

TOWARDS A PRIBILOF ISLANDS RESEARCH CENTER:
BACKGROUND INFORMATION AND FEASIBILITY ASSESSMENT

For Presentation At
The Pribilof Islands Collaborative Meeting
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DRAFT
Report Prepared By:

Bruce W. Robson¹ & Stephen J. Insley²

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¹ Community and Ecology Resources, 5415 NE 54th Street Seattle, WA 98105
Email: mandybruce@co-eco.com

² Brentwood Bay Biological, 1070 Llanfair Cr. Brentwood Bay BC V8M 1G2 Canada
Email: sinsley03@yahoo.com

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Draft

I. Objective of this assessment

During the November 2006 meeting of the Pribilof Islands Collaborative (PIC), a research center working group was convened for which a set of guiding principles were identified. First, a Pribilof Islands Research Center (PIRC) should complement and enhance the existing efforts and strengths of both island communities and augment their involvement in Bering Sea research through increased contact and collaboration with the regional scientific community. Second, it should provide educational and socioeconomic benefits to the residents of the Pribilof Islands while contributing to a global understanding of central Bering Sea resources and issues. Third, a center should provide infrastructure for scientific researchers to work in a coordinated fashion with high quality technical support. And fourth, a center should contribute to and enhance, both directly and indirectly, conservation of the central Bering Sea ecosystem, and in so doing should benefit all those with a stake in the region (i.e. the stakeholders). The goal of this report has been to collect background information including a range of potential models as an initial evaluation of the feasibility of a PIRC and to present this information for consideration to interested individuals and organizations. Our objectives are to identify the choices available, the corresponding decisions that need to be made, and a process for moving forward towards the endpoint of a research center.

Our methods are primarily threefold: discussions with individual stakeholders from the local communities, industry, environmental groups and scientific community; review of existing Research Centers focusing on but not limited to Alaska; and group discussions with stakeholders and the research community. Through this review and discussion we hope to narrow down the focus of what is wanted, what is achievable, and to answer the following key questions. What purpose would a research center serve? What need would a center fill? And finally, what would a center have to offer?

The current document is a working draft for circulation prior to our group discussion scheduled as part of the January 19, 2008 Pribilof Islands Collaborative meeting in Anchorage, Alaska. As such, any and all comments regarding the general topic as well as this document are highly encouraged.

We are grateful for everyone's input and look we look forward to a constructive discussion.

II. Background Information

1. The Place

The Pribilof Islands archipelago is located southwest of Bristol Bay, approximately 300 miles west of mainland Alaska and 185 miles north of the Aleutian Islands chain. The Pribilof region supports high concentrations of marine wildlife, including seabirds, fur seals and sea lions, fish and invertebrates. The high biodiversity and biological productivity is largely due to the islands proximity to a very productive continental shelf and shelf-break marine ecosystem. Although they are only 40 miles apart, St. Paul and St. George each offer unique wildlife habitat. St. Paul Island is characterized by extensive beach habitat occupied by the largest northern fur seal breeding rookeries in the archipelago. In contrast, the vast cliffs of George provide the Pribilofs

most extensive seabird cliff nesting habitat. During the summer breeding season the islands support a diverse assemblage of species with an estimated three million seabirds, one of the largest colonies in the northern hemisphere, over half a million northern fur seals (*Callorhinus ursinus*) and hundreds of Steller sea lions (*Eumetopias jubatus*) and harbor seals. The Pribilofs are the largest northern fur seal rookery in the world, with over 50% of the world population breeding on its shores. Walrus Island, one of the smaller Pribilof Islands, is the northernmost Steller sea lion rookery in the Bering Sea.

The islands of St. George and St. Paul are the only inhabited islands in the Pribilof group, home to the world's largest community of Aleut people. Brought to the islands in the late 1700s to harvest seals for Russian fur hunters, the Aleuts have made their home there for more than 200 years. The communities represent a wealth of local and traditional knowledge of the Islands and surrounding marine ecosystem. Following the passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971 the Aleut people of the Pribilofs, through the Tanadgusix Corporation (TDX) on St. Paul and Tanaq Corporation on St. George, are the primary property owners. Federal Agencies also own and manage significant areas of land. The Aleut people operate much of the municipal infrastructure through local city governments and have been charged with managing local resources through the Aleut Community of St. Paul Island Tribal Government and the Traditional Council of St. George Island. The tribal governments have also entered into a co-management agreement with the National Marine Fisheries Service for the management of northern fur seals and Steller sea lions. Local fisheries associations and Community Development Quota (CDQ) groups are actively involved in the management of local fisheries.

The combination of cultural history and biological diversity on the Pribilof Islands affords a unique setting for a world class research center. The PIRC is well positioned to contribute valuable scientific and traditional knowledge that can help chart an informed course regarding the future of the Bering Sea.

2. History of Research on Pribilof Islands

The Pribilof Islands have been a center of interest and research in the North Pacific Ocean spanning three centuries. Since approximately the 1970s, ongoing resource surveys and episodic large scale research programs have provided a wealth of oceanographic, fisheries and wildlife data about the Pribilof Islands and surrounding marine ecosystem. While the short summary presented below is by no means exhaustive, it is intended to briefly touch upon some of the relevant research programs that have collected information on Pribilof Islands wildlife and the southeast Bering Sea ecosystem.

Early Research:

- The work of Father Ivan Veniaminov and Henry Elliott during the 19th century provided early baseline information on the natural history of the Pribilof Islands (Figure 1).
- Research by David Starr Jordan provided some of the earliest information on the pelagic diet and habits of the northern fur seal.
- The Harriman Cruise of 1899 provided an early example of the widespread interest in the Pribilof Islands.

Ongoing Agency Research:

- Early management research conducted under the North Pacific Fur Seal Treaty of 1911 provided one of the longest time-series of population data for any large mammal. This legacy of research is carried on today by the National Marine Mammal Laboratory (NMML) including the following fur seal research:
 - Bull count data from 1901-2007,
 - Pup production data from 1912-2006,
 - Fur seal life history and diet data from the scientific harvests and tagging, studies during the 1960s through the 1990s,
 - Fur seal telemetry and diet studies from the 1970s to the present.

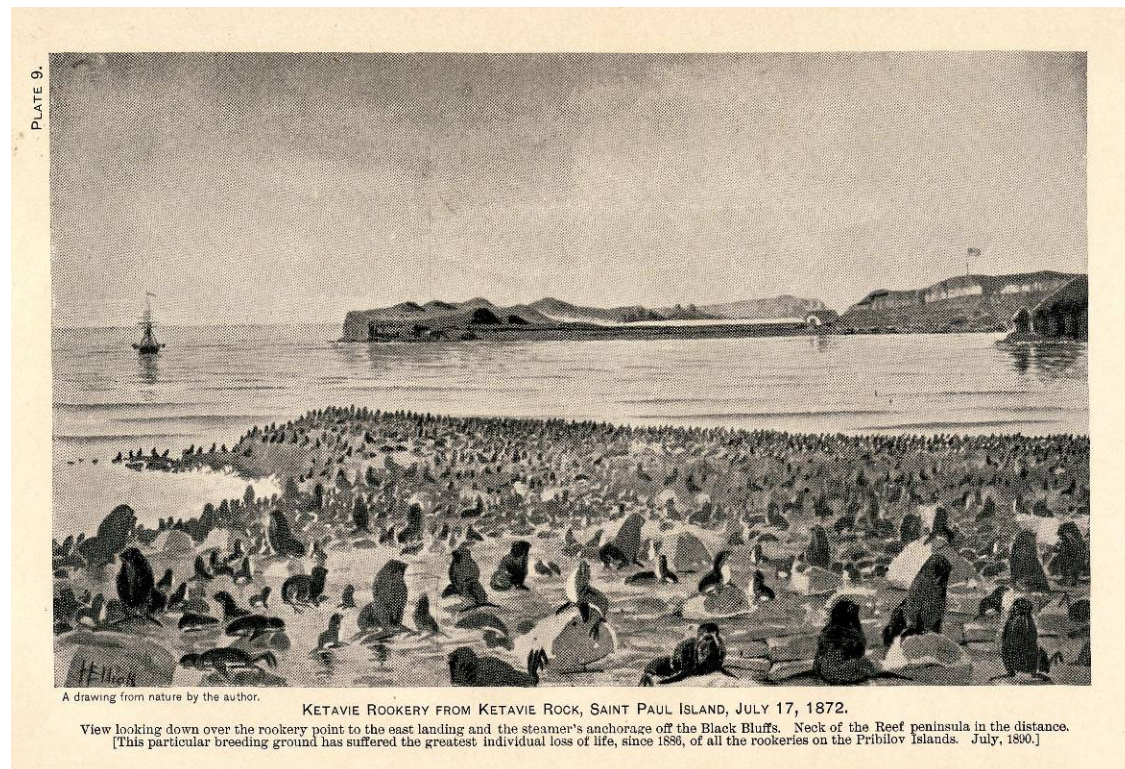


Figure 1. A drawing by Henry Elliott in 1872 illustrates the wealth of information on the natural and cultural history of the Pribilof Islands.

- **USFWS/AMNWR** has conducted seabird population and productivity studies continuously since the mid-1980s with earlier intermittent assessment data from earlier studies.
- The National Marine Fisheries Service (**NMFS**) has conducted groundfish assessment surveys on the eastern Bering Sea shelf and slope since the 1970s.
- The Pacific Marine Environmental Laboratory (**PMEL**) maintains oceanographic moorings and releases satellite tracked drifters in the Pribilof region.
- The **NOAA Weather Service** maintains a long-term weather station on St. Paul Island.

Community-based Research Programs

- The **Tribal Ecosystem Conservation Offices** on St. Paul and St. George conduct a range of wildlife observations and environmental monitoring under the Island Sentinel Program. Grant-based projects also target specific research questions including:
 - Fur seal entanglement monitoring,
 - Seabird monitoring,
 - Killer whale and sea lion predation on fur seals,
 - Steller sea lion and harbor seal population assessment,
 - Paleo-biology and archeology,
 - Reindeer management and range erosion,
 - Ocean temperature monitoring in collaboration with PMEL (Figure 2).
- **CBSFA** and **TDX** have conducted fisheries research on halibut bycatch.
- The **IPHC** conducts halibut stock assessment surveys in the Pribilof region and stations a field technician on St. Paul Island during the summer halibut fishery.



Figure 2. A local researcher prepares a temperature/salinity sensor for deployment in St. Paul harbor for the Pribilof Islands Community-based Ocean Monitoring Program (PICBOMP).

Large Scale Fisheries, Oceanography and Ecosystem Research:

- **OCSEAP** - The Outer Continental Shelf Environmental Assessment Program (1975-1984) was conducted by NOAA at the request of the BLM. The purpose of the OCSEAP was to establish an environmental baseline for detecting and assessing development-related impacts and to provide a basis for predicting the primary impact of petroleum development on the Alaskan marine environment. The many facets of OCSEAP included the studies of ice movements and deformation, mammals, birds, fish, benthos, plankton, microbiology, chemistry, oceanography, meteorology, and geology.
- **FOCI** - The Fisheries Oceanography Coordinated Investigations Program (1991-1996) was a joint research program between the Alaska Fisheries Science Center (AFSC) and the (PMEL). The program was established by NOAA in 1984 to study relationships between the marine environment and the survival of commercially valuable fish. The Bering Sea FOCI program was established in 1991 and ended in 1996.
- **SEBSCC** – The Southeast Bering Sea Carrying Capacity Program (1997-2001) was a NOAA Coastal Ocean Program Regional Ecosystem Study administered by the

University of Alaska, the AFSC, and the PMEL. SEBSCC's goal was to increase understanding of the southeastern Bering Sea ecosystem, to document the role of juvenile walleye pollock and factors that affect their survival, and to develop and test annual indices of pre-recruit (age-1) pollock abundance.

- **BASIS** - The Bering-Aleutian Salmon International Survey (2002-2006). The AFSC Ocean Carrying Capacity (OCC) Program is responsible for BASIS research in U.S. waters. Researchers with the OCC Program conducted shelf-wide surveys during fall 2002 through 2006. The focus of BASIS research was on salmon; however, the broad spatial coverage of oceanographic and biological data collected during late summer and early fall provided insight into how the pelagic ecosystem on the eastern Bering Sea shelf responded to changes in spring productivity.
- **BEST and BSIERP** – Through the Bering Sea Ecosystem Study and the Bering Sea Integrated Ecosystem Research Program, the National Science Foundation (NSF) and the North Pacific Research Board (NPRB) are entering into a partnership to support a comprehensive vertically integrated investigation of the Bering Sea ecosystem (2007-2012). BEST focuses on understanding the impacts of changing sea-ice conditions and on the chemical, physical, and biological characteristics of the ecosystem and human resource use activities. BSIERP focuses on understanding key processes regulating the production, distribution and abundance of marine organisms in the Bering Sea, especially marine mammals, seabirds, and fish, and how they may respond to natural and human-induced influences, particularly those related to climate change and its economic and sociological impacts.

3. The People

Local and regional user groups

In general terms, the potential users of the PIRC can be categorized in three main groups:

- **Researchers** – agency, academic, local and independent researchers with an interest in studying some component of the Pribilof environment and culture.
- **Cultural users** – people (local and outside) with an interest in Aleut culture and the history of the Pribilof Islands.
- **Community members and general public** – local and outside people with an interest in the Pribilofs and research conducted through the PIRC.

Stakeholder participants

The current membership of the PIC and the management agencies participating in a scientific advisory capacity provides a good representation of the major regional stakeholders that have an interest in the development of the PRC:

- **Island entities** (City Governments, Tribal Governments and Native Corporations)
- **Local fishermen** (CDQ groups and fishermen's associations).
- **Fishing industry** (Fishery Gear types and processors)
- **Environmental organizations** (WWF, TNC, Audubon, Oceana, Greenpeace)
- **Management agencies** and government research institutions (NPFMC, NMFS, USFWS, IPHC, ADF&G and others).
- **Academic Institutions** and Non-government research organizations.

III. Pros and Cons: Would a Center benefit the stakeholders?

The potential benefits and possible costs to different stakeholders will depend on the specifics of the type of research center being pursued. However, it is important to have an ongoing discussion of some of the general benefits and possible costs from the outset. Here we attempt to present pros and cons by stakeholder group even though some clearly cut across groups.

1. Potential Benefits:

a. The local communities

- **Employment** – It is likely that a research center(s) will create some seasonal and full-time jobs in the community. Centers assessed in detail in this study employed anywhere from 2-3 to over 100 people at different educational levels.
- **Education** - The presence of a research center will provide increased educational opportunities for local students and provide consistent post-secondary educational and internship opportunities close to home. The majority of centers surveyed had internship and educational outreach programs.
- **Ecosystems** - A well focused local research program integrated with large-scale regional studies is likely to provide a better understanding of both the local and broader ecosystem and thus enhance conservation efforts.
- **Collaboration** - There is potential for supporting increased collaborative research on alternative energy and local-scale resource enhancement technology (e.g. crab hatcheries).

b. The research communities

- **Facilities & Logistics** - Reliable research and support facilities will allow for more research planning and organization as well as less pressure on the existing facilities to house non-government researchers.
- **Efficiency** – A central locally-based research organization will facilitate planning and control of research efforts and thus help to minimize redundancies and harmful effects on local species and habitat.
- **Collaboration** – A better opportunity to bring researchers together and encourage increased collaboration amongst researchers, with the local community and foster more cross-disciplinary studies.

c. The commercial communities

- **Applied Science** – Increased opportunities for local involvement in management science through increased locally focused research.
- **Enhancement** - Possibility for enhancement/hatchery activities of depressed local stocks of commercially valuable species.

2. Potential Negative Aspects:

a. The local communities

- **Pressure** - Increased numbers of people and research may increase the pressure on the local environment and infrastructure.

- **Competition** – possibility of competition between PIRC activities and those currently taking place in the ECO offices.
- b. The research communities
- **Competition** - Increased research activity may put more pressure on research sites and negatively affect local species and their habitat.
 - **Regulation** – Research permits may become more difficult to obtain due to increase in research intensity.
- c. The commercial communities
- **Focus** - Center activities become more focused on advocacy than objective research.

IV. Models: What can be learned from existing Centers?

Research Centers worldwide are exceptionally diverse in their structure and functional details. As a starting point for this information gathering process, we investigated the details of as many of these centers as possible through web-based searches, list-server based calls for information, and formal and informal interviews. Key aspects of the results of this search are summarized below. We have also appended categorized short and long-lists of relevant centers and their URLs as well as other useful internet links (see Appendix 1). The lists are intended to make the process of gathering more extensive background information on research centers easier for all interested parties in order to supplement the discussion that this report will precede. As further useful background information for a discussion, we have appended additional detail of our short-list of centers, largely gathered from the respective URLs: (1) financial details (see Appendix 2); and (2) administrative and governance details (see Appendix 3). Again, our goal is to facilitate informed discussion on the topic.

1. Summary of information from Center search

a. Owner/Founder:

- **University** – Most universities or academic institutions are associated with research centers in the form of marine or field research laboratories/stations that they operate either alone or with a consortium of other universities.
- **Multi-agency** – A number of research centers are consortiums of several government agencies or combinations of universities, government agencies and industry.
- **Private/NGO not-for-profits** – A large number of small centers with little-to-no infrastructure, small budgets and often a specific focus, fit this category.
- **Private for-profits** – A number of for-profit centers exist, often associated with individual consulting practices.

b. Focus:

- **Facilitates research** – The most basic form of center acts to facilitate research through provisioning such things as transportation and lodging, assistance with permits, and research assistants.

- **Conducts research** – Often centers are formed with the goal of conducting a specific task which can be broad or narrow in scope. This can occur with research staff or with external researchers.
- **Supports research** – Most large research centers, particularly private and multi-agency centers, fund at least some of their own projects. Project funding at university centers tends to be by external grants to individual researchers. Even smaller centers, however, often support research at some level such as through internships.
- **Conducts education / outreach / cultural activities** – University centers tend to be combinations of education (e.g. university courses) and research, and conduct outreach to a lesser degree. Multi-agency centers vary widely. Those that are primarily government, tend to be research focused with limited outreach and little education. Broader consortiums, however, exist.
- **Combination of above** – Many examples exist that cut across these broad categories and combine the above different focuses (e.g. Alaska SeaLife Center).

c. Patterns of infrastructure:

- **Med-Large infrastructure** – There is a clear division of centers by infrastructure; conducting certain types of research (e.g. lab-based), in-house research with staff, and formal education demands a certain degree of infrastructure.
- **Minimal or no infrastructure** – A surprising number of non-profits exist with minimal or no infrastructure; basic projects where lab or other facilities are unnecessary often demand little or no infrastructure. Similarly, facilitating research as a function (e.g. St. George Island Inst.), demands minimal infrastructure.

d. Forms of Funding Sources Available:

- **Large startup/operational funding** – A large initial pulse of funding (e.g. oil-spill money), often matched by government funds, allows the majority of growth, usually the physical infrastructure, to happen initially rather than gradually over a long period of time. Problems include sustaining the level of initial commitment for maintenance costs.
- **Part of a larger focus** – Large-scale research plans or data gathering efforts are sometimes put forward by agencies such as the National Science Foundation which involve multiple partners (e.g. environmental observatories) and can form a significant part of the funding.
- **Foundation/Government support** – Examples include congressional mandates and matching funds; more often to cover or assist with startup rather than maintenance costs.
- **Usage fees** – Private centers will often recover some overhead costs through usage fees for lab space and equipment use (e.g. see Huntsman Marine Science Center user fee schedule in Appendix 2).
- **Indirect charges** – Most centers recover some costs by charging indirect fees on external grants. Rates vary widely by institution.
- **Tourism** – A variety of centers recover some costs through commercial aspects such as a gift shop or museum. For a small center, the resulting funds can represent

a significant portion of the annual budget (e.g. gift shop at the Grand Manan Whale and Seabird Research Station; specific amounts provided in Appendix 2).

- **Volunteerism** – A wide variety of centers significantly decrease their operating costs by using volunteer staff. This is particularly widespread in centers with some aspect of tourism or outreach component located in or near areas with reasonable populations of people.

e. Administration/Governance:

- **Founding body** – The physical center is often preceded by a formal group such as a non-profit 501-c organization whose primary role may be to raise funds for the center. Examples include the Seward Association for the Advancement of Marine Science and the Charles Darwin Foundation which preceded the Alaska SeaLife Center and the Charles Darwin Research Station, respectively.
- **Executive Board/ Board of Directors** – The executive board headed by the executive director generally governs the center. All significant stakeholders are represented and ideally play an active role in the center.
- **Advisory Board** - Advisory boards may change with the state of the center and not all centers have them. For example, during the formation phase its membership may be primarily tasked with shaping the center, whereas once running it may be specific to the operations (e.g. science) being undertaken.
- **Committees** – The existence and number of specific committees is largely a function of the size the organization. The most immediate focus for a committee is likely to be fundraising.

2. Key details from specific examples:

Basic financial information on seven relevant research center examples that range in size is summarized below in Table 1. The goal of this summary is to provide specific details of the finances needed to make a center operate. That is, to define the financial boundaries. By doing so we can more practically define what can be realistically accomplished on the Pribilof Islands.

Table 1. Budget and size indices for a range of research centers. The information below represents approximate amounts gathered from annual reports, websites and conversations. It is provided here for the purposes of basic comparison only.

Center	Size	Start up	Annual	Employees	Source
CDRS	L	Land and Bldgs	~4 m	>100	mixed
ASLC	L	60 m	~6 m	110	gov
HMSC	M	Land and Bldgs	2.8 m	33	mixed
BASC	M	8 m	1-2 m	9	Grants (NSF), Fees
PWSSC	M	~350 k	2 m	24	Grants, donations
GMWSRS	S	25 k house gifted	15-20 k	3 part time	Grants, sales, donations
SGII	S	50 k	15-20 k	1 part time	Grants

Basic information of administrative structure for seven centers varying in size is summarized below in Table 2. The goal of summarizing this information is to provide examples of how different centers were formed and how they operate. The formation of a governing body with the goal of defining the details of what can be accomplished on the Pribilofs and moving that goal forward will likely be the next action to pursue.

Table 2. Comparisons of administrative/governing bodies for a range of research centers. As with Table 1, the information below is approximate, gathered from annual reports, websites and conversations and is provided here for the purposes of basic comparison only.

Center	Size	Founding Body	Board Members	Advisory Boards	Committees
CDF & CDRS	L	Yes	80 (9)	Y	4
ASLC	L	Yes	Yes	Y	Yes
HMSC	M	No	20	Y (14)	6
BASC	M	?	9	Y	8
PWSSC	M	Yes	19	N	6
GMWSRS	S	No	3	No	No
SGII	S	Yes	7	Yes (7)	No

V. Moving Forward: What are the next steps?

Our analysis of a range of existing research centers indicates that the Pribilof Islands are well suited for a small to medium sized research center at this time. It is unlikely that a large research center is appropriate at the outset (e.g. a center on the scale of the ASLC). However, over time a small to medium sized center could increase in scope according to demand as has been demonstrated by the evolution of the CDRS. It is also apparent from our analysis that a small scale research center can be very successful on one or both of the islands. This is evidenced by the initial success of the St. George Island Institute. Such an effort can certainly entail a collaborative structure between the islands and could also grow over time. However, if the collective vision for the PIRC involves an effort to establish a collaborative structure between the islands that has widespread support and participation by regional stakeholders from the outset, a broader scope is necessary. To this end we have attempted to identify the first steps for developing a short-range plan to pursue a medium sized research center on the Pribilofs, while at the same time identifying potential problems that can be avoided.

1. Administrative and governance structure

This section is intended to initiate a discussion on the first steps toward identifying a model for a research center that: a) incorporates applicable information from our research on existing research centers, b) attempts to balance the opinions and goals expressed by potential users and stakeholders and c) is inclusive of the both Pribilof Island communities.

To this end, we propose a “straw man” model for discussion of the administrative structure of the **Pribilof Islands Research Consortium (PIRC)**. The consortium could follow the model of the CDF and CDRS in which a separate foundation is formed to advise and fundraise for research center(s) operating on the islands. The proposed administrative governance structure of the PIRC could include the following bodies:

a. Advisory Board

The PIRC advisory board would reflect the existing structure of the Pribilof Islands Collaborative. To the extent that existing PIC stakeholders and members of the scientific community want to and are able to take part in the effort, advisory board membership should be structured based on the current PIC composition. Other options would be to include a separate institutional board for stakeholder organizations (see the CDF example) and/or to create a separate scientific advisory board.

b. Board of directors (for each island)

To respect the differences between islands and acknowledge the possibility that different models may fit the needs of each island, a separate board of directors could be constituted on each island. The boards should at minimum be comprised of the representatives from each island entity that also serve on the PIRC advisory board and would benefit from membership by scientists with local research experience.

c. Fundraising body

Developing a strategy to seek start-up funding for the PIRC will be the first and most important task. It may be advisable to form a separate body within the administrative/governance structure specifically charged with fundraising for the PIRC (see the CDF example).

2. Resolve Strategic Issues

At the outset, the PIRC Advisory Board and Boards of Directors for each Island should address the primary strategic issues that need immediate resolution. This may be best pursued through the formation of committees formed to address specific tasks.

a. Identify Potential Users:

- **Local communities** – The Aleut communities of St. Paul and St. George are likely to have the most diverse use possibilities for a center. Potential uses range from biological research, possibly connected to Tribal ECO studies, cultural and biological archiving, education, and community functions.
- **Government researchers** – At minimum this should include expanded versions of longstanding research being conducted by the National Marine Fisheries Service (Alaska Region and the National Marine Mammal Laboratory), the US Fish and Wildlife Service and other research organizations that are becoming active in local research. Opportunities for collaborative research efforts would likely increase with the formation of the PIRC.

- **Industry** – The different fisheries could play an active role individually or in partnership with locals, government and academic researchers. This could occur via individual projects or more globally, such as through the formation of a center for excellence within the research center that focuses on the specific biological issues of concern (e.g. local habitat quality and change; see HMSC URL).
- **Academic** – Researchers from primary partner institutes (e.g. Alaska universities) as well as secondary institutes (e.g. North Pacific Universities Marine Mammal Research Consortium, the University of Alaska Fairbanks, University of California Santa Cruz) will likely form a core of steady users with a diverse range of research topics by top scientists and graduate students, as has been the case historically. In addition, if sufficient facilities exist, it may be possible to offer university accredited courses analogous to other university Marine Stations (e.g. the Friday Harbor or Bamfield Marine Stations).

b. Identify the focus (Is the center to be multipurpose?)

- Facilitate research
- Conduct research
- Fund internships especially for locals
- Fund larger projects
- Host specialty courses
- Cultural/community activities
- Cultural and biological archive

c. Identify the infrastructure assets and needs:

- **Existing facilities** - Both Islands have existing historical buildings that could potentially be used to house a small to medium size research facility. Among the likely candidates are the historical sealing plant, or washhouse (Figure 3), on St. George and the old clinic on St. Paul. Both buildings are located in the respective villages. Both facilities are currently owned by NOAA and would entail a usage agreement or transfer to be suitable candidates for a research facility.
- **New Construction** - If existing facilities are insufficient to accommodate the scope of the research center vision, new facilities could be constructed. New construction will likely require a higher level of initial funding and land-use agreements will need to be negotiated with the local landowner.
- **Marine Infrastructure** – A shared research vessel which could also serve as a passenger ferry between islands may be required, or at minimum small research boats for each island. The TDX Corporation owns and operates the R.V. Cape Flattery, a 185 foot vessel with 48 berths which is available for charter.



Figure 3. The St. George Sealing Plant was designated a National Historic Landmark building in 1962. It was recently the focus of a \$2 million renovation project to preserve the plant's structural and historical integrity. The restoration was completed in 1999 by the St. George Tanaq Corporation and NOAA.

d. Identify potential funding sources, partners and tenants:

- **Education institutes** – primary examples include UAF, UAA, UASE, UCSC, and UBC.
- **Government Institutes and Research Centers** – primary examples include NMML, NMFS AK Region, USFWS, AK F&G, USCG, MMS.
- **Federal and State Governments**
- **Industry** – primary examples include APICDA and CBSFA
- **NGO's** – primary examples include WWF, CI, TNC, Audubon, Oceana and Greenpeace
- **Local entities** - Cities and Tribal Governments of STG and SNP, TDX, Tanaq.
- **Corporations** – examples include Alaska Airlines, Penn Air, BP, Trident
- **Granting Agencies** – examples include The National Science Foundation, the Rasmussen Foundation, Anchorage, the Prescott Foundation, Sea Grant, and the North Pacific Research Board

3. Put Plan into Action:

Once agreement has been reached on the above strategic issues, essentially aligning the stakeholders, and the governing bodies have been identified, the project can move forward.

a. Advisory board / board of directors:

- Formalize the long-term goals
- Lay out the main step to reach the long-term goals
- Lay out a timeframe with milestones
- Clearly identify how the goals are to be specific for both islands

b. Fundraising body:

- Construct budget scenarios based on specifics
- Branding
- Begin fundraising campaign

Appendix 1: Research Centers – Short and Long Lists

Below are short- and long-lists of relevant centers and their URLs as well as other useful internet links. The short-list includes each of the centers listed in Tables 1 and 2 as well as ten additional relevant centers. The long-list is annotated with notes in parentheses, identifying the owner/founding body (u = university; p = private; g = government; or a combination = m), the focus (r = research; e = education) and whether it is located in Alaska or the Pacific North West (AK or NW). This information is derived from institutional web sites, annual reports and conversations with staff members, board members and users. Our intention has been to provide as much information as possible to all interested parties in order to facilitate informed discussion on the topic.

Short List

1. *Alaska SeaLife Center*, Seward AK: www.alaskasealife.org
2. *Barrow Arctic Science Consortium*, Barrow AK: <http://www.arcticsscience.org/aboutBASC.php>
3. *Center for Alaskan Coastal Studies*, Homer AK: <http://www.akcoastalstudies.org/>
4. *Charles Darwin Research Station*, Galapagos Islands, Ecuador: <http://www.darwinfoundation.org/en/>
5. *Cook Inlet Keeper*, Homer AK: <http://www.inletkeeper.org/about/overview.htm>
6. *Grand Manan Whale & Seabird Research Station*, Grand Manan NB Canada: <http://www.gmwsrs.org/>
7. *Gulf of Maine Research Institute*, Portland ME: <http://www.gma.org/>
8. *Huntsman Marine Science Center*, St. Andrews NB Canada: <http://www.huntsmanmarine.ca/>
9. *Intercultural Center for the Study of Deserts and Oceans* – CEDO, Sonora, Mexico: <http://www.cedointercultural.org/>
10. *Kohala Center*, HI: <http://learning.kohalacenter.org/>
11. *Ocean Alaska Science and Learning Center*, Seward AK: <http://www.oceanalaska.org/>
12. *Petersburg Marine Mammal Center*, Petersburg AK: <http://www.psgmmc.org/index.html>
13. *Port Orford Ocean Resource Team*, Port Orford OR: <http://www.oceanresourceteam.org/>
14. *Prince Williams Sound Science Center*, Cordova AK: http://www.pwssc.gen.ak.us/site_index.shtml
15. *Salmon Coast Research Station*, Simoom Sound BC, Canada: <http://www.salmoncoast.org/>
16. *Society for Ecological and Coastal Research - SEACR*, Ahousat BC, Canada: <http://www.geog.uvic.ca/whalelab/seacr-facts.html>
17. *St. George Island Institute*, St. George AK.

Long List

1. *Alaska Islands and Ocean Visitor Center* (AK; p,g; e,r): <http://alaskaislandsandocean.org/>
2. *Alaska Sea Life Center* (AK; p; r,e): www.alaskasealife.org
3. *Alaska Whale Foundation* (AK; p; r,e): <http://alaskawhalefoundation.org/index.html>
4. *Alaska Wildlife Response Center* (part of the IBRRC – International Bird Rescue Research Center) (AK; p; r,e): http://www.ibrrc.org/alaska_center.html
5. *Alaska-Siberia Research Center* (AK; p; r,e): <http://www.aksrc.homestead.com/>
6. *Aldo Leopold Wilderness Research Institute* (g; r,e): <http://leopold.wilderness.net/default.htm>
7. *Alert Bay Marine Lab.* Contact Mike Berry (alby@cablerocket.com)
8. *Bahamas Marine Mammal Research Organization*, (p; r,e) www.bahamaswhales.org
9. *Bamfield Marine Science Center*, BC Canada (NW; u; r,e): <http://www.bms.bc.ca/index.htm>
10. *Barrow Arctic Science Consortium*, Barrow AK: <http://www.arcticsscience.org/aboutBASC.php>
11. *Beam Reach Marine Science and Sustainability School* (NW; p; r,e): [www.beamreach.org\071](http://www.beamreach.org/071)
12. *Blue Ocean Society*, Portsmouth NH (p; r,e): <http://www.blueoceansociety.org/>
13. *Boreal Ecology Cooperative Research Unit* (AK; u,g; r,e): <http://www.becru.uaf.edu/>
14. *Bottlenose Dolphin Research Institute* (BDRI), Italy (p; r,e): www.thebdri.com
15. *Caribbean Conservation Corporation & Sea Turtle Survival League* (p; r,e): <http://cccturtle.org/ccctmp.htm>
16. *Cascadia Research Collective* (NW; p; r): <http://www.cascadiaresearch.org/>
17. *Center for Alaskan Coastal Studies* (CACCS) (AK; p; r,e): <http://www.akcoastalstudies.org/>
18. *Center for Cetacean Research & Conservation* (CCRC) (p; r,e): www.whaleresearch.org
19. *Center for Whale Research*, Friday Harbor WA (NW; p; r,e): <http://www.whaleresearch.com/index.html>
20. *Central Puget Sound Marine Mammal Stranding Network* (NW; p; r): <http://www.beachwatchers.wsu.edu/island/mmsn/>
21. *Cetacean Studies Institute* (p; r,e): www.dolphintale.com
22. *Charles Darwin Research Station*, Galapagos Islands, Ecuador: <http://www.darwinfoundation.org/en/>
23. *Charlotte Harbor National Estuary Program*: <http://www.chnep.org/>
24. *Chewonki Foundation*, Wiscasset, ME (p; e, r): (<http://www.chewonki.org/>
25. *Coastal Ecosystem Research Foundation*, Port Hardy BC Canada (NW; p; r,e): <http://www.cerf.bc.ca/index.asp>
26. *Coastal Ecosystems Research Foundation* (CERF) (NW; p; r,e): <http://www.cerf.bc.ca/>
27. *Comunidad y Biodiversidad* (COBI), Mexico (p; r,e): <http://www.cobi.org.mx/index.php?pag=inicio&idioma=eng>
28. *Cook Inlet Keeper*, Homer AK: <http://www.inletkeeper.org/about/overview.htm>
29. *Cook Islands Whale Research & Education Centre* (p; r,e): www.whaleresearch.org
30. *Dauphin Island Sea Lab*, Dauphin Island, AL: <http://www.disl.org/>
31. *Duke University Marine Laboratory*, (u; r,e): <http://www.nicholas.duke.edu/marinelab/>

32. *Fish and Wildlife Research Institute*: <http://research.myfwc.com/>
33. *Grand Manan Whale & Seabird Research Station* (p; r,e), Grand Manan NB Canada: <http://www.gmwsrs.org/>
34. *Group for Research and Education on Marine Mammals* (GREMM) (p; r,e): <http://www.gremm.org/eng/5/FS5.html>
35. *Gulf Coast Research Lab, Mississippi* (u; r,e): http://www.usm.edu/gcrl/site_map/flash.php
36. *Gulf of Maine Research Institute* (GMRI) (p; r,e): <http://www.gma.org/>
37. *Harbor Branch Oceanographic Institution* (p; r,e): http://www.hboi.edu/index_01.html
38. *Hawai'i Marine Mammal Consortium* (p; r,e): www.hmmc.org
39. *Hofstra Marine Labs, Saint Ann's Bay, Jamaica* (p,u; r,e): http://people.hofstra.edu/jason_d_williams/HUML/index.htm
40. *Humpback Whales of Kennedy Entrance and Kachemak Bay*, Alaska (AK; p; r,e): www.kbaywhales.com
41. *Huntsman Marine Science Center*, St. Andres NB Canada (p; r,e): <http://www.huntsmanmarine.ca/>
42. *Intercultural Center for the Study of Deserts and Oceans* - CEDO (p; r,e): <http://www.cedointercultural.org/>
43. *Kasitsna Bay Laboratory*, Seldovia, AK: <http://www.westnurc.uaf.edu/kbay.html>
44. *Keys Marine Laboratory*: <http://www.keysmarinelab.org/>
45. *Khoyatan Marine Lab*, Haida Gwaii, BC: <http://www.mareco.org/KML/Home/default.asp>
46. *Kohala Center* HI (p; e): <http://learning.kohalacenter.org/>
47. *Kula Nai'a Foundation* HI (p; r,e): <http://www.kulanaia.org/index.htm>
48. *Lifeforce Foundation* (p; r,e): lifeforcesociety@hotmail.com
49. *Manatee Rehabilitation Partnership* (MRP) (m; r): <http://wildtracks.org/Florida/home.htm>
50. *Marine Ecology Centre*, Sidney BC (p; r,e): <http://www.mareco.org/home/default.asp>
51. *Marine Education and Research of South East Alaska* - <http://www.mersea.com/>
52. *Marine Environmental Research Institute*, Blue Hill ME: <http://www.meriresearch.org/aboutus/mcenter.html>
53. *Marine Mammal Center* (p; r,e): www.marinemammalcenter.org.
54. *Mingan Island Cetacean Study*, Mingan Islands QC Canada (p; r,e): www.rorqual.com
55. *Monterey Bay Aquarium Research Institute* (MBARI) (p; r,e): <http://www.mbari.org/default.htm>
56. *Mote Marine Laboratory* (p; r,e): <http://www.mote.org/>
57. *National Coral Reef Institute* (m; r,e): <http://www.nova.edu/ocean/ncri/aboutus.html>
58. *New Zealand Tourism Research Institute* (u; r): <http://www.tri.org.nz>
59. *North Gulf Oceanic Society* (p; r): <http://whalesalaska.org/>
60. *Ocean Alaska Science and Learning Center* (AK; g,p; r,e): <http://www.oceanalaska.org/>
61. *Ocean Conservation Research* (p; r,e): www.OCR.org
62. *Ocean Sounds Science Center* (p; r,e): www.ocean-sounds.com
63. *Oceanwide Science Institute* (OSI) HI (p; r,e): <http://oceanwidescience.org/index.html>
64. *Orca Network* WA (NW; p; r,e): <http://www.orcanetwork.org/>
65. *Orcalab* BC (p; r,e): <http://www.orcalab.org/>

66. *Petersburg Marine Mammal Center*, Petersburg AK:
<http://www.psgmmc.org/index.html>
67. *Point Reyes Bird Observatory* (p; r,e): <http://www.prbo.org/cms/index.php>
68. *Port Orford Ocean Resource Team*, Port Orford OR:
<http://www.oceanresourceteam.org/>
69. *Prince Williams Sound Science Center*, Cordova AK:
http://www.pwssc.gen.ak.us/site_index.shtml
70. *Pro Delphinus*, Peru (p; r): <http://www.prodelphinus.org/home.php>
71. *Provincetown Center for Coastal Studies* (PCCS) (p;r,e): <http://www.coastalstudies.org/>
72. *Salmon Coast*, Simoom Sound BC, Canada: <http://www.salmoncoast.org/>
73. *Sarasota Bay Estuary Program* (m; r,e): <http://www.sarasotabay.org/aboutSBEP.asp>
74. *SEACR*, Ahousat BC, Canada: <http://www.geog.uvic.ca/whalelab/seacr-facts.html>
75. *Shoals Marine Lab*, Isle of Shoals, Maine (u; r, e): <http://www.sml.cornell.edu/>
76. *Skidaway Institute of Oceanography* (SkIO) (m; r,e):
<http://www.skiio.peachnet.edu/index.php>
77. *Taras Oceanographic Foundation* (p; r,e): www.taras.org
78. *TerraMar Research*, (NW; p; r,e): <http://www.terramarresearch.org/>
79. *Tethys Research Institute*, Italy (p; r): <http://www.tethys.org>
80. *The School for Field Studies*, Salem ME: <http://www.fieldstudies.org/>
81. *Vancouver Aquarium*, BC Canada (NW; u, r,e): <http://www.vanaqua.org/home/>
82. *Virginia Institute of Marine Science* (VIMS) (u; r,e): <http://www.vims.edu/welcome/>
83. *Whale Center of New England* (p; r,e): <http://www.whalecenter.org/>
84. *Whale Museum* (NW;p; r,e): <http://www.whalemuseum.org>

Selected University Marine Laboratories:

1. *Bamfield Marine Science Center*, BC, Universities of Alberta, Calgary, British Columbia, Simon Fraser, and Victoria: <http://www.bms.bc.ca/>
2. *Bodega Marine Laboratory*, University California Davis: <http://www.bml.ucdavis.edu/>
3. *Centro de Investigación Científica y de Educación Superior de Ensenada* (CICESE), Ensenada, Mexico: <http://www.cicese.mx/>
4. *Coastal Marine Ecology Laboratory*, California State University Fullerton: <http://biology.fullerton.edu/people/faculty/steve-murray/index.html>
5. *Friday Harbor Laboratories*, University of Washington: <http://depts.washington.edu/fhl/index.html>
6. *Kino Bay Center*, Mexico, Prescott College: <http://www.prescott.edu/highlights/kino/index.html>
7. *Moss Landing Marine Laboratories*, California State Universities (Fresno, Hayward, Monterey Bay, Sacramento, San Francisco, San Jose, and Stanislaus): <http://www.mlml.calstate.edu/>
8. *Wrigley Marine Science Center*, University of Southern California: <http://wrigley.usc.edu/welcome.html>

Selected Aquaria:

1. *Aquarium of the Pacific*, Long Beach, CA: <http://www.aquariumofpacific.org/>
2. *Birch Aquarium Scripps Institute*, La Jolla CA: <http://aquarium.ucsd.edu/>
3. *Cabrillo Marine Aquarium*, San Pedro, California: <http://www.cabrilloaq.org/>
4. *Monterey Bay Aquarium*, Monterey Bay CA: <http://www.mbayaq.org/>
5. *National Aquarium*, Baltimore MD: <http://www.aqua.org/>
6. *New England Aquarium*, Boston MA: <http://www.neaq.org/>
7. *Seattle Aquarium*, Seattle WA:
<http://www.seattleaquarium.org/NetCommunity/Page.aspx?&pid=183&srcid=201>
8. *Shedd Aquarium*, Chicago IL: <http://www.sheddaquarium.org/>
9. *Mystic Aquarium*, Mystic CT: <http://www.mysticaquarium.org/>
10. *Vancouver Aquarium*, Vancouver BC: <http://www.vanaqua.org/home/>

Links to Broader Sources of Relevant Information:

1. *Gulf of Maine (GOM) oceanography, marine mammalogy, GIS, and marine education*
http://www.elijahmm.com/~kara/global_nav/GOM_websites.html
2. *List of NW Marine Experts*: <http://www.mareco.org/KML/Projects/experts.asp>
3. *Network of Marine Research Institutions and Documents*:
<http://www.marenet.de/MareNet/>
4. *Organization of Biological Field Stations (OBFS)*: <http://www.obfs.org/>

Appendix 2: Financial Information – Research Center Examples

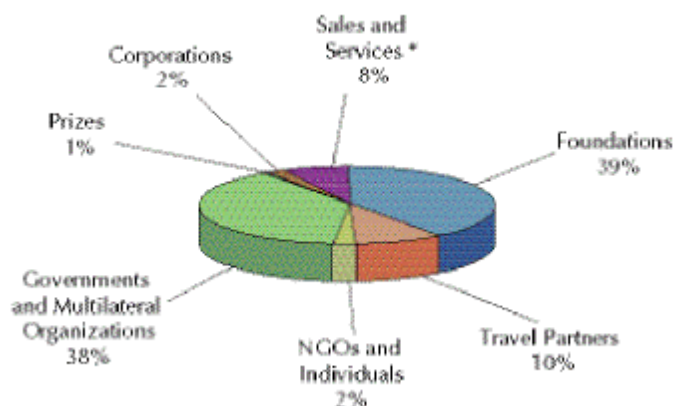
As further background information, we have listed financial details of three examples of our short list; one from each of the sizes from Tables 1 and 2. This information is derived from institutional web sites, annual reports and conversations with staff members, board members and users. As with the long-list, our intention is to provide as much information as possible to all interested parties in order to facilitate informed discussion on the topic.

1. Charles Darwin Foundation and Charles Darwin Research Station:

The CDF's funding

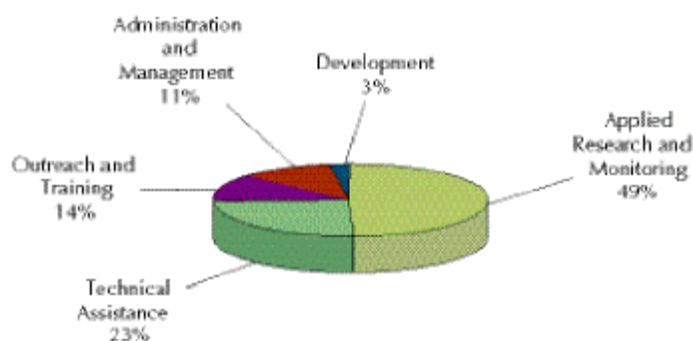
The CDF receives financial support from many organizations, foundations, governments and individuals around the world. CDF is an international not-for-profit association (Association Internationale Sans But Lucratif, AISBL), registered in Belgium and subject to Belgian law. CDF generates its income through donations, grants, scientific services and gift shop sales at the Charles Darwin Research Station.

Where CDF's funds come from



Revenue	2005	2004
Foundations	\$1,491,962	\$1,443,358
Travel Partners	\$362,103	\$273,413
NGOs and individuals	\$87,460	\$100,476
Government and multilateral organizations	\$1,431,062	\$2,250,539
Prizes	\$29,665	\$45,494
Corporations	\$56,633	\$79,628
Sales and Services	\$304,566	\$298,684
Total operating revenue	\$3,763,452	\$4,491,592

Where CDF's funds go



Expenses	2005	2004
Applied research and monitoring	\$2,065,183	\$2,206,663
Technical Assistance	\$956,005	\$1,157,730
Outreach and Training	\$565,332	\$568,741
Management	\$461,817	\$378,860
Development	\$106,778	\$86,734
Total Expense	\$4,155,115	\$4,398,728
Surplus (deficit)	(\$391,663)	(\$92,864)

CDF's Donors

More than 90 percent of CDF's revenue comes from a donor base made up of organizations, foundations, corporations, governments and individuals worldwide.

- **Friends of Galapagos** - Friends of Galapagos Organizations (FOGOs) provide substantial support through funding for priority conservation work in Galapagos. There are currently [FOGOs](#) in 9 countries.
- **Governments and Multilateral Organizations** - Governments often give through their Overseas Development Assistance (ODA) organizations. Multilateral agencies are global or regional cooperative organizations that represent various countries. These agencies have historically been the CDF's largest donor group and contributed 38% of revenue in 2005, totaling more than US\$1.4 million. However, there has been a significant drop in this type of support in recent years.
- **Individual Donors** - To offset the drop in funding from government and multilateral organization support as well as to diversify charitable support overall, increasing donations from this group is now a major priority for CDF.
- **Public and Private Foundations and NGOs** - Foundations and NGOs (non-governmental organizations) are also growing in importance as supporters of the CDF as a means to diversify historic dependence on government and multilateral organizations.

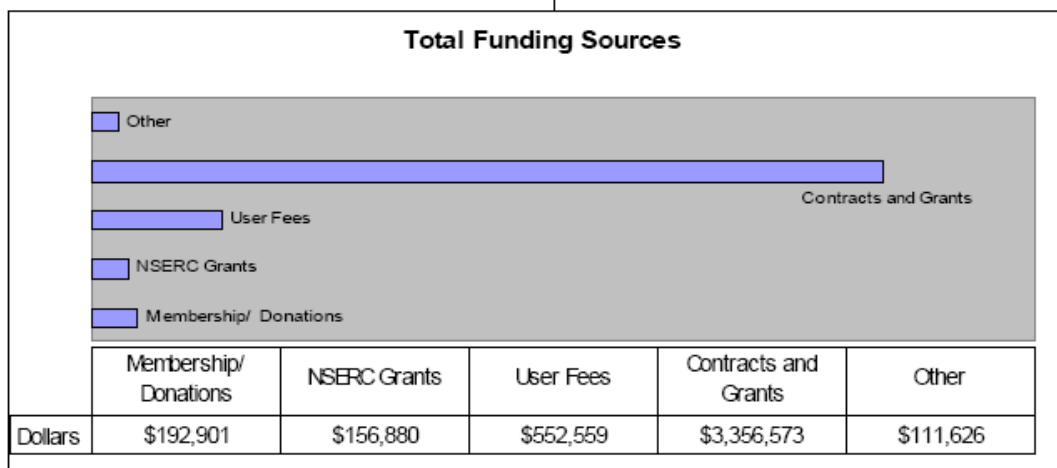
2. Huntsman Marine Science Center

Administration and Finance

The Huntsman Marine Science Centre is a private, not-for-profit charitable organization established to provide facilities for marine research and education for professional and academic purposes. The Huntsman is dependent on members, government agencies, private enterprises and foundations for financial support in the form of research contracts, grants, membership fees, facility user fees and donations. Relative departmental activities and funding sources are outlined in the figures below, with financial data of various Huntsman funds shown in the Income Statement and Balance Sheet.

The Operating Fund reflects the day to day operations of the Enterprise. Grants, User Fees, sales and unrestricted contributions are recognized as revenues of the Operating Fund in the year received. We have completed the fiscal year with an operating surplus of \$ 35,331, which is in excess of the Board approved operating deficit of \$ 27,034.

The summary accounts do not contain sufficient detail to allow for a full understanding of the financial affairs of the Huntsman. Further information can be obtained by contacting the Director of Finance, Ms. Sandra Clark.



<i>Year ended March 31, 2007 (x000s)</i>	Fund	Asset Fund	Fund	Total
INCOME STATEMENT				
Revenues:				
Contract and Grants	1,589	1,768		3,357
User Fees and Sales	553			553
NSERC Funding	157			157
Membership fees and donations	74		119	193
Other	89		22	111
	<u>2,462</u>	<u>1,768</u>	<u>141</u>	<u>4,371</u>
Expenses:				
Purchased materials and services	1,274		139	1,413
Employment costs	1,135			1,135
Scholarship	1			1
Amortization of capital assets		235		235
Interest on long-term debt	17			17
Loss on sale of capital assets		6		6
	<u>2,427</u>	<u>241</u>	<u>139</u>	<u>2,807</u>
Excess (deficiency) of revenue over expenses	35	1527	2	1564
BALANCE SHEET				
Assets				
Cash	825		141	966
Accounts Receivable	853			853
Marketable securities	50			50
Interfund receivables	122			122
Inventories	13			13
Prepays	46			46
	<u>1,909</u>		<u>141</u>	<u>2,050</u>
Capital assets		5,510		5,510
	<u>1,909</u>	<u>5,510</u>	<u>141</u>	<u>7,560</u>
Liabilities				
Demand loans	124			124
Accounts payable	970			970
Interfund payables			122	122
Unearned revenue	641			641
Fees paid in advance	20			20
Deferred scholarship contributions	43			43
Current portion of long-term debt		4		4
	<u>1,798</u>	<u>4</u>	<u>122</u>	<u>1,924</u>
Long-term debt		92		92
Invested in capital assets		5,414		5,414
Externally restricted			127	127
Internally restricted	10		6	16
Unrestricted	101		(114)	(13)
	<u>111</u>	<u>5,414</u>	<u>19</u>	<u>5,544</u>
	<u>1,909</u>	<u>5,510</u>	<u>141</u>	<u>7,560</u>

THE HUNTSMAN MARINE SCIENCE CENTRE FEE SCHEDULE

1 Lower Campus Road, St. Andrews, NB Canada E5B 2L7 Effective from April 1, 2007 TEL. 1-506-529-1200 FAX 1-506-529-1212 All prices in Canadian \$ 18/06/2007
 HMSC reserves the right to alter this fee schedule

Reservation contacts: Email: Telephone:

Aquarium aquarium@huntsmanmarine.ca 1-506-529-1202

Public Education Ms. Ashley Birch aholmes@huntsmanmarine.ca 1-506-529-1260

Universities/Boats/Labs Ms. Ashley Birch aholmes@huntsmanmarine.ca 1-506-529-1260

Aquaculture

Other Ms. Kim Arseneau huntsman@huntsmanmarine.ca 1-506-529-1200

HOUSING

(HST charged on linens only)

Unit Charge	
Needler Hall and Anderson House: (per person)	Per night
- Bed (Dormitory Style Room)	\$22
- Room (1 bed)	\$60
- Room (2 bed) - for one person by request if available	\$75
Apartments (private lounge & kitchen)	Per night
- Apartment - Upper Guest Cottage	\$66
- Apartment - Lower Guest Cottage	\$66
- Apartment - Upper Carriage House	\$66
- Bedroom - Stable House	\$35
- Bedroom - Lower Carriage House	\$35
- Bedroom - Upper Graduate Residence	\$35
- Bed in a shared room - Lower Graduate Residence	\$22
Housekeeping Services – When requested	Per hour
- basic cleaning included in rental costs	\$25.00
Electricity Costs - % applied to accommodation fees	n/a
Operating season – April through September	15%
Off season - October through March	
Lock out (call in charge)	\$45
Lost key charge (per key)	\$10
Rent of sheets, towels (per issue)	\$15
Campus fee for students, researchers and instructors	Per day
- Use of grounds – lecture room, Lab, Computer room and wireless internet access	\$15/person
- Non-university courses (includes HMSC Instructor)	\$32/person
- Non-university teaching lab	\$70 /group

SCIENTIFIC SERVICES

(HST charged on Research Vessel and small boats only)

Researchers of Canadian Univ.	
Christofor Research Lab	Per day
Per m ²	\$0.90
Environment rooms	\$27.90
Tank Space per m ² (basic facilities)	Per day
Holding facilities	\$0.45

Research Vessel – W.B. Scott Minimum Charge = 2 hours/day Boat days 8:00-16:30 With crew, fuel and maintenance	Per hour \$100
Osprey 22 power vessel Minimum charge = 2 hours/day With Crew	Per hour \$175
Underwater Remotely Operated Vehicle ROV – with technician	Per hour \$80
Small Boats – Gas Included Geeman 25ft, 100hp (Cree) – HMSC technician required at additional hourly rate Boston Whaler 17 ft, 30 hp Aluminum boat 14 ft, 8 hp	Per hour \$25 \$25 \$20
Specimen Collection	Please inquire
Dechlorinated fresh water Per thousand gallons - US gallons	\$2.25
Technical Services Per Diem – 7.5 hours	Per day \$165
Professional Services Senior Scientist Geneticist Scientist Naturalist Junior Scientist	Per day \$545 \$525 \$375 \$375 \$225
Truck Mileage per kilometer	\$0.45

3. Grand Manan Whale and Seabird Research Station

The following accounting summaries are provided to illustrate the cash flow and finance structure of a medium sized research center.

	<u>2006</u>	<u>2005</u>
A. FUNDS REMAINING AS OF 31.xii & CARRIED FORWARD	60,200.28	44,400.20
B. REVENUES RECEIVED DURING FISCAL YEAR:		
1. Receipted donations issued to 31.xii	14,475.00	17,550.09
a. General	4,506.27	
b. Whale Conservation Fund, NB (WCF):	4,217.05	
c. Harbour Porpoise Release (HPRP):	1,190.00	
d. Dr. Gaskin Memorial Fund (DEG):	75.00	
e. Fundy Bird Observatory (FBO):	1,270.90	
f. Building Fund	0.00	
g. Right Whale Sponsorship	3,215.78	
2. Small donations at door box for which receipts not given:	1,811.87	2,098.61

3. Research Grants/Funds		82,325.60	68,804.00
a. Whale and Dolphin Conservation Society	2,696.60		
b. New Brunswick Wildlife Trust Fund A & B	3,140.00		
c. Connor Bros.	2,000.00		
d. International Fund for Animal Welfare	10,000.00		
e. Baillie Fund	2,500.00		
f. Mountain Equipment Co-op	4,739.00		
g. Habitat Stewardship Program A & B	28,700.00		
h. Canadian Whale Institute	5,000.00		
i. Down to Earth Conservation	1,000.00		
j. Ark Angel Foundation	1,000.00		
k. Humane Society Canada	1,000.00		
l. New Brunswick Environmental Trust Fund	12,000.00		
m. Fundy Community Foundation	500.00		
n. Fairmont Algonquin	5,000.00		
o. East Coast Ecosystems	3,050.00		
4. Reimbursements yet to be received:			
5. Interest/exchange:		592.27	-138.10
6. Gross sales of items in Gift store:		37,161.77	46,421.51
7. Government Employment Grants		2,031.00	1,606.00
a. HRDC summer placement:	2,031.00		
b. SEED (provincial grant):			
8. HST (for 2005) and Federal Gas Excise Rebates (for 2004, 2005):		3,436.94	3,479.50
9. Office services/supplies:		2,393.34	
10. Travel allowances/refunds		150.00	
11. Money still in hand for accounts payable:		213.67	51.24
12. Other revenues		0.00	0.00
		<hr/>	<hr/>
TOTAL REVENUE FOR FISCAL YEAR:		144,591.45	139,872.85
GROSS REVENUES + FUNDS CARRIED FORWARD:		204,791.73	184,273.05
C. EXPENDITURES FOR FISCAL YEAR:		2006	2005
		<hr/>	<hr/>
1. Disbursements to qualified donees:		1,500.00	0.00
2. Salaries to employees/honorariums/employer deductions:		30,568.77	22,509.46
a. Museum assistants	5,183.90		
b. General	12,535.49		
c. WHSCC	313.89		
d. Right Whale Project	12,535.49		
3. Fund-raising costs - mail outs:		310.77	365.85
4. Insurance, land tax on building:		4,376.24	2,389.05
5. Household & upkeep of building & equipment:		3,621.39	2,207.29
6. Office operations:		2,155.06	195.51
8. Boat/trailer insurance, licensing:		2,412.00	2,462.00
9. Museum & lab. Maintenance, expansion & repairs:		430.11	219.08
10. Research supplies & utilities:		2,996.25	3,222.01
11. Stock purchases for Gift store:		22,570.48	30,601.40
12. Bank charges:		749.44	952.16
13. Associated travel costs (including all projects):		9,929.04	14,978.13

14. Small equipment purchase & repair (research associated):	716.66	10,009.34
15. Porpoise research costs (without salaries/travel/small equipment):	8,112.09	8,109.76
16. Right Whale projects costs (without salaries, travel):	13,057.36	20,994.85
17. WCF expenditures (without salaries, travel):	97.14	750.52
18. Seabird Project (without salaries, travel):	20,806.49	785.83
19 Herring project (without salaries, travel):	696.86	0.00
20. Memberships, advertising:	254.88	318.13
21. FBO expenditures:	0.00	3,001.02
20. Other:	0.00	0.00
TOTAL EXPENDITURES FOR FISCALYEAR:	125,361.01	124,071.39

EXCESS OF REVENUE & \$ CARRIED FORWARD:	79,430.72	60,201.66
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D. MONIES IN ACCOUNTS & IN HAND AT 31.xii:

1. Held in GMWSRS US account at 31.xii (5,432.96*1.15) :	6,247.90	9,589.59
2. Held in GMWSRS grant account at 31.xii:	3,297.65	4,156.92
3. Held in GMWSRS business account at 31.xii:	47,443.37	28,480.62
4. Held in GMWSRS account (account closed 2006, money transferred):	0	1,609.48
5. Held in GMWSRS Money Master at 31.xii:	16,624.64	14,355.13
6. Held as cash/cheques at GMWSRS at 31.xii:	5,847.14	2,008.55

ACTUAL MONIES IN ACCOUNTS & IN HAND AT 31.XII:	79,460.70	60,200.29
(discrepancies can occur due to exchange fluctuations)	29.99	-1.37

E. NON-CASH GIFTS at 31.xii

	2006	2005
1. donation of 24 Route 776 house and property	50,000.00	
2. Forty Calendars & two plaques for resale	860.00	
3. Seven matted photographs for resale	35.00	
4. Six jewellery pieces for resale	35.70	
5. Nine matted photographs for resale	40.00	
TOTAL NON-CASH GIFTS at 31.xii	50,970.70	5,660.00

Appendix 3: Administrative and Governance Information – Research Center Examples.

As additional background information, we have also included administrative and governance details from several of the selected centers focused on in Tables 1 and 2. This information is derived from institutional web sites, annual reports and conversations with staff members, board members and users. As with the long-list, our intention is to provide as much information as possible to all interested parties in order to facilitate informed discussion on the topic.

1. Barrow Arctic Research Center

Board of Directors and Staff

BASC is governed by a nine member Board of Directors. Board Officer Positions include a President, a Vice President, a Secretary/Treasurer and an Executive Director. Board representatives are elected from the following organizations (# of Representatives/# of Alternates):

- Ukpeagvik Inupiat Corporation Representatives (3/3)
- Senior Representative (elected by Senior Council) (1/1)
- Ilisagvik College Representatives (2/2)
- North Slope Borough Government (2/2)
- Federal Representative (1/1) (elected by the Board membership to represent U.S. governmental science programs that have physical facilities or activities in the Barrow area)

BASC Board members and staff serve on the following committees:

- Scientific Management Advisory Committee
- Digital Subcommittee
- Barrow Environmental Observatory Subcommittee
- Facilities Committee
- Finance Committee
- BASC/NSF Cooperative Agreement Management Team
- Saturday Schoolyard and Outreach Coordinator
- Chukotka Science Support Group
- Science Advisory Group - SAG provides BASC with researcher feedback and suggestions.

BASC Employees (9)

- Executive Director (1)
- Information Technology Manager (1)
- Senior Systems Programmer (1)
- Station Manager (1)
- Logistics Planner (1)
- Assistant Logistics Coordinators (4)

Selected Committee Details:

1) Science Management Advisory Committee (SMAC)

The SMAC provides advice to the board of directors regarding BASC's support of research projects, educational outreach, and its management of the Barrow Environmental Observatory. The membership of the SMAC includes representatives of a BEO-based NSF project, a Barrow-based federal agency, and the BEO landowner (see membership list). Decisions and recommendations are by consensus.

2) BEO Subcommittee

The BEO Subcommittee was created to assist BASC in the management of the BEO (see location map).

3) Science Advisory Group

The Science Advisory Group (SAG) is composed of NSF-supported investigators, with the purpose of providing advice to BASC on its scientific support operations. The SAG provides:

- Researcher feedback to BASC regarding BASC's management of and performance under the BASC-NSF Cooperative Agreement (CA).
- Suggestions on changes or additions to BASC's activities under the CA. The goal is to continue BASC's strong tradition of facilitating excellent science and excellent outreach in the Arctic.
-

The SAG holds one in-person meeting in Barrow during the summer research season, and one off-season in-person meeting in Barrow or another suitable location. These meetings are held in conjunction with SMAC meetings. Ad hoc telephone meetings are convened by the Chair of the SMAC as needed. SAG meetings are open to the public.

The pool of potential SAG members consists of all NSF-funded researchers who work with BASC. The actual composition of the SAG is determined by the SMAC. No less than ten researchers are appointed to the SAG.

2. Charles Darwin Foundation (CDF)

Board and General Assembly

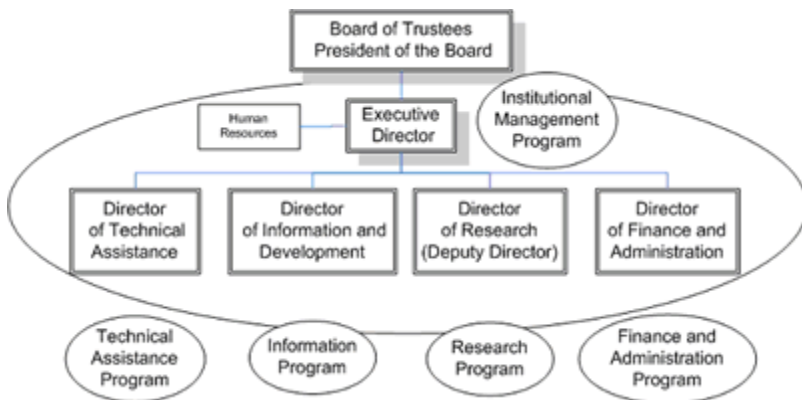
The CDF Board of Directors and General Assembly include scientists, conservationists, natural resource managers, philanthropists, government officials, diplomats and people from other professions.

The Board of Directors (9 members) works closely with the Executive Team and has committees for finance, fundraising, science and membership.

The General Assembly is CDF's highest authority and reflects the international character of the organization. Its members establish policy, issue regulations, elect the Board of Directors, and approve the operational plan and the budget, as well as other important

CDF business. The General Assembly is made up of honorary (11), institutional (22), active (80) and corresponding members (10).

The proceedings of the General Assembly and Board of Directors are governed by CDF's Statutes, which can be changed by a vote of two-thirds of the Active Members.



Appendix 3, Figure 1. Organizational chart for the Charles Darwin Foundation taken from the CDF website.

Administration

The CDF Executive Team consists of 4 people in the following positions:

- Executive Director
- Director of Technical Assistance
- Director of Administration and Finance
- Director of Information and Development

3. Prince William Sound Science Center

The PWSSC has 19 members on its board of directors:

Executive Committee (7)

- Chairman
- 1st Vice-Chair
- 2nd Vice Chair
- Secretary
- Treasurer
- Member-at-large

Non-officer Board Members 12

Board members serve on the following committees (number of board members):

- Executive Committee (6)

- Finance and Personnel Committee (4)
- Audit Committee (3)
- Nominations & Development Committee (6)
- Education Committee (5)
- Research Committee (5)
- 2008 Copper River Nouveau Planning Committee (6)

The PWSSC staff of 24 people is comprised of the following positions:

- Principle Investigators (8)
 - President & CEO - responsible for overall operations at the Center and provides administrative support to both the Science Center's Board of Directors and the Advisory Board of the Oil Spill Recovery Institute.
 - Finance Director -responsible for all financial related activities and helps coordinate grants and contracts administration. She prepares budgets and financial reports for the President and Board of Directors, and coordinates annual audits of the Center's finances which are completed by nationally recognized accounting firms.
 - Bookkeeper - responsible for accounts payable/receivable and payroll.
 - Administrative assistant - public relations and administrative projects and maintains the visitor area of the center.
 - IT systems administrator/Technician
 - Program Specialist - various administrative and general Science Center tasks.
 - Field biologist
 - Administrative assistant and scientific project technician (part-time).
 - GIS Analyst - developing a knowledge system to provide easy access to extensive biophysical and socioeconomic information describing the region and will include numerous geographic data layers, maps, reports and photographs.
 - Field and laboratory biologist - at-sea collection and laboratory processing of zooplankton samples.
 - Avian biologist
 - Director of Development
 - Education Specialists (4)
 - Oil Spill Recovery Institute Program Manager - develops annual and strategic plans for a grant program focused on oil pollution issues in the Arctic and sub-Arctic. He oversees peer reviews of proposals, monitors grant contracts, and provides leadership in planning research programs and work plans in collaboration with the OSRI Board and Scientific and Technical Committee. The Research Program Manager works with the Executive Director to develop and maintain cooperative agreements with other organizations for research and education programs.
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4. Huntsman Marine Science Center

The HMSC board of directors in 2006-07 was comprised of 19 members:

- Chairman of the Board
- Vice-Chair Finance and Admin
- Vice-Chair Development
- Vice-Chair Education
- Vice-Chair Research
- Chair – Users Committee
- Treasurer
- Executive Committee Member
- Board Members (11)

The HMSC also has an Advisory Board and an International Aquaculture Innovation Centre Board of Directors.

The Staff and Administration of the HMSC (60 people total) is broken down as follows:

Administration (6)

- Finance and Administration
- Purchasing/Accounts Payable
- Executive Assistant/Reception
- Senior Executive Assistant
- Executive Director
- Director, Business Development & Communications

Buildings, Grounds and Infrastructure (5)

International Aqua Innovation Centre (16)

Outreach and Education Centre (9)

Atlantic Reference Centre (15)

Residences (9)