

STEPHEN BERNARD BRANDT
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Table of Contents

Personal Data.....	2
Education	2
Professional Background.....	2
Research Cruise Experience	3
Research Interests	3
Professional Societies	3
Government Training.....	3
Recent Professional Activities.....	4
Awards	10
Scientific Conference Leadership.....	11
Notable Achievements as Director of Oregon Sea Grant 2009 – 2013	13
Notable Achievements as Director of NOAA/GLERL, 1997 - 2009.....	15
NOAA-Level Committees (2003-2007 Only Listed)	16
Significant GLERL – Level Activities.....	16
Scientific Publications.....	17
Submitted Manuscripts	28
Papers Drafted.....	29
Recent Selected Technical Reports.....	29
Selected Technical Reports (from 1986 – 2000 only).....	30
Recent Technical Reports.....	33
Recent Funded Research.....	34
Selected Completed Research (partial listing only).....	36
Scientific Presentations.....	39
Peer Review Activities	66
Selected Public Presentations.....	66
Selected Courses Taught	69
Selected Graduate Students Supervised	69
Selected Academic Committees	71

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Personal Data

Date of Birth: May 12, 1950
Place of Birth: Milwaukee, Wisconsin
Citizenship: U.S.A.

Education

- B.A. University of Wisconsin, Madison. Zoology and Mathematics. 1972
- M.S. University of Wisconsin, Madison. Oceanography and Limnology. 1975
Thesis: *Acoustic Determination of Fish Distribution and Abundance in Lake Michigan with Special Reference to Temperature*
- Ph.D. University of Wisconsin, Madison. Oceanography and Limnology. 1978
(Ph.D. Minor: Statistical Analyses and Experimental Design).
Thesis: *Thermal Ecology and Abundance of Alewives (Alosa pseudoharengus) in Lake Michigan*

Professional Background

- 2013 - Present: Professor, Department of Fisheries and Wildlife, Oregon State University, Corvallis, OR.
- 2009 - 2013: Director, Oregon Sea Grant Program and Professor, Department of Fisheries and Wildlife, Oregon State University, Corvallis, OR.
- 1997 - 2009: Senior Executive Service, Director, NOAA Great Lakes Environmental Research Laboratory, Ann Arbor, MI.
- 2006 - Acting Deputy Assistant Administrator (6 months) NOAA Research, Washington D.C.
- 1994 - 1997: Director, Great Lakes Center for Environmental Research and Education and Professor of Biology, SUNY College at Buffalo, NY.
- 1987 - 1994: Professor/Associate Professor, Chesapeake Biological Laboratory, University of Maryland System, Center for Environmental and Estuarine Studies, Solomons, MD.
- 1983 - 1987: Associate Professor and New York Sea Grant Fisheries Professor, College of Environmental Science and Forestry, State University of New York, Syracuse, NY.

- 1983 - 1987: Associate Professor, Research Center, State University of New York College at Oswego, Oswego, NY.
- 1978 - 1983: Research Scientist/Senior Research Scientist (tenured), Division of Fisheries Research, Commonwealth (CSIRO) Marine Laboratories, Cronulla, NSW, Australia.
- 1973 - 1978: Graduate Research Assistant, Wisconsin Sea Grant Scholar Program, University of Wisconsin, Madison, WI.
- 1972: Research Specialist, Laboratory of Limnology, University of Wisconsin, Madison, WI.

Research Cruise Experience

Chief Scientist on over 80 research cruises, with over 800 days spent at sea in the South Pacific Ocean – Tasman Sea, Western North Atlantic Ocean – Gulf Stream, Eastern Indian Ocean, Adriatic Sea - Italy, Sargasso Sea, Gulf of Mexico, Great Lakes and Chesapeake Bay.

Research Interests

Fish ecology and management of marine and freshwater ecosystems; Specifically: 1) Bioenergetics, food webs, physical-biological interactions, and predator-prey interactions among fishes; 2) The ecology of thermal fronts; 3) Ecosystem forecasting; 4) Spatial modeling of fish growth and production; 5) Development and application of underwater acoustics for studies on patchiness, stock abundance and community size structure in pelagic ecosystems; 6) Coastal ocean observing systems and 7) Impacts of coastal hypoxia.

Professional Societies

American Fisheries Society
 American Society for Limnology and Oceanography
 American Association for the Advancement of Science
 Sigma Xi
 Coastal and Estuarine Research Federation
 Australian Marine Sciences Association
 National Secretary, 1982-83
 Chair, Graduate Student Training, 1982-83
 American Geophysical Union
 International Association for Great Lakes Research (past president)

Government Training

- Supervisor Training
- Leadership and Executive Coaching
- Dealing with Change
- Leadership and Management Development (2 weeks)
- Safety
 - Fire Safety

- Laboratory Safety
- Defibrillator, CPR
- Ergonomics
- Dupont 2-day Safety
- STAR Safety
- Communication Skills
- Dealing with the Press
- Leadership (multiple courses)
- Listening Skills
- Internet Security Training
- AED/CPR Training
- Negativity Training
- Matrix Management
- Union-Management Training
- EEO and Diversity
- Alternative Dispute Resolution

Recent Professional Activities

- 2018 – Chair (2017 – present) and Member (2014 – Present), Independent Science Board, Delta Stewardship Council, State of California.
- 2018 – Member (2014 – present), Oregon Watershed Enhancement Board, representing OSU Extension Services
- 2018 – Member (2014 – Present), Community Outreach and Engagement Stakeholder Advisory Board, Environmental Health Sciences Center, OSU.
- 2018, Co-Chair, Special Scientific Session, “Impacts of hypoxia on fishes and food webs in freshwater, coastal and oceanic ecosystems: A Global Perspective. Annual American Fisheries Society Meeting, 19-24 August, 2018. Atlantic City, NJ.
- 2014 – 2017, Member, Independent Science Board, Geothermal Exploration of Mid-Ocean Ridges off Oregon and California, Hydrothermal Resources, HGM
- 2017, Co-chair, Special Scientific Session, “Ecological Impacts of Hypoxia on coastal ecosystems”, CERF-2017 Coastal and Estuarine Research Federation, 5 – 9 November, Providence RI.
- 2017, Co-chair, Special Scientific Session, “Response of fishes to extreme climate events”, Annual Meeting of the American Fisheries Society, 20 – 24 August, Tampa, FL.

- 2017, Co-chair, Special Scientific Session, “Pelagic Fish Seascapes: Integration of new technology and modeling” Annual Meeting of the American Fisheries Society 20 – 24 August, Tampa, FL.
- 2017, Co-Chair Workshop: “Hypoxia effects on fish and fisheries: kick-off meeting of decision support tool development”, Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017 Workshop, 5 – 9 February, New Orleans, Louisiana
- 2017, Co-Chair, Special Workshop: “User-driven tools to predict and assess effects of reduced nutrients and hypoxia on living resources in the Gulf of Mexico”, American Fisheries Society Annual Meeting, 22 August, 2017, Tampa, FL.
- 2019, Lead Instructor for International Course: “Mountains to the Sea: Ecological, fisheries and human-use issues connected with major water bodies”, May, 2019. University of Trieste, Trieste, Italy.
- 2017, Invited Plenary Speaker: “Ecosystem Forecasting: Bridging Science to management”. Greater Everglades Ecosystem Restoration (GEER) Conference, 17 – 21 April, Coral Springs, Florida
- 2017, Co-Chair, Workshop: “Hypoxia effects on fish and fisheries: kick-off meeting of decision support tool development”, Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017 Workshop, 5 – 9 February, New Orleans, Louisiana
- 2016, Participant, International CLIOTOP – Climate Impact on Ocean Top Predators Conference, 14 – 18, September, 2016. San Sebastian, Spain
- 2016, Visiting Professor, (September – October), University of Trieste, Trieste Italy
- 2015, Co-Chair, Special Scientific Session on “Hypoxia and temperature as interactive multi-stressors in coastal ecosystems” at the biennial conference of the Coastal & Estuarine Research Federation (CERF), 8 – 12 November in Portland, Oregon.
- 2015, National Review Panel, New York Sea Grant Program, March 30 – April 1, 2015, Cornell University
- Served as Acting Deputy Assistant Administrator of NOAA Research overseeing approximately 900 employees and a budget of over \$300M. January 2006-June 2006.
- 2009 - 2013, Chair, Science and Technology Advisory Committee (STAC), Advisory to the Governors Ocean Policy Advisory Council, OR,
 - Lead the formal evaluation of the entire statewide marine mapping effort that fed directly into the revision of the state’s Territorial Sea Plan and siting designations for Alternative Ocean Energy development in Oregon.

- Lead the evaluation of the state's 10-year monitoring plan for designated marine reserves.
- 2009 - 2013, Member and Executive Board, Governor's Ocean Policy Advisory Council, Oregon
- 2010 - 2013, Chair, Oregon State University Marine Council, Oregon
- 2010 - 2013, Chair, Oregon Nearshore Research Task Force, Reports to State Legislature.
 - In 2012 -13 lead an effort to draft and pass two state legislation bills to: (1) expand STAC's role as a state-wide scientific advisory body, and (2) establish an Oregon Ocean Science Trust to fund nearshore research.
- 2013, Invited Chair, Oregon Legislative Coastal Caucus Panel on Looking Forward. Economic Summit, August 27 – 28, 2013, Lincoln City, OR.
- 2012 - 2014, Member, Board on Oceans, Atmosphere and Climate (BOAC, Association of Public and Land-Grant Universities.
- 2009 - 2013, Executive Board, Cooperative Institute for Marine Resources (regional NOAA Cooperative Institute)
- 2011 - 2013, Board of Directors, Oregon Coast Aquarium, Newport, OR.
- Formal Federal Congressional Testimony in Washington D.C. on
 - Invasive Species, 2002
 - Invasive Species, 2003
 - Great Lakes Restoration, 2004
 - Invasive Species and Commercial Shipping, 2005
 - Great Lakes Regional Collaboration, 2006
 - Invasive Species, 2006
 - Great Lakes Restoration 2008
- Briefed over 400 federal congressional offices on a wide variety of NOAA issues and priorities between 1997 – 2008.
- Formal Testimony to various House and Senate Committees in the Oregon State Legislature in Salem, OR. 2011 – 2013.
- Member, Louisiana Coastal Area (LCA) Ecosystem Restoration Science Advisory Board, 2006 – 2012.

- Regional Lead of all of NOAA activities and services in the 8 Great Lakes States, 2006 – 2009
- Co-Editor, Special Symposium on "Innovative approaches using bioenergetics models", Transactions of the Fisheries Society, Volume 122, 1993
- Co-Editor, Special Publication of Canadian Journal of Fisheries and Aquatic Sciences on "Spatial Processes in Aquatic Ecosystems" 1999
- Co-Editor 2009: Special Issue of Journal of Experimental and Marine Biology and Ecology on "Ecological Issues of Hypoxia on living Resources".
- Director, NOAA National Center of Excellence for Great Lakes and Human Health. 2004-2009.
- International Association for Great Lakes Research
 President 1994-95
 Vice-President 1993-94
 Board of Directors 1991-96
 Chair, Membership Committee 1992-94
 Member, Awards Committee, Membership Committee, Endowment Committee, Fellowship Committee 1995-96
 Associate Editor, Journal of Great Lakes Research, 1984 – 2009
Member, 1972 – Present
- International Joint Commission
 Science Advisory Board 1995-97
 Co-chair, Council of Great Lakes Research Managers 1996-2008
 Lake Erie Task Force 1995-96
 Co-chair, Emerging Issues Committee 1996-97
- National Association of Marine Laboratories
 Board of Directors 1995-97
 President 1998-99, NEAMGLL
- Associate Editorships
 International Journal of Limnology 1998-2010
 Journal of Great Lakes Research 1984- 2009
 Trans. of American Fish. Society 1989-91
- International Field Years for Lake Erie: Initiated and led the largest-ever coordinated, interdisciplinary field program on Lake Erie that included over 45 scientists, 27 state and federal agencies and universities, and 10 research vessels. Research was focused on anoxia and harmful algal blooms. 2005-2009

- Great Lakes Regional Collaboration: Officially lead NOAAs input to the President's Great Lakes Executive Order and was NOAA's Regional Working Group representative, coordinated NOAA efforts on 8 Strategic Teams, advise the NOAA Administrator at Task Force Meetings, successfully advanced 2 of 5 accepted priority issues (observing systems, invasives), provided NOAA's input for the May report to the President, submitted progress reports to NOAA Science Advisory Board and NOAA PPI, co-chaired the Research and Observations Team, and led a coordinated, NOAA-wide Ocean Council approved response to the Great Lakes Regional Collaboration Strategy.
- Board of Directors, Cooperative Institute for Limnology and Ecosystem Research, NOAA-University of Michigan 1997-2009.
- Chair, Council of Great Lakes Research Managers, International Joint Commission, 2000 – 2009.
- Executive Board, NE National Underwater Research Program, University of Connecticut 2003-2009.
- National Academy of Sciences Panel, Global Commerce and Transportation Issues in the Great Lakes 2004-2005.
- Steering Committee, Ocean.U.S. Great Lakes Coastal Ocean Observing System, 2004-2007.
- Executive Board, Michigan Sea Grant Program 1998-2009.
- Board of Directors, Cooperative Institute for Climate and Ocean Research, NOAA-Woods Hole Oceanographic Institute 1999-2009.
- Chair, Science Advisory Board, Grand Valley State University, Water Institute 2002 - 2010.
- Executive Board, University of Michigan Biological Station 1998-2009.
- Advisory Board, Wisconsin Sea Grant Institute 2004-2012.
- Member and NOAA representative, Interagency Binational Executive Council 2000-2009.
- Member and NOAA representative, U.S. Policy Committee 1997-2009.
- Executive Committee of the Lake Erie Lakewide Management Plan comprised of all water quality managers.
- Lake St. Clair Coastal Habitat Advisory Committee 2003-2008.

- Served in Washington, D.C. for 6 weeks in 2002 as Acting Director of NOAA's Environmental Research Laboratories encompassing 12 laboratories.
- Mentor, NOAA Leadership Competencies Development Program 2001-2002
- Regularly briefs over 40 public health and beach management entities through the Great Lakes Human Health Network.
- Served as Acting Deputy Assistant Administrator (and occasionally Acting Assistant Administrator) of NOAA Research for 6 weeks in 2003 overseeing 900 employees and a budget of over \$300M.
- Ohio Sea Grant Review Panel, 2001
- NOAA Leadership Competencies Development Program (LCDP) Mentor, 2002-2003.
- Blue Ribbon Panel, Great Lakes Economic Evaluation, Northeast-Midwest Institute 1998-1999.
- Member, President (OSTP) Committee on Environment and Natural Resources, Task Team for Invasive Species. 1998.
- Advisory Board, Great Lakes Program, University of Buffalo, 1995-1997.
- Board of Governors, New York Great Lakes Research Consortium, 1994-1997.
- Advisory Committee, Niagara River Remedial Action Plan (RAP), 1995-96.
- Observer, Great Lakes Commission, 1997 – 2009.
- Review Panels, National Science Foundation, May 1994, June 1995, August 1995, June 1996, April 1997.
- Other Activities

Scientific Advisory Board, Maryland DNR, 1987-1993; Advisory Board, NOAA Coordinated Ecosystem Research of COP, 1990-91; New York Sea Grant Institute Program Advisor, 1983-88; Program Advisor, EPA Water Quality Monitoring Programs, 1986; National Academy of Science Panel, 1983; Chesapeake Bay Remote Sensing Work Group, 1989-1993; Co-chair Great Lakes Sea Grant Network Committee, 'Forage fish issues in the Great Lakes', 1984-87; Co-convener 'Comparison of Great Lakes Worldwide', IAGLR, Madison, WI, 1989; Co-convener 'International Program of Lake Ontario Trophic Transfer (LOTT)', Burlington, Ontario, Canada, 1989; Invited panelist 'Bioacoustics Measurement of Water Mass Boundaries' Acoust. Soc. Amer. Univ. Park, PA, 1990; Convener, American Fisheries Society Special Symposium on "Underwater Acoustics: An emerging technology of

managing tomorrow's fisheries", Raleigh, NC, 1987; Steering Committee, Great Lakes Fishery Commission, "Classification and Inventory of Great Lakes Aquatic Habitats", 1986-87; Invited panelist, "Predator-Prey dynamics in the Great Lakes", IAGLR, 1987; Co-convenor, 'Production Dynamics of Large Lake Ecosystems: Patterns, processes and inter-lake comparisons', IAGLR, 1989; Co-convenor, "Comparison of Great Lakes Worldwide", IAGLR, 1989; Invited Panelist, "Fish Community Health", IAGLR, 1989; Co-convenor, 'International Workshop on comparing production dynamics of Great Lakes Ecosystems', Syracuse, NY, 1988; Convenor, 'Workshop on prey-fish abundance of estimation', Milwaukee, WI, 1988; Invited participant, ECHO-FRONT Workshops, New Orleans, LA, 1986; Steering committee for Program for Interdisciplinary Lake Ontario Research (PILOR), 1986; Co-convenor, 'Lake Ontario Ecosystem: Past, Present and Future', IAGLR, 1991; Mentorship Program, Calvert County School System, 1990; Invited panelist, "Bioacoustical Measurement of Water Mass Boundaries." Annual Acoustical Society of America Conference, Penn State, University Park, PA. 1990; Invited Panelist on Education and Training in Acoustics, GLOBEC Workshop on Acoustic Technology and the Integration of Acoustical and Optical Sampling Methods, WHOI, 1991; Invited Panelist at the Acoustical Society of America Symposium on Acoustical Oceanography, Dallas, TX, 1991; Co-convenor, "Trophic Transfer in Lake Ontario", IAGLR, 1992; Co-convenor, American Fisheries Society Special Symposium on 'Innovative approaches using bioenergetics models: Future applications to fish ecology and management', Rapid City, SD, 1992; Co-convenor, "Lake Erie Trophic Transfer Studies", IAGLR, 1995.

Awards

- 2015 Chandler-Misner Award for best published paper, International Association for Great Lakes Research
- 2007 President's White House Closing the Circle Award, June 2007.
- 2006 Department of Energy Leadership Award for "Green Ships" Initiative.
- 2004 Anderson-Everett Award, highest award given by the International Association of Great Lakes Research.
- 2002 Presidents Rank Award, Meritorious Executive in the Senior Executive Service.
- Best Paper Awards
 - American Fisheries Society, NY Chapter (co-author), 1987.
 - Hydrolab Award, Int. Conference Great Lakes Res. (co-author), 1987.
 - American Fisheries Society, Potomac River Chapter, (co-author), 1989.
 - American Fisheries Society, Annual Meeting Poster Award (co-author) 1991.
 - Fisheries and Wildlife Conference, Annual Meeting (co-author) 1992.
 - Hydrolab Award, Poster, International Conference on Great Lakes Research (co-author) 1992.

Scientific Conference Leadership

- Co-Chair, 2015, Scientific Session on Coastal Hypoxia. Biennial meeting of the Coastal and Estuarine Research Federation,, November, 2015, Portland, OR.
- Haceta Head Coastal Conference Leadership: Created an MOU with local community leaders to jointly run an annual Haceta Head Coastal Conference in Oregon. This conference is the only statewide conference that brings together the public, community leaders, state legislators, faculty and graduate students to discuss science. It has about 200 participants and, now, a large graduate student participation. In 2012, our keynote speaker was the First Lady of Oregon.
- Chair and Organizer, 2012 International Workshop on Invasive Species and the 2011 Tsunami Marine Debris: Regional Preparedness and Response. July 30 – 2 August, 2012. Portland, OR.
- Co-chair, 2012 Bringing the High Seas Home. 8th Annual Haceta Head Coastal Conference, October 26 – 27, 2012. Florence, OR.
- Steering Committee, Salish Sea Marine Survival research and Ecosystem Indicators, Nov 5 – 7, 2012, Bellingham, WA
- Co-chair, 2011 Research in Oregon’s Oceans, 7th Annual Haceta Head Coastal Conference, October 27 – 28, 2011. Florence, OR.
- Chair, 2011 Oregon Conference on Coastal and Marine Spatial Planning, November 29 – 30, 2011.
- Co-chair 2011: Hypoxia Effects on Aquatic Living Resources. Special Session at Coastal and Estuarine Federation biennial meeting, Daytona Beach, FL. November 6 – 10, 2011.
- Co-chair 2010: Oceans and Human Health: Reducing Risks Through Prediction. From Observation to Prediction in the 21st Century. Ocean Sciences Meeting, Portland, OR. February 21-27, 2010
- Co-chair 2005 Annual Meeting of the International Association for Great Lakes Research (600 Attendees) on Ecosystem Forecasting
- Co-chair 2008 Scientific Session on ‘Oceans and Human Health’, National Ocean Sciences Meeting, Orlando, Florida
- Co-Chair, 2008 Workshop of “Impact of Invasives on Food Webs and Fisheries’, Chicago Illinois, 2008

- Co-chair, 2007 Special Session on “Oceans and Human Health: Identifying and Understanding Ocean Health Benefits and Threats”, 2007, American Society of Limnology and Oceanography Aquatic Sciences Meeting, Santa Fe, NM.
- Co-chair, 2007 National Workshop on “Ecological Impacts of Hypoxia on Living Resources”, 2007, Bay St. Louis, MS.
- Co-chair, 2006 Special session on “Great Lakes and Human Health: Integrating Science to Reduce Risks”, 2006, International Association for Great Lakes Research, Windsor, Ontario, CAN.
- Co-chair, 2005 Special session on “Great Lakes and Human Health”, 2005, International Association for Great Lakes Research, Ann Arbor, MI.
- Co-chair, 2004 Special session on “Fish Bioenergetics,” 2004, American Fisheries Society Annual Conference, Madison, Wisconsin
- Organizing Committee, 2001, NOAA Coastal Zone 2001
- Organizing Committee, 1999 ASLO Ocean Sciences Annual Conference, Santa Fe, NM. Chair, Scientific Workshop.
- Chair, 1999 Special Thematic Session on “Aquatic Sciences: New Approaches and Paradigms,” 1999 ASLO Ocean Sciences Annual Conference, Santa Fe, NM.
- Co-chair, 1999 Special session on ‘Large Lakes and Enclosed Seas’ 1999 ASLO Ocean Sciences Annual Conference, Santa Fe, NM.
- Co-chair 1994 Joint meeting of the Estuarine Research Federation and the International Association of Great Lakes Research, Windsor, Ontario.
- Co-chair, 1997 Annual Meeting of the International Association for Great Lakes Research, Buffalo, New York.
- Co-convener, 1997 “Great Lakes Acoustic Workshop”, 5-6 June 1997, Buffalo, NY
- Co-chair, 1997 Special session on “Fisheries acoustics: How useful is it to the Great Lakes?”, 1997 IAGLR Meeting, Buffalo, NY
- Co-convener, 1997 special symposium on “Space, time and scale: New perspectives in fisheries ecology”, Annual Meeting of the American Fisheries Society, 24-28 August 1997. Monterey, CA
- Co-chair 1996 Special session on "Spatial pattern and process in aquatic environments", 1996 Ocean Sciences Meeting, San Diego, CA

- Chair, 1996 Session on "Trophic interactions in the Great Lakes: Feast or famine", 1996 IAGLR Meeting, Toronto, CANADA
- Invited participant, 1996 "Workshop on Bioacoustics in the Indian Ocean", March 1996, Goa, INDIA
- Co-convenor, 1996 URIP workshop on "Spatio-temporal dynamics in aquatic ecosystems", 13-16 Nov. 1996, Cornell University, Ithaca, NY
- Invited participant:
 - EPA State of the Great Lakes Conference, 6-8 Nov. 1996, Windsor, Ontario, Canada
 - U.S. Global Ocean Observing System (GOOS) Workshop, 10-12 Dec. 1996, Bethesda, MD
 - International Joint Commission, Lake Erie Modeling Summit, 15-17 Sept. 1996, Windsor, Ontario, Canada
 - EPA, Chesapeake Bay Scientific Advisory Committee Workshop on "Linking Water Quality and Fisheries", 20-22 Nov. 1996, Solomons, MD
 - NOAA Coastal Ocean Data Workshop, 11-13 March 1997, Fort Pierce, FL

Notable Achievements as Director of Oregon Sea Grant 2009 – 2013

- The **most significant accomplishment** was to achieve a ranking of the **best program in the country** out of 32 programs based on 4 years of accomplishments. In October 2012, the first Performance Review Panel (PRP) evaluation was held to assess each Sea Grant program's progress towards achieving its strategic plan and its impact relative to federal investment. This review was based on a site visit evaluating Management and Administration and on the last 4 years reporting on about 96 metrics and written accomplishments and impacts and other material provided across 5 focus areas.
- Created an MOU with local community leaders to jointly run an annual Heceta Head Coastal Conference in Oregon. This conference is the only statewide conference that brings together the public, community leaders, state legislators, faculty and graduate students to discuss science. It has about 200 participants and, now, a large graduate student participation. In 2012, our keynote speaker was the First Lady of Oregon.
- Initiated and conducted annual coastwide trips to engage with stakeholders. This was recognized by the National Sea Grant Program as a Best Management Practice.
- As chair of the Science and Technology Advisory Committee (STAC), Advisory to the Governors Ocean Policy Advisory Council, lead the formal evaluation of the entire statewide marine mapping effort that fed directly into the revision of the state's

Territorial Sea Plan and siting designations for Alternative Ocean Energy development in Oregon.

- As elected chair of the Oregon Nearshore Research Task Force lead an effort to draft and pass two state legislation bills to: (1) expand STAC's role as a state-wide scientific advisory body, and (2) establish an Oregon Ocean Science Trust to fund nearshore research.
- At the Provosts request, created and subsequently chaired the Oregon State University Marine Council that provided an organizing mechanism for all 17 departments, colleges and centers that support marine science at OSU. Memberships on the council were center directors, deans and department chairs.
- As chair of the OSU Marine Council, secured an MOU with the Port Orford community to develop research laboratories, offices and educational facilities in Port Orford as the only such facility for OSU on the south coast of Oregon.
- Developed a strong relationship with the states bi-cameral and bi-partisan legislative coastal caucus.
- Created and lead a number of regional initiatives including a fellows program in support of the West Coast Governors Agreement on Ocean Health (PI), West Coast Invasive Species Program (PI), NOAA-West stakeholder engagement on CMPS (Co-PI), and a new regional NOAA-West to create two videos on Marine Debris (Co-PI).
- In response to the arrival of the Japanese Tsunami Dock off Newport, led the effort to raise funding and hold a regional/national workshop aimed at reducing the risk of invasive species associated with Japanese Tsunami marine debris. Partners included NOAA, PSU, USFWS, National Sea Grant Office, ODFW and the National Invasive Species Council. This workshop led to adoption of JTMD invasive species response protocols by West Coast states and British Columbia.
- Managed a major biennial competitive grants programs that included pre-proposals, over 300 external mail reviews, science panels and a stakeholder panel. Overall funding for each competition was about \$3M.
- Led the redesign of the Oregon Sea Grant Education Program to adopt a new strategic focus on Free-choice Learning. The vision with this refocus is to be recognized regionally and nationally as the premier provider and model for public audiences' learning about marine and aquatic sciences, and the primary source for research and tool development and assessment on free-choice learning for professional audiences working in marine and ocean sciences.
- Initiated an annual summer scholars program to allow students the opportunity to work

on policy issues in state and federal agencies.

- Served as co-host with the Marine Mammal Institute on a 10-day expedition to Baha, Mexico in 2012 to educate potential OSU donors on whale ecology and restoration and gave a seminar on Sea Grant. This initial partnership fostered the creation of a joint faculty position between OSG and MMI.
- Secured consolidated and expanded new space for the Corvallis-based Sea Grant activities which had been spread across 5 locations and 3 buildings on campus.

Notable Achievements as Director of NOAA/GLERL, 1997 - 2009

- As P.I., created a NOAA Center of Excellence for Great Lakes and Human Health in 2004. Serve as Center Director and obtained \$7.2M in funding for 11 institutions and 24 principal investigators.
- Created the NOAA National Center for Invasive Species Research which is headquartered at GLERL.
- Obtained a 15-year lease of the University of Michigan's 85' Research Vessel Laurentian for a total cost of \$100K.
- Took the GLERL annual congressional budget from \$5.9M in 1997 to \$9.2M in 2004.
- As the highest ranking NOAA government official (and only member of the Senior Executive Service) in the Great Lakes Region, represent NOAA on a number of national / international committees/boards.
- Represented the Oceanic and Atmospheric Research Line Office (900 employees) on the NOAA Research Council and developed the NOAA-5-year and 20-year NOAA Strategic Plans.
- Led the 8-year effort to obtain a new building for all operations for NOAA that doubled the space and modernized all facilities for NOAA's research in the Great Lakes.
- Initiated a unique regional Sea Grant Extension position at GLERL that provides an interface of GLERL research to the Great Lakes coastal community via a network of 60 extension agents. This model is now being adopted NOAA-wide. A second regional extension position has been created to expand Sea Grant responsibilities into the human health arena, a new area for Sea Grant.

- Initiated, developed and tested a NOAA-wide policy on Emeritus Scientists, which has been adopted.
- As U.S. Chair, led the Council of Great Lakes Research Managers of the International Joint Commission (which includes most federal, university and Canadian agencies on the Great Lakes) to complete reports that defined a new Interagency Research Coordination Strategy that was adopted and funded and also assessed the need of open-lake observing systems.
- Led NOAA to develop and use the first research vessel with a biodiesel engine as well as the first research vessel operating with no petroleum products in the entire federal fleet across all agencies. GLERL received Department of Energy and White House Awards.
- Developed the first shared scientific appointment across labs and line offices in NOAA research.
- Oversaw the transition of the Great Lakes Coastal Forecasting System into fully operational status in NOS and NWS.

NOAA-Level Committees (2003-2007 Only Listed)

- OAR PMAC Committee
- NOAA Ship Allocation Committee
- OAR Senior Research Council
- Chair, NOAA Great Lakes Regionalization
- OAR Representative to NOAA's Ecosystem Research Program
- OAR Representative to NOAA's Habitat Program Matrix
- OAR Representative to NOAA's Invasive Species Program Matrix
- NOAA Research Council, 2003-2004
- OAR – NOS Senior-level Collaboration

Significant GLERL – Level Activities

- Undertook workforce restructuring by creating an Operations Council and Science Council to better link human capital to organizational mission.
- Initiated a GLERL Team Award that sets up long-term lab wide goals to improve organizational excellence, facilitates a positive workplace and promotes teamwork, goal setting and self-evaluations.
- Worked well through a Union-Management Partnership to develop lab wide policies.

- Developed a strong safety program with a full-time safety officer and dedicated safety budget. The safety office serves full-time on the Operations Council and a safety element was added to each supervisors performance plan. Examples of Activities in 2003-4 include: 1) employee training on lab safety, AED/CPR, radiation safety, crane safety, hazard communication, lab spill procedures, and emergency evacuation drills, 2) laboratory inspections, 3) research vessel inspections and drafted operational risk assessments, operating manual and boat management policy, 4) upgrades to ergonomics, 5) inspection of halon and carbon dioxide systems, 6) informal walk-throughs of the building to encourage safe behaviors, and 7) completed extensive field station renovations include NFPA required illumination, exit signs, sprinkler system and fire alarm detection. Received high marks on NOAA security and lab safety inspections and responded to all recommended improvements.
- Developed a strong EEO/Diversity Program at GLERL. Examples of activities in 2003-4 include: To heighten EEO/Diversity efforts, the EEO representative was assigned to the Operations Council to be involved in all personnel discussions, ensure GLERL is up-to-date on NOAA-wide activities and proactively advise on how to improve EEO/Diversity issues and compliance. A diversity element was added to all supervisors' performance plans. Also 1) fostered women/minority staff to represent GLERL at outreach activities such as the Regional –National Ocean Sciences Bowl to provide younger prospective scientists with mentorship opportunities, 2) conducted labwide training in listening skills, 3) continued an undergraduate internship program that allows students (19 this year) of diverse backgrounds to mentor with GLERL scientists. Advertisements are targeted to minority universities and the AISES, 4) formed a new partnership with Salish Kootenai College to increase interest in environmental studies in Native Americans. 5) Allocated 1.5% of the GLERL budget to employee training to support employee career development. 6) Appointed a female minority as GLERL's first Deputy Director, made her head of the Operations Council, and put her in a Supervisory role of over 30% of laboratory staff and 7) sent a female support scientist on a 6-month leadership training sabbatical.
- Created new NOAA/GLERL field offices on Lake Erie and Lake Huron
- Led the development of a strong partnership with the National Marine Sanctuary through, among other things, joint purchase and operation of a research vessel.
- Led GLERL participation in approximately 100 media interviews and 50 community service activities annually.

Scientific Publications

1. Peterson, M.L., C.S. Clay and S.B. Brandt. 1976. Acoustic estimates of fish density and scattering function. *J. Acoust. Soc. Amer.* 60(3): 618-622.
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 118. Brandt, S.B. 2014. Ask a Scientist: Lingcod: Oregon’s Voracious Predator. Popular article in *Oregon Coast Magazine*. 33(5): 28 -29.
 119. Brandt, S.B. 2014. Ask a Scientist: Gray Whale Migrations off Oregon. Popular article in

Oregon Coast Magazine. 33(6): 10-11.

120. Brandt, S.B. 2015. Ask a Scientist: Oregon's Coastal Islands and Seastacks. Popular article in Oregon Coast Magazine. 34 (3): 12-13.
121. Brandt, S.B. 2015. Ask a Scientist: Oregon's Undersea Forests: Bull Kelp. Popular article in Oregon Coast Magazine. 34(4): 12-13.
122. Brandt, S. B. 2015. Ask a Scientist: Modern Tools Take the Pulse of Oregon's Coast. Popular article in Oregon Coast Magazine 34 (5): 12-13.
123. Brandt, S. B. 2016. Ask a Scientist: El Nino. Popular article in Oregon Coast magazine 35(1): 10-11.
124. Brandt, S. B. 2016. Sea Lions. *Oregon Coast Magazine*. 35(4): 12-13.
125. Brandt, S. B. 2016. Western Snowy Plover: Recovery needs our help. *Oregon Coast Magazine*. 35 (6): 12-13.
126. Wiens, J. et al. 2017. Facilitating Adaptive Management in the California's Sacramento-San Joaquin Delta. *San Francisco Estuary and Watershed Science*, 15 (2): 1- 15.
127. Brandt, S. B. 2017. Oregon's Sharks. *Oregon Coast Magazine*. 36(4): 12-15.
128. Brandt, S. B. 2017. Tides: Where Sea and Land Collide. *Oregon Coast Magazine*. 36(5): 12-13.
129. Brandt, S. B. 2018. Chinook Salmon: The King of the Northwest Pacific Coast. *Oregon Coast Magazine* 37(2): 15 – 27.
130. Goto, D., et al. 2017. Size-mediated control of perch-midge coupling in Lake Erie transient dead zones. *Environmental Biology of Fishes* 100 (9) 1-18.
131. Glaspie, CN, M.A. Clouse, and S. B. Brandt. 2018. Effect of hypoxia on diet of Atlantic bumper *Chloroscombrus chrysurus* in the northern Gulf of Mexico. *Transactions of the American Fisheries Society*. 147:740-648.

Submitted Manuscripts

- Glaspie, C. N., Elliot, D. T., Pierson, J. J., Roman, M. R., and Brandt, S. B. *Submitted and In Revision*. Occurrence and diet of fish in relation to hypoxia in the northern Gulf of Mexico. For submission to *The Journal of Experimental Marine Biology and Ecology*.

- Roman, M.R., S. B. Brandt, E. D. Houde and J. Pierson. 2018. *Submitted*. Impacts of Seasonal Hypoxia on Pelagic Zooplankton and Fishes. *Frontiers in Marine Science*.

Papers Drafted

- Brandt, S. B., Sellinger, C. E., and Glaspie, C. N. *Drafted*. Growth rate potential as a causal mechanism for North Pacific salmon returns in a changing climate. For submission to *PLOS One*.
- Brandt, S. B., Sellinger, C. E., and Glaspie, C. N. *Drafted*. Seafood diet: Linking fish feeding to habitat, prey availability and bioenergetics in a pelagic predator. For submission to *Environmental Biology of Fishes*.
- Ludsin et al. Hypoxia reduces availability of Quality habitat for bay anchovy in Chesapeake Bay. *Manuscript drafted and with lead author for submission*.
- Brandt, S.B. Growth rate potential as a Quantitative measure of Fish Habitat Quality. Status: *literature reviewed and partially written for Reviews in Fish Biology*.
- Brandt, S.B. and C. S. Sellinger. Sensitivity of spatially-explicit growth rate potential models to predator swimming speed and reactive distance. Status: initial analyses done and figures drafted. Intended for *Trans. Amer. Fish. Soc.*

Recent Selected Technical Reports

Brandt, S. B., C. S. Sellinger and C. N. Glaspie. 2017. User-driven tools to predict and assess effects of reduced nutrients and hypoxia on living resources in the Gulf of Mexico Annual Progress Report, May, 2017. 11 pp.

Delta Independent Science Board, 2015. Flows and fishes in the Sacramento – San Joaquin Delta: Research Needs in support of adaptive management. Delta Stewardship Council. 29pp.

Brandt, S. B., C.S. Sellinger and C. N. Glaspie. 2016. Improved Understanding of the Northern Gulf of Mexico Pelagic Ecosystem: Integration, Synthesis and Modeling of High-Resolution Zooplankton and Fish Data”. National Academy of Sciences Annual Progress Report. 11pp.

Delta Independent Science Board, 2016. Improving Adaptive Management in the Sacramento-San Joaquin Delta. Delta Stewardship Council, 48 pp.

Selected Technical Reports (from 1986 – 2000 only)

1. Brandt, S.B. 1986. Impact of alewife on spawning migration on young, warm-water fish. 1986 Progress report, N.Y. Sea Grant Institute.
2. Brandt, S.B. 1986. Food habits of adult trout and salmon in Lake Ontario. 1986 Progress report, N.Y. Sea Grant Institute.
3. Brandt, S.B. 1986. Trophic interactions of Lake Ontario fishes and their implications for multispecies sport fisheries management. 1986 Progress report, N.Y. Sea Grant Institute.
4. Brandt, S.B. and P.A. Unger. 1986. Development of a bioacoustics system to assess fish stocks in small lakes and ponds in relation to acid precipitation. Environmental Protection Agency Rep. No. CR-812663-01-0. 211 pp.
5. Brandt, S.B. 1987. Food habits of adult trout and salmon in Lake Ontario. 1987 Progress report, N.Y. Sea Grant Institute.
6. Brandt, S.B. 1987. Trophic interactions of Lake Ontario fishes and their implications for multispecies sport fisheries management. 1987 Progress report, N.Y. Sea Grant Institute.
7. Brandt, S.B. 1987. Research on underwater acoustics and pelagic fishes. pp. 7-9 In: S. Fellows (ed.) CEES Annual Report Ref. No. [UMCEES]CBL 87-179.
8. Brandt, S.B. 1987. Recent directions in fishery management strategies in Lake Ontario. Food Web II Workshop Summary, International Joint Commission. Ref. No. [UMCEES]CBL 87-49.
9. Brandt, S.B. 1988. Impact of alewife spawning migration on young warm-water fish. NOAA Final Report NA85A-D-SG021/RF-20.
10. Brandt, S.B. 1988. Food habits of adult trout and salmon in Lake Ontario. NOAA Final Report NA86AA-D-SG045/RF-34.
11. Brandt, S.B. 1988. Trophic interactions of Lake Ontario fishes and their implications for multi-species sport fisheries management. NOAA Final Report NA86AAD-SG045D/RF-19.
12. Brandt, S.B. 1988. Hydroacoustics as a stock assessment technique in the Potomac River. Progress report (F-135-88-008) to the Maryland Department of Natural Resources.

13. Brandt, S.B. 1989. Hydroacoustics as a stock assessment technique in the Potomac River. NOAA/Chesapeake Bay Stock Assessment Committee Annual Report. Ref. No. [UMCEES]CBL 89-117.
14. Brandt, S.B. 1989. Acoustic assessment of pelagic fish abundances in Lake Michigan. Executive Summary Report to the Wisconsin Department of Natural Resources. Ref. No. [UMCEES]CBL 89-105, 83 pp.
15. Brandt, S.B. 1989. Hydroacoustics as a stock assessment technique in the Potomac River. Final Report to the Maryland Department of Natural Resources (Contract F-135-88-008). Ref. No. [UMCEES]CBL 89-094, 211 pp.
16. Brandt, S.B. 1990. Acoustic quantification of fish abundance in the Chesapeake Bay. Progress Report, Maryland Department of Natural Resources Power Plant Topical Research Program. Ref. No. [UMCEES]CBL 90-047. 223 pp.
17. Houde, E. and S.B. Brandt. 1990. Abundance and comparative trophic ecology of schooling pelagic fishes in the Chesapeake Bay. Maryland Sea Grant College Progress Report R/F-65.
18. Brandt, S.B. and K.J. Hartman. 1991. Comparative growth, consumption and energetics of the top piscivores in the Chesapeake Bay. Annual progress report to the Sport Fishing Institute. Ref. No. [UMCEES]CBL 91-064. 17 pp.
19. Hartman, K.J. and S.B. Brandt. 1991. Energetic evaluation and trophic relationships of piscivores in the Chesapeake Bay. Progress Report to the Electric Power Research Institute. Ref. No. [UMCEES]CBL 91-177. 7 pp.
20. Houde, E. and S.B. Brandt. 1991. Abundance and comparative trophic ecology of schooling pelagic fishes in the Chesapeake Bay. Annual Progress Report. Ref. No. [UMCEES]CBL 91-165.
21. Brandt, S.B. 1992. Acoustic measurement of fish abundance in the Chesapeake Bay. Final Report to the Maryland Department of Natural Resources. Ref. No. [UMCEES]CBL 92-054. 152 pp.
22. Brandt, S.B. 1992. Spatial articulation of fish growth rate potential: the integration of bioacoustics and bioenergetics. Annual progress report to the National Science Foundation. Ref. No. [UMCEES]CBL 92-122.
23. Houde, E.D. and S.B. Brandt. 1992. Abundance and trophic ecology of schooling pelagic fishes in the Chesapeake Bay. Progress Report to the Maryland Sea Grant Program, R/F-65, Ref. No. [UMCEES]CBL 92-084.
24. Kemp, W.M., S.B. Brandt, W.R. Boynton, R. Bartleson, J. Hagy, J. Luo and C.J. Madden. 1992. Ecosystem models of the Patuxent River Estuary Relating Nutrient Loading to

Production of Selected Fish Populations. Final Report to Maryland Dept. Natur. Resource. 215 pp.

25. Stewart, D.J. and S.B. Brandt. 1992. Biomass and production dynamics of pelagic planktivores: A comparative analysis of Lakes Ontario and Michigan. Progress Report to New York Sea Grant Institute R/CE-2.
26. Brandt, S.B., D.J. Bailey and J. Kirsch. 1994. Fish abundance, size and species composition in the G-West area near Pooles Island. Final report to Maryland Environmental Service. 138 pp.
27. Brandt, S.B. and K.N. Irvine. 1994. Great Lakes Center for Environmental Research and Education, State University of New York, College at Buffalo. The Great Lakes Geographer, 1(2): 81-83.
28. Brandt, S.B. 1995. Acoustic measurement of fish abundance in the Chesapeake Bay. Final Report to Maryland Department of Natural Resources. 154 pp.
29. Brandt, S.B. and 11 other authors. 1995. Chesapeake Bay Ecosystem Modeling Program. Technical Synthesis Report to EPA Chesapeake Bay Program. EPA903-R-95-002: 189 pp.
30. Brandt, S.B., D.J. Bailey and J. Kirsch. 1995. Fish abundance, size and species composition near Worton Point. Final report to Maryland Environmental Service. 91 pp.
31. Brandt, S.B., K.J. Hartman, M. Weimer and J.M. Jech. 1995. Fish abundance, size and species composition in the G-West and reference areas near Pooles Island. Interim Report to Maryland Environmental Services. 94 pp.
32. Gerken, M., S.B. Brandt, K.J. Hartman and J.M. Jech. 1995. Fish abundance, size and species composition in the G-West and reference areas near Pooles Island. Final report to Maryland Environmental Service. 222 pp.
33. Jech, J.M., S.B. Brandt, and K.J. Hartman. 1995. Fish abundance, size and species composition in the G-West area near Pooles Island. Interim report to Maryland Environmental Service. 105 pp.
34. Weimer, M.T., S.B. Brandt, J.M. Jech and S.A. Pothoven. 1996. Fish abundance, size and species composition in the G-West and reference areas near Pooles Island. Interim Report to Maryland Environmental Services. 50 pp.
35. Barry, K.L., E. Demers, J.M. Jech and S.B. Brandt. 1997. Acoustic measurements of fish abundance in the Delaware Bay. 1996 Final Report, EPRI Environmental Group. 407 pp.

36. Pothoven, S.A., S.B. Brandt, J.M. Jech and M.T. Weimer. 1997. Fish abundance, size and species composition in the G-West and reference areas near Pooles Island. 1996 Final Report to Maryland Environmental Services. 180 pp.
37. Brandt, S.B. and E. Demers. 1998. Chesapeake Bay ecosystem modeling program (1993-1998); fish bioenergetics modeling. Quarterly reports to the Chesapeake Program Office. Annapolis, MD.
38. Pothoven, S.A., S.B. Brandt, J.M. Jech , D.W. Hondorp and K.L. Barry. 1998. Fish abundance, size and species composition in the G-West and reference areas near Pooles Island. Final Report to Maryland Environmental Services. Annapolis, MD. 199 pp.
39. Brandt, S.B. 1999. Fish Bioenergetic Modeling. Final Report to EPA Chesapeake Bay Ecosystem Modeling Program (1993-1998) 20pp.
40. Brandt, S.B., J. Tyler and J. Horne. 1999. Linking Space and Time Scales of Fish Production Measurements in Lake Ontario. Final Report to New York Sea Grant Program.
41. Brandt, S.B. 2002. Final Report for Fish Bioenergetics Modeling, Chesapeake Bay Ecosystem Modeling Program (1993-1998). Final Report to EPA Chesapeake Bay Program Office, Annapolis, Maryland.

Recent Technical Reports

- Brandt et al. May 2014. Modeling the Impacts of Hypoxia on Ecologically and Commercially Important Living Resources in the Northern Gulf of Mexico : Annual Progress Report to NOAA. NA09NOS4780234
- Brandt, S. B. 2015. Modeling the impacts of hypoxia on ecologically and commercially important living resources in the Northern Gulf of Mexico. Final Report to NOAA, 21 pp.
- Scavia et al. 2014. ECOFORE: Forecasting the causes, consequences and remedies for hypoxia in Lake Erie. Final report to NOAA. 23 pp.
- Delta Independent Science Board, 2014. Review of the Draft BDCP EIR/EIS and Draft BDCP. Delta Stewardship Council, Delta Science Program.
<http://deltacouncil.ca.gov/sites/default/files/documents/files/Attachment-1-Final-BDCP-comments.pdf>. 90 pp.

- Delta Independent Science Board, 2015. Floes and Fishes in the Sacramento-San Joaquin Delta: Research Needs in support of Adaptive Management. Delta Stewardship Council, Delta Science program. 31 pp.

Recent Funded Research

1. Improved Understanding of the Northern Gulf of Mexico Pelagic Ecosystem: Integration, Synthesis and Modeling of High-Resolution Zooplankton and Fish Data”. National Academy of Sciences, 1/1/2016 – 12/31/2017, Total: \$504,472. (Co-Principal Investigator).
2. User-driven tools to predict and assess effects of reduced nutrients and hypoxia on living resources in the Gulf of Mexico. NOAA-BGOMEX, 9/1/2016 – 8/31/2020, \$899,996. (Co-Principal Investigator)
3. The future of Oregon’s fisheries: Incorporating habitat quality and climate into albacore tuna production estimates”. Agriculture Research Foundation, OSU: 1/17/17 – 12/31/18, Total: \$12,482. (Principal Investigator).
4. Modeling the Impacts of Hypoxia on Ecologically and Commercially Important Living Resources in the northern Gulf of Mexico. NOAA, \$339,436. 2009 – 2015. (Principal Investigator).
5. Oregon Sea Grant Omnibus Program, NOAA. \$4,634,000. 2009 – 2014. (Principal Investigator).
6. ECOFORE: Ecological Forecasting the Causes and Consequences of Lake Erie Hypoxia, \$2,505,746. 2006-2014. NOAA (Co-Investigator).
7. Spatially-explicit, high-resolution Mapping and Modeling to Quantify Hypoxia and Oil Effects on the Living Resources of the northern Gulf of Mexico. National Science Foundation, \$46,891. 2010 – 2011. (Principal Investigator).
8. Implementing the West Coast Regional Research and Information Report and Plan: A Collaborative Approach with the West Coast Governors Agreement on Ocean Health. NOAA Sea Grant, \$300,000. 2010 – 2013. (Principal Investigator).
9. Developing the Foundation for a Framework for Public and Stakeholder Engagement in a Regional Coastal and marine Spatial Planning Process. NOAA National Sea Grant. \$30,000. 2011 – 2013. (Co- Principal Investigator).
10. A Regional, Evaluative Approach to Pathway (REAP) Assessment for Aquatic Invasive Species: Predicting Risks and Testing Solutions. NOAA National Sea Grant . \$690,000. 2010 – 2013. (Principal Investigator).

11. Sea Grant Aquaculture Extension: Creating Capacity in Oregon and the Northwest. NOAA National Sea Grant. \$295,711. 2010 – 2013. (Principal Investigator).
12. Invasive Species Biofouling on the 2011 Tohoku Tsunami Marine Debris: A workshop to facilitate Regional Preparedness and Response. NOAA National Sea Grant, USFWS and Oregon Department of natural Resources. \$22,000. 2012 – 2013. (Principal Investigator).
13. Elevating public awareness, engagement and solutions to West Coast Marine Debris through video outreach. NOAA National Sea Grant, \$25, 000. 2012 – 2013 (Co-Principal Investigator).
14. Adaptive Integrated Framework (AIF): a new methodology for managing impacts of multiple stressors in coastal ecosystems, \$4,618,100. 2007-2013. (Co-Investigator)
15. Center of Excellence for Great Lakes and Human Health. NOAA Office of Global Programs, \$7,200,000. 2004-2009. (Principal Investigator).
16. Nutrient and Trophic Dynamics in the Adriatic Sea. U.S. State Department and Croatia Ministry of Science and Technology, \$150,000. 1998 - 2009. (Co-Investigator).
17. Development of a Universal, High-Speed Buoy System for Coastal Observations. NOAA, \$365,000. 2005-2007. (Principal Investigator)
18. NGO2006: Spatially-explicit, High-resolution Mapping and Modeling to Quantify Hypoxia Effects on the Living Resources of the Northern Gulf of Mexico, \$1,462,729. 2006-2009. (Principal Investigator).
19. Ecosystem variability and estuarine fisheries: a synthesis. NOAA – Coastal Ocean Program, \$1,400,000. 2003-2005. (Principal Investigator).
20. Development of an Integrated Coastal Observing System for the Great Lakes. International Joint Commission, National Sea Grant Program, \$20,000. 2003-2006. (Principal Investigator).
21. Development of Sea Grant Extension at GLERL. NOAA National Sea Grant Program, \$123,000. 2001-2008. (Principal Investigator).
22. An evaluation of bioenergetics modeling for lake whitefish in Lake Michigan. Great Lakes Fishery Trust, \$201,114. 2001-2004. (Co-Investigator).
23. Effects of *Diporeia* declines on fish diet, growth and food web dynamics in southeast Lake Michigan. Great Lakes Fishery Trust, \$277,000. 1999-2003. (Principal Investigator).

24. Towards the Census of Marine Life: Proof of concept through integration of traditional, optical and acoustic zooplankton and fish data in the Chesapeake Bay. Sloan Foundation, \$250,000. 2002-2004. (Co-Investigator).
25. Trophic interactions in estuarine systems (TIES): Pulsed inputs, physical features and biological patches. National Science Foundation, \$3,600,000. 1995-2002. (Co-Investigator).
26. Ecosystem Models of the Patuxent River Estuary: Relating nutrient and organic loadings to production of selected fish populations. Governor's Council on Chesapeake Bay Research Fund and the U.S. EPA, \$228,000. 1991-1999. (Principal Investigator)
27. Biomass and Energy Flow in Pelagic Food Webs of Large Lakes. Great Lakes University Research Grant, Environment Canada, \$36,000. 1994-1999. (Principal Investigator)
28. Spatially-Explicit Models of Fish Growth: Integration of acoustics and bioenergetics. National Science Foundation, \$360,000. 1994-1999. (Principal Investigator)
29. Fish Abundance, Size and Species Composition in the G-West Area Near Pooles Island. Maryland Department of Environmental Services, \$268,965. 1995-1999. (Principal Investigator)
30. The Importance of Understanding Ecological Complexity to Predicting Effects of Multiple Stressors on Coastal Systems. NOAA Coastal Oceans Program, \$204,448. 1995-2000. (Principal Investigator - part of multi-investigator program)
31. Spatially-Explicit Models of Lake Kinneret Bleak Growth Rate Potential: Functional Linkages Between Physical and Biological Structure. U.S.-Israel Binational Science Foundation. 1995-1998. (Co-principal Investigator)
32. Linking Space and Time Scales of Fish Production Measurements in Lake Ontario: Adding the Fourth Dimension. New York Sea Grant, \$127,000. 1996-1998. (Principal Investigator).

Selected Completed Research (partial listing only)

Seasonal and spatial assessment of bay anchovy population abundance and biometrics in the Hudson River. Hudson River Foundation, \$311,004. 1996-1999. (Co-principal Investigator)

Planktivore Production in Lake Ontario: Effects of prey availability, predation and spatial heterogeneity. New York Sea Grant Institute, \$109,450. 1995-1997. (Principal Investigator)

Ecological Role of Striped Bass in the Hudson River Estuary-Overwinter Spatial Biometrics. Hudson River Foundation, \$53,316. 1995-1996. (Co-principal Investigator)

Predator-prey Modeling of Fish Populations within Three-Dimensional GIS. National Science Foundation, \$81,000. 1995-1997. (Co-principal Investigator - joint project with NCGIA, SUNY-Buffalo)

Fish abundance, size and species composition: Kent Island Site #104. Maryland Environmental Services, \$106,287. 1996-97. (Principal Investigator)

Acoustic measurement of fish abundances in the Delaware Bay. Electric Power Research Institute, \$119,677. 1996-97. (Principal Investigator)

Pelagic Biomass and Production in Lake Erie. Natural Sciences and Engineering Research Council of Canada, \$530,000 CAD. 1994-1997. (Multiple Principal Investigators)

Development of a Great Lakes Bioenergetics, Physiology, and Behavior Laboratory. National Science Foundation - Academic Research Infrastructure, \$113,000. 1996-1998. (Principal Investigator)

Development of a Fisheries Acoustic Center. National Science Foundation - Academic Research Infrastructure, \$119,000. 1996-1998. (Principal Investigator)

Promoting Community Involvement in Great Lakes Issues Using an Ecosystem Approach. Center for Development of Human Services, Buffalo State College, \$1,500. 1996-1997. (Principal Investigator)

Renovation of the Water Supply and Treatment Facilities of the Great Lakes Center's Aquatic Research Laboratory. National Science Foundation, \$118,460. 1996-1997. (Principal Investigator)

A Planning Workshop to Further Develop a Multidisciplinary Approach to Great Lakes Environmental Studies. National Science Foundation, \$25,000. 1996-1997. (Co-principal Investigator)

Role of Oceanic fronts in the distribution and life history strategies of American eels (Anguilla rostrata) (with J.D. McCleave, University of Maine) National Science Foundation. 1988-1990.

Spatial articulation of fish growth rate potential: The integration of bioacoustics and bioenergetics. National Science Foundation. 1991-1994.

Abundance and comparative trophic ecology of schooling pelagic fishes the Chesapeake Bay. Maryland Sea Grant Institute. 1990-1992.

Feeding ecology, growth and bioenergetics of the emerald shiner, a reemerging native species in Lake Erie? Great Lakes Research Consortium, \$13,370. August 1994 - June 1995.

Ecosystem Models of the Patuxent River Estuary-Relating Nutrient Loadings to Production of Selected Fish Populations. EPA via subcontract from the University of Maryland, \$23,204. August 1994-September 1995.

Biomass and production dynamics of pelagic planktivores: A comparative analyses of Lakes Ontario and Michigan. New York Sea Grant Institute. 1990-1992.

Energetics evaluation and trophic relationships of striped bass, bluefish and weakfish in the Chesapeake Bay. Electric Power Research Institute. 1990-1993.

Biomass and energy flow in pelagic food webs of large lakes. Great Lakes University Research Grant, Environment Canada. 1991-1992.

Acoustic quantification of fish abundance in the Chesapeake Bay: Applications to power plant siting and evaluation. Maryland Department of Natural Resources. 1989-1991.

Acoustic monitoring of pelagic fish abundance in the deep trough region of the Chesapeake Bay. Maryland Department of the Environment. 1991-1993.

Acoustic monitoring of fish abundances to minimize mortalities during underwater explosives testing in the Chesapeake Bay. Naval Surface Warfare Center. 1987-1988.

Hydroacoustics as a stock assessment technique in the Potomac River. Maryland Department of Natural Resources. 1988-1989.

Fish stock assessment in Chesapeake Bay. Maryland Department of Natural Resources, subcontract from CBL (B. Rothschild). 1988-1989.

Trophic interactions of Lake Ontario fishes and their implications for multispecies sport fisheries management. New York Sea Grant. 1984-1988.

Acoustic assessment of forage fish abundance in Lake Michigan Wisconsin Department of Natural Resources. 1986-1989.

Acoustic techniques for the study of nekton and zooplankton at water mass boundaries and ocean fronts. Office of Naval Research via a contract from the University of Wisconsin, Madison. 1984.

Enhancement of capabilities for large lake biological research at SUNY. New York Research Foundation. 1984-1985.

Food habits of adult trout and salmon in Lake Ontario, New York Sea Grant. 1986-1987.
Artificial reef development and the Sport Fishery of western Lake Ontario (with J. Gannon). New York Electric and Gas Corporation. 1984.

Dedicated ship-time aboard the NOAA vessel. R/V WHITING, NOAA, 10 days. 1984-1985.

Dynamics of zooplankton in relation to fish predation in Lake Ontario (with Joe Makarewicz), N.Y. Sea Grant Institute. 1984-1985.

Development of bioacoustics system to assess fish stocks in small lakes and ponds in relation to acid precipitation, Environmental Protection Agency. 1985-1986.

Development of a mobile acoustic profiling system (MAPS) to assess fish stocks in small lakes and ponds, New York Research Foundation. 1985-1986.

Impact of alewife spawning migration on young warmwater fish. N.Y. Sea Grant Institute. 1984-1985.

Scientific Presentations

1. Brandt, S.B. and J.J. Magnuson. 1974. Acoustic detection of alewife in Lake Michigan. Invited paper to acoustic Fish Detection Workshop held at Glenora Fisheries Station, 14-15 November 1974, Picton, Ontario, CANADA.
2. Brandt, S.B. and J.J. Magnuson. 1975. Sonar stock assessment of alewife in Lake Michigan. Contributed paper to Wisconsin Chapter of the American Fisheries Society, annual meeting, 10-11 January 1975, Stevens Point, WI.
3. Brandt, S.B. and J.J. Magnuson. 1975. Application of acoustic techniques for the stock assessment of Lake Michigan alewives. Invited paper to Workshop on Problems of Assessing Populations of Nekton, 25-27 February 1975, Santa Barbara, CA.
4. Magnuson, J.J. and S.B. Brandt. 1975. Fish population estimation in Lake Michigan. The Great Lakes, 1975: The Great Lakes, 2001. 18-19 September 1975, Madison, WI.
5. Janssen, J. and S.B. Brandt. 1976. Vertical migration of alewives (*Alosa pseudoharengus*) and opossum shrimp (*Mysis relicta*) in Lake Michigan. Contributed paper to American Fisheries Society, Annual Meeting. 19-22 September 1976, Dearborn, MI.
6. Magnuson, J.J., S.B. Brandt and C.S. Clay. 1976. Bioacoustics location of a thermal front in the Atlantic Ocean near Cape Hatteras. 91st Meeting of the Acoustical Society of America, TX.

7. Peterson, L., C.S. Clay and S.B. Brandt. 1976. Acoustic estimates of fish density and scattering function. Contributed paper to 91st Meeting of the Acoustical Society of America, TX.
8. Stewart, D.J., S.B. Brandt and J.J. Magnuson. 1976. Distributional response of fish to a thermal front in the Atlantic Ocean near Cape Hatteras. Contributed paper to 39th Meeting of the American Society of Limnology and Oceanography. 14-21 June 1976, Savannah, GA.
9. Stuntz, W.E., S.B. Brandt and R.J. Hall. 1976. Thermal, primacy in fish ecology, fact or fancy? Invited paper to 19th Conference on Great Lakes Research. May 1976, Guelph, Ontario, CANADA.
10. Brandt, S.B. 1977. Distributional ecology of alewife (*Alosa pseudoharengus*) in Lake Michigan. Invited paper to Sea Grant Great Lakes Fisheries Conference. 13-15 December 1977, Madison, WI.
11. Magnuson, J.J. and S.B. Brandt. 1977. Fish ecology of the Great Lakes. Invited paper to the 40th Meeting of the American Society of Limnology and Oceanography. 20-23 June 1977, East Lansing, MI.
12. Brandt, S.B. 1978. The effects of thermal fronts on fish distributions in Lake Michigan and the Atlantic Ocean. National Marine Fisheries Service. November 1978, La Jolla, CA.
13. Brandt, S.B. 1979. Application of acoustics to the study of fish - behavior an example from Lake Michigan. Invited paper to Australian Workshop on the Use of Acoustics in Biological Oceanography. 13-14 February 1979, Cronulla, N.S.W., AUSTRALIA.
14. Brandt, S.B. 1980. Response of mesopelagic fish to a warm-core eddy in the Tasman Sea. Contributed paper to the Australian Society of Fish Biology Annual Conference. 15-17 August 1980, Melbourne, AUSTRALIA.
15. Brandt, S.B. 1980. Distribution of mesopelagic fishes in and around a warm-core eddy of the southeast coast of Australia. Contributed paper to the winter meeting of the American Society of Limnology and Oceanography. 31 January 4 February 4, 1980, Los Angeles, CA.
16. Brandt, S.B. and V.A. Wadley. 1980. Thermal fronts as ecotones and zoogeographic barriers in marine and freshwater systems. Invited paper to Ecological Society of Australia, Annual Meeting. Melbourne, AUSTRALIA.
17. Crowder, L.B, J.J. Magnuson and S.B. Brandt. 1980. Thermal habitat shifts in Lake Michigan fishes. Contributed paper to the 23rd Conference on Great Lakes Research. 19-22 May 1980, Kingston, Ontario, CANADA.

18. Maxwell, J.G.H. and S.B. Brandt. 1981. Comparison of the relative sampling efficiencies of the RMT 8, IYGPT, and ENGEL pelagic trawls and the implications to mesopelagic biomass estimates by acoustics. Contributed paper to 8th Annual Conference of the Australian Society of Fish Biology. 31 July-3 August 1981, Brisbane, Queensland, AUSTRALIA.
19. Wadley, V.A., S.B. Brandt and F.B. Griffiths. 1981. Micronekton associated with a Tasman Sea eddy. Contributed paper to annual Meeting of the Australian Marine Sciences Association. 9-10 May 1981, Brisbane, Queensland, AUSTRALIA.
20. Brandt, S.B., V.A. Wadley and F.B. Griffiths. 1981. Micronekton associated with a warm-core eddy. Contributed paper to 44th Annual Meeting of the American Society of Limnology and Oceanography. 15-18 June 1981, Milwaukee, WI.
21. Brandt, S.B. 1982. Warm-core eddies: biological contrasts and consequences. Invited paper to U.S. - Australian - N.Z. Workshop on Warm-Core Eddies. 18-22 January 1982, Wellington, NEW ZEALAND.
22. Brandt, S.B. 1983. Selectivity of towed nets: its relationship to trawl size and fish behavior. Paper presented at the 113th Annual Meeting of the American Fisheries Society. 15-20 August 1983, Milwaukee, WI.
23. Brandt, S.B. and F.B. Griffiths. 1983. Physical and biological aspects of oceanic fronts. Paper presented at the Annual Meeting of the American Society of Limnology Oceanography. 11-16 June 1983, St. Johns, Newfoundland, CANADA.
24. Brandt, S.B. 1984. Disappearance of the deepwater sculpin from Lake Ontario; the keystone predator hypothesis. Paper presented to the Annual Meeting of the International Association of Great Lakes Research. 1-6 May 1984, St. Catharines, Ontario, Canada.
25. Brandt, S.B. 1984. Thermal habitat partitioning of mesopelagic fishes at warm-core eddies. Paper presented at the American Geophysical Union Meeting. 3-7 December 1984, San Francisco, CA.
26. Brandt, S.B. and D.P. Kolenosky. 1984. Food habits of adult trout and salmon in Lake Ontario. Paper presented to the 114th Annual Meeting of the American Fisheries Society. 14-17 August 1984, Ithaca, N.Y.
27. Brandt, S.B. 1985. Food of adult trout and salmon in Lake Ontario. Invited paper presented at the Annual Meeting of the International Association for Great Lakes Research. 2-5 June 1985, Milwaukee, WI.
28. Brandt, S.B. and L.B. Crowder. 1985. An ecological perspective on recent and historical dynamics in Great Lakes Fish Communities. Invited paper presented at the Annual

- Meeting of the International Association for Great Lakes Research. 2-5 June 1985, Milwaukee, WI.
29. Brandt, S.B. and R.M. DeMuth. 1985. Critical factors affecting winter survival of the alewife (*Alosa pseudoharengus*) in the Great Lakes: A bioenergetics evaluation. Paper presented at the Annual Meeting of the Inter. Assoc. for Great Lakes Research. 2-5 June 1985, Milwaukee, WI.
 30. Brandt, S.B. 1985. Prey and habitat selection of Lake Ontario fishes in a fluctuating thermal environment. 115th Annual Meeting of the American Fisheries Society and the International Association of Fish and Wildlife Agencies. 7-12 September 1985, Sun Valley, ID.
 31. Brandt, S.B. 1986. Trophic relationships among Lake Ontario fishes. 29th Conference on Great Lakes Research (IAGLR), University of Toronto. May 1986, Toronto, Ontario, CANADA.
 32. Brandt, S.B., C.A. Iancu, T.P. Urban, M. Shea and J. Makarowicz. 1986. Comparison of alewife diet composition and zooplankton community structure in Lake Ontario. 29th Conference on Great Lakes Research (IAGLR), University of Toronto. May 1986, Toronto, Ontario, CANADA.
 33. Madon, S.P. and S.B. Brandt. 1986. Smelt predation on slimy sculpin in Lake Ontario and its implications for lake trout food resources. 29th Conference on Great Lakes Research (IAGLR), University of Toronto. May 1986, Ontario, CANADA.
 34. Magnuson, J.J., C.S. Clay and S.B. Brandt. 1986. The hierarchical characterization of the Gulf Stream front using sonars during Echo Front cruise 1985. Ocean Sciences Meeting. 13-17 January 1986, New Orleans, LA.
 35. Mason, D.M., D.B. MacNeill, S.B. Brandt and J. Gannon. 1986. Interaction between alewife and larval yellow perch in a Lake Ontario embayment. 29th Conference on Great Lakes Research (IAGLR), University of Toronto. May 1986, Ontario, Canada.
 36. Brandt, S.B. and R. O'Gorman. 1987. Predator-prey dynamics in Lake Ontario, Invited paper presented at the 30th International Conference on Great Lakes Research. 10-14 May 1987, Ann Arbor, MI.
 37. Brandt, S.B. 1987. Patchiness in pelagic fish distributions: a help or hindrance to acoustic stock assessment. Presented at the International Symposium on Fisheries Acoustics. 22-26 June 1987, Seattle, WA.
 38. Brandt, S.B. 1987. Underwater acoustics: a matter of scale and resolution. Invited paper to 117th Annual Meeting of the American Fisheries Society. 13-17 September 1987, Winston-Salem, NC.

39. Iancu, C. A. and S.B. Brandt. 1987. Bioenergetic evaluation of the feeding strategies of adult alewife in southeastern Lake Ontario. Amer. Fish Soc. N.Y. Chapter Annual Meeting. January 1987, Rome, NY.
40. MacNeill, D. and S.B. Brandt. 1987. Ontogenetic shifts in gill-raker morphology and prey capture efficiency of the alewife. American Fisheries Society, N.Y. Chapter Annual Meeting. January 1987, Rome, N.Y.
41. MacNeill, D.B. and S.B. Brandt. 1987. Ontogenetic shifts in gill-raker morphology and prey capture efficiency of the alewife. 30th International Conference on Great Lakes Research. 10-14 May 1987, Ann Arbor, MI.
42. Mason, D. and S.B. Brandt. 1987. Impact of alewife on larval yellow perch survival and growth. Paper presented at the 30th International Conference on Great Lakes Research. 10-14 May, 1987, Ann Arbor, MI.
43. Unger, P.A., S.B. Brandt and G. Yogis. 1987. Acoustic assessment of fish abundances in small lakes: effects of fish and zooplankton distributions. American Fisheries Society, N.Y. Chapter Annual Meeting. January 1987, Rome, NY.
44. Unger, P.A., S.B. Brandt and G.A. Yogis. 1987. Acoustic assessment of fish abundance in small lakes. International Symposium on Fisheries Acoustics. 22-26 June 1987, Seattle, WA.
45. Urban, T., S. Madon and S.B. Brandt. 1987. Juvenile smelt (Osmerus mordax diet in Lake Ontario. American Fisheries Society, N.Y. Chapter Annual Meeting. January 1987, Rome, NY.
46. Urban, T.P. and S.B. Brandt. 1987. Resource partitioning by juvenile smelt and juvenile alewife in Lake Ontario. 30th International Conference on Great Lakes Research. 10-14 May 1987, Ann Arbor, MI.
47. Brandt, S.B., P.A. Unger, D.M. Mason, R.L. Argyle, L. Wells and D.J. Stewart. 1988. Measuring Fish Abundances in the Great Lakes: Is acoustics a sound approach? 31st International Conference on Great Lakes Research. 17-20 May 1988, Toronto, Ontario, CANADA.
48. Unger, P.A., S.B. Brandt and D.M. Mason. 1988. Hydroacoustic estimates of fish sizes in Lake Michigan. Annual meeting of the American Society of Limnology and Oceanography. 12-16 June 1988, Boulder, CO.
49. Mason, D.M. and S.B. Brandt. 1988. Influence of predation on larval yellow perch survival in Lake Ontario. Invited paper, 12th Annual Larval Fish Conference, 25-28 June 1988, Ann Arbor, MI.

50. Stewart, D.J. and S.B. Brandt. 1988. Modeling and bioacoustics: Building the foundation for ecosystem oriented management of Great Lakes Fishes. Invited paper to 118th Annual Meeting of the American Fisheries Society. 12-15 September 1988, Toronto, CANADA.
51. Brandt, S.B., D.M. Mason, R.L. Argyle and D.J. Stewart. 1988. System-level management of Great Lakes fishes: Is acoustics a sound approach? Annual meeting of the American Geophysical Union. 5-9 December, 1988, San Francisco, CA.
52. Brandt, S.B. 1988. Underwater acoustics: applications to fish ecology and fisheries management. Special Invited Seminar. University of Stockholm. 25 May 1988, Stockholm, SWEDEN.
53. Brandt, S.B. 1988. Overview of bioacoustics techniques and applications. Special Invited Seminar. Remote Sensing with Ocean and Ocean Resource Applications. Fisheries and Oceans Canada. 22 November 1988, Ottawa, Ontario, CANADA.
54. Brandt, S.B. 1988. Great Lakes forage abundance and size-spectrum. Invited paper to workshop on "Comparing production dynamics of the Lake Michigan and Lake Ontario Ecosystems". 1-2 December 1988, Syracuse, NY.
55. Brandt, S.B. 1988. Acoustic assessment of fish abundances and fish sizes in Lake Michigan. Keynote speaker, workshop on prey-fish abundance and dynamics in Lake Michigan. 22 September 1988, Milwaukee, WI.
56. Brandt, S.B. 1988. Application of underwater acoustics to fish studies in marine and freshwater systems. Special Invited Seminar. Office of Naval Research, Underwater Acoustics Division. 27 September 1988, Washington, D.C.
57. Brandt, S.B. 1988. Fish abundance estimation in the Chesapeake Bay: Is acoustics a sound approach? Annual Chesapeake Technical Conference. 26 February 1988, Lexington Park, MD.
58. Brandt, S.B. 1989. System-level management and production in the Great Lakes: Bioacoustics, bioenergetics and multi-lake comparisons. Guest seminar, Great Lakes Environmental Research Laboratory. 11 January 1989, Ann Arbor, MI.
59. Brandt, S.B. 1989. Applications of knowledge-based systems to fisheries management and acoustic abundance measures. Invited paper to NOAA Workshop on Knowledge-Based Systems and Marine Sciences, George Mason University. 21-24 May 1989, Fairfax, VA.
60. Mason, D.M. and S.B. Brandt. 1989. Applications of acoustic techniques to the study of fish populations in the Great Lakes and the Chesapeake Bay, Potomac River Chapter, American Fisheries Society Annual Meeting. 28-29 April 1989, Solomons, MD.

61. Brandt, S.B. 1989. Quantification of pelagic planktivores in the Great Lakes. Invited presentation to Workshop on Interactions of Limnological and Fisheries Research, Great Lakes Environmental Research Laboratory. 13-14 April 1989, Ann Arbor, MI. 1989.
62. Brandt, S.B. 1989. Biomass and production dynamics of pelagic planktivores in the Great Lakes. Invited presentation to Workshop on Lake Ontario Trophic Transfer (LOTT), Canadian Center for Inland Waters. 28-29 June 1989, Burlington, Ontario, CANADA.
63. Sprules, W.G., S.B. Brandt, E. Jin, M. Munawar and D.J. Stewart. 1989. Patterns in the biomass size structure of the complete Lake Michigan pelagic community. Invited paper to the 32nd International Conference on Great Lakes Research. 29 May - 2 June 1989, Madison, WI.
64. McDonald, M.E., J.H. Selgeby, L.B. Crowder and S.B. Brandt. 1989. Forage fish dynamics in Lakes Michigan, Superior and Ontario: Patterns and processes. Invited paper to the 32nd International Conference on Great Lakes Research. 30 May - 2 June 1989, Madison, WI.
65. Brandt, S.B., V. Patrick, D.M. Mason, R.L. Argyle and L. Wells. 1989. Spatial and temporal patchiness and abundance of pelagic fishes in Lake Michigan. Invited paper to the 32nd International Conference on Great Lakes Research. 29 May - 2 June 1989, Madison, WI.
66. Brandt, S.B. 1989. Acoustic measures of patchiness, abundance and size of pelagic fishes. Invited paper to the 119th Annual Meeting of the American Fisheries Society. 7-12 September 1989, Anchorage, AK.
67. Brandt, S.B. 1989. Abundance and production of pelagic planktivores: A comparison between Lakes Ontario and Michigan. N.Y. Sea Grant Institute. 26-27 September 1989, Stony Brook, NY.
68. Sprules, W.G., S.B. Brandt, E. Jin and M. Munawar. 1990. Spatial and temporal patterns in structure of the Lake Michigan pelagic food web. Paper accepted for the Annual Meeting of the International Association for Great Lakes Research. 13-17 May 1990, Windsor, Ontario, CANADA.
69. Brandt, S.B. 1990. Hydroacoustics as a stock assessment technique in the Potomac River. NOAA Chesapeake Bay Stock Assessment Committee Annual Meeting. 16-17 January 1990, Virginia Institute of Marine Science, Gloucester Point, VA.
70. Mason, D.M. and S.B. Brandt. 1990. Diel patterns of pelagic fish distributions in Lake Michigan. Annual Meeting of the International Association for Great Lakes Research. 13-17 May 1990, Windsor, Ontario, CANADA.

71. Hartman, K.J., E.V. Patrick, D.M. Mason and S.B. Brandt. 1990. Abundance of bay anchovy (*Anchoa mitchilli*) in the mid-Chesapeake Bay. Annual Meeting of the American Society of Limnology and Oceanography. 10-14 June 1990, Williamsburg, VA.
72. Mason, D.M., E.V. Patrick, K.J. Hartman and S.B. Brandt. 1990. Spatial and temporal variability in the abundance and distribution of the pelagic biota in the Chesapeake Bay. Annual Meeting of the American Society of Limnology and Oceanography. 10-14 June 1990, Williamsburg, VA.
73. Patrick, E.V., D.M. Mason and S.B. Brandt. 1990. Fish population flow: a description of time varying fish distribution from acoustic survey data. Annual Meeting of the American Society of Limnology and Oceanography. 10-14 June 1990, Williamsburg, VA.
74. Brandt, S.B. 1990. Acoustical scattering at thermal fronts: spatial scales versus thermal scales. Invited paper to the Annual Acoustical Society of America Conference. 20-25 May 1990, Penn State, University Park, PA.
75. Brandt, S.B., D.M. Mason, V. Patrick, K. Hartman, M. Klebasko and E. Houde. 1990. Trophic supply and demand assessment in the Chesapeake Bay. Chesapeake Research Consortium Symposium. December 1990, Baltimore, MD.
76. Munawar, M., S.B. Brandt, W.G. Sprules and D. Stewart. 1991. Lake Ontario trophic transfer (LOTT) study: a new multidisciplinary and multitrophic approach. Invited paper to 34th International Conference on Great Lakes Research. June 1991, Buffalo, NY.
77. Brandt, S.B., D.M. Mason and A.P. Goyke. 1991. Trophic supply and demand in Lake Ontario: system perspectives. Invited paper to 34th International Conference on Great Lakes Research. June 1991, Buffalo, NY.
78. Goyke, A.P., S.B. Brandt and D.M. Mason. 1991. Trophic supply and demand in Lake Ontario: distribution and abundance of pelagic planktivores. Invited paper to 34th International Conference on Great Lakes Research. June 1991, Buffalo, NY.
79. Hartman, K.J. and S.B. Brandt. 1991. Seasonal diets of juvenile striped bass, bluefish and weakfish in the Chesapeake Bay. Tidewater Chapter, American Fisheries Society. February 1991, MD.
80. Mason, D.M., S.B. Brandt, A.P. Goyke, V. Patrick and W.G. Sprules. 1991. Trophic supply and demand in Lake Ontario: the zooplankton - planktivore linkage. Invited paper to 34th International Conference on Great Lakes Research. June 1991, Buffalo, NY.

81. Brandt, S.B., D.M. Mason, A.P. Goyke, E.V. Patrick and D.J. Stewart. 1991. Trophic supply and demand in Lake Ontario: the planktivore - piscivore linkage. Invited paper to 34th International Conference on Great Lakes Research. June 1991, Buffalo, NY.
82. Stewart, D., P. Rand, S.B. Brandt and J. Haynes. 1991. Dynamics of salmonine predation in New York waters of Lake Ontario. Invited paper to 34th International Conference on Great Lakes Research. June 1991, Buffalo, NY.
83. Hartman, K.J. and S.B. Brandt. 1991. Trophic linkages, predation potential, and interactions between top predators in the mid-Chesapeake Bay. Annual Meeting of the American Fisheries Society. September 1991, San Antonio, TX.
84. Brandt, S.B. 1991. Spatially-explicit models of fish production: the integration of acoustics and bioenergetics. Invited paper to the Annual Meeting of the Acoustical Society of America. November 1991, Houston, TX.
85. Brandt, S.B. and E.V. Patrick. 1991. Acoustic Visualization and Information Retrieval. Invited presentation to Workshop on Acoustic assessments of demersal fishes. 26-30 August 1991, St. Johns, Newfoundland, Canada.
86. Brandt, S.B., D.M. Mason and E.V. Patrick. 1992. Spatially-explicit models of fish growth rate. Annual Meeting of the American Society of Limnology and Oceanography. February 1992, Santa Fe, NM.
87. Hartman, K.J. and S.B. Brandt. 1992. Trophic linkages of top predators in the Chesapeake Bay. Northeastern Division Meeting of the American Fisheries Society. May 1992, Norfolk, VA.
88. Brandt, S.B. 1992. Spatially-explicit fish bioenergetics models. Invited presentation to the Chesapeake Bay Program Workshop on Current Approaches for Modeling Estuaries Ecosystem Processes. 24-27 March 1992, St. Michaels, MD.
89. Brandt, S.B. 1992. Spatially-explicit models of fish production: Integration of acoustics and ecological models. Invited paper to the World Fisheries Congress. 4-9 May 1992, Athens, GREECE.
90. Hartman, K. and S.B. Brandt. 1992. Energetics and trophic linkages of top predators in the Chesapeake Bay. American Fisheries Society, Potomac Chapter. 2 April 1992, St. Michaels, MD.
91. Brandt, S.B. and J. Kirsch. 1992. Spatially-explicit models of fish growth rate and production. Invited paper, Annual Meeting of the American Fisheries Society. September 1992, Rapid City, SD.

92. Brandt, S.B. and K.J. Hartman. 1992. Innovative approaches using bioenergetics models: Future applications to fish ecology and management. Invited paper, Annual Meeting of the American Fisheries Society. September 1992, Rapid City, SD.
93. Brandt, S.B. and D.M. Mason. 1992. Functional features of fish feeding and growth in a pelagic landscape. Invited paper to GUTSHOP '92. 8-11 November 1992, Orcas Island, WA.
94. Goyke, A. and S.B. Brandt. 1992. Abundance and biomass of pelagic planktivores in Lake Ontario. 35th International Conference on Great Lakes Research. 31 May - 4 June 1992, Waterloo, Ontario, CANADA.
95. Munawar, M., S.B. Brandt, G. Sprules and D.S. Stewart. 1992. Lake Ontario Trophic Transfer (LOTT) study: An emergence of an ecosystemic and multi-disciplinary research strategy in the Great Lakes. 35th International Conference on Great Lakes Research. 31 May - 4 June 1992, Waterloo, Ontario, CANADA.
96. Brandt, S.B., D.M. Mason, A. Goyke, K.J. Hartman, J. Kirsch and J. Luo. 1993. Spatially-explicit ecological modeling of fish: underwater views of functional attributes of the aquatic habitat. Invited paper to the Second International Conference on Integrating GIS and Environmental Modeling. September 1993, Breckenridge, CO.
97. Mason, D.M., A. Goyke and S.B. Brandt. 1993. Lake Michigan's and Lake Ontario's capacity to support salmonine growth: a spatially explicit modeling approach. The 36th Conference, International Association for Great Lakes Research. June 1993, Green Bay, WI.
98. Hartman, K.J. and S.B. Brandt. 1993. Predatory demand in the Chesapeake Bay: Implications for management. Presented at the 123rd Annual Meeting of the American Fisheries Society. 29 August - 2 September, Portland, OR.
99. Luo, J. and S.B. Brandt. 1993. Modeling of bay anchovy (*Anchoa mitchilli*) production and consumption in Chesapeake Bay. 76th Annual Ecological Society of America Meeting. 31 July - 4 August, 1993, Madison, WI.
100. Brandt, S.B. 1994. Spatially-explicit models of production: coupling physical and biological structure in aquatic systems. Ocean Sciences Meeting. 21-25 February 1994, San Diego, CA.
101. Brandt, S.B. 1994. New approaches for understanding fish production and trophic relationships in large aquatic systems. Invited paper to the 37th Conference, International Association for Great Lakes Research. 5-9 June 1994, University of Windsor, Windsor, CANADA.

102. Brandt, S.B. and K.J. Hartman. 1994. Spatial analyses of piscivore growth: A new tool for fish management and ecological understanding. Annual meeting of the American Fisheries Society. 21-25 August 1994, Halifax, Nova Scotia, CANADA.
103. Luo, J., S.B. Brandt and C.F. Cerco. 1994. A 3-D spatially-explicit model of striped bass, Morone saxatilis, growth rate in Chesapeake Bay. Annual meeting of the Ecological Society of America. 8-11 August 1994, Knoxville, TN.
104. Luo, J., S.B. Brandt and P.J. Behr. 1994. Size and temperature dependence on the maximum consumption rate of white perch, Morone americana in Chesapeake Bay. 37th Conference, International Association for Great Lakes Research. June 1994, University of Windsor, Windsor, CANADA.
105. Hartman, K.J. and S.B. Brandt. 1994. Ontogenetic changes in habitat suitability of the Chesapeake Bay for striped bass and bluefish. Annual Meeting of American Fisheries Society. 21-25 August 1994, Halifax, Nova Scotia, CANADA.
106. Brandt, S.B. 1994. What drives biological production: Linking the physics and chemistry to the biology. Keynote speaker, Great Lakes Coastal Ocean Processes Workshop. October, 1994. Milwaukee, WI.
107. Luo, J. and S.B. Brandt. 1994. Virtual reality of planktivores: Are fish really size selective? International Council for the Exploration of the Sea (ICES). 20-24 September 1994, St. Johns, Newfoundland, CANADA.
108. Brandt, S.B. 1995. Predator-prey interactions, bioenergetics and top-down control in estuarine systems. Invited paper to International Workshop on "Trends in Land-Use Water Quality and Fisheries", 14-20 May, 1995, Piran, SLOVENIA.
109. Jech, J.M., S.B. Brandt, D. Einhouse, R. Kenyon, M. Kershner, C. Knight, K. Muth, S. Nepszy, D. Stewart, M. Turner and L. Witzel. 1995. Abundance, distribution and production of fishes in Lake Erie. International Association of Great Lakes Research (IAGLR). 28 May - 1 June 1995, Kellogg Center at Michigan State University, East Lansing, MI.
110. Brandt, S.B. 1995. Fish bioenergetics models: Linkages to lower trophic levels and water quality models. Water Quality and Living Resources Modeling Workshop. 11-12 July, 1995, St. Michaels, MD.
111. Hartman, K.J., J. Luo and S.B. Brandt. 1995. Spatial analyses of predator growth potential: Biotic and abiotic. National Meeting of American Fisheries Society. 25-31 August, 1995, Tampa, FL.
112. Hartman, K.J., M. Gerken and S.B. Brandt. 1995. Field verification of a bioenergetics model for striped bass. National Meeting of American Fisheries Society. 25-31 August, 1995. Tampa, FL.

113. Jech, J.M. A.P. Goyke and S.B. Brandt. 1995. Acoustic Identification of Fish in the North American Great Lakes. International Council for the Exploration of the Sea Symposium on Fisheries and Plankton Acoustics. 12-16 June, Aberdeen, SCOTLAND.
114. Brandt, S.B. and J.M. Jech. 1995. Integrating Acoustics with Ecological Modeling: Making the Most of the Spatial Information in Acoustic Data. 1995. International Council for the Exploration of the Sea Symposium on Fisheries and Plankton Acoustics. 12-16, June. Aberdeen, SCOTLAND.
115. Brandt, S.B. 1995. Spatial Models of Fish Productivity. SCOPE Committee's workshop on Estuarine Synthesis. February, 1995, Irvine, CA.
116. Luo, J. and S.B. Brandt. 1995. Virtual reality of planktivores: Are fish really size selective? Annual meeting of the American Fisheries Society, 25-31 August, 1995, Tampa, FL.
117. Brandt, S.B. 1995. Getting the most out of acoustic data: Linking acoustics with spatially-explicit ecological models. Invited paper to Annual Meeting of the Acoustical Society of America. 26-30 November, 1995, St. Louis, MO.
118. Gerken, M., K.J. Hartman and S.B. Brandt. 1996. Hypoxia: To what degree does it affect striped bass growth and consumption. NY Great Lakes Research Conference, 12-13 January, 1996, Syracuse, NY.
119. Horne, J.K. and S.B. Brandt. 1996. Spatial modeling of aquatic habitat from a fish's perspective. Third International Conference on Integrating GIS and Environmental Modeling, 21-25 January, 1996, Santa Fe, NM.
120. Brandt, S.B. 1996. Spatial patterns and processes in aquatic systems. ASLO Ocean Sciences Meeting, 12-16 February 1996, San Diego, CA.
121. Luo, J., K.J. Hartman, S.B. Brandt, T.H. Rippetoe and C.F. Cerco. 1996. Spatially-explicit carrying capacity of the Atlantic menhaden in the Chesapeake Bay: Linking 3-D water quality and fish bioenergetics models. ASLO Oceans Science Meeting, 12-16 February, 1996, San Diego, CA.
122. Brandt, S.B. 1996. Applications of underwater acoustics to fish ecology. Invited paper to the joint U.S.-India Conference on Underwater Acoustics. 8-15 March, 1996. Goa, INDIA.
123. Brandt, S.B. 1996. Spatial models of fish growth and predator-prey interactions. Queen's University. 28 March, 1996. Kingston, ON, CANADA.

124. Brandt, S.B. 1996. Acoustics and bioenergetic modeling approaches to evaluating fish habitat quality in Chesapeake Bay. Invited paper to New England Estuarine Research Conference. May 2, 1996. Millbrook, NY.
125. Brandt, S.B. 1996. Trophic Interactions in the Great Lakes. Annual meeting of the International Association for the Great Lakes Research, 26-19 May, 1996, Toronto, CANADA.
126. Luo, J. and S.B. Brandt. 1996. Virtual reality of foraging fish. Annual meeting of the International Association for the Great Lakes Research, 26-29 May, 1996, Toronto, CANADA.
127. Terra, M.E. and S.B. Brandt. 1996. Spatially-explicit models of walleye growth rate potential in Lake Erie. Annual meeting of the International Association for the Great Lakes Research, 26-29 May, 1996, Toronto, CANADA.
128. Brandt, S.B. 1996. Fish production in the Chesapeake Bay: Where do we stand? Invited paper to workshop on Economic Value of Chesapeake Bay Restoration. 11 July 1996. Baltimore, MD.
129. Brandt, S.B. 1996. New approaches for understanding food-web dynamics in the Great Lakes of North America. Invited poster to the International Symposium on "Exploring the Great Lakes of the World: Food-web dynamics, health and integrity." 14-19 July, 1996, Victoria Falls, ZIMBABWE.
130. Brandt, S.B., M.J. Jech and J. Luo. 1996. Spatial and Temporal Complexity in Aquatic Environments: a Key to Fluctuating Fisheries? World Fisheries Conference. Brisbane, AUSTRALIA. 28 July-2 August, 1996.
131. Brandt, S.B. 1996. Spatial models of fish growth in large aquatic systems. Invited seminar. Yigal Kinneret Limnological Lab, Tiberias, ISRAEL. 14 August, 1996.
132. Tyler, J.A., S.B. Brandt and D. Breitburg. 1996. Linking water quality to larval fish production: A spatially-explicit individual-based modeling approach. Annual meeting of the American Fisheries Society. 25-29 August, 1996, Dearborn, MI.
133. Weimer, M.J. and S.B. Brandt. 1996. Diet growth and bioenergetics of white perch: diel and seasonal dynamics. Annual meeting of the American Fisheries Society. 25-29 August, 1996, Dearborn, MI.
134. Kracker, L., J.K. Horne and S.B. Brandt. 1996. Three-dimensional modeling of fish habitat quality in aquatic systems. Annual meeting of the American Fisheries Society. 25-29 August, 1996, Dearborn, MI.

135. Tyler, J.A. and S.B. Brandt. 1996. Diel effects on habitat quality: Spatial and Temporal changes in growth rate potential. Annual Meeting of the Ecological Society of America. 11-15 August, 1996, Providence, RI.
136. Brandt, S.B. 1996. Spatial assessment of fish ecology and bioenergetics in large aquatic systems. Invited seminar, 13 November, 1996. SUNY-Stony Brook, NY.
137. Brandt, S.B., J.M. Jech, K. Barry, E. Demers, P. Klose and J. Luo. 1997. Spatial modeling of fish habitat quality: A tri-estuary comparison. 1997 ASLO Aquatic Sciences Meeting. February, 1997. Santa Fe, NM.
138. Hondorp, D.W., S.B. Brandt and J.K. Horne. 1997. The effect of model spatial resolution on estimates of planktivore consumption. Great Lakes Research Consortium Student/Faculty Conference. February 7-8, 1997. SUNY College of Environmental Science and Forestry, Syracuse, NY.
139. Zhou, L., J.K. Horne, J.A. Tyler, J.M. Jech, J. Luo and S.B. Brandt. 1997. The effect of time scale on potential salmonid production in Lake Ontario. 40th Annual Meeting of the International Association for Great Lakes Research. 1-5 June, 1997. Buffalo, NY.
140. Tyler, J.A., D.W. Hondorp, J.K. Horne, L. Zhou, J.M. Jech and S.B. Brandt. 1997. Comparing spatial and temporal measures of salmonid habitat quality in Lake Ontario. 40th Annual Meeting of the International Association for Great Lakes Research. 1-5 June, 1997. Buffalo, NY.
141. Hondorp, D.W., S.B. Brandt and J.K. Horne. 1997. The effects of model resolution on estimates of pelagic planktivory in Lake Ontario. 40th Annual Meeting of the International Association for Great Lakes Research. 1-5 June, 1997. Buffalo, NY.
142. Kracker, L.M., S.B. Brandt, J.K. Horne and J.M. Jech. 1997. A 3-dimensional view of fish distribution in Lake Ontario. 40th Annual Meeting of the International Association for Great Lakes Research. 1-5 June, 1997. Buffalo, NY.
143. Horne, J.K., J.A. Tyler, J.M. Jech, J. Luo, L. Zhou, B.R. Kerman and S.B. Brandt. 1997. Spatial and temporal variability in acoustic data: A comparison using Lake Ontario nekton. 40th Annual Meeting of the International Association for Great Lakes Research. June 1-5 1997. Buffalo, NY.
144. Brandt, S.B., J.M. Jech, E. Demers, K.L. Barry and P. Klose. 1997. Spatial modeling of fish habitat quality, growth, predation and ecological efficiency. Annual Meeting of the American Fisheries Society. August 24-28 1997. Monterey, CA.
145. Mason, D.M. and S.B. Brandt. 1997. Space, time and scale: New perspectives in fisheries ecology. Annual Meeting of the American Fisheries Society. August 24-28 1997. Monterey, CA.

146. Hondorp, D. and S.B. Brandt. 1997. Zooplanktivory in Lake Ontario: Patterns at high spatial resolution. Annual Meeting of the American Fisheries Society. August 24-28 1997. Monterey, CA.
147. Hartman, K.J., B. Nagy, J.M. Jech and S.B. Brandt. 1997. Hydroacoustic estimates of striped bass (*Morone saxatilis*) distribution and abundance in the Hudson River. Annual Meeting of the American Fisheries Society. August 24-28, 1997. Monterey, CA.
148. Tyler, J.A. and S.B. Brandt. 1997. Effects of environmental heterogeneity and habitat selection on fish growth. Annual Meeting of the American Fisheries Society. August 24-28, 1997. Monterey, CA.
149. Boynton, W.R., E. Houde, M. Kemp, M. Roman, J.M. Jech and S.B. Brandt. Interactions between physics and biology in the estuarine turbidity maximum of Chesapeake Bay, USA. International Council for the Exploration of the Sea. September 25-28 1997. Baltimore, MD,
150. Brandt, S.B., E. Demers, K.L. Barry, P. Klose and J.M. Jech. 1997. Fish production and habitat quality: A comparison among the Chesapeake, Delaware and Hudson River. Invited plenary talk to Biennial Meeting of the Estuarine Research Federation. October 12-16 1997. Providence, RI.
151. Demers, E., K.L. Barry, J.M. Jech and S.B. Brandt. 1998 Spatial and Temporal Distribution of Pelagic Fishes in Delaware Bay. 14th Biennial Estuarine Research Federation International Conference, 14-16 October 1997. Providence, RI.
152. Zhou, L., S.B. Brandt and J.K. Horne. 1998. Spatial and temporal variability of planktivore fish density: a hydroacoustic approach in Lake Ontario. American Society of Limnology and Oceanography, Ocean Sciences Meeting. San Diego, California. February 8-14. Abstract printed in EOS 79(1): 87.
153. Demers, E.K., M.A. Gerken, and S.B. Brandt. 1998 Effects of Low Dissolved Oxygen on Striped Bass Bioenergetics and Habitat Quality. Gulf of Mexico Hypoxia Workshop, 11-12 March 1998, Baton Rouge, LA.
154. Kracker, L.M., S.B. Brandt, J.K. Horne and J.M. Jech. 1998. Applying a landscape ecology approach to large lake ecosystems. United States Regional Meeting of the International Association for Landscape Ecology, 13th Annual Conference - Applications of Landscape Ecology in Natural Resource Management. 18-19 March 1998. Michigan State University, East Lansing, MI.
155. Jech, J.M., D. Hondorp and S.B. Brandt. 1998. Historical perspectives of fish distribution are measured with underwater acoustics during the Lake Ontario Trophic transfer

- study. Annual meeting of the International Association for Great Lakes Research. 18-22 May, Hamilton, Ontario, CANADA.
156. Roy, D. and S.B. Brandt. 1998. The application of hydroacoustics and the spatially explicit model in determining habitat selection in western lake Ontario. Annual meeting of the International Association for Great Lakes Research. 18-22 May, Hamilton, Ontario, CANADA.
 157. Walline, P.D., J.A. Tyler and S.B. Brandt. 1998. Managing competition in Lake Kinneret fisheries. International Association of Great Lakes Research. May 18-22, Hamilton, Ontario, CANADA.
 158. Brandt, S.B. 1998. Fisheries Bioenergetics workshop using information to understand our ecosystem! Chesapeake Bay Program. 16 June. Annapolis, MD.
 159. Tyler, J.A., W.G. Sprules and S.B. Brandt. 1998. Tracking Other Trophic Levels: Spatial Coherence Between fish and Zooplankton in Great Lakes Ecosystems. American Society of Limnology and Oceanography - Ecological Society of America Joint meeting. June 7-12, 1998. St. Louis, MO.
 160. Brandt, S.B., E. Demers, M. Jech, K. Barry, P. Klose and D. Hondorp. 1998. Spatial processes in Large Aquatic Ecosystems: Merging Underwater Acoustics and Ecological Modeling. VII International Congress of Ecology, 19-25 July, Florence, ITALY.
 161. Demers, E.K., M.A. Gerken, and S.B. Brandt. 1998. Effects of Low Dissolved Oxygen on Striped Bass Bioenergetics and Habitat Quality. Annual American Fisheries Society, 24-27 August 1998. Hartford, CT.
 162. Pothoven, S.A., E. Demers, J.M. Jech, and S.B. Brandt. 1998. Diel, seasonal and inter-annual patterns in prey availability in the upper Chesapeake Bay: A striped bass perspective. Annual meeting of the American Fisheries Society, 24-27 August 1998. Hartford, CT.
 163. Brandt, S.B., and J. Tyler. 1998. Climate Change: Implication for Fish Habitat Quality and Growth Potential. Invited Paper to the Annual meeting of the American Fisheries Society. 24-27 August 1998. Hartford, CT.
 164. Barry, K.L., E. Demers, J.M. Jech and S.B. Brandt. 1998. Spatial and Temporal Patterns of Weakfish Habitat Quality in Delaware Bay, Annual meeting of the American Fisheries Society. August 24-28, 1998. Hartford, CT
 165. Walline, P.D., S.B. Brandt, J.M. Jech and J.A. Tyler. 1998. Spatial models of Lake Kinneret: A fish's perspective on the pelagic zone. Kinneret Limnological Laboratory, Israel Oceanographic and Limnological Research Symposium. 5-11 September. Kinneret, ISRAEL.

166. Tyler, J., P. Walline and S.B. Brandt. 1998. Lavnun abundance: How changes may affect Lake Kinneret's zooplankton. *Limnology and Lake Management* 2000. Sept. 6-11. Tiberias, ISRAEL.
167. Brandt S.B., M. Jech, E. Demers, K. Barry and D. Hondorp. 1998. Spatial Visualization and analyses: merging underwater acoustics and ecological modelling to view habitat from the fishes perspective. Invited paper to the ICES 1998 Annual Science Conference. 16-19 Sept., Cascais, PORTUGAL.
168. Brandt, S.B. 1998. Fisheries bioenergetics and ecosystem modelling. Invited paper to the Chesapeake Bay Stock Assessment Committee. 3 Dec., Colonial Beach, VA.
169. Brandt, S.B. 1999. Bioenergetics modeling in the Chesapeake Bay. Invited presentation to Chesapeake Bay Higer Trophic Level Modeling workshop. 18-20 May, Annapolis, MD.
170. Tyler, J.A., P.D. Walline, M. Gophen and S.B. Brandt. 1999. Seasonal changes in fish abundance and food consumption in Lake Kinneret. 8-12 August. Ecological Society of America. Spokane, WA.
171. Hondorp, D.W., S.B. Brandt and W. Gary Sprules. 1999. Spatially-explicit models of zooplankton production and fish consumption in western Lake Ontario. Annual Meeting of the American Fisheries Society. August 29– September 3 1999. Charlotte, N.C.
172. Pothoven, S.A., S.B. Brandt, T. Nalepa, M. Quigley. 1999. Diets of Lake Whitefish in southeastern Lake Michigan. 61st Midwest Fish and Wildlife Conference. Dec. 4-7. Chicago, IL.
173. Waline, P. and S.B. Brandt. 1999. Seasonal changes in fish abundance and food consumption in Lake Kinneret, August 8-12, 1999. Ecological Society of America. Spokane, WA.
174. Pothoven, S.A, D. Hondorp and S.B. Brandt. 2000. Effects of *Diporeia* declines on bloater and alewife in Lake Michigan. 62nd Midwest Fish and Wildlife Conference. Dec. 3-6, 2000. Minneapolis, MN.
175. Hondorp, D.W., S.A. Pothoven, T.F. Nalepa, and S.B. Brandt. 2000. Prey Fish Diets in southeastern Lake Michigan 1998-99. Annual Meeting of the Michigan Chapter of the American Fisheries Society. March 7, 2000. Michigan State University. East Lansing, MI.
176. Brandt, S.B. 2000. Great Lakes Research Priorities GLERL. Invited presentation to 43rd Annual Conference of the International Association for Great Lakes Research. 22-26 May 2000. Cornwall, CANADA.

177. Hondorp, D., S.A. Pothoven and S.B. Brandt. 2000. *Diporeia* declines in southeast Lake Michigan: prey fish diet dynamics in an affected site and predictions for the future. 43rd Annual Conference of the International Association for Great Lakes Research. 22-26 May 2000. Cornwall, CANADA
178. Brandt, S.B. 2000. Great Lakes Research Priorities. Invited presentation to 43rd Annual Conference of the International Association for Great Lakes Research. 22-26 May 2000. Cornwall, CANADA.
179. Brandt, S.B. 2001. Spatial scaling of fish and their habitat. Annual meeting of the Estuarine Research Federation. Nov. 4-8. St. Petersburg, FL.
180. Hondorp, D.W. and S.B. Brandt. 2001. Slimy Sculpin Feeding Mechanics. Annual International Association for Great Lakes Research. June 10-14 2001. Green Bay, WI.
181. Pothoven, S.A., Hondorp, D.W., Nalepa, T.F. and S.B. Brandt. 2001. Effect of *Diporeia* Declines on Lake Michigan Forage Fishes. Annual International Association for Great Lakes Research. June 10-14 2001. Green Bay, WI.
182. Pothoven, S.A., D.W. Hondorp and S.B. Brandt. 2003. Status of *Mysis* in southeastern Lake Michigan. 46th Conference on Great Lakes Research, IAGLR. June 22-26, 2003. Chicago, IL.
183. Hondorp, D.W. and S.B. Brandt. 2003. Comparative foraging behaviors of slimy and deepwater sculpin. 88th Annual Meeting of the Ecological Society of America. August 4, 2003. Savannah, GA.
184. Ludsin, S.A., X. Zhang, L.W. Florence, M.R. Roman and S.B. Brandt. 2003. A multi-scale analysis of factors that influence spatial distributions of bay anchovy in Chesapeake Bay. American Fisheries Society, Quebec City, Canada.
185. Florence, L.W., S.A Ludsin, W.C. Boicourt, M.R. Roman and S.B. Brandt. 2003. Effects of the Chesapeake Bay hydraulic control point on zooplankton and bay anchovy distributions. American Fisheries Society, Quebec City Canada.
186. Brandt, S.B. 2003. Invasive Species in the Great Lakes. Invited plenary, New York Chapter of American Fisheries Society. March. Corning, NY.
187. Hondorp, D.W., S.A. Pothoven, S.B. Brandt. 2003. Sculpin diet dynamics in southeast Lake Michigan. 2000-2002. 46th Conference on Great Lakes Research, IAGLR. June 22-26, 2003. Chicago, IL.

188. Costantini, M., E. Arneri, S. Fonda-Umani, A. Russo and S.B. Brandt. 2004. Does the Po River affect the distribution and production of anchovy in the Northern Adriatic Sea? Adriatic Sea Conference. 14-16 June. Venice, ITALY.
189. Pothoven, S.A., D.W. Hondorp, T.F. Nalepa and S.B. Brandt. 2004. Effects of *Diporeia* declines on diet condition and abundance of alewife, bloater, and rainbow smelt in Lake Michigan. Annual Meeting of the American Fisheries Society. August 23-26. Madison, WI.
190. Ludsin, S.A., D.M. Mason, S.B. Brandt, X. Zhang and M. Roman. 2004. A spatially explicit modeling evaluation of factors that regulate growth rate potential and distribution of bay anchovy in Chesapeake Bay. Invited paper, Annual Meeting of the American Fisheries Society. August 23-26. Madison, WI.
191. Hondorp, D.W., S.A. Pothoven, S.B. Brandt and C.P. Madenjian. 2004. Factors influencing habitat selection in Great Lakes sculpin. Annual Meeting of the American Fisheries Society. August 23-26. Madison WI.
192. O'Connor, D.V., C.P. Madenjian, S.A. Pothoven, P.J. Schneeberger, R.R. Rediske and S.B. Brandt. 2004. Laboratory evaluations of a lake whitefish bioenergetics model. Annual Meeting of the American Fisheries Society. August 23-26. Madison WI.
193. Madenjian, C.P., S.A. Pothoven, D.V. O'Connor, P.J. Schneeberger, R.R. Rediske and S.B. Brandt. 2004. Field evaluation of a lake whitefish bioenergetics model. Annual Meeting of the American Fisheries Society. August 23-26. Madison WI.
194. Florence, L.W., and S.B. Brandt. 2005. Education at NOAA's Center of Excellence for Great Lakes and Human Health. National Marine Educator's Association 2005 Annual Meeting. July 14. Kahului, HI.
195. Hondorp, D.W., S.A. Pothoven and S.B. Brandt. 2005. Diet and prey selection of sculpin in southeast Lake Michigan. 48th Annual Conference of the International Association for Great Lakes Research. May 23-27. Ann Arbor, MI.
196. Madenjian, C.P., D.W. Hondorp, T.J. Desorcie, and J.D. Holuszko. 2005. Sculpin community dynamics in Lake Michigan. International Association of Great Lakes Research. May 23-27. Ann Arbor, MI.
197. Brandt, S.B. and D. Scavia. 2005. Ecosystem forecasting: a focused scientific approach to ecosystem management. Invited paper to: 48th Annual meeting of the International Association for Great Lakes Research. May 23-27. Ann Arbor, MI.
198. Brandt, S.B. 2005. Ecosystem forecasting: Integrating science to reduce risks to human health. Invited paper to Biennial Meeting of the Estuarine Research Federation. October 17-20. Norfolk, VA.

199. Brandt, S.B., D. Schwab, T. Croley, D. Beletsky and R. Whitman. 2006. Ecosystem forecasting: Integrating science to reduce risks to human health. ASLO Ocean Sciences Annual Meeting. February 18-24. Honolulu, HI.
200. Ludsin, S.A., S.B. Brandt, H.A. Vanderploeg, M.R. Roman, W.C. Boicourt, D.G. Kimmel, and X. Zhang. 2006. Ecological responses of pelagic zooplankton and fish to seasonal hypoxia in the Northern Gulf of Mexico, Chesapeake Bay, and Lake Erie. ASLO Ocean Sciences Annual Meeting. February 18-24. Honolulu, HI
201. Ludsin, S.A., S.B. Brandt, N. Hawley, and B.J. Eadie. 2006. The 2005 International Field Years on Lake Erie (IFYLE) Program. Lake Erie Millennium Network Meeting, March 1. Windsor, Ontario, CAN.
202. Ludsin, S.A., S.B. Brandt, N. Hawley, B.J. Eadie and M. Lansing. 2006. The 2005 International Field Years on Lake Erie (IFYLE) hypoxia program. International Association for Great Lakes Research Annual Meeting. May 25-30, Windsor, Ontario, CAN.
203. Ruberg, S.A., S.B. Brandt, H.A. Bootsma, S.J. Gordon, J.C. Lane, G.A. Meadows, T.C. Miller and R.W. Muzzi. 2006. Real-time environmental coastal observation network (RECON). International Association for Great Lakes Research Annual Meeting, May 25-30, Windsor, Ontario, CAN.
204. Brandt, S.B. 2006. Green Ship Initiative: Use of bio-fuels, lubricants and oils onboard research vessels. Invited plenary paper to 9th Annual Congressional Renewable Energy and Energy Efficiency Expo. 20 June, 2006. Washington, DC.
205. Brandt, S.B., T.E. Croley, D. Schwab, D. Beletsky, J. Dyble, G. Fahnenstiel, G. Leshkevich, S. Ruberg, S. Joseph and R. Sturtevant. 2006. Ecosystem forecasting: Linking biological and physical models to reduce the risks to human health in coastal areas. Invited paper to workshop on "Skill Assessment for Coupled Biological / Physical Models of Marine Systems". 10-13 July, Chapel Hill, NC.
206. Brandt, S.B. 2006. NOAA Center of Excellence for Great Lakes and Human Health. Ocean and Human Health Initiative Workshop. 18-20, January, Charleston, SC.
207. Brandt, S.B. 2006. The President's Executive Order for the Great Lakes. Invited paper to the Great Lakes Regional Coastal Zone Management Meeting. October 24-26, Traverse City, MI.
208. Brandt, S.B. 2006. NOAA's Great Lakes Research and Restoration Programs. Invited paper to the Great Lakes Regional Coastal Zone Management Meeting. October 24-26, Traverse City, MI.
209. Ludsin, S.A., S.B. Brandt, D.M. Mason, M.R. Roman, D.G. Kimmel, W.C. Boicourt, X. Zhang and C.M. Rae. 2007. Effects of hypoxia on the distribution and behavior of

- fish in the Northern Gulf of Mexico. ASLO 2007 Aquatic Sciences Meeting. February 4-9, Sante Fe, NM.
210. Brandt, S.B. and D.M. Mason. 2007. Integrating fisheries acoustics with new observation platforms, environmental stressors and models: Future research opportunities and challenges. Invited paper, 50th Anniversary Symposium, American Fisheries Research Biology. February 12-15, Seattle, WA.
 211. Donahue, D. and S.B. Brandt. 2007. Green Research Vessel Initiatives: Development of biodiesel and bio-products in marine applications. Invited paper to POWER-GEN Renewable Energy and Fuels Conference. March 6-9, Las Vegas, NV.
 212. Brandt, S.B. 2007. President's Executive Order for the Great Lakes. Invited paper. Regional Ocean Governance Workshop. March 19-23, Monterrey, CA.
 213. Brandt, S.B., M. Costantini, S.A. Ludsin, D.M. Mason and W.C. Boicourt. 2007. Influence of hypoxia on fish growth rate potential in Chesapeake Bay. Invited presentation to Workshop on "Ecological Impacts of Hypoxia Living Resources". March 26-29, Bay St. Louis, MS.
 214. Höök, T.O., S.A. Ludsin, S.A. Pothoven, J. Roberts, T.F. Nalepa, H.A. Vanderploeg, S.A. Ruberg, and S.B. Brandt. 2007. Influence of hypoxia on the ecology of zooplanktivorous and benthivorous fishes in Lake Erie's central basin. Invited presentation to Workshop on "Ecological Impacts of Hypoxia Living Resources". March 26-29, Bay St. Louis, MS.
 215. Ludsin, S.A, W.C. Boicourt, S.B. Brandt, K. Hozyash, D.G. Kimmel, D.M. Mason, C.M. Rae, M.R. Roman, H. Zhang, and X. Zhang. 2007. Indirect effects of coastal hypoxia on planktivore habitat: Implications for pelagic food webs and fisheries. Invited presentation to Workshop on "Ecological Impacts of Hypoxia Living Resources". March 26-29, Bay St. Louis, MS.
 216. Vanderploeg, H.A., S.A. Ludsin, S.A. Pothoven, T.O. Höök, J.J. Roberts, S.A. Ruberg, J.F. Cavaletto, J.R. Liebig, G.A. Lang and S.B. Brandt. 2007. Influence of hypoxia on the distribution, behavior, and foraging of zooplankton and planktivorous fish in central Lake Erie: Field observations and future research directions. Invited presentation to Workshop on "Ecological Impacts of Hypoxia Living Resources". March 26-29, Bay St. Louis, MS.
 217. Brandt, S.B. 2007. The Great Lakes ecosystem: Can we forecast the future? Invited Plenary Speaker, Annual Meeting of the International Association for Great Lakes Research. May 28 – June 1, University Park, PA.
 218. Ruberg, S.A., S.B. Brandt, R.W. Muzzi, N. Hawley, H.A. Bootsma, J. Gray and T.B. Bridgeman. 2007. Real-time Environmental Coastal Observation Network. Annual

Meeting of the International Association for Great Lakes Research. May 28 – June 1, University Park, PA.

219. Vanderploeg, H.A., S.A. Pothoven, D.M. Mason, D.M. Krueger, J.F. Cavaletto, J.R. Liebig, G.A. Lang, K.L. Pangle, S.D. Peacor, S.B. Brandt, S.A. Ludsin, J.J. Roberts, T.O. Höök and R. Pichlova. 2007. Diel vertical migration and predatory interactions among zooplankton, the predatory invasive zooplankter *Bythotrephes longimanus*, and fish in large lakes: Observations with multiple technologies. Annual Meeting of the International Association for Great Lakes Research. May 28 – June 1, University Park, PA.
220. Zhang, X., L. Bahner, R.J. Wood, E.D. Houde, E.R. Annis, L.W. Harding, S.A. Ludsin and S.B. Brandt. 2007. Modeling the temporal and spatial variability in bay anchovy habitat suitability in Chesapeake Bay: Habitat matters. Estuarine Research Federation's 19th Biennial International Conference. November 4-8, Providence, RI.
221. Brandt, S.B. et al. 2008. Spatially-Explicit Growth Predictions to Assess Habitat Quality of Walleye during Hypoxia in Lake Erie. Annual Meeting of the International Association for Great Lakes Research, St. Petersburg, Canada
222. Brandt, S.B., M. Costantini, S.A. Ludsin, D.M. Mason, and H.A. Vanderploeg. 2008. Spatially-explicit growth predictions to assess habitat quality of walleye during hypoxia in Lake Erie. Oral presentation at the International Association for Great Lakes Research 51st Annual Conference on Great Lakes Research, Peterborough, ON. May 20.
223. Brandt, S.B., A.T. Adamack, H. Zhang, K.M. Boswell, S.A. Ludsin, D.M. Mason, M.R. Roman, and W.C. Boicourt. 2009. Broad- and Fine-scale Effects of Hypoxia on Pelagic Fish in the Northern Gulf of Mexico. Coastal and Estuarine Research Federation. Portland, OR. November 1-6, 2009.
224. Brandt, S. B. 2009. NGOMEX Program description and objectives. Northern Gulf of Mexico Hypoxia Workshop. Silver Spring, Md. Feb. 12-13, 2009. *Invited presentation.*
225. Brandt, S. B. 2009. Growth rate potential modeling of fish habitat quality. Invited presentation to: Northern Gulf of Mexico Hypoxia Workshop. Silver Spring, Md. Feb. 12-13, 2009.
226. Zhang, H., D. M. Mason, S.A. Ludsin, S.B. Brandt, A.T. Adamack, C. Stow, M.R. Roman, and W.C. Boicourt. 2009. Hypoxia Impacts on the Growth and Distribution of the Pelagic Fish in the Northern Gulf of Mexico. Coastal and Estuarine Research Federation. Portland, OR. November 1-6, 2009.

227. Sellinger, C., S. Brandt and T. Hunter. 2009. Forecasting Beach Closures Using Statistical Methods. Oceans and Human Health Meeting. October, 6 -8, Seattle, Washington. *Invited presentation.*
228. Brandt, S. 2009. Great Lakes Ecosystem Management. Louisiana Coastal Authority, April 7 – 9, 2009 Vicksburg Mississippi. *Invited presentation.*
229. Pangle, K.L., S. Pothoven, H.A. Vanderploeg, T.O. Höök, S.B. Brandt and S.A. Ludsin. 2010. Hypoxia's impact on pelagic fishes: a tale of two planktivores. Ecological Society of America. Pittsburg, PA. August 1-6, 2010.
230. Brandt, S.B. and S. Kolesar. 2010. Effects of hypoxia on Growth rate potential of walleye in Lake Erie. Webinar presentation to ECOFORE Principal Investigators. April 22, 2010.
231. Brandt, S.B., U. Varanasi, and J. Trtanj, (Session Co-Chairs). 2010. Oceans and Human Health: Reducing Risks Through Prediction. From Observation to Prediction in the 21st Century. Ocean Sciences Meeting, Portland, OR. February 21-27, 2010. *Special session.*
232. Sellinger, C.E., S.B. Brandt, and T. Hunter. 2010. Forecasting Beach Closings and Conditions in the Great Lakes. Oceans and Human Health: Reducing Risks Through Prediction. From Observation to Prediction in the 21st Century. Ocean Sciences Meeting, Portland, OR. February 21-27, 2010. *Poster.*
233. Brandt, S. B., M. Roman, J. Pierson, S. Kolesar, B. Boicourt, C. Sellinger. 2011. How does hypoxia affect habitat quality of fishes? Advancing the Science of Limnology and Oceanography Aquatic Sciences Meeting. San Juan, Puerto Rico. February 13-18, 2011. *Invited presentation.*
234. Brandt, S. B., C. Sellinger, S. Kolesar, M. Roman, J. Pierson, B. Boicourt. 2011. How does hypoxia affect habitat quality of fishes? AEHMS 10 – The Aquatic Ecosystem Puzzle: Threats, Opportunities and Adaptation. Siena, Italy. June 13 – 15, 2011. *Poster.*
235. Adamack, A. T., M. A. Clouse, S. A. Ludsin, D. M. Mason, S. B. Brandt, H. Zhang. 2011. Effects of hypoxia on fish diets in the northern Gulf of Mexico. Advancing the Science of Limnology and Oceanography Aquatic Sciences Meeting. San Juan, Puerto Rico. February 13-18, 2011..
236. Brandt, S.B. 2011. Hypoxia Effects on Fishes in the Gulf of Mexico. 2nd Annual Gulf of Mexico Hypoxia Research Coordination Workshop. Bay St. Louis, MS. March 31 – April 1, 2011. *Invited oral presentation.*
237. Kolesar, S. E., J. J. Pierson, and J. Testa (Session Co-Chairs). 2011. Consequences of Hypoxia for Living Resources and Biogeochemical Cycles. Advancing the Science of

- Limnology and Oceanography Aquatic Sciences Meeting. San Juan, Puerto Rico. February 13-18, 2011. *Special session*.
238. Roman, M., J. Pierson, S. Brandt, S. Kolesar, C. Sellinger, J. Cowan, D. Mason, C. Stow, S. Sable, A. Adamack. 2011. CSCOR NGOMEX: Effects of hypoxia on production potential of ecologically and commercially important living resources in the northern Gulf of Mexico. Advancing the Science of Limnology and Oceanography Aquatic Sciences Meeting. San Juan, Puerto Rico. February 13-18, 2011. *Poster*.
239. Brandt, S. B., C. Sellinger, S. Kolesar, M. Roman, J. Pierson, B. Boicourt. 2011. How does hypoxia affect habitat quality of fishes? Annual Meeting of the Coastal and Estuarine Research Federation. Poster. Daytona, FL November 6 – 10, 2011.
240. Kimmel, D., S. Mitra, J. Snyder, B. McGlaughon, K. Scalise, M. roman, J. Pierson, G. Jahn, S. brandt and J. Montoya. 2011. Macondo-1 well oil-derived polycyclic aromatic hydrocarbons accumulated in mesozooplankton from the Northern Gulf of Mexico via trophic transfer. Annual Meeting of the Coastal and Estuarine Research Federation. Poster. Daytona, FL November 6 – 10, 2011.
241. Borberg, J. M. and S.B. Brandt. 2012. Engaging the academic research community in Oregon's coastal and marine spatial planning efforts. Ocean Sciences Meeting, Salt Lake City, UT, 20 – 24 February, 2012.
242. Roman, M., S.B. Brandt, D. Elliot and J. Pierson. 2012. The impacts of hypoxia on ecologically and commercially important living resources in the northern Gulf of Mexico. NOAA NGOMEX Workshop. Bay St. Lewis, MS. March 2012.
243. VanderWoude, A.J., D.M. Mason, H. Zhang, C. Stowe, A Adamack, K. de Musert, J.J. Pierson, M. R. Roman, S.B. Brandt, S. Kolesar and C. Sellinger. 2013. The effects of hypoxia on the food web of the Northern Gulf of Mexico: An Atlantis ecosystem modeling approach. ASLO 2013 Aquatic Sciences Meeting, 17-22 February, New Orleans, LA.
244. Brandt, S. B., C. Sellinger, S. Kolesar and D. Jensen. 2013. Hypoxic impact on fish habitat quality: Winners and losers. ASLO 2013 Aquatic Sciences Meeting, 17-22 February, New Orleans, LA.
245. Brandt, S. B. and C. Sellinger. 2013. Growth rate potential as a quantitative ecosystem indicator of habitat quality. Annual Meeting of PICES – North Pacific Marine Science Organization. October 11 – 20, Nanaimo, BC, CAN.
246. Borberg, J., S. B. Brandt, J. Stein and T. Vann. 2013. Opportunities and challenges for policy makers, managers, and scientists in planning for and implementing Marine Spatial Planning. Biennial Conference of the Coastal and Estuarine Research Federation. Nov. 3 – 7. San Diego, CA

247. Zhang, H., D. M. Mason, C. A. Stowe, A. Adamack, S. Brandt, X. Zhang, D. Kimmel, M. Roman, W. Boicourt, and S. Ludsin. 2013. Impact of Hypoxia on habitat quality of pelagic fishes in the Northern Gulf of Mexico. Biennial Conference of the Coastal and Estuarine Research Federation. Nov. 3 – 7. San Diego, CA
248. Vander Woude, et al. 2013. An Atlantis ecosystem-based approach to model effects of hypoxia on the food web of the Northern Gulf of Mexico. CERF, 3 - 7 November, San Diego, CA
249. Brandt, S.B. and C.S. Sellinger. 2013. Response of pelagic fishes to hypoxia in the Gulf of Mexico. NGOMEX all-pi meeting, November 3, San Diego, CA
250. Brandt, S. B. 2014. Spatial Patterning of Habitat Quality for Pelagic Fish. Invited seminar. June 18. University of Maryland, Cambridge, Maryland.
251. Brandt, S. B. 2014. Fish responses to hypoxia. Hypoxia –OA Research Exchange annual meeting. May 28. Oregon State University, Corvallis, Oregon.
252. Brandt, S. B. 2014. Habitat Quality: A fishes perspective. Invited Plenary Speaker. October 28 – 30, 2014. Biennial Bay-Delta Science Conference, Sacramento, California.
253. Brandt, S.B. 2015. *Habitat Quality: Space and time perspectives from a pelagic fish*. Invited presentation, Department of Fisheries and Wildlife, Oregon State University, February, OSU
254. Brandt, S.B. 2015. Delta Independent Science Board: Looking back in 2014, forward to 2015. Invited presentation to Interagency Ecological Program Annual Workshop, March 18 – 20, Folsom, CA.
255. Brandt, S.B. 2015. Modeling Fish Habitat Quality. Invited plenary to Workshop on Integrated Environmental Modeling of Estuarine Systems. May 21 – 23, 2015, Davis, California.
256. Brandt, S. B. and C. E. Sellinger. 2015. Seafood Diet: Linking Fish Feeding to Habitat, Prey Availability and Bioenergetics in a Pelagic Predator. 145th Annual Meeting of the American Fisheries Society. August 16 – 21, Portland Oregon.
257. Brandt, S.B. 2015. Spatial Patterning of Habitat Quality for a Pelagic Fish. Two Invited presentations, University of Trieste, 28 September, 2015, Trieste, Italy.
258. Sellinger, C. E. and S.B. Brandt. 2015. Climate-driven oxygen and temperature conditions: Predictor of habitat quality for oceanic Chinook salmon? Biennial conference of the Coastal & Estuarine Research Federation (CERF), 8 – 12 November in Portland, Oregon.

259. Brandt, S. B., C. E. Sellinger, M. Roman and E. D. Houde. 2015. Winners and losers in hypoxic coastal habitats: Is temperature the key? Biennial conference of the Coastal & Estuarine Research Federation (CERF), 8 – 12 November in Portland, Oregon.
260. Brandt, S. B. and Sellinger, C. 2016. Assessing essential fish habitat for a marine pelagic fish. Annual Meeting of the American Fisheries Society (AFS) Annual Meeting, 21 – 25 August, Kansas City, Missouri.
261. Brandt, S. B. 2016. Science Strategies in Large Programs, Invited Panelist to The Science Enterprise Workshop: Supporting and Implementing Collaborative Science, 1 – 3 November, Davis, California.
262. Brandt, S. B. and Sellinger, C. 2016. Variability in North Pacific Ocean conditions: Assessing habitat-specific vital rates and thresholds for fishes. North Pacific Marine Science Organization (PICES) Annual Meeting, 9 – 15, November, San Diego, California,.
263. Brandt, S. B. 2017. “Use of Models: Production Potential Models”. Workshop: Hypoxia effects on fish and fisheries: kick-off meeting of decision support tool development, Gulf of Mexico Oil Spill & Ecosystem Science Conference 2017 Workshop, 5 – 9 February, New Orleans, Louisiana
264. de Mutsert, K., Brandt, S., Campbell, M., Lewis, K., Laurent, A., Sellinger, C., Steenbeck, J., Buszowski, J., Cowen, J. H., and Christensen, V. 2017. Assessing effects of reduced nutrients and hypoxia on living resources in the Gulf of Mexico using a coupled ecosystem modeling approach. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting, 28 February – 3 March 2017, Honolulu, Hawaii.
265. Glaspie, C. N., S. B. Brandt and C. S. Sellinger. 2017. Linking North Pacific Chinook Salmon habitat quality with Fish Production in a Changing Climate. Oregon American Fisheries Society, 1 – 4 March, Bend, Oregon.
266. Glaspie, C. N., Brandt, S. B. and Sellinger, C. E. 2017. Linking North Pacific Chinook salmon habitat quality with fish production in a changing climate. Oral presentation, Research Advances in Fisheries, Wildlife, and Ecology Symposium (RAFWE), April, 2017. Corvallis, OR.
267. Brandt, S.B. 2017. Spatial Ecology of Pelagic Fishes. Invited Seminar to Fisheries and Wildlife Department Stream Team, Oregon State University, 13 March, Corvallis, Oregon.
268. Brandt, S.B., C.N. Glaspie and C. S. Sellinger. 2017. Defining energy landscapes to predict distribution and production of fish. Abstract submitted to Annual Meeting of Ecological Society of America, 6 – 11 August, Portland OR.

269. Brandt, S. B. 2017. “Ecosystem Forecasting: Bridging Science to Management”. **Invited Plenary Speaker**, Greater Everglades Ecosystem Restoration (GEER) Conference, 17 – 21 April, Coral Springs, Florida
270. de Mutsert, K., Brandt, S. B., Lewis, K. A., Laurent, A., Steenbeek, J., and Buszowski, J. August 2017. “Simulating hypoxia and nutrient reduction effects on the Northern Gulf of Mexico fishery ecosystem”. American Fisheries Society Meeting, 20 – 24 August, Tampa, FL.
271. Glaspie, C.N., Brandt, S. B. and Sellinger, C. E. 2017. “Hypoxia impacts on small pelagic fishes: Insights from high-frequency acoustic sensing.” American Fisheries Society Meeting, 20 – 24 August, Tampa, FL.
272. Glaspie, C.N., Brandt, S. B. and Sellinger, C. E. 2017. “North Pacific Salmon habitat quality in response to climate regime shifts.” American Fisheries Society Meeting, 20 – 24 August, Tampa, FL.
273. Brandt, S. B. 2017. “User-driven tools to predict and assess effects of reduced nutrients and hypoxia on living resources in the Gulf of Mexico”, Special Workshop, American Fisheries Society Meeting, 20-24 August, Tampa, FL.
274. Sellinger, C. E., Brandt, S. B. and Glaspie, C.N. 2017. “Climate, temperature, and hypoxia as multifaceted drivers of West Coast ecosystems.” Coastal and Estuarine Research Federation, 5 – 9 November, Providence, RI.
275. de Mutsert, K., S. B. Brandt, K. A. Lewis, A. Laurent, J. Steenbeek and J. Buszoeski. 2017. “Simulating hypoxia and nutrient reduction effects on the Northern Gulf of Mexico fishery Ecosystem”. Coastal and Estuarine Research Federation, 5 – 9 November, Providence, RI.
276. Glaspie, C. N., Brandt, S. B. and Sellinger, C. E. 2017. Hypoxia impacts on marine fish trophic dynamics in the Northern Gulf of Mexico.”Hatfield Marine Science Center Seminar Series, Newport, OR, December 2017.
277. Brandt, S.B., A. Laurent, C. N. Glaspie, C. E. Sellinger and K. de Mutsert. 2018. “Assessing and predicting the effects of reduced nutrients and hypoxia on fishes in the Gulf of Mexico.” ASLO Ocean Sciences Meeting. 11-15 February. Portland OR.
278. Sellinger, C.E., S.B. Brandt and C. N. Glaspie. 2018. “Identifying the impacts of large-scale climatic variability on habitat quality and production of oceanic Chinook salmon in the North Pacific.” ASLO Ocean Sciences Meeting. 11-15 February. Portland OR.
279. Brandt, S., Laurent, A., Glaspie, C., Sellinger, C., and de Mutsert, K. Using a Coupled Ecosystem Modeling Approach to Evaluate Effects of Reductions in Nutrients and

Hypoxia on Living Marine Resources. American Fisheries Society Meeting, 19-24 August, Atlantic City, NJ.

280. de Mutsert, Kim, Alexander Van Plantinga, Stephen Brandt, Cassandra Glaspie, Kristy Lewis, Arnaud Laurent, Joe Buszowski. 2018. Predicting Fish Population Responses to Hypoxia Using 2-D and 3-D Coupled Biophysical Models. American Fisheries Society Meeting, 19-24 August, Atlantic City, NJ.

Peer Review Activities

Proposals Reviewed

National Science Foundation, New York Sea Grant, Maryland Department of Natural Resources, Wisconsin Sea Grant, Michigan Sea Grant, Minnesota Sea Grant, National Sea Grant Institute, Ohio Sea Grant Institute, New Hampshire Sea Grant, Maine Sea Grant, California Sea Grant, Marine Sciences and Technology Grants (Australia), National Geographic Society, Washington Sea Grant Institute, Oregon Sea Grant Institute, New Jersey Department of Environmental Protection and Energy - Delaware Estuary Program, Ocean Production Enhancement Network (OPEN), Nova Scotia, Canada, Louisiana Universities Marine Consortium (LUMCON), National NSERC, NMFS, J. Allen Francis Award, EPA.

Articles Reviewed (Multiple Papers)

Journal of Great Lakes Research, Transactions of the American Fisheries Society, Journal of the Acoustical Society of America, Canadian Journal of Fisheries and Aquatic Sciences, Rapports et Proces-Verbaux, Deep-Sea Research, Marine Ecology Progress Series, Biological Oceanography, Australian Journal of Marine and Freshwater Research, Journal of Theoretical Biology, Fisheries Bulletin, Estuaries, Limnology and Oceanography.

Selected Public Presentations

- "Use of New Technologies to Study Fishes in the Great Lakes". Public Education on the Changing Face of the Lower Great Lakes. University of Buffalo. February, 1994. Buffalo, NY.
- "New Approaches for Evaluating Fish Abundances and Production in the Great Lakes". Sportfisheries Seminar. March, 1994. Rochester, NY.
- "Fisheries Acoustics". Multiagency workshop. Buffalo State College. April, 1994. Buffalo, NY.
- "The Ecology and Economics of Great Lakes Fisheries". New York State Assembly. February, 1994. Albany, NY.

- "Spatial Dynamics of Predator-prey in Large Aquatic Systems", Invited Seminar, Cornell University. May, 1994. Ithaca, NY.
- "Ecosystem Process Modeling and Fish Bioenergetics". EPA Chesapeake Bay Program. May, 1994. Annapolis, MD.
- "Great Lakes Fisheries Management". Great Lakes Summer Institute. July, 1994. Buffalo, NY.
- "The Great Lakes Center's Role in Environmental Research and Education". General Motors Corporation. July, 1994. Buffalo, NY.
- "The Need for Whole-lake Multidisciplinary approaches in the Great Lakes". Testimony to State Assembly public hearing on Great Lakes Fisheries. September, 1994. Buffalo, NY.
- "The Role of the Great Lakes Center to the Region". Presentation to local business leaders. November, 1994. Buffalo, NY.
- "The Lake Erie Food Web". Western New York Sportfisheries Conference. March, 1995. Blasdell, NY.
- "Food Web Studies: New Approaches for Ecosystem Management". Scholarships and Creativity Symposium. April, 1995. Buffalo, NY.
- "Fish Ecology and Management in the Great Lakes: Where have we been and where do we go from here?". Buffalo Industrial Advisory Council, Environmental Conference. May, 1995. Buffalo, NY.
- "Great Lakes Issues". Invited presentation, Conference on Ecosystem Watershed Management. June, 1995. Buffalo, NY.
- "Lake Ontario's whole-lake study". New York State, Lake Ontario Sport Fisheries Seminar. 15 August, 1995. Lockport, NY.
- "Fisheries Dynamics in the Great Lakes". New York Research Consortium Panel. 12 January, 1996. Syracuse, NY.
- "Spatial models of fish growth and predator-prey interactions." Queen's University. 28 March, 1996. Kingston, Ontario, CANADA.
- "Fish production in the Chesapeake Bay: Where do we stand?". Workshop on Economic Value of Chesapeake Bay Restoration. 11 July, 1996. Baltimore, MD.

- “Spatial processes and fisheries management in the Great Lakes”. Invited Seminar, University of Wisconsin. 24 April, 1997. Milwaukee, WI.
- “University-Government Partnerships”. University of Michigan. 1998. Ann Arbor, MI.
- “Bioenergetics modeling in the Chesapeake Bay”. Invited presentation, Chesapeake Bay Higher Trophic Level Modeling workshop. 18-20 May, 1999. Annapolis, M.D.
- “Great Lakes Research Priorities”. Invited Seminar, Changes and Challenges: The Great Lakes – 2000 and Beyond. 9 March, 2000. East Lansing, MI.
- “Emerging issues in the Great Lakes: Developing the scientific framework for an ecosystem approach”. Invited speaker, International Joint Commission Workshop on Emerging Issues. March, 2002. Racine, WI.
- “Invasive Species in the Great Lakes: Sources and Impacts”. Invited presentation, International Joint Commission Biennial Meeting. 16 September, 2003. Ann Arbor, MI.
- “Impact of Diporeia disappearance of fishes in the Great Lakes”. Invited seminar, Great Lakes Fisheries Trust. 5 November, 2003. Ann Arbor, MI.
- “Ecosystem Forecasting in the Chesapeake Bay”. Invited seminar, NOAA Research Council Meeting. 18 August, 2004. Annapolis, MD.
- “Great Lakes and Human Health”. Invited seminar, Regional Sea Grant Meeting. Ohio State University. 14 September, 2004. Put-in Bay, OH.
- “The West Coast Regional Sea Grant Marine Research and Information Plan”. Invited presentation to the Oregon Nearshore Research Task Force, Dec. 2-3, 2009 Newport, Oregon.
- “The Oregon Sea Grant Program”. Invited presentation to the Oregon Nearshore Research Task Force. Jan. 21 – 22, 2010. Newport Oregon.
- “The Oregon Sea Grant Program”. Invited presentation to the Our Oceans coalition. March 1, 2010. Salem, Oregon.
- “The Oregon Sea Grant Program and Partnerships”. Presentation to the Oregon Governors Natural Resources Cabinet, June 10, 2009. Salem, Oregon.
- “Oregon Sea Grant Program”. Invited presentation to the Climate Institute Workshop. Oregon State University, June 24-25, 2009.
- “Oregon Sea Grant Program:”. Invited presentation to state legislature public briefing, Oregon Coast Aquarium, July 22, 2009. Newport Oregon.

- “Overview of the Nearshore Research Task Force”, Invited presentation to the Governors Ocean Policy Advisory Council, January 29, 2010, Bandon, Oregon
- “Troubled Waters: A fish-eye view of dead zones and oil spills in the Gulf of Mexico”. Invited Speaker to SciencePub, November 8, 2010. Corvallis, Oregon.
- “Troubled Waters: A fish-eye view of dead zones and oil spills in the Gulf of Mexico”. Invites Dinner Speaker. OSU Volunteers. April 9, 2011. Newport Oregon.
- “Integrated marine research, education and stakeholder engagement”, Presentation to potential OSU donors, March, 2012, Baha, Mexico.

Selected Courses Taught

Fisheries and Wildlife Departmental Seminar, OSU, 2013, 2014, 2015 (total 6 terms)
 Aquatic Ecology - College of Environmental Science and Forestry.
 Ecology of the Chesapeake Bay - University of Maryland.
 Quantitative Fish Ecology and Management - University of Maryland.
 Great Lakes Fisheries - Buffalo State College (co-instructor), 1994, 1996
 Great Lakes Limnology - Buffalo State College (co-instructor), 1995.
 Ecosystem Modeling - Buffalo State College (co-instructor), 1995.
 Underwater Acoustics: Principals and Applications - Buffalo State College (co-instructor), 1996.

Selected Graduate Students Supervised

Degrees Conferred

- D. Palumbo, M.S. Western Australian Institute of Technology, Perth, Australia, External Supervisor, 1982. "Limits on the use of the statistical analysis of echo ensembles in fisheries acoustics."
- V. Wadley, Ph.D. University of Sydney, Sydney, Australia, External Supervisor. "Mesopelagic Squid ecology in the Tasman Sea."
- J. Young, M.S. University of New South Wales, Sydney, Australia, External Supervisor. "Amphipods associated with a warm-core eddy."
- K. Mills, Ph.D. SUNY College of Environmental Science and Forestry, Chairman of Exam Committee.
- A. Bador, M.S. SUNY College of Environmental Science and Forestry, Committee, 1985.

- G. Merritt, M.S. SUNY College of Environmental Science and Forestry, Committee, 1986.
- D. Park, SUNY College of Environmental Science and Forestry, Committee, 1985.
- R. Preale, SUNY College of Environmental Science and Forestry, Committee, 1984.
- T. Sinnett, SUNY College of Environmental Science and Forestry, Committee, 1984.
- T. Urban, M.S. SUNY College of Environmental Science and Forestry, Major Professor, 1988.
"Food and habitat partitioning by young-of-the-year alewife and rainbow smelt in southeastern Lake Ontario."
- S.P. Madon, M.S. SUNY College of Environmental Science and Forestry, Major Professor, 1989. "Feeding ecology of adult rainbow smelt (*Osmersu mordax*) in Lake Ontario."
- D.M. Mason, M.S. SUNY College of Environmental Science and Forestry, Major Professor, 1989. "The impact of alewives on the survival of larval yellow perch in the Great Lakes."
- D.B. MacNeill, M.S. SUNY College of Environmental Science and Forestry, Major Professor, 1988. "Ontogenetic shifts in gill-raker morphology and prey capture efficiency of the alewife, *Alosa pseudoharengus*, with field applications of a retention model."
- L. Rudstam, Ph.D. University of Stockholm, Stockholm, Sweden. Invited External Examiner, 1988. "Production dynamics of *Mysis* in the Baltic Sea."
- C. Iancu, M.S. SUNY College of Environmental Science and Forestry, Major Professor, 1989.
"Prey switching in adult alewife as predicted from bioenergetic modeling."
- M.J. Klebasko, M.S. Marine Estuarine and Environmental Studies, University of Maryland System. Major Professor, 1991. "Trophic ecology and daily ration of bay anchovy (*Anchoa mitchilli*) in the mid Chesapeake Bay."
- S.B. Wang, M.S. Marine Estuarine and Environmental Studies, University of Maryland System, Committee, 1992. "Abundance, relative biomass, production, and energy storage of bay anchovy, *Anchoa mitchilli* in the Chesapeake Bay."
- A. Appenziller, Ph.D. McGill University, Montreal, Canada, External Examiner. 1992. "On the application of hydroacoustic methods to analyses of distribution and abundance of pelagic fishes: behavioral and statistical considerations."
- D.M. Mason, Ph.D. Marine Estuarine and Environmental Studies, University of Maryland System. Major Professor 1993. "Spatial models of the distribution, foraging and growth of pelagic fishes."

- K.J. Hartman, Ph.D. Marine Estuarine and Environmental Studies, University of Maryland System. Major Professor 1993. "Striped bass, bluefish, and weakfish in the Chesapeake Bay: Energetics, trophic linkages, and bioenergetics model applications."
- T.H. Rippetoe, M.S. Marine Estuarine and Environmental Studies, University of Maryland System. Major Professor 1993. "Growth and bioenergetics of Atlantic menhaden in the Chesapeake Bay."
- H. Forman, M.S. Biology, Buffalo State College. Committee 1996.
- W.H.H. Sauer, Ph.D. University of Port Elizabeth, South Africa (External Examiner), 1993.
- C. Richardson, M.S. Marine, Estuarine and Environmental Studies, University of Maryland System. 1996. "Homing behavior and home range of large mouth bass in the tidal upper Chesapeake Bay as determined by radio telemetry."
- D. Hondorp, M.S. Great Lakes Environmental Studies, Buffalo State College, Buffalo, NY. "Spatial distributions of planktivorous fish and zooplankton in western Lake Ontario." Major Professor, 1998.
- L. Zhou, M.S. Great Lakes Environmental Studies, Buffalo State College, Buffalo, NY "Distribution and variability of fish in Lake Ontario: An acoustic approach in time and space." Major Professor. 1999.
- L. Kracker, Ph.D. Environmental Engineering, University of Buffalo, Buffalo, NY." The Quantification and Classification of Aquatic Landscape Structure." Committee 1998.
- A.P. Goyke, Ph.D. Marine Estuarine and Environmental Studies, University of Maryland System, Major Professor 1998.
- D. Roy, M.S. Department of Biology, University of Windsor, Major Professor 1999.
- L. Sano, Ph.D. School of Natural Resources, University of Michigan, Committee 2005.
- D. Hondorp, Ph.D. School of Natural Resources, University of Michigan, Major Professor 2006.
- M. Weimer, M.S., Great Lakes Environmental Studies, Buffalo State College, Buffalo, NY 2007.
- L. Jensen, MS. Fisheries and Wildlife Department, OSU, Corvallis, Oregon, 2017

Selected Academic Committees

- Faculty in Graduate Program, Fisheries and Wildlife Department, Oregon State University, 2009 – present

- Promotion and Tenure Committee, Fisheries and Wildlife Department, Oregon State University, 2017 – present
- Outreach Committee, Fisheries and Wildlife Department, Oregon State University, 2017 – present
- Member, Search Committee, Department head, Fisheries and Wildlife, Oregon State university, 2015 – 2016
- Faculty in Graduate Program in Marine Estuarine and Environmental Sciences. University of Maryland. 1987-1997.
- Search Committee, New York Sea Grant Institute, Associate Director. 1986-1987.
- Scientific advisor to Search Committee, New York Sea Grant Institute Director. 1986- 1987.
- Search Committee, SUNY Great Lakes Consortium faculty in Environmental Chemistry. 1986.
- Search Committee, SUNY-Oswego Associate Director of the Research Center. 1985.
- Chair, Computer Facilities Committee, Chesapeake Biological Laboratory. 1988-1993.
- Member, Formalin Committee, Chesapeake Biological Laboratory. 1987-1993.
- Chair, Search Committee CBL Computer Specialist. 1988-89.
- Chair, 5-year Planning Committee, Computer Facilities and Services. 1988-1993.
- Member, 5-year Planning Committee, Quality of Faculty Expertise and Competence. 1988-1993.
- Faculty Senate, University of Maryland, Center for Estuarine and Environmental Research. 1989-1993.
- Chair, Faculty Senate Standing Committee on Quality of Professional Life. 1990-1992.
- Vice-Chair, Faculty Senate, University of Maryland, Center for Estuarine and Environmental Studies, 1991-1992.
- Member, CEES Vessel Operations Committee, 1991-1993.
- Search Committee, CBL Computer Specialist, 1992.
- Search Committee, CBL Computer Assistant, 1992.
- Personnel Committee, Biology Department, Buffalo State College, 1994-95.
- Chair, Search Committee, Aquatic Ecology, Assistant Professor, 1994-95.
- Chair, Search Committee, Fish Ecology and Management, Research Assistant Professor, 1994-95.
- Chair, Search Committee, Landscape Ecology, Research Assistant Professor, 1994-95.
- Various Search and Promotion Evaluation committees.
- President's Task Force.
- Computer Committee, Biology Department, Buffalo State College, 1996-97.
- Chair, Graduate Program Option, Great Lakes Environmental Studies, 1995-98.
- Member, Promotion and Tenure Committee, Department of Fisheries and Wildlife, Oregon State University. 2009 – present
- Member, Search Committee, Director of Hatfield Marine Science Center, Oregon State University 2012.
- Member, Search Committee, Vice President for Research, Oregon State University, 2010
- Chair, Marine Council, Oregon State University, 2009 – 2013
- Member, Graduate Student Committee, Department of Fisheries and Wildlife, Oregon State University, 2015 – present