

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).

You may also view your plan as participants will see it at:

<https://www.waterproperties.ca/requests/cruiseplanview.php?cruiseid=2024-031>

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-AgentdeplanificationCORQuestG.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 participants contact the security officer 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.

Option 1 -- Spawn Email Automatically from WaterProperties:

An email may be automatically generated by clicking on the button below and this will provide a link to your reports in the email. 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 other comments or adding other email address that might have an interest in your report.*

FOR GC USERS -- This may no longer work if you are using Chrome or Edge as it will generate a security message like "The information that you're about to submit is not secure. Because this form is being submitted using a connection that's not secure, your information will be visible to others." If you receive this message, then try clicking the "Send Anyways" button to spawn an email that you can then edit before sending. If this doesn't work, then either use another browser (e.g., Firefox) or proceed to Option 2 below.

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.

Option 2 -- Create Email Manually with Necessary Information:

If Option 1 does not work, then you can manually create the cruise plan distribution email and send to cruise participants. Click the + link below to show the email contents and then copy the TO, CC, SUBJECT, and BODY into your own email and send it out.

[Click to open email message that you can copy into your own email](#)

If you wish to share this cruise plan with others or print off copies, then make sure to use this link:

Edit This Cruise Plan



Regional Operations Centre, Canadian Coast Guard Western

Science Vessel Cruise Plan: PAC 2024-031



Plan last updated: Thursday 16 May 2024 07:36:42

Print Plan to Printer or PDF

Cruise Plan Overview

Department/Group:	Fisheries and Oceans Canada, OSD
Science Cruise Number:	PAC 2024-031
Ship's Patrol Number:	23-00
Vessel/Platform:	Neocaligus -- Ship Profile
Dates:	From: Friday, 12 Jul 2024 To: Wednesday, 17 Jul 2024 (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
Cruise Objectives:	<p>To conduct biological (through vertical plankton hauls and water sampling) and physical (though CTD) monitoring at 28 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.</p> <p>At each zooplankton/net station, collect a full depth (10m off bottom to surface) CTD profile using SBE 25p CTD with SBE 43 dissolved oxygen, Wetlabs fluorometer and PAR sensors. As well as a full depth (10m off bottom to surface) zooplankton tow, using BONGO net with 250um mesh.</p> <p>At select stations, collect surface or bottom water with a Niskin for salinity, nutrients, HPLC (phytoplankton pigment analysis), photosynthetic activity (FLC, for primary production estimates), and a phytoplankton taxonomy sample. At GEO1, 12, and 42 collect samples for secondary production estimate (chitobiase).</p>
Related Documents:	Scientific Sampling Package for 2024-031 Sampling Equipment Request for 2024-031

Scientific Personnel

Berths Required: 2

Mark Belton
OSD



Mobile: 2502088292

Certifications

Sile Kafrissen
OSD
she/her



Mobile: 250-893-9159

MSR Summary

Certifications

Notes: on-board lead

(Personnel may upload a photo, give mobile numbers, and specify dietary requirements from their WaterProperties.ca dashboard)

Anticipated Employee Hours (full cruise): 60 | Anticipated Overtime Hours: 60 (~8.0 days) | 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:

Ship 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 needed should be on board and attached to port side-aft deck wooden divider
PBS Shrimp table and box for back deck, plastic cabinet/shroud (sits on outside table across from lab door)
2 Large crates containing: zooplankton nets, other sampling gear (SBE 25p 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:

2 hrs

Logistics:

Commence Loading:

12 July, 10am, PBS

Sailing:

sail once loaded

Operations Profile:

12 hr 0700-1900 daylight hours

Returning:

on or before 17 July, offloading gear and science crew at IOS before returning to PBS

Offloading:

on or before 16 July 2024, end of trip, IOS

Logistics Details:

Load equipment on the morning of 12 July at PBS (timing depends on traffic for science crew to drive from IOS to PBS that morning 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

1st day: load late morning (~1.5 hrs) and depart from PBS, sampling at GEO1 for about 2 hours then continue survey to the north.
1-5th day: Carryout survey
5th day: unload science gear and crew at IOS at end of survey
Last day: 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:

<https://www.waterproperties.ca/upload/2024-031.gpx>

[Click to Download GPX File for 2024-031](#)

[Click to Download CSV File for 2024-031](#)

This GPX file may be used in virtually any navigational software including our recommendation of [OpenCPN](#) (Free and available for Windows, Linux, Mac, Android). The CSV file may be given to users that cannot read GPX files. You can also convert GPX files to just about any other format (e.g., Google Earth KML, etc) here: [GPSVisualizer.com](#)

NEW for 2022: Some GPX files will give frustrations for users as waypoints will be imported into software (e.g., OpenCPN) showing hard-to-read hollow circles. We recommend checking the GPX file here prior to importing to ensure that waypoint symbols have been included as they are typically not with OziExplorer and other charting software exports. To edit this GPX file you can open it in any text editor (e.g., notepad) and check to see if the tags <sym> and <type> are present for each waypoint. If they are not then do a 'search and replace all' as follows. Search for: '</name>' Replace with: '</name><sym>Symbol-Diamond-Red</sym><type>WPT</type>' and then save your file. You can then import this modified GPX file into your favourite charting software package.

How to import into Windows OpenCPN: Click Route & Mark Manager from Floating Toolbar > Import GPX... from bottom of window. You can also import an [extended waypoint icon pack](#) into OpenCPN and unzip this folder into C:\ProgramData\opencpn and restart the application.

How to import into OziExplorer (legacy, not supported anymore): File > Load from File > Import GPX File.

How to import into Google Earth: File > Open > Pick GPS from lower right > Import GPX File.

Note that both OziExplorer and Google Earth lose the GPX waypoint symbols on import

If you need some general charts to view waypoints on OpenCPN then you can download [CHS3000](#) (all of BC coast), [CHS3001](#) (Vancouver Island and South Coast), and [CHS3002](#) (Haida Gwaii and North Coast).

Itinerary Stations/Details:

Station Lat N lon.min Lon W lon.min Bottom Depth (m) Sampling

GEO1 49 15 -123 45 400 CTD, net, water. Chito 7 depths

3 49 26.6 -124 20.2 327 CTD, water

CPF2 49 28 -124 30 325 CTD, net

BS-11 49 29 -124 46 58 CTD, net, water

6 49 30.6 -124 27.8 192 CTD, water

9 49 35.5 -124 38.3 170 CTD, water

11 49 42.4 -124 43.4 290 CTD, net

12 49 43.6 -124 40.8 357 CTD, net, water. Chito 7 depths

20 49 47.2 -124 32.3 311 CTD

22 49 40.2 -124 16.3 353 CTD, net, water

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, water

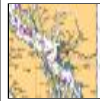
28 49 24.1 -123 45.3 134 CTD, net

27 49 19.1 -123 48 347 CTD, water

33 49 3.6 -123 33 388 CTD, water
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, water. Chito 6 depths
46 48 51.4 -123 10.8 176 CTD, net, water
56 48 46.4 -123 1.6 214 CTD, water
59 48 36.96 -123 14.978 225 CTD, net, water
GI-01 48 45.86 -123 20.53 65 CTD, net
SC-04 48 43.5 -123 25 90 CTD, net, water
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
 2024-031plan1.jpg	file	329K	Thursday 16 May 2024 10:36

Approved COVID Protocols

Approved Safe Work Procedures and Approved Field Work Application:

 No Approved COVID
File present

Standard Operating Procedures

This section contains the Standard Operating Procedures for scientific equipment on board. These procedures should be reviewed by scientists, crew, and officers prior to conducting scientific operations on board. *(This section is in development -- Jan 2024)*

CTD

SBE25 in Standalone Mode Instructions
SBE9/19/25 Maintenance Between Stations

Water Properties

Salinity Sampling Flowchart
Chlorophyll Sampling
Nutrient Collection Flowchart
Nutrient Collection Sampling

Biological Sampling

Phytoplankton Sampling
Zooplankton Sampling
Jelly Sampling

Maps and Deck Layout

Map of Station Locations:

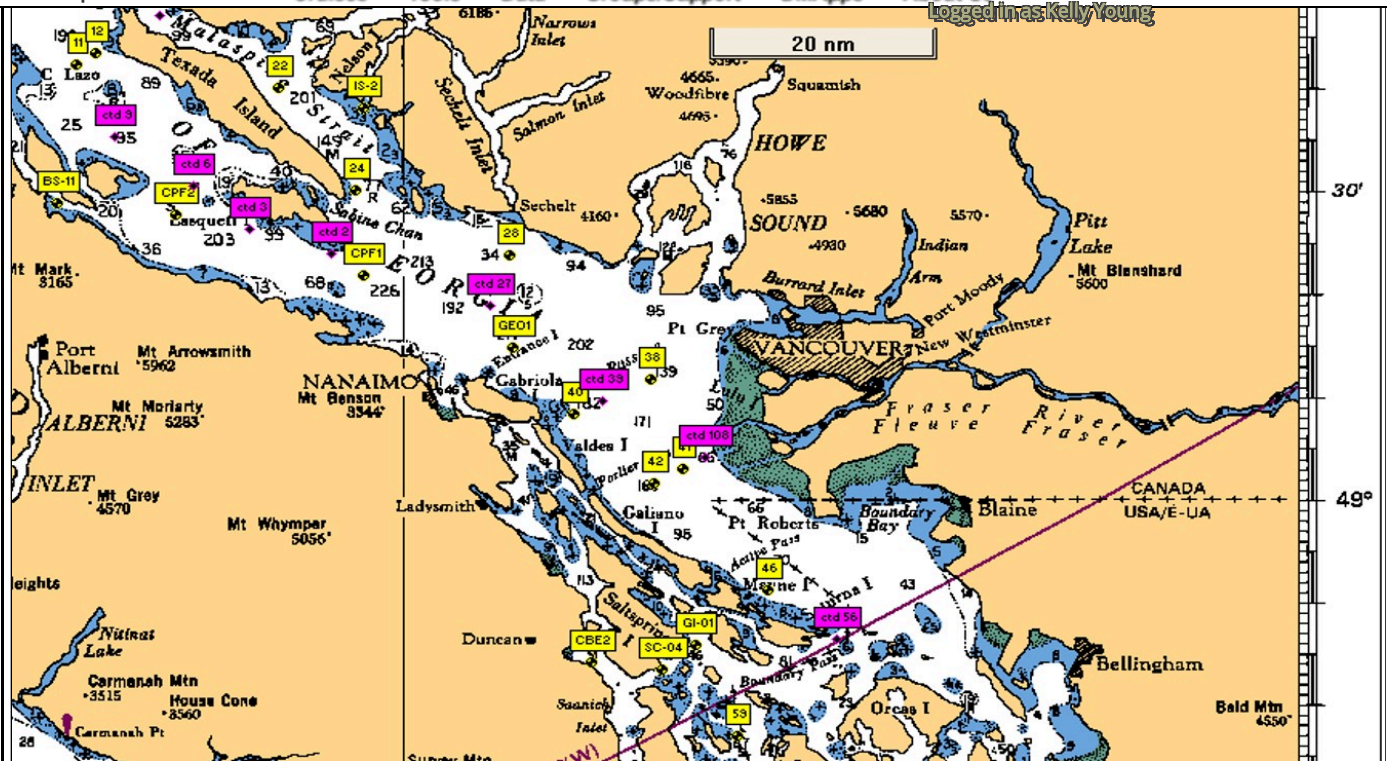


Image Notes:

Deck Layout:

 No Deck Image File
Uploaded

This page generated from: <https://www.waterproperties.ca/requests/cruiseplansubmit.php?> on Thursday 16 May 2024 10:36:42

Recent Plan Views

Kelly Young: 2024-05-16

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[Water Properties Main Page](#)