

## Zachary S. Feiner

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### Education

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- 2015** **Ph.D.**, Forestry and Natural Resources, Purdue University, West Lafayette, IN  
**2011** **M.S.**, Zoology, North Carolina State University, Raleigh, NC  
**2007** **B.S. (honors)**, Zoology and Biology, University of Wisconsin-Madison, Madison, WI

### Professional Appointments

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- 2020 – present** **Assistant Scientist**, Center for Limnology, University of Wisconsin-Madison, Madison, WI
- 2019 – 2020** **Honorary Fellow**, Center for Limnology, University of Wisconsin-Madison, Madison, WI
- 2018 – 2020** **Research Scientist**, Office of Applied Science, Wisconsin Department of Natural Resources, Madison WI
- 2016 – 2018** **Postdoctoral Scholar**, Purdue University, West Lafayette, IN  
*Project:* Mechanisms and importance of trophic complexity in aquatic food webs.
- 2011 – 2015** **Ross Fellow**, Purdue University, West Lafayette, IN  
*Dissertation:* Eco-evolutionary dynamics in life history traits of Great Lakes fishes.
- 2008 – 2011** **Graduate Research Assistant**, North Carolina State University, Raleigh, NC  
*Thesis:* Life history and trophic variation along a white perch invasion gradient.
- 2008** **Research Technician**, North Carolina State University, Raleigh, NC  
*Project:* Size and phenology of anadromous fish spawning runs.
- 2007** **Conservation Intern**, Arizona Game and Fish Department, Pinetop, AZ  
*Project:* Invasive species control and management of threatened native species.

### Peer-reviewed Publications (\*advised graduate student, \*\*undergraduate student)

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- 52.** Kerkhove, A.M.\*, A. Trudeau, O.P. Jensen, D.A. Isermann, P.A. Dombrowski, A.M. Latimer, and **Z.S. Feiner**. In press. Understanding the role of recreational angling technology in angler expectations of catch, trip catch, and angler satisfaction. *Fisheries*.
- 51.** Preul-Stimetz, T.N., **Z.S. Feiner**, S.L. Shaw, and G.G. Sass. In press. Evaluating the potential importance of individual identity, maternal traits, and environment as predictors of egg characteristics in walleye *Sander vitreus*. *Fisheries Research*.
- 50.** Maitland, B., H.A. Bootsma, C.R. Bronte, D.B. Bunnell, **Z.S. Feiner**, K.H. Fenske, W.W. Fetzer, C.J. Foley, B.S. Gerig, A. Happel, T.O. Höök, F.W. Keppeler, M.S. Kornis, R.F. Lepak, A.S. McNaught, B.M. Roth, B.A. Turschak, J.C. Hoffman, and O.P. Jensen. In press. Testing food web theory in a large lake: the role of body size in habitat coupling in Lake Michigan. *Ecology*.

49. Barta, M.\*\*\*, J.R. Reed, T.A. Cichosz, A.D. Shultz, M. Luehring, G.G. Sass, and **Z.S. Feiner**. 2024. Lagging spawning and increasing phenological extremes jeopardize walleye (*Sander vitreus*) in north-temperate lakes. *Limnology and Oceanography Letters* 9: 229-236.
48. Frater, P.N., **Z.S. Feiner**, G.J.A. Hansen, D.A. Isermann, A.W. Latzka, and O.P. Jensen. 2024. The incredible HALK: Borrowing data for age assignment. *Fisheries* 49: 117-128.
47. Wszola, L., **Z.S. Feiner**, and J. De Long. 2023. Integrating human behavior into structured population models. *Ecological Modeling* 486: 110538.
46. Sass, G.G., S.T. LaMarche\*\*, and **Z.S. Feiner**. 2023. Do angler catch rates differ between open water and ice anglers in Wisconsin? *Fisheries Research* 263: 106678.
45. Dassow, C., G.G. Sass, S.L. Shaw, **Z.S. Feiner**, C. Niemann, and S. Jones. 2023. Depensation in fish recruitment driven by context-dependent interactions with another predator. *Fisheries Research* 262: 106675.
44. Solokas, M.A.\*, **Z.S. Feiner**, R. Al-Chokachy, P.E. Budy, J.T. DeWeber, J. Sarvala, G.G. Sass, S.A. Tolentino, T.E. Walsworth, and O.P. Jensen. 2023. Shrinking body size and climate warming: Many freshwater salmonids do not follow the rule. *Global Change Biology* 29: 2478-2492. doi: 10.1111/gcb.16626.
43. Krabbenhoft, C.A., S.S. Ludsin, E.A. Marschall, R.R. Budnik, L.Z. Almeida, C.L. Cahill, H.S. Embke, **Z.S. Feiner**, P.J. Schmalz, M.J. Thorstensen, M.J. Weber, M.R. Wuellner, and G.J.A. Hansen. 2023. Synthesizing professional opinion and published science to build a conceptual model of walleye recruitment. *Fisheries* 48: 141-156. doi: 10.1002/fsh.10884.
42. Coulter, D.P., **Z.S. Feiner**, A.A. Coulter, and M.W. Diebel. 2022. Using individual-based models to develop invasive species risk assessments by predicting species habitat suitability. *Journal of Applied Ecology* 59: 3083-3097. doi: 10.1111/1365-2664.14304.
41. Broda, S.\*\*, J.T. Mrnak, **Z.S. Feiner**, S.L. Shaw, and G.G. Sass. 2022. Black crappie influences on walleye natural recruitment in northern Wisconsin lakes. *North American Journal of Fisheries Management* 42: 1202-1214.
40. Doll, J., and **Z.S. Feiner**. 2022. Think like a Bayesian and avoid pitfalls from our frequentist past. *Ideas in Ecology and Evolution* 15: 1-11.
39. Wszola, L.S.\*, **Z.S. Feiner**, C.J. Chizinski, J.B. Poletto, and J.P. DeLong. 2022. Fishing regulations, sexual dimorphism, and the life history of harvest. *Canadian Journal of Fisheries and Aquatic Sciences* 79: 1590-1604. doi: 10.1139/cjfas-2021-0248.
38. **Feiner, Z.S.**, A.D. Shultz, G.G. Sass, A. Trudeau, M.G. Mitro, C.J. Dassow, A.W. Latzka, D.A. Isermann, B.M. Maitland, J.J. Homola, H.S. Embke, and M. Preul. 2022. Resist-Accept-Direct (RAD) considerations for climate change adaptation in fisheries: the Wisconsin experience. *Fisheries Management and Ecology* 29: 346-363.
37. Embke, H., S. Carpenter, D. Isermann, G. Coppola, D. Beard, A. Lynch, G. Sass, **Z.S. Feiner**, M.J. Vander Zanden. 2022. Resisting ecosystem transformation through an intensive whole-lake fish removal experiment. *Fisheries Management and Ecology* 29: 364-377.
36. **Feiner, Z.S.**, Dugan, H.A., N.R. Lottig, G.G. Sass, and G.A. Gerrish. 2022. A perspective on the ecological and evolutionary consequences of phenological variability in north-temperate lakes. *Canadian Journal of Fisheries and Aquatic Sciences* 79: 1590-1604.

35. Stuart, C.\*\*\*, J. Doll, **Z.S. Feiner**, and P. Forsythe. 2022. Estimating population size and survival of adult northern pike in the open waters of lower Green Bay. *Fisheries Management and Ecology* 29: 298-309.
34. Lant, M.J.\*\*\*, D.H. Ogle, **Z.S. Feiner**, and G.G. Sass. 2022. A comparison of fish catch rates among local, non-local, and non-resident anglers of three northern Wisconsin lakes. *Fisheries Research* 250: 106286.
33. Brandt, E.J., **Z.S. Feiner**, A.W. Latzka, and D.A. Isermann. 2022. Similar environmental conditions are associated with Walleye and Yellow Perch recruitment success in Wisconsin lakes. *North American Journal of Fisheries Management* 42: 630-641.
32. Foley, C.J., and **Z.S. Feiner**. 2021. Spatial patterns in dry weight of six Lake Michigan prey fishes. *Journal of Great Lakes Research* 47: 1836-1843.
31. Lynch, A.J., N.A. Sievert, H.S. Embke, A. M. Robertson, B.J.E. Myers, M.S. Allen, **Z.S. Feiner**, F. Hoogakker, S. Knoche, R.M. Krogman, S.R. Midway, C.L. Nieman, C.P. Paukert, K.L. Pope, M.W. Rogers, L.S. Wszola, and T.D. Beard. 2021. The U.S. Inland Creel and Angler Survey Catalog (CreelCat): Development, applications, and opportunities. *Fisheries* 46: 574-583. IP-122018. BAO Approval 2/9/2021.
30. Evans, T.M., **Z.S. Feiner**, L.G. Rudstam, D. Mason, J. Watkins, E.D. Reavie, A.E. Scofield, L.E. Burlakova, A.Y. Karatayev, and W.G. Sprules. 2021. Size spectra analysis of a decade of Laurentian Great Lakes data. *Canadian Journal of Fisheries and Aquatic Sciences* 79: 183-194.
29. Sass, G.G., **Z.S. Feiner**, and S.L. Shaw. 2021. Empirical evidence for depensation in freshwater fisheries. *Fisheries* 46: 266-276.
28. Honsey, A.E., **Z.S. Feiner**, and G.J.A. Hansen. 2020. Drivers of walleye recruitment in Minnesota's large lakes. *Canadian Journal of Fisheries and Aquatic Sciences* 77: 1921-1933.
27. Larson, W.A., D.A. Isermann, and **Z.S. Feiner**. 2020. Incomplete bioinformatic filtering and inadequate age and growth analysis lead to an incorrect inference of harvest-induced changes: a comment on Bowles et al. (2020). *Evolutionary Applications* 14: 278-289.
26. **Feiner, Z.S.**, M.H. Wolter, and A.W. Latzka. 2020. "I will look for you, I will find you, and I will [harvest] you": Persistent hyperstability in a recreational fishery. *Fisheries Research* 230: 105679.
25. Leonhardt, B.S., A. Happel, H. Bootsma, C. Bronte, S. Czesny, **Z.S. Feiner**, M. Kornis, J. Rinchard, B. Turschak, and T.O. Höök. 2020. Diet complexity of Lake Michigan salmonines: 2015 – 2016. *Journal of Great Lakes Research* 46: 1044-1057.
24. **Feiner, Z.S.**, A.W. Latzka, M.H. Wolter, L.D. Eslinger, and G.R. Hatzenbeler. 2020. Assessing the rage against the machines: Do ice anglers' electronics improve catch and harvest rates? *Fisheries* 45: 327-333.
23. **Feiner, Z.S.**, S.L. Shaw, and G.G. Sass. 2019. Influences of female body condition on recruitment success of walleye (*Sander vitreus*) in Wisconsin lakes. *Canadian Journal of Fisheries and Aquatic Sciences* 75: 2131-2144.
22. **Feiner, Z.S.**, C.J. Foley, R.K. Swihart, H. Bootsma, S. Czesny, J. Janssen, J. Rinchard, and T.O. Höök. 2019. Individual and spatial variation are as important as species-level variation to the trophic complexity of a lentic food web. *Ecology of Freshwater Fish* 28: 516-532.
21. **Feiner, Z.S.**, D.P. Coulter, D.P., and T.O. Höök. 2019. A question of scale: Weak evidence for broad regional synchrony in fish recruitment within or among species in inland lakes. *Fisheries Research* 214: 45-55.

20. **Feiner, Z.S.**, M.K. Brey, and C. Burgett\*\*. 2018. Consistently high trophic overlap between invasive white perch and native black crappie in southeastern reservoirs. *North American Journal of Fisheries Management* 39: 135-149.
19. **Feiner, Z.S.**, C.J. Foley, H. Bootsma, S. Czesny, J. Janssen, J. Rinchar, and T.O. Höök. 2018. Species identity matters when interpreting trophic markers in aquatic food webs. *PLoS ONE* 13(10): e0204767.
18. Dunlop, E.S., **Z.S. Feiner**, and T.O. Höök. 2018. Potential for fisheries-induced evolution in the Laurentian Great Lakes. *Journal of Great Lakes Research* 44: 735-744.
17. Foley, C.J., **Z.S. Feiner**, T.D. Malinich, and T.O. Höök. 2018. A meta-analysis of the effects of exposure to microplastics on fish and aquatic invertebrates. *Science of the Total Environment* 631-632: 550-559.
16. **Feiner, Z.S.**, R.K. Swihart, D.P. Coulter, and T.O. Höök. 2018. Fatty acids in yellow perch: variable complexity, identity, and phenotypic correlates. *Canadian Journal of Zoology* 96: 859-868.
15. **Feiner, Z.S.**, T.D. Malinich, and T.O. Höök. 2017. Interacting effects of identity, size, and winter severity determine temporal consistency of offspring phenotype. *Canadian Journal of Fisheries and Aquatic Sciences* 75: 1337-1345.
14. Collingsworth, P.D., D.B. Bunnell, M.W. Murray, Y.-C. Kao, **Z.S. Feiner**, R.M. Claramunt, B.M. Lofgren, T.O. Höök, and S.A. Ludsin. 2017. Climate change as a long-term stressor for the fisheries of the Laurentian Great Lakes of North America. *Reviews in Fish Biology and Fisheries* 27: 363-391.
13. **Feiner, Z.S.**, S.C. Chong, D.G. Fielder, J.A. Hoyle, C. Knight, T.E. Lauer, M.V. Thomas, J.T. Tyson, and T.O. Höök. 2017. Sex-based tradeoffs between growth, mortality, and maturation in Great lakes yellow perch stocks. *Canadian Journal of Fisheries and Aquatic Sciences* 74: 2059-2072.
12. **Feiner, Z.S.**, J.A. DeWoody, J.E. Breck, and T.O. Höök. 2017. Influence of multilocus heterozygosity on size during early life. *Ecology and Evolution* 7: 2142-2154.
11. **Feiner, Z.S.**, D.P. Coulter, T. Krieg\*\*, S.B. Donabauer, and T.O. Höök. 2016. Environmental influences on fish assemblage variation among ecologically similar glacial lakes. *Environmental Biology of Fishes* 99: 829-843.
10. **Feiner, Z.S.**, H.-Y. Wang, D.W. Einhouse, J.R. Jackson, E.S. Rutherford, C. Schelb, C.S. Vandergoot, T.G. Zorn, and T.O. Höök. 2016. Thermal environment and maternal effects shape egg size in a freshwater fish. *Ecosphere* 7(5). doi: 10.1002/ecs2.1304.
9. **Feiner, Z.S.**, D.P. Coulter, S.C. Guffey, and T.O. Höök. 2016. Does overwinter temperature regulate egg quality and maternal condition in yellow perch? *Journal of Fish Biology* 88: 1524-1543.
8. Sullivan, C.\*\*, D.P. Coulter, **Z.S. Feiner**, S. Donabauer, and T.O. Höök. 2015. Influences of gear type and analytical methodology on fish assemblage characterisations in temperate lakes. *Fisheries Management and Ecology* 22: 388-399.
7. Lenaerts, A.W.\*\*\*, A.A. Coulter, **Z.S. Feiner**, and R.R. Goforth. 2015. Egg size variability in an invasive fish, silver carp *Hypophthalmichthys molitrix* (Valenciennes, 1844), and its environmental correlates. *Aquatic Invasions* 10: 449-461.
6. **Feiner, Z.S.**, S.C. Chong, C.T. Knight, T.E. Lauer, M.V. Thomas, J.T. Tyson, and T.O. Höök. 2015. Rapidly shifting maturation schedules following reduced commercial harvest in a freshwater fish. *Evolutionary Applications* 8: 724-737.

5. **Feiner, Z.S.**, D.B. Bunnell, T.O. Höök, C.P. Madenjian, D.M. Warner, and P.D. Collingsworth. 2015. Non-stationary recruitment dynamics of rainbow smelt: the influence of environmental variables and variation in size structure and length-at-maturation. *Journal of Great Lakes Research* 41: 246-258.
4. Andree, S.R.\*\*, **Z.S. Feiner**, J. Bledsoe\*\*, A. Cragun\*\*, and T.O. Höök. 2014. Ontogenetic variability of maternal effects in an iteroparous fish. *Ecology of Freshwater Fish* 24: 384-396.
3. **Feiner, Z.S.**, J.A. Rice, A.J. Bunch, and D.D. Aday. 2013. Trophic niche and diet overlap between invasive white perch and resident white bass in a southeastern reservoir. *Transactions of the American Fisheries Society* 142: 912-919.
2. **Feiner, Z.S.**, J.A. Rice, and D.D. Aday. 2013. Trophic niche of invasive white perch and potential interactions with representative reservoir species. *Transactions of the American Fisheries Society* 142: 628-641.
1. **Feiner, Z.S.**, D.D. Aday, and J.A. Rice. 2012. Phenotypic shifts in white perch life history strategy across stages of invasion. *Biological Invasions* 11: 2315-2329.

### Book Chapters

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- Feiner, Z.S.**, A.W. Latzka, and M.H. Wolter. 2021. What to exploit when you're exploiting? Angler size selectivity responds to regulation in a recreational fishery, *in* K. Pope and L. Powell, eds. *New Paradigms in Harvest Management*. CRC Press.
- Feiner, Z.S.**, and T.O. Höök. 2015. Environmental biology of percid fishes, *in* P. Kestemont, K. Dabrowski, and R.C. Summerfelt, editors. *Biology and Culture of Percid Fishes – Principles and Practices*, pp. 61-100. Springer Netherlands, Dordrecht.

### Manuscripts in Review

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- Embke, H.S., **Z.S. Feiner**, G.J.A. Hansen, D. Isermann, O.P. Jensen, C. Rounds, Q. Smith, and M.J. Vander Zanden. In review. Bright spots for advancing ecological understanding and conservation decision-making. *BioScience*.
- Embke, H.S., **Z.S. Feiner**, G.J.A. Hansen, J.T. Mrnak, M.W. Price, C. Rounds, G.G. Sass, S.L. Shaw, and A. Shultz. In review. Healing ogaa (walleye *Sander vitreus*) waters: lessons and future directions for inland fisheries rehabilitation. *Reviews in Fisheries Science and Aquaculture*.
- Xu, L., **Z.S. Feiner**, P. Frater, G.J.A. Hansen, R. Ladwig, C.P. Paukert, M. Verhoeven, L. Wszola, and O.P. Jensen. In review. Smaller wins, bigger losses: asymmetric impacts of climate change on preferred thermal habitat of lake fish. *Nature Communications*.
- Dembkowski, D.J., A.W. Latzka, **Z.S. Feiner**, and D.A. Isermann. In review. Use of vehicle counters to evaluate potential shifts in angler effort in response to implementation of more restrictive panfish regulations in Wisconsin lakes. *North American Journal of Fisheries Management*.
- Feiner, Z.S.**, J.C. Doll, B. Dickinson, and M. Christie. In review. Hierarchical modeling reveals increasing and more variable age and size at maturation within a decade of commercial fishery closure. *Evolutionary Applications*.
- Koenigbauer, S.T.\*, **Z.S. Feiner**, B. Dickinson, S.L. Shaw, L.Z. Almeida, M. DuFour, A.J. Gatch, C. Schraidt, and T.O. Höök. In review. Egg size scales negatively with system size in a periodic fish species. *Ecology and Evolution*.

### Manuscripts in Preparation

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- Dugan, H.A., **Z.S. Feiner**, M. Winder, H. Sosik, and E.H. Stanley. In prep. Advancing phenology in limnology and oceanography. Intended submission to Limnology and Oceanography Letters.
- Koenigbauer, S.T.\*, **Z.S. Feiner**, D.G. Fielder, T.G. Zorn, M. Faust, S.L. Shaw, G.G. Sass, B.A. Schmidt, and T.O. Höök. In prep. Spawner size influences reproductive phenology of an iteroparous fish. Intended submission to Ecological Applications.
- Wszola, L.S., J. Kasper, **Z.S. Feiner**, P. Frater, G.J.A. Hansen, O. Jensen, L. Xu, and C. Paukert. In prep. Unlikely refuge: Can southern U.S. reservoirs shelter coolwater fish in a warming world?
- Trudeau, A., B. Beardmore, **Z.S. Feiner**, and O.P. Jensen. In prep. Anticipating angler responses to walleye declines in Wisconsin inland lakes.
- Jensen, O.P., R. Bi., C. Solomon, B. Van Poorten, **Z.S. Feiner**, G.G. Sass, C. Nieman, and A. Trudeau. In prep. Catchability trends and proportionality of the catch-per-unit-effort vs. abundance relationship for recreational fisheries. Intended submission to Fish and Fisheries.
- Feiner, Z.S.**, S.L. Shaw, and G.G. Sass. In prep. Understanding adaptability of walleye spawning phenology and recruitment to a changing climate. Intended submission to Canadian Journal of Fisheries and Aquatic Science.
- Leonhardt, B.S., B. Turschak, A. Happel, H. Bootsma, C. Bronte, S. Czesny, **Z.S. Feiner**, M. Kornis, J. Rinchard, and T.O. Höök. In prep. Differential ability of three trophic indicators to describe diets of top predators in a large lake. Intended submission to Food Webs.

### Non-reviewed Reports and Publications

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- Wisconsin's changing climate: Impacts and solutions for a warmer climate. 2021. Wisconsin Initiative on Climate Change Impacts. Nelson Institute for Environmental Studies, University of Wisconsin-Madison and the Wisconsin Department of Natural Resources, Madison, Wisconsin.
- Feiner, Z.S.**, M. Mitro, A.W. Latzka, M. Barta\*\*, H. Embke, J. Homola, D. Isermann, J. Lyons, B. Maitland, G. Sass, S. Shaw, A. Shultz, I. Tsehaye, and M.J. Vander Zanden. 2020. Fisheries Working Group Report. Wisconsin Initiative on Climate Change Impacts. Madison, WI, USA. <https://wicci.wisc.edu/fisheries-working-group/>
- Feiner, Z.S.** 2014. Evolution and ecology in Great Lakes fishes. Purdue FNR Compass, pp. 27-29. West Lafayette, IN, USA. <https://ag.purdue.edu/fnr/Documents/Compass2014.pdf>.
- Brey, M.K., **Z.S. Feiner**, J.D. Godbout, D.D. Aday, and J.A. Rice. 2011. Trophic interactions and reservoir food web dynamics. North Carolina Wildlife Resources Commission, Federal Aid in Sport Fish Restoration, Project F-68-08, Final Report, Raleigh, NC, USA.

### Grants and Fellowships

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| 2024 – 2026 | Wisconsin Sea Grant. Understanding angler behavior and values among urban anglers of the Lake Michigan shoreline. PI: <b>Z. Feiner</b> , Co-PIs: O. Jensen, A. Schultz. (\$256,856).                                 |
| 2022 – 2024 | Midwest Glacial Lakes Partnership. Assessing relationships between fisheries and aquatic vegetation to improve lake habitat management. PI: <b>Z. Feiner</b> , Co-PI: H. Rantala. (\$248,294).                       |
| 2022 – 2027 | USGS Midwest Climate Adaptation Science Center. Walleye fisheries bright spots in a changing climate. PI: H. Embke, Co-PIs: <b>Z. Feiner</b> , G. Hansen, D. Isermann, O. Jensen, M.J. Vander Zanden. (\$1,249,709). |

- 2021 – 2023 USGS Climate Adaptation Science Center. Managing bluegill fisheries as a social-ecological system under a changing climate. PI: **Z. Feiner**, Co-PIs: O. Jensen, D. Isermann. (\$750,000).
- 2021 – 2022 Great Lakes Fishery Commission. Genetic and phenotypic basis for fishery-induced evolution in Lake Michigan yellow perch. PI: M. Christie, Co-PIs: **Z. Feiner**, J. Doll, W. Larson, B. Dickinson. (\$195,000).
- 2018 – 2019 National Research Council, NRC Research Assistantship Program. Using size spectrum modeling to inform ecosystem-based fisheries management. PI: **Z. Feiner**, Co-advisors: L. Rudstam and D. Mason. (\$128,000; declined).
- 2018 Cooperative Institute for Great Lakes Research, CIGLR Postdoctoral Fellowship. Using size spectrum modeling to inform ecosystem-based fisheries management. PI: **Z. Feiner**, Co-PIs: L. Rudstam and D. Mason. (\$70,000).
- 2015 – 2016 Purdue University, Postdoctoral Scholars in Natural Resources. Mechanisms and importance of phenotypic complexity in aquatic food webs. PI: **Z. Feiner**, Co-sponsors: T.O. Höök and R.K. Swihart (\$100,000).
- 2011 – 2014 Purdue University, Ross Fellowship. Student: **Z. Feiner**, Advisor: T.O. Höök. (\$159,000).

### Grants in Review

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- 2024 – 2028 National Science Foundation. Ecosystem responses to increasing unpredictability in lake ice phenology. PI: **Z. Feiner**, Co-PIs: H. Dugan, G. Gerrish, N. Lottig, G. Sass. (\$1,983,235).

### Chaired Sessions and Workshops

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- 2024 Climate change impacts on inland fish and fisheries. Association for the Sciences of Limnology and Oceanography Annual Meeting. Madison, WI, USA.
- 2023 Holistic management of fish and aquatic plants. Virtual Workshop (state and federal agency participants).
- 2023 Holistic management of fish and aquatic plants. Wisconsin Lakes and Rivers Conference, Stevens Point, WI. Workshop.
- 2023 Holistic management of fish and aquatic plants. Virtual Workshop (tribal participants).
- 2023 Resist-Accept-Direct (RAD) options for Wisconsin walleye management. WDNR RAD Walleye Summit, Stevens Point, WI. Workshop.
- 2023 R-Expo: Continuing education in R. Wisconsin Chapter American Fisheries Society Annual Meeting. Stevens Point, WI, USA.
- 2022 Phenological change in aquatic ecosystems. Joint Aquatic Sciences Meeting, Grand Rapids, MI, USA
- 2022 R-Expo: Continuing education in R. Wisconsin Chapter American Fisheries Society Annual Meeting. Virtual Conference.
- 2021 R-Expo: Continuing education in R. Wisconsin Chapter American Fisheries Society Annual Meeting. Virtual Conference.

- 2020 Bayesian inference: Application and interpretation. Annual Meeting of the American Fisheries Society. Virtual Conference.
- 2020 R-Expo: Continuing education in R. Wisconsin Chapter American Fisheries Society Annual Meeting. Eau Claire, WI, USA.
- 2015 Bayesian inference in fisheries and wildlife ecology. Midwest Fish and Wildlife Conference. Indianapolis, IN, USA.
- 2013 Life history traits and reproductive ecology of Great Lakes fishes. Annual Conference for the International Association for Great Lakes Research, West Lafayette, IN, USA.

### Professional Service

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- 2023 – present Co-PI, NSF North-Temperate Lakes Long-Term Ecological Research Project
- 2023 – present Associate Editor, *North American Journal of Fisheries Management*
- 2023 – 2024 Associate Editor, *Phenological Change in Aquatic Ecosystems* special issue in *Limnology and Oceanography Letters*
- 2023 – present Midwest Climate Adaptation Science Center Synthesis Working Group  
• Incorporating Climate Resiliency in the Management of Fish and Wildlife
- 2023 – present Executive Committee, Water @ UW
- 2022 – present Contributor to fishR suite of R packages (FSA, RFishBC, and others)
- 2020 – present Co-Chair, Wisconsin Initiative on Climate Change Impacts Fisheries Working Group
- 2019 – present Association for the Sciences of Limnology and Oceanography
- 2019 – present Wisconsin rep, North Central Division AFS Centrarchid Technical Committee
- 2018 – present Wisconsin Department of Natural Resources Panfish Team
- 2018 – present Wisconsin Department of Natural Resources Lake Michigan Team
- 2018 – present Midwest Glacial Lakes Partnership Science and Data Team
- 2018 – present Wisconsin Chapter AFS
- 2016 – 2023 AFS John E. Skinner Award Committee
- 2014 – present AFS Early Life History Section
- 2011 – 2020 International Association for Great Lakes Research (IAGLR)
- 2011 – 2016 Purdue University AFS Student Subunit  
• Grad Student Advisor, 2012-2014
- 2011 – 2018 Indiana Chapter AFS
- 2008 – present American Fisheries Society (AFS)
- 2008 – 2011 North Carolina State University AFS Student Subunit  
• Co-President, 2009
- 2008 – 2011 North Carolina Chapter AFS

### Peer Review

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| <i>Biology and Ecology of Fishes, Third Edition</i>       | <i>Journal of Experimental Marine Biology and Ecology</i> |
| <i>Canadian Journal of Fisheries and Aquatic Sciences</i> | <i>Journal of Fish Biology</i>                            |
| <i>Ecological Applications</i>                            | <i>Journal of Freshwater Ecology</i>                      |
| <i>Ecology of Freshwater Fish</i>                         | <i>Journal of Great Lakes Research</i>                    |
| <i>Environmental Biology of Fishes</i>                    | <i>Lake and Reservoir Management</i>                      |
| <i>Environmental Pollution</i>                            | <i>Marine and Freshwater Research</i>                     |
| <i>Fish and Fisheries</i>                                 | <i>Marine Ecology Progress Series</i>                     |
| <i>Fisheries</i>  | <i>Molecules</i>  |
| <i>Fisheries Management and Ecology</i>                   | <i>North American Journal of Fisheries Management</i>     |



*Freshwater Biology*  
*Frontiers in Ecology and Evolution*  
*Functional Ecology*  
*Hydrobiologia*  
*Journal of Applied Ichthyology*

*PLoS ONE*  
*Proceedings of the National Academy of Sciences*  
*The Open Fish Science Journal*  
*Transactions of the American Fisheries Society*  
*Zoologia*

### Research Prioritization and Proposal Reviews

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2022 Rannís Icelandic Research Fund Proposal Review  
2022 Minnesota Aquatic Invasive Species Research Center Research Needs Assessment  
2022 USGS Midwest Climate Adaptation Science Center Research Prioritization: “Loss of Winter”  
2022 Graduate Women In Science National Fellowship Proposal Review  
2019 Minnesota Aquatic Invasive Species Research Center Proposal Review

### Invited Seminars and Lectures

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*Climate change impacts on Great Lakes ecosystems*. June 2024. Badger Talks Quick Picks Series.  
<https://youtu.be/KyDIgWkC1o>.

*Frozen Lakes 101: What’s under the ice?* January 2024. Clean Lakes Alliance Frozen Assets Festival, co-presented with Hilary Dugan. <https://www.youtube.com/watch?v=uMO0dYROWjo>.

*Creel World Wisconsin*. January 2024. Mondays at Mead Seminar Series. Friends of the Mead McMillan Wildlife Areas.

*Phenological whiplash and fisheries*. December 2023. Lake Country Clean Waters.

*RAD (Resist-Accept-Direct) considerations for climate change adaptation in fisheries*. March 2023. South Dakota State University, Natural Resource Management Departmental Seminar Series.

*Depensatory recruitment in Wisconsin walleye: mechanisms and management*. January 2023. Wisconsin DNR Office of Applied Science Webinar Series.

*Climate adaptation planning in practice*. July 2022. 2022 Natural Hazards Center Workshop.

*WICCI 2021 Report*. April 2022. WDNR Internal Webinar Series.

*Wisconsin’s State of the Climate: Wisconsin Initiative on Climate Change Impacts*. April 2022. Wisconsin Academy of Sciences, Arts, and Letters Climate and Energy Series.

*Climate effects and adaptation in Wisconsin’s fisheries*. March 2022. Wisconsin DNR Office of Applied Science Seminar Series.

*Phenological whiplash and fisheries*. April 2021. Wisconsin Water Week.

*Phenological whiplash*. July 2020. UW-Madison Center for Limnology, Trout Lake Station Seminar Series.

*Creel World: Wisconsin*. June 2020. UW-Madison Center for Limnology, Trout Lake Station Seminar Series.

*Creel World: Wisconsin*. May 2020. Wisconsin American Fisheries Society Virtual Seminar Series.  
<https://vimeo.com/413806404>.

*Understanding angler behavior in Wisconsin’s panfish fishery*. January 2020. Wisconsin DNR Office of Applied Science Webinar Series.

*Landing a career as an aquatic ecologist.* March 2019. University of Mount Olive Undergraduate Biology Seminar Series.

### **Research Collaborations**

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USGS Great Lakes Science Center, NOAA Great Lakes Environmental Research Laboratory, Wisconsin Department of Natural Resources (DNR), Michigan DNR, Ohio DNR, Indiana DNR, Minnesota DNR, North Carolina Wildlife Resources Commission, New York State Department of Environmental Conservation, Ontario Ministry of Natural Resources, Cornell University, Ball State University, University of Wisconsin-Milwaukee, Illinois Natural History Survey, SUNY-Brockport, Duke Energy, LimnoTech, Midwest Glacial Lakes Partnership, Cooperative Institute for Great Lakes Research, University of Wisconsin Center for Limnology, North Temperate Lakes LTER, Great Lakes Indian Fish and Wildlife Commission, University of Minnesota-Twin Cities

### **Selected Research Presentations** (*Last 5 years, \*advised grad student, \*\*undergraduate student*)

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**Feiner, Z.S.**, S.L. Shaw, and G.G. Sass. June 2024. Hitting a moving target: Critical periods for walleye spawning and recruitment success. American Society of Limnology and Oceanography Annual Meeting, Madison, WI. *Oral presentation.*

**Feiner, Z.S.**, S.L. Shaw, and G.G. Sass. February 2024. Hitting a moving target: Critical periods for walleye spawning and recruitment success. Wisconsin Chapter American Fisheries Society Meeting, Stevens Point, WI. *Oral presentation.*

Trudeau, A.\*, B. Beardmore, **Z.S. Feiner**, P. Frater, and O.P. Jensen. August 2023. Anticipating angler responses to walleye decline in Wisconsin inland lakes. Contributed session: Human dimensions of sport fishing. American Fisheries Society Annual Meeting, Grand Rapids, MI. *Oral presentation.*

Trudeau, A.\*, B. Beardmore, **Z.S. Feiner**, and O.P. Jensen. August 2023. Integrating human behavioral responses into climate change predictions for inland recreational fisheries. Midwest Climate Adaptation Science Center Meeting, Indianapolis, IN. *Poster presentation.*

Stankowski, D.S.\*, D. A. Isermann, D. J. Dembkowski, **Z.S. Feiner**, and O. P. Jensen. February 2023. Bluegill Growth and Size Structure in the Midwestern USA: Predictive Models and Benchmarks for Fisheries Management. Midwest Fish and Wildlife Conference, Overland Park, KS. *Oral presentation.*

Frater, P., **Z.S. Feiner**, G. Hansen, D. Isermann, A. Latzka, and O. Jensen. February 2023. The Incredible HALK: Borrowing data for age assignment. Midwest Fish and Wildlife Conference, Overland Park, KS. *Oral presentation.*

Vasquez, B., D. Dembkowski, O. Jensen, S. Shaw, G. Sass, Q. Smith, H. Embke, M.J. Vander Zanden, **Z.S. Feiner**, J. Mrnak, G. Hansen, and D. Isermann. February 2023. Empirical evaluation of walleye (*Sander vitreus*) thermal-optical habitat in northern Wisconsin lakes. Wisconsin Chapter American Fisheries Society Meeting, Stevens Point, WI. *Oral presentation.*

Stankowski, D. S.\*, D. A. Isermann, D. J. Dembkowski, **Z.S. Feiner**, and O. P. Jensen. February 2023. Bluegill Growth and Size Structure in the Midwestern USA: Predictive Models and Benchmarks for Fisheries Management. Wisconsin Chapter American Fisheries Society Meeting, Stevens Point, WI. *Oral presentation.*

Smith, Q., H. Embke, **Z.S. Feiner**, G. Hansen, D. Isermann, O. Jensen, and M.J. Vander Zanden. February 2023. Walleye Fisheries of the Upper Great Lakes Region: Bright Spots in a Changing Climate. Wisconsin Chapter American Fisheries Society Meeting, Stevens Point, WI. *Poster presentation.*

- Preul-Stimetz, T., S. Shaw, **Z.S. Feiner**, and G. Sass. February 2023. Investigating Relationships Among Walleye (*Sander vitreus*) Egg Quality, Maternal Traits, and Interactions with Environmental Factors. Wisconsin Chapter American Fisheries Society Meeting, Stevens Point, WI. *Poster presentation.*
- Kerkhove, A., A. Trudeau, D.A. Isermann, O.P. Jensen, and **Z.S. Feiner**. February 2023. Impacts of angler technology on panfish angler catch rates and satisfaction across the state of Wisconsin. Wisconsin American Fisheries Society Meeting, Stevens Point, WI. *Oral presentation.*
- Dembkowski, D., **Z.S. Feiner**, and A. Latzka. February 2023. Use of remote car counters to evaluate potential shifts in angler effort in response to implementation of more restrictive panfish regulations. Wisconsin Chapter American Fisheries Society Meeting, Stevens Point, WI. *Oral presentation.*
- Bass, E., L. Feucht, **Z.S. Feiner**, S. Shaw, and J. Mrnak. February 2023. Macrophyte coverage improves largemouth bass abundance and size structure: A RAD application for aquatic plant management in Wisconsin lakes. Wisconsin Chapter American Fisheries Society Meeting, Stevens Point, WI. *Poster presentation.*
- Feiner, Z.S.**, A. Shultz, G. Sass, A. Trudeau, M. Mitro, C. Dassow, A. Latzka, D. Isermann, B. Maitland, J. Homola, H. Embke, and M. Preul. January 2023. Resist-Accept-Direct (RAD) considerations for climate change adaptation: Lessons from Wisconsin fisheries. Wisconsin Wildlife Society Meeting, La Crosse, WI. *Oral presentation.*
- Latzka, A., A. Scott, R. Holsman, R. Olson, K. Broadway, G. Matzke, T. Motl, P. Short, Z. Woiak, J. Hansen, M. Wolter, **Z.S. Feiner**, L. Tate. August 2022. Small bags, bigger panfish: Paired biological and social evaluations of restrictive regulations. American Fisheries Society Meeting, Spokane, WA. *Oral presentation.*
- Kerkhove, A.\*, A. Trudeau, D.A. Isermann, O.P. Jensen, and **Z.S. Feiner**. May 2022. Impacts of angler technology on panfish angler catch rates and satisfaction across the state of Wisconsin. Joint Aquatic Sciences Meeting. Grand Rapids, MI, USA. *Oral presentation.*
- Kerkhove, A.\*, A. Trudeau, D.A. Isermann, O.P. Jensen, and **Z.S. Feiner**. February 2022. Impacts of angler technology on panfish angler catch rates and satisfaction across the state of Wisconsin. Midwest Fish and Wildlife Conference. Des Moines, IA, USA. *Oral presentation.*
- Stankowski, D.S.\*, D.A. Isermann, D.J. Dembkowski, **Z.S. Feiner**, and O.P. Jensen. February 2022. Bluegill growth and size structure in the midwestern USA: Predictive models and benchmarks for fisheries management. Midwest Fish and Wildlife Conference. Des Moines, IA. *Oral presentation.*
- Feiner, Z.S.**, M. Barta\*\*, G.G. Sass, H. Dugan, N. Lottig, and G. Gerrish. February 2022. Implications of increasingly unpredictable phenology for walleye recruitment. Wisconsin American Fisheries Society Annual Meeting. *Virtual Presentation. Winner, Best Professional Paper award.*
- Dassow, C., G.G. Sass, S. Shaw, **Z.S. Feiner**, C. Nieman, and S. Jones. February 2022. Abiotic and biotic influences on walleye (*Sander vitreus*) recruitment depensation in Wisconsin. Wisconsin American Fisheries Society Annual Meeting. *Virtual presentation.*
- Broda, S.\*\*, **Z.S. Feiner**, J.T. Mrnak, S.L. Shaw, and G.G. Sass. February 2022. Black crappie influences on walleye natural recruitment in northern Wisconsin lakes. Wisconsin American Fisheries Society Annual Meeting. *Virtual presentation.*
- Lant, M.J.\*\*, G.G. Sass, **Z.S. Feiner**, and D.H. Ogle. February 2022. Does local knowledge matter? A comparison of fish catch rates among local, non-local, and non-resident anglers of three northern Wisconsin lakes. Wisconsin American Fisheries Society Annual Meeting. *Virtual presentation.*

- Stankowski, D.S.\*, D.A. Isermann, D.J. Dembkowski, **Z.S. Feiner**, and O.P. Jensen. February 2022. Bluegill growth and size structure in the midwestern USA: Predictive models and benchmarks for fisheries management. Wisconsin American Fisheries Society Annual Meeting. *Virtual presentation.*
- Brandt, E., **Z.S. Feiner**, A. Latzka, and D. Isermann. February 2021. Evidence for synchrony between yellow perch and walleye recruitment dynamics and temporal trends in northern Wisconsin lakes. Midwest Fish and Wildlife Conference. *Virtual presentation.*
- Brandt, E., **Z.S. Feiner**, A. Latzka, and D. Isermann. February 2021. Evidence for synchrony between yellow perch and walleye recruitment dynamics and temporal trends in northern Wisconsin lakes. Wisconsin American Fisheries Society Annual Meeting. *Virtual presentation.*
- Lant, M.J.\*\*\*, G.G. Sass, **Z.S. Feiner**, and D.H. Ogle. February 2021. Explaining catch rates among local, non-local, and non-resident anglers of Wisconsin's Northern Highland Fishery Research Area lakes. Wisconsin American Fisheries Society Annual Meeting. *Virtual presentation.*
- Broda, S.\*\*\*, **Z.S. Feiner**, and G.G. Sass. February 2021. Black crappie (*Pomoxis nigromaculatus*) influences on walleye (*Sander vitreus*) natural recruitment in northern Wisconsin lakes. Wisconsin American Fisheries Society Annual Meeting. *Virtual poster.*
- LaMarche, S.T.\*\*\*, **Z.S. Feiner**, and G.G. Sass. February 2021. Species-specific and temporal differences in open water and ice angler catch rates in Wisconsin, 1990-2020. Wisconsin American Fisheries Society Annual Meeting. *Virtual poster.*
- Sievert, N., A. Lynch, H. Embke, A. Robertson, B.J.E. Myers, M. Allen, **Z.S. Feiner**, F. Hoogakker, S. Knoche, S. Midway, C. Nieman, C. Paukert, K.L. Pope, M. Rogers, L. Wszola, T.D. Beard. September 2020. The U.S. Inland Creel and Angler Survey Catalog (CreelCat): Development, applications, and opportunities. Annual Meeting of the American Fisheries Society. *Virtual presentation.*
- Coulter, D.P., **Z.S. Feiner**, A. Coulter, M. Diebel. September 2020. Predicting suitability of Wisconsin rivers to invasive bigheaded carp. Annual Meeting of the American Fisheries Society. *Virtual presentation.*
- Feiner, Z.S.**, G.G. Sass, and S.L. Shaw. September 2020. Using hierarchical Bayesian models to identify depensation in freshwater fisheries. Annual Meeting of the American Fisheries Society. *Virtual presentation.*
- Feiner, Z.S.**, A.W. Latzka, and M.H. Wolter. October 2019. Effects of bag limits on angler harvest and size selectivity in a harvest-oriented recreational fishery. Annual Meeting of the American Fisheries Society. Reno, NV, USA. *Oral presentation.*
- Evans, T.M., L. Rudstam, J. Watkins, D. Mason, and **Z.S. Feiner**. June 2019. Using size spectrum modeling to inform ecosystem management of the Great Lakes. Annual Conference for the International Association for Great Lakes Research. Brockport, NY, USA. *Oral presentation.*
- Feiner, Z.S.**, A.W. Latzka, and M.H. Wolter. February 2019. Trends and stability of angler catch rates and size selectivity for Wisconsin panfish. Wisconsin American Fisheries Society Annual Meeting, Green Bay, WI, USA. *Oral presentation.*
- Evans, T. M., Watkins, J., Mason, D., **Feiner, Z.S.**, Rudstam, L. January 2019. Can size spectrum modeling be used to inform ecosystem management of the Great Lakes? New York State American Fisheries Society Annual Meeting, Poughkeepsie, NY, USA. *Oral presentation.*
- Koenigbauer, S.\*, **Z.S. Feiner**, and T.O. Höök. August 2018. Maternal size and offspring quality in fish: A meta-analysis. Annual Meeting of the American Fisheries Society, Atlantic City, NJ, USA. *Poster presentation.*

## Honors and Awards

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- 2022 Excellence in Research, Wisconsin Department of Natural Resources Office of Applied Science
- 2019 Outstanding Reviewer, Canadian Journal of Fisheries and Aquatic Sciences
- 2015 AFS John E. Skinner Memorial Award (\$800)
- 2014 AFS Early Life History Section Student Travel Award (\$300)
- 2013 IAGLR Norman S. Baldwin Fisheries Research Scholarship (\$6,000)
- 2012 IAGLR Student Travel Award (\$150)
- 2011 Conference of Southern Graduate Schools Master's Thesis Award nominee
- 2010 North Carolina Chapter American Fisheries Society Student Travel Award (\$400)
- 2007 National SMART Grant (\$4,000)
- 2007 Wisconsin Higher Education Grant (\$1,390)
- 2006 University of Wisconsin-Madison Dean's List
- 2003 William F. Vilas Merit Scholarship (\$400)

## Teaching Experience

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### South Dakota State University

Fall 2023 *Holistic management of fish and aquatic plants.* Guest Lecture, NRM 492/592 – Wetland Ecology/Management.

### University of Wisconsin Stevens Point

Fall 2020-2022 *Creel World: Wisconsin.* Guest Lecture, WATR 483 – Fisheries Research.

### Purdue University

Fall 2012-2015 Fisheries Science and Management (FNR 454)  
Teaching assistant 2012-2014; Sole instructor 2015.  
3 credits, 15-20 students, lecture and lab

June 2012, 2014 Purdue Forestry and Natural Resources Summer Camp  
Teaching assistant 2012, Lab Instructor 2014

## Mentoring

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### Advised graduate students

Lonnie Parry (UW-Madison Freshwater and Marine Sciences, MS)  
Amanda Kerkhove (UW-Madison Freshwater and Marine Sciences, MS, 2023)

### Graduate student committees

Brenden Elwer (South Dakota State University Natural Resource Management, Coulter, MS)  
Anne Weerda (UW-Madison Integrative Biology, Ehrlich, PhD)  
Jeremy Abels (UW-Madison Integrative Biology, Weber, PhD)  
Dakota Stankowski (UW-Stevens Point, Fisheries and Water Resources, Isermann, MS)  
Joseph Mrnak (UW-Madison Freshwater and Marine Sciences, Vander Zanden, PhD 2024)  
Mary Solokas (UW-Madison Freshwater and Marine Sciences, Jensen, MS 2021)  
Scott Koenigbauer (Purdue Forestry and Natural Resources, Höök, MS 2020)

### Postdoctoral researchers

Bobby Davis (UW-Madison, 2024-present)  
Paul Frater (UW-Madison, 2021-2024)  
Ashley Trudeau (UW-Madison, 2023-2024)  
Ellen Albright (UW-Madison, 2023-2024)  
Thomas Evans (Cornell, 2018-2020)

### **Undergraduates supervised (graduation year)**

Elizabeth Moe (UW-Madison, Center for Limnology Chase-Noland Fellow, 2024)  
Martha Barta (UW-Madison, 2023)  
Tyler Krieg (Purdue, 2016)  
Sara Andree (Purdue, 2014)  
Chris Sullivan (Purdue, 2013)  
Aaron Cragun (Purdue, 2013)  
Jacob Bledsoe (Purdue, 2012)

### **Press Coverage of Research**

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- Pierce, C.P. October 2022. We are up climate change creek, and look at all these fish! Esquire Politics Blog. <https://www.esquire.com/news-politics/politics/a41821735/carp-invasive-species/>.
- Hubbuck, C. October 2022. Carp invasion: Study highlights climate threat to key Wisconsin Rivers. Wisconsin State Journal. [https://madison.com/news/local/environment/carp-invasion-study-highlights-climate-threat-to-key-wisconsin-rivers/article\\_b1752537-ae33-54bc-9008-be2a17f6d439.html](https://madison.com/news/local/environment/carp-invasion-study-highlights-climate-threat-to-key-wisconsin-rivers/article_b1752537-ae33-54bc-9008-be2a17f6d439.html).
- Rude, L., & D. Fulton. August 2022. For the record: Examining the health and future of Wisconsin's waterways. WISC Channel 3000 News. [https://www.channel3000.com/news/environment/for-the-record-examining-the-health-and-future-of-wisconsin-s-waterways/article\\_2fcbf5bc-e10e-5afc-9024-51161c79ad8e.html](https://www.channel3000.com/news/environment/for-the-record-examining-the-health-and-future-of-wisconsin-s-waterways/article_2fcbf5bc-e10e-5afc-9024-51161c79ad8e.html).
- Nsubuga, A. June 2022. Fisheries: Where the walleye are. Perpetual Notion Machine, WORT Community Radio. <https://www.wortfm.org/fisheries-where-the-walleye-are/>
- Burakoff, M. June 2022. Some Wisconsin lakes may lose their walleye, studies suggest. How can fisheries adapt? Spectrum News 1. <https://spectrumnews1.com/wi/milwaukee/news/2022/05/26/some-wisconsin-lakes-may-lose-their-walleye--studies-suggest--how-can-fisheries-adapt->
- Keller, B. May 2022. Wisconsin walleye threatened by warming waters. WKOW News. [https://www.wkow.com/community/wisconsin-walleye-threatened-by-warming-waters/article\\_d989a812-d163-11ec-aab1-572081c31976.html](https://www.wkow.com/community/wisconsin-walleye-threatened-by-warming-waters/article_d989a812-d163-11ec-aab1-572081c31976.html)
- Shultz, A. Summer 2022. Forecasting the future of fishing in Wisconsin. Mazina'igan: A Chronicle of the Lake Superior Ojibwe. <https://data.glifwc.org/mazinaigan/>
- Wegehaupt, N. May 2022. Report shows declining walleye population in Wisconsin. WORT Community Radio. <https://www.wortfm.org/report-shows-declining-walleye-population-in-wisconsin/>
- Hubbuck, C. May 2022. Where have all the walleye gone? Before long, anglers may have to make do with bluegills. Wisconsin State Journal. [https://madison.com/news/local/environment/where-have-all-the-walleye-gone-before-long-anglers-may-have-to-make-do-with/article\\_be246b1f-4981-5c19-acf8-6609f59b64df.html](https://madison.com/news/local/environment/where-have-all-the-walleye-gone-before-long-anglers-may-have-to-make-do-with/article_be246b1f-4981-5c19-acf8-6609f59b64df.html)
- Kaeding, D. May 2022. Anglers and tribal fisheries may need to find a new catch as climate change threatens walleye. Wisconsin Public Radio. <https://www.wpr.org/anglers-and-tribal-fishers-may-need-find-new-catch-climate-change-threatens-walleye>
- Briel, S., Feiner, Z.S., Latzka, A., and Wolter, M. August 2018. Panfish Management in Wisconsin. Wild Wisconsin – Off the Record Podcast. <https://www.youtube.com/watch?v=mqXIEtDyzto&feature=youtu.be>.

- Williams, R. May 2018. Microplastics can harm creatures at the bottom of the food web. The Environment Report. Michigan Public Radio. <http://michiganradio.org/post/microplastics-can-harm-creatures-bottom-food-web>
- Kelly, D. August 2015. After commercial fishing ban, Lake Michigan yellow perch respond quickly. FishSens Magazine. <http://magazine.fishsens.com/after-commercial-fishing-ban-lake-michigan-yellow-perch-respond-quickly.htm>
- Matheny, K. April 2015. Smeltdown: Small fish continues Great Lakes vanishing act. Detroit Free Press. <http://www.freep.com/story/news/local/michigan/2015/04/04/great-lakes-smelt-decline-lake-michigan-invasive/25292463/>
- Kelly, D. March 2015. The Great Lakes rainbow smelt decline is complicated, models show. FishSens Magazine. <http://magazine.fishsens.com/the-great-lakes-rainbow-smelt-decline-is-complicated-models-show.htm>