

Quarterly Project Report

1. Team Identification

Project Team: Marine and Climate System ▼

Budget Year: 2018

Quarter: Q4

2. Scope - Highlights of the Period

Person Days:

Accomplishments

Missed Targets

3. Activity Tracking

ID	Task	% Complete	Status
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

4. Risk And Issue Updates

ID	Risk Event	Status
<input type="text"/>	<input type="text"/>	<input type="text"/>

5. Budget Information

CURRENT QUARTER SPENDING

Amounts are the cumulative totals to the end of the reporting period.

1. Salaries and Benefits

<i>a) Graduate Students</i>	<input type="text"/>	<input type="text"/>
<i>b) PDF's</i>	<input type="text"/>	<input type="text"/>
<i>c) Technical Staff</i>	<input type="text"/>	<input type="text"/>

2. Equipment or Facility

a) Purchase or Rental	<input type="text"/>	<input type="text"/>
b) Operations and Maintenance Cost	<input type="text"/>	<input type="text"/>
3. Materials and Supplies	<input type="text"/>	<input type="text"/>
4. Travel Expenses		
a) Conferences	<input type="text"/>	<input type="text"/>
b) Field Work	<input type="text"/>	<input type="text"/>
c) Project Related Travel	<input type="text"/>	<input type="text"/>
d) Central Planning Meetings	<input type="text"/>	<input type="text"/>
5. Dissemination Costs	<input type="text"/>	<input type="text"/>
Total	\$0	

OTHER ORGANIZATIONS IN-KIND CONTRIBUTIONS

Organization	Contribution	Description
<input type="text"/>	<input type="text"/>	<input type="text"/>
Total	\$0	

6. Budget Explanation

Budget Statement	<input type="text"/>
Cash Contributions	<input type="text"/>
Expenditure Tracking	<input type="button" value="Click here to attach a file"/>

7. Research Team

Team Member	Overview of Participation and Scientific Contributions
<input type="text"/>	<input type="text"/>

8. Other

Please provide any additional information/comments as required.

[<< Research Team](#)

Before submitting the form, please confirm that the information contained in this

report is complete and accurate to the best of your knowledge.

Upon clicking submit the report will be saved as:

BaySys Quarterly Status Report - Marine and Climate System 2018 Q4

Submit

It will then automatically be sent for review and approval by the project team.

Txt Report Status:

Draft In Progress

Quarterly Project Report

1. Team Identification

Project Team: Contaminants ▼

Budget Year: 2018

Quarter: Q4

2. Scope - Highlights of the Period

Person Days: 53

Accomplishments

Participation in bay-wide cruise campaign. Collection of Hudson Bay water, ice, atmospheric, and sediment samples for organic matter and inorganic matter fingerprinting and mercury determination.

Determination of Hudson Bay total mercury concentrations on board during bay-wide cruise.

Submission of two manuscripts related to samplings of sediment for inorganic matter fingerprinting analysis.

Missed Targets

No missed targets.

3. Activity Tracking

<i>ID</i>	<i>Task</i>	<i>% Complete</i>	<i>Status</i>
51	Task 5.1 Relationship between mercur...	60	On target. Required samples collected during the
52	Task 5.2 Suspended Sediment and Org...	80	On target.
53	Task 5.3 Mass balance modeling of m...	65	On target.

4. Risk And Issue Updates

<i>ID</i>	<i>Risk Event</i>	<i>Status</i>
11	Availability of Manitoba Hydro sediment data	On target. No longer a risk.
10	Hydro-Quebec historical data is not provided	On target. Collaborating with Hydro-Quebec and E

ID	Risk Event	Status
9	Mercury cross-contamination on the Amundsen	On target. Mercury contamination not observed d
2	Sequence of data analysis, and model outputs causes c	Behind schedule. Requested project extension to

5. Budget Information

CURRENT QUARTER SPENDING

Amounts are the cumulative totals to the end of the reporting period.

1. Salaries and Benefits

a) Graduate Students	\$44,485.4	Stipends for MSc#1, MSc#2, MSc#4
b) PDF's	\$66,813.07	Salary and benefits for PDF#1
c) Technical Staff	\$5,983.85	Technical support for data analysis.

2. Equipment or Facility

a) Purchase or Rental	\$3,279.4	Instruments and components for sample analysis.
b) Operations and Maintenance Cost	\$20,510.13	Analytical and laboratory costs.

3. Materials and Supplies

	\$7,219.06	Materials for sample collection and analysis.
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4. Travel Expenses

a) Conferences	\$316.86	Conference fees are minimal due to use of student travel fund gr
b) Field Work	\$2,077.07	Travel to field sampling campaigns.
c) Project Related Travel	\$48.11	Costs associated with meetings
d) Central Planning Meetings	\$433.81	Coordination meetings.


5. Dissemination Costs

	\$0	none
Total	\$151,166.76	

OTHER ORGANIZATIONS IN-KIND CONTRIBUTIONS

Organization	Contribution	Description
NSERC CREATE	18,000	PhD#1 stipend
GETS	8,748	MSc#2 stipend
U. Manitoba	21,044.78	MSc#2 stipend
NSERC DG - Wang	3,125	Jeff Gao stipend
U. Manitoba UMGF	3,125	Jeff Gao's stipend
Total	\$54,042.78	

6. Budget Explanation

Budget Statement	
Cash Contributions	NSERC DG (to Wang) for Jeff Gao's stipend University of Manitoba UMGF for Jeff Gao's stipend
Expenditure Tracking	 Click here to attach a file

7. Research Team

Team Member	Overview of Participation and Scientific Contributions
Feiyue Wang	Project lead – mercury methylation and mass budget; supervision of MSc#2...
Allison Zacharias	Project co-lead; planning of data analysis, manuscript preparation.
Sarah Wakelin	Project co-lead; planning of data analysis, manuscript preparation.
Kathleen Munson	PDF#1 – project coordination, mercury methylation and mass budget; parti...
James Singer	MSc#2 – mercury methylation and mass budget; participation in summer b...
Zou Zou Kuzyk	Lead on particulate organic matter sources and transport; submission of Hu...
Tassia Stainton	MSc#1 – particulate organic matter sources and transport. Data interpretati...
Samantha Huyghe	MSc#4 – data analysis of archived geophysical and geochemical data, prepa...
David Lobb	Sediment budget and fingerprinting - (inorganic); participation in planning s...
Masoud Goharrokhi	PhD#1 – sediment budgeting and fingerprinting (inorganic): preparation of ...
Robie Macdonald	Consultation for bay-wide cruise, participation in Hudson Bay impact assess...
Philip Owens	Sediment budgeting and fingerprinting (inorganic); training PhD#1 (co-supe...
Ellen Petticrew	Sediment and organic matter fingerprinting – supervision of MSc#1, data in...
Gary Stern	Supervision of PDF#1. Coordination of zooplankton samples following 2018 ...

8. Other

Please provide any additional information/comments as required.

[<< Reasearch Team](#)

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BaySys Quarterly Status Report - Contaminants 2018 Q4

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Txt Report Status:

Draft In Progress

Quarterly Project Report

1. Team Identification

Project Team: NEMO Modeling ▼

Budget Year: 2018

Quarter: Q4

2. Scope - Highlights of the Period

Person Days: 0

Accomplishments

Major accomplishments include the completion of additional simulations for sensitivity studies, ongoing training of HQP, dissemination of NEMO output, and ongoing research and analysis. In particular, additional NEMO historical simulations were carried out to examine sensitivity to atmospheric forcing (including ERA, also used by Team 2). NEMO has been successfully run with Arctic HYPE. Bias-corrected CMIP5 data and HYPE discharge data was provided by Ouranos and Team 2 in September 2018. New experiments have recently been launched with ERA atmospheric forcing and finalized HYPE and Arctic-HYPE river discharge data produced by Team 2. The ANHA configuration of the NEMO model was upgraded to v3.6, leading to a significant increase in its computational speed. NEMO experiments with explicit tidal forcing were run, and are presently being evaluated. Atmospheric forcing from ECCO was obtained through to summer 2018, with model simulations extended through this period, to support the ongoing comparison with ECCO's RIOPS system. Inge Deschepper (from Team 3) visited the University of Alberta to integrate her coupled pelagic and sympagic ecosystems model into the ANHA configuration of NEMO. In addition, NEMO model output was made available to BaySys researchers (and their HQP) to assist with their analysis (including Sergei Kirillov, Zou Zou Kuzyk, Igor Dmitrenko, Simon Belanger and Jean-Eric Tremblay). The NEMO model was evaluated, as outlined in studies of modeled sea surface temperature and sensitivity to atmospheric forcing and model resolution led by HQP Shabnam JafariKhasragh, submitted in May, 2018; freshwater dynamics and sensitivity to river discharge forcing and model resolution, led by Natasha Ridenour and submitted in August, 2018; summer freshwater circulation using high-resolution model output and AVISO data, submitted in September, 2018.

Missed Targets There were no missed targets during this quarter.

3. Activity Tracking

<i>ID</i>	<i>Task</i>	<i>% Complete</i>	<i>Status</i>

4. Risk And Issue Updates

<i>ID</i>	<i>Risk Event</i>	<i>Status</i>
20	NEMO Model area	This risk has been addressed through coordinated
19	Redo bias correction for climate scenarios	This risk has also been addressed. Bias-corrected

5. Budget Information

CURRENT QUARTER SPENDING

Amounts are the cumulative totals to the end of the reporting period.

1. Salaries and Benefits

<i>a) Graduate Students</i>	\$9,000	salary; Please note that this information will need to be provided
<i>b) PDF's</i>	\$14,000	salary
<i>c) Technical Staff</i>	\$0	N/A

2. Equipment or Facility

<i>a) Purchase or Rental</i>	\$0	N/A
<i>b) Operations and Maintenance Cost</i>	\$0	N/A

3. Materials and Supplies

	\$0	N/A
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4. Travel Expenses

<i>a) Conferences</i>	\$0	N/A
<i>b) Field Work</i>	\$0	N/A
<i>c) Project Related Travel</i>	\$0	N/A
<i>d) Central Planning Meetings</i>	\$0	N/A

5. Dissemination Costs

	\$0	N/A
Total	\$23,000	

OTHER ORGANIZATIONS IN-KIND CONTRIBUTIONS

<i>Organization</i>	<i>Contribution</i>	<i>Description</i>
Total	\$0	


6. Budget Explanation

Budget Statement

Please note that this and all budget-related sections will need to be completed by a

Cash Contributions

Expenditure Tracking

 [Click here to attach a file](#)

7. Research Team

Team Member

Overview of Participation and Scientific Contributions

Paul Myers

Team 6 co-lead; NEMO modeling, student supervision

Natasha Ridenour

PhD1; freshwater dynamics and circulation, model evaluation

Jennifer Lukovich

Team 6 co-lead; model-data comparison, sea ice dynamics

Shabnam Jarfarikhasragh

model evaluation, SSTs, heat, energy, and momentum fluxes

Kevin Sydor

Manitoba Hydro Team 6 co-lead; NEMO modelling coordination

Karen Wong: Manitoba Hydro Team 6 co-lead; NEMO modelling coordination

8. Other

Please provide any additional information/comments as required.

[<< Reasearch Team](#)

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