BPRC RETREAT
October 30, 2012
AGENDA

9:00 am  Set up / Coffee & Bagels
9:15  State of BPRC Address (EMT)
10:15  BPRC Time Line Project (Lynn Lay & Laura Kissel)
10:30  Break
10:45  BPRC Education/Outreach Update
       (Carol Landis, Jason Cervenec, Nate Patrick)
11:15  Environmental Sciences Network at Ohio State (Dr. Richard Moore)
11:30  Tom Kassebaum & Wes Haines – IT issues & Updates
11:45  Open discussion
12:00 pm  Lunch is provided (Jason will have a new slide show running)

NOTE: As we have to vacate the Women’s Club at 1 pm it is important
      that each presenter stay on time. Also I would like to continue
      the discussions over lunch please.

1:00  Adjourn
BPRC Awards Compared to Inflation (FY 1981 to 2012)

TOTAL BPRC Awards

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Dollars (Millions)</th>
</tr>
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<tbody>
<tr>
<td>1980</td>
<td>$3.80</td>
</tr>
<tr>
<td>1983</td>
<td>$3.44</td>
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<tr>
<td>1986</td>
<td>$4.42</td>
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<tr>
<td>1989</td>
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<td>2007</td>
<td>$4.89</td>
</tr>
<tr>
<td>2010</td>
<td>$6.42</td>
</tr>
<tr>
<td>2013</td>
<td>$6.02</td>
</tr>
</tbody>
</table>

Total Number of Grants and Awards Dollars (FY 1998 - 2012)

2012 = 26 total awards (11 new; 15 continuing)
IDC on Awards FY12: $1,122,780
IDC Expense FY12: $1,104,475

Arts and Sciences Funding for BPRC was $642,153 (74%)
Office of Research Funding for BPRC was $225,621 (26%)

Net gain: $237,001

OR Investment: ~$225,621
Return on IDC: ~$287,242
Return on Investment: $61,621 ~127%

ASC Investment: ~$642,153
Return on IDC: ~$817,533
Return on investment: $175,380 ~127%
Student Graduations

Ji Hoon Jung, M.A. (Box) – Summer 2012
Phaedra Tinder, M.S. (Howat) – Spring 2012
Rachael Gray, M.S. (Polyak) – Spring 2012
Kate Ziegelgruber, M.S. (Chin) – Spring 2012
Marcella Card, PhD (Chin) – Spring 2012
Allison Kreinberg, M.S. (Chin) – Spring 2012
Katelyn Johnson, M.S. (Thompson) – Spring 2012
Lindsey Higgins, M.S. (Mosley-Thompson) – Spring 2012
Alex Eddy, M.S. (Mark) – Spring 2012
Stephanie Konfal, Ph.D. (Wilson) – Spring 2012
William Magee – M.S. (Wilson) – Spring 2012
Jamey Stutz – M.S. (Wilson) – Spring 2012
Zachary Trunkely – M.S. (Wilson) – Spring 2012
BPRC Tours
Number of people who toured BPRC (Fiscal Year)

BPRC Outreach
July 2011 - June 2012
FY 2012
Total: 3920 People

Outreach: 1731, 44%
Tours: 718, 18%
School Visits: 428, 11%
Rock Box: 1043, 27%

Data Sources: Outreach (Carol, Nate), Anne Grunow, Laura Kissel, Presentation Reports submitted or reported
BPRC Outreach 2012-2013
(Thus far FY 13 - 1729 people)

Outreach: 801, 46%
Tours: 215, 13%
School Visits: 363, 22%
Rock Box: 330, 19%
Outreach: (9)
School Visits: (1)
Rock Box: (1)
Tours: (13)

Office of Research has provided additional funding ($)

Instructional Equipment and Supplies: $50,000

Renovation of rooms 177 and 136 Scott Hall to move the Learning Center from Room 136 to Room 177 Scott Hall.

Funds are being used for demolition, flooring, paint, electrical work, transfer of the Polycom System and other general computer equipment upgrades for the Learning Center and BPRC.
Kudos to Jason, Michele & Tom for the Redesign of the Learning Center

Before

Kudos to Jason, Michele & Tom for the Redesign of the Learning Center

After
Kudos to Jason, Michele & Tom for the Redesign of the Learning Center

After

BPRC Funds and Endowments

Development Fund Names and Numbers

If you are interested in supporting the activities of the BPRC, we have several funds to which you might make a contribution. To make an online donation, please click on the fund of interest below.

- Friends of BPRC (00000)
- Jack Traywoca Graduate Scholarship in Atmospheric Sciences (367395)
- Details on the endowed fund
- Corps Webster Undergraduate Research Support (01020)
- Ice Core Program Fund (319793)
- U.S. Polar Bear Research (311024)
- Snow, Water, and Research Support (301271)
- BPRC Education and Outreach (031019)
- Global Climate Change Research Support (31919)
- Archival Program Support Fund (566375)
- Polar Archives General Fund (000250)
- Byrd Polar Fellowship Program (900148)
- Henry H. Brecher Scholarship Fund (319629) • Details on this fund and Mr. Brecher
- Emeritus D. Rudolph Polar Studies Fund (90627)
- BPRC: Polar Meteorology General Development Fund (01396)

Alternatively, donations can also be sent via check to the BPRC or the OSU Development Office. Please make checks payable to The Ohio State University.

Byrd Polar Research Center
108 Scott Hall
1010 Carnarvon Rd
Columbus, OH 43210
814-292-6631

OSU Development
701 Fawcett Center
2400 Olentangy River Road
Columbus, OH 43210
814-292-8668
Development Activities (FY 2011 – 2012)

We continue to have ~12 donors who give annually or on a routine basis (~$5,500). This includes contributions through OSU payroll deductions of ~$350/mo.

Spontaneous donations do happen!

Some recent (FY 2013) activities:

Dennis Costello (OSU, M.A. Economics), Braemar Energy Ventures:
  Replacement of all freezer lighting with LED technology: ($6500)

BPRC was featured at the opening events (lunch and dinner) for the “But for Ohio State” $2.5 Billion campaign (included a video)

Special Visitors:
Keith Monda (ret. President of Coach, ASC Advisory Council and Member of the Board of The Ohio State University Foundation; currently chairing the Arts and Sciences Campaign Committee; Keith is also involved with the Kilimanjaro book project (sponsored by the Rotary Club)

Tours of Note
Dean David Williams, COE (02/01/2012) and Dean Joe Steinmetz, ASC (12/19/2011)

BPRC PIs Play a Big Role in the Scientific Committee on Antarctic Research (SCAR)

Following the SCAR Open Science Conference in Portland, OR in July 2012:
Terry Wilson is now the U.S. Delegate to SCAR.
Berry Lyons is Chief Officer of the Standing Scientific Group on Geosciences
David Bromwich is Chief Officer of the Standing Scientific Group on Physical Sciences
There are only 3 Standing Scientific Groups: BPRC scientists lead two of them!
Chief Officers are also members of the SCAR Executive Committee.
BPRC is hosting the SCAR and POLENET web sites.
Congratulations to Terry, David and Berry!

12/31/2012
Accomplishments: July 1, 2011 – June 30, 2012
(disclaimer – we can only mention items brought to our attention)

Matthew Makou, November, 2012, Assistant Professor of sedimentary and organic geochemistry at the University Lyon.

Broxton Bird, August 2012, Assistant Professor, Dept. of Earth Sciences, Indiana University-Purdue, Indianapolis (IUPUI).

Matthew Konfirst, September 2012, AAAS Fellow at NSF in Chemical, Bioengineering Environmental and Transport Systems

Ken Jezek retired June 30, 2012. Faculty Emeritus He will continue to submit proposals and run grants through BPRC

Santiago de la Peña joined BPRC in January 2012

Chiara Ugletti joined BPRC in November 2011

Jason Cervenec joined BPRC as our new Director of Education & Outreach

Carol Landis plans to retire (December 31st, 2012) …. Carol will never retire

Stephanie Konfal received her Ph.D. in Spring of 2012 and has joined Dr. Wilson’s POLENET research group.

Accomplishments: July 1, 2011 – June 30, 2012
(disclaimer – we can only mention items brought to our attention)

David Bromwich is a member of the WMO Polar Prediction Project to advance numerical weather prediction in the Polar Regions; Workshop in UK this December

Ellyn Enderlin won the Michael Johnson Graduate Student Award (for mid-career graduate students) in the School of Earth Sciences

Berry Lyons was awarded the 2012 Distinguished Undergraduate Research Mentor along with four other faculty

Ellen Mosley-Thompson & Lonnie Thompson received the Benjamin Franklin Medal from the Franklin Institute, April 26, 2012

Stacy Porter received a Fenburr Travel Award from the Department of Geography

BPRC PIs participated with faculty and students from the Columbus College of Art and Design (CCAD) on a class project – communicating science through art
CCAD Faculty member: Kim Landsbergen, Ph.D.
See a 4 minute video:  
http://www.youtube.com/watch?v=cnR8zYKZRP0&feature=youtu.be
News Coverage from BPRC website (http://bprc.osu.edu/news/press/)
(disclaimer – we can only mention items brought to our attention)

Jason Box: OurAmazingPlanet, MSNBC, Christian Science Monitor, Seattle Post Intelligencer, Climate Central, OSU Research News, NOAA ClimateWatch Magazine (Petermann Glacier breakup; Greenland Ice Sheet melt; historical photos)

Lonnie Thompson and Ellen Mosley-Thompson:
CNN International interview, New York Times

Paolo Gabrielli & Lonnie Thompson: OSU Research report (Ortles Project)

Victor Zagorodnov: Antarctic Sun (Ross Ice Shelf Project)

Mary Davis: CBS News, LiveScience.com (AGU presentation)

Harunur Rashid: EOS interview (Abrupt Climate Change: Mechanisms, Patterns, and Impacts)

There are many more so please remember to report these to Wes / Michele!
Kudos to Wes and Tom for the Redesigned Web Page
Kudos to Bryan and Alfonso: BPRC’s Lego League (The Penguins)
Team: 10 students; Grades 4 to 7; Ages 9 to 12
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Team: 10 students; Grades 4 to 7; Ages 9 to 12
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Last Year’s Discussion: Future Goals (FY 2011-1012 and onward)

1) Initiate an External Advisory Board
2) Complete the virtual tour (digital signage project)
3) Once the virtual tour is completed place it on our website
4) Add giving opportunities to the specific virtual tour sites – using iPhone
5) Standardize the front pages for each research group
6) Attempt to tap one time funds from President Gee’s $1 Billion initiative
7) Continue with building upgrades as funds allow
8) Redesign our brochure for giving opportunities and include more concrete examples
Last Year’s Discussion: Future Goals (FY 2011-1012 and onward)

1) Initiate an External Advisory Board

Dan Schrag

Daniel P. Schrag is the Sturgis Hooper Professor of Geology at Harvard University, Professor of Environmental Science and Engineering, and Director of the Harvard University Center for the Environment.

B.S. in geology and geophysics and political science from Yale
Ph.D. in geology from the UC Berkeley

Research Foci:
- Climate & climate change over the broadest range of Earth history
- Using information on past climate to better understand anthropogenic climate change in the future;
- Geochemistry and climatology
- Energy technology & policy, including carbon capture and storage and low-carbon synthetic fuels

He currently serves on President Obama’s Council of Advisors on Science and Technology; recipient of the James B. Macelwane Medal from the AGU and a MacArthur Fellow

David Randall

Director: Center for Multiscale Modeling of Atmospheric Processes
Professor, Dept. of Atmospheric Science, Colorado State University

B.S. and M.S. Aeronautical & Astronautical Engineering, OSU
Ph.D. Atmospheric Sciences, UCLA

Research Foci:
- General circulation modeling
- Cloud-climate studies and cloud parameterization
- Climate dynamics
- Numerical methods

Fellow (AMS, AGU, AAAS)
NASA Medal for Exceptional Scientific Achievement
Journal of Climate - Chief Editor
Last Year’s Discussion: Future Goals (FY 2011-1012 and onward)

1) Initiate an External Advisory Board

Jim White

**Director of INSTAAR**, University of Colorado Boulder
Professor of Geological Sciences and Environmental Studies
Current Chair of the NAS-NRC Polar Research Board

Ph.D. Columbia University

Research Foci:
- Global scale climate and environmental dynamics
- Carbon dioxide concentrations and climate from stable hydrogen isotopes, peat and other organics
- Climate from deuterium excess and hydrogen isotopes in ice cores
- Isotopes in general circulation models
- Modern carbon cycle dynamics via isotopes of CO₂ & CH₄
- Participant in GISP2, NorthGRIP, NEEM, Siple Dome and Inland WAIS ice core drilling project

Tamara Ledley

Dr. Tamara Shapiro Ledley
Senior scientist and Chair of the Center for Science Teaching and Learning at TERC. Prior to that she conducted a research program in Earth system science with an emphasis on the polar regions at Rice University for 15 years.

Ph.D. Massachusetts Institute of Technology

Current Educational Foci:
- Confronting the Challenges of Climate Literacy, NSF, PI
- Climate Literacy and Energy Awareness Network Pathway, NSF, PI
- Earth System Science: A Key to Climate Literacy", NASA, PI
- Facilitating Student Understanding of the Earth System on Multiple Time Scales", NSF, PI
- Enhancing Use of Data in Education: Bridging the Scientific and Educational Communities", NSF, PI

Technical Education Research Center, Cambridge, MA
Education & Public Outreach

2011-2012

Landis.83@osu.edu

http://bprc.osu.edu/education/

Area events

• Earth Day at the Zoo
• Scarlet Gray & Green
• Girl Scouts oceanography merit badge event
• COSI Annual Teacher Resource Day (Nate)

Other:
• STEM recruiting day @ Ohio Union (Nate)
• Peru Night
• Columbus Bicentennial
On Campus & Online

• Pres. Gee's breakfast,
• Leadership Conference @ 4-H Building,
• VP Beatty's Outreach & Engagement event,
• Several online webinars and conference calls (e.g. Climate Literacy Network: CLEAN)
• On planning committee for OSU webinar series & Breakfast of Science Champions

Conference participation

• Prepared poster for Alvaro’s presentation & contributed paper for International Geographical Union's Regional Conference in Santiago, Chile (Nov 2011)

  Jan 18-20, 2012 (poster)

• TN Environmental Conference, March 2012

• Interfaith Power & Light (IPL) national conference,
  Apr 30- May 2, 2012 (presentation)
Presentations in TN

• Lonnie’s Skype presentation to UT-Knoxville
• Eastern TN State Univ. (ETSU) faculty luncheon
• Johnson City, TN Rotary Club
• Boone Watershed Partnership annual meeting
• Greeneville TN Americorps conference

Helping Teachers

• Assisted w/ a 6-week climate change course for elementary teachers
  (@ Metro School working with Kim Lightle)
• Monthly news blasts to e-list
• Provided support to teacher requests
Participation in Funded Grant Proposals

Mike Durand: “From Classrooms to Geoscience Careers: Developing, Testing and Disseminating a High School Module on Modeling Water in Urban Environments,”


Yo Chin’s Study of Chemicals from Flame Retardants in Populations,

&

Nathan Stansell’s studies of Holocene climate variability in the tropical Andes.

The Handoff!

….Here’s Jason!!

• School book about Mt. Kilimanjaro (Rotary Club partnership) being written by a retired Tanzanian teacher,

• 2 presentations at AGU in Dec. 2012,

• Update and upgrade of Polar Frontier exhibit at the Zoo,

• Summer 2013 hydro-modeling workshop at Metro School,

• More videos & social networking, etc.
Overview

What have I been doing?

• Infrastructure
• Communication
• Materials & Programs
• Partnerships

Where is E&O headed?

Infrastructure
Communication

Materials & Programs

12/31/2012
Partnerships

Ohio Resource Center
College of Education & Human Ecology
Office of Diversity & Inclusion
University Libraries
Department of History
Office of Technology Commercialization & Knowledge Transfer
School of Environment & Natural Resources
Battelle

Schools: Metro, GEMS
Local School Districts: Columbus, Hamilton, Heath, Newark, Southwestern, Worthington

Where is E&O headed?
Overarching Goals

- All program and materials need to be based on best practices, research, or stakeholder needs.
- Data need to be collected on demand, usage, and success of implementation for programs and materials.
- Major shifts are occurring in both K-12 education (framework, standards, evaluation) and universities (research into learning and pressure for shifts in delivery).
- Technology shifts are occurring in instruction of students and communication with the general public.
- Partnerships are critical to enhance quality, reach a larger audience, avoid duplication of services, and distribute costs.
- BPRC needs to serve as a voice for quality and balance in science education.
Where is E&O headed?

Specifics

- Major Push for User-Directed Contact with BPRC (e-mail listserves, website, Facebook, Twitter, mobile apps, etc.)
- Develop & Leverage Comprehensive “Packets” of Programs & Materials Based on BPRC Research (learning materials developed and coordinated with teacher training or student workshops - example: Earth Sciences Careers Grant, student materials developed for inclusion with school site visits and existing BPRC products - example: Rock Boxes)
- Focus on Partnerships in Earth and Biological Sciences That Allow Us to Lead the Way in Earth Systems Education for Both Formal & Informal Learning Environments (Framework, Next Generational Science Standards, Modeling Instruction)
- Development of Online Learning Materials That Can Be Effectively Used in Hybrid Course Structures while Formatting & Funding Them for Sustained Use
- Developing Partnership Audiences for Field Testing Materials
- Regularly Offer Innovative Programs to Engage a Young Audience
- Help BPRC Create Partnerships

ENVIRONMENTAL SCIENCES NETWORK

AT OHIO STATE

Dr. Richard Moore, Executive Director
Where did we come from?

- There is “tremendous opportunity for OSU to excel in the environmental and earth sciences”
- BUT: “Organization and coordination of these efforts are currently suboptimal”
- OSU’s strong breadth and diversity in environmental sciences needs loose & flexible connective structure as well as much less red tape and “territorialism” involved in cross-unit work.

What do we do?

**Connect** members of the ES community at Ohio State.

- **300+ Faculty enrolled on esn.osu.edu**
- **19 Environmental doctoral programs, 18 more related**
- **87 ES Graduate Program faculty**
- **5 New interdisciplinary ES graduate specializations**
- **36 Environmentally related centers**
What do we do?

Reduce barriers to performing interdisciplinary ES research, teaching and/or outreach.

- Our consortium backs cross-unit collaboration.
- Working with Vice-Provost Susan Williams on MOU for interdisciplinary work.
- Sponsoring seed grants to stimulate new cutting-edge research clusters.

Seed Grant Breakdown

Seed Grant Participants By College
70 participants total
27 OSU schools / departments
9 OSU colleges
$75M in target grant funds identified.

- CPH
- CFAES
- CAS
- COE
- Glenn
- Fisher
- Law
- Ed & Hum Ec
- Vet Med
- External
What do we do?

**Recruit** and retain talented graduate students in ES across the university.

- ESN: a portal for all environmentally related graduate programs.
- This year: connect grad studies chairs and collaborate on shared issues, recruiting, etc.

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**Raise the profile** of research and graduate programs in ES at Ohio State.

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**What do we do?**

**Connect**

**Reduce barriers**

**Recruit**

**Elevate**
What Can We Do For You?

We represent you—the academic environmental sciences at Ohio State—in:

• Conversations around big issues affecting many groups including water, climate, and energy.

• Cluster hiring and related initiatives with the University Discovery Themes.

Any questions?

ENVIRONMENTAL SCIENCES NETWORK AT OHIO STATE

Dr. Richard Moore, Executive Director
### Last Year’s Discussion: Future Goals (FY 2011-1012 and onward)

1. Initiate an External Advisory Board  
2. Complete the virtual tour (digital signage project)  
3. Once the virtual tour is completed place it on our website  
4. Standardize the front pages for each research group  
5. Add giving opportunities to the specific virtual tour sites – using iPhone  
6. Attempt to tap one time funds from President Gee’s $1 Billion initiative  
7. Continue with building upgrades as funds allow  
8. Redesign our brochure for giving opportunities and include more concrete examples

### This Year’s Future Goals (FY 2012-1013 and onward)

1. Hold first meeting of our External Advisory Board (Jan or Feb, 2013)  
2. Complete the virtual tour (digital signage project)  
3. Once the virtual tour is completed place it on our website  
4. Add giving opportunities to the specific virtual tour sites – using iPhone  
5. Standardize the front pages for each research group - continue?  
6. Attempt to tap one time funds from President Gee’s $1 Billion initiative  
7. Continue with building upgrades as funds allow  
8. Redesign our brochure for giving opportunities and include more concrete examples  
9. Seek funds to enhance our Post-doctoral Program  
10. Increase funding for E & O Program  
11. Add a new group (Remote Sensing, Other?)  
12. Continue to meet with potential donors; and explore the potential of the Campus Campaign.

Please provide your thoughts? Discussion
ADJOURN