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By Manager of Licensing at 4:57 pm, Apr 08, 2011

SCIENTIFIC RESEARCH LICENCE APPLICATION LAND, FRESHWATER & MARINE BASED RESEARCH

NRI strongly recommends that applicants review the following documents prior to submitting an application: *Scientific Research Licencing Guidelines* and *Negotiating Research Relationships in Inuit Communities: A Guide for Researchers*.

For more information about the Nunavut Research Institute (NRI) please visit our web site www.nri.nu.ca

IMPORTANT

This application fulfills the requirements for the NIRB environmental screening. Please be advised that your application will not be processed until the application form, project summary, and maps are received.

SECTION 1: APPLICANT INFORMATION

1a. Project Title Limnology and Paleoecology of Lakes and Ponds

1b. Project Number

Please indicate if applicant has submitted any previous application(s) to NRI related to this project proposal? Yes ☒ No ☐

If yes, please indicate the previous NRI licence number: 0200307R-M

Please indicate if applicant has submitted any previous application(s) to NIRB related to this project proposal? Yes ☒ No ☐

If yes, please indicate the previous NIRB project number(s): #04YN075

2. Applicant's full name and mailing address:

<u>John P. Smol</u>	Phone: <u>1-613-533-6147</u>
<u>Dept. Biology, Queen's University</u>	Fax: <u>1-613-533-6617</u>
<u>116 Barrie St, Kingston ON K7L 3N6</u>	Email: <u>smolj@queensu.ca</u>

3. Field Supervisor's name and mailing address:

<u>John P. Smol</u>	Phone: <u>(as above)</u>
<u>(as above)</u>	Fax: <u></u>
<u></u>	Email: <u></u>

4. Other Personnel list (name, position, affiliation)

<u>Marianne Douglas (Co-PI), Prof. Univ Alberta</u>	<u>Weston Blake, Jr., GSC (emeritus)</u>
<u>Alexandra Rouillard, MSc student, Queen's U.</u>	<u>Megan Goudie, MSc student, UA</u>
<u>Chris Grooms, Researcher; Queen's U.</u>	<u>Conrad Murphy, MSc student, UA</u>

SECTION 2: AUTHORIZATION NEEDED

1. Indicate all authorizations associated with the project proposal:

- | | |
|---|--|
| <input type="checkbox"/> Regional Inuit Association (RIA) | <input type="checkbox"/> Nunavut Planning Commission (NPC) |
| <input type="checkbox"/> Nunavut Water Board (NWB) | <input type="checkbox"/> Department of Indian And Northern Development |

- ☐ (DIAND)
☐ Department of Fisheries and Oceans (DFO)
☐ Community Government & Services (CG&S)
☒ Nunavut Research Institute (NRI/GN)
☐ Department of Culture, Language, Elders, and Youth (CLEY/GN)
☐ Canadian Launch Safety (CLS)
☐ Environment Canada (EC)

- ☐ Department of Environment (GN)
☐ Department of National Defense (DND)
☐ Hamlet
☐ Parks Canada (PC)
☐ Canadian Wildlife Service (CWS)
☐ Other (please specify): _____

2. List the active permits, licences, or other rights related to the project proposal and their expiry date:

3. Have you applied for all authorizations required to conduct the project proposal activities?

☒ YES

☐ NO

SECTION 3: PROJECT PROPOSAL DESCRIPTION

1. Indicate the activities related to the project proposal:

- ☒ Temporary camp (to be removed at end of field season)
☐ Permanent camp (to remain for life of authorization)
☐ Construction of recreational or safety cabin
☒ Temporary fuel storage (to be removed at end of field season)
☐ Permanent fuel storage (to remain for life of authorization)
☐ Placement of structures for life of permit (other than camp or cabin – i.e. scientific instruments)
☐ Placement of permanent structures (other than camp or cabin – i.e. scientific instruments)
☐ Air surveys (i.e. geophysical, wildlife)
☒ Use of aircraft/watercraft/land vehicle for personnel drop-off and pick-up to project location
☐ Use of on-site mechanized vehicles (i.e. atv, snowmobile, truck, zodiac)
☐ Sewage or grey water disposal via sump
☐ Hazardous waste storage or disposal
☐ Solid waste disposal
☐ Chemical storage
☐ Explosives storage
☐ Soil testing

- ☐ Soil disposal/ soil storage
☒ Incineration of combustible wastes and removal of non-combustible wastes
☐ River/ stream/ lake crossing or work/ bridge
☐ Drainage alteration
☐ Geoscientific sampling by diamond drilling
☐ Geoscientific sampling by soil sampling
☐ Geoscientific sampling by trenching
☐ Geoscientific sampling by borehole core
☐ Blasting
☐ Channeling
☐ Excavation
☐ Hydrological testing
☐ Abandonment and restoration
☐ Site restoration (fertilization/ grubbing/ scarification/ spraying/ recontouring)
☒ Research
☒ Ecological survey
☐ Harvesting
☐ Removal of vegetation for scientific purposes
☐ Other: _____

2. Personnel

Total No. of personnel on site = (A)	7	Total No. of days on-site = (B)	~12	Total No. of Person days (A) x (B) = 84
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3. Timing

Period of operation:	~July 7, 2009	to	~July 21, 2009
Proposed term of authorization:	2009	to	2011

Please outline the phases of the proposed project (construction/ operation/ decommissioning) including the

timing and scheduling of each phase.

4. Location(s) of data collection:

Location Name	Region North Baffin, South Baffin, Kivalliq, Kitikmeot	Co-ordinates Lat (degree / minute), Long (degree / minute)	NTS Map Sheet #	Land Status Crown, Commissioners', Inuit Owned
Cape Herschel	Qikiqtani	78° 37', 74° 42'	039F	Crown
Pim Island	Qikiqtani	78° 41' 76° 0'	039F	Crown
Bache Peninsula	Qikiqtani	79° 13'76° 0'	039H	Crown
Stygge Nunatak	Qikiqtani	78° 44' 78° 28'	039F	Crown
Resolute Bay	Qikiqtani	74° 41' 94° 50'	058F	Crown

If the project proposal includes a **camp**, please provide the coordinates of the camp location

Lat (degree/minute) 78° 37' Long (degree/minute) 74° 42'
NTS Map Sheet # (if different from above) 039F

The Nunavut Impact Review Board may require additional location information in a subsequent Project Specific Information Requirement (PSIR) submission. This may take the form of a digital Geographic Information Systems (GIS) file.

SECTION 4: NON-TECHNICAL PROJECT PROPOSAL DESCRIPTION

Please attach a non-technical description of the project proposal, no more than 500 words, in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot). The project description should outline the following:

- Project Title
- Researcher's Name and Affiliation
- Project Location
- Timeframe
- Project Description
 - purpose
 - goals & objectives
 - method of transportation
 - any structures that will be erected (permanent / temporary)
 - restoration / abandonment plans
- Methodology
 - collection protocol
 - collection mechanisms
 - indicate why specific communities or individuals were selected for your research
- Data
 - short term & long term use of data
 - other uses of data
- Reporting

- How will the research results be communicated to the individual participants, communities, regional and Nunavut organizations?
- Will the research result in a publication?

SECTION 5: MATERIAL USE

1. List equipment (including drills, pumps, aircrafts, vehicles etc.):

Equipment type and number	Size – dimensions	Proposed use
PCSP helicopter		(ferry to site and transportation to Pim Island etc.)

2. Detail fuel and hazardous material use:

Fuel	Number of Containers and Capacity of Containers	Total Amount of Fuel (in Litres)	Proposed Storage Methods
Diesel			
Gasoline	2	8L	PCSP Guidelines
Aviation fuel			(our aviation fuel is typically cached at Alexandra Fiord by PCSP)
Propane	4	25 lb tanks	PCSP Guidelines
Other			
Hazardous Materials and Chemicals		Total Amount of Hazardous Materials and Chemicals (in Litres)	

3. Detail daily water consumption rates

Daily amount (in Litres)	Proposed water retrieval methods	Proposed water retrieval location
30 L	bucket	A river feeding a large pond 1 km from camp

4. Have you applied for a Class A License with the Nunavut Water Board?

☐ YES

☒ NO

SECTION 6: WASTE DISPOSAL AND TREATMENT METHODS

1. List the types of waste:

Type of waste	Projected amount generated	Method of Disposal	Additional treatment procedures
Sewage (human waste)	4 small honey bags	Repeated burn and burial, following PCSP Guidelines	
Greywater	a few pails	dispersal on land, following PCSP guidelines	
Combustible wastes	1 garbage bag	Burn on site	Return any non-combustibles to Resolute
Non-Combustible wastes	1 small bag	Return to Resolute	Resolute Dump
Overburden (organic soil, waste material, tailings)			
Hazardous waste			
Other:			

2. Will you be incinerating combustible waste, removing all solid waste, and removing the ash generated from incineration?

☒ YES

☐ NO

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

1. List the community representatives that have been contacted and provide the minutes of the meetings if available:

Community	Name	Organization	Date Contacted
(As in the past, we send reprints and reports and offer to give talks to communities involved. We have never had any concerns expressed. This summer, PCSP has asked us to talk at Resolute, and we are pleased to do so.)			

2. How will the proposed project benefit Nunavut?

We are monitoring water quality and the effects of climate change and other environmental stressors on Arctic lakes and ponds. This has major implications on the sustainability of the Arctic.

4. Describe and attach documentation regarding community support or concerns for the proposed project:

We send our reprints and other reports to Resolute (HTA and the Mayor's office) and also to Grise Fiord. We have never had any concerns in 27 years of our work.

5. Is there a traditional knowledge component to this research project? If yes, please explain:

No

SECTION 8: GENERAL QUESTIONS

1. Do you give NRI permission to publish project information in the Nunavut Research Institute Annual Compendium of Research Undertaken in Nunavut?

☒ YES

☐ NO

2. Is the proposed research associated with International Polar Year (IPY)?

☐ YES

☒ NO

3. In addition to the application form, applicants are required to submit additional information in an electronic format to the Manager, Research Liaison, cfilion@nac.nu.ca. Please check that the following have been submitted to NRI:

- ☒ Project Summary -in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot)
- ☒ NTS Maps of the project

Applicant: John P. Smol

Signature, 

Title: Professor and Canada
Research Chair

Date: March 21, 2009