EXECUTIVE

S. Martin Taylor
ONC President & CEO

Verena Tunnicliffe
VENUS Director

Kate Moran
NEPTUNE Canada Director

Scott McLean
ONCCEE Director

ADMINISTRATION

Natalia Gartley, Executive
Assistant to the President

Jamie Millin, Assistant Secretary
to the Board of Directors

MAIN OFFICE

Ocean Networks Canada
University of Victoria
Technology Enterprise Facility
#160-2300 McKenzie Avenue
PO BOX 1700 STN CSC
Victoria, BC V8W 2Y2
Canada
Telephone: (+1) 250.472.5400
Facsimile: (+1) 250.472.5370
E-Mail: oncsec@uvic.ca
www.oceannetworks.ca
Ocean Networks Canada (ONC) is a not-for-profit society created in 2007 by the University of Victoria to develop and manage the ONC Observatory, to position Canada as an international leader in the science and technology of ocean observing systems, and to maximize associated economic and societal benefits through commercialization and outreach.

**ONC Vision**
To be a world leading organization supporting ocean discovery and technological innovation.

**ONC Mission**
To enable transformative ocean research for the advancement of science and technology and for the benefit of Canada.
PRESIDENT’S REPORT

Ocean Networks Canada

Over the five years since its inception in 2007, ONC has evolved from an administrative infrastructure for two already successful ocean research platforms – VENUS and NEPTUNE Canada – to an increasingly integrated organization with the goal of advancing Canada’s ocean science and technology through its lead position at the forefront of cabled ocean observing systems. Two major milestones have marked ONC’s development. The first was the success in 2009 in being awarded a federal centre of excellence in commercialization and research (CECR) to establish the ONC Centre for Enterprise and Engagement (ONCCEE). Building on the technology development already in place through the innovation required to build and operate VENUS and NEPTUNE Canada, ONCCEE, in partnership with industry and government, has accelerated national and international initiatives in its focal areas of sensors and instruments, ocean observing technologies, oceans ICT, and education and public engagement. The second milestone was the CFI major science initiatives award in March of this year which secures five years of operating funding ($33M) for the ONC Observatory with partner funding already secured from the BC Government, UVic and other agencies for the first two years. This latter award is signal in several respects: it secures vital longer term operating funding allowing for longer term planning and priority setting in accord with ONC’s five year strategic plan; it recognizes the status of the ONC Observatory as one of Canada’s major science facilities; it follows a blue-ribbon international peer review which validated the Observatory as currently the leading facility of its kind in the world; it reinforced the vital importance of robust governance and management commensurate with the scope and scale of operating an Observatory encompassing the VENUS coastal network and the NEPTUNE Canada coastal to deep ocean regional system; and last, but by no means least, it proved again the crucial importance of great teamwork by the Board and all levels of management to develop and present a very strong application. My sincere thanks to all concerned!

Another aspect of ONC’s emergence is to understand its role as part of an emerging consortium of major ocean research programs in Canada which include the Ocean Tracking Network (an international CFI platform led by Dalhousie), the Canadian Healthy Ocean Network (an NSERC Strategic Research Network based at Memorial) and ArcticNet (an NCE headquartered at Laval). Recognizing the potential of this combination of research assets for Canada, together with related strengths at other universities, has prompted the development of the Consortium of Canadian Ocean Research Universities (CCORU) which to date brings together some 14 Canadian universities to promote the development of ocean research in the national interest. A first, and potentially very significant, CCORU initiative has been to commission the Council of Canadian Academies to complete a scoping study of priority ocean research and policy issues for Canada. The results recently released, and the planned follow-up study, promise to advance the development of an integrated national oceans S&T plan in which the ONC Observatory is positioned to play a major role as a national facility with an expected operating life of at least 25 years.

As with any successful organization, ONC’s strength ultimately resides in the vision, commitment, energy and collegiality of its people. As ONC’s founding President and CEO, it has been a real privilege and pleasure to lead this remarkable team over the past five years, and at the same time to experience the excellent support and guidance of such a wise and experienced Board of Directors. My special thanks to the ONC Executive team of Verena Tunnicliffe, Kate Moran and Scott McLean, and to my two Board chairs, Robert Giroux and Andy Bjerring. It’s also good to be able to welcome Duc Le as ONC’s inaugural chief finance and administration officer.

In closing my final President’s report, my hope is that I have given to ONC at least a fraction of what I have gained through the opportunities, challenges and experiences that the position has afforded. ONC has a great future in prospect with Kate Moran ideally qualified to lead it to even greater success.

Martin Taylor
ONC President & CEO (to June 30, 2012)
# OCEAN NETWORKS CANADA TEAM

## IT & Web
- Kevin Bartlett (V)
- Ben Biffard (NC)
- Tim Boesenkool (NC)
- Yan Chen (NC)
- Bob Crosby (NC)
- Helena Jeeves (NC)
- Reyna Jenkyns (NC)
- Tim Lavallee (NC)
- Murray Leslie NC)
- Tony Lin (NC)
- Johanna MacLeod (V)
- Khai Yih Ong (NC)
- Dwight Owens (NC)
- Susan Perkins (NC)
- Daisy Qi (NC)
- Ronald Schouten (NC)
- Michael Thorne (NC)
- Meghan Tomlin (NC)
- Mitozcelle Valenzuela (NC)

## Communication & Education
- Ellyn Davidson (ONCCEE)
- Leslie Elliott (NC)
- Natasha Ewing (ONCCEE)
- Virginia Keast (ONCCEE)
- Nikolai Korniyuk (V)
- Andy Robertson (NC)
- Rick Searle (ONCCEE)

## Engineering & Enterprise
- Jeff Bosma (ONCCEE)
- Tom Dakin (ONCCEE)
- Claire DeGrasse (ONCCEE)
- John Dorocicz (NC/V)
- Reece Hasanen (NC)
- Denis Hedji (V)
- Paul Macoun (V)
- Jonathon Miller (NC)
- Richard Riddell (NC)
- Chris Sundstrom (V)
- Matthew Uganecz (NC)
- Jonathan Zand (NC)

## Systems
- Martin Hofmann (NC)
- Austin Henry (NC)
- Shane Kerschtiem (NC)
- Nic Scott (NC)

## Administrative Support
- Claudio Alfaro (NC)
- Marja Blase (V)
- Karen Douglas (NC)
- Natalia Gartley (ONG)
- Lindsay Hill (ONCCEE)
- Christina Waddle (NC)
- Marion Will (NC)
- Jason Rush (NC)

## Science & Data Operations
- Dilumie Abeysirignawardena (NC)
- Clio Bonnett (NC)
- Ken Dennman (V)
- Françoise Gervais (NC)
- Martin Heesemann (NC)
- Maia Hoeberechts (NC)
- Marlene Jeffries (V)
- Marjolaine Matabos (NC)
- Steve Mihaly (NC)
- Ajaya Ravindran (NC)
- Martin Scherwath (NC)
- Jaklyn Verynck (V)

## Management
- Richard Dewey (AD. Res., V)
- Duc Le (Chief F&A, ONC)
- Eric Guillemer, (Man., IT, NC)
- Kim Juniper (AD. Sci., NC)
- Ian Kulin (AD. Eng., NO)
- Scott McLean (Dir., ONCCEE)
- Kate Moran (Dir., NC)
- Fern Johnson (AD. F&A, NC)
- Benoit Pirenev (AD. IT, NC)
- Adrian Round (AD. Eng./Ops., V)
- Martin Taylor (Pres., ONC)
- Verena Tunnicliffe (Dir., V)

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NC - NEPTUNE Canada Network
V - VENUS Network
ONC - Ocean Networks Canada Corporate
ONCCEE - ONC Centre for Enterprise & Engagement
The governance and oversight roles of the ONC Board include responsibility for the usual range of financial and organizational matters, but, as with other MSI’s, also for the development of strategies, priorities and policies that will ensure that the Observatory will continue to serve its purpose as an enabler of transformative science of global significance. During last December’s visit of the international Panel appointed by CFI, both aspects of the Board’s governance were given special emphasis.

Regarding the general governance role, the Panel mentioned the need for mechanisms to ensure ONC’s accountability to the broader Canadian and international communities of end users and other stakeholders, specifically noting that consideration might be given to involving other institutions as members of ONC (they are already well represented on the Board). As the Board explores this issue in the coming year, it will naturally be taking into account the fact that UVic is the sole owner of the Observatory and so has a unique fiduciary interest.

Regarding the science planning issue, the Board agrees with the Panel about the importance of ensuring that the Observatory retains its standing even as other infrastructure initiatives develop in Canada and around the world. In addressing this issue, we will be especially reliant on the work of ONC’s science committees and on the International Science Advisory Board established in 2011. On behalf of the Board of ONC, I would like to thank all those volunteers for engaging in this process with us.

This past year saw three members of the Board step down from their positions, including the founding Chair, Robert Giroux, as well as John Fraser and Arthur May, who had also been Directors since 2007. The University, the staff of ONC and the other members of the Board owe these departing Directors a huge vote of thanks for their many contributions over ONC’s first four years.

To fill the vacancies left by these departing members, several new Directors joined the Board during the year: Alan Winter, Jim Roche, Chris Loomis and Louis Fortier, as well as Geoff Munro as a non-voting observer. These appointments give the Board a decidedly pan-Canadian flavour, with strong representation from other ocean-science institutions across the country as well as other leading science initiatives.

It is only fitting to conclude this annual report with a special word of thanks to Martin Taylor. Martin’s contributions to ONC over the past five years have been, in a word, monumental. His vision of ONC being more than the sum of its parts was prescient and his efforts to breathe life into what began as a barebones concept were tireless. On behalf of all of us Martin, thank you for everything that you have done to build the ONC that we know today.

Andrew Bjerring
Chair, ONC Board of Directors
Bottom row (left to right): Fern Johnson, Gayle Gorrill, Jamie Millin, Martin Taylor, Bud Graham, Kate Moran, David Vogt, Andrew Bjerring, Jim Roche and Christopher Loomis.

Top row (left to right): Charles Randell, Ray Protti, Howard Brunt and David Fissel.

**DIRECTORS**

Andrew Bjerring, Board Chair
Howard Brunt, University of Victoria
Martha Crago, Dalhousie University
David Fissel, ASL Environmental Sciences Inc
Louis Fortier, University of Laval
Bud Graham, Board Vice Chair
Gayle Gorrill, University of Victoria
Kate Moran, ONC President & CEO (as of July 1, 2012)
Christopher Loomis, Memorial University of Newfoundland
Ray Protti, Board of Governors, University of Victoria
Charles Randell, President & CEO, C-CORE
Jim Roche, President & CEO, CANARIE/Stratford Managers Corp
Martin Taylor, ONC President & CEO (until June 30, 2012)
Oscar Schofield, Rutger’s University
David Vogt, University of British Columbia
Wendy Watson-Wright, UNESCO - IOC
Alan Winter, President & CEO, Genome British Columbia

**OFFICERS**

Jamie Millin, Assistant Secretary, University of Victoria
Fern Johnson, Treasurer, University of Victoria

**ONC Objectives**

- Enabling transformative science and technology
- Translating knowledge for public policy
- Creating economic and commercial development opportunities
- Promoting public outreach and engagement
- Building international collaborations and partnerships
DIRECTOR’S REPORT

VENUS

What a year for VENUS as we combined matured operations with a new growth spurt! We focussed on consolidating our data delivery to support new research programmes and on extending capability to address the observing needs of a coastal sea under stress. The Saanich Inlet array has operated for six years with great reliability while the Strait of Georgia has delivered data for four years.

Focusing on Goals - The VENUS Coastal Network of ONC continues to refine its service priorities to support research that addresses major issues of the BC ocean. We are guided by the goals outlined in our Phase II construction grant and by the ONC Strategic Plan. Ocean change remains a key theme. Thus, monitoring key indicators (such as temperature and oxygen), providing tools to study system response, and promoting discussion of results are core activities. As integrated observation is critical, we are expanding our footprint to include the water column and the sea surface over a larger area of the Salish Sea.

Working with the Ocean - A major objective of our network operations is to demonstrate consistency with well maintained subsea infrastructure and good data delivery. Through this reliability, our users gain confidence to commit to sustained programmes. After years in the water, corrosion is a major factor affecting sensors, housings and connectors. Thus, we have addressed these risks through several approaches to assessment and re-design such as use of novel materials. The VENUS subsea design and control systems are now prototypes for ocean observing systems elsewhere in the world such as the Mediterranean; our industry partner, OceanWorks uses VENUS to promote its products such as the keystone node.

A variety of opportunities arose to give us access to maintain and upgrade the subsea infrastructure. Two brief missions using the R/V Thompson were appended to the NEPTUNE Canada cruises in the summer. Two additional cruises were executed in collaboration with research programmes from Fisheries & Oceans Canada and Natural Resources Canada. We worked with the Canadian Scientific Submersible Facility who has provided subsea vehicle services since the beginning; we also explored the capabilities of a smaller system with a Vancouver company to build our ROV supplier base.

Working with the Data - Reliability is a key focus especially as data become more complex and user expectations increase. We upgraded monitoring and alert systems to detect problems from seafloor to campus and are working on some automated re-sets for subsea components. If users have troubles accessing data through the VENUS Download, alerts come to staff who give priority to data service. For example, students in university classes needed help in their many last-minute requests; we see the great interest in ‘real-time’ data to educators. We saw a record 28,800 archive requests this year and 47,000 views of data graphics on the website.

As users discover the power of high-resolution, long-term data, they are defining new requirements for products to assist interpretation of complex information. We have new graphical and pictorial representations to deliver overviews of ocean behaviour to users and educators. In addition, we are expanding the formats available for downloaded data from new and old sensors. An important milestone this year was ingestion of a decade of data from DFO and UBC acquired from ferry-based sensors. As we are now expanding this instrumentation through VENUS, the historical data take on considerable significance.

Beyond the Cable - With a new grant from CFI/BCKDF in 2010, we began the expansion of VENUS to meet the needs of a growing user base. Major advances in Phase II developments included completion of upgrades of the basic infrastructure to yield greater reliability and more instrument capacity. All node pods were lifted and refurbished. A major accomplishment was commissioning of the first surface radar (CODAR) station on Canada’s Pacific coast. With a second station in July 2012, we will supply surface conditions for much of the southern Strait of Georgia. We also initiated the first of three instrument packages on ferries that cross the Strait to assess effects of the Fraser River plume and plankton blooms.

Working with the Researchers - We work with researchers in many ways, including preparing experiments and providing access to seafloor instruments. For example, forensic experiments with a newly designed camera system captured impressive footage of shark activity. We worked closely with Natural Resources Canada to measure seabed movements and a cruise with Fisheries and Oceans science focused on productivity in the Strait. This joint work augments VENUS understanding of investigator research goals and user appreciation of the subsea operations necessary to maintain the array. Other major research projects included camera deployments for biorhythm study, calibration for hydrophones and acoustic profilers, whale identifications, deep water renewal processes, and salmon detection.

Verena Tunnicliffe
VENUS Director
Top image: VENUS hydrophone arrays allow researchers to study the communication behaviour of orca. We often hear cetaceans and provide up to date spectrograms and audio files every five minutes on our website. For 15 minutes on January 16, 2012, the VENUS hydrophone array at our Strait of Georgia East site (170m depth) picked up a diversity of whale vocalizations identified as Southern Resident Killer Whales J pod. See http://venus.uvic.ca/category/highlight-galleries/hydrophone-highlights/whale-sounds/page/2/

Bottom images (left to right): Saanich Inlet Node Pod Upgrade; Oregon State University Scientists Deploy a New Sensor Suite on VENUS; VENUS Ferry System installed on the MV Queen of Alberni, May 2012.
This year marked the first automated, intensive use of NC seafloor cameras for ecological studies, employing the Tempo-mini camera at the Endeavour site, and the Barkley Canyon cameras. This involved collaboration among French, Spanish, Italian and Canadian researchers, studying organism responses to seafloor habitat variability. NEPTUNE initiated new technical workshops and the first was held at the University of British Columbia (UBC) on 8 March 2012. This full day workshop enabled 24 UBC faculty, post-doc and graduate student participants to learn how to access NEPTUNE data and use online data visualization tools. More of these workshops are planned for 2013, with the aim of facilitating interdisciplinary research at specific locations on the undersea network.

The Keck Foundation awarded $1M to Woods Hole Oceanographic Institution for a new tiltmeter to be connected to NEPTUNE capable of measuring very subtle changes in plate motion at ODP 889. NEPTUNE currently maintains a seismometer and bottom pressure recorder at ODP 889, but these instruments do not measure the small-scale slips that have been observed to presage other megathrust earthquakes, like the recent Japanese earthquake.

In late November, the C/S Global Sentinel successfully repaired a faulty connection that caused a complete network shutdown on September 20. Within 24 hours of the September shutdown, the problem was traced to the Folger node site and power and data were rerouted to allow the rest of the network to come back online.

A new facility and test tank at the Marine Technology Centre was completed this summer. In addition to a new storage building, a deep tank was installed and equipped with a chiller to keep salt water cool and a permanent crane to test instrument platforms and nodes.

An electrical fault at Folger platform occurred in spring. To eliminate further damage, the platform remained offline until the electrical fault was repaired at the end of August.

In May, the C/S Wave Venture completed repairs on the Barkley main extension cable, which had been hit by a trawl in February 2011. The repair was preparation for the summer maintenance cruise, which brought the site back on-line.

This first operations and maintenance cruise dubbed Wiring the Abyss 2012, was completed onboard the R/V Thompson. The dedicated team completed work at all five of the node areas and documented the activities live through NEPTUNE’s new “Wiring the Abyss” 2012 website.

With increased instrumentation, data flow increased exponentially. Over 570 sensors are producing data while another 1,300 are monitoring the infrastructure. The archive currently has 51.4TB, including 26.4TB collected in the past year alone, attracting 14,400 registered users, with 663 undertaking multiple data downloads. The DMAS development team improved interactive services in Oceans 2.0, such as DigitalFishers, supported by CANARIE funding. New data products for a larger variety of instruments were also prepared. The Brentwood College School mini-observatory was also inaugurated.

Staffing changes at NEPTUNE included the interim appointments of two new associate directors following the departure of Dr. Mairi Best in August 2011 and Dr. Lucie Pautet in January 2012. Dr. Kim Juniper re-joined NEPTUNE as the Associate Director, Science in September 2011 and to bring further outside scientific expertise to the management and science planning of the network, a “visiting scientist” position was created. The initial six month term was filled by Dr. John Dower (University of Victoria). Mr. Ian Kulin was appointed interim Associate Director, Engineering in January 2012 and, in addition to preparing for two maintenance cruises in 2012, has been working to build an internal engineering team to provide ongoing engineering planning and support for the highly specialized NEPTUNE underwater scientific instrumentation. This included the addition of an Installation Support Specialist, Marine Equipment Technician and Operations Support Manager.

NEPTUNE’s outreach and communications efforts were fruitful. The advisory groups, NC Science Planning Committee (SPC) and Users Committee (UC) met regularly. The SPC began to prepare a five-year science plan while the UC provided input on cruise priorities and policies related to proposals, workshops, and support. NEPTUNE began releasing a new monthly html newsletter that has grown the readership.

NEPTUNE joined the ONC team at several high profile conferences including the American Geophysical Union’s Annual Fall Meeting, the American Association for the Advancement of Science’s Annual Conference, and the Ocean Sciences Meeting. A new ebook, the "NEPTUNE Canada Marine Life Field Guide" is now available on the Apple iBook store. Public outreach included a TEDx talk, articles and op-eds in the Globe and Mail, Maclean’s magazine, the History Channel, CBC radio and television, the Vancouver Sun, and the Times Colonist.

Kate Moran
NEPTUNE Canada
Building success on strong partnerships

We have the unique position of being Canada’s Centre of Excellence in Ocean Observing Systems, with a mission to strengthen Canada’s international leadership role in ocean observing science and technology. Leveraging the assets of Ocean Networks Canada, our mandate is to focus on commercialization, technology transfer and outreach that will benefit Canada’s industry and citizens.

In our third year of operation, with a full time team of eight staff, we’ve been building momentum and success based on solid foundations that support our four main target sectors:

- Ocean Sensor Technologies
- Ocean Observing System Technologies
- Information and Communication Technologies
- Education and Public Engagement

Funded by the Centres of Excellence for Commercialization and Research (CECR) program, ONCCEE is dedicated to leveraging the world’s largest and most advanced ocean observing systems, VENUS and NEPTUNE Canada. Through strategic partnerships with industry and academia, ONCCEE has helped grow international recognition of the ONC Observatory and supported Canadian industry by providing communications consultation, technology demonstrations, and ocean observing expertise. This past year, we presented or exhibited at over 20 major international conferences and workshops. Our unique education mandate has been working to attract students to careers in ocean science and technology, while informing the public on critical ocean issues through the lens of the Ocean Networks Canada Observatory.

Over the past year, ONCCEE led the development of an extensive Arctic Feasibility Study for Ocean Observatories, and is consequently helping to establish cabled observing systems and monitoring programs in both the Arctic and Atlantic Canada. Another major accomplishment has been laying the groundwork for an exciting partnership in renewable ocean energy taking place in Nova Scotia’s Bay of Fundy with the FORCE program.

Since early 2011, the Centre of Excellence has played a major role in establishing Canada’s first national ocean technology industry association—the Ocean Technology Alliance Canada (OTAC)—linking regional industry associations to create a national network of 192 ocean technology companies and organizations.

ONCCEE continues to work closely with the Department of Foreign Affairs and International Trade (DFAIT) as a member of the Ocean Technology Advisory Board and has been instrumental in organizing a joint Canada-Brazil ocean technology workshop that may well lay the foundation for future collaborations in ocean observing systems. Additional partnership projects are under development in the EU and Asia.

Identifying technologies ready for commercialization and helping companies expand into new markets are also cornerstones of ONCCEE’s growing success in promoting Canadian industry. For companies seeking to launch novel new technologies in areas of critical market need—such as ocean acidification and ambient acoustic noise—the sensors team provide a unique facility for technology demonstrations that includes the opportunity to test instruments on a world-class sea floor observatory. This past year, ONCCEE created the world’s first digital low frequency hydrophone calibration system to demonstrate the leadership position of Canadian technologies.

Identifying a large potential market across North America, ONCCEE has also been working to develop a commercial version of a mini-observatory for scholastic markets, based on the DMAS prototype installed in Brentwood College with CANARIE support in early 2012. Another key project launched within the ICT portfolio involves IBM Canada and other partners working on a near-field tsunami test bed system combining sensor and IT technologies to provide advance warning to coastal populations at risk.

Launched in late 2011, our new website continues to evolve, as the education team explores and expands partnerships in public education with institutions across Canada. Shaw Communications generously produced and distributed a public service announcement to increase awareness of Ocean Networks Canada across the western provinces, and a novel television and web series highlighting Canada’s ocean research and technology is under development.

Integrating and encouraging undergraduate and graduate students is vital to ONCCEE projects. Students working with IBM Canada won the People’s Choice Award at the CASCON conference in Toronto for their work in developing novel ICT technologies for processing Observatory video. The Education team now sponsors an active Ocean Students Society at the University of Victoria and is working to establish a national ocean student network.

Equally important to ONCCEE is the development of programs to attract and recruit students to ocean science and technology careers, such as the first annual Ocean Science Symposium that created the opportunity for University of Victoria students to mentor local high school students.

As we focus on 2012-2013, ONCCEE is looking forward to working closely with our growing community of industry, government and educational partners to develop Canada’s leadership role in ocean science and technology.

Scott McLean
ONCCEE Director
AUDITOR’S REPORT

BALANCE SHEET: Year ended March 31, 2012, with comparative information for 2011

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<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
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<tr>
<td><strong>Current assets</strong></td>
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<td>Accounts receivable</td>
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<td>Due from the University of Victoria</td>
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<td>4,693,082</td>
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<td><strong>Capital assets (note 2)</strong></td>
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<td>58,752</td>
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<td></td>
<td>$4,782,168</td>
<td>$5,947,409</td>
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<tr>
<td><strong>Liabilities and Net Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current liabilities:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable and accrued liabilities</td>
<td>$95,355</td>
<td>$121,253</td>
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<tr>
<td>Deferred membership fees</td>
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<td>12,018</td>
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<tr>
<td></td>
<td>95,355</td>
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<tr>
<td><strong>Deferred contributions (note 3)</strong></td>
<td>4,575,757</td>
<td>5,782,598</td>
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<tr>
<td><strong>Unamortized deferred capital contributions (note 4)</strong></td>
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<td>18,095</td>
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<tr>
<td><strong>Net assets</strong></td>
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<td>Invested in capital assets</td>
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<td></td>
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<td></td>
<td>$4,782,168</td>
<td>$5,947,409</td>
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</table>

INCOME STATEMENT: March 31, 2012, with comparative information for 2011

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue:</strong></td>
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</tr>
<tr>
<td>Natural Sciences and Engineering Research Council</td>
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<td>$544,096</td>
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<td>Other federal</td>
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<td>Indian Affairs and Northern Development</td>
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<td>103,418</td>
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<tr>
<td>Grant revenue from the University of Victoria</td>
<td>36,430</td>
<td>127,581</td>
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<td>Miscellaneous</td>
<td>17,244</td>
<td>13,762</td>
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<td>Amortization of deferred capital contributions</td>
<td>10,520</td>
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<td></td>
<td>1,276,378</td>
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<td><strong>Expenses:</strong></td>
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<tr>
<td>Salaries and benefits</td>
<td>825,000</td>
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<td>Travel</td>
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<td>Operational expenses</td>
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<td>Consulting fees</td>
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<td>160,016</td>
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<td>Amortization of capital assets</td>
<td>28,582</td>
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<td>Supplies</td>
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<td>Renovations</td>
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<td>Professional fees</td>
<td>12,588</td>
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<td>Hospitality</td>
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<td>1,244,807</td>
<td>956,443</td>
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<tr>
<td><strong>Excess (deficiency) of revenue over expenses</strong></td>
<td>$31,571</td>
<td>$(9,725)</td>
</tr>
</tbody>
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Note: Full audited statements with notes are available at www.oceannetworks.ca
FINANCIAL HIGHLIGHTS

The chart below represents Ocean Networks Canada Society’s total expenditures for the past year. These expenses include ONC corporate, the two underwater networks, NEPTUNE Canada and VENUS, and the ONC Centre for Enterprise and Engagement.

TOTAL EXPENDITURES BY DIVISION FOR THE YEAR ENDING MARCH 31, 2012

These expenses were funded by the Canada Foundation for Innovation, Natural Sciences and Engineering Research Council, Western Economic Diversification Canada, CANARIE, the University of Victoria and other scientific community contributors.

FUNDING PARTNERS FOR THE YEAR ENDING MARCH 31, 2012
RECENT PUBLICATIONS

Refereed Journal Publications

2011


2012


Theses


Other Published Documents


Allan, J., Martin, D., Newton, J. 2012. Using social networking, mobile apps to distribute tsunami hazard information platforms drawing on IOOS, regional coastal system data provide local stakeholders with water levels, inundation warnings in tsunamis. SeaTechnology, Vol. 54 (4).


Conference Presentations


Matabos, M., Dean, C, Juniper, K.S., Tunnicliffe, V. 2011. A year of benthic community responses to fluctuating oxygen levels assessed through online observations. 45th CMOS Congress, Victoria, BC.

Juniper K.S., Dean, C., Robert, K., Matabos, M. 2011. Seasonal dynamics of microbial mat growth at the VENUS observatory in Saanich Inlet, British Columbia. 45th CMOS Congress, Victoria, BC.


Cullen, J., Whitney, F., Blackmore, S. 2011. Variation in the concentration of redox sensitive dissolved metals in response to a bottom water renewal event in Saanich Inlet, BC. 45th CMOS Congress, Victoria, BC.

Dewey, R., Macoun, P., Bedard, J. 2011. Acoustic Doppler Velocimetry from the VENUS coastal network. 45th CMOS Congress, Victoria, BC.

Zedel, L. 2011. One year of detecting fish movements with a Doppler profiler on the VENUS Ocean Observatory. 45th CMOS Congress, Victoria, BC.


Ross, T., Smith, C. 2011. Co-incident in-situ observations of turbulence and zooplankton with a new biophysical profiler. 45th CMOS Congress, Victoria, BC.


OCEAN NETWORKS CANADA
Exploration • Innovation • Action
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A University of Victoria Initiative

ONC PARTNERS

Funding
Canada Foundation for Innovation
Government of British Columbia
Natural Sciences & Engineering Research Council
Centres of Excellence for Commercialization & Research
Western Economic Diversification Canada
University of Victoria
CANARIE , Inc.

Government
Aboriginal Affairs & Northern Development
Fisheries & Oceans Canada
Foreign Affairs and International Trade
Natural Resources Canada
Environment Canada
Parks Canada
National Research Council of Canada
Department of National Defense
Industry Canada
BC Ministry of Jobs, Tourism & Skills Training
BC Ministry of Advanced Education, Innovation and Technology
BC Ministry of Environment
BC Ministry of Energy, Mines & Natural Gas
BC Ministry of Agriculture

Education & Public Engagement
Vancouver Aquarium
Shaw Discovery Centre
Brentwood College
Port Alberni Tsunami Centre
MITACS
Middle & High Schools
National Museums

Academia
Consortium for Ocean Leadership
Monterey Bay Aquarium Research Institute
Northwest Association of Networked Ocean Observing Systems
Bamfield Marine Sciences Centre
University of Alberta
University of British Columbia
Simon Fraser University
University of Victoria
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Industry
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