare (2.47 acres).*
d) *The Trust Committee shall consult on an annual basis with the School District #68.*

C(V) - Commercial (Village) **548 NORTH ROAD (Adjacent Existing CO-OP Property)**

"The 2011 BC Assessment Authority data indicates that there are 30 properties classified as commercial for tax purposes in the Gabriola Planning Area.

The greatest concentration of commercial use is located in the vicinity of the Lockinvar Triangle (also referred to as the Village Centre). This area provides for a mix of commercial, residential, public recreational, and institutional uses." (OCP excerpt, Section 3.1, Pg. 20)

6.2.2 SECTION 3.1 – GENERAL COMMERCIAL POLICIES

a) *The minimum and average parcel size in any commercial designation shall be 0.5 hectares (1.235 acres), excepting the Tourist Recreation designation in which there shall be no additional lots created.*
b) *A commercially designated site shall be designated as a development permit area where it is believed important to regulate the form and character of development which occurs there.*
c) *The community plan makes provision for five separate commercial land use designations: Village Commercial, Local Commercial, District Commercial, Tourist Commercial and Tourist Recreational. Policies pertaining separately to each of these commercial designations follow. The locations of commercially designated property are shown on Schedule B (the Plan Map) which is attached to and forms part of this plan.*
d) *One single-dwelling residential unit per parcel may be permitted in any Commercial designation.*

6.2.3 SECTION 3.2 – VILLAGE COMMERCIAL POLICIES

a) *Existing commercially zoned properties in the "Village Centre" (the Lockinvar Triangle area) are designated Village Commercial.*
b) *The Village Centre shall be recognized as the main location for commercial activity in the planning area.*
c) *The Village Commercial designation shall provide for a range of commercial uses including: retail, restaurant, personal service use, office use, institutional use,*

building supply sales and the servicing and fueling of motor vehicles. The Zoning Bylaw will specify in detail the range of uses permitted.

d) The expansion of the Village Commercial designation shall be considered based on compliance with the following criteria:

i. adequate off-street parking, landscaping and pedestrian access is provided;

ii. the design and site layout of the proposed development can be well integrated into the existing land use pattern in the Village Centre;

iii. the parcel fronts onto a main road and access and egress to the parcel can be provided safely;

iv. the additional area proposed for Village Commercial is small in size.

e) Land in the Village Commercial designation and any future additions to the Village Commercial designation shall be placed in the Village Centre development permit area so as to ensure that the form and character of development which occurs is consistent with the existing character of the Folklife Village.

6.3 DEVELOPMENT PERMIT AREAS (DPA)

The following Gabriola Island Development Permit Area (DPA) is applicable to the subject property:

6.3.1 DPA 7 – THE VILLAGE CENTRE;

This DPA is applicable to all properties within the Village Commercial land use designation.

"The Gabriola village centre area is designated as a development permit area for the purposes of establishing objectives for form and character, water conservation and reduction of greenhouse gas emissions. This designation will help ensure that commercial development will be pedestrian oriented, landscaped to conserve water resources and encourage fuel efficient vehicles and alternative modes of transportation."(OCP Excerpt)

7.0 CONCLUSIONS

7.1 OPPORTUNITIES & CONSTRAINTS

7.1.1 CURRENT ZONING

The current Zoning of 793 Lockinvar Lane does not support the placement of Propane tanks on the property.

7.1.2 COMMUNITY VISION

The OCP designates 793 Lockinvar Lane as Institutional, which does not support commercial or retail land uses. Despite this, the adjacent Commercial (Village) Designation applied to 548 North

Road provides policy support for expansion of the Lockinvar Triangle. Lockinvar Triangle is identified as the main commercial centre for the island.

OCP policy states:

> *"The expansion of the Village Commercial designation shall be considered based on compliance with the following criteria:*
>
> - *adequate off-street parking, landscaping and pedestrian access is provided;*
> - *the design and site layout of the proposed development can be well integrated into the existing land use pattern in the Village Centre;*
> - *the parcel fronts onto a main road and access and egress to the parcel can be provided safely;*
> - *the additional area proposed for Village Commercial is small in size."*

The small and logical expansion of the existing and adjacent use appears to be supportable under OCP policy.

There are a number of options available to accommodate propane tanks on the Lockinvar Property. The simplest approach would be to add propane storage and sales to the existing IN2 Institutional 2 Zoning District.

Propane tanks are removable. Therefore, leaving the balance the existing zoning in place would allow future redevelopment of the site under the Institutional Policies of the OCP.

Expansion of propane services to the Island is also in alignment with the GHG reduction policies of the OCP. Natural Resources Canada (NRCAN) clearly cites the environmental benefits of propane:

> *"Propane burns more cleanly than gasoline or diesel fuel. On a per unit energy use basis, propane produces fewer greenhouse gas emissions that contribute to climate change. The use of propane as an alternative fuel in factory-built vehicles can reduce greenhouse gas emissions by 20 – 25 percent in light-duty vehicles on a life-cycle (well-to-wheel) basis (compared with gasoline).*
>
> *Propane also contains fewer toxic pollutants. For example, because propane has extremely low sulphur content, it does not produce significant amounts of sulphur oxides, which can contribute to acid rain and smog. Furthermore, propane is a pressurized fuel that must be contained within a sealed system, right up to the time it enters your vehicle, so it is less likely to escape into the soil or water through careless handling, spills or evaporation."(nrcan.ca)*

8.0 DISCLAIMER

This report is intended for general guidance and information purposes only. This report is under no circumstances intended to be used or considered as financial or investment advice.

The material in the report is obtained from various sources per dating of the report. We have taken reasonable care to ensure that, and to the best of our knowledge, material information contained herein is in accordance with the facts and contains no omission likely to affect its understanding.

MacDonald Gray Consultants does not make any representation or warranty, express or implied, as to the accuracy or completeness of this report and will not have any liability towards any other person resulting from the use of this report.

There may have been changes in matters which affect the property subsequent to the date of this report. Neither the issue nor delivery of this report shall under any circumstance create any implication that the information contained herein is correct as of any time subsequent to the date hereof or that conditions surrounding the property have not since changed. MacDonald Gray Consultants does not intend, and does not assume any obligation to update or correct the information included in this report.

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This report is subject to Canadian law, and any dispute arising in respect of this report is subject to the exclusive jurisdiction of Canadian courts.

APPENDIX 'A' – LAND TITLE DOCUMENTS

TITLE SEARCH PRINT 2022-10-20, 10:45:07

File Reference: Requestor: Nigel Gray

Declared Value $ 195000

CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN

Land Title District	VICTORIA
Land Title Office	VICTORIA
Title Number	FB339548
From Title Number	ES115350
Application Received	2010-04-06
Application Entered	2010-04-16

Registered Owner in Fee Simple

Registered Owner/Mailing Address: MID ISLAND CONSUMER SERVICES CO-OPERATIVE, INC.NO. 0000759
103-2517 BOWEN ROAD
NANAIMO, BC
V9T 3L2

Taxation Authority Nanaimo/Cowichan Assessment Area

Description of Land

Parcel Identifier: 002-623-463

Legal Description:

LOT 42, SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT, PLAN 22723

Legal Notations

LAND HEREIN WITHIN BUILDING SCHEME SEE 50459W

Charges, Liens and Interests

Nature:	COAL TSN
Registration Number:	DF45586
Registration Date and Time:	1939-10-18
Remarks:	INTER ALIA FORFEITED TO CROWN, 02/10/1947, DF 47743, EXCEPT THOSE PARTS OF LOTS 43 AND 44, FORMERLY IN PLAN 7868

Nature:	UNDERSURFACE RIGHTS
Registration Number:	109304G
Registration Date and Time:	1944-04-22 10:00
Registered Owner:	DAVID TAYLOR
Remarks:	INTER ALIA AFB 13.333.13837A EXCEPT THOSE PARTS OF LOTS 43 AND 44 FORMERLY IN PLAN 7868

Nature:	RESTRICTIVE COVENANT
Registration Number:	404457G
Registration Date and Time:	1970-09-11 15:04
Remarks:	DD 60221W

Nature:	UNDERSURFACE RIGHTS
Registration Number:	S13098
Registration Date and Time:	1987-02-19 09:00
Remarks:	INTER ALIA PURSUANT TO MINERAL LAND TAX ACT, SBC 1979, CHAPTER 260 AND AMENDMENTS THERETO, MINERALS (EXCEPT GOLD AND SILVER) HEREIN AND THE RIGHT TO WORK, WIN OR CARRY AWAY SAME UNDER 109304G, FORFEITED AND VESTED IN CROWN

Duplicate Indefeasible Title NONE OUTSTANDING

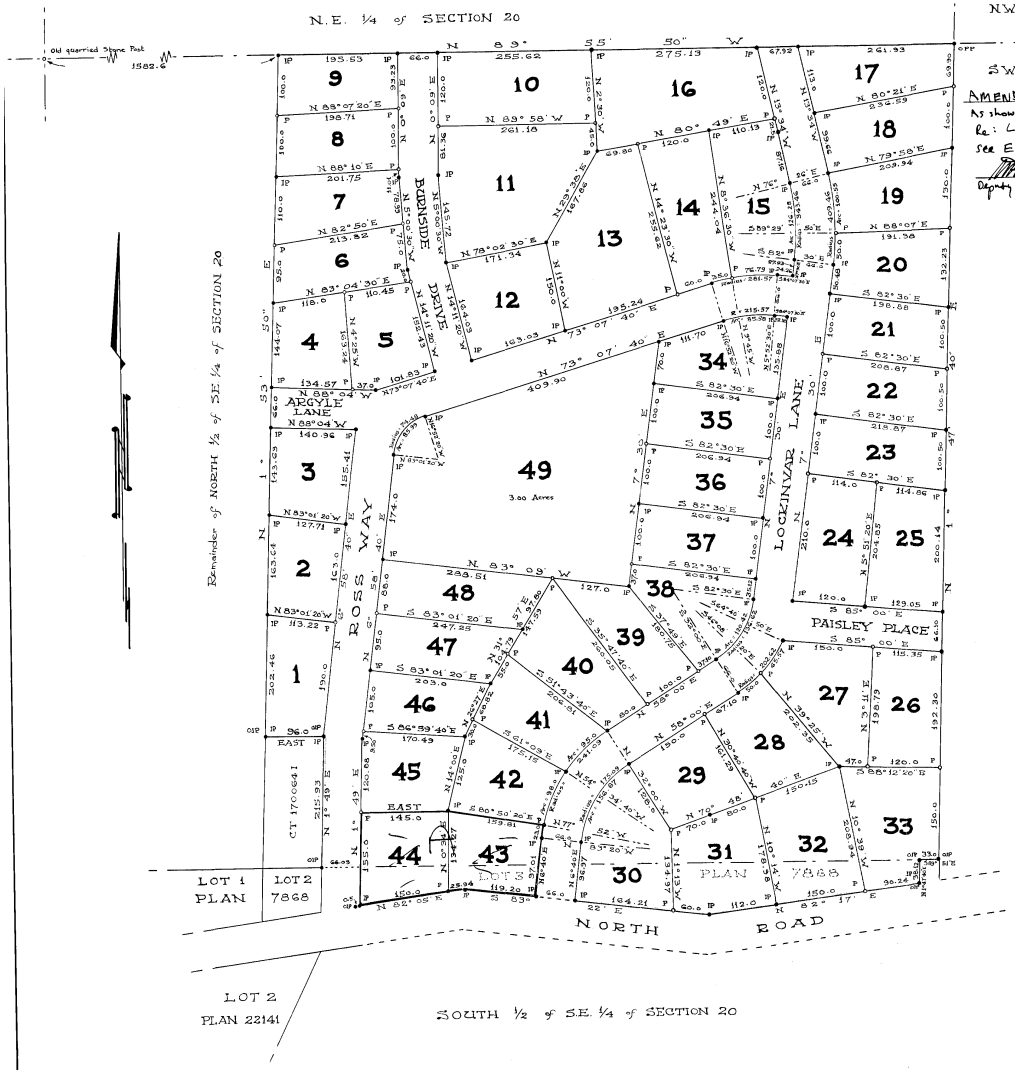
Transfers NONE

Pending Applications NONE

PLAN Nº 22723

Deposited in the Land Registry Office at Victoria, B.C.
this 1st day of December 1969
33.174 W
33.172 W
M.I.F.

H. Kneally
Registrar



AMENDMENTS

As shown hereon under Section 137 Land Title Act
Re: Lots 43 and 44 now Lot A
See EW 157667

Deputy Registrar

PLAN OF SUBDIVISION OF LOT 3, PLAN 7868 AND PART OF THE EASTERLY 17 CHAINS OF THE NORTH ½ OF THE SOUTH-EAST ¼ OF SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT.

Scale :- 1 inch to 100 feet.

LEGEND

Bearings Astronomic derived from Plan 7868.

- OIP denotes Iron Post found.
- OPP denotes Standard Pipe Post found.
- IP denotes ½ × 30" square galvanized Iron Post set.
- P denotes 3×3" White Wood Post set.

This Plan lies within the Nanaimo Regional District

Approved under the Land Registry Act
this 7th day of October 1969

Approving Officer:-
Department of Highways.

Registered Owners:-

SOUTHERN SLOPE HOLDINGS 1959 LTD.

SECRETARY

I, Alan H. Knappett of the City of Nanaimo, British Columbia Land Surveyor, make oath and say that I was present at and did personally superintend the survey represented by this plan and that the survey and plan are correct. The said survey was completed on the 26th day of August, 1969.

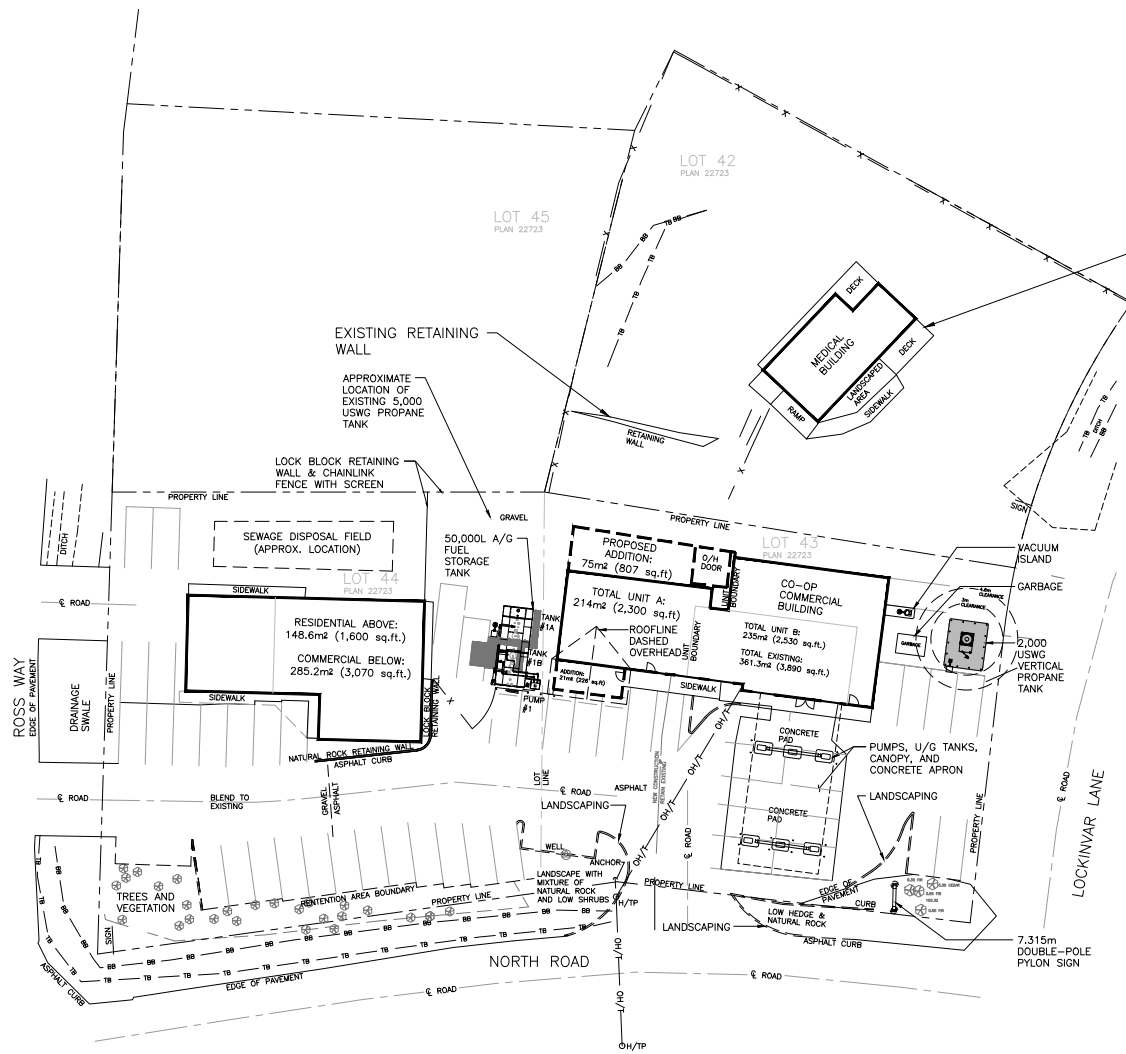
A.H. Knappett B.C.L.S.

Sworn before me
this 4th day of September, 1969.

A Commissioner for taking Affidavits
within the Province of British Columbia

File:- N G55
FB. 30 P. 41
36 P. 41

APPENDIX 'B' PRELIMINARY SITE PLANS



01 **EXISTING SITE PLAN**

Scale 1 : 500

NOTE:

1. THIS IS NOT A LEGAL OR TOPOGRAPHICAL SURVEY
2. THIS IS NOT AN AS-BUILT DRAWING
3. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE
4. DO NOT SCALE DRAWINGS
5. ANY ERRORS OR OMISSIONS MUST BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY
6. CONTRACTOR TO CONFIRM LOCATION OF ALL FACILITIES AND UTILITIES, PRIOR TO COMMENCEMENT OF CONSTRUCTION

FEDERATED CO-OPERATIVES LIMITED

NOTES:

1. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE NOTED.
2. THIS DRAWING IS FOR REFERENCE ONLY; ALL DIMENSIONS SHALL BE CONFIRMED, ON SITE, BY THE ARCHITECT BEFORE COMMENCING WORK OR ORDERING MATERIALS.
3. CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA.

PROJ. # 22231

DATE 21 SEPTEMBER 2023

DRAWN . **CHECKED** .

RETAIL: MID-ISLAND CO-OP

FACILITY: C-STORE

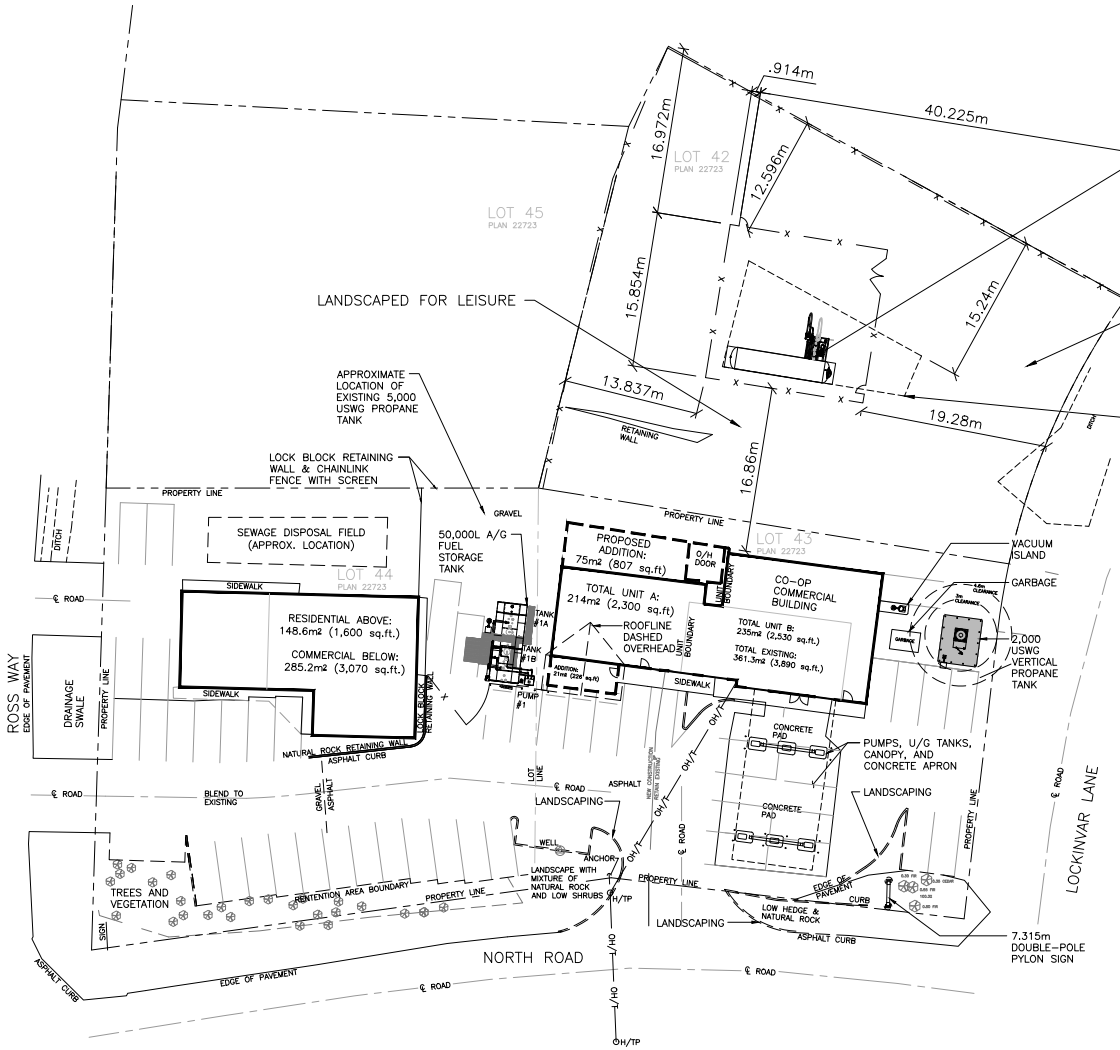
LOCATION

LOT(S)	42
BLOCK(S)	.
PLAN	22723
LEGAL DESC.	.
CIVIC ADD.	548 NORTH ROAD
CITY	GABRIOLA ISLAND
PROVINCE	BRITISH COLUMBIA

SHEET .

DWG. # 101.1 **REV.** D

C:\Users\LEEJAY~1.KNO\AppData\Local\Temp\AcPublish_19516\22231-D.dwg



PROPOSED SITE PLAN

01

Scale 1 : 500

NOTE:

1. THIS IS NOT A LEGAL OR TOPOGRAPHICAL SURVEY
2. THIS IS NOT AN AS-BUILT DRAWING
3. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE
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FEDERATED CO-OPERATIVES LIMITED

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3. CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA.

PROJ. #	22231
DATE	21 SEPTEMBER 2023
DRAWN	. **CHECKED** .
RETAIL:	MID-ISLAND CO-OP
FACILITY:	C-STORE

LOCATION

LOT(S)	42
BLOCK(S)	.
PLAN	22723
LEGAL DESC.	.
CIVIC ADD.	548 NORTH ROAD
CITY	GABRIOLA ISLAND
PROVINCE	BRITISH COLUMBIA

SHEET .

DWG. # 101.2 **REV.** D

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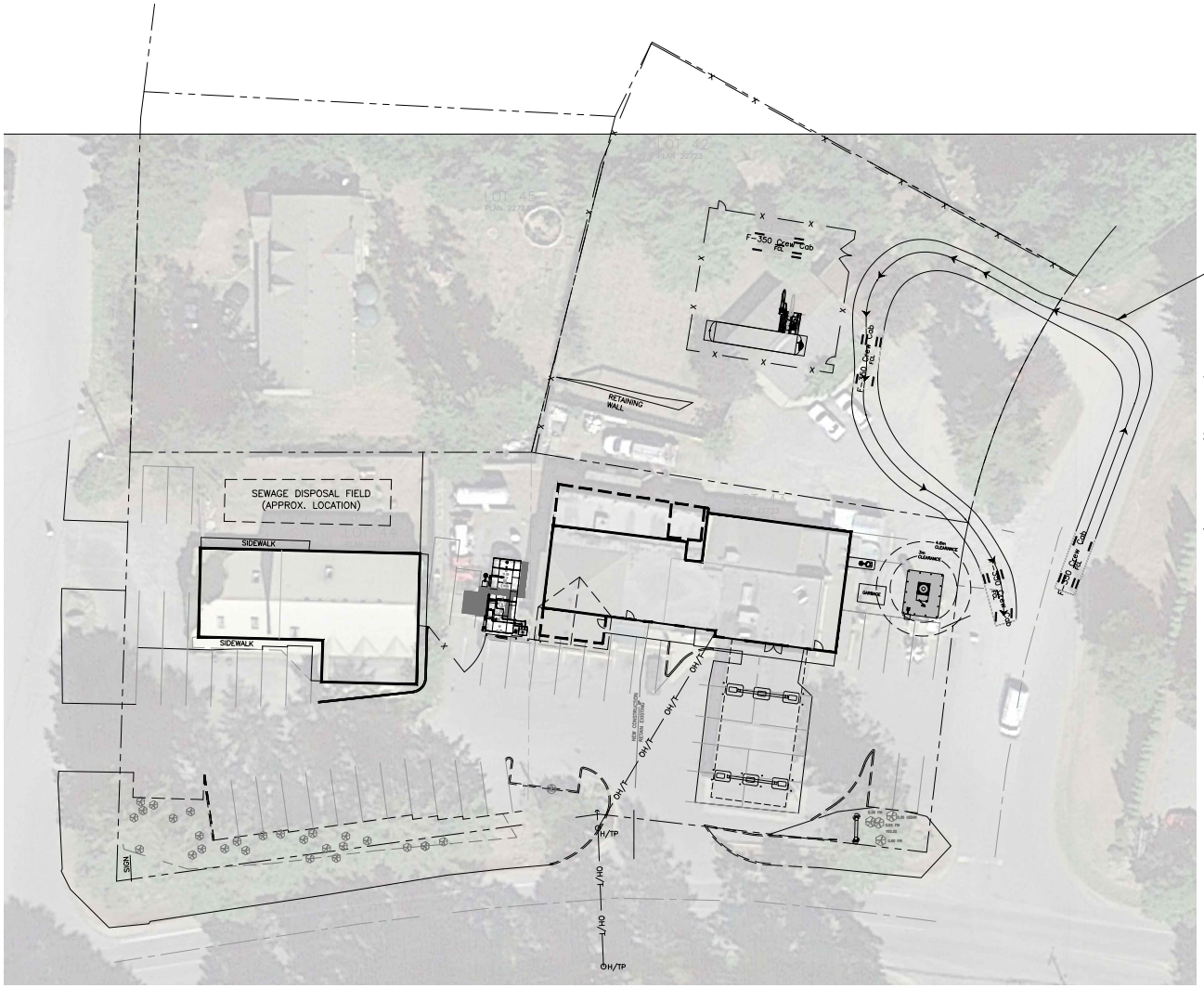

F350 DUALLY USED TO REPRESENT PATH OF RETAIL PROPANE DELIVERY TRUCK

AUTOTURN NOTE

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3. ACTUAL VEHICLE MAY NOT BE EXACTLY AS SHOWN.

01 **PROPANE VEHICLE PATH**
Scale 1 : 500

FEDERATED CO-OPERATIVES LIMITED

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3. CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA.

PROJ. #	22231
DATE	21 SEPTEMBER 2023
DRAWN	. **CHECKED** .
RETAIL:	MID-ISLAND CO-OP
FACILITY:	C-STORE
LOCATION	
LOT(S)	42
BLOCK(S)	.
PLAN	22723
LEGAL DESC.	.
CIVIC ADD.	548 NORTH ROAD
CITY	GABRIOLA ISLAND
PROVINCE	BRITISH COLUMBIA
SHEET	.
DWG. #	101.3 **REV.** D

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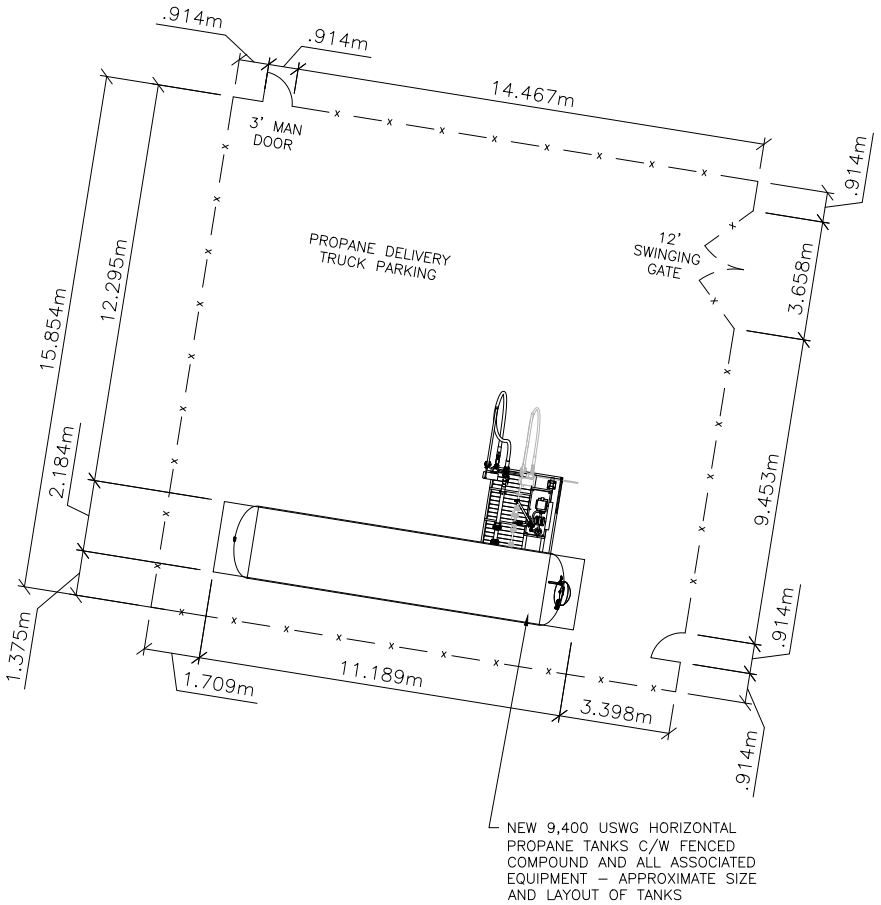

01 **PROPANE DETAIL PLAN**
Scale 1 : 150

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FEDERATED CO-OPERATIVES LIMITED

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PROJ. #	22231
DATE	21 SEPTEMBER 2023
DRAWN	.
CHECKED	.
RETAIL:	MID-ISLAND CO-OP
FACILITY:	C-STORE

LOCATION

LOT(S)	42
BLOCK(S)	.
PLAN	22723
LEGAL DESC.	.
CIVIC ADD.	548 NORTH ROAD
CITY	GABRIOLA ISLAND
PROVINCE	BRITISH COLUMBIA

SHEET .

DWG. # 103.1 **REV.** D

APPENDIX 'C' - REZONING / LAND USE RATIONALE

793 LOCKINVAR LANE - SUMMARY OF KEY POINTS:

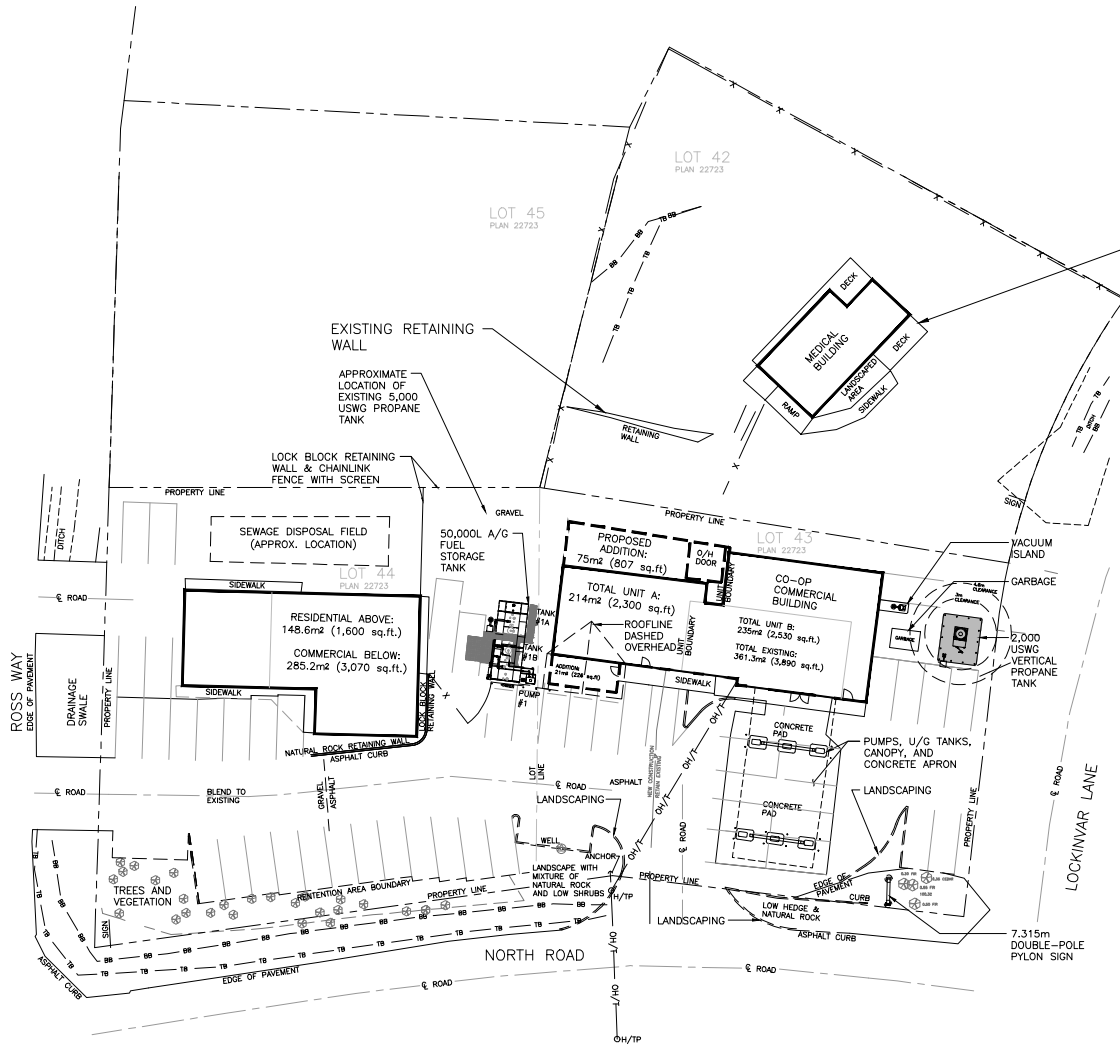
1) CO-OP Supplies Propane for:
   a) **Home heating** to approximately 300 Gabriola Island residences;
      i) This is also the supply point for off-grid customers on DeCourcy Island and Mudge Island.
   b) **Farm heating** such as chicken coops and barns;
   c) Island resort operators like **Surf Lodge and Pub**;
   d) Island grocers like **Nesters Food Market**;
2) Increasing Supply Challenges / BC Ferries Schedules
   a) There is only one **Dangerous Goods Sailing** per week to Gabriola Island;
      i) The weekly sailing only has space for a set amount of dangerous goods (petroleum, propane, compressed gasses, etc.);
      ii) With the amount of current customers on Gabriola, and the added strain of new development also adding tanks to their new builds, there is no way that the island can be fully supplied with the storage that currently exists;
      iii) These constraints in combination with unexpected ferry service disruptions have resulted in the need for additional storage in order to provide adequate supply (an additional weeks' worth) to Island(s) customers.
3) Public Safety and Pending Regulatory Changes
   a) Provincial Government – Technical Safety BC compliance requirements for **Gas Code Changes** are coming in 2025.
   b) Existing propane storage equipment is not expected to meet the next regulations. All other equipment is up to the code requirements.
   c) New propane storage facilities would be installed and operated with anticipated code changes in mind, providing a higher level of public safety.
   d) Note that propane storage would be used to fill service trucks and would not be accessible to the general public.
4) No Current Demand for the Institutional Property
   a) The property at 793 Lockinvar Lane has been offered for lease with no interest to date;

i) With the understanding that this may change in the future, our proposal is to simply add **Propane Storage as a Site Specific Land Use** on the property;

ii) This would retain the balance of permitted institutional uses within the IN2 Zoning District.

iii) 793 Lockinvar Lane will only be used for storage and any land alteration would be fully reversible. Nothing will be put in the ground and all infrastructure will be removable.

iv) As a side note, there was interest expressed by the RCMP to use the property for staff housing of their Constables, however that required a zoning change that was rejected by the Trust.



NOTE:

1. THIS IS NOT A LEGAL OR TOPOGRAPHICAL SURVEY
2. THIS IS NOT AN AS-BUILT DRAWING
3. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE
4. DO NOT SCALE DRAWINGS
5. ANY ERRORS OR OMISSIONS MUST BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY
6. CONTRACTOR TO CONFIRM LOCATION OF ALL FACILITIES AND UTILITIES, PRIOR TO COMMENCEMENT OF CONSTRUCTION

01 **EXISTING SITE PLAN**
Scale 1 : 500

FEDERATED CO-OPERATIVES LIMITED

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PROJ. #	22231
DATE	21 SEPTEMBER 2023
DRAWN	. **CHECKED** .
RETAIL:	MID-ISLAND CO-OP
FACILITY:	C-STORE

LOCATION

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PLAN	22723
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SHEET .

DWG. # 101.1 **REV.** D

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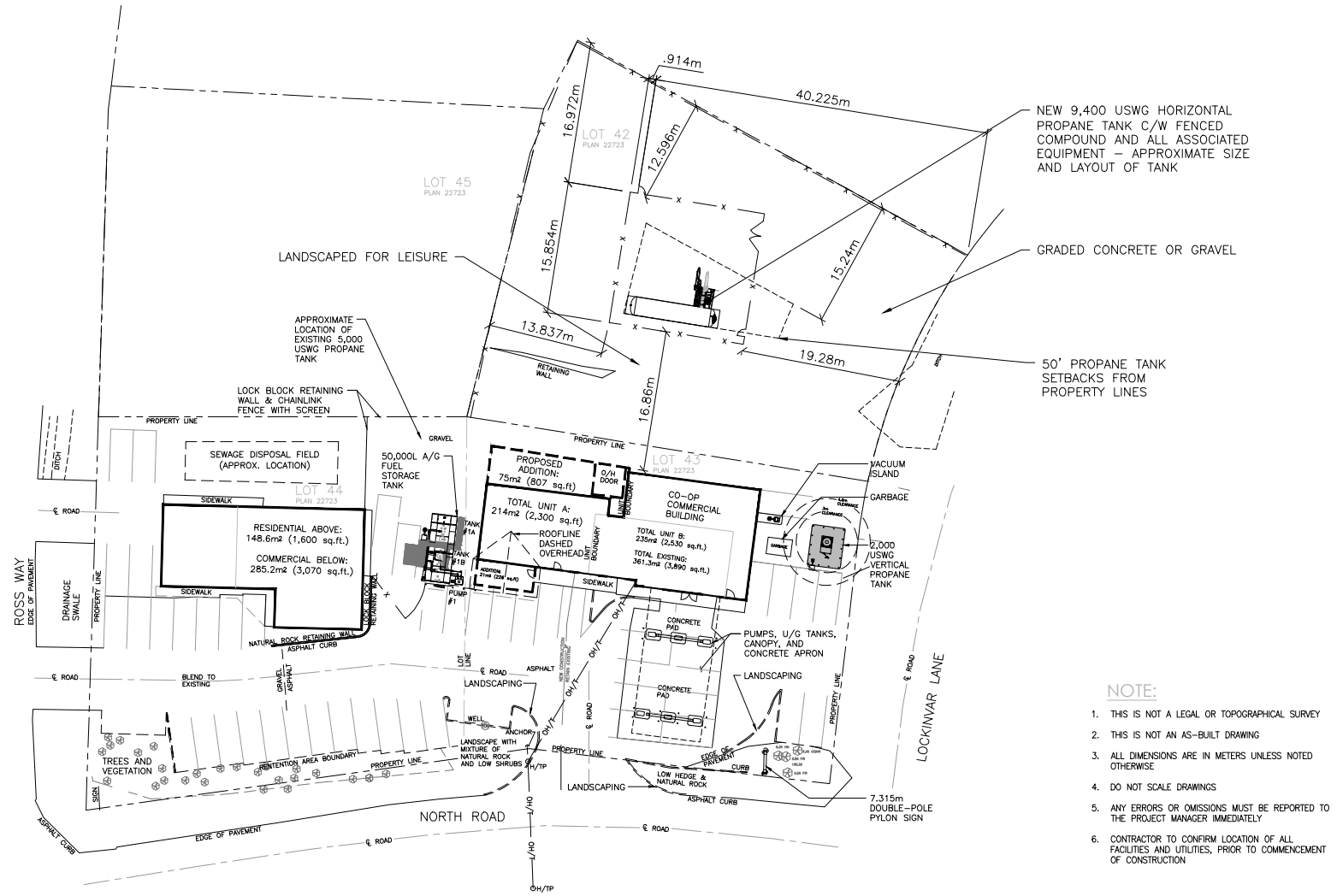

PROPOSED SITE PLAN

01 Scale 1 : 500

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PROVINCE	BRITISH COLUMBIA

SHEET .

DWG. # 101.2 **REV.** D

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F350 DUALLY USED TO REPRESENT PATH OF RETAIL PROPANE DELIVERY TRUCK

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01 **PROPANE VEHICLE PATH**
Scale 1 : 500

FEDERATED CO-OPERATIVES LIMITED

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PROJ. # 22231

DATE 21 SEPTEMBER 2023

DRAWN . **CHECKED** .

RETAIL: MID-ISLAND CO-OP

FACILITY: C-STORE

LOCATION

LOT(S)	42
BLOCK(S)	.
PLAN	22723
LEGAL DESC.	.
CIVIC ADD.	548 NORTH ROAD
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PROVINCE	BRITISH COLUMBIA

SHEET .

DWG. # 101.3 **REV.** D

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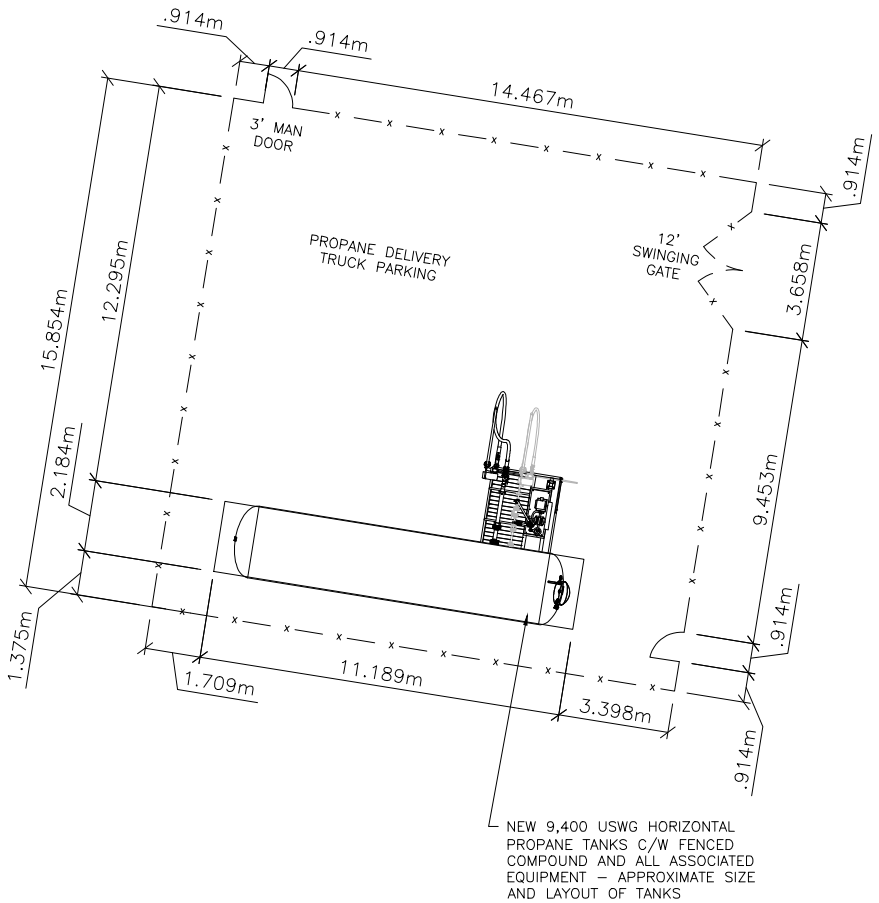

01 **PROPANE DETAIL PLAN**
Scale 1 : 150

FEDERATED CO-OPERATIVES LIMITED

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SHEET .

DWG. # 103.1 **REV.** D

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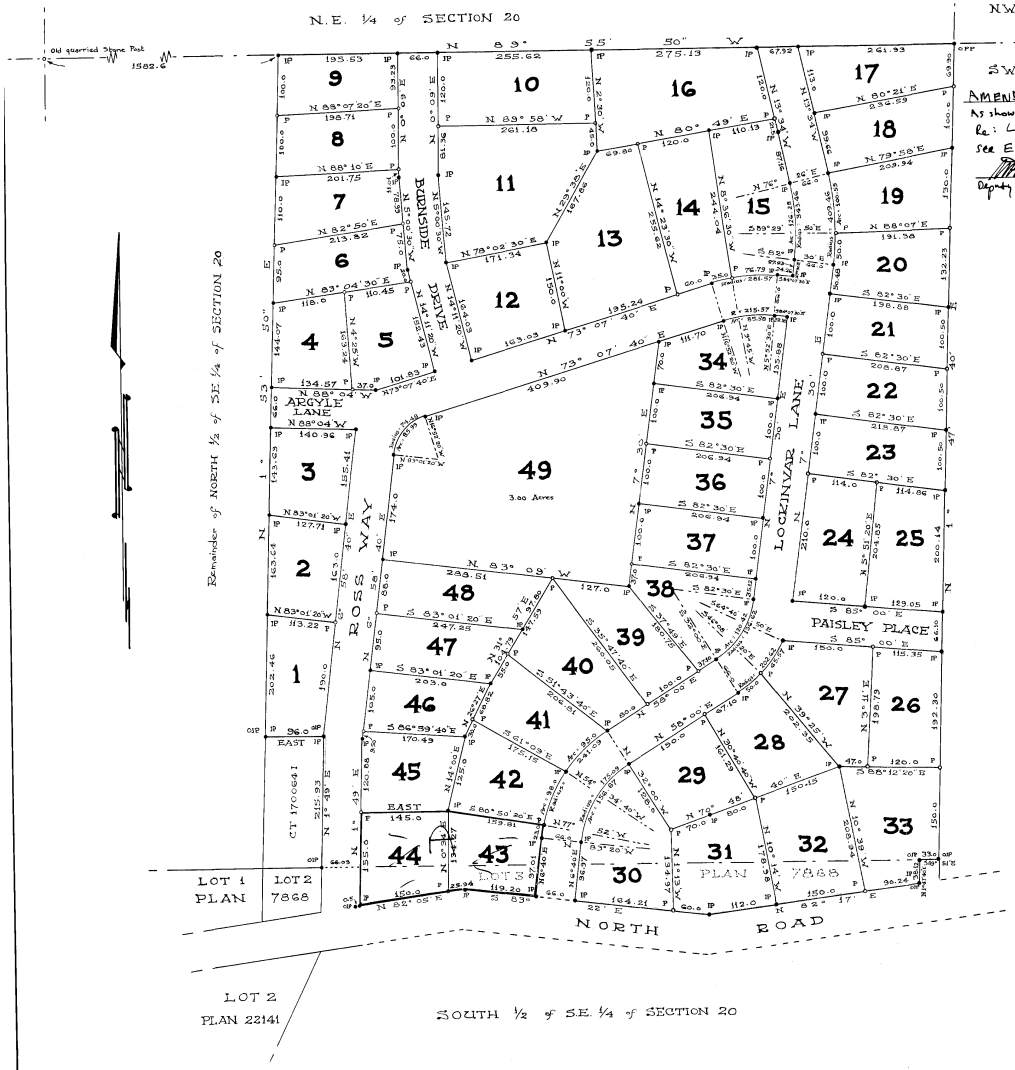
PLAN Nº 22723

Deposited in the Land Registry Office at Victoria, B.C.
this 1st day of December 1969
33.174 W
33.172 W
M.I.F.

H. Kneally
Registrar



AMENDMENTS

As shown hereon under Section 137 Land Title Act
Re: Lots 43 and 44 now Lot A
See EW 157667

Deputy Registrar

PLAN OF SUBDIVISION OF LOT 3, PLAN 7868 AND PART OF THE EASTERLY 17 CHAINS OF THE NORTH ½ OF THE SOUTH-EAST ¼ OF SECTION 20, GABRIOLA ISLAND, NANAIMO DISTRICT.

Scale :- 1 inch to 100 feet.

LEGEND

Bearings Astronomic derived from Plan 7868.

- OIP denotes Iron Post found.
- OPP denotes Standard Pipe Post found.
- IP denotes ½ × 30" square galvanized Iron Post set.
- P denotes 3×3" White Wood Post set.

This Plan lies within the Nanaimo Regional District

Approved under the Land Registry Act
this 7th day of October 1969

Approving Officer:-
Department of Highways.

Registered Owners:-

SOUTHERN SLOPE HOLDINGS 1959 LTD.

SECRETARY

I, Alan H. Knappett of the City of Nanaimo, British Columbia Land Surveyor, make oath and say that I was present at and did personally superintend the survey represented by this plan and that the survey and plan are correct. The said survey was completed on the 26th day of August, 1969.

A.H. Knappett B.C.L.S.

Sworn before me
this 4th day of September, 1969.

A Commissioner for taking Affidavits
within the Province of British Columbia

File:- N G55
FB. 30 P. 41
36 P. 41