

Gary Edward Whelan

Michigan Department of Natural Resources
Fisheries Division
P.O. Box 30446
Lansing, MI 48909
(517) 248-5840 (Work)
Email: whelang@michigan.gov

Education

University of Wyoming

Laramie, Wyoming

B.S. Wildlife Conservation and Management (Fisheries Emphasis) - 1979

University of Missouri

Columbia, Missouri

M.S. Fisheries Management - 1983

Professional Experience

1987 to Present - Michigan Department of Natural Resources - Fisheries Division

2014 to Present - Research Section Manager

2009 to 2016 - Habitat Management Unit Manager

2011 to 2013 - Aquatic Species and Regulatory Affairs Unit Manager

2005 to 2013 - Tribal Coordination Unit Manager

1998 to 2014 - Fish Production Manager

2004 to 2005 - Acting Division Chief

1997 to 1998 - Acting Fish Production Manager

1988 to 1998 - FERC Project Coordinator/Habitat Protection Specialist

1987 to 1988 - FERC Project Coordinator and Commercial Fisheries Biologist

Currently, I am a Program Manager for Fisheries Division directly responsible for the Research Section, Fish Health, and parts of the Habitat Management Unit. I am also a member of Fisheries Division Management Team responsible for all aspects of Division operation including: administration; budget development and approval; workforce and organizational structure analyses; policy formulation; and assisting the Division Chief. I have been on the Division Management Team since 1997. Since 2005, I have also been the Division's Emergency Response Coordinator.

As Research Section Manager for Fisheries Division, I am responsible for managing all aspects of the Division's research program including: overseeing operations at seven research stations; four large Great Lakes survey and assessment vessels; coordination with and overseeing over \$1,000,000 in contracts the Partners in Ecological Research and Management Program (PERM) at Michigan State University, and fisheries programs at other state universities including the University of Michigan and Lake Superior State University; statewide creel census; and the publication and archiving of Division aquatic resource information. Section duties also include: direct supervision to three unit managers in charge of research facilities and vessels along with 7 other section staff members; second line supervision for approximately 38 section employees; assisting in supervision for 7 PERM facility members; responsibility for a program budget of \$8.0

million including budget development and accounting; and responsibility for facility development and maintenance.

As the Habitat Management Unit Manager, I oversaw all aspects of environmental assessment and large scale habitat management for the Division including Federal Energy Regulatory Commission projects, dam removal issues, stream channel rehabilitation, fish passage, coordination of the Midwest Glacial Lakes Fish Habitat Partnership and Upper Midwest Great Lakes Basin Landscape Conservation Cooperative; and the administration of the natural rivers program. I supervised a unit manager and was a second-line supervisor for six other staff.

As Fish Production Manager for Fisheries Division, I was responsible for managing the statewide fish production program and for overall Division management as a member of Fisheries Division Management Team. This included overseeing six state-owned fish production facilities and the Fish Health and Quality Laboratory. Fish Production Section duties included: direct supervision to three unit managers in charge of fish production facilities, fish health program and fish transportation staff; second line supervision to approximately 50 personnel; responsibility for a program budget of \$8.0 million including budget development and accounting; responsibility for system maintenance; responsible for the implementation of a program wide technology assessment; responsible for Divisional oversight of Platte River State Fish Hatchery Court Case; and the Division's point person for all fish health issues (a position that I still have at this time) including Viral Hemorrhagic Septicemia and whirling disease concerns. During this period, I also successfully guided the 1998-2004 Fish Production Renovation Project. In this capacity, I oversaw the investment of \$23 million in our hatchery system along with the development of Great Lakes Ecological Information Centers at each of our six state hatcheries. Prior to taking the Fish Production Manager position permanently, I served a year as Acting Fish Production Manager for Fisheries Division.

As the Tribal Coordination Unit Manager, I oversaw all facets of the Great Lakes and Inland Tribal Consent Decrees in 1836 Treaty Ceded waters. This included ensuring Division compliance with all facets of the two Consent Decrees, overseeing and supervising the unit supervisor, and second-line supervision to 2 biologists. I also represented the Division at Tribal Technical Fisheries Committee and Executive Council Meetings.

As the Manager of the Aquatic Species and Regulatory Affairs Unit, I was responsible for all aspects of fisheries regulations, legislative analysis, commercial fisheries, aquatic invasive and nuisance species, and coordination between field and fish production units on stocking issues for the Division. I supervised a unit manager and was the second-line supervision for three other staff.

For 1 year, I was the Acting Fisheries Division Chief directly responsible of all aspects of the Division operation including fish production, fisheries research, habitat protection and regulatory affairs. This included overseeing administration, six state-owned fish production facilities, six research stations and direct supervision of 6 employees along with second line supervision to approximately 180 individuals. In this position, I represented the Division at Departmental-level Committees along with having responsibilities for handling legislative inquiries and responses. Fisheries Division management responsibilities included policy formulation; budget development and approval; issue analysis; and workforce and organizational structure analyses.

For 12 years, I was the FERC Project Coordinator for the Department responsible for the environmental analysis of hydropower impacts. In this position, I was responsible for the development of Department FERC policies, study guidelines, individual project recommendations to mitigate and enhance resource conditions at licensing and re-licensing projects, and technical expert in quasi-legal proceedings concerning the licensing and re-licensing projects. Additional duties included assisting the Division in the preparation of watershed assessments, other environmental permit review, preparation of rehabilitation plans for state listed fish species (lake

sturgeon), analysis of non-hydropower dam impacts, and developing rehabilitation strategies for river systems.

I have also been directly responsible: as the lead negotiator for a consent agreement, which resolved a 14 year old lawsuit on effluents from the Platte River State Fish Hatchery; for 3 completed FERC settlement agreements (Wisconsin Electric Power Company – Menominee River, Thunder Bay Power Company – Thunder Bay River, and the Wolverine Power Cooperative – Black River). I also served as lead negotiator that developed a settlement agreement on the Ontonagon River (Upper Peninsula Power Company); and as the lead technical person on the completed Consumers Power Company Settlement Agreement on AuSable, Manistee and Muskegon Rivers.

The other Fish Division position I worked in was as the Commercial Fisheries Biologist. The duties of this position included the management of Michigan's commercial fishery (open water, aquaculture and bait), analyzing and reporting catch data, administration of the commercial fishing license system, and representing the Department in quasi-legal and legal proceedings concerning commercial fisheries.

1983 to 1987 - Research Associate - Michigan State University - Department of Fisheries and Wildlife

I was responsible for the fisheries section of a multidiscipline study of extremely low frequency electromagnetic sound on a river system in the Upper Peninsula of Michigan. Duties included study design, data collection, data analysis, report writing, supervision of laboratory and field staffs, and budgeting. Other duties included supervision of all aspects of a fisheries laboratory, assisting graduate students with their research and computer programming.

1980 to 1983 - Research Assistant - University of Missouri - Department of Fisheries and Wildlife

I was responsible for a research project on the effects of heavy metals on a lotic benthic community as part of a larger study on the effects of the old lead mining belt in Missouri on the surrounding ecosystem. Duties included study design, data collection, analysis of heavy metals in invertebrate tissue using a atomic absorption spectrophotometer, data analysis, and report and thesis preparation. I also assisted U.S. Fish and Wildlife Service staff from the Columbia National Fisheries Research Laboratory in the collection and preparation of water, sediments, algae, invertebrates, and fish (both whole carcass and blood) for heavy metal analysis.

1979 - Fisheries Assistant - Wyoming Department of Game and Fish

I assisted in the collection and analysis of data for an evaluation of the effects of non-game fish removals on a reservoir in northeastern Wyoming.

Publications (Copies Available Upon Request)

Barnes, M.E. and G.E. Whelan. 2004. Visitor policies and practices at public trout and salmon hatcheries in North America. Fisheries 29(10): 16-21.

- Boonthai, T., S.J. Herbst, G.E. Whelan, and M. Faisal. 2017. The Asian fish tapeworm (*Schyzocotyle acheilognathi*) is widespread in baitfish retail stores. *Parasite and Vectors* 10: 618-627.
- Boonthai, T.P. Loch, Q. Zhang, M. Gunn Van Deuren, M. Faisal, G.E. Whelan, and S.J. Herbst. 2018. Retail baitfish in Michigan harbor serious fish viral pathogens. *Journal of Aquatic Animal Health* 30: 253-263.
- Brenden, T.O., R. Reilly, E. Eisch, A. Switzer and G.E. Whelan. 2018. Temporal variation in total phosphorus concentrations revealed from a multidecadal depth-specific monitoring program on Big Platte Lake, Michigan. *Environmental Monitoring and Assessment* 190: 430.
- Canale, R. P., R. Harrison, P. Moskus, T. Naperalala, W. Swiecki and G. Whelan. 2004. Case Study: Reduction of Total Phosphorus Loads to Big Platte Lake, MI through Point Source Control and Watershed Management. *Proceedings of the Water Environment Federation, Watershed 2004* 17:1060-1076.
- Canale, R.P., T. Redder, W. Swiecki and G. Whelan. 2010. A Phosphorus Budget and Remediation Plan for Big Platte Lake, MI. *Journal of Water Resources Planning and Management* 136 (5): 576-586.
- Canale, R.P. and G.E. Whelan. 2014. Validation of a bio-energetic model for juvenile salmonids using growth data from a production-scale feeding study. *Aquaculture* 433: 201-2017.
- Canale, R.P., G. Whelan, A. Switzer, and E. Eisch. 2016. A bioenergetic approach to manage production and control phosphorus discharges from a salmonid hatchery. *Aquaculture* 451: 137-146.
- Cogswell, S.F., G.E. Whelan, and R. Sturtevant. 2012. Habitat conditions in the Lake Michigan watershed. In, *The State of Lake Michigan in 2011*. Edited by D.B. Bunnell. Great Lakes Fishery Commission, Ann Arbor, Michigan, USA. Special Publication 12-01.
- Cooper, A.R., D.M. Infante, J.A. Ross, W.M. Daniel, K. Herreman, C.C. Estes, and G.E. Whelan. 2019. Contemporary and future landscape-based anthropogenic disturbances to Alaska streams: Implications for anadromous fish habitat conservation. *American Fisheries Society Symposium* 90: 229-253.
- Crawford, S., Whelan, G., Infante, D.M., Blackhart, K., Daniel, W.M., Fuller, P.L., Birdsong, T., Wieferich, D.J., McClees-Funinan, R., Stedman, S.M., Herreman, K., and Ruhl, P. 2016. *Through a Fish's Eye: The Status of Fish Habitats in the United States 2015*. National Fish Habitat Partnership Board. accessed on [DATE], at url <http://assessment.fishhabitat.org/>.

- Deweber, J.T., Y. Tsang, D.M. Krueger, J.B. Whittier, T. Wagner, D.M. Infante, and G. Whelan. 2014. Importance of understanding landscape biases in USGS gage locations: Implications and solutions for managers. *Fisheries* 39(4): 155-163.
- Elsayed, E., M. Faisal, M. Thomas, G. Whelan, W. Batts and J. Winton. 2006. Isolation of viral haemorrhagic septicaemia virus from muskellunge, *Esox masquinongy* (Mitchell), in Lake St. Clair, Michigan, USA revealed new sublineage of the North American genotype. *Journal of Fish Diseases* 29: 611-619.
- Faisal, M., M. Shavaliar, R. Kim, E. Millard, M. Gunn, A. Winters, C. Schulz, A. Eissa, M.V. Thomas, M. Wolgamood, G. Whelan, and J. Winton. 2012. Spread of the Emerging Viral Hemorrhagic Septicemia Virus Strain, Genotype IVb, in Michigan, USA. *Viruses* 4(5): 734-760.
- Faisal, M., C. Schulz, A. Eissa, T. Brenden, A. Winters, G. Whelan, M. Wolgamood, E. Eisch, and J. VanAmberg. 2012. Epidemiological investigation of *Renibacterium salmoninarum* in three *Oncorhynchus* spp. in Michigan from 2001 to 2010. *Preventive Veterinary Medicine* 107: 260-274.
- Faisal, M., C.A. Schulz, T.P. Loch, R.K. Kim, J. Hnath and G. Whelan. 2013. Current status of fish health and disease issues in the Laurentian Great Lakes 2005-2010. Pages 259-304 in W.W. Taylor, A.J. Lynch and N.J. Leonard, editors. *Great Lakes Fisheries Policy and Management*. Michigan State University Press, East Lansing.
- Faisal, M., T.P. Loch, M. Shavaliar, M. Gunn VanDeuren, I. Standish, A. Winters, G. Glennie, J. Aho, M. Wolgamood, J. VanAmberg, E. Eisch, and G. Whelan. 2019. Resurgence of salmonid Herpesvirus-3 infection (Epizootic Epitheliotropic Disease) in hatchery-propagated Lake Trout in Michigan. *Journal of Aquatic Animal Health* 31: 31-45.
- Forsyth, D.K., C. M. Riseng, K. E. Wehrly, L. A. Mason, J. Gaiot, T. Hollenhorst, C. M. Johnston, C. Wyrzykowski, G. Annis, C. Castiglione, K. Todd, M. Robertson, D.M. Infante, L. Wang, J.E. McKenna, and G. Whelan. 2016. The Great Lakes Hydrography Dataset: consistent, binational watersheds for the Laurentian Great Lakes Basin. *Journal of the American Water Resources Association* 52(5): 1068-1088.
- Fuller, P.L., and G.E. Whelan. 2018. Flathead catfish invasion of the Great Lakes. *Journal of Great Lakes Research* 44: 1081-1092.
- Hay-Chmielewski, E.M., P.W. Seelbach, G.E. Whelan and D.B. Jester Jr. 1994. Huron River assessment. Michigan Department of Natural Resources - Fisheries Division, Lansing, Michigan. Special Report Number 18. 138 pp.
- Hay-Chmielewski, E.M., G.E. Whelan, B. Ylkanen, N. Auer, J. Baker, J. Copeland, J. Epifanio, D. Hayes, R. Juetten, C. Latta, G. Schnicke, S. Scott, and S. Swan. 1997. Lake sturgeon

- rehabilitation strategy. E.M. Hay-Chmielewski and G.E. Whelan, Editors. Michigan Department of Natural Resources - Fisheries Division. Special Report 17.
- Hayes, D.B., W.W. Taylor, M.T. Drake, S.M. Marod and G.E. Whelan. 1998. The value of headwaters to brook trout (*Salvelinus fontinalis*) in the Ford River, Michigan, USA. In, Proceedings of Headwater '98, the Fourth International Conference on Headwater Control, Merano, Italy, April 1998. M.J. Haigh, J. Krecek, G.S. Rajwar and M. P. Kilmartin, Editors. Oxford & IBH Publishing Company Ltd., New Delhi, India. Pages 175-185.
- Haxton, T., G. Whelan and R. Bruch. 2014. Historical biomass and sustainable harvest of Great Lakes lake sturgeon (*Acipenser fulvescens* Rafinesque, 1817). *Journal of Applied Ichthyology* 30: 1371-1378.
- Loch, T.P., K. Scribner, R. Tempelman, G. Whelan, and M. Faisal. 2012. Bacterial infections of Chinook salmon, *Orcorhynchus tshawytscha* (Walbaum), returning to gamete collection weirs in Michigan. *Journal of Fish Diseases* 35(1): 39-50.
- Moffitt, C.F., G.E. Whelan and R. Jackson. 2010. Historical Perspectives on Inland Fisheries Management in North America. In, Third Edition of Inland Fisheries Management in North America. W. Hubert and M. Quist, Editors. American Fisheries Society, Bethesda, Maryland. Pages 1-41.
- Muzzall, P.M., G.E. Whelan and C.R. Peebles. 1987. Parasites of burbot *Lota lota* (Gadidae), from the Ford River in the Upper Peninsula of Michigan. *Canadian Journal of Zoology* 65: 2825-2827.
- Muzzall, P.M., G.E. Whelan and W.W. Taylor. 1992. Host-parasite relationships of longnose dace, *Rhinichthys cataractae*, from the Ford River, Michigan. *Journal of Parasitology* 78(5):837-844.
- Muzzall, P.M. and G.E. Whelan. 1995. *Rhabdochona cotti* (Nematoda: Rhabdochonidae) in mottled sculpins, *Cottus bairdi*, from the Ford River, Michigan. *Journal of Parasitology* 81(3): 488-490.
- Muzzall, P.M. and G.E. Whelan. 2010. Parasites of fishes from the Great Lakes: A Synopsis and review of the literature 1871-2008. Great Lakes Fishery Commission, Ann Arbor, MI Special Report 2010-03.
- Muzzall, P.M. and G.E. Whelan. In review. Parasites of Fish from the Inland Waters of Michigan: A Synopsis and Review of the Literature, 1912 – 2017. Michigan Department of Natural Resources Report, Lansing, Michigan.
- Muzzall, P.M., M.V. Thomas, and G.E. Whelan. 2016. Occurrence of Asian fish tapeworm, *Bothriocephalus acheilognathi* in *Notropis* spp. (Cyprinidae) in Saginaw Bay and Port Sanilac, Lake Huron, and Lake St. Clair, Michigan, U.S.A. *Comparative Parasitology* 83(1): 124-129.

- Phillips, K.A., A. Noyes, L. Shen, and G. Whelan. 2014. Model program for fish health management in the Great Lakes. Great Lakes Fishery Commission Special Publication 14-02.
- Seelbach, P.W. and G.E. Whelan. 1988. Identification and contribution of wild and hatchery steelhead stocks in Lake Michigan tributaries. *Transactions of the American Fisheries Society* 117(5): 444-451.
- Scribner, K.T., P. Howell, M. Thomas, K. Smith, P. Hanchin, M. Wolgamood and G. Whelan. 2015. Spatial genetic structure of suspected remnant and naturalized populations of muskellunge and evidence for introgression between stocked and native strains. *Journal of Great Lakes Research* 41: 1131-1137.
- Scribner, K.T., W. H. Lowe, E. Landguth, G. Luikart, D.M. Infante, G.E. Whelan and C.C. Muhlfeld. 2016. Applications of genetic data to improve management and conservation of river fishes and their habitats. *Fisheries* 41(4): 174-188.
- Throckmorton, E., T. Brenden, A.K. Peters, T.J. Newcomb, G.E. Whelan and M. Faisal. 2017. Potential Reservoirs and Risk Factors for VHSV IVb in an Enzootic System: Budd Lake, Michigan, United States. *Journal of Aquatic Animal Health* 29: 31-42.
- Thuemler, T.F., G.E. Whelan and J.D. Fossum. 1991. Assessment of the effect on aquatic habitat from a hydroelectric peaking project using IFIM. *Instream Flow Chronicle* 8(1): 1-3.
- Trushenski, J.T., H.L. Blankenship, J.D. Bowker, T.A. Flagg, J.A. Hesse, K.M. Leber, D.D. Mackinlay, D.J. Maynard, C.M. Moffitt, V.A. Mudrak, K.T. Scribner, S.F. Stuewe, J.A. Sweka, G.E. Whelan, and C. Young-Dubovsky. 2015. Introduction to a special section: Hatcheries and management of aquatic resources (HaMAR) – Considerations for use of hatcheries and hatchery-origin fish. *North American Journal of Aquaculture* 77:327–342.
- Trushenski, J.T., G.E. Whelan and J.D. Bowker. 2018. Why keep hatcheries? Weighing the economic cost and value of fish production for public use and public trust purpose. *Fisheries* 43(6): 284-293.
- Trushenski, J.T., J.D. Bowker, G.E. Whelan, and J.A. Heindel. 2020. AFS 150th Anniversary Celebration: From Johnny Fish-seed to hatchery-bashing to shaping the shoal of aquaculture stakeholders. *Fisheries* 45(9): In press.
- Wang, L., D. Infante, P. Esselman, A. Cooper, D. Wu, W. Taylor, D. Beard, G. Whelan and A. Ostroff. 2011. A hierarchical spatial framework and database for the National Fish Habitat condition assessment. *Fisheries* 36(9): 436-449.
- Whelan, G.E. 2004. A historical perspective on the philosophy behind the use of propagated fish in fisheries management: Michigan's 130-year experience. *American Fisheries Society Symposium* 44: 307-315.

- Whelan, G.E. 2020. A career of taking a path little taken: the advantages of being opportunistic in fisheries science. In press in W. Taylor, A. Carlson, A. Bennett, and C.P. Ferreri, editors. *Lessons in Leadership: Integrating Courage, Vision, and Innovation for the Future of Sustainable Fisheries*. American Fisheries Society, Bethesda, Maryland.
- Whelan, G.E. 2019. The really big picture of habitat: The conceptual underpinnings and future vision for the National Fish Habitat Partnership – National Fish Habitat Assessment. Pages 33-56 in D.C. Daumwalter, T.W. Birdsong, and G.P. Garrett, editors. *Multispecies and Watershed Approaches to Freshwater Fish Conservation*. American Fisheries Society, Symposium 91, Bethesda, Maryland.
- Whelan, G.E. and J. E. Johnson. 2004. Successes and failures of large-scale ecosystem manipulation using hatchery production: The Upper Great Lakes experience. *American Fisheries Society Symposium* 44: 3-32.
- Whelan, G.E., W.M. Daniel, E. Dean, D. Infante, K. Herreman and A. Cooper. 2018. Who is doing what to trout: Insights from the National Fish Habitat Assessment. In R. Carline, editor. *Wild Trout XII: Science, politics, and wild trout management: who's driving and where are we going*, Bozeman, Montana. Pages 263-272.
- Whelan, G.E., D.M. Day, J.M. Casselman, L. Gephart, C.J. Hall, J. Lichatowich, M. Matylewich, L. Miranda, L. Roulson, P.D. Shirey, N. Mercado-Silva, J. Waldman and D. Winters. 2020. AFS 150th Anniversary Celebration: Tracking fisheries through time: The American Fisheries Society as a historical lens. *Fisheries* 45(8): in press.
- VHSV Expert Panel and Working Group. 2010. Viral hemorrhagic septicemia virus (VHSV IVb) risk factors and association measures derived by an expert panel. *Preventive Veterinary Medicine* 94: 128-139.

Selected 2015-2019 Professional Presentations (Other Previous Titles upon request)

- “America’s Experiment with Voluntary Landscape Scale Aquatic Habitat Protection and Rehabilitation: Some thoughts about the first 10 years of the National Fish Habitat Partnership (NFHP)” – Annual Ontario Chapter – American Fisheries Society Meeting, Orillia, Ontario February 2015 (Invited Keynote Speaker)
- “BIG DATAbases, part 2: Environmental predictor variables – NFHAP Database” – US Forest Service Big Data Workshop, Boise, ID April 2015
- “A State Fisheries Agency Perspective on Big Data” – US Forest Service Big Data Workshop, Boise, ID April 2015
- “Aquaculture expansion in Michigan – Thoughts on Potential Natural Resource Challenges” – Great Lakes Fish Health Committee (Ithaca, NY July 2015) and Great Lakes Fishery Commission Council of Lake Committees (Windsor, Ontario April 2015)

“Painting the National Habitat Mural: The Vision, Potential and Status of the National Fish Habitat Partnership Habitat Assessment” - Annual Native American Fish and Wildlife Conference, Juneau, AK May 2015 (Invited)

“So close but so far: A saga of how data consistency issues affected the NFHP National Habitat Assessment” – Annual American Fisheries Society Meeting, Portland, OR August 2015 (Invited)

“Painting the national habitat picture: The vision and potential of the National Fish Habitat Partnership Habitat Assessment” - - Annual American Fisheries Society Meeting, Portland, OR August 2015 (Invited)

“Science and Data Committee Report – 2015 Accomplishments and 2016 Plans” – National Fish Habitat Board Meeting – October 2015

“Where on earth did that fish disease come from: Graphic fish health tales about the history and future of wild and hatchery fish interactions” – Midwest Fish and Wildlife Conference – Grand Rapids MI January 2016 (Invited Speaker)

“Who’s Next - Some Thoughts on the Likely Next Pathogen and Fish Health Challenges for the Great Lakes Basin” – Annual International Association of Great Lakes Research Meeting – Guelph, Ontario June 2016

“Aquaculture Expansion in Michigan – Thoughts on Potential Natural Resource Challenges” – Great Lakes Fishery Commission Fish Health Committee Meeting – August 2016

“Science and Data Committee Report – 2016 Accomplishments and 2017 Plans” – National Fish Habitat Board Meeting – Panama City, FL October 2016

“National Fish Habitat Partnership Board - National Assessment”- Annual MI DNR Fisheries Division Biologists Conference – December 2016

“2015 National Fish Habitat Assessment” – Ontario Ministry of Natural Resources and Forestry Rivers and Streams Task Team Workshop – Toronto Ontario January 2017

“National Fish Habitat Partnership Board’s “Through a Fish’s Eye” (National Fish Habitat Assessment Report)” – Annual North American Wildlife and Natural Resources Conference – AFWA Committees and American Fisheries Society – Fisheries Administration Section Meetings – Spokane WA March 2017

“Evaluation of Scientific and Management Responses to the Emergence of VHSV in the Great Lakes Basin” – Annual American Fisheries Society – Fish Health Section Meeting – East Lansing, MI April 2017

“The Really Big Picture of Habitat: The Conceptual Underpinnings and Vision for the National Fish Habitat Partnership – National Fish Habitat Assessment.” - Annual American Fisheries Society Meeting – Tampa FL August 2017 (Invited Speaker – Multispecies and Watershed Approaches to Freshwater Fish Conservation Symposium)

“VHS 2017 – Another round on the house” – Great Lakes Fishery Commission – Fish Health Committee Meeting – Guelph Ontario August 2017

“Invasive Pathogens in Michigan’s Baitfish System” - – Great Lakes Fishery Commission – Fish Health Committee Meeting – Guelph Ontario August 2017

“Stuck With Nowhere To Go: The Fisheries Management Implications of Connectivity” – Annual American Fisheries Society Meeting – Tampa FL August 2017 (Invited Speaker – Monsters of Fish Habitat Workshop)

“National Fish Habitat Assessment – The Next Generation” – Annual Association of Fish and Wildlife Agencies Meeting – Snowbird, UT September 2017

“National Fish Health Summary” - Annual Association of Fish and Wildlife Agencies Meeting – Fish and Wildlife Health Committee - Snowbird UT September 2017

“Who is Doing What to Trout: Insights from the National Fish Habitat Assessment” – XIIth Wild Trout Symposium, West Yellowstone MT September 2017

“Science and Data Committee Report – 2017 Accomplishments and 2018 Plans” – National Fish Habitat Board Meeting – Rapid City SD October 2017

“Research Section – DNR’s Inquisitive Community” – MI DNR Fisheries Division – All Division Meeting, Bellaire, MI December 2017

“Stuck With Nowhere To Go: The Fisheries Management Implications of Connectivity” – Grand Valley State University AWRI Seminar Series, Muskegon MI December 2017 (Invited Speaker - Extended Version)

“What Difference Can I Make? Reflections on the Importance of Capturing Agency Information Before it Disappears” – Idaho Chapter of the American Fisheries Society, Plenary Speaker, Idaho Falls, ID February 2018 (Invited Speaker)

“National Fish Habitat Board Science and Data Updates” – North American Wildlife and National Resources Conference – Association of Fish and Wildlife Agencies – Fisheries and Water Resources and Ocean Resources Policy Committees and American Fisheries Society – Fisheries Administration Section Meeting March 2018 (Invited Speaker)

“National Fish Health Summary” - North American Wildlife and National Resources Conference – Association of Fish and Wildlife Agencies – Fish and Wildlife Health Committee March 2018

“Fish Health Management and Status in Michigan”- Midwest Association of Fish and Wildlife Agencies – Fish and Wildlife Health Committee April 2018 (Invited Speaker)

“Do Beaver and Trout Really Get Along? Some Perspectives on a Long-Term Conflict Concerning Landscape Scale Riparian Management” – Midwest Fish and Wildlife Conference, Cleveland, OH January 2019

“What Caused the American Fisheries Society and the U.S. and State Fish Commissions to be Established? An Environmental Profile of America’s Aquatic Resources About 1870” – Annual American Fisheries Society Meeting – Reno, NV October 2019

“Tracking Fisheries through Time: The American Fisheries Society as a Historical Lens” – Annual American Fisheries Society Meeting – Virtual September 2020 with Diana Day as co-author

“A “Fishhead” Path Much Less Taken – Turning Chaos and “Odd” Career Side Trips into Growth and Opportunities” - Annual American Fisheries Society Meeting – Virtual September 2020

Professional Society Service

American Fisheries Society

- Life Member Parent Society since 1985
- Society Member since 1978
- Member Michigan Chapter since 1983
- Certified Fisheries Biologist – 1989, Re-certified 2002 and 2008
 - Recertification in process at this time
- Member of Fisheries Information and Technology, Fish Culture, Fish Health, History, Fisheries Management, and Fisheries Administration Sections

American Fisheries Society

- Michigan Chapter
 - Raffle Chairperson, 1984-1986
 - Secretary/Treasurer, 1987-1990
 - Awards Committee 2017-Present
- North Central Division
 - President-Elect –2011-2012
 - President – 2012-2013
 - Past President – 2013-2014
 - Michigan Midwest Fish and Wildlife Conference Chair– 2002-2005
 - Michigan Midwest Fish and Wildlife Conference Chair – 2012-2016
- Society
 - Journal Article Reviewer for Transactions of the American Fisheries Society, Society, Fisheries, Journal of Aquatic Animal Health, and North American Journal of Fisheries Management
 - Sections
 - President-Elect – Fisheries Administration Section – 2019-present
 - President – History Section – 2009-2012
 - President – Fisheries Information and Technology Section - 1997-98
 - Board of Professional Certification Chair – 2002 - 2008
 - Board of Professional Certification – 2001 - 2008
 - Committees
 - Member of 150th Anniversity Meeting Organizing Committee – 2019-2020
 - Member of Exhibits Subcommittee for 150th Anniversity Meeting – 2019-20
 - Meetings Oversight Committee – 2019-2020
 - Nominating Committee 2017-2018
 - Outstanding Chapter and Sub-Unit Award Committee Chair – 2014-5
 - PFIRM II Committee – 2012 to 2014
 - AFS Management Committee
 - Member 2011-2012
 - Member 2009-2010

- Member 1997-98 (Special Management Committee)
- Member of Distinguished Service Award Committee, 1998-1999
- Member of Environmental Concerns Committee - 1988-1989
- Annual Meeting Program Committee 1987
- Panels
 - Multistates Conservation Grants Advisory Panel – 2020 to Present

Other Professional Activities

Association of Fish and Wildlife Agencies

- Fisheries and Water Resources Committee
 - Committee Member 2004 to present
- Fish and Wildlife Health Committee
 - Committee Member 2004 to present
- Oceans Policy Committee
 - Committee Member 2010 to present
- Research Committee (MAFWA Representative)
 - Committee Member 2018 to present

Great Lakes Fishery Commission

- Member of the Great Lakes Fish Health Committee – 1998 to present
 - Chair – Great Lakes Fish Health Committee – 2005 to 2008
- Member of Sea Lamprey Barrier Task Force – 2014-present

Instream Flow Council

- Steering Committee – 1997-98 – Wrote bylaws and established IFC
- President-Elect – 1998 – 2000
- President – 2000 - 2002
- Past-President – 2002 – 2004
- Regional Director – 2006-2007

International Association for Great Lakes Research

- Member
- Reviewer for Journal of Great Lakes Research papers

Janice Fenske Fellowship Board (Michigan State University – Diversity Fellowship)

- Board member since 2006 and assisted in forming Board
- Fellow Mentor multiple times

National Fish Habitat Partnership Board

- Core Action Plan Development Team – 2005-2006

- Co-Chair – Board Science and Data Committee – 2006-Present
- Board Staff Member 2006 - Present
- Midwest Glacial Lakes Fish Habitat Partnership Steering Committee
 - Member 2009 to Present
 - Vice-Chair 2016 - Present

US Department of Agriculture - North Central Regional Aquaculture Center

- Technical Committee – Research Subcommittee – 2001- 2016

US Fish and Wildlife Service – Upper Midwest Great Lakes Landscape Conservation Committee

- Steering Committee Member 2013 to 2017

Additional Professional Training

American Fisheries Society, Oregon Chapter, Portland, Oregon

Watershed and Stream Restoration Workshop: Shared Responsibilities for Shared Watershed Resources, 1993

American Fisheries Society, North Central Division, Rivers and Streams Committee, Montipelier, Ohio

Fluvial Geomorphology, 1992

American Fisheries Society, Annual Meeting Attendance

1985, 1986, 1987, 1988, 1989, 1990, 1993, 1996, 1997, 1998, 1999, 2000, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2018, 2019, 2020

Association of Fish and Wildlife Agencies Annual Meeting Attendance

2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020

BioSonics, Seattle, Washington

Using Hydroacoustics to Obtain Information About Fish Populations, 1989

Institute for Participatory Management and Planning, Monterey, California

Systematic Development of Informed Consent, 1999

Instream Flow Council, Higgins Lake, Michigan

2D Hydraulic Modeling Workshop, 2000

Michigan Sea Great, Marquette, Michigan

HAACP – Exotic Species, 2002

HAACP – Bait and VHSv, 2007

National Center on Accessibility, Lansing, Michigan

Planning Accessible Outdoor Environments and Interpretative Opportunities, 2001

North American Wildlife and Natural Resources Conference Attendance

2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020

Progress Associates, Big Rapids, Michigan

Team Building, 2000
Accountability Training, 2002
Conflict Management, 2003
Natural Resources Leadership Training Academy, 2003-2004
Team Building Refresher 2014
State of Michigan, Civil Service Commission, Lansing, Michigan
Expert Witness, 1990
State of Michigan, Department of Natural Resources, Lansing, Michigan
Database Management, 1990
Microsoft Excel, 1990
Microsoft Word, 1990
Introductory and Intermediate SPSS, 1992
Using ArcView GIS in the DNR, 2000
Vision and Values, 2003
U.S. Fish and Wildlife Service, Fort Collins, Colorado
Habitat Evaluation Procedures (HEP), 1989
Designing and Conducting Instream Flow Studies Using IFIM (IF200), 1989
Problem Solving Using IFIM (IF201), 1989
Field Techniques for Stream Habitat Analysis (IF305), 1989
Using the Computer Based Physical Habitat Simulation System (IF310), 1990
U.S. Fish and Wildlife Service, Shepherdstown, West Virginia
Fish Genetics (FIS1102), 1999
Warm and Coolwater Fish Culture (FIS 1140), 2003
U.S. Fish and Wildlife Service, Turners Falls, Massachusetts
Fish Passageways and Diversion Structures, 1992

Professional Awards and Honors

American Fisheries Society – Fisheries Management Section
Award of Merit – 2000
American Fisheries Society
Best Oral Paper Award – Propagated Fishes in Resource Management Symposia,
Boise, ID – 2003
Fellows Class of 2019
American Fisheries Society – Michigan Chapter
Justin W. Leonard Award of Excellence – Lifetime Achievement Award – 2018
American Fisheries Society – North Central Division
Distinguished Service Award 2020
Federation of Fly Fishers – Great Lakes Council
Achievement Award - 2000

Michigan Council Trout Unlimited

Order of the Hexagenia - Professional of the Year - 1992

Michigan Department of Natural Resources - Fisheries Division

Chiefs Award for Achievement - 1991

King Salmon Award for Excellence in Fisheries Management - 1993

The Anglers of the AuSable

Kingfisher Award - 1995

United States Department of Agriculture, Forest Service, Ottawa National Forest

Certificate of Appreciation – 1994

Certificate of Appreciation - 1998

United States Department of Interior, U.S. Fish and Wildlife Service

Certificate of Appreciation - 1995

Certificate of Appreciation - 1997