Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences, Sidney, BC

Science Cruise Plan

Your cruise plan has been recorded. Please review the document below to ensure that there are no errors. If you wish to edit your cruise plan then you may click 'Edit This Cruise Plan' button at either the top or bottom of this page (please do not just use your web browser's back button as data may be lost).

**There are two more steps for your cruise plan and both should be completed at a minimum of 6 weeks of sailing.**

## Step 2: Security Clearances [** Not done yet **]

As Chief Scientist, you are responsible for requesting security clearances for all participants from the DFO security officer. This process should be done **as soon as possible**, especially for participants outside DFO.

### NEW REQUIREMENTS AS OF MAY 2022:

For DFO science programs there is a new procedure for requesting clearances and the traditional WaterProperties security form cannot be used anymore (if you do submit via this website you will just be told to use the new procedure anyways).
The recommended approach is to have your cruise participants complete the security form and use your name as chief scientist to request the clearance. The DFO-internal form may be found here (will open in a new tab): https://intranet.ent.dfo-mpo.ca:8081/ss/en/node/1581 and the instructions that you can pass along to cruise participants is here (also opens in a new tab): HowToRequestSecurityClearance.docx. As this form is only accessible inside of DFO, non-DFO participants will not be able to complete the form. If you are a DFO chief scientist then you will need to complete the form for them with their DOB and address. REMEMBER -- DOB's ARE PROTECTED B INFORMATION, you should not be sharing them with anyone else including other cruise participants. Once all of your participants have their security clearances then please compose an email to: DFO.CCGWestROCPlanningOfficer-AgentdeplanificationCOROuestG.MPO@dfo-mpo.gc.ca with all of the clearance emails attached inside that email (you can click on this email address now and save a draft email so you don't need to come back here to grab this email later). This will need to be completed at least one week before sailing.

If you are not a DFO chief scientist (e.g., NRCan, ONC, ECCC, NSERC) then you may still use the button below to auto generate the email that will be sent to the DFO security officer and they will complete the new form for you. Dates of Birth (DOB) are required for clearances, so if they are not included in the generated email then you must either contact the security officer directly with DOB's or have your cruise partipants contact the security officier directly with their DOB's.

2. ONLY NON-DFO PROGRAMS -- Send Security Clearances (will send email directly, no editing)

## Step 3: Distributing/Updating Your Cruise Plan to Participants and Vessels [Submitted ]

When you are ready, you may distribute a link to your completed (or updated) cruise plan to all participants listed on your cruise plan, the Vessel you are sailing on, the Regional Operations Centre at Coast Guard, the IOS Winch Shop, and the PSVC committee. Cruise plans are available to view by anyone with an account on the WaterProperties.ca site.

An email may be automatically generated by clicking on the button below. This email will be generated using your default email application (e.g., Outlook, Thunderbird, etc) and sent from your account. *You will be able to edit the email message before sending, including adding any comments or adding other email address that might have an interest in your plan.*
**IF YOU ARE USING CHROME then clicking the email buttons below will likely generate a not secure form submission warning message and you will not be able to proceed. If this is the case use use another browser (e.g., Firefox) or use the alterative option below to copy the email to your own email application.**

3.1. Send Cruise Plan Email (will create email in your email application, then you send)

3.2. Click to Update Cruise Plan Sent Date

Once you have initially sent your cruise plan or have done an update email, please click the update button above to refresh the last sent date on your cruise plan.

**Email button above not working or security errors? You can click the + link below to show the email contents and then copy the TO, CC, SUBJECT, and BODY into your own email.**

⊞ Click to open email message that you can copy into your own email

Edit This Cruise Plan

# Regional Operations Centre, Canadian Coast Guard Western

## Science Vessel Cruise Plan: **PAC 2023-022**

**Plan last updated: Wednesday 26 Apr 2023 09:58:07**

Print Plan to Printer or PDF

## Cruise Plan Overview

| | |
|---|---|
| **Department/Group:** | Fisheries and Oceans Canada, OSD |
| **Science Cruise Number:** | PAC 2023-022 |
| **Ship's Patrol Number:** | 23-00 |
| **Vessel/Platform:** | Neocaligus -- Ship Profile |
| **Dates:** | **From: Tuesday, 30 May 2023 To: Sunday, 04 Jun 2023**<br>*(No separate scientific legs defined)* |
| **Chief Scientist:** | **Kelly Young**, Kelly Young, kelly.young@dfo-mpo.gc.ca **Mobile:** 236-464-3781 |
| **Project Title:** | **SoG Plankton** |
| **Survey Area/Areas of Operations:** | Strait of Georgia |

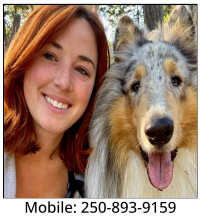
stations throughout the Northern Salish Sea (Strait of Georgia). To continue a monthly time series of observations to better understand plankton seasonal cycles and year-to-year variability within the Strait. These surveys will contribute to other regional DFO and external partner (eg: Universities) projects by providing baseline (prey field) data for fisheries research.
At each zooplankton/net station, collect a full depth (10m off bottom to surface) CTD profile using SBE 25 CTD with SBE 43 dissolved oxygen and Wetlabs fluorometer sensors. As well as a full depth (10m off bottom to surface) zooplankton tow, using BONGO net with 236um black mesh.
At select stations, collect surface or bottom water with a Niskin for salinity, nutrients, HPLC (phytoplankton pigment analysis), photosynthetic activity (for primary production estimates), and a phytoplankton taxonomy sample.
At GEO1, 12, and 42 collect samples for secondary production estimate (chitobiase).

**Related Documents:**
Scientific Sampling Package for 2023-022
Sampling Equipment Request for 2023-022

## Scientific Personnel

**Berths Required:** 2

### Sile Kafrissen



Mobile: 250-893-9159
(No MSR summary)

Affliation:

Notes: **on-board lead, sampling**

Dietary Requests: -
Dietary Intolerances: -
Dietary Allergies: -

### Erinn Raftery

Mobile: 250-857-1475
MSR Summary Page

Affliation:

Notes: **sampling**

Dietary Requests: -
Dietary Intolerances: -
Dietary Allergies: -

*(Personnel may upload a photo, give mobile numbers, and specify dietary requirements from their WaterProperties.ca dashboard)*
**Incidentals Estimate: $103.80**

## Support Required

**Ship's Equipment:**
Crane for deploying/retrieving net, loading/unloading large crates
'PBS Shrimp' table and box for back deck, plastic cabinet (sits on outside table across from lab door)
Science winch, block + display, and wire to deploy CTD and zooplankton net to max depth 420m. Winch needs to be able to haul net max 1 m/s (vertical haul)
Seawater hose on deck to wash down net
Deep freeze to store biological samples (small amount)

**Technical:**
[None Required]

**Deck Machinery:**
Ships crane for loading/unloading crates of equipment at start/end of trip and for retrieving plankton net.
Shore crane at IOS for unloading crates of equipment at end of trip.
Science winch, block and wire to deploy CTD and zooplankton net to max depth 420m. Winch needs to be able to haul net max 1 m/s (vertical haul)

**Fishing Gear:**
[None Required]

**Other Equipment to be Loaded:**
Metal brackets (Niskin holders) are neededshould be on board and attached to port side-aft deck wooden divider
PBS Shrimp table and box for back deck, plastic cabinet (sits on outside table across from lab door)
2 Large crates containing: zooplankton nets, other sampling gear (SBE 25 CTD, Niskins, associated sampling equipment and containers).

**Special Requirements:**
[None Required]

## Dangerous Goods

*All personnel using Dangerous Goods MUST have valid WHMIS certification to handle dangerous goods*

**Gas Cylinders**

**Corrosives**

**Toxic**

100% Formalin (also Flammable), 2x1L, Lab/deck
Lugol's iodine solution, 25mL, Lab/deck

**Flammables**

95% Ethanol, 1L, Lab/deck

# Logistics

**Anticipated Loading Time:** 1.5 hrs

**Logistics:**

**Commence Loading:** 30 May 2023, 10am, PBS
**Sailing:** sail when loaded
**Operations Profile:** 12 hr 0700-1900 daylight hours
**Returning:** on or before 4 June 2023, offloading gear and science crew at IOS before returning to PBS
**Offloading:** on or before 3 June 2023, end of trip, IOS
**Scientific Crew Changes:** [Not Given]
**Logistics Details:**

Load equipment on the morning of 30 May 2023 at PBS (timing depends on traffic for science crew to drive from IOS to PBS that morning &ndash| aiming for 10 am). Depart and do GEO1 as first station (outside Nanaimo).

Carryout survey, ideal route is to head North to Deep Bay, do stations around Texada Island then central SoG before finishing in Gulf Islands and unloading science gear and crew at IOS on day before last, before ship heads back to PBS on last day. |Weather dependant, adjust as necessary.

Will need IOS shore crane assistance at end of trip to recover crates of gear from lower docks and return them to hanger area.

# Daily Itinerary Summary

30 May 2023: load late morning (~1.5 hrs) and depart from PBS, sampling at GEO1 for about 2 hours then continue survey to the north.

30 May-3 June 2023: Carryout survey

3 June 2023: unload science gear and crew at IOS at end of survey

4 June 2023: vessel returns to PBS

Route and timing will determine what stations are occupied, will have to adjust daily depending on weather, other factors.

Ideal route is to head N to Deep Bay, do stations around Texada Island then central SoG before finishing in Gulf Islands and unloading samples and gear at IOS before heading back to PBS. Weather dependant, adjust as necessary.

# Detailed Itinerary and Files

**Downloadable station waypoints and possibly routes for use with any navigation or planning software:** *No GPX File Provided by Chief Scientist*

**Itinerary Stations/Details:**

Station Lat mn Lon mn Bottom Depth (m) Sampling
GEO1 49 15 -123 45 400 CTD, net, Niskin x7 extrawater
3 49 26.6 -124 20.2 327 CTD, Niskin
6 49 30.6 -124 27.8 192 CTD, Niskin
CPF2 49 28 -124 30 325 CTD, net
BS-11 49 29 -124 46 58 CTD, net, Niskin
9 49 35.5 -124 38.3 170 CTD, Niskin
11 49 42.4 -124 43.4 290 CTD, net
12 49 43.6 -124 40.8 357 CTD, net, Niskin x7extra water
20 49 47.2 -124 32.3 311 CTD
22 49 40.2 -124 16.3 353 CTD, net, Niskin
IS-2 49 38.2 -124 5 30 CTD, net
24 49 30.3 -124 6 425 CTD, net
CPF1 49 22 -124 5 245 CTD, net
2 49 24.1 -124 9.3 289 CTD, Niskin
28 49 24.1 -123 45.3 134 CTD, net, Niskin
27 49 19.1 -123 48 347 CTD, Niskin
40 49 8.6 -123 36.8 146 CTD, net
39 49 9.8 -123 33 388 CTD, Niskin
38 49 12 -123 26.4 300 CTD, net
108 49 4.4 -123 19.1 90 CTD
41 49 3.3 -123 22.3 245 CTD, net
42 49 1.8 -123 26.2 326 CTD, net, Niskin x7 extra water
46 48 51.4 -123 10.8 176 CTD, net, Niskin
56 48 46.4 -123 1.6 214 CTD, Niskin
59 48 36.96 -123 14.978 225 CTD, net, Niskin
GI-01 48 45.86 -123 20.53 65 CTD, net
SC-04 48 43.5 -123 25 90 CTD, net, Niskin
CBE2 48 44.22 -123 34.45 65 CTD, net

**Other Supporting Documents:**
*Note that some of these files may not load correctly in your browser when clicked, but you can right-click on them and save them to your local machine to view.*

| Filename | Type | Size | Modified |
|---|---|---|---|
|  2023-022plan1.jpg | file | 329K | Wednesday 26 Apr 2023 12:58 |

# Approved COVID Protocols

**Approved Safe Work Procedures and Approved Field Work Application:**

✘ No Approved COVID File present

# Maps and Deck Layout

Map of Station Locations:

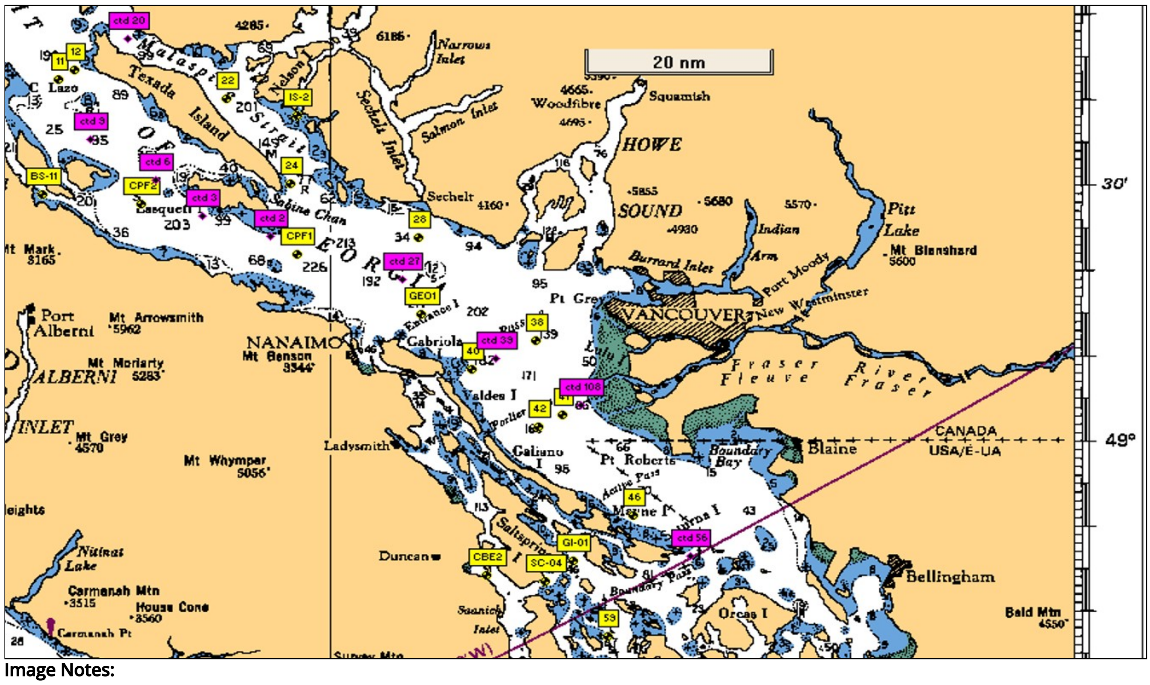



Image Notes:

Deck Layout:

✘ No Deck Image File Uploaded

This page generated from: https://www.waterproperties.ca/requests/cruiseplansubmit.php? on Wednesday 26 April 2023 12:58:07

**Recent Plan Views**

Kelly Young: 2023-04-26

Edit This Cruise Plan

Water Properties Main Page