



July 8, 2021

PUP No. 886-0004-21-23

Via email: tom.foulds@cermaq.com

Attn: Tom Foulds

Cermaq Canada Ltd.
203-919 Island Highway
Campbell River, BC
V9W 2C2

Dear Permit Holder:

Enclosed is amendment #1 for pesticide use permit No. 886-0004-21-23, issued under the provisions of the *Integrated Pest Management Act*. The purpose of the amendment is to modify the authorized discharge areas as illustrated on page 8 of the permit.

It is the responsibility of the permit holder to ensure that all activities conducted under this permit are carried out with due regard to the rights of third parties and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Section 14 of the *Integrated Pest Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Administrator, designated officer, or as further instructed.

Yours truly,

Cassandra Caunce, BSc.
Director, South Authorizations
for Administrator, *Integrated Pest Management Act*



MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY

PESTICIDE USE PERMIT

No. 886-0004-21-23

Amendment #1

Pursuant to Section 6 of the Integrated Pest Management Act

Cermaq Canada Ltd.
203-919 Island Highway
Campbell River, BC
V9W 2C2

is authorized to use pesticides subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Integrated Pest Management Act* and may result in prosecution.

1. Purpose of the Permit

- 1.1 This permit has been issued for the management of post-chalimus stage sea lice (*Lepeophtheirus spp* and *Caligus spp*) on farmed Atlantic salmon at facilities in Clayoquot Sound as shown on the attached maps. The permit authorizes the use of the pesticide Interlox Paramove 50 (active ingredient hydrogen peroxide) administered exclusively using the well-boat method. This use is authorized as part of an integrated pest management program for sea lice management and is necessary as part of an effective resistance management strategy for chemotherapeutant use at these sites.

2. Authorized Pesticide Use

- 2.1 Pesticide use by the permit holder must be for the sole purpose of treating post-chalimus stage sea lice (*Lepeophtheirus spp* and *Caligus spp*) on farmed Atlantic salmon at five locations (Dixon, Millar, Ross, Bawden, Binns), as shown on the attached maps.

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2.2 The pesticide listed below is approved for use under the terms of this permit. The permit holder must utilize the lowest effective application rates where treatment objectives may still be achieved.

Trade Name	Active Ingredient (a.i.)	Product P.C.P. No.	Application Rate of Interlox Paramove 50 (g/L)	Maximum Total Number of Treatments (per pen per year)
Interlox Paramove 50	Hydrogen Peroxide	31393	2.4 -3.6	6

As per the above table, the permit holder is authorized to conduct a maximum of six well-boat treatments using Interlox Paramove 50 per pen per year.

3. Treatment Dates

3.1 The pesticide use described herein may be conducted from seven days after the date of publication of the permit, as described in condition 4.2, until the permit expires on July 6, 2024.

4. Notifications

4.1 Within seven days of permit issuance, the permit holder must post a copy of the permit on the Cermaq Canada Ltd. website and make a copy available for viewing by the public at the Cermaq Canada Ltd office in Campbell River, BC. The permit must remain accessible at these locations as described above until one week after the permit has expired.

4.2 Within 15 days permit issuance, the permit holder must publish a notice in the Westerly News. The published notice must contain the following information:

- (a) name, address and telephone number of the permit holder;
- (b) permit number;
- (c) purpose of pesticide use;
- (d) pesticide(s) to be used (trade name, P.C.P. No. and active ingredient);
- (e) method of pesticide application;
- (f) map(s) showing the location of the treatment area;
- (g) projected dates of project commencement and completion;
- (h) information on where copies of the permit and map of the treatment area may be examined in detail; and

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- (i) information on how and when the public can contact the permit holder to obtain any pesticide use and related integrated pest management information.
- 4.3 The permit holder must conduct any additional notification with other parties, as agreed upon with those parties during the consultation process.
- 4.4 Before conducting each pesticide treatment authorized under this permit, the permit holder must provide a treatment notice to the Ahousaht Ha'wiih <info@mhssahousaht.ca> and <danny@mhssahousaht.ca> that includes the location, application method, date and approximate time of treatment.
- 4.5 At least 24 hours prior to any pesticide use, the permit holder must post signs advising of the upcoming pesticide use at the access points to each facility being treated. These postings must be maintained for the duration of the pesticide use. The signs must be waterproof, be a minimum of 279 mm by 432 mm in size (i.e. 11" x 17"), and have the heading "Pesticide Use Notice" (in 25 mm lettering) and contain, at a minimum, the following information:
- (a) the trade names and active ingredients of each pesticide to be used;
 - (b) the date or range of dates for the pesticide use;
 - (c) precautions to be taken by all employees needed to minimize exposure to the pesticides and residues;
 - (d) the Pesticide Use Permit number; and
 - (e) how to obtain additional information about the pesticide or pesticide use.
- 4.6 The permit holder must make detailed information on the proposed, current and past pesticide use under this permit readily available to anyone that accesses or uses the general area adjacent to the treated areas. Treatment information must be of sufficient detail to allow the accurate delineation of areas where pesticide use has or will occur.
- 4.7 The permit holder must ensure that all personnel involved in the project are:
- a) notified of this permit;
 - b) provided a copy of the permit; and
 - c) familiar with the terms and conditions of the permit and any permit amendments prior to any pesticide use.
- 4.8 At least two days and no more than 35 days before conducting each pesticide treatment authorized under this permit, the permit holder must provide a treatment notice to ipmreporting@gov.bc.ca that includes the location, application method, date and approximate time of treatment. Immediate notification must be provided when a pending treatment has been cancelled, delayed or deferred.

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5. Integrated Pest Management Requirements

5.1 The permit holder must make all reasonable efforts to remove moribund fish as necessary.

5.2 The permit holder must follow the procedures outlined in the “Standard Operating Procedure (SOP) for *Sea Lice Counts, Weight, and Quality Assessments*” (Cermaq Canada Ltd., October 2017 or most current version) document for correctly identifying sea lice and monitoring populations of *Lepeophtheirus spp* and *Caligus spp*. The permit holder must ensure that the Standard Operating Procedures relating to identification and monitoring are kept up to date through the duration of the permit.

5.3 The permit holder must verify one of the following circumstances exist before conducting treatment:

5.3.1 A pre-established threshold of motile *Lepeophtheirus* sea lice per fish per site has been exceeded. (This may be a threshold required to maintain compliance with the company’s Marine Finfish Aquaculture Licence under the *Fisheries Act*, or it may be established by the veterinarian responsible for fish stock health to achieve management objectives, or it may be established as part of an Area Based Management Plan.); or

5.3.2 When treatment of sea lice is deemed necessary by the veterinarian responsible for fish stock health to prevent the infestation of a site when fish are being moved between pens, or for other management objectives.

5.4 After each pesticide application, the permit holder must conduct a post-application monitoring of sea lice populations in accordance with the permit holder’s “Standard Operating Procedure (SOP) for *Sea Lice Counts, Weight, and Quality Assessments*” (Cermaq Canada Ltd. October 2017 or most current version) document for sea lice monitoring to determine the effectiveness of the pesticide application.

5.5 The permit holder must undertake ongoing research efforts to investigate the feasibility of additional sea lice control methods, including, but not limited to, the use of mechanical removal technology, cleaner fish, and freshwater treatments.

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6. Restrictions

- 6.1 The permit holder must ensure pesticide-treated waters from well-boats is released only while the vessel is in motion, in locations that are a minimum of 200 m away from shore, and in locations that are within 18 kilometres of the aquaculture facility. Where practicable, the permit holder will discharge within the 'proposed discharge areas' as per the attached map titled 'Authorized Well Boat Discharge Areas'.
- 6.2 The permit holder must visually monitor for any potential impacts to non-target organisms during the release of pesticide-treated waters from the well-boat.
- 6.3 Pesticide use must be conducted under the direction of a provincially licensed veterinarian, by applicators with valid certificates in the *marine aquaculture* category, and in accordance with any additional treatment-specific training required by the pesticide manufacturer.
- 6.4 The permit holder must ensure that a copy of the certificate of all certified applicators conducting the pesticide use is at or near the treatment location during the pesticide use.
- 6.5 The permit holder must comply with the requirements of the label for the pesticide used.
- 6.6 The permit holder must comply with all applicable regulations under the *Integrated Pest Management Act*.
- 6.7 This permit is not transferable without the written approval of the Administrator.

7. Record Keeping

- 7.1 For each treatment location and day of pesticide use under this permit, the permit holder must keep a record containing the following information:
 - a) the treatment location;
 - b) the name and certificate number(s) of the pesticide applicator certificate holder(s) who used the pesticide;
 - c) the date and time of the pesticide use;
 - d) the pre- and post-treatment sea lice monitoring results;
 - e) the specific threshold and/or justification for the pesticide application determined by the veterinarian responsible for fish stock health;
 - f) the trade name of the pesticide used and its registration number under the federal Pest Control Product Act;
 - g) the method and rate of application and the total quantity used;

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- h) the water temperature and direction of the tide at the time of the release of treated water from the well-boat;
- i) direction and speed of the well-boat at the time of release of treated water;
- j) the distance from shore of the well-boat at the time the treated water is released; and
- k) the details of impacts (if any observed) on non-target organisms during the release of pesticide-treated waters.

8. Reporting

8.1 The permit holder must submit an annual report for each calendar year via email to ipmreporting@gov.bc.ca on or before January 31 of the next calendar year. The first report is due January 31, 2022. The report must include the following information:

- a) The total quantity of Interlox Paramove 50 used in the calendar year at all sites.
- b) For each aquaculture facility site treated with Interlox Paramove 50:
 - i. Date or date range of treatments, if treatments for one site were conducted over multiple days;
 - ii. For well-boat treatments, total number of well-boat loads;
 - iii. Average load biomass (kgs);
 - iv. Pre-treatment sea lice levels;
 - v. Post-treatment sea lice levels;
 - vi. % efficacy of the treatment;
 - vii. Total volume of water treated; and
 - viii. Total quantity of Interlox Paramove 50 used.
- c) A summary statement indicating what, if any, effects on non-target organisms were observed during the treatments.
- d) A summary of the sea lice re-capture efforts conducted, including an estimate of the percent of dislodged sea lice captured for each treatment.
- e) A summary of any non-chemical treatments for sea lice control conducted, including the type and number of non-chemical treatments conducted in the calendar year.
- f) A summary of the number of SLICE (active ingredient emamectin benzoate) treatments conducted at all sites, including the date ranges associated with these treatments and the volume of SLICE used for each treatment.

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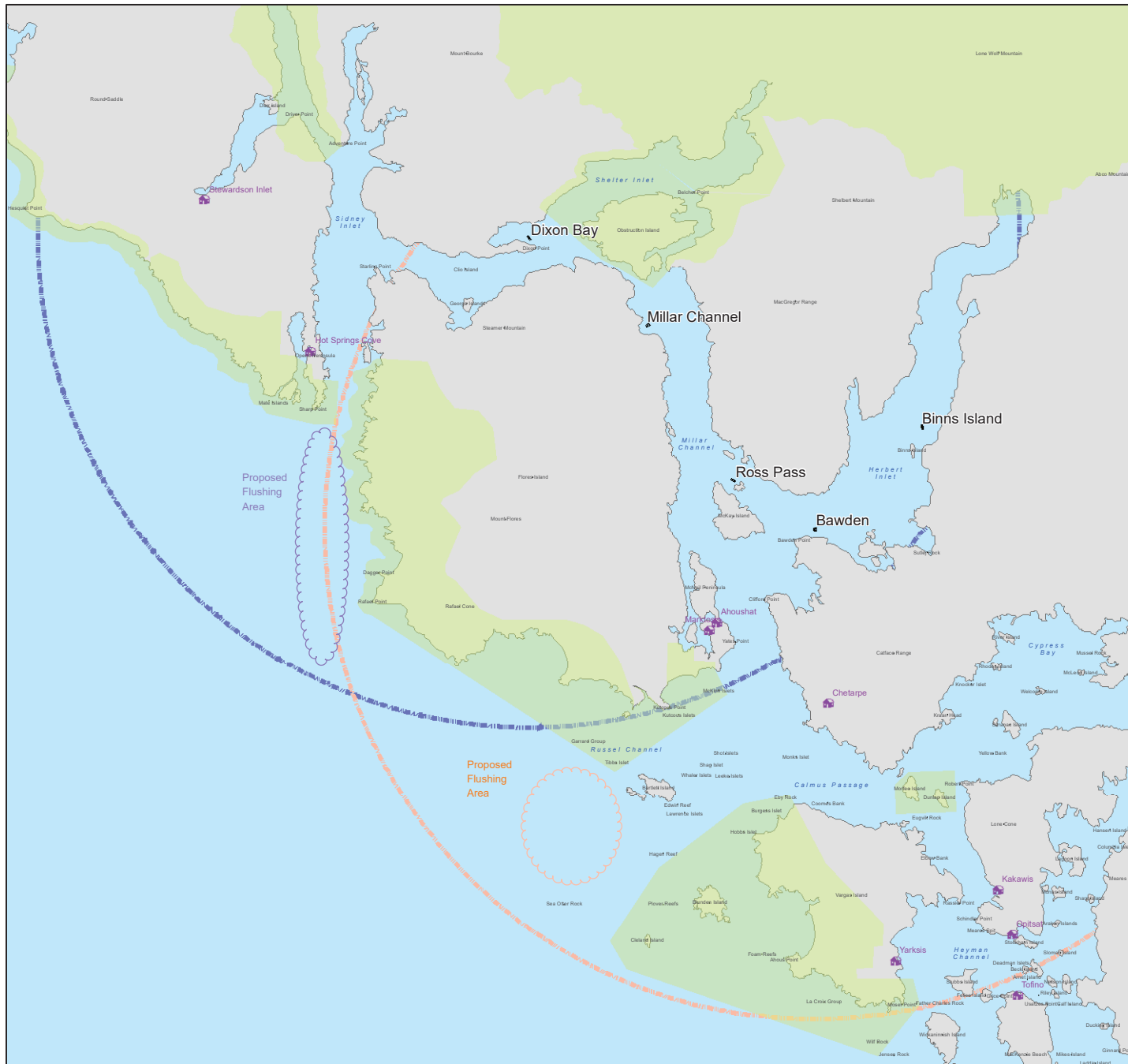
- g) A summary of the ongoing research efforts by the permit holder to investigate the feasibility of additional non-chemical sea lice control methods, including, but not limited to, the use of mechanical removal technology, cleaner fish, and freshwater treatments.
- 8.2 The permit holder must report any effects on non-target organisms observed as a result of the release of pesticide-treated waters from the well-boat as soon as practicable to the Administrator via ipmreporting@gov.bc.ca.
- 8.3 Upon request from the Administrator, the permit holder must provide water treatment calculations and dose rates associated with the planned or undertaken pesticide use.
- 8.4 Pesticide spills that result in impacts not authorized by or consistent with this permit, must be immediately reported to Emergency Management BC at 1-800-663-3456. Spill-affected areas must be immediately evaluated and cleaned-up/decontaminated as appropriate. As soon as practicable, the permit holder must provide the Administrator with reports via email to ipmreporting@gov.bc.ca on the nature of the spill, any impacts as well as any clean-up/decontamination activities planned or undertaken.
- 8.5 If the permit holder believes that the permit holder or another person has contravened the *Integrated Pest Management Act* or Regulation in a manner involving the release of pesticide into the environment, the permit holder must give written notice to the Administrator as soon as practicable.
- 8.6 If the permit holder believes that non-compliance with any of the terms and conditions of this permit has occurred, the permit holder must give written notice to the Administrator via email to ipmreporting@gov.bc.ca as soon as practicable. The permit holder must undertake actions to evaluate the potential impact of the non-compliance on human health and or the environment.

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Paramove Use Authorized Well Boat Discharge Areas

CERMAQ



- Cage Array
- Provincial Park
- Community
- 18km Bawden Buffer
- 18km Dixon Buffer

Geographic Location

Clayoquot Sound
West Vancouver Island, BC

PUP# 886-0004-21/23

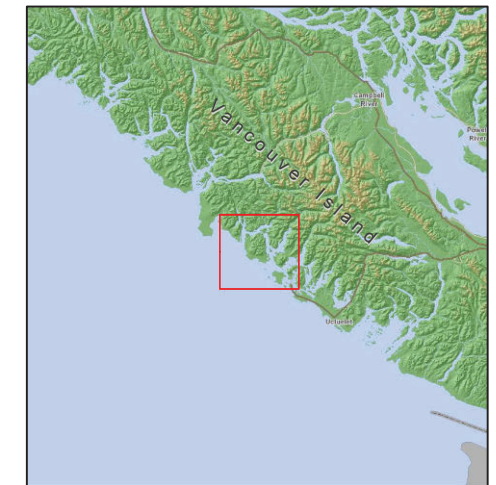
DFO Management Area 24



Coordinate System: NAD 1983 BC Environment Albers

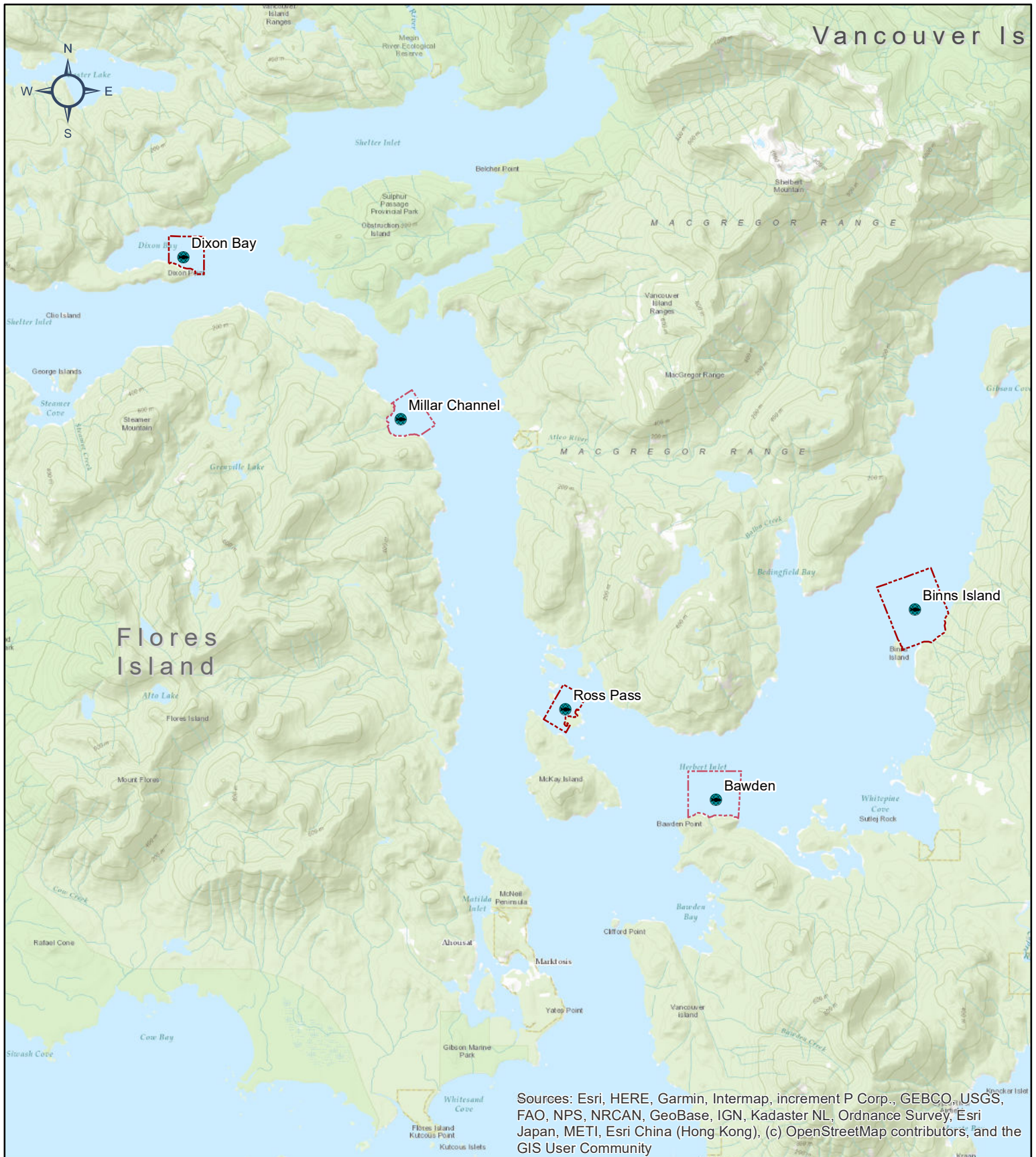
Author: Cermaq Canada Ltd

Date Saved: 7/5/2021 11:37:31 AM



Cermaq Canada Ltd Clayoquot North Operations

1:100,000



0 1 2 4 Kilometers

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Dixon Bay

Marine Finfish Facility Reference # 234

Land File # 1403293

CERMAQ



- Cage Array (10x30m)
- Feed/Accom. Barge
- Expected Dispersal
- Tenure

Geographic Location

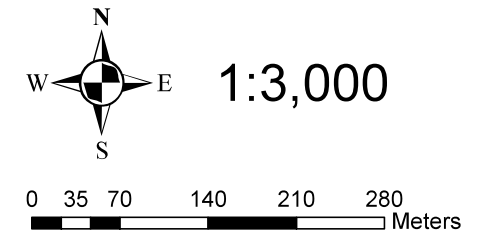
Dixon Bay, Shelter Inlet,
Clayoquot Region,
West Vancouver Island,
BC

Facility Coordinates

49° 24.251'N 126° 9.100'W

DFO Management Area

24-3



Coordinate System: NAD 1983 BC Environment Albers

Author: Cermaq Canada Ltd

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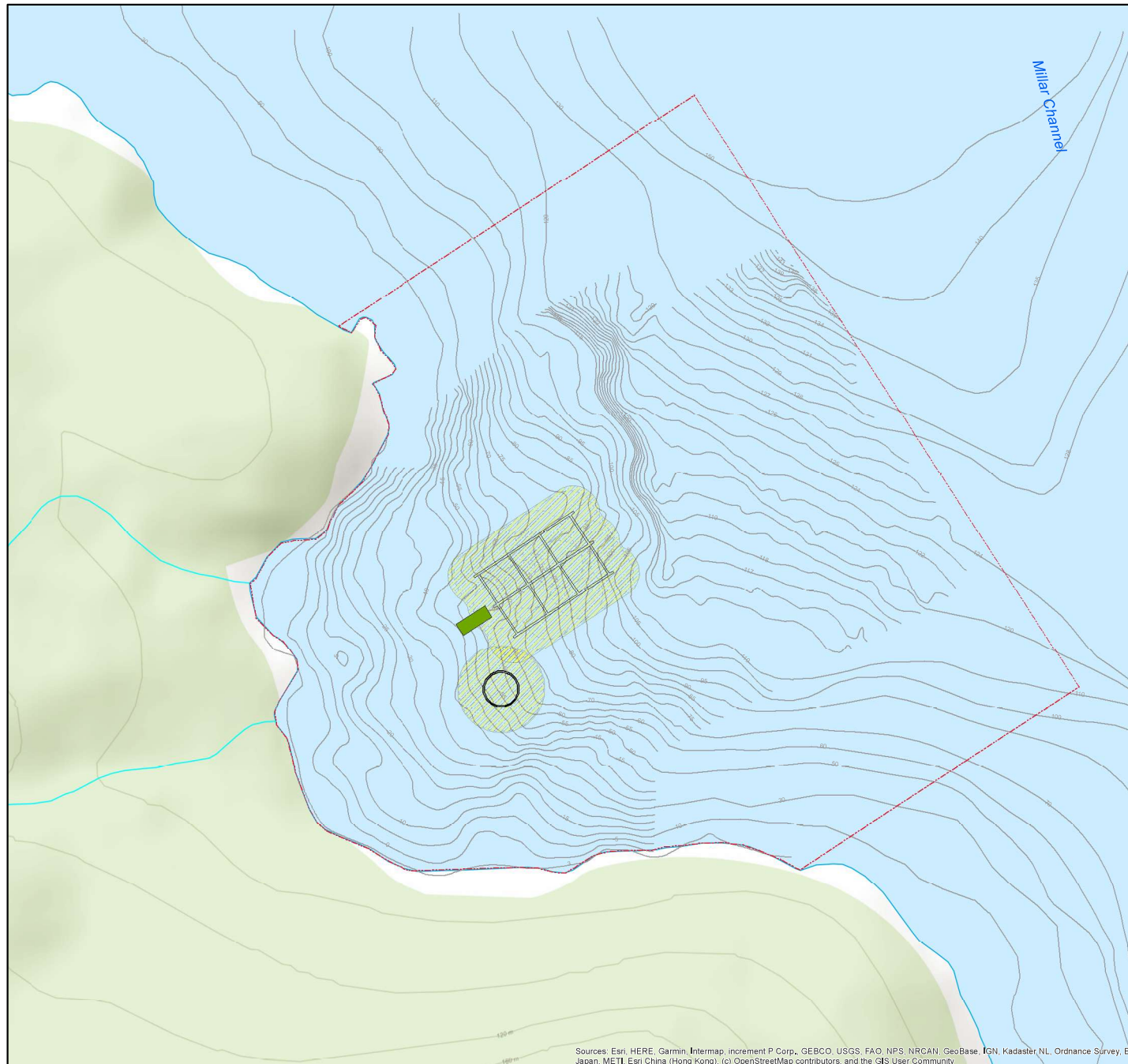
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Millar Channel

Marine Finfish Facility Reference # 1507

Land File # 1408719

CERMAQ



- Feed Accomodation Barge
- Expected 30m Dispersal
- Tenure Boundary (54.66 Ha)

Geographic Location

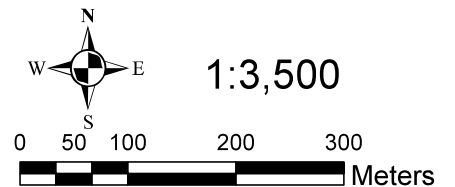
East Flores Island,
Millar Channel
Clayoquot Region, BC

Facility Coordinates

49° 22.490'N 126° 05.567'W

DFO Management Area

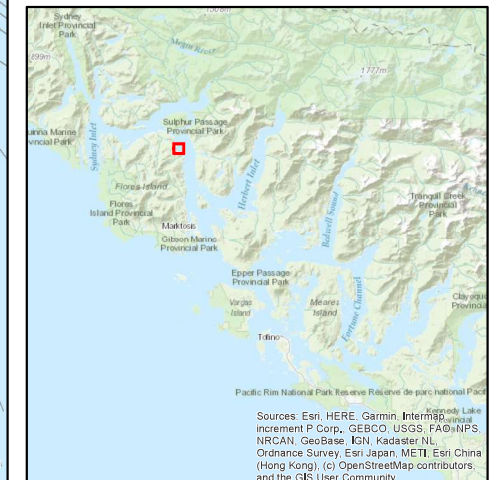
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Coordinate System: NAD 1983 BC Environment Albers

Author: Cermaq Canada Ltd

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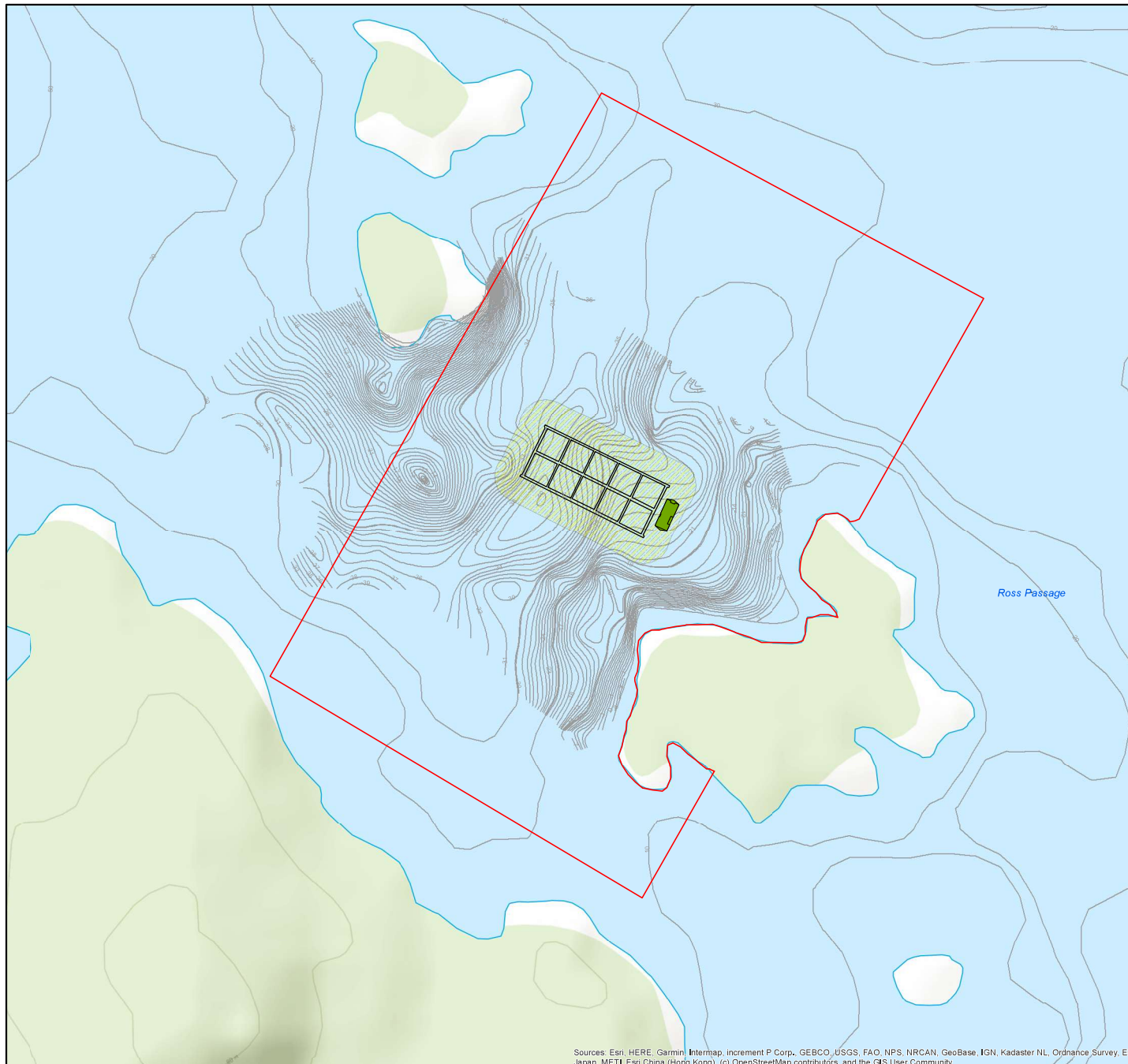
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Ross Pass

Marine Finfish Facility Reference # 314

Land File #1405933

CERMAQ



- Tenure (38.5Ha)
- Cage Array (12x30m)
- Feed/Accom. Barge
- Expected 30m Dispersal
- Bathymetry (m)

Geographic Location

Ross Passage
Millar Channel
Clayoquot Region, BC

Facility Coordinates

49° 19.469'N 126° 02.920'W

DFO Management Area

24-4



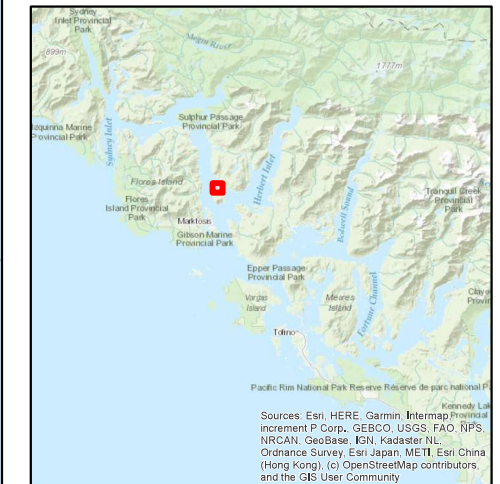
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Author: Cermaq Canada Ltd

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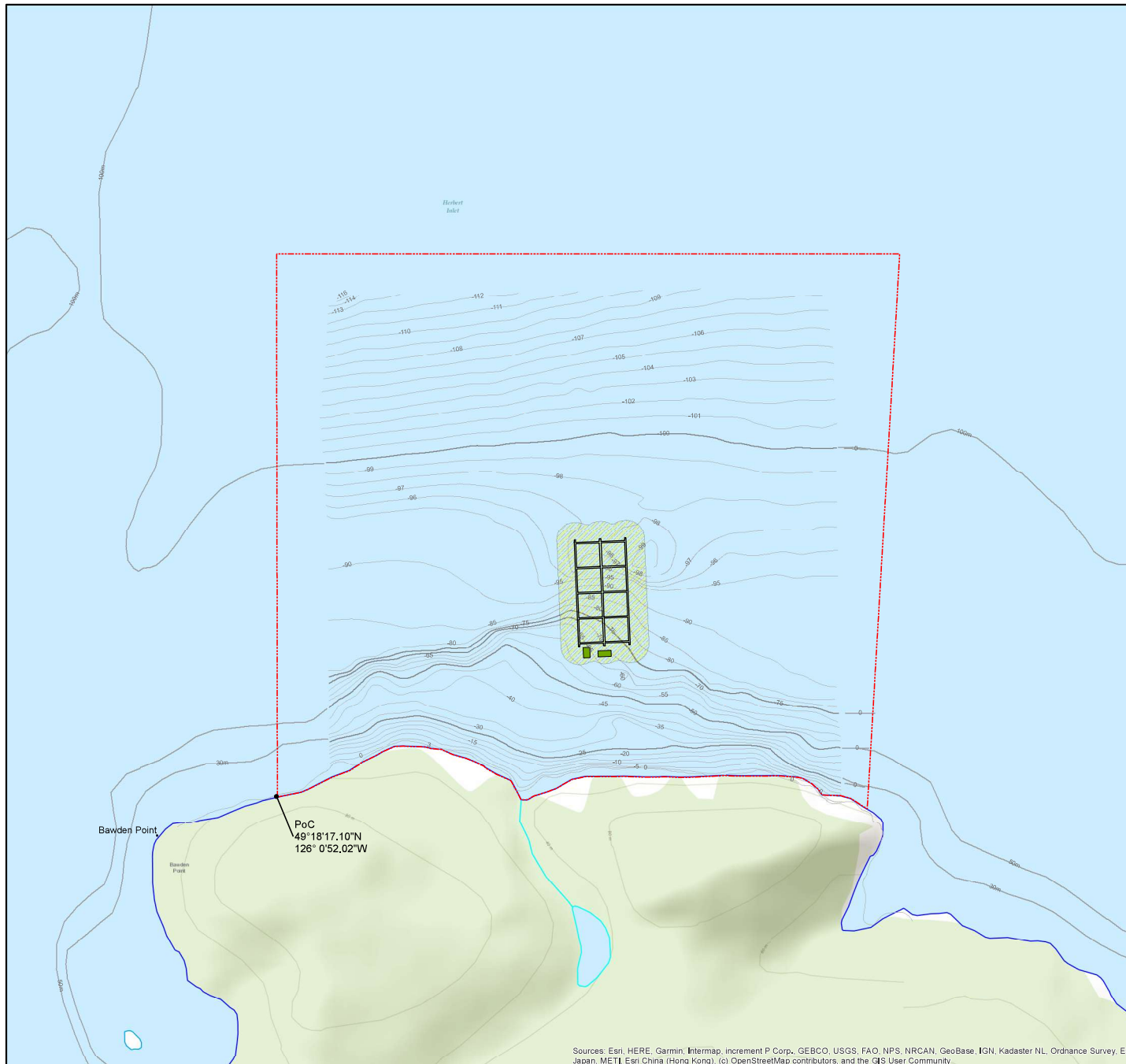
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Bawden Point

Marine Finfish Facility Reference # 227

Land File # 1403647

CERMAQ



- Tenure Boundary (90.3Ha)
- Cage Array
- Accomodation & Feed Barge
- ▨ Expected 30m Dispersal
- Bathymetry (m)

Geographic Location

Bawden Point, Herbert Inlet,
Clayoquot Region, BC

Facility Coordinates

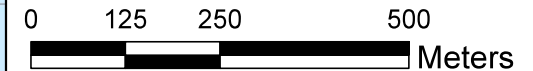
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DFO Management Area

24-5



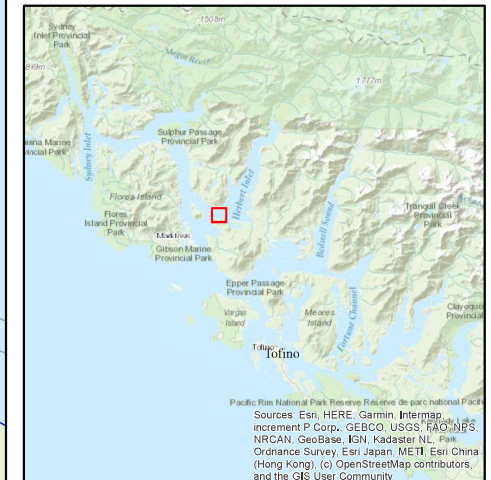
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Coordinate System: NAD 1983 BC Environment Albers

Author: Cermaq Canada Ltd

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Binns Island Facility

Marine Finfish Facility Reference #1148

Land File # 1406648

CERMAQ



- Binns Tenure (143 Ha)
- Cage Array (12x30m)
- Feed Barge
- Expected 30m Dispersal
- Bathymetry (m)

Geographic Location

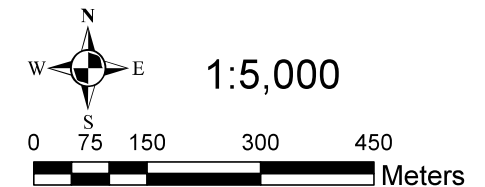
Binns Island, Herbert Inlet
Clayoquot Region
Wests Vancouver Island, BC

Facility Coordinates

49° 20.502'N 125° 57.174'W

DFO Management Area

24-5



Coordinate System: NAD 1983 BC Environment Albers

Author: Cermaq Canada Ltd

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Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community