

Coordinating and Advancing Field-Based Marine Science Education in Puget Sound: Creating a Vision for the Future

A workshop held March 14-15, 2004, in Seattle, Washington

Final Report and Recommendations

August 17, 2004

Christian P. Sarason¹, Frederick (Fritz) Stahr¹,
James Gawel², Ellie Linen Low³, Ardi Kveven⁴,
Stephanie Raymond⁵, Tom Schaefer⁶, Kathleen Sider⁷,
and Angie Thomson-Bulldis⁸

¹ Ocean Inquiry Project, info@oceaninquiry.org

² University of Washington, Tacoma, jimgawel@u.washington.edu

³ Salish Sea Expeditions, ellie@salish.org

⁴ Ocean Research College Academy, akveven@everettcc.edu

⁵ People for Puget Sound, sraymond@pugetsound.org

⁶ Pacific Marine Research, tomatpmr@aol.com

⁷ Seattle Aquarium, kathy.sider@seattle.gov

⁸ University of Washington, athomsonbulldis@yahoo.com

Table of Contents:

Acknowledgments..... 2

Executive Summary..... 3

Introduction 4

Organization and methods 4

Results..... 6

Recommendations..... 8

Conclusion..... 8

Tables 9

 Table 1: Important criteria when considering a marine science field experience9

 Table 2: Factors preventing use of marine field experiences in classes 9

 Table 3: Importance of direction ahead for marine science education in Puget Sound.....9

 Table 4: Importance of non-curricular activities the coordinator could focus on 10

 Table 5: Importance of tasks regarding curriculum that the coordinator could focus on 10

 Table 6: Types of funding to pay the coordinator's salary 10

 Table 7: Type of organizational structure to fund and manage the coordinator 11

Appendices 11

 Appendix 1 – Steering Committee Members 11

 Appendix 2 – Participants 12

 Appendix 3 – Schedule of Activities 16

Acknowledgments

Funding for this workshop and report was generously provided by ***The Russell Family Foundation***. In-kind support provided by the Seattle Aquarium, the Odyssey Maritime Discovery Center, Salish Sea Expeditions, Menzies Project, and Ocean Inquiry Project was greatly appreciated and critical to the workshop's success. Thanks to the Workshop Steering Committee for their effort and dedication to making this a success. A special thank you also goes to Nancy McKay for encouraging us to push ahead with this project.

Executive Summary

Given Puget Sound's unique character as a large and complex estuary with a population of 3.6 million on its shores, understanding its marine environment is critical to maintaining environmental integrity in the region. Toward that end, a number of field-based marine science education programs exist in the region, although no formal coordination exists between them. A workshop entitled *Coordinating and Advancing Field-Based Marine Science Education in Puget Sound: Creating a Vision of the Future* brought together users and providers of those programs to explore which elements of the status quo are successful and which could be improved and advanced. Over 80 participants from all levels and types of educational organizations, as well as staff from most of the area's boat-based education programs, met in Seattle in March 2004. The results generated at the workshop and from pre- and post-workshop surveys reveal a need for more coordination of field-based marine science education efforts in the region. Participants recommend a Puget Sound Marine Science Education Coordinator position be created, funded, and managed—ideally through a consortium of users and providers. The position could exist independently or be housed at a college, university or existing marine science center. Further, they recommend the consortium employ a business model that allows the coordinator to focus more on the job than on raising salary support.

Introduction

Puget Sound is the only fjord located in the lower 48 states and a natural treasure of the United States. Its uniqueness is increased by the large population surrounding it; nearly 3.6 million people in 2000 with 5 million projected by 2020¹. Many parts of the Sound's marine environment are being stressed and these areas are not only in areas of urban development. A case in point is the alarmingly low value of dissolved oxygen in southern Hood Canal, an area without dense human population, that caused several significant fish kills in 2003 with a high chance for more in 2004². In more developed areas, oil spills, non-point source pollution, and a wide variety of Superfund³ sites are all consequences of a population that uses the Sound as a working waterway as well as one that embraces its natural beauty. If we are to make progress in addressing the many issues facing Puget Sound, educating and motivating citizens is a crucial activity. If the people that enjoy the region's natural resources also understand the science behind the problems affecting the Sound, better stewardship is sure to follow.

Organization and methods

In September 2003, representatives of most of the organizations providing some form of field-based marine science education in the Puget Sound region formed a Workshop Steering Committee (see [Appendix 1](#)). The committee met monthly to develop a comprehensive invitation list, a pre-workshop survey that helped determine the content of the workshop, and the actual workshop meeting plan and other arrangements (space, food, field-trips, etc.). After the workshop, this same group met several times to analyze preliminary conclusions from the workshop sessions. It also conducted a post-workshop survey of participants to verify those conclusions. Survey results are included as tables referenced in the *Results* section below. (See <http://www.oceaninquiry.org/workshop> for links to other workshop material.)

¹ Georgia Basin-Puget Sound Ecosystems Indicator Report, Spring 2002, <http://wlapwww.gov.bc.ca/cppl/gbpsei/population/>

² Washington State Department of Ecology, 6/8/2004, http://access.wa.gov/news/2004/Jun/n200458_7664.aspx

³ U.S. Environmental Protection Agency, National Priorities List Sites in Washington, <http://www.epa.gov/superfund/sites/npl/wa.htm>

On March 14-15, 2004, over 80 educators, scientists and community members from around Puget Sound gathered, at the Odyssey Maritime Discovery Center and the Seattle Aquarium on Elliott Bay in Seattle for the workshop. The focus was to create a vision for the future of field-based marine science education in the Puget Sound region, recognizing the importance of collaboration and communication. The emphasis on field-based education recognizes that this learning mode is a powerful way to bring knowledge to the public: understanding gained through experience tends to be long lasting. However, getting students and learners onto Puget Sound is often difficult due to logistics, costs, and lack of time to organize activities. Ships and marine science equipment are expensive, logistically complicated and require specialized curriculum. We hoped to address these issues and begin to formulate solutions.

The workshop opened with formal presentations by Steering Committee members on boat-based programs available in Puget Sound, boat-based programs in other major metropolitan estuaries around the country, and some of the beach-based programs here in the Sound. The latter were included because, for many people, a first (and sometimes frequent) experience with the marine environment occurs at the interface between land and sea (i.e., the beach). Breakout discussion sessions on Sunday followed the presentations, centering first on the general topic of identifying the highest priority needs for Marine Science Education (MSE) in Puget Sound, followed by breakouts by education level (e.g. elementary, middle school, high school and college). The workshop also included three Sunday morning field trips donated by The Menzies Project, Pacific Marine Research and Salish Sea Expeditions. Over half the workshop attendees participated in one of those trips. After the Sunday breakout sessions, a summary session was conducted at the Aquarium, followed by a reception for participants. Monday's activities focused on addressing the needs identified during Sunday's sessions, with an emphasis on proposing achievable solutions. Workshop participants were randomly assigned to breakout sessions which were facilitated by members of the Steering Committee. Not all participants were able to attend both days but a substantial majority did. (See [Appendix 2](#) for participant list and [Appendix 3](#) for session schedules.)

Results

A call for coordination and communication on various fronts—ranging from improved access to information about various programs, to assistance with the complicated logistics of field based experiences, to the collection and dissemination of curricula and teaching resources—was the principal result of the workshop and surveys. Recognizing the broad nature of the workshop’s main goal (creating a vision), participants organized their thinking into two major areas: what is needed to help expand the reach of field-based marine science and strategies for addressing those needs.

The pre-workshop survey revealed the most important factors, or needs, for users of field-based marine science education are exposure to, and being informed about, the marine environment (see [Table 1](#)). Cost, time to organize, and limited knowledge about available programs were the top three items preventing educators from using marine science experiences (see [Table 2](#)). A need for coordination between providers as well as offering information about the various programs was identified by a very strong response in the pre-workshop survey (see [Table 3](#)). During workshop sessions discussing needs, the following were also identified: 1) curriculum design and distribution; 2) some type of equipment pool; and, 3) outreach efforts to inform residents about marine science education in Puget Sound.

Creation of a Puget Sound Marine Science Education Coordinator position was the strategy identified to satisfy those needs. This person would provide information about marine science educational opportunities in the Puget Sound region, and could assist educators in deciding which programs, materials or resources might best fit a particular curriculum or their desire to get students into the field. The coordinator is meant to be a connector not only between users and providers but also between different providers (e.g., the equipment pool) and between the various users (e.g., the curriculum bank). Everyone recognized many obstacles exist that might prevent teachers from getting classes out onto the Sound. While some of those revolve around costs and funding, some can be overcome with the addition of someone to facilitate the action itself. The coordinator may indirectly increase available funding for these experiences because outreach generally increases awareness about the importance of such opportunities. Ideally, funding to meet needs highlighted by the coordinator’s outreach activities would follow.

During the workshop, we discussed what activities the coordinator should focus on and how the organization that supports the position should be created and funded. All agreed that maintaining an active webpage would be a principal activity of the coordinator, but a host of other activities were envisioned. Creating a consortium that consists of providers and users, but with some outside advisors or board members, was envisioned as the best structure for funding and managing this position. Both consortium membership fees and separate grant moneys were considered as a means to sustain the position. All agreed, however, the coordinator should be allowed to focus primarily on the tasks outlined rather than spending most of his/her time raising salary money.

In order to sharpen the focus of the workshop conclusions, we conducted a post-workshop survey. Results confirmed that creating a coordinator position to provide a single point of contact for learning about and finding appropriate programs, platforms, or curricula is the primary strategy to meet regional needs. Survey participants ranked gathering and sharing information about funding sources highest among non-curricular activity for the coordinator, followed by coordinating outreach activities and recommending programs (see [Table 4](#)). For curricular activities, creating a clearinghouse for material that already exists was top ranked, followed by making curricula web-based and easy to distribute (see [Table 5](#)).

Participants concluded a self-sustaining business model centered on user fees, if possible, would be ideal for management and continuation of the coordinator position, with supplemental funding coming from private foundations and federal grants (see [Table 6](#)). The coordinator should not be solely responsible for writing grant proposals to continue the position. Many believed housing the position within an existing organization, such as community college, university, or marine science center, would be best to take advantage of office space and payroll services (see [Tables 7 and 8](#)). However, some expressed strong concern that housing the position within an existing institution would compromise the independence of leadership, finances and operation of the fledgling organization.

Recommendations

The following comprises a brief list of activities to establish a Puget Sound Marine Science Education Coordinator and provide this person with clear direction and support.

- 1) Form a committee of interested parties to pursue the creation of both a coordinator position and an organization to manage and support that position.
- 2) Suggest the organization be a consortium of members who both provide and use field based marine science education and who are willing to provide financial support and management for the coordinator.
- 3) Determine the best form of governance, structure, and financing for such a consortium, given that its primary focus is to raise funds for salary and other costs of the coordinator. A self-sustaining business model is most desirable.
- 4) Seek an appropriate location for the coordinator position, balancing independence with best use of resources, such as at an institution of higher education or an existing marine science center.

Conclusion

We acknowledge the outcome of this workshop marks the beginning of the next step in field-based marine science education in Puget Sound. While everyone who attended agreed that creating a new coordinator position is highly desirable, it will take determination and hard work to do so. The importance of oceans and estuaries is receiving renewed focus at all levels (e.g., Hood Canal Dissolved Oxygen Program, Pew Oceans Report, the Oceans Commission Report), so timing is good for creating new marine science education opportunities. The true challenge is to create a funding mechanism for the position (and organization managing it) that is sustainable even when the popular focus shifts to another subject. We believe, however, that the intrinsic value of field-based marine science education will always remain high and the effort of engaging more people in it is worthwhile.

Tables

Table 1: Important criteria when considering a marine science field experience

	Very Important	Important	Somewhat Important	Not Important
Exposure for students	70% (47)	24% (16)	3% (2)	3% (2)
Inquiry-based curriculum	48% (31)	42% (27)	8% (5)	3% (2)
Connected to research science	37% (24)	31% (20)	28% (18)	5% (3)
Fun	38% (24)	41% (26)	19% (12)	3% (2)
Informative	62% (40)	35% (23)	3% (2)	0% (0)
Nearby Location	41% (27)	29% (19)	23% (15)	8% (5)
Student Directed Research	32% (20)	27% (17)	29% (18)	12% (8)

Total Respondents: 66

Table 2: Factors preventing use of marine field experiences in classes

	Very Important	Important	Somewhat Important	Not Important	N/A
Cost	49% (31)	17% (11)	6% (4)	2% (1)	25% (16)
Distance	20% (12)	25% (15)	25% (15)	5% (3)	26% (16)
Time to organize	16% (10)	30% (19)	19% (12)	8% (5)	27% (17)
Fitting in with current curriculum	10% (6)	20% (12)	22% (13)	13% (8)	35% (21)
Knowing about available programs	25% (15)	30% (18)	15% (9)	2% (1)	30% (18)

Total Respondents: 63

Table 3: Importance of direction ahead for marine science education in Puget Sound

	Very Important	Important	Somewhat Important	Not Important
Coordination between providers	55% (33)	25% (15)	20% (12)	0% (0)
Information about programs available	52% (31)	40% (24)	7% (4)	2% (1)
Connection to Puget Sound research	45% (27)	35% (21)	18% (11)	2% (1)
Year-around operations	28% (17)	35% (21)	33% (20)	3% (2)
Data collection (e.g. water quality)	43% (26)	39% (24)	18% (11)	0% (0)
Availability of computer models	22% (13)	36% (21)	37% (22)	5% (3)
Availability of historic data	32% (19)	41% (24)	27% (16)	0% (0)

Total Respondents: 61

Table 4: Importance of non-curricular activities the coordinator could focus on

	Extremely Important	Very Important	Important	Somewhat Important	Not Important
Gather and share info about funding sources	39% (11)	25% (7)	25% (7)	7% (2)	4% (1)
Provide transportation options and advice	11% (3)	21% (6)	21% (6)	39% (11)	7% (2)
Facilitate scheduling groups with providers	11% (3)	21% (6)	21% (6)	18% (5)	29% (8)
Organize and manage an equipment pool	11% (3)	18% (5)	14% (4)	32% (9)	25% (7)
Coordinate outreach activities	26% (7)	48% (13)	11% (3)	11% (3)	4% (1)
Recommend best program and/or platform for different types of experiences	29% (8)	43% (12)	18% (5)	11% (3)	0% (0)

Total Respondents: 29

Table 5: Importance of tasks regarding curriculum that the coordinator could focus on

	Extremely Important	Very Important	Important	Somewhat Important	Not Important
Create curricula which meets EALRs	15% (4)	26% (7)	37% (10)	11% (3)	11% (3)
Make curricula flexible	27% (7)	27% (7)	27% (7)	8% (2)	12% (3)
Make curricula easy to distribute (web)	39% (11)	18% (5)	25% (7)	18% (5)	0% (0)
Create clearing-house for existing curricula	43% (12)	21% (6)	25% (7)	7% (2)	4% (1)
Coordinate data sharing and needs, create curricula that use these data	29% (8)	36% (10)	21% (6)	14% (4)	0% (0)

Total Respondents: 28

Table 6: Types of funding to pay the coordinator's salary

	Extremely Important	Very Important	Important	Somewhat Important	Not Important
Consortium fees (providers and users both pay)	21% (6)	11% (3)	46% (13)	7% (2)	14% (4)
Grants from private foundations	19% (5)	33% (9)	33% (9)	11% (3)	4% (1)
Grants from federal agencies	12% (3)	19% (5)	42% (11)	19% (5)	8% (2)
Some sort of self-sustaining business model	32% (8)	0% (0)	28% (7)	12% (3)	28% (7)

Total Respondents: 28

Table 7: Type of organizational structure to fund and manage the coordinator

	Best	O.K.	Worst
Establish an independent membership cooperative organization (providers and users) but ask an exiting non-profit to act as its fiscal agent	15% (4)	69% (18)	15% (4)
Ask an existing organization to create a position within their organization to provide these services. (NB, funding per se would not be requested from the partner organization other than in the form of office space and payroll services.)	41% (11)	37% (10)	22% (6)
Establish an independent membership cooperative non-profit to house the coordinating person and website. The non-profit will be directed by a board comprised of representatives from the founding providers and users (members).	31% (8)	23% (6)	46% (12)

Total Respondents: 27

Table 8: Where should coordinator's office be?

	Agree
University or Community College	52% (14)
Existing non-profit	19% (5)
Existing marine science center	44% (11)
Existing association	19% (5)
Create a new umbrella organization	7% (2)

Total Respondents: 27 (NB: multiple choices were allowed)

Appendices

Appendix 1 – Steering Committee Members

Christian P. Sarason, Chair – *Program Director*, Ocean Inquiry Project, Seattle, WA
 Jim Gawel – *Assistant Professor*, University of Washington (UW), Tacoma, WA
 Beth Grafe – *Executive Director*, Sound Experience, Port Townsend, WA
 Ardi Kveven – *Executive Director*, Ocean Research College Academy, Everett, WA
 Ellie Linen Low – *Executive Director*, Salish Sea Expeditions, Bainbridge Island, WA
 Stephanie Raymond – *Education Coordinator*, People for Puget Sound, Seattle, WA
 Tom Schaefer – *Program Director*, Pacific Marine Research, Seattle, WA
 Kathy Sider – *Conservation Education Manager*, Seattle Aquarium, Seattle, WA
 Fritz Stahr – *President*, Ocean Inquiry Project, Seattle, WA (*ex-officio, non-voting*)
 Angie Thomson-Bulldis – *Assistant Director, Development and Outreach Initiatives*, UW
 College of Ocean and Fishery Sciences, Seattle, WA

Appendix 2 – Participants

Nathan Ahlgren
University of Washington
Seattle, WA
nahlgren@ocean.washington.edu

Mark Allen
Underwater Admiralty Services
Kirkland, WA
support@uasi.org

Eric Baer
Highline Community College
Des Moines, WA
ebaer@highline.edu

Sue Baldwin
Western Washington University
Clinton, WA
redwings@whidbey.com

Judith Barker
Fife School District
Tacoma, WA
jbarker@mail.fife.k12.wa.us

Stephen Barker
Fife School District
Tacoma, WA
jbarker@mail.fife.k12.wa.us

Patty Bauer
Northshore School District
Woodinville, WA
pbauer@nsd.org

Herb Bergamini
The Northwest School
Seattle, WA
herb.bergamini@northwestschool.org

Joshua Berger
The Evergreen State College
Olympia, WA
bergerj@evergreen.edu

Scott Bergquist
Underwater Admiralty Services
Kirkland, WA
support@uasi.org

Kate Boersma
Oregon Museum of Science and Industry
Portland, OR
KBoersma@omsi.edu

Julia Bos
Washington Department of Ecology
Olympia, WA
jbos461@ecy.wa.gov

Jan Burnette
Pacific Marine Research
Seattle, WA.
janatpmr@aol.com

Liz Campbell
Seattle Central Community College
Seattle, WA
ecampb@sccd.ctc.edu

Derek Clark
Cedar River Middle School
Maple Valley, WA
dclark@tahoma.wednet.edu

Judy Cowling
Highline High School
Burien, WA
jcowling@hsd401.org

Susan Crawford
Underwater Admiralty Services
Kirkland, WA
support@uasi.org

Judy D'Amore
Port Townsend Marine Science Center
Port Townsend, WA
jdamore@olympen.com

Chuck Fowler
Pacific Northwest Maritime Heritage Council
Olympia, WA
nwnx@olywa.net

Coordinating and Advancing Field-Based Marine Science Education in Puget Sound

Sara Frame
IslandWood
Bainbridge Island, WA
saraf@islandwood.org

James Gawel
University of Washington, Tacoma
Tacoma, WA
jimgawel@u.washington.edu

Amy Glaub
Western Washington University
Seattle, WA
amyglaub@hotmail.com,
glauba@u.washington.edu

Jim Hasselbalch
Seattle Maritime Academy
Seattle, WA
jhasselbalch@sccd.ctc.edu

Gary Hauk
Juanita High School
Kirkland, WA
ghauk@lkwash.wednet.edu

Jennifer Hoffman
Ocean Research College Academy
Everett, WA
hoffrau@u.washington.edu

Joe Hull
Seattle Central Community College
Seattle, WA
jhull@sccd.ctc.edu

Daniel Hull
Nisqually Reach Nature Center
Olympia, WA
nrnc@nisquallyestuary.org

Kathleen Hurley
Independent
Bellingham, WA
arrecifes4@yahoo.com

Robin Jacobson
The Whale Museum
Friday Harbor, WA
robin@whalemuseum.org

Joseph Jones
Oregon Museum of Science and Industry
Redmond, OR
JPJones@omsi.edu

Dawn Juliano
University of Washington
Seattle, WA
dawnj@u.washington.edu

Kristina Kee
Penny Creek Elementary
Everett, WA
kristina_kee@everett.wednet.edu

Caroline Kiehle
Institute for Systems Biology
Seattle, WA
ckiehle@systemsbiology.org

Michele LaFontaine
Pierce College
Lakewood, WA
gomtuu50@yahoo.com

Keri Larocque
Independent
Seattle, WA
Kerilarocque@aol.com

Wendy Lawrence
Eastside Preparatory School
Kirkland, WA
wlawrence@eastsideprep.org

Chuck Lennox
Cascade Interpretive Consulting
Seattle, WA
chuck.lennox@interpconsulting.com

Ellie Linen Low
Salish Sea Expeditions
Bainbridge Island, WA
ellie@salish.org

Niki Masters
Independent
Seattle, WA
nmasters206@aol.com

Coordinating and Advancing Field-Based Marine Science Education in Puget Sound

Janice Mathisen
Seattle Aquarium
Seattle, WA
janice.mathisen@seattle.gov

Fiona Norris
San Juan Nature Institute
Friday Harbor, WA
info@sjnature.org

Pat Maxwell
Pacific Marine Research
Seattle, WA.
patmaxwell@hotmail.com

Wayne Olsen
Pierce College
Bonney Lake, WA
wbolsen@comcast.net

Michelle McConnell
Menzies Project
Port Townsend, WA
michellelmcconnell@hotmail.com

Joan Olson
Lake Washington School District
Mercer Island, WA
mauryo@comcast.net

Nancy McKay
The Russell Family Foundation
Gig Harbor, WA
Nancy@TRFF.ORG

Jeff Parsons
University of Washington
Seattle, WA
parsons@ocean.washington.edu

Lori Mitchell
Salish Sea Expeditions
Bainbridge Island, WA
lori@salish.org

Sarah Pedersen
The Evergreen State College
Olympia, WA
pederses@evergreen.edu

Beth Morrison
Northshore School District
Woodinville, WA
bethdmorrison@aol.com

Tom Perry
Island County Beach Watchers
Camano Island, WA
vickintom@earthlink.net

Ron Nilsen
Bellarmine Preparatory High School
Tacoma, WA
nilsenr@bellarmineprep.org

Vicki Perry
Island County Beach Watchers
Camano Island, WA
vickintom@earthlink.net

Joyce Nishimura
Woodward Middle School
Bainbridge Island, WA
jnishimura@bainbridge.wednet.edu

Judy Pierce
Cedarcrest High School
Duvall, WA
piercej@riverview.wednet.edu

Beth Norman
Pierce College
Lakewood, WA
bnorman@pierce.ctc.edu

Terese Plutko
St. Monica School
Mercer Island, WA
plutkot@stmonicasea.org

Jim Norris
Menzies Project
Port Townsend, WA
jnorris@olympus.net

Casey Ralston
Northwest Fisheries Science Center
Seattle, WA
caseyr2@u.washington.edu

Coordinating and Advancing Field-Based Marine Science Education in Puget Sound

Alan Rammer
Washington Department of Fish & Wildlife
Montesano, WA
rammeadr@dfw.wa.gov

Stephanie Raymond
People for Puget Sound
Seattle, WA
sraymond@pugetsound.org

Ronald Raymond
Spectrum Marine Development
Seattle, WA
spectrum@olypen.com

Jose Rios
University of Washington, Tacoma
Tacoma, WA
jrrios@u.washington.edu

Cassandra Sandkam
Odyssey Maritime Discovery Center
Seattle, WA
csandkam@ody.org

Christian Sarason
Ocean Inquiry Project
Seattle, WA
cpsarason@oceaninquiry.org

Tom Schaefer
Pacific Marine Research
Seattle, WA
ctschaef@aol.com

David Secord
University of Washington -Tacoma
Tacoma, WA

Katherine Shaw
Cascadia Community College
Seattle, WA
kfshaw@ocean.washington.edu

Kathy Sider
Seattle Aquarium
Seattle, WA
kathy.sider@seattle.gov

Jonna Sloan
Padilla Bay National Estuarine Research
Reserve
Mount Vernon, WA
jsloan@padillabay.gov

Giovannina Souers
Seattle Aquarium
Seattle, WA
giovannina.souers@seattle.gov

Paul Spang
Garfield High School
Seattle, WA
wpspangenber@seattleschools.org

Fritz Stahr
Ocean Inquiry Project
Seattle, WA
stahr@oceaninquiry.org

Valerie Sundby
University of Washington
Seattle, WA
vsundby@u.washington.edu

Amy Sutton
Portland Public Schools
Portland, OR
asutton@pps.k12.or.us

Angie Thomson-Bulldis
University of Washington
Seattle, WA
angiet@u.washington.edu

Scott Veirs
Beam Reach
Seattle, WA
scott@beamreach.org

Debbi Walcker
Northshore School District
Woodinville, WA
dwalcker@nsd.org

Carolyn Wilcox
Edmonds School District
Seattle, WA
wilcoxc@edmonds.wednet.edu

Coordinating and Advancing Field-Based Marine Science Education in Puget Sound

William Winn
University of Washington
Seattle, WA
billwinn@u.washington.edu

Robyn Woodman
Independent
Stanwood, WA
robynwoodman@hotmail.com

Appendix 3 – Schedule of Activities

*Coordinating and Advancing Field-Based Marine Science Education in Puget Sound:
Creating a Vision for the Future*

Sunday, March 14

- 8:30a** — Field trips begin. *Salish Sea Expeditions* and *Menzies Project* trips depart from Bell Harbor Marina (next to Pier 66); *Pacific Marine Research* trip departs from Argosy dock (Pier 56).
- 11:00a** — Registration starts, *Odyssey Maritime Discovery Center*.
- 1:00p** — *Odyssey Great Room*: Introduction, call to action, and initial survey results.
Fritz Stahr (Ocean Inquiry Project)
- 1:15p** — *Odyssey Great Room*: Boat-based programs in Puget Sound.
Ellie Linen Low (Salish Sea Expeditions)
- 1:45p** — *Odyssey Great Room*: Beach-based programs in Puget Sound.
Kathy Sider (Seattle Aquarium)
- 2:15p** — *Odyssey Great Room*: Examples of other programs around the country.
Christian P. Sarason (Ocean Inquiry Project)
- 2:45p** — *Odyssey Great Room*: Summary of status-quo. Directions for breakout sessions.
- 3:00p** — *Odyssey Great Room*: Break for coffee and snacks.
- 3:30p** — *Breakout Rooms (Aquarium and Odyssey)*: What are the top 5 “wants”, or ways, to create the best field-based marine science education for your students/programs? What are the top 5 “needs”, or critical resources, to facilitate those “wants”? Check your badge to identify your breakout session room (by color-code). (Please finish up by 4:45p to get to Aquarium by 5p.)
- 5:00p** — *Aquarium Bay View Room*: Wrap-up session for wants & needs. Each breakout group reports back a summary of their results, highlighting the main points (5 min each group).
- 5:30p** — *Aquarium Bay View Room (and exhibits after 6pm)*: Join us for a catered reception to meet other participants, create connections and share ideas.
- 7:30p** — *Aquarium Bay View Room and Exhibits*: Reception (ends ~9 p.m.)

Monday, March 15

- 9:00a** — *Odyssey Great Room*: Recap of Sunday’s results and a call to action: ***Creating a vision for the future***. Fritz Stahr (Ocean Inquiry Project)
- 9:30a** — *Odyssey Great Room and Breakout rooms*: Breakouts by age group served (K-6, 6-12, community college and university, general public and informal). Breakout groups should consider wants and

Coordinating and Advancing Field-Based Marine Science Education in Puget Sound

needs identified on Sunday and in survey and add (or elaborate on) anything specific to their demographic.

- 10:30a** — *Odyssey Great Room:* Break for coffee and snacks.
- 11:00a** — *Breakout Rooms:* Breakouts by color-code again. Work on solutions to one or two of the top needs identified on Sunday. Assignments by Steering Comm.
- 12:00p** — *At Large:* Lunch, please see enclosed suggestion list for area restaurants.
- 1:00p** — *Breakout Rooms/Odyssey Great Room:* Reconvene in same groups to work on weaving solutions to “needs” with “wants” to create a vision for the future.
- 2:30p** — *Odyssey Great Room:* Break for coffee and snacks.
- 3:00p** — *Odyssey Great Room:* Final discussion and integration of our vision for field-based marine science education in Puget Sound. What should it be like in 2014? in 2024?
- 4:00p** — *Adjournment.*