Application for Consent to Conduct Marine Scientific Research

1. General Information

1.1 Reference ID:

Application number:	F2010-078
Project name:	Keil, Barkley and Clayoquot Sounds, 2010

1.2 Sponsoring institution(s):

Institution	Contact Information	Director
University of Washington	University of Washington, School of Oceanography, Box 357940., Seattle, WA. 98195-7940 206 543-5060	Dr Russ McDuff

1.3 Scientist in charge of the project:

Name:	Keil, Rick
Affiliation:	University of Washington
Address:	Box 355351
Phone:	206 616 1947
Fax:	206 685 3351
Email:	rickkeil@u.washington.edu

1.4 Scientists from coastal states involved in the planning of the project:

See Section 8 (Participation)

1.5 Submitting officer:

Name: Affiliation: Address:	King, Eric University of Washington, School of Oceanography
Phone:	206-543-5060
Fax:	206-543-6073
Email:	ericking@uw.edu

2. Description of Project

2.1 Nature and objectives of the project:

Watercolumn and sediment sampling of Barkley Sound (Effingham Inlet) and Clayoquot Sound (all inlets). Water column processes to be studied: optics, bacterial growth rates and community structure, phytoplankton community assemblage. Sediments to be sampled with small multicorer and Van Veen grabs. Three small moored sediment traps will be deployed for 24-48 hr to collect settling particles. Drifting optical buoys will be deployed in Tofino Inlet. The ship will stay with the deployed buoys at all times.

2.2 Relevant previous or future research projects:

This is the 12th of 14 funded cruises. Funding for cruises through 2012 has been received.

2.3 Previously published research data relating to project:

2000-2009 State Department cruise data reports. Two peer reviewed article based on data from previous cruises (below). Three additional manuscripts in press or submitted. Nuwer, J. and Keil, R.G. 2005. Organic Carbon preservation in an intermittently anoxic fjord; Clayoquot Sound BC. Limnology and Oceanography v50, 1119-1128. Walsh, E.M., Ingalls A.E. and Keil R.G. 2008. Sources and transport of terrestrial organic matter in Vancouver Island fjords and the Vancouver-Washington margin: A multiproxy approach using Î'13Corg, lignin phenols and the ether lipid BIT index. Limnology and Oceanography 53(3), 1054-1063.

3. Methods and Means to be Used

3.1 Platform:

Name:	CLIFFORD A. BARNES
Nationality (Flag State):	United States
Overall length:	65
Maximum draught (meters):	8
Displacement/gross tonnage:	99
Propulsion:	
Call sign:	WRN 5495
Cruising speed:	
Maximum speed:	
Name of captain/master:	Ray McQuin
Number of crew:	2
Number of scientists on board:	6

3.2 Other craft used in the project:

none

3.3 Methods and scientific instruments:

Types of Samples and Data	Methods to be Used	Instruments to be Used
Water Sampling	CTD, oxygen analysis, large volume filtration, DNA and RNA sampling, chlorophyll, oxygen titrations, bacterial growth measurements, optical measurements, ADCP	CTD, fluorometer, beta-max counter, ADCP, optical sensor (e.g. AC-9)
Sediment Sampling	Geochemical processes for C, N and H (protein and carbohydrate analyses)	Multicorer, sediment trap, Van Veen grab and 3 inch gravity corer.

3.4 Will harmful substances be used?

No.

3.5 Will drilling be carried out?

No.

3.6 Will explosives be used?

No.

3.7 Will protected species be studied?

No.

4. Installations and Equipment

4.1 Will there be any installations?

Yes. With two exceptions, all equipment deployed is tethered to the ship, nothing in the water for more than 30 minutes or so at a time. The two freely deployed pieces are a sediment trap and an optical array. Both are temporarily deployed out of the normal lanes of ship traffic and are anchored to the sea bed using retrievable iron weights. They are deployed for 24-48 h and the ship stays within visible distance of the two instruments to keep them safe from accidental boat traffic. They are deployed in Tofino Inlet, Clayoquot SOund BC at 49.167N x 125.69W (near Rankin Rocks).

5. Geographical Area(s)

5.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude):

Clayoquot and Barkley Sounds, Vancouver Island, BC. General area is about 49.2N and 126W

5.2 Attach chart(s) showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment:

See Section 10 (Attachments)

6. Dates

6.1 Expected dates:

Project start date: Sep 08, 2010 Project end date: Sep 17, 2010

Coastal Area	Entry Date	Final Departure Date	Multiple Entries Expected?
Canada	Sep 8, 2010 12:00:00 AM	Sep 17, 2010 12:00:00 AM	No
Explanation of multiple entries:			

Extent to which Canada will be enabled to participate or to be represented in the research project: We collaborate loosely with scientists from Bamfield Marine lab and from Univ Victoria. We can make aspace available on the ship or at the marine lab in Tofino.

7. Port Call(s)

Port	Arrival Date	Departure Date	Special Logistical Requirements	Shipping Agent
Victoria	Sep 8, 2010 12:00:00 AM	Sep 17, 2010 12:00:00 AM	none	none

8. Participation

8.1 Extent to which coastal state(s) will be able to participate or to be represented in the research project:

See Section 6 (Dates)

8.2 Proposal dates and ports for embarkation/disembarkation:

See Section 7 (*Port Call(s)*)

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary reports, which should include the expected dates of submission of the final results:

No more than 30 days from the end date of the research.

9.2 Propose means for access by coastal state to data and samples:

Data will be provided through official channels at no cost to the coastal State(s). Samples will be provided upon request.

9.3 Propose means to provide coastal State with assessment of data, samples and research results or provide assistance in their assessment or interpretation:

http://rats.state.gov/oes-rats/application/report/print.action?applicationId=3486&printFrie... 2010/08/10

Assessment of data, samples, and research results will be provided at no cost to the coastal State(s). Assistance in futher assessment or interpretation will be provided upon request.

9.4 Propose means of making results internationally available:

Samples and data will be made available via email request. Space on the ship is limited to 6 scientists. All the births are already filled, but upon request, we can attempt to accommodate a Canadian participate. Weâ??d wish to know ASAP. There is space at the Clayoquot Field Station in Tofino that we can use to accommodate scientific partners. Interpreted data is made internationall available through presentaions and peer-reviewed publications.

10. Attachment(s)

Final Report		
Attachment	Estimated Delivery Date	
No Final Report Currently Available		

Additional Attachments			
Attachment Type	Attachment	Submission Date	
Proposed Cruise Track	1280775704127_station numbers 2.png		