

OCS Scientific Committee Meeting

May 17-19, 2011

Holiday Inn Cape Cod Hyannis, Massachusetts

Official Proceedings

Processing

- Tuesday
 - [Agenda](#)
 - Presentations
 - › Associate Director's Welcome, New Opportunities and Challenges – Mr. Robert LaBelle
 - › Alternative Energy Programs: Current Status and Next Steps – [Ms. Michelle Morin](#)
 - › Update of Activities Pertaining to the Priorities of the National Ocean Policy – [Dr. Mary Boatman](#)
 - › Atlantic Governance Councils (NROC, MARCO); Renewable Energy and Wildlife – [Mr. Marvin Moriarty](#)
 - › Update of Ongoing and Future Research Pertaining to the Deepwater Horizon Oil Spill –
[Dr. Pat Roscigno](#)
 - › Report on the Gulf of Mexico Information Transfer Meeting – Drs. D. Michael Fry, Lorrie Rea,
Tyler Priest, and Joe Smith
 - › Overview of Environmental Studies Program – [Dr. Rodney Cluck](#)
 - › Overview of Regional Environmental Programs including Regional components of the ESP –
[Dr. Dee Williams](#)
[Ms. Michelle Morin](#)
[Dr. Pat Roscigno](#)
[Dr. Ann Scarborough Bull](#)
 - › FERC, NOAA, and DOE Renewable Energy Federal Partnerships – Questions and Answers – Led
by Dr. Alan Thornhill
 - › Orientation for Discipline Breakout Groups and Special Announcement – Dr. Rodney Cluck
 - Transcripts Outline
- Wednesday
 - [Agenda](#)
- Thursday
 - [Agenda](#)
 - Discipline Subcommittee Presentations
 - › [Biology and Ecology](#)
 - › [Physical Oceanography](#)
 - › [Social Sciences](#)
 - › [Interdisciplinary](#)
 - Open Discussion of Subcommittee Reports
 - Telecon with Director Michael Bromwich
 - Committee Business
 - Transcripts Outline
- Acronyms

(Transcripts are available upon request. Please go to Transcripts Outline and request which pages you would like to receive. Please e-mail your request to:

Supporting Materials

- [Committee Members](#)
- [Discipline Groups and Subcommittees](#)
- [Invited Speakers](#)
- [Other Participants](#)

- Attendees
- [Federal Register](#)
- [Charter](#)

Bureau of Ocean Energy Management, Regulation and Enforcement
Outer Continental Shelf
Scientific Committee
Meeting Agenda

MEETING DATES: May 17-19, 2011

LOCATION: Holiday Inn
Cape Cod – Hyannis
1127 Iyannough Road
Hyannis, Massachusetts 02601

Tuesday, May 17

- | | | |
|------------|--|--|
| 9:00 a.m. | Welcome and Introductions
<i>(please turn cell phones off or set to silent)</i> | Dr. D. Michael Fry , Chair, OCS SC and
Dr. Rodney Cluck , Acting Executive Secretary
of the OCS SC and Chief, Environmental
Sciences Branch |
| 9:15 a.m. | Associate Director’s Welcome, New
Opportunities and Challenges | Mr. Robert LaBelle , Acting Associate Director
for Offshore Energy and Minerals Management |
| 9:30 a.m. | Alternative Energy Programs: Current
Status and Next Steps | Ms. Michelle Morin , Chief, Environmental
Review Branch, Office of Alternative Energy
Programs |
| 10:00 a.m. | Update of Activities Pertaining to the
Priorities of the National Ocean Policy | Dr. Mary Boatman , National Ocean Policy
Staff, Office of Science and Technology Policy |

10:30 a.m. – 10:45 a.m. BREAK

- | | | |
|------------|---|---|
| 10:45 a.m. | Atlantic Governance Councils
(NROC, MARCO); Renewable Energy
and Wildlife | Mr. Marvin Moriarty , Regional Director, U.S.
Fish and Wildlife Service, Northeast Region |
| 11:15 a.m. | Update of Ongoing and Future
Research Pertaining to the Deepwater
Horizon Oil Spill | Dr. Pat Roscigno , Chief, Environmental Studies
Section, Gulf of Mexico OCS Region |
| 11:30 a.m. | Report on the Gulf of Mexico
Information Transfer Meeting | Drs. D. Michael Fry, Lorrie Rea, Tyler Priest,
and Joe Smith , OCS SC Members |

12:00 – 1:30 p.m. LUNCH

1:30 p.m.	Director's Welcome and Presentation of Plaques to Outgoing Members	Mr. Michael Bromwich , Director, Bureau of Ocean Energy Management, Regulation and Enforcement
2:30 p.m.	Overview of Environmental Studies Program	Dr. Rodney Cluck , Acting Executive Secretary of the OCS SC and Chief, Environmental Sciences Branch
(2:45 p.m.)	Overview of Regional Environmental Programs including Regional components of the ESP	(20 minutes each)
	<ul style="list-style-type: none"> • Alaska OCS Region 	Dr. Dee Williams , Chief, Environmental Studies Management Section
3:05 p.m. – 3:20 p.m. BREAK		
(3:20 p.m.)	<ul style="list-style-type: none"> • Atlantic OCS Region 	Ms. Michelle Morin , Chief, Environmental Program, Office of Alternative Energy Programs
(3:40 p.m.)	<ul style="list-style-type: none"> • Gulf of Mexico 	Dr. Pat Roscigno , Chief, Environmental Studies Section
(4:00 p.m.)	<ul style="list-style-type: none"> • Pacific OCS Region 	Dr. Ann Scarborough Bull , Chief, Environmental Studies Section
4:20 p.m.	FERC, NOAA, and DOE Renewable Energy Federal Partnerships – Questions and Answers	Led by Dr. Alan Thornhill , Science Advisor to the Director, Bureau of Ocean Energy Management, Regulation and Enforcement
4:50 p.m.	Orientation for Discipline Breakout Groups and Special Announcement	Dr. Rodney Cluck , Acting Executive Secretary of the OCS SC and Chief, Environmental Sciences Branch
5:00 p.m.	Public Comment	

RECESS

**Bureau of Ocean Energy Management, Regulation and Enforcement
Outer Continental Shelf (OCS)
Scientific Committee (SC)
Meeting Agenda**

Wednesday, May 18

Physical Sciences, Biology, and Socioeconomic Disciplines meet separately to discuss national and regional studies plans for fiscal years 2012 and 2013.

Interdisciplinary Coordinator: Ms. Jennifer Ewald 8:00 – 9:30 (2 – Alaska; 1 Atlantic; 3 National)		
Biology/Ecology	Physical Sciences	Social Sciences
Coordinator: Dr. Mike Rasser	Coordinator: Dr. Guillermo Auad	Coordinator: Dr. John Primo
9:30 – 10:00 Atlantic (2)	9:30 – 10:00 Gulf of Mexico (1)	9:30 – 10:00 Alaska Studies Updates
10:00 – 10:15 BREAK		
10:15 – 11:30 Pacific (8)	10:15 – 11:30 Alaska (4)	10:15 – 11:30 Gulf of Mexico (3)
11:30 – 1:00 LUNCH		
1:00 – 1:45 Pacific continued	1:00 – 1:45 National (3)	1:00 – 1:45 Atlantic (2)
1:45 – 2:00 National (1)	1:45 – 2:45 Atlantic (3)	1:45 – 3:45 continue Alaska Studies Updates, if needed (includes 15 minutes break)
2:00 – 4:15 Gulf of Mexico (8) (includes 15 minutes break)		
2:45-3:00 BREAK		
Gulf of Mexico (continued)	3:00 – 3:45 OPEN	Alaska (continued)
	3:45 – 6:00 Prepare Presentation	3:45 – 4:00 National (1)
4:15 – 6:00 Alaska (7)		4:00 – 6:00 Prepare Presentation

**Bureau of Ocean Energy Management, Regulation and Enforcement
Outer Continental Shelf (OCS)
Scientific Committee (SC)
Meeting Agenda**

LOCATION: Holiday Inn
Cape Cod – Hyannis
1127 Iyannough Road
Hyannis, Massachusetts 02601

Thursday, May 19

- 9:00 a.m. Reports From Discipline Breakout Group Sessions
(30 minutes each)
(please turn cell phones off or set to silent)
- Ecology/Biology
 - Physical Oceanography

10:00 a.m. – 10:15 p.m. BREAK

- Social Sciences

10:45 a.m. Open Discussion of Breakout Group Reports **Dr. D. Michael Fry, Chair, OCS SC**

11:30 Noon – 1:00 p.m. LUNCH

1:00 p.m. Public Comment

1:30 p.m. Committee Business **Dr. D. Michael Fry, Chair, OCS SC**

- Items for the Letter to the Director
- Emerging Issues/Topics of Interest

2:30 p.m. – 2:45 p.m. BREAK

- Other Business
- Dates and locations for the next meeting

3:00 p.m. Final Comments

3:15 p.m. **ADJOURN**

***DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT,
REGULATION AND ENFORCEMENT***



***Personnel Who Interact with
the OCS Scientific Committee***

***Hyannis, Massachusetts
May 17-19, 2011***

MICHAEL R. BROMWICH

Director

Mr. Bromwich is the Director of the Bureau of Ocean Energy Management, Regulation and Enforcement and has served in that position since June 21, 2010. He was asked by President Obama and Interior Secretary Ken Salazar to lead reforms that will strengthen oversight and regulation of offshore oil and gas development and oversee the fundamental restructuring of the former Minerals Management Service, which was responsible for overseeing oil and gas development on the Outer Continental Shelf.

From 1999-2010, Mr. Bromwich was a litigation partner in the Washington, DC and New York offices of Fried Frank Harris Shriver & Jacobson, where he headed the firm's Internal Investigations, Compliance and Monitoring practice group. Mr. Bromwich concentrated his practice on conducting internal investigations for private companies and other organizations; providing monitoring and oversight services in connection with public and private litigation and government enforcement actions; and representing institutions and individuals in white-collar criminal and regulatory matters. He also provided crisis management assistance and counseling.

After joining the firm in 1999, Mr. Bromwich conducted many major internal investigations for companies, both publicly traded and privately held, in the energy, pharmaceuticals, public accounting, and private security industries, among others; reviewed the compliance programs and policies of major companies in a variety of industries, conducted extensive field reviews of such programs and made recommendations for their improvement; and represented companies and individuals in state and federal criminal investigations. In 2002, Mr. Bromwich was selected by the Department of Justice and the District of Columbia to serve as the Independent Monitor for the District of Columbia's Metropolitan Police Department (MPD), focusing on use of force, civil rights integrity, internal misconduct, and training issues. He served in that position until 2008 when MPD was determined to have achieved substantial compliance. In 2007, Mr. Bromwich was selected by the City of Houston to undertake a comprehensive investigation of the Houston Police Department Crime Lab; the investigation was widely praised for identifying serious problems in some of the Crime Lab's operations and providing recommendations for the Lab's improvement.

From 1994 to 1999, Mr. Bromwich served as Inspector General for the Department of Justice. As Inspector General, he headed the law enforcement agency principally responsible for conducting criminal and administrative investigations into allegations of corruption and misconduct involving the 120,000 employees of the Department of Justice. He was also responsible for conducting independent audits of the Department's programs and operations.

As Inspector General, Mr. Bromwich was best known for conducting special investigations into allegations of misconduct, defective procedures and incompetence in the FBI Laboratory; the FBI's conduct and activities regarding the Aldrich Ames matter; the handling of classified information by the FBI and the Department of Justice in the campaign finance investigation; the alleged deception of a Congressional delegation by high-ranking officials of the Immigration and Naturalization Service; and the Justice Department's role in the CIA crack cocaine controversy. During his tenure as Inspector General, Mr. Bromwich testified before Congressional committees on about 20 occasions.

Before his appointment as Inspector General, Mr. Bromwich served as a federal prosecutor in the 1980s. From 1987 through 1989, he served as Associate Counsel in the Office of Independent Counsel for Iran-Contra. In January-May 1989, he was one of three courtroom lawyers for the government in the case of *United States v. Oliver L. North*.

Mr. Bromwich's other responsibilities in that office included supervising a team of prosecutors and law enforcement agents that investigated allegations of criminal misconduct against government officials and private citizens in connection with provision of aid to the Contras in Nicaragua and serving as overall coordinator of the Iran-Contra grand jury.

From 1983 to 1987, Mr. Bromwich served as an Assistant U.S. Attorney in the U.S. Attorney's Office for the Southern District of New York. During his tenure, he tried many lengthy and complex cases and argued many appellate matters before the Second Circuit. Mr. Bromwich served as Deputy Chief and Chief of the Office's Narcotics Unit.

In addition to his government service, Mr. Bromwich spent about seven years as a lawyer in private practice. From 1989 through 1993, he was a partner in the Washington, DC office of Mayer, Brown & Platt, where he specialized in white-collar criminal defense. Mr. Bromwich represented individual and corporate clients in state and federal administrative and judicial proceedings, conducted and supervised numerous complex investigations on behalf of individual and corporate clients and tried two cases to verdict, including the acquittal of a defendant charged with export violations that was the subject of national press attention. Earlier, from 1980 to 1983, he was an associate in the Washington, DC office of Foley & Lardner.

Mr. Bromwich has published articles in law reviews and other publications on conducting and managing complex investigations. He is also a frequent speaker and panelist on law enforcement, oversight and criminal law issues. Since leaving government in 1999, he has published articles on law enforcement, criminal justice and oversight issues in *The New York Times*, *Washington Post*, *Los Angeles Times*, *the Boston Globe*, and *Legal Times*. During his career, he has also participated in nationally televised symposia on the Independent Counsel Act, the operation of the jury system in high-profile cases and the changing role of federal prosecutors. He has also been the subject of profiles published by *The American Lawyer*, and the *Associated Press* and since leaving government has made appearances on a wide variety of nationally televised news and public affairs programs.

Mr. Bromwich received his law degree from the Harvard Law School in 1980 and a master's degree in Public Policy from Harvard's John F. Kennedy School of Government the same year. He received his undergraduate degree, *summa cum laude*, from Harvard College in 1976. Mr. Bromwich is admitted to the District of Columbia Bar.

ALAN D. THORNHILL
Science Advisor to the Director

In March 2010, Dr. Thornhill was hired as Science Advisor to the Director. From 2001 to 2010, he was the Executive Director of the Society for Conservation Biology—an international society of 12,000 conservation professionals working to advance the science and practice of protecting life on Earth. Previously he was the Director of Learning and Communications for the Science Division for The Nature Conservancy (the global organization), and a Professor of Ecology and Evolutionary Biology at Rice University in Houston, Texas. In his role as the first Executive Director of the Society for Conservation Biology, he launched the executive office, oversaw the development of a professional staff, and initiated programs that saw the global membership triple in seven years. Among the programs under the Society's leadership is the David H. Smith Conservation Research Fellowship Program, a two year postdoctoral research grant for outstanding early-career scientists. For the past six years, Dr. Thornhill has taught in the Masters Program in the College of Natural Resources at Virginia Polytechnic Institute and State University. Dr. Thornhill earned his Bachelors and Ph.D. degrees in Ecology from the University of California, Irvine.

ROBERT P. LABELLE

Acting Deputy Associate Director for Offshore Energy and Minerals Management

Robert LaBelle is the Acting Associate Director for Offshore Energy and Minerals Management and manages key facets of the U.S. Offshore Energy Program, including policy development and program planning. In addition to offshore oil and gas resources, as mandated in the Energy Policy Act of 2005, this now includes authority for development and regulation of offshore wind, wave, and marine current renewable energy in all U.S. Federal waters.

He has received both the Citation for Distinguished Service (2008) and the Citation for Meritorious Service (1996) from the Department of the Interior (DOI) in recognition of his scientific and management accomplishments. Previously, as Chief of the Minerals Management Service's (MMS) Environmental Division, Mr. LaBelle was responsible for offshore oil and gas industry compliance with all environmental requirements, including water and air quality, seafloor impacts, endangered species, oil spill risk analysis, and cultural resources. He has managed large environmental and technology research programs and has overseen the preparation of numerous Environmental Impact Statements and other decision documents used for U.S. offshore energy activities.

In prior positions, Mr. LaBelle was Chief of the MMS Technology Assessment and Research Program, where he led research on safety, engineering, and technical aspects of offshore production and development. Prior to joining DOI, Mr. LaBelle worked for Martin Marietta Corp on the siting of electrical power plants and on assessing their effects on aquatic species. Mr. LaBelle is a graduate of the University of Massachusetts Dartmouth (BS), the University of Maryland (MS), and Loyola College, MD (MBA).

MARY BOATMAN

Oceanographer, Environmental Sciences Branch

Dr. Boatman is an oceanographer in the Environmental Sciences Branch of the Environmental Division in Herndon, VA. She is currently on a two year detail to the National Ocean Council as an Ocean Policy Advisor. She is working on the implementation of the National Ocean Policy established by President Obama in July, 2010. She has a Ph.D. in chemical Oceanography from Texas A&M University.

ANN SCARBOROUGH BULL

Chief, Environmental Studies Pacific Outer Continental Shelf (OCS) Region

A Southern California native, Dr. Scarborough Bull was brought up on the ocean and worked as a deck-hand for her father during commercial fishing and charter boat operations. She received her Bachelor's degree in both Biochemistry and Biology from University of California San Diego and went on to obtain a Master's and PhD from Louisiana State University and the Marine Biological Laboratory Woods Hole. Her post-doctoral work at Johns Hopkins University centered on the health of fish populations and their responses to anthropogenic degradation of their environments. A career employee for the Department of the Interior in environmental research and assessment, she worked over a decade for the former Minerals Management Service, now, Bureau of Ocean Energy Management, Regulation and Enforcement, in the Gulf of Mexico

Region and has been with BOEM Pacific Region since 2001. Dr. Scarborough Bull is presently the Chief of Environmental Studies, Pacific Outer Continental Shelf Region.

JOSEPH CHRISTOPHER

Regional Supervisor, Office of Leasing and Environment Gulf of Mexico Outer Continental Shelf (OCS) Region

Mr. Christopher has been involved in various aspects of the OCS Program for over 30 years, and is currently responsible for the Region's leasing and adjudication activities, environmental studies program, pre- and post-lease environmental assessment processes, and Coastal Impact Assistance Program. He holds a B.A. in Geography from the University of New Orleans and an M.A. in Management from Central Michigan University.

RODNEY E. CLUCK

Chief, Environmental Sciences Branch

Dr. Cluck is the Chief of the Branch of Environmental Sciences at the Bureau of Ocean Energy, Management, Regulation, and Enforcement in Herndon, Virginia. He holds a Ph.D. in sociology from Mississippi State University and a Masters Degree in Rural Sociology from the University of Arkansas, Fayetteville. For 6 years Dr. Cluck served as the Headquarters' social scientist for the Environmental Division. In 2005, he joined the Office of Offshore Alternative Energy Programs and was the project manager for the United States' first offshore wind facility. Dr. Cluck is currently the Chief of the Environmental Sciences Branch where he leads the Environmental Studies Program, the scientific backbone that supports the Bureau of Ocean Energy, Management, Regulation and Enforcement's decision-making concerning offshore energy development.

MICHELLE MORIN

Chief, Environmental Review Branch Office of Alternative Energy Programs

Ms. Morin is the Chief of the Environmental Review Branch of BOEMRE's Office of Alternative Energy Programs. In addition to ensuring compliance with the National Environmental Policy Act (NEPA) and other environmental laws, she is responsible for managing the coordination of the Atlantic OCS Region studies program to support decisions related to renewable energy leasing and activities. Prior to her current position, she was an environmental protection specialist in the Headquarters Branch of Environmental Assessment. Ms. Morin holds a B.A. in Geography from the University of New Orleans, and was a NEPA coordinator in the Gulf of Mexico Region for several years.

PASQUALE "PAT" ROSCIGNO

Chief, Environmental Sciences Section Gulf of Mexico and Atlantic Outer Continental Shelf (OCS) Regions

Dr. Roscigno is the Chief of the Environmental Sciences Section for the Gulf of Mexico and Atlantic OCS Regions. He is responsible for managing the Regions' Environmental Studies

Program and has over 20 years of experience in managing multi-disciplinary environmental projects. Previously, he held several different research and program management positions with the Minerals Management Service and with the Department of Interior's U.S. Fish and Wildlife Service. He attended Fordham University in New York City.

LYNNETTE L. VESCO

Regional Supervisor, Office of Leasing and Environment Pacific Outer Continental Shelf (OCS) Region

Ms. Vesco is the Regional Supervisor, Office of Leasing & Environment, Pacific OCS Region. She manages the leasing and environmental aspects of Pacific OCS Region programs, including the oil and gas, renewable energy and marine minerals programs. She is responsible for planning and managing the Region's Environmental Studies Program; coordinating the review and analysis of offshore energy and marine mineral lease proposals; conducting environmental reviews, analyses and consultations for proposed activities; ensuring compliance with environmental conditions of project approvals; and planning and managing the Region's Coastal Impact Assistance Program which provides grants to the State and local governments affected by oil and gas activities. Ms. Vesco has an M.A. in marine biology.

DEE WILLIAMS

Chief, Environmental Studies Section Alaska Outer Continental Shelf (OCS) Regions

Dr. Williams is responsible for managing and directing the activities of a multi-disciplinary staff in the planning, design, procurement, and conduct of environmental research and study products to serve BOEMRE environmental information needs in close coordination with other resource management agencies and stakeholder groups in the arctic. He earned a Ph.D. in anthropology from Columbia University and previously worked in academics and resource management consulting. He has a broad international and intercultural background in development impact studies, with many publications in various academic journals and book presses. He sits on Technical Review committees for multiple federal/state agencies in Alaska.

*Outside Speakers
at the
Outer Continental Shelf
Scientific Committee Meeting*



**Hyannis, Massachusetts
May 17-19, 2011**

MARVIN MORIARTY

Regional Director U.S. Fish and Wildlife Service, Northeast Region

Mr. Moriarty is regional director for the U.S. Fish and Wildlife Service's Northeast Region. He was appointed to lead the Northeast Region in 2003, and brings more than 38 years of public service and fish and wildlife conservation experience to the position.

As head of the Service's thirteen-state region from Maine to Virginia, which is home to more than one-quarter of the U.S. population, he provides oversight and management of a more than \$445 million budget. He leads a regional team of 1,000 employees who manage 132 facilities, including national wildlife refuges, national fish hatcheries and fishery resource offices, and offices dedicated to law enforcement, endangered species recovery, migratory bird management, wetlands conservation, grants, partnerships with landowners, states, and tribes, and other natural resource conservation efforts.

Throughout his career, Mr. Moriarty has been a leading voice for good governance and shared leadership among federal, state and local natural resources agencies. He championed efforts to bring together agencies throughout the 64,000-square mile Chesapeake Bay watershed, the largest estuary in the nation, to work together toward common outcomes. He has also integrated the work of more than 25 Service offices in the watershed to ensure Service employees are collaborating toward those common outcomes. These efforts set the stage for engagement by the Service and the Interior Department to restore and recover the Chesapeake Bay under President Obama's Chesapeake Bay Executive Order.

He is a national leader in the Service's strategic habitat conservation initiative, which works with partners to achieve the highest priority conservation outcomes at landscape scales, which is particularly important given the impacts of rapidly changing climate on fish, wildlife and habitats. Under Mr. Moriarty's leadership, the Service's Northeast Region is facilitating landscape-scale partnerships to gather the highest priority science so that agencies and communities can use this information to plan for the future.

Mr. Moriarty started working for the Service in 1972 on wetland and water quality restoration in the Delaware and Chesapeake bays. After several other assignments, he became chief of endangered species in Washington in 1986, followed by a year as deputy assistant director of fish and wildlife enhancement. In 1988 he moved to Minneapolis to become the deputy regional director for the Great Lakes and Big Rivers Region, a position he held for 15 years. Mr. Moriarty has served as Northeast Regional Director since 2003.

Mr. Moriarty holds a Bachelor of Science degree in biology from St. Joseph's College in Philadelphia. He was born in Springfield, Vermont. Moriarty makes his home in Amherst, Massachusetts.

STEPHEN BOWLER

**Fish Biologist
Federal Energy Regulatory Commission**

Mr. Bowler is a Fish Biologist and the Marine and Hydrokinetic Energy Team Lead in the Division of Hydropower Licensing of the Office of Energy Projects at the Federal Energy Regulatory Commission. He coordinates a work group that supports the Division in developing and adapting its regulatory program to address new hydropower technologies. He also manages reviews of hydrokinetic and conventional hydropower applications and analyzes water resource and aquatic biology issues. Previously, he monitored, assessed, managed, and regulated water resources for state and local governments and worked in advocacy and education related to fishery management. Mr. Bowler has a Master's degree (University of Michigan, Ann Arbor) in Natural Resources Ecology and Management with a focus on aquatic sciences.

CHRIS CALDOW

**Senior Scientist and Project Manager
Center for Coastal Monitoring and Assessment's Biogeography Branch
National Oceanic and Atmospheric Administration**

Mr. Caldow is a Senior Scientist and Project Manager with NOAA's Biogeography Branch and is one of the principle investigators for this mission. He has a Bachelor's degree in Aquatic Biology from the University of California, Santa Barbara and a Masters degree in Biology from the University of Houston. Since 2000, he has been assisting the Branch in carrying out its mission to supply marine resource managers with critical information on the distribution of the living marine resources they manage. During this cruise, he will be overseeing day-to-day operations of the diving and mapping efforts to ensure that the cruise is a success and project objectives are met.

PATRICK GILMAN

**Environmental and Policy Specialist
Department of Energy**

Mr. Gilman is an Environmental and Policy Specialist in DOE's Wind and Water Power Program. Since joining DOE in 2008 as a Presidential Management Fellow, he has led the program's research and engagement on environmental and policy issues associated with land-based and offshore wind technology deployment. Prior to his tenure at DOE, Mr. Gilman held a variety of staff and consulting positions in energy, environmental, and urban policy and planning, most recently with the World Resources Institute. He holds a BA in Politics from Whitman College, and an MA in International Affairs and International Economics from the Paul H. Nitze School of Advanced International Studies at Johns Hopkins University.

OCS SCIENTIFIC COMMITTEE DISCIPLINE BREAKOUT GROUPS

ECOLOGY/ BIOLOGY	PHYSICAL OCEANOGRAPHY	SOCIOECONOMICS
Kenneth Dunton	Jim Coleman	Ralph Brown
Michael Fry	Mark Johnson	Richard Hildreth
Lorrie Rea	Mike Kosro	Richard Howarth
Gene Shinn	Mary Scranton	Tyler Priest
John Trefry	Joe Smith	Peter Schweitzer

SUBCOMMITTEES

DEEPWATER	ALASKA	RENEWABLE ENERGY	ENVIRONMENTAL SENSITIVITY
*Joe Smith	*Peter Schweitzer	*Mike Fry	*Lorrie Rea
Jim Coleman	Ken Dunton	Ralph Brown	Richard Hildreth
Mike Kosro	Mike Fry	Richard Hildreth	Richard Howarth
Tyler Priest	Duane Gill	Richard Howarth	Mike Fry
Mike Rex	Richard Howarth	Mike Kosro	Joe Smith
**Ian Voprial	Mark Johnson		
	Lorrie Rea		

* Chair

**Membership Pending

Outer Continental Shelf Scientific Committee

Charter

Article I.

1. Committee's Official Designation (Title). **Outer Continental Shelf (OCS) Scientific Committee.**

Article II.

2. **Authority.** This Committee is in the public interest in connection with the responsibilities of the Department of the Interior (DOI) under the OCS Lands Act, as amended (43 U.S.C. 1331 *et. seq.*) and as provided in Section 9 (a)(2) of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., App.
3. **Objectives and Scope of Activities.** The Committee will provide advice to the Secretary of the Interior (Secretary), through the Director of the Minerals Management Service (MMS), on the feasibility, appropriateness, and scientific value of the OCS Environmental Studies Program. The Committee will review the relevance of the research and data being produced to meet MMS scientific information needs for decisionmaking and may recommend changes in scope, direction, and emphasis.
4. **Description of Duties.** The duties of the Committee are solely advisory and are stated in Objectives and Scope of Activities above.
5. **Agency or Official to Whom the Committee Reports.** The Committee will report to the Secretary through the Director of the MMS.
6. **Support.** The MMS will be responsible for providing necessary support for the Committee.
7. **Estimated Annual Operating Costs and Staff Years.** The estimated annual operating costs associated with supporting the Committee's functions, including all direct and indirect expenses, are estimated to be \$75,000 plus the support of one full-time employee.
8. **Designated Federal Officer.** Associate Director for Offshore Energy and Minerals Management (ADOEMM), or the ADOEMM's designee.
9. **Estimated Number and Frequency of Meetings.** The Committee will meet at the request of the Director of the MMS, but not less than once annually.
10. **Duration.** The Committee's charter may be renewed in 2-year increments by the Secretary as long as the Offshore Energy and Minerals Management Program of the MMS requires the expertise and advice of the Committee.
11. **Termination.** The Committee is subject to biennial review and will terminate 2 years from the date the charter is filed, unless renewed prior to that date. The Charter is renewed in compliance with section 14(a) (2) of the FACA. The Committee is subject to the provisions of the FACA, 5 U.S.C.

Appendix 2, and shall take no action unless in compliance with the charter filing requirements of section 9 of FACA.

12. Membership and Designation. The Secretary will appoint fifteen non-Federal members to the Committee to serve a 3-year term. There will be no alternates. These members have been designated as Special Government Employees (SGEs). Non-Federal members may not serve more than two consecutive terms. However, after a 2-year break in service, any such non-Federal member will again be eligible for appointment. The DFO may recommend that the Secretary revoke the appointment of the member if the appointed member fails to attend two consecutive meetings. All members serve at the discretion of the Secretary.

Non-Federal Members: To ensure fair and balanced representation in terms of technical skills and geographic location with consideration for the efficiency and fiscal economy of the Committee, the Secretary may appoint members based on the following criteria:

- Scientific competence,
- Reputation within their field of expertise, and
- Ability to represent important elements of the MMS's research and science information efforts.

Federal Members: The Director of the MMS, or the Director's designee, is a nonvoting, ex officio member of the Committee

13. Ethics Responsibility. The Committee's non-Federal members are designated SGEs and will comply with applicable ethics rules and regulations. The DOI will provide materials to members who are appointed as special government employees, which will explain their ethical obligations. Consistent with the ethics requirements, members will endeavor to avoid any actions that would cause the public to question the integrity of the Committee's operations, activities, or advice. The provisions of this paragraph do not affect any other statutory or regulatory ethical obligations to which a member may be subject.

14. Subcommittees. The MMS may establish subcommittees or workgroups as it deems necessary, upon recommendation of the Committee or its Chair, for the purposes of compiling information or conducting research. However, such subcommittees or workgroups must act only under the direction of the Committee and must report their recommendations to the full Committee for consideration. The Committee Chair, with the approval of the DFO, will appoint subcommittee or workgroup members. Subcommittees or workgroups will meet as necessary to accomplish their assignments, subject to the approval of the DFO and the availability of resources.

15. Recordkeeping. The records of the Committee, formally and informally established subcommittees, or other subgroups of the Committee, shall be handled in accordance with General Records Schedule 26, Item 2 or other approved agency records disposition schedule. These records shall be available for public inspection and copying, subject to the Freedom of Information Act, 5 U.S.C. 552.

SIGNED/KEN SALAZAR _____

Secretary of the Interior

MARCH 3, 2010 _____

Date Signed

MARCH 10, 2010 _____

Date Filed

Physical Sciences: Michael Kosro, Mary Scranton, Joe Smith, Mark Johnson

Gulf of Mexico Region

1. Remote Sensing Assessment of Surface Oil Transport and Fate during Spills in the Gulf of Mexico
 - a. Cost Range: \$500-\$600K.
Period of Performance: FY 2012-2014
 - b. Issues:
 - i. Develop satellite based algorithms to determine oil thickness, extent and surface weathering
 - ii. Provides new imagery and statistics for comparison with models
 - iii. Should help OSRA modeling and address NEPA requirements
 - c. Comments
 - i. We are concerned that the best data (Macondo) may not be available for this study. This issue needs to be addressed prior to funding.
 - ii. If Macondo data are not available, what other oil spill data are available, such as active seeps?
 - iii. The committee does not agree with labeling frontal boundaries as impenetrable to oil.
 - d. **Final recommendation:** Support if adequate data are available.

2. Workshop on Future Directions in Understanding Physical-Biological Oceanographic Interactions in Mid- to Deep Waters of the Gulf of Mexico

- a. Cost Range: \$200-\$300K
Period of Performance: FY 2012-2013
- b. Issues:
 - i. Goal is to better integrate and synthesize mid and deep water physics and biology. Last workshop was ten years ago.
 - ii. Workshop will review current knowledge, identify data gaps, develop a plan, identify collaborating partners in US, Mexico to identify long term modeling strategy.
 - iii. Collaboration with NASA, NOAA, USGS, academic institutions, oil industry
- c. Comments:
 - i. We are pleased to find that BOEMRE is soliciting broader, external expertise to formulate their programs.
 - ii. Needs further focus in terms of driving questions and identifying key people retaining open participation.
- d. **Final recommendation:** Support.

3. Short and Long term Physical Oceanography Plans (Alexis Lugo-Fernandez)

- a. The committee appreciates, as should BOEMRE, his request to maintain international collaboration. Nice to see the longer term vision and the “heads up” on future work to be proposed.

Alaska Region

1. Characterization of the Circulation on the Continental Shelf Areas of the Northeast Chukchi and Western Beaufort Seas

a. Cost Range: \$3,600-\$5,400L plus joint funding
Period of Performance: FY 2012-2017

i. Issues:

1. Builds on prior work, ice velocities, R.Pickart's work on shelf, WRF modeling, and extends coastal HF radar over Hannah Shoal.
2. Core objective: extend present HF radar study and upgrade to >250 km transmitters to cover Hannah Shoal. Include moorings, gliders
3. Makes key data available to the science community

ii. Comments:

1. Collaboration with AON is good.
2. Expensive program but want more detail in the presentation

iii. **Final recommendation:** Support if funds are available.

We note that it is impossible for the committee to sensibly evaluate a \$5M proposal following only several minutes or less of presentation.

2. Physical and Chemical Analysis of Crude and Refined Oils: Lab and Mesoscale Oil Weathering (p215)

- a. Cost Range: \$360-\$520K
Period of Performance: FY 2012-2014
- b. Issues:
 - i. BOEMRE currently uses the SINTEF (Norwegian) model to estimate oil weathering that has been updated to include ice effects.
 - ii. Expand model to include a suite of Alaska based oils, essentially expanding the SINTEF library based on most recent 5 years of data.
 - iii. Will include a 5-yr license for updated SINTEF model
- c. Comments
 - i. What data are used in ice to validate this model?
- d. **Final recommendation:** Support. BOEMRE might consider negotiating with SINTEF for permanent access in exchange for BOEMRE providing data on AK oils to broaden their model.

3. High-Resolution Digital Bathymetry Dataset

- a. Cost Range: \$160-\$240 Period of Performance: FY 2012-2014
- b. Issues:
 - i. Data will be aggregated from surveys, research, and other sources, some is proprietary
 - ii. Identify areas for new surveys
- c. Comments
 - i. No doubt that better bathymetry will improve modeling.
- d. **Final recommendation:** Support

4. Applications for Mapping Spilled Oil in Arctic Waters (p241)
 - a. Cost Range: \$1000-\$1500K (plus joint funding)
Period of Performance: FY 2013-2017
 - b. Issues
 - i. Propose to use dye to understand small scale transport of oil.
 - ii. Test effectiveness of HF radar current data and AUV data to detect subsurface hydrocarbon
 - iii. Requires new/existing technology in gliders to map subsurface movement of hydrocarbon plume
 - c. Comments:
 - i. Why not try detection first in Santa Barbara where known seeps exist?
 - ii. Goals need to be focused and resubmitted next year to include a better understanding of the technology and justification of proposed tracer.
 - d. **Final recommendation:** Not ready for funding. See above.

5. U.S.-Canada Trans-boundary Fish and Lower Trophic Communities

a. Cost Range: \$4,000-\$6,000K (with joint funding)

Period of Performance: FY 2012-2016

b. Issues:

- i. Paucity of historical data
- ii. Focus area is along the US. Canada boundary near Mackenzie Canyon
- iii. Dietary and trophic level work is needed
- iv. Timely collaboration with Canadians

c. Comments:

- i. Claim of addressing inter-annual variability with surveys in years 1 and 3 is not supportable. We recognize that 2 year of data is better than 0 years.
- ii. Are the results of Canadian CASES study relevant?
- iii. Important to understand location preferences of fish for coastal versus offshore. This may be a priority over “physics” in the early stage of this work.
- iv. Lack of information about fish in the Arctic is a critical issue.

d. **Final recommendation:** Cautionary support given the high costs coupled with the potential for program extension to address long term variability.

6. Use of the Chukchi Sea by Endangered Baleen and Other Whales
(Westward Extension of BOWFEST) (p227)

a. Cost Range: \$3,600-\$5,400K (with joint funding)

b. Period of Performance: FY 2012-2017

c. Issues:

- i. Satellite tagging of whales to provide spatial and temporal patterns of endangered species, population structure and ecological issues
- ii. Includes passive acoustics in Wainwright and Bering Strait
- iii. Have observed historical range expansion of whales in Beaufort and Chukchi Seas

d. Comments:

- i. No cooperation with Russians, very difficult to acquire
- ii. Not clear to committee what are products to date from this project. Should be considered before going ahead.
- iii. See above comments: \$5M in 5 minutes.

e. **Final recommendation:** No decision, lacks physics details.

7. Impact of Oceanic Bio-Physical Feedbacks on the Alaskan Arctic State

a. Cost Range: \$650-\$800K

Period of Performance: FY 2012-2015

b. Issues:

- i. Idea is that heat content of the mixed layer increases with CHL
- ii. Bio-physical feedbacks increasingly important (IPCC)

c. Comments:

- i. Committee is concerned that this appears to be only a modeling result
- ii. Would like to see the biological affect ranked with other parameters.

d. **Final recommendation:** Reconsider next year with additional background work.

Headquarters

1. Improving Oil-spill Risk Analysis in the Gulf of Mexico: a Multi-Model Approach
 - a. Cost Range: \$300-\$350K
Period of Performance: FY 2012-2014
 - b. Issues:
 - i. Using model ensembles forced by real current and wind data and compared with set of metrics set up by BOEMRE
 - c. Comments
 - i. Good to see common time period with consistent forcing functions.
 - ii. Will use BOEMRE model ensemble output for the statistical basis for the comparison
 - d. **Final recommendation:** Support.

2. Outer Continental Shelf Air Quality Modeling Update (p287)
 - a. Cost Range: \$200-\$280K
Period of Performance: FY 2012-2014
 - b. Issues:
 - i. Switch from MM5 to WRF algorithms to improve air quality modeling for wind turbines
 - c. Comments:
 - i. Makes a better OCD offshore coastal dispersion model
 - d. **Final recommendation:** Support

3. Near-Real Time Monitoring of Surface Ocean Currents from Oil Platforms

- a. Cost Range: \$400-\$500K
Period of Performance: FY 2012-2016
- b. Issues:
 - i. Seeks to place H F radars on GoM platform “Atlantis” to improve models
- c. Comments
 - i. Why standard range instead of long range HFR?
 - ii. Overlapping footprint seems minimal for 2D currents
 - iii. Need to ensure that “shore” radars will share data
- d. **Final recommendation:** Support because HF radar data is useful to improve models.

Atlantic Region

- 1. An Estimation of Criteria Pollutant Emissions on the Atlantic OCS
 - a. Cost Range: \$220-330K
Period of Performance: FY 2013-2014
 - b. Issues:
 - i. Air quality monitoring stations in the GoM but not in the Atlantic to conform to NEPA requirements
 - ii. Can use table of emission types per engine type times numbers of the ships running in the area
 - iii. Can estimate vessel data in order to see what pollutant level may be expected
 - c. Comments:
 - i. Crunch the numbers to complete scale analysis and assess potential for significant impact
 - d. **Final recommendation:** Prior to resubmission, complete preliminary calculations.

2. Literature Review: Environmental Risks, Fate and Effects of Chemicals Associated with Wind Turbines on the Atlantic OCS

a. Cost Range: \$100-120K

Period of Performance: FY 2013

b. Issues:

i. What are the fates of the chemicals in wind turbines

ii. Literature will become part of future EISs

iii. Have literature already on land-based turbines.

c. Comments

i. Will address questions on fate and toxicity

d. **Final recommendation:** Support at reduced budget.

3. Microclimatology Modeling near Offshore Wind Energy Facilities

a. Cost Range: \$375-450K

Period of Performance: FY 2013-2014

b. Issues:

i. Aids in impact analysis and EIS for wind development

ii. Focuses on fog generation, temperature change
“downstream”, and energy extraction

iii. Could this lead to a desktop model you could use?

c. Comment:

i. Important to understand spatial scales of turbine wakes

ii. Essential to scale up the European work

iii. Need schematics of turbine arrays to use in model studies.

d. **Final recommendation:** Fund with necessary industry input.

Atlantic

1. Environmental and Social Consequences of Port Expansion and Operations Associated with Offshore Commercial Wind Energy on the Mid-Atlantic OCS
 - a. Cost Range: \$240-360K
Period of Performance: FY 2013-2014
 - b. Issues:
 - i. Evaluate potential impacts of port expansion on infrastructure and habitat.
 - ii. Need to understand consequences of extensive port use and potential for mitigation of negative impacts.
 - c. Comments:
 - i. Is this an industry issue or a social sciences issue?
 - d. **Final recommendation:** In comparing different ports, it is outside scope to pick a “winning” port.

Top Priorities:

1. Characterization of the Circulation on the Continental Shelf Areas of the Northeast Chukchi and Western Beaufort Seas
2. High-Resolution Digital Bathymetry Dataset
3. Near-Real Time Monitoring of Surface Ocean Currents from Oil Platforms
4. Workshop on Future Directions in Understanding Physical-Biological Oceanographic Interactions in Mid- to Deep Waters of the Gulf of Mexico

Global recommendations:

- For expensive programs, the committee needs more detail and more presentation time
- Continue to encourage broader collaboration, both national and international
- Require peer-reviewed publications
- Improve data availability and archiving from all funded studies