T. Douglas Beard, Jr. United States Citizen

WORK ADDRESS

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EDUCATIONAL BACKGROUND:

Degree Earned	Institution	Date
B.S. Major-Biology Minor-Chemistry	University of Wisconsin - Eau Claire	1987
M.S. Major - Fish and Wildlife Advisor – Dr. Robert Carline	Pennsylvania State University	1990
Ph.D. Major - Zoology Minor – Applied Statistics Advisor - Dr. Stephen Carpenter	University of Wisconsin- Madison	2002

PROFESSIONAL EXPERIENCE:

United States Geological Survey/Land Resources Mission Area, Reston, VA – Acting Associate Director, February 2015 – August 2015, July 2017-present

Serve as Associate Director for Climate and Land Use Mission Area (CLU) for the U.S. Geological Survey. Responsible for overseeing, setting broad strategic direction for, development and management of the \$135 million annual CLU missions. Develops and manages all aspects of CLU, including the National Climate Change and Wildlife Science Center (NCCWSC) and the Department of Interior Climates Science Centers, the Climate Research and Development program, the Land Change Science program and the Land and Remote Sensing Program (including management of the LandSat Satellite program). Direct supervision of two national capabilities, NCCWSC and the Earth Resources Observation Systems (EROS) Data Center (EDC) in Sioux Falls, SD. Direct authority to manage fiscal and human resources to achieve the mission and strategic objectives of the CLU mission area. Work across DOI and with other federal agencies to develop and implement the CLU mission area. Lead strategic planning efforts on CLU to identify research priorities and determine

national/international priorities for CLU research that include state, federal and NGO partners. Build and maintain partnerships with international, federal, state and NGO partners. Serve as member of official U.S. delegations to the Convention of Biological Diversity and as alternate head of delegation to the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES).

United States Geological Survey/Climate and Land Use Mission Area, Reston, VA –Chief, National Climate Change and Wildlife Science Center, November 2009-February 2015, August 2015-June 2017.

Serve as director for National Climate Change and Wildlife Science Center (NCCWSC) for the U.S. Geological Survey. Responsible for developing and managing the national NCCWSC and standing up the Department of Interior Climate Science Centers (CSC). Develop, manage and implement \$26 million NCCWSC program. Identify priorities for national climate change and wildlife science and develop budget activities and work with multiple Federal, State and Local partners to develop the science agenda. Work across DOI bureaus to develop and implement the DOI Climate Science Centers. Lead strategic planning efforts on NCCWSC research priorities and determine national/international priorities for NCCWSC research that include state, federal and NGO partners. Build and maintain partnerships with international, federal, state and NGO partners. Serve as advisor on national policies for NCCWSC priorities and work to integrate national research priorities into international initiatives. Serve as member of official U.S. delegations to the Convention of Biological Diversity and as alternate head of delegation to the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES). Hire, manage and supervise staff in leading development of the NCCWSC and CSCs. Work with and brief senior levels of the administration and Congress to advance goals and objectives of NCCWSC and CSC. Foster partnerships with States, NGO's and others interested in climate change effects on fish, wildlife and their habitats. Lead definition, supervision and development of information management system in support of data and information managed by NCCWSC. Manage budget, for implementation of the NCCWSC. Develop goals, objectives and strategic guidance for the program, evaluate proposals and recommend for funding research priorities, evaluate progress of the research program and report on national goals.

United States Geological Survey/Biological Resources Discipline, Reston, VA – Program Coordinator Fisheries; Aquatic & Endangered Resource Program May 2006 – 2009

Serve as national leader for Fisheries; Aquatic & Endangered Resources for the U.S. Geological Survey. Responsible for developing and managing the national Fisheries; Aquatic & Endangered Resrouces Program. Develop, manage and implement \$24 million Fisheries program. Identify priorities for national fisheries research, develop budget activities and work with multiple Federal, State and Local partners to develop the national fisheries program. Lead strategic planning efforts on fisheries research priorities and determine national/international priorities for fisheries research that include state, federal and NGO partners. Build and maintain partnerships with international, federal, state and NGO partners. Serve as advisor on national policies for fisheries research priorities and work to integrate national fisheries research priorities into international initiatives. Work as advisor to international efforts to develop coordinated World Council of Fisheries Societies and as part of U.S. Government team as a representative to the U.N. Convention on Biological Diversity. Manage budget, write proposals for internal and external funding and develop work orders for implementation of the Fisheries; Aquatic & Endangered Resources Program. Develop goals, objectives and strategic guidance for the program, evaluate proposals and recommend for funding research priorities, evaluate progress of the research program and report on national goals.

United States Geological Survey/National Biological Information Infrastructure, Reston, VA – Program Manager Fisheries and Aquatic Resources Node, Program Manager Aquatic Gap Program, January 2003 – May 2006

Responsible for developing and managing the national Fisheries and Aquatic Resources Node for the National Biological Information Infrastructure. Develop fisheries data standards and information systems that integrate fisheries data from multiple sources. Identify priorities for fisheries information and determine partners for the program. Lead strategic planning efforts on fisheries information management efforts and determine national/international priorities for fisheries information that include state, federal and NGO partners. Serve as advisor on national policies for fisheries information management and work to integrate national fisheries information sets into international initiative. Work as advisor to international efforts to develop coordinated Fisheries Information systems and as part of U.S. Government team as a representative to the U.N. Convention on Biological Diversity. Manage budget, write proposals for internal and external funding and develop work orders for implementation of the Fisheries and Aquatic Resources Information Program. Manage National Aquatic Gap program and set national priorities that integrate into international programs, including both marine and freshwater systems. Develop goals and objectives for the program, evaluate proposal and recommend for funding research priority, evaluate progress of the research program and report on national aquatic gap goals. Coordinate coral reef program for the NBII.

Wisconsin Department of Natural Resources-Treaty Fisheries Coordinator, Madison, WI January 2000-January 2003 (Supervisor, Steve Hewett, 608-267-7501)

Responsible for developing statewide Fisheries Management and Habitat Protection treaty fisheries policy and assure the agency is in compliance with the Federal Court Decisions regarding offreservation fisheries harvest. Act as the department liaison on treaty fisheries issues with the Great Lakes Indian Fish and Wildlife Commission, Tribal Biologists, Federal Agencies, and other state agencies such as the Department of Justice and Department of Administration. Manage the \$2.4 million treaty fisheries budget to assure department and state policies are met. Independently develop and review sampling protocols and budgets to assure that treaty fishery sampling meets court ordered guidelines. Review all department projects as regards fisheries sampling and make decisions as to their validity. Lead management planning, training and evaluation teams. Develop and coordinate entry level fisheries biologist hiring program.

Wisconsin Department of Natural Resources-Statewide Database Coordinator, February 1991-December 1999.

Responsible for developing statewide Fisheries Management database policy and design. Design, implement, review, and develop policy to optimize sampling designs for population estimation and creel surveys of targeted fish populations. Design and implement a database and analysis system for the statewide Fisheries Management program. Lead department wide efforts to develop a surface water integration system. Develop and maintain computer programs for analysis of data for development of statewide policies. Provide biometric support service for all Fisheries Management program wide fisheries and habitat training meeting every year, including development of program and curriculum, training materials and distribution of learning tools.

Wisconsin Department of Natural Resources-Fisheries Data Analyst July 1990-February 1991

Responsible for conducting data analyses of treaty fishery database and give reports to the public, Department policy makers, Federal Court proceedings, and field fishery personnel. Design, implement, review, and optimize sampling designs for population estimation and creel surveys of targeted fish populations. Design and implement a database and analysis system for the treaty fishery in the ceded territory. Develop and maintain computer programs for analysis of data by field personnel.

Minnesota Department of Natural Resources-Natural Resource Specialist-Fisheries, March 1990-June 1990

Responsible for designing of projects and collecting data for Duluth area streams and lakes. Preparation of reports to the Minnesota Department of Natural Resources and U.S. Fish and Wildlife Service. In charge of creel survey analysis for St. Louis River and other inland lakes. Responsible for statistical analysis of existing data and database development and management. Assist area manager in making management decision for area lakes and streams. Prepare and give informational talks for public interest groups and also professional meetings.

SOCIETY MEMBERSHIPS AND PROFESSIONAL ACTIVITIES

American Fisheries Society – Member, 1987 to present American Fisheries Society Membership Concerns Committee 1990-Member American Fisheries Society Membership Concerns Committee-Member American Fisheries Society North Central Division Membership Chair-1993 American Fisheries Society Continuing Education Committee 1993-2000 American Fisheries Society Computer User Section, Librarian 1995-1996 American Fisheries Society Wisconsin Chapter, Continuing Education Chair 1994-1996 American Fisheries Society North Central Division, Continuing Education Chair, 1996-1997 American Fisheries Society Computer User Section, President-Elect, President 1999-2003 American Fisheries Society International Fisheries Section, President 2003-2005 Program Chair-Fisheries 1997 Midwest Fish and Wildlife Conference President-Organization of Fish and Wildlife Information Managers, 1998-1999 American Fisheries Society Continuing Education Committee, Chair, 1999-2000 Student participant, Resilience Alliance workshop on Adaptive Management 2000
Member of Scenarios Working Group, Millennium Ecosystem Assessment Project, 2002-2006.
5th World Fisheries Congress, Program Planning Committee 2005-2008
5th World Recreational Fisheries Conference – Steering Committee
World Council of Fisheries Societies – Chair Strategic Planning Committee 2007-2012
Fisheries Conservation Foundation – Board Member, 2007-2008
World Council of Fisheries Societies – Vice President 2008-2012
World Council of Fisheries Societies – President 2012 – 2016.
6th World Recreational Fisheries Conference – International Steering Committee
Science Committee, Fisheries Society of the British Isles Climate Change and Fisheries
Meeting, July 2010.
Global Conference on Inland Fisheries, UN-FAO, member of International Steering
Committee.

EDITORIAL

Reviewer:	North American Journal of Fisheries Management
	Transactions of the American Fisheries Society
	Canadian Journal of Fisheries and Aquatic Sciences
	Ecosystems
	Conservation Ecology
	Fisheries
	Proceedings of the National Academy of Sciences
	Fisheries Management and Ecology

North American Journal of Fisheries Management, Associate Editor, 1999-2001 Fisheries, Science Editor, 2002-2010

HONORS AND AWARDS

Honorable Mention-Best Student Paper at the Annual Meeting of the American Fisheries Society, September 1989, Anchorage
Wisconsin Chapter AFS Best Paper Award-1992
North Central Division AFS Best Paper Award-1994
Honorable Mention, Best Paper in North American Journal of Fisheries Management – 2003
U.S. Department of State Meritorious Honor Award – 2004, 2011
U.S. Geological Survey Superior Service Award – 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
U.S. Geological Survey Diversity Award – Supervisor 2011
U.S. Department of Interior Meritorious Service Award -2017
Zayed International Prize for Scientific/ technological achievements in environment – Millennium Ecosystem Assessment, Zayed Prize International for the Environment, 2005. American Fisheries Society Distinguished Service Award – 2008. Japanese Society for the Promotion of Science, Short Term Fellowship - 2009

TEACHING EXPERIENCE

Water Pollution-Pennsylvania State University, Fall 1989.
Fisheries Management-5 lectures, University of Wisconsin-Stevens Point, Spring 1994, Spring 1997, Spring 1998, Spring, 1999, Spring 2000.
Microcomputer Software and Hardware-U.S. Fish and Wildlife Service, Silver Creek, CO, 1995, 1996, Atlanta, GA 1996, Omaha, NE 1996, Monterey, CA 1997, Washington, DC 1998.
Modeling Demystified, American Fisheries Society Annual Meeting, 1998.
Adaptive Management in Northern Wisconsin Lakes District, sponsored by the WI DNR and Resilience Alliance, March 2002.
Eastern Mediterranean Basin Environmental Policy, Michigan State University Study Abroad

Adjunct Faculty Appointment – University of Wisconsin – Stevens Point, 1998-present Adjunct Faculty Appointment – Michigan State University, 2005-present Adjunct Faculty Appointment – University of Nebraska – Lincoln, 2010-present

Graduate Students Committees

Program, 2007, 2008.

Mark W. Rodgers, M.S. – University of Wisconsin-Stevens Point Dee R. McClanahan, M.S. – University of Wisconsin-Stevens Point Tracy L. Kolb, M.S. – Michigan State University Dustin Martin, Ph.D. – University of Nebraska –Lincoln Bryan Matthias, M.S. – University of Florida Marielle Peschiera, M.S. – Michigan State University Kelsey Schlee, M.S. – Michigan State University Abigail Lynch, Ph.D. – Michigan State University Ralph Tingley, Ph.D. – Michigan State University Joe Nohner, Ph.D. – Michigan State University Andrew Carlson, Ph.D. – Michigan State University

BOOKS

- Beard, T.D., Jr., S. Sutton and R. Arlinghaus (eds.) 2011. The angler in the environment; proceedings of the 5th World Recreational Fisheries Conference. American Fisheries Society, Bethesda, MD.
- Tsukamoto, K, T. Kawamura, T. Takeuchi, T.D. Beard, Jr. and M. Kaiser (eds.) 2008. Fisheries for global welfare and environment. Proceedings of the 5th World Fisheries Congress, Yokohama, Japan. Terra Scientific Publishing Company, Tokyo.

PEER REVIEWED PUBLICATIONS

- Lynch, Abigail J., I. G. Cowx, E. Fluet-Chouinard, S. M. Glaser, S. C. Phang, T. D. Beard, Jr., S. D. Bower, J. L. Brooks, D. B. Bunnell, J. E. Claussen, S. J. Cooke, Y.-C. Kao, K. Lorenzen, B. J. E. Myers, A. J. Reid, J. J. Taylor, and S. Youn. 2017. Inland fisheries – Invisible but integral to the UN Sustainable Development Agenda for ending poverty by 2030. Global Environmental Change 47:167-173.
- Deines, A.M., D. B. Bunnell, M.W. Rogers, D. Bennion, W. Woelmer, M. J. Sayers, A.G. Grimm, R.A. Shuchman, Z. B. Raymer, C. N. Brooks, J. G. Mychek-Londer, W.W. Taylor, and T.D. Beard Jr. 2017. The contribution of lakes to global inland fisheries production. Frontiers in Ecology and Evolution 15:293-298.
- Carlson, A.K., W.W. Taylor, K.M. Hartikainen, D.M. Infante, T.D. Beard, Jr. and A.J. Lynch. 2017. Comparing stream-specific to generalized temperature models to guide salmonid management in a changing climate. 27:443-462.
- Bonar, S. A., N. Mercado-Silva, W. A. Hubert, T.D. Beard, Jr., D., Göran, and J. Kubečka, 2017. Standard Methods for Sampling Freshwater Fishes: Opportunities for International Collaboration. Fisheries 42:150-156.
- Lynch, A. J., S. J. Cooke, T. D. Beard, Jr., Y.-C. Kao, K. Lorenzen, A. M. Song, M. S. Allen, Z. Basher, D. B. Bunnell, E. V. Camp, I. G. Cowx, J. A. Freedman, V. M. Nguyen, J. K. Nohner, M. W. Rogers, Z. A. Siders, W. W. Taylor, S. Youn. 2017. Grand challenges in the management and conservation of North American inland fish and fisheries. Fisheries. 42: 115-124.
- Beard, Jr. T. D., E. H. Allison, D. A. Bartley, I. G. Cowx, S. J. Cooke, C. Fuentevilla, A. J. Lynch, W. W. Taylor. 2016. Inland fish and fisheries: A call to action. In Freshwater, fish, and the future: Proceedings of the global cross-sectoral conference, W. W. Taylor, D. M. Bartley, C. I Goddard, N. J. Leonard, and R. Welcomme, eds., pp. 1-6. American Fisheries Society Press: Bethesda, MD.
- Cooke, S.J., D.M. Bartley, T. Douglas Beard, Jr., I.G. Cowx, C.I. Goddard, C. Fuentevilla, N.J. Leonard, A.J. Lynch, K. Lorenzen, and W.W. Taylor. 2016. From ideas to action: ten steps to responsible inland fisheries that support livelihoods, food security and healthy aquatic ecosystems. In Freshwater, fish, and the future: Proceedings of the global cross-sectoral conference, W. W. Taylor, D. M. Bartley, C. I Goddard, N. J. Leonard, and R. Welcomme, eds., pp. 343-351. American Fisheries Society Press: Bethesda, MD.
- Cooke, S. J., E. H. Allison, T. D. Beard, Jr., R. Arlinghaus, A. H. Arthington, D. M. Bartley, I. G. Cowx, C. Fuentevilla, N. J. Leonard, A. J. Lynch, V. M. Nguyen, S. Youn, W. W. Taylor, R. L. Welcomme. Online early access (DOI: 10.1007/s13280-016-0787-4). On

the sustainability of inland fisheries: Finding a future for the forgotten. Ambio 45:753-764.

- Lynch, A.J., S. J. Cooke, A. M. Deines, S. D. Bower, D.B. Bunnell, I. G. Cowx, V. M. Nguyen, J. Nohner, K. Phouthavong, B. Riley, M. W. Rogers, W. W. Taylor, W. Woelmer, S.-J Youn, and T. D. Beard, Jr. 2016. The social, economic, and environmental importance of inland fish and fisheries. Environmental Reviews. 24: 115-121.
- Lynch, A. J., T. D. Beard, Jr., A. Cox, S. C. Phang, C. C. Arantes, R. E. Brummett, J. F. Cramwinckel, L. Gordon, M. A. Husen, J. Liu, P. H. Nguyen, P. K. Safari, Z. Zarnic. 2016. Drivers and synergies in the management of inland fisheries: Searching for sustainable solutions. In Freshwater, fish, and the future: Proceedings of the global cross-sectoral conference, W. W. Taylor, D. M. Bartley, C. I Goddard, N. J. Leonard, and R. Welcomme, eds., pp. 183-200. American Fisheries Society Press: Bethesda, MD.
- Nguyen, V.M., A.J. Lynch, N. Young, I.G. Cowx, T.D. Beard, Jr, W.W. Taylor, and S.J. Cooke. 2016. To manage inland fisheries is to manage at the social-ecological watershed scale. Journal of Environmental Management. 181:312-325.
- Deines, A.M., D. B. Bunnell, M. W. Rogers, T. D. Beard, Jr., and W. W. Taylor. 2015. A review of the global relationship among freshwater fish, autotrophic activity, and regional climate. Reviews in Fish Biology and Fisheries. 25:323-336.
- Lynch, A.J., W.W. Taylor, T.D. Beard, Jr. and B.M. Lofgren. 2015. Climate change projections for lake whitefish (*Coregonus clupeaformis*) recruitment in the 1836 Treaty Waters of the Upper Great Lakes. Journal of Great Lakes Research. 41:415-421.
- Beard, T.D, Jr. 2014. Creating professional networks for successful career enhancement. Pages 239-244 in W.W. Taylor, A.J. Lynch, and N.J. Leonard, editors. Future of fisheries: perspectives for emerging professionals. American Fisheries Society, Bethesda, MD.
- Cooke, S.J., R. Arlinghaus, D.M. Bartley, T.D. Beard, Jr., I.G. Cowx, T.E. Essington, O.P. Jensen, A. Lynch, W.W. Taylor, R. Watson. 2014. Where the waters meet: sharing ideas and experiences between inland and marine realms to promote sustainable fisheries management. Canadian Journal of Fisheries and Aquatic Sciences. 71:1593-1601
- Matthias, B.G., M.S. Allen, R.N.M. Ahrens, T.D. Beard, Jr. and J.A. Kerns. 2014. Hide and seek: interplay of fish and anglers influences spatial fisheries management. Fisheries 39:261-269.
- Camacho, A. and T.D. Beard, Jr. 2014. Maintaining Resilience in the Face of Climate Change. In Social-Ecological Resilience and Law, edited by Ahjond S. Garmestani and

Craig R. Allen. Columbia University Press.

- Youn, S. J., W. W. Taylor, A. J. Lynch, I. G. Cowx, T. D. Beard Jr., D. Bartley, and F. Wu. 2014. Inland capture fishery contributions to global food security and threats to their future. Global Food Security 3: 142-148.
- Cooke, S. J., Lapointe, N. W. R., Martins, E. G., Thiem, J. D., Raby, G. D., Taylor, M. K., Beard, T. D. and Cowx, I. G. 2013. Failure to engage the public in issues related to inland fishes and fisheries: strategies for building public and political will to promote meaningful conservation. Journal of Fish Biology, 83: 997–1018.
- Brown, M.L., M.S. Allen and T.D. Beard, Jr. 2012. Data management and statistical techniques. Pages 15-78 in A. Zale, D. Parrish and T. Sutton eds. Fisheries Techniques, 3rd edition. American Fisheries Society, Bethesda, MD.
- Arlinghaus, R., T. D. Beard, Jr., S.J. Cooke and I. Cowx. 2012. Benefits and Risks of Adopting the Global Code of Practice for Recreational Fisheries. Fisheries 37:165-172.
- Wang, L., D. M. Infante, P. Esselman, A. Cooper, D. Wu, W.W. Taylor, T.D. Beard, Jr., G. Whelan, and A. Ostroff. 2011. A Hierarchical Spatial Framework and Database for the National River Fish Habitat Condition Assessment. Fisheries 36:436-449.
- Daedlow, K., T. D. Beard, Jr., and R. Arlinghaus. 2011. A Property Rights-Based View on Management of Inland Recreational Fisheries: Contrasting Common and Public Fishing Rights Regimes in Germany and the United States. In Beard, T.D., Jr., A. Loftus and R. Arlinghaus (eds.) The angler in the environment; proceedings of the 5th World Recreational Fisheries Conference. American Fisheries Society, Bethesda, MD.
- Beard, T. D., Jr., R. Arlinghaus, S. J. Cooke, P. McIntyre, S. De Silva, D.M. Bartley, and I. G.Cowx. 2011. Ecosystem approach to inland fisheries: research needs and implementation strategies. Biology Letters 7:481-483.
- Beard, T.D., Jr., H. Allen, E.P. Anderson and K.L. Smith. 2008. Tradeoffs in management of freshwater ecosystem services under international environmental conventions: the case of inland waters fisheries. In M. Schecter, N.J. Leonard and W.W. Taylor eds. International Governance of Fisheries Ecosystems: Learning from the Past, Finding Solutions for the Future. American Fisheries Society, Bethesda, MD.
- Hayes, D. J., Hansen, M. J. and T. D. Beard, Jr. 2007. Sampling and experimental design. In M. L. Brown and C. S. Guy, eds. Analysis and interpretation of freshwater fisheries data. American Fisheries Society., Bethesda, MD.
- Rodríguez, J. P., T. D. Beard, Jr., E. M. Bennett, G. S. Cumming, S. Cork, J. Agard, A. P. Dobson, and G. D. Peterson. 2006. Trade-offs across space, time, and ecosystem services. *Ecology and Society* 11(1): 28. [online] URL: http://www.ecologyandsociety.org/vol11/iss1/art28/

- Hansen, M. J., T. D. Beard, Jr. and S. W. Hewett. 2005. Effect of Measurement Error on Tests of Density Dependence of Catchability for Walleyes in Northern Wisconsin Angling and Spearing Fisheries. North American Journal of Fisheries Management. 25:1010-1015.
- Toth, F. L., E. Hizsnyik, J. Park, K. Saterson, A. Stott, T. D. Beard, Jr., D. Deane, C. Ringler, D. van Vuuren. 2005. Policy Implications for Selected Stakeholders. In S.R. Carpenter and P. Pingali, eds., Millennium Ecosystem Assessment, Volume 2: Scenarios Assessment.
- Rodríguez, J. P., T. D. Beard, Jr., J. Agard, E. M. Bennett, S. Cork, G. Cumming, D. Deane,
 A. P. Dobson, D. M. Lodge, M. Mutale, G. Nelson, G. D. Peterson, and T. Ribeiro.
 2005. Interactions among ecosystem services. In S.R. Carpenter and P. Pingali, eds.,
 Millennium Ecosystem Assessment, Volume 2: Scenarios Assessment.
- Rogers, M. W., M. J. Hansen and T. D. Beard, Jr., 2005. Relationships between Recapture Rates from Different Gears for Estimating Walleye Abundance in Northern Wisconsin Lakes. 25:195-202.
- Sass, G.G., S. W. Hewett, T. D. Beard Jr, A. H. Fayram and J. F. Kitchell. 2004. The role of density dependence in growth patterns of ceded territory walleye populations of Northern Wisconsin: effects of changing management regimes. North American Journal of Fisheries Management. 24:1262–1278.
- Beard, T.D., Jr., S. Cox, and S.R. Carpenter. 2003. Impacts of daily bag limit reductions on angler effort for Wisconsin walleye lakes. North American Journal of Fisheries Management. 23:1283-1293.
- Rogers, M. W., M. J. Hansen and T. D. Beard, Jr. 2003. Catchability of walleyes to fyke-nets and electrofishing in Northern Wisconsin lakes. North American Journal of Fisheries Management 23:1193-1206.
- Beard, T.D., Jr., P. W. Rasmussen, S.P. Cox and S.R. Carpenter. 2003. Evaluation of a management system for a mixed walleye spearing and angling fishery in northern Wisconsin. North American Journal of Fisheries Management 23:481-491.
- Beard, T.D., Jr., M. J. Hansen, and S.R. Carpenter. 2003. Development of a regional stockrecruitment model for understanding factors affecting walleye recruitment in northern Wisconsin lakes. Transactions of the American Fisheries Society 132:382-391.
- Peterson, G.D., T.D. Beard, Jr., B.E. Beisner, E.M. Bennett, S.R. Carpenter, G.D. Cumming, C.L. Dent, T.D. Havlicek. 2003. Assessing future ecosystem services: a case study of the Northern Highlands Lake District, Wisconsin. Conservation Ecology 7(3): 1. [online] URL: <u>http://www.consecol.org/vol7/iss3/art1</u>

- Cox, S., T.D. Beard, Jr., and C.J. Walters. 2002. Harvest Control in open-access sport fisheries: hot rod or asleep at the reel? Bulletin of Marine Science 70:749-761.
- Beard, T. D., Jr. 2002. The roles of recruitment, angler effort response, angler perception, and exploitation limits in structuring regional walleye fisheries in Northern Wisconsin. Ph.D. dissertation, University of Wisconsin-Madison.
- Fayram, A.H., S.H. Hewett, S.J. Gilbert, S.D. Plaster, and T.D. Beard, Jr. 2001. Evaluation of a 15-inch minimum length limit for walleye angling in northern Wisconsin. North American Journal of Fisheries Management 21:816-824.
- M.J. Hansen, T.D. Beard, Jr. and S.W. Hewett. 2000. Catch rates and catchability of walleyes in angling and spearing fisheries in northern Wisconsin lakes. North American Journal of Fisheries Management 20:109-118.
- Beard, T.D., Jr. and T.E. Essington. 2000. Effects of angling and life history processes on bluegill size structure: insights from an individual-based model. Transactions of the American Fisheries Society 129:561-568.
- Beard, T.D., Jr. and J.M. Kampa. 1999. Changes in bluegill, black crappie and yellow perch populations in Wisconsin during 1967-1991. North American Journal of Fisheries Management 19:1037-1043.
- Beard, T.D., Jr., and 9 coauthors. 1998. The multistate aquatic resource information system. Fisheries 23(5):14-18.
- Jennings, M.J., J. Lyons, E. Emmons, G. Hatzenbeler, M. Bozek, T. Simonson, T.D. Beard, Jr. and D. Fago. 1998. Toward the development of an index of biotic integrity for inland lakes in Wisconsin. In T. P. Simon, ed., Assessing the sustainability and biological integrity of water resource quality using fish assemblages. CRC press.
- Rasmussen, P.W., M.D. Staggs, T.D. Beard, Jr. and S.P. Newman 1998. Bias and confidence interval coverage of creel survey estimates evaluated by simulation. Transactions of the American Fisheries Society 127:469-480.
- Beard, T.D. Jr., S.W. Hewett, Q. Yang, R.M. King and S. J. Gilbert. 1997. Prediction of angler catch rates based on walleye population density. North American Journal of Fisheries Management 17:621-627.
- Beard, T.D. Jr., M.T. Drake, J.E. Breck and N.A. Nate. 1997. Effects of simulated angling regulations on stunting in bluegill populations. North American Journal of Fisheries Management 17:525-532.
- Membership Concerns Committee, Situational Ethics Workgroup. 1993. Should we eat these fish? A situational ethics survey of AFS members. Fisheries 18(2):19-23.

- Beard, T.D. Jr. and R.F. Carline. 1991. Influence of spawning and other stream habitat features on spatial variability of wild brown trout. Transactions of the American Fisheries Society 120:711-722.
- Carline, R.F., T.D. Beard Jr, and B.A. Hollender. 1991. Response of wild brown trout to elimination of stocking and no-harvest regulations without tackle restrictions. North American Journal of Fisheries Management 11:253-266.
- Beard, T.D. Jr. 1990. M.S. The effects of redd distribution and embryo survival on spatial variation in wild brown trout densities in Spring Creek, Centre County, Pennsylvania. Master of Science Thesis. The Pennsylvania State University, University Park, PA.

SELECTED TECHNICAL PRESENTATIONS (over 200+)

- Beard, T.D. Jr. and R.F. Carline. 1989. Influence of redd distribution and embryo survival on spatial variation in densities of brown trout in a limestone stream. 119th Annual Meeting of the American Fisheries Society. Anchorage, Alaska.
- Beard, T.D. Jr. and J. Kampa. 1993. Changes in bluegill, black crappie and yellow perch populations in Wisconsin since 1967. 123rd Annual Meeting of the American Fisheries Society. Portland, Oregon.
- Beard, T.D., Jr., S.W. Hewett, Q. Yang, S. Gilbert and R.M. King. 1994. Density dependence in walleye angling catch rates. 56th Midwest Fish and Wildlife Conference. Indianapolis, IN.
- Beard, T.D, Jr., S.W. Hewett, Q. Yang, S.Gilbert and R.M. King. 1995. Density dependence in walleye angling catch rates. 125th Annual Meeting of the American Fisheries Society. Tampa Bay, FL.
- Beard, T.D., Jr. and 9 coauthors. 1997. The multistate aquatic resources integration system. 127th Annual Meeting of the American Fisheries Society. Monterey, CA.
- Beard, T.D., Jr. and S.R. Carpenter. 1997. Do anglers control regional variability in walleye stocks? 59th Midwest Fish and Wildlife Conference. Milwaukee, WI.
- Beard, T.D., Jr. and S.R. Carpenter. 1999. Incorporating angler response into fisheries management models. 129th Annual meeting of the American Fisheries Society. Charlotte, NC.
- Beard, T.D., Jr., P.W. Rasmussen, S. Cox and S.R. Carpenter. 2003. Evaluation of a inland recreational management system that incorporates measures of uncertainty into estimates of total allowable catch for a mixed walleye spearing and angling fishery. 3rd

Percis Symposium, Madison, WI.

- Beard, T.D., Jr. 2005. Integrating data across space and time for user accessiblity-examples from aquatic systems. Monitoring Science and Technology Symposium. Denver, CO, September 21 - 24, 2004.
- Beard, T.D., Jr., H.Allen, E.P. Anderson and K.L. Smith. 2006 (invited). Tradeoffs in Inland Freshwater Systems; Can we have our fish and eat them too? 136th Annual Meeting of the American Fisheries Society, Lake Placid, NY.
- Beard, T.D., Jr. 2006 (invited). From Process to Function Evolution of a Fisheries Biologist. University of Florida graduate seminar, Gainesville, FL.
- Beard, T.D., Jr., D.M. Infante, D. Wu, and G. Whelan. 2008 (invited). The National Fish Habitat Action Plan – overview and assessment of the state of aquatic habitat. 68th Midwest Fish and Wildlife Conference, Madison, WI.
- Beard, T.D., Jr. 2008 (invited). Investment in data for management of deltas: rely on what you have, don't cry for what you don't. 5th Great Lakes of the World Symposium; Sustainability, integrity and management. Addis Ababa, Ethiopia.
- Beard, T.D., Jr. 2011 (invited). When Public Data Becomes Public Data, and Why We Can't Hold It Anymore. 141st Annual Meeting of the American Fisheries Society, Seattle, WA.
- Beard, T. D., Jr. 2012 (invited). IPBES, governments, and stakeholders: Bridging the divide between science and policy. 97th Annual Meeting of the Ecological Society of America. Portland, Oregon.
- Beard, T.D., Jr. 2013 (invited). Trans-Pacific Collaborations, Sharing Experiences in Fisheries Science. 100th Anniversary Meeting of the Japanese Society of Fisheries Science. Tokyo, Japan.

SYMPOSIA & WORKSHOPS

- Gregory, R.W., T.D. Beard, Jr. and A.J. Loftus 2003. Better resource management through better information; Making data available. 133rd Annual Meeting of the American Fisheries Society, Quebec City, Quebec.
- Beard, T.D., Jr. 2004. Accessing Monitoring Information Across Multiple Scales; Unifying Knowledge for Better Management of Natural Resources. Monitoring Science and Technology Symposium. Denver, CO, September 21 - 24, 2004.
- Beard, T.D., Jr., M.J. Hansen and P.L. Angermeier. 2006-2008. Aquatic GAP Analysis Program: A Search for New Paradigms to Guide Future Research. National Center

for Ecological Analysis and Synthesis workshop, Santa Barbara, CA.

- Beard, T.D., Jr., C. Lewis, H. Nakata and S. Watabe. 2007. Restoration, enhancement, and protection of coastal marine fishery ecosystems. American Fisheries Society-Japanese Society of Fisheries Science joint symposium. 137th Annual Meeting of the American Fisheries Society, San Francisco, CA.
- Global Code of Conduct for Recreational Fisheries. 2007. U.S. representative to the European Inland Fisheries Advisory Commission. Utrecht, Netherlands.
- Parsons, B., J. Neilsen, S. Moberly, G. Rassam, P. Coutin, J. McKenzie, T.D. Beard, Jr. and A. Seitz. 2008. 2nd international symposium on Advances in Fish Tagging and Marking Technology, Auckland, New Zealand.
- Beard, T.D., Jr., O. Katano, and S. Cooke. 2008. Inland Fisheries The Hidden Crisis. 5th World Fisheries Conference, Yokohama, Japan.
- Beard, T.D., Jr., J. Winton, S. Watabe and K. Ogawa. 2009. Emerging fish diseases across Pacific. American Fisheries Society-Japanese Society of Fisheries Science joint symposium. Japanese Society of Fisheries Science Annual Meeting, Tokyo, Japan.
- Beard, T.D., Jr., S. Cooke, I.G. Cowx, C. Goddard and R. Arlinghaus. 2009. Inland Fisheries

 The Hidden Crisis. American Fisheries Society Meeting, 139th Annual Meeting of
 the American Fisheries Society, Nashville, Tennessee, U.S.A..
- Taylor, W.W., M. Schecter, T.D. Beard, Jr. A. Schroeder and A. Lynch. 2009. Reframing the Argument for Sustainable Global Fisheries: Resources, Policy, Governance, Business Strategies, and Management. 139th Annual Meeting of the American Fisheries Society, Nashville, Tennessee, U.S.A..
- Beard, T.D., Jr., K. B. Jones, M. Rowen and K.K. Milton. 2010. International intergovernmental platform on biodiversity and ecosystem services science priorities. Shepardstown, West Virginia, U.S.A.
- Beard, T.D., Jr., S. Cooke, I. Cowx, C. Goddard, S. de Silva, D. Bartley and R. Arlinghaus.2010. Ecosystem Approach to Inland Fisheries, Vientiene, Laos.
- Beard, T.D., Jr., M. Rowen and A. Larigauderie. 2012. Development of a Work Programme for the Intergovernmental Platform on Biodiversity and Ecosystem Services. SE-SYNC, Annapolis, MD.
- Beard, T.D., Jr., D. Bartley, I.G. Cowx, W.W. Taylor, B. Bunnell, C. Goddard and J. Dettmers. 2012. Inland Fisheries: Biodiversity, Food Security and the need for Ecosystem Management. 6th World Fisheries Congress, Edinburg, Scotland.

Taylor, W.W., D. Bartelty, I.G. Cowx, A. Lynch, R. Welcomme, E. Allison and C. Goddard.

2015. United Nations Conference on Inland Fisheries. Rome, Italy.

Cooke, S.J., W.W. Taylor and T. D. Beard, Jr. 2016. Moving Toward a Global Status of Inland Fisheries – First Steps. 7th World Fisheries Congress, Busan, Korea.

REVIEWS AND COMMENTARY

- Beard, T.D., Jr. 2003. NBII: providing access to data and information on U.S. Biological Resources. Fisheries 28(5):27.
- Beard, T.D., Jr., P. Bueno and J. Fisher. 2006. Tsunami relief fund making an impact. Fisheries 31:190.
- Beard, T.D., Jr. 2007. 5th World Fisheries Congress planning well underway. Fisheries 32:189.
- Beard, T.D., Jr., W.W. Taylor, N.A. Graham, N.J. Leonard, and K.E. Waco. 2008. Study abroad; a faculty perspective. Fisheries 33:39.
- Beard, T.D., Jr., R. O'Malley, and J. Robertson. 2011. New Research on Climate's Front Lines understanding climate change impacts on fish and wildlife. The Wildlife Professional 5(3):26-31.
- Haig, S.M., T.E. Martin, C.van Riper and T.D. Beard, Jr. 2013. Pathways for Conservation. Science 341 (6143): 215.

GRANTS

- Principle Investigator, Multistate Aquatic Resources Information System-\$150,000, Granted to Wisconsin, Illinois, Michigan, Iowa and Minnesota. State partnership grant from National Biological Service.
- Co-Principle Investigator, Development of a National Fisheries Database System-\$50,000. Granted to Illinois, Wisconsin, Wyoming and USGS/BRD-Columbia, MO. Partnership grant USGS/BRD.
- Co-Principle Investigator, Fisheries Database Summit II, Data for the National Fish Habitat Initiative. \$97,500. Granted to AFS-Computer Section. U.S. FWS, Multi-State Conservation Grant Program.
- Co-Principle Investigator, Spatial analysis of relations among conservation practices, freshwater biodiversity, ecosystem services, and human well-being. \$20,000 (up to \$190,000 over 3 years). Granted to P.L. Angermeier, VA. Tech and E.M. Bennett, McGill University, USGS/BRD – Aquatic Gap.

Principle Investigator, Identifying gaps and needs for improving large-scale biodiversity modeling through lessons learned from climate models. \$94,000. NASA Earth Sciences Program.