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www.sfu.ca/vpacademic**MEMORANDUM**

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**ATTENTION** Senate  
**FROM** Jon Driver, Vice-President, Academic and  
Provost, and Chair, SCUP  
**RE:** Faculty of Environment: Pacific Water Research Centre (SCUP 15-18)

**DATE** May 19, 2015**PAGES** 1/1

A handwritten signature in black ink, appearing to be "Jon Driver", written over a horizontal line.

At its May 13, 2015 meeting, SCUP reviewed and approved the establishment of the Pacific Water Research Centre (PWRC) as a Centre for a five-year term.

**Motion:**

That Senate approve the establishment of the Pacific Water Research Centre (PWRC) as a Centre for a five-year term.

c: I. Stefanovic



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**MEMORANDUM**

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**ATTENTION** Susan Rhodes, Secretary  
Senate Committee on University Planning  
(SCUP) **DATE** April 27, 2015

**FROM** Norbert H. Haunerland **PAGES** 1/1

**RE:** Pacific Water Research Centre (PWRC)

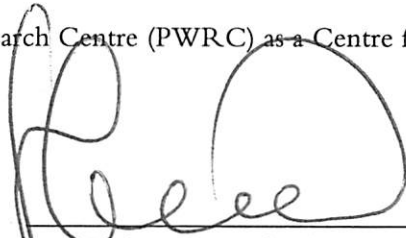
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Attached is a proposal from Dr. Ingrid Stefanovic, Dean, Faculty of Environment for the establishment of the Pacific Water Research Centre (PWRC).

I recommend approval as a Research Centre according to Policy 40.01. Once approved by SCUP the proposal should be sent to Senate for approval and the Board of Governors for information.

**Motion:**

That SCUP approves the Pacific Water Research Centre (PWRC) as a Centre for a 5-year term.



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Dr. Norbert Haunerland  
Associate Vice-President, Research

Attachment

C: Dr. Ingrid Stefanovic, Dean, Faculty of Environment



INGRID LEMAN STEFANOVIC, DEAN  
FACULTY OF ENVIRONMENT

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April 27, 2015.

Dr. Joy Johnson,  
Vice-President, Research,  
Simon Fraser University,  
Burnaby, BC.

Re: Proposal to establish a Pacific Water Research Centre

Dear Dr. Johnson,

This letter confirms my enthusiastic support for the creation of the Pacific Water Research Centre within the Faculty of Environment.

There is strong backing across the Faculty for such a unit, and we are already poised to pursue additional external funding opportunities from organizations committed to water issues in Canada. In fact, it is our hope to formally launch and solicit additional support for the Centre at the forthcoming Canadian Water Summit, taking place this June in Vancouver.

Dr. Murray Rutherford of the School of Resource and Environmental Management has agreed to serve as Interim Director.

Others across Canada, including members of Ryerson University's Urban Water Centre, have expressed interest to me in pursuing future collaborative research with our faculty members. Given that interest within SFU as well as beyond its borders, it seems only appropriate that the Faculty of Environment support the creation of this new Centre.

Please let me know if you require any further information.

Yours sincerely,

A handwritten signature in cursive script, appearing to read 'I. Stefanovic'.

Ingrid Leman Stefanovic,  
Professor and Dean

**PACIFIC WATER RESEARCH CENTRE (PWRC)**

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May 2015

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## 1 SUMMARY

The purpose of the interdisciplinary Pacific Water Research Centre (PWRC) is to realize an expanding need to integrate the social and natural sciences to address complex water issues, both regionally as well as within the context of broader national and international challenges. The World Economic Forum has earlier this year identified the water crisis as the top global risk and a recent GlobeScan survey ranked Canada as second only to Mexico in terms of the degree to which citizens themselves identified fresh water problems as "very serious." The importance of water research is increasingly undisputed.

The PWRC integrates and expands upon the activities of the Water Research Group in the School of Resource and Environmental Management (REM), as well as other units of the Faculty of Environment, to support cross disciplinary investigations in the nexus between water science, social values and public policy. The proposed research centre aims to deepen and expand existing relationships with the broader British Columbia water sector community as well as national and international academic and industry organizations. This vision is consistent with the SFU strategy for becoming Canada's most community-engaged research university.

The PWRC shall be governed in accordance with University policies including R.40.01, RESEARCH CENTRES AND INSTITUTES. The administrative officer for the PWRC shall be the Dean of the Faculty of Environment.

The Dean of the Faculty of Environment shall appoint the Director of the PWRC, under advisement from the PWRC membership. The term of office for the Director shall normally be five years, with the possibility of extension.

The PWRC will act in accordance with all university policies, and in a manner consistent with the goals and the objectives of Simon Fraser University.

## 2 INTRODUCTION

Incorporating societal and cultural perspectives about the meaning, value and use of water in decision-making is increasingly recognized as a central element affecting the long term viability of water resources. Regionally, British Columbia is struggling to manage its use of water among changing social priorities. Challenges arise in a range of areas, from agriculture to recreation, increased domestic use, and expanding uses of water to explore energy resources. Existing governance structures and physical systems are often limited in their capacity to adapt to water challenges in the face of scientific uncertainty and often, those regulatory structures and decision making strategies inadequately incorporate water science or consider user preferences and behaviours in response to policy options.

Alternatively, integrating social values into water science, hydrological models, and governance structures, promises to increase the adaptive capacity of the resulting system. Examples of research areas that begin to embrace this interdisciplinary approach include social hydrology, coupled social-economic modelling, and integrated water management.

However, while the identification of social values and preferences is notable, greater appreciation and incorporation of these aspects in decision making by industry and resource managers is achieved when these individuals are engaged in the research. Further, research

benefits from identifying and including community parameters. That is, what social, economic, and ecological triggers are influenced by industry? How do changes in topographic features affect community values and management options? What is the urban response to changing water supplies? How do fluctuating government priorities and policies affect responses in ecological systems and the management of local waterways? How do advances in water science suggest new policy options? A close partnership with communities, industry, and government is central to the research program.

REM, the Faculty of Environment, and Simon Fraser University have a long history in community engaged research that additionally applies to water research. More recently, the REM Water Research Group was established in 2010 by REM PhD student Steve Conrad – with support from fellow REM PhD student Cedar Morton and faculty advisor Murray Rutherford to bring together a diverse group of water researchers within REM. Since its inception, the group has attracted 18 members and has contributed to research on water economics, policy and governance, modelling, climate adaptation, and urban planning. The group has developed an active, informal network with academic and professional groups across British Columbia and, in addition to its research activities, has provided comments and assistance on publications, watershed plans, and policy, including the City of Burnaby's Environmental Assessment framework, the Coquitlam River Watershed Roundtable's planning process, and British Columbia's *Water Act* modernization initiative.

The Water Research Group has also established strong ties and conducted community research with external groups such as the BC Water and Waste Association, the Okanagan Basin Water Board, the BC Ministry of Agriculture, Agri-Food Canada, The Fraser Basin Council, The City of Kelowna, The Southeast Kelowna Irrigation District, the Professional Engineers and Geoscientists of BC, BC Hydro, and others. The group's chair has fostered a strong working partnership with international research groups including The National Center for Atmospheric Research in Boulder Colorado, The Commonwealth Scientific and Industrial Research Organisation in Australia, The Water Research Foundation in Golden Colorado, the International Water Association, and the University of Queensland, Australia.

Other researchers across the Faculty of Environment have established similar, significant collaborations both nationally and internationally. This combined activity has resulted in a growing reputation and opportunity to recognize and promote water research at SFU.

### **3 OBJECTIVES**

The goal of the PWRC is to create a platform for pursuing interdisciplinary, community connected water research to support resilient water systems. The particular objectives of the PWRC are:

- to establish Simon Fraser University as a nationally recognized centre for cross disciplinary research in natural and social sciences on water science, management and values
- to foster partnerships with communities and build a common understanding of their values as they inform water resource management and security
- to inform resource decision-making through collaboratively developed decision support tools and systems with industry and government
- to provide a foundation for faculty, graduate and undergraduate students to work together to develop innovative water research

- to assist in increased student enrolment in water related programs
- to establish a solid foundation for future collaborations and funding opportunities

The centre's portfolio of activities would focus on applied research, connecting academic knowledge to water management challenges to achieve practical solutions for the water sector. Its particular strength is the close integration of natural and social systems, dynamic system modeling, policy and legal frameworks, and participatory processes and stakeholder engagement. Key areas of research shall include: societal responses to policy, technology applications, and economic measures; implication of river morphodynamics on management approaches; implication of climate change on freshwater systems; frameworks for integrating social values in water governance and climate adaptations; water energy connections and their implications on freshwater systems; the visualization of water system changes; the behavioural and social-economic aspects of water use; coupled social-ecological/hydrological modelling; the standardization of data and communication and knowledge sharing and an integrated approach to water resource management.

The PWRC shall bring together a network of SFU researchers, community stakeholders, first nations and industry to define a research agenda around local waterways, community water systems and utilities, and water needs in an uncertain future. The PWRC would also act as forum for discussion and distribution of answers.

## **4 GOVERNANCE**

- The PWRC shall be a research centre as defined in SFU Research Policy R40.01
- The Director of the PWRC shall report to the Dean of the Faculty of Environment.
- The PWRC shall be governed in accordance with University policies including R.40.01, RESEARCH CENTRES AND INSTITUTES. If this document and University policy differ on any issue, University policy shall prevail.
- The PWRC is housed within the Faculty of Environment at SFU.

### **4.1 STEERING COMMITTEE OF PWRC AT SFU**

The task of the Steering Committee is to determine the overall direction of the Centre and to oversee the management of its operations. While it normally operates by consensus, when necessary it can make decisions by majority vote, including the appointment of new members of the Steering Committee.

- Initial membership will be:
  - Associate Dean or Dean's Faculty-level designate
  - Director of the PWRC at SFU
  - Three additional members of the PWRC at SFU

### **4.2 DIRECTOR**

- The Director of the PWRC shall be appointed by the Dean of the Faculty of Environment under advisement from the PWRC membership. Term of office for the Director shall normally be five years.

The Director's tasks include the following responsibility, which he/she may delegate but not abrogate:

- Chairing the Steering Committee;
- Overseeing the Centre's finances;
- Recruiting members;
- Preparing the annual report to the Dean, Faculty of Environment.

#### 4.3 MEMBERSHIPS

- Faculty, postdoctoral fellows and graduate students of SFU may be made regular members of the PWRC.
- Starting members of the PWRC at SFU may include the current members of the REM Water Research Group and faculty from the Faculty of Environment:
  - *Faculty*
    - Dr. Faran Ali
    - Dr. Duncan Knowler
    - Dr. Lance Lesack
    - Dr. Margaret Schmidt
    - Dr. Murray Rutherford
    - Dr. Nick Hedley
    - Dr. Ingrid Leman Stefanovic
    - Dr. Jeremy Venditti
    - Dr. John Welch
    - Dr. Karen Kohfeld
    - Dr. Kirsten Zickfeld
    - Dr. Sean Markey
    - Dr. Tracy Brennand
    - Dr. Valerie Crooks
    - Dr. Wolfgang Haider
  - *Phd Students*
    - Sarah Breen
    - Steve Conrad
    - Cedar Morton
    - Ryan Trenholm
    - Ryan Bradley
    - Jonathan Cripps
  - *Master Students*
    - Chris Cunada
    - Brandon Heung
    - Julia Berry
    - Nelly Bouevitch
    - Jessica Daniels
    - Gillian Fielding
    - Julia Fryer
    - Arlene Janousek
    - Catherine Parsons



- Status of Research Associates may be granted to those from other universities and external partners who share the same research interests and whose involvement enhances the research of the PWRC at SFU.

## **5 FUNDING**

- Small amount of operating grants may be made available through the Dean's office, as well as through external advancement opportunities.
- Research grants and projects will be sought through funding agencies in Canada, the United States, and other countries. Remaining funds from the Water Research Foundation Project 31-599154 may be used to support initial research activities of the PWRC.

# Library Course Assessments

The Library participates in the course approval process for new courses at both the undergraduate and graduate levels. By Senate motion (S.93-11) "no new course should be approved by Senate until funding has been committed for necessary library materials." A Library review should be conducted after new course proposals have been approved by the department or school curriculum committee, before being considered by the Faculty curriculum committee. New courses will not be approved at the Senate Committee on Undergraduate Studies (SCUS) or Senate Graduate Studies Committee (SGSC) until a Library review has been completed. Even if the department states that no new library resources are required, a report from the Library is required to confirm this view.

To submit course proposals for review by the Library, forward the following materials to Megan Crouch @ [lib-courseassessment@sfu.ca](mailto:lib-courseassessment@sfu.ca).

- course proposal forms
- complete course outline
- reading list created for the course, if any
- date of Faculty curriculum committee meeting (or other deadline for library report)

Please send the above materials at least two weeks prior to your deadline.

An assessment will be done to evaluate whether the Library's holdings and present collection development activities are adequate to support the new course. If no new library resources are required, the course will be added to the appropriate list below indicating the library is adequately resourced to support the course.

If additional library resources are required, a full report will be created and linked below, and the associated costs will be identified. The costs may be one-time, to fill gaps in holdings, or ongoing, for example, to start new journal subscriptions, or sustain book collecting in areas not now included in the Library's collection scope. If costs are attached, the department or school is asked to transfer the required funds to the Library's materials budget. Questions about the process can be directed to Megan Crouch @ [lib-courseassessment@sfu.ca](mailto:lib-courseassessment@sfu.ca).



## No additional Library resources required

Unless otherwise indicated, these courses require no additional library resources based on a course location of SFU Burnaby. In many cases, if the courses were to be offered at SFU Surrey or Vancouver or as off-campus courses, additional Library costs might be involved. Please contact Megan Crouch @ [lib-courseassessment@sfu.ca](mailto:lib-courseassessment@sfu.ca) for details.

Chronic Pain Research Institute

Graduate Certificate in Curriculum and Instruction: Teaching Greek as an Additional Language

HIV/AIDS Research Centre

Pacific Blue Cross - SFU Computational Health Informatics Research Centre

Pacific Water Research Centre

SFU-JLU Joint Centre for Bioarchaeological Research (JCBR)

SFU-Zhejiang University Joint Centre on Big Data (JCBD)

ARCH 531, 541, 551, 561

BISC 420, 471 (Sensory Biology)

BPK 401, 432, 458 (KIN 458), 482

BUS 656, 719, 723, 724, 725, 726, 729, 875, 876

CMPT 295, 731, 732

COGS 110, 350, 380, 381, 480

EDUC 836

ENGL 208

ENSC 120,180

ENV 400, 452

FNST 141, 206, 241, 341, 441

FPA 105, 142

GERO 850

GSWS 335

HIST 111, 2XX (Japan from 1603 to 1867), 243, 275, 349, 476, [358 / IS 358]

HS 100, 275, 304, 349, 476

HSCI 416, 843

HUM 106, 222, 387

KIN 482 (BPK 482)

MBB 700, 729

MSE 4xx-3: Special Topics: Advanced Dynamics

MTI 810, 820, 830, 840, 850, 860, 870, 880

NUSC 482

PHIL 121, 221, 358

PLCY 830, 831

URB 647



## **Completed Library course assessments**



### **Senate Approved Library Course Assessments**

**Senate document numbers appear in brackets where available, e.g. (S.11-7)**

