10 September 2025

Application for Sabbatical Leave
Jonathan P. Doubek, Ph.D.
School of Natural Resources and Center for Freshwater Research and Education

Title
Collaborating locally, regionally, and globally to enhance our understanding of changing lake conditions under anthropogenic stressors

Project Abstract

My sabbatical proposal has three sections. Section 1 is to better understand factors that affect lake whitefish abundance in Lakes Michigan, Huron, and Superior. This work will leverage a long-term collaboration with Jason Smith from Bay Mills Indian Community. Section 2 is to examine changes in water quality across 1000's of inland lakes in Michigan, working with long-term and spatial datasets with Jo Latimore and Erick Elgin from Michigan State University. Section 3 is to study long-term changes in plankton populations in lakes around the world. This last section is in collaboration with Jason Stockwell from the University of Vermont and Orlane Anneville at the University of Savoie-Mont Blanc, France using data from over 300 lakes through the Global Lake Ecological Observatory Network. Work will advance our understanding of changing lake conditions locally, regionally, and globally, and provide high-impact educational and research experiences for LSSU undergraduate and graduate students.

Section 1: Drivers of lake whitefish abundance in Lakes Michigan, Huron, and Superior

Introduction

Lake whitefish (*Coregonus clupeaformis*) support some of the most commercially, recreationally, and culturally important fisheries in the Great Lakes (Smith 1968). However, lake whitefish abundance and harvest have declined in several regions since the late 1990s (Baldwin et al. 2009; GLFT & GLFC 2018), some of which is attributed to the invasion of zebra (*Dreissena polymorpha*) and quagga (*Dreissena bugensis*) mussels. Zooplankton (animal plankton) are a critical food source for larval and juvenile (age-0) lake whitefish, but increased consumption of phytoplankton by invasive mussels has indirectly reduced zooplankton density (Gobin et al. 2015). Therefore, reduced food for age-0 lake whitefish may reduce the probability that these fish survive into adult stages.

Agencies are just beginning to better understand relations between zooplankton, other environmental variables, and age-0 lake whitefish abundance, and more work is needed to

understand if a bottleneck occurs at this early life stage, reducing the number of larval fish surviving to adult stages. Future work involves linking together long-term datasets, and conducting additional sampling, to better understand these complex relations, and how age-0 lake whitefish abundance changes spatially and temporally across the Great Lakes.

Background

Jason Smith with Bay Mills Indian Community (see letter of support) and I have worked on several projects involving several other agencies so far since my start here at LSSU on this topic of lake whitefish and food webs in the Great Lakes. This work has supported research for at least ten LSSU students and several CFRE research technicians. Jason and I currently have a project funded through the Great Lakes Fishery Trust (GLFT), which is in its third and final year, where twelve agencies (six tribal, two state, two federal, and two academic institutions) sampled over 50 sites in 2023 and 2024 for many environmental variables including zooplankton and age-0 lake whitefish. Jason Smith, Jason Stockwell (see letter of support for section 3 of my application), Nicole Watson with the U.S. Geological Survey, and I also have another grant in review to the Great Lakes Fishery Commission (GLFC) to link zooplankton abundance, water temperature, and ice data with year-class strength of lake whitefish and cisco in Lake Superior using long-term datasets. We will know soon if that project is funded, and if so, we start work on that during my sabbatical too.

Through this and other work, former LSSU students Samuel Johnston (Johnston et al. 2023) and Simon Freeman (Freeman et al. In Press; this manuscript was just accepted on 9/12/25, which is the 7th published paper this year I am an author on) published their senior research thesis, and several other current and former LSSU students are working to publish work from our collaborations (e.g., Gwendolyn Phillips and Elliana Prow et al. In Prep). Future work will build off these projects to enhance our understanding of factors affecting lake whitefish abundance in the Great Lakes, providing further educational and research experience for LSSU undergraduate and graduate (through the new 4+1 M.S. program in Fisheries and Wildlife Management) students.

Specifically, the following avenues of work are:

A: seasonal zooplankton and fish relations) Start a new project to sample zooplankton and age-0 lake whitefish seasonally at several sites locally in Lake Superior to better understand the seasonality between larval fish and their food resources, sampled at higher frequencies than

performed previously. This work will be in collaboration also with Simon Freeman at Bay Mills Indian Community who has performed some of this sampling already earlier this year. I will help to oversee the sample processing, data analysis, writing, and help with future sampling events.

B: otoliths) Use archived, existing age-0 lake whitefish samples to age them from otoliths. Otoliths are a structure in fish which age can be determined from, a similar idea to ageing trees from tree rings. This outcome would be a new skill I learn that would involve LSSU students and be taught in courses at LSSU to enhance the learning experience for students such as Ichthyology (NRES 310), other fish classes, and a potential special topics course for graduate students in Fisheries and Wildlife Management. This work would also shed light into when and where fish hatch synchronously (all at once) or asynchronously (multiple times over a season) in different regions of the lakes, important in detecting ideal spawning habitats for adult lake whitefish and suitable nursery habitat for age-0 fish.

C: current projects) Continue to write manuscripts and submit products to peer-reviewed journals from existing projects such as our GLFT and GLFC work.

Outcomes

- One paper submitted to a peer-reviewed journal from our Great Lakes Fishery Trust active grant (part C).
- One manuscript submitted to a peer-reviewed journal from new research developments such as seasonal zooplankton and fish relations or through fish ageing (A and/or B).
- Learn how to age age-0 lake whitefish through otolith analysis (B).
- Submit a proposal to teach a special topics graduate level course for the new M.S. program in Fisheries and Wildlife Management at LSSU on global change effects on ecosystems. At least one class/lab would be to train students on how to age larval fish from otoliths, and discuss implications of changing ecological conditions on larval fish ecology (B).
- Attend one conference such as the Michigan chapter of the American Fisheries Society to present on new research (A or B).
- Include undergraduate and graduate students at LSSU on the research projects through the research thesis courses, and via research positions (A-C).
- Work at the Bay Mills Indian Community Biological Services office in Brimley, Michigan for at least 2 weeks (A-C), increasing connections between LSSU and BMIC.
- Submit one grant proposal with Jason Smith and Simon Freeman on new research that supports LSSU undergraduate and graduate students (B).

Timeline

Project	Fall 2026	Spring 2027	Summer 2027
A: seasonal zooplankton and fish relations	Start planning for sampling Process samples from 2025	Sample Process samples from 2025	Counting/lab processing of samples from 2026 Analyze data/write manuscript
B: otoliths	Training on the protocol Develop a special topics course and submit to the School of Natural Resources for approval Write a proposal to fund future work	Age fish and work on research Write a proposal to fund future work	Age fish and work on research Write manuscript and present on findings Write a proposal to fund future work
C: current projects	Analyze data and write manuscript(s)	Analyze data and write manuscript(s)	Analyze data and write manuscript(s)

Section 2: Changes to lake water quality across Michigan inland lakes using long-term and spatial datasets

Introduction

The MiCorps' Cooperative Lakes Monitoring Program (CLMP; https://www.micorps.net/lake-monitoring/) is a long-term Michigan lake monitoring program that links together scientific data, citizen science, and community outreach. Through the CLMP, data for water quality variables have been collected for 20-50+ years across 1000's of inland lakes including Secchi disk depth (water transparency), total phosphorus, chlorophyll *a* concentration (algal biomass), water column profiles of water temperature and dissolved oxygen concentration, and other data. In addition to long-term data, many lakes have data collected in any one year, providing important insight into spatial, as well as temporal, research questions on how conditions in Michigan inland lakes may be changing.

Inland lakes in Michigan span a gradient of lake morphometric characteristics such as surface area, depth, and mixing regimen, and water quality characteristics such as trophic status and whether invasive species such as the zebra mussel are present. Therefore, this dataset can address important questions regarding how the water quality of Michigan lakes changes over space and time based on anthropogenic stressors. However, few studies have been published

using these data (e.g., Bruhn and Soranno 2005; Williams et al. 2017; Poisson et al. 2019); more analysis of these data are needed to better understand water quality changes in Michigan inland lakes and especially bridge these data to local stakeholders (i.e., lake associations) interested in water quality of specific lakes.

The goals for this scope of work and research are to 1) quantify trends in lake conditions over time and space in Michigan, 2) develop products that advance our understanding of Michigan inland lakes through peer-reviewed publications, reports, and community outreach products, 3) write one grant, and 4) work with at least one lake stakeholder group to support research on inland Michigan lakes. We plan to address questions that are important to the scientific community as well as to stakeholder inquiries on specific lakes.

Background

Jo Latimore and Erick Elgin with Michigan State University's Extension, who help lead CLMP initiatives, and I have been in discussion about this work and the planned outcomes (see their joint letter of support). We will work together to use this dataset to answer important scientific questions about trends in water quality in Michigan inland lakes over space and time. Specifically, we will analyze CLMP data to quantify how water quality variables such as water transparency, water temperature, and dissolved oxygen concentration are changing. We will link CLMP data with other datasets such as invasive species datasets to examine what inland Michigan lakes have invasive mussels and how water quality variables in those lakes may change differently from lakes without these invaders. Further, we will create data visualizations products for individual lake stakeholders interested in certain lakes and meet with those stakeholders about water issues. We will conduct research of interest both for peer-reviewed publications, but also for those interested in individual lakes.

I am a limnologist, and through my B.S., M.S., Ph.D., and postdoc, I have worked on inland lakes all over the U.S., and world. Since starting at LSSU, much of my funded research has been on the Great Lakes on many important questions and topics such as lake whitefish ecology. However, I have not performed as much inland lake research on Michigan lakes recently, which is a gap in Michigan research in general, and this sabbatical would be critical time for me to develop research on MI inland lakes, further connecting these research avenues at LSSU with other universities and agencies across the state. I am enthusiastic about collaborating with Jo and Erick and fostering collaborations with researchers and stakeholders to increase inland lake research in Michigan and include LSSU students in the work.

Outcomes

- Write at least one manuscript to be submitted to a peer-reviewed journal analyzing changes in water quality in Michigan inland lakes spatially and temporally.
- Create open-access data products and data visualization products/tools (i.e., using the Shiny App in R) for users interested in the data and visuals.
- Attend virtual and in-person meetings with Jo and Erick to work on products.
- Attend and present at one webinar with stakeholders to discuss the work.
- Attend and present at a conference such as the annual CLMP conference or the Inland Lakes Convention on the work.
- Use statistical analysis in the above products for courses at LSSU to teach students on how to analyze complex spatial and temporal data, and how to visualize those data in R. These multivariate and other data analysis tools using this CLMP dataset would be applied in NRES 350 (Ecological Data Analysis and Interpretation, which is a new course that I taught in Spring 2025) and NRES 550 (Advanced Ecological Data Analysis), training undergraduate and graduate students on complex spatial and temporal approaches.
- Include undergraduate and graduate students at LSSU on the research projects through the research thesis courses, and via research positions.
- Apply for one grant with Jo and Erick to support inland Michigan lake work, supporting undergraduate and graduate students at LSSU in research.
- Work with at least one lake association/group/stakeholder on what they are interested to study in a particular lake or area, and receive funding with them to help carry out that work.

Timeline

Fall 2026	Spring 2027	Summer 2027
Analyze CLMP data Meet and interact with lake stakeholders Meetings with Jo and Erick	Analyze CLMP data and write manuscript Attend and present at a webinar Create statistics lectures and lab modules for use in LSSU courses Meetings with Jo and Erick	Write and submit a manuscript Create open-access data products Apply for a grant Attend a MI inland lakes conference

Section 3: Quantifying changes in phytoplankton and zooplankton populations in lakes around the world

Introduction

Anthropogenic pressures such as climate change (i.e., O'Reilly et al. 2015), eutrophication (i.e., Doubek et al. 2015), and invasive species (i.e., Kraemer et al. 2023) are altering lake conditions (Stockwell et al. 2020; Anneville et al. 2025) in many areas across the

planet. Fortunately, we live in an era where more and more datasets are becoming available spatially and temporally, providing important tools to ask salient scientific questions on multiple scales to better understand and quantify how these anthropogenic stressors alter lake ecosystems. Limnologists within the Global Lake Ecological Observatory Network (https://gleon.org/; GLEON) have been conducting research on many temporal and spatial scales for decades to better understand lakes as sentinels in changing conditions (e.g., Dugan et al. 2017; Nava et al. 2023), which I have been active in since 2015 (i.e., Doubek et al. 2019, 2021) through several leadership and research roles. This sabbatical research direction will leverage large-scale, global datasets developed within GLEON, and my existing international collaborations, to examine how multiple environmental factors affect lakes around the world.

One proposed avenue of this work is to examine how climate change is affecting algal communities (the base of food webs) in lakes, building off previous work within the GLEON working group called the "Global Evaluation of the Impacts of Storms on freshwater Habitat and structure of phytoplankton Assemblages" (GEISHA; https://www.fondationbiodiversite.fr/en/the-frb-in-action/programs-and-projects/le-cesab/geisha/). GEISHA has access to long-term data from more than 50 lakes around the world. Through this network, a review paper was written that I was a co-author on (Stockwell et al. 2020) that summarized how changing climatic conditions could affect phytoplankton communities using the published literature, and several follow up papers are currently underway that I would help with. One on-going GEISHA project is developing an open-source R package called algaeClassify (https://cran.r-project.org/web/packages/algaeClassify/index.html), which helps classify algal species into morphological and functional groups for analysis from lake data. Another project is testing relations between cyanobacterial (can cause water quality issues), or blue-green algae, abundance in lakes in relation to sunspot versus human activity. A third project is analyzing plankton richness questions across lake types, and a final project is classifying what algae dominate lakes across different regions/biomes of the world and how that has changed over time. I would help push at least one or more of these on-going projects, which have been in progress since about 2018, to submission to a peer-reviewed journal during sabbatical.

The other proposed work under this section is to work with large-scale zooplankton datasets. Zooplankton occupy the middle of the food chain in freshwater lakes, a critical link to water quality and fisheries issues. This project focuses on the keystone zooplankton taxa, *Daphnia*, and aims to identify lakes in which *Daphnia* are decreasing over time in lakes around

the world. This project will utilize the Zooplankton as Indicators Group (ZIG) dataset within GLEON (https://sfigary.github.io/website/ZIG.html), which has plankton data for more than 300 lakes. This analysis aims to determine what lake types and conditions result in *Daphnia* declines in lakes using analyses such as in Anneville et al. (2025). We also want to establish links between specific lake characteristics and the observed trends, in order to identify possible relations between the declining trends and key environmental factors such as changes in water temperature, trophic status, and invasive species. For example, in areas where lakes may have become more oligotrophic (nutrient poor), or have had adverse effects of invasive species, *Daphnia* abundance may decrease (Sarpe et al. 2014; Barbiero et al. 2019), with resulting consequences for lake food webs and water quality. Where information is available on fish abundance and pollutants such as PFAS-PFOS, we will also analyze these aspects. We expect the results will enhance our understanding and knowledge on the impacts of trophic status on higher trophic levels, and provide information for lake managers, such as in Lake Geneva (Switzerland/France) and in the Great Lakes.

Background

Work with this project will be with Jason Stockwell at the University of Vermont and Orlane Anneville at the University of Savoie-Mont Blanc in France (see letters of support). I was a postdoctoral research associate with Jason and Orlane where I worked on various GLEON and GEISHA projects (i.e., Stockwell et al. 2020; Doubek et al. 2021). Since my postdoc position, numerous GEISHA projects (algaeClassify led by V.P. Patil, U.S. Geological Survey, Alaska; sunspots and cyanobacteria led by G. Dur, Shizuoka University, Japan; and phytoplankton richness in lakes led by A.M. Lewandowska, University of Helsinki, Finland) have been in progress. The projects are progressing, but are not yet submitted to a peer-reviewed journal. I will be able to use my knowledge of the projects and GEISHA program from my previous work to be able to help push at least one, if not more, of these products to submission for publication.

I worked with the ZIG data in GLEON too in the past, and so have institutional knowledge of this dataset, and how to analyze the data. I will be able to work with this dataset and scientists from around the world to analyze important questions surrounding factors resulting in *Daphnia* decline in lakes.

Through these projects, I plan to travel to visit Jason in Vermont and Orlane in France for some time to help get these projects to completion. I plan to have undergraduate and graduate LSSU students involved with the work, connecting LSSU to global research. Skills obtained

from the work, such as advanced statistical analysis, will be used in courses at LSSU, and will benefit LSSU students in thesis work. This work would continue to foster my international collaborations, which would be beneficial to LSSU through teaching and research.

Outcomes

- Help submit one GEISHA phytoplankton manuscript to a peer-reviewed journal.
- Analyze data, write, and submit a manuscript to a peer-reviewed journal using GLEON ZIG data on global trends and declines in *Daphnia* across lakes.
- Write a grant to travel to the University of Savoie-Mont Blanc in France to work with Orlane in-person for about two weeks. There is a grant through her university I will apply for.
- Travel to work with Jason in Vermont for about two weeks. Search for funding opportunities to support my travel.
- Attend and present at a conference such as GLEON or the International Society of Limnology (SIL).
- Host a workshop on data analysis used in the global *Daphnia* trends paper or GEISHA products at LSSU and at a GLEON or SIL conference.
- Include statistics used and learned in NRES 350 and NRES 550 courses at LSSU.
- Include undergraduate and graduate students in the research.

Timeline

Fall 2026	Spring 2027	Summer 2027
Analyze GEISHA and ZIG data Apply for a travel grant to visit the University of Savoie-Mont Blanc. The application is due in September 2026	Analyze GEISHA and ZIG data and write manuscripts If a travel grant is awarded, visit France for ~2 weeks to work on research Travel to the University of Vermont to work on research for ~2 weeks	Analyze GEISHA and ZIG data and write manuscripts Submit manuscripts to peer-reviewed journals Attend SIL or GLEON conference (typically these are in the summer or fall) Host a statistics workshop

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Bay Mills Biological Services Department

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Boozhoo Sabbatical Committee,

I enthusiastically support Dr. Jon Doubek's proposal for sabbatical beginning in 2026. From Jon's first days at LSSU he has been a valuable partner and ally for all five CORA Tribes. All of these partnerships promoted Tribal sovereignty, protected retained treaty rights, increased our understanding of the challenges Giigoonh (fish) face in our highly altered ecosystems – all while doing an amazing job of seamlessly incorporating student learning into every project. Our projects have centered on Atikameg (Lake Whitefish), a fish that is central to the culture and being of the Anishinaabek in the Great Lakes region.

While these projects have answered many questions, resulted in numerous publications and extended student's learning, every answer has brought on numerous new questions. The Bay Mills Indian Community is very excited at the opportunity to partner with Dr. Doubek during his sabbatical and answer some of these important questions. We have at least three projects, with field work completed, that would benefit Bay Mills, the Great Lakes and LSSU students. First, Simon Freeman, LSSU grad and mentee of Jon's, has sampled Whitefish Bay zooplankton weekly throughout 2025. This project is the temporal compliment to Sam Johnston's spatial zooplankton project from ~2020. Just as Dr. Doubek was critical in helping Johnston's research, he would be instrumental as a partner in the Freeman led study. Second is a project that I have wanted to complete since 2017 involving synchrony of Atikameg hatching within and across waterbodies. Dr. Doubek could play a key role in completing this study during his sabbatical. Finally, this time would allow Jon to devote significant effort to analysis and writing for his Great Lakes Fishery Trust funded project. This project has ten partners, greater than 50 samples sites and two years of data. Each of these is invaluable to the CORA Tribes and each of these projects has myriad potential 'spinoff' projects that could, and should, involve and help educate LSSU students.

The fish and the people of Bahwetting would benefit greatly from Dr. Doubek's sabbatical work. We are highly supportive!!!

Baamampii Kwaabamin,

Jason Smith
Great Lakes Fisheries Assessment Biologist
Biological Services Bay Mills Indian Community

MICHIGAN STATE
UNIVERSITY

August 29, 2025

Dear Sabbatical Committee,

We are writing to offer our enthusiastic support for granting sabbatical to **Dr. Jonathan Doubek** in 2026-27. We are aquatic ecologists and public outreach specialists with Michigan State University Extension's Center for Lakes and Streams and serve as Director (Latimore) and Lake Programs Manager (Elgin) for the Michigan Clean Water Corps (MiCorps) volunteer lake and stream monitoring program.

A major component of MiCorps is the Cooperative Lakes Monitoring Program (CLMP), the nation's second-oldest volunteer lake monitoring program. For 51 years, the CLMP has provided training and support for volunteers to collect rigorous data on the health of inland lakes across Michigan. Through their efforts, we've amassed a rich data set that includes water quality and ecological data on thousands of Michigan lakes. This data set represents an outstanding, yet underutilized, resource for answering scientific questions about changes in our lakes through time.

We have had several occasions to discuss collaboration opportunities with Dr. Doubek and are very excited about the prospect of his proposed sabbatical project. The wealth of data available in the CLMP database will enable Dr. Doubek to lead an in-depth analysis of changes to Michigan's lakes over time and space. While the possibilities for inquiry are nearly unlimited, we are particularly interested in Dr. Doubek's examination of water temperature and dissolved oxygen over time, as we anticipate that changes in climate and land use may be impacting fish habitat and water quality in ways that would not be detectable without decades of detailed data. We are also interested in changes in water clarity over time that may be linked to nutrient enrichment, zebra mussel invasion, and other stressors. Undoubtedly other questions – and discovery – will follow as we dive into the data, and Dr. Doubek shares our commitment to sharing these findings with our volunteers, lake communities, and natural resource managers.

Dr. Doubek's proposed work will enhance understanding of Michigan lakes, underscore the value of long-term monitoring efforts, and inform lake conservation and management led by natural resource agencies and individual lake communities across Michigan. We look forward to a long-term collaborative relationship with Dr. Doubek and eagerly anticipate the outcomes of his research.

Sincerely,

College of
Agriculture and
Natural Resources

DEPARTMENT OF
FISHERIES AND
WILDLIFE

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The University of Vermont
Rubenstein School of Environment and Natural Resources

September 14, 2025

To: Sabbatical Committee
From: Jason Stockwell, PhD
Re: Letter of Support for Sabbatical for Dr. Jonathan Doubek

Dear Sabbatical Committee,

I am writing to give my full support to Dr Jonathan Doubek's sabbatical application package for 2026-2027. I have known Dr Doubek since 2013 when we first met at the All-Hands Meeting of the Global Lake Ecological Observatory Network (GLEON). In addition to working on several projects collaboratively while he was a PhD student at Virginia Tech, Dr Doubek also spent a year as a post-doc in my laboratory prior to joining the LSSU faculty in 2019.

Dr Doubek and I have discussed his plans for his sabbatical, and I am happy to host him here in my lab at UVM to work on several projects and papers. Dr Doubek was part of an international team called GEISHA that evaluated the impacts of storm disturbances on phytoplankton, where we co-authored several papers together. There are still other papers that need to be completed and Dr Doubek's time on those would be invaluable for completion. Dr Doubek and I were also co-PIs on two grants from the EU-funded AQUACOSM program where we travelled to France in 2019 and 2021 to work on replicated pond systems to examine migration of plankton under different trophic states and predation levels. We have one publication from that effort and several manuscripts underway. Dr Doubek's sabbatical would provide the needed time to help complete those papers.

These projects involve very large data sets. Dr Doubek and I have discussed the possibility to run a short workshop on data analysis using R based on these data sets, with a target audience of undergraduates. This would be a great opportunity to engage with students from both LSSU and UVM. Furthermore, I have a recent graduate from LSSU in my lab doing a MSc (Gwen Phillips) who would be a key contributor to this effort and provide a valuable bridge for students from both campuses. Training of undergraduates in the use of R is becoming more in demand and such an effort would be fruitful for developing student skills to better engage in future research experiences.

Dr Doubek was one of the most impressive post-docs I have been around. He is was incredibly productive as a researcher and highly motivated as a mentor during his short stay (~1 year) in my lab prior to accepting his position at LSSU. He published four papers (two as lead-author) during this time, and we published several manuscripts since then. I have no doubt that providing Dr Doubek with this sabbatical will be a very strong return on investment. I look forward to working with him closely once again.

Sincerely,

Jason D. Stockwell
Professor, Rubenstein School of Environment and Natural Resources
Director of the Rubenstein Ecosystem Science Laboratory

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September 1, 2025, Thonon-les-Bains

Dear Sabbatical Committee,

I am writing in strong support of Dr. Jonathan P. Doubek's application for sabbatical funding. Dr. Doubek is an accomplished limnologist, whose expertise in phytoplankton, zooplankton and fish dynamics makes him an outstanding candidate for advancing our collaborative research.

As co-Principal Investigator, I collaborated with Dr. Doubek on an international research project, co-funded by two synthesis centers (CESAB and John Wesley Powell Center), aimed at studying the impacts of storms on phytoplankton communities. During this project, Dr. Doubek made substantial contributions as a postdoctoral researcher, demonstrating deep expertise and a strong commitment to achieving the scientific objectives. He played a pivotal role in data analysis and strongly contributed in the writing of key papers. His understanding of the project's objectives and his positive engagement with international collaborators were crucial to the success of this project.

Since completing his postdoctoral position in 2019, Dr. Doubek has held faculty positions as an assistant, then associate professor. He has continued to develop his reputation as an expert in limnology, showing noteworthy academic work and leadership in this field.

If funded, Dr. Doubek will work with me on two distinct but complementary fronts during his sabbatical. First, he will assist in finalizing the pending papers from our previous international project, leveraging his in-depth knowledge of the project's datasets and network of collaborators. Second, he will undertake innovative analysis as part of a new, internationally oriented lake management project, which is of great significance for policy and practice. This new project builds on a GLEON initiative and is part of a larger project, which is partially supported by the CIPEL (International commission for the protection of Lake Geneva) and aims to provide elements to guide future phosphorus policy in the Lake Geneva catchment area (France/Switzerland).

Dr. Doubek's blend of experience, technical expertise, and proven motivation puts him in a strong position to have a significant impact through these initiatives. I have every confidence that his sabbatical will yield important scientific advances and strengthen partnerships across disciplines and borders.

I am very pleased to support Dr. Doubek's application and look forward to collaborating closely with him should he receive funding.

Sincerely yours

Orlane Anneville

Jonathan P. Doubek

jdoubek@lssu.edu
School of Natural Resources and the Center for Freshwater Research and Education
Lake Superior State University
650 W. Easterday Ave., Sault Sainte Marie, MI, USA
Google Scholar page: https://scholar.google.com/citations?user=UgyIji0AAAAJ&hl=en
Last updated: September 2025

RESEARCH INTERESTS

Aquatic ecology; limnology; plankton ecology; fish ecology; community and ecosystem ecology; organismal biology; food web interactions; global change effects on freshwater ecosystems; macrosystems ecology; interdisciplinary and team science

EDUCATION

Virginia Tech (Blacksburg, VA)

- **Doctor of Philosophy, Department of Biological Sciences**, 2018
- Global Lake Ecological Observatory Network (GLEON) Fellow, 2015-2018
- Virginia Tech Interfaces of Global Change (IGC) Fellow, 2013-2018
- Virginia Tech College of Science Outstanding Doctoral Student, 2017
- Advisor: Dr. Cayelan Carey

University of Michigan, School of Natural Resources and Environment (Ann Arbor, MI)

- **Master of Science**, Ecology, Evolution, & Conservation Biology, 2013
- Master's Thesis: Planktonic Food Web Relations in Laurentian Great Lakes
- Advisors: Dr. John Lehman and Dr. Bradley Cardinale

University of Michigan, College of Literature, Science, and the Arts (Ann Arbor, MI)

- **Bachelor of Science (with distinction)**, Biology and Program in the Environment, 2010
- Honor's Thesis in Biology; James B. Angell Scholar

RESEARCH AND TEACHING POSITIONS HELD

2024 – Present	Associate Professor, School of Natural Resources and the Center for Freshwater Research and Education, Lake Superior State University, MI, USA
2019 – 2024	Assistant Professor, School of Natural Resources and the Center for Freshwater Research and Education, Lake Superior State University, MI, USA
2018 – 2019	Postdoctoral Research Associate, Rubenstein School of Environment and Natural Resources, University of Vermont, VT, USA. Advisor: Dr. Jason Stockwell
2013 – 2018	Teaching and Research Assistant, Department of Biological Sciences, Virginia Tech, Blacksburg, VA, USA
2008 – 2013	Teaching and Research Assistant, School of Natural Resources and Environment and Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI, USA
2011 – 2012	Water Quality Monitoring Coordinator, Huron River Watershed Council, Ann

	Arbor, MI, USA
2009 – 2010, 2012	Aquatic Sciences Research Assistant, City of Ann Arbor, Ann Arbor, MI, USA
2008	Evolutionary Aquatic Research Assistant, United States Geological Survey, De Pere, WI, USA

LEADERSHIP, FELLOWSHIP, AND SERVICE POSITIONS

LSSU Society for Fish and Wildlife Chapter Club Mentor 2021 – Present

***Ecosphere* Subject-Matter Editor (Freshwater Ecology Track)** 2020 – 2025

LSSU Society for Conservation Biology Chapter Club Mentor 2020 – 2021

GLEON Student Association Chair 2016 – 2018

- Informed, trained, and mentored students, enabling the next generation of scientists within GLEON to participate in collaborative, international, and interdisciplinary network science
- Communicated and facilitated opportunities for students within the GLEON network
- Organized workshops and research projects for GLEON students and postdocs

GLEON Steering Committee Member 2016 – 2018

- Participated on a core leadership committee within GLEON consisting of an international group of scientists in discussing and planning current activities and future directions of GLEON

GLEON Graduate Student Fellow 2015 – 2018

- This program trained a cohort of graduate students from around the world to analyze large and diverse data sets, operate effectively in diverse international teams, and communicate science to researchers, the public, and managers
- Participated in three weeklong workshops while completing multiple interdisciplinary, collaborative scientific projects

IGC Fellow 2013 – 2018

- Obtained experience and training in the multidimensional aspects of global change through graduate student education
- Participated in courses, seminars, and special events that bolstered training in my specific academic field, but also at the science-policy interface

COURSES TAUGHT

Ecological Data Analysis and Interpretation, NRES 350, Lake Superior State University Spring 2025
Freshman Seminar, NRES 199, Lake Superior State University Fall 2024, 2025
Ichthyology, NRES 310, Lake Superior State University Fall 2019-2025
Limnology Lab, NRES 345, Lake Superior State University Fall 2019-2025
Senior Project, NRES 495, Lake Superior State University All semesters
Fish Ecology, NRES 333, Lake Superior State University Spring 2020-2025
Principles of Watersheds, NRES 286, Lake Superior State University Spring 2020-2025
Sophomore Seminar, NRES 299, Lake Superior State University 2020-2022, 2024
Senior Capstone, NRES 499, Lake Superior State University Spring 2023
Field Biology: Fish and Wildlife Ecology and Identification, **NRES 107**,

Lake Superior State University Spring 2020, 2021
Independent Study in Global Conservation, NRES 290, Lake Superior State University 2021
Independent Study in Aquatic Ecology, NRES 290, Lake Superior State University 2022
Introduction to Biology Lab, Virginia Tech Spring 2018
Freshwater Ecology, Virginia Tech Fall 2014, 2015, 2016, 2017
Explorations of a Field Biologist, University of Michigan Summer 2012, 2013
Introductory Biology Lab, University of Michigan May 2011 – Jun. 2012; May – June 2013
Natural Resource Statistics, NRE 538, University of Michigan Spring 2013
Ecological Issues, Environment 201, University of Michigan Fall 2012

MENTORED UNDERGRADUATE STUDENT RESEARCH THESES (39)

- Ethyn Lusardi, Lake Superior State University, Present
- Elijah Herriman, Lake Superior State University, Present
- Brenden Conger, Lake Superior State University, Present
- Brendan Burpee, Lake Superior State University, Present
- Rowan Faust, Lake Superior State University, Present
- Aiden Cardwell, Lake Superior State University, Present
- Gwendolyn Phillips, Lake Superior State University, 2025 (graduation year)
- Ellie Prow, Lake Superior State University, 2025
- Emma Watson, Lake Superior State University, 2025
- Zachary Kassuba, Lake Superior State University, 2024
- Dakota Smith, Lake Superior State University, 2024
- Alexandra VanKampen, Lake Superior State University, 2024
- Devin Rath, Lake Superior State University, 2023
- Mason Spiess, Lake Superior State University, 2023
- Mackenzie Belleville, Lake Superior State University, 2023
- Ethan DePauw, Lake Superior State University, 2023
- Olivia Jacobs, Lake Superior State University, 2023
- Jacob Lohraff, Lake Superior State University, 2023
- Samuel Mitchell, Lake Superior State University, 2023
- Lucas Chorba, Lake Superior State University, 2022
- Simon Freeman, Lake Superior State University, 2022
- Joshua Heistan, Lake Superior State University, 2022
- Kollin Kemerling, Lake Superior State University, 2022
- Joseph Tolles, Lake Superior State University, 2022
- Tristan Compton, Lake Superior State University, 2021
- Silas Dunn, Lake Superior State University, 2021
- Lucas Glass, Lake Superior State University, 2021
- Callie Kammers, Lake Superior State University, 2021
- Reo Wallace, Lake Superior State University, 2021
- Timothy Boyd, Lake Superior State University, 2021
- Drew Heckman, Lake Superior State University, 2021
- Danielle Scharnowski, Lake Superior State University, 2020
- Samuel Johnston, Lake Superior State University, 2020
- Sadye Goldfarb, University of Vermont, 2020
- Samantha Field, University of Vermont, 2018
- Niall Goard, Virginia Tech, 2018

- Kylie Campbell, Virginia Tech, 2017
- Charlotte Harrell, Virginia Tech, 2016
- Zachary Gajewski, Virginia Tech, 2015

PEER-REVIEWED PUBLICATIONS (* denotes undergraduate student)

2025 Freeman, SDD*, Smith JB, Ackiss AS, Anweiler KV, Freeman HN*, Hessell CR, Jonas J, LaFaver CJ, Olsen EJ, **Doubek JP**. Day versus night relations between larval lake whitefish, cisco, and zooplankton onshore in Lakes Michigan, Huron, and Superior. Journal of Great Lakes Research, In Press.

Wander HL, Lofton ME, **Doubek JP**, Howard DW, Hipsey MR, Thomas RQ, Carey CC. Warming air temperatures alter the timing and magnitude of reservoir zooplankton biomass. Ecological Modelling, In Press.

Liguori A*, Wander HL, **Doubek JP**, Stockwell JD, Burch HM*, Stagnar SR*, Richardson DC. Presence of zooplanktivorous fish favors deeper daytime vertical distribution of freshwater zooplankton. Invertebrate Biology, In Press.

Edwards AN, Sitar SP, Moerke AH, **Doubek JP**, Yule DL, Carl DD, Goldsworthy CA, Harding IC, Michaels SB, Berglund EK, Moore SA, Gerig BS. 2025. Food web structure of the Lake Superior fish community in 2021–2022. Journal of Great Lakes Research 51(1), 102486.

Schmidt AG, Anderson IM*, Bruel R, Chapina RJ, **Doubek JP**, Fiorini S, Goldfarb SK, Lacroix G, Wander HL, Zigic S*, Stockwell JD. 2025. Impacts of hypoxia and planktivory on crustacean and rotifer diel vertical and horizontal migration behaviors. Hydrobiologia 852, 2687–2707.

Pu G, Shchapov K, Pearce NJT, Bowen K, Bramburger A, Camilleri A, Carrick H, Chaffin JD, Cody W, Coleman ML, Currie WJS, Depew DC, **Doubek JP**, Eveleth R, Fitzpatrick M, Glyshaw PW, Godwin CM, McKay RM, Munawar M, Niblock H, Quintanilla M, Rennie M, Sand MW, Schraitle KJ, Twiss MR, Uzarski DG, Vanderploeg HA, Vick-Majors TJ, Westrick JA, Wheelock BA, Xenopoulos MA, Zastepa A, Ozersky T. 2025. The Great Lakes Winter Grab: Limnological Data from a Multi-Institutional Winter Sampling Campaign. Limnology and Oceanography Letters 10(1), 37–61.

Tran-Khac V, **Doubek JP**, Patil V, Stockwell JD, Adrian R, Chang C-W, Dur G, Lewandowska A, Rusak JA, Salmaso N, Straile D, Thackeray SJ, Venail P, Bhattacharya R, Brentrup J, Bruel R, Feuchtmayr H, Gessner MO, Grossart H-P, Ibelings BW, Jacquet S, MacIntyre S, Matsuzaki, S-I, Nodine E, Nõges P, Rudstam L, Soulignac F, Verburg P, Znachor P, Zohary T, Anneville O. 2025. Using long-term ecological datasets to unravel the impacts of short-term meteorological disturbances on phytoplankton communities. Freshwater Biology 70(5), e70023.

2023 Johnston SJ*, Smith JB, Slater BD*, **Doubek JP**. 2023. Spatial density, biomass, and composition of crustacean zooplankton on Lake Michigan beaches. *Fishes* 8(12): 599.

Veronica NAVA, Frezzotti ML, Aherne J, Alfonso MB, Antão-Geraldes AM, Attermeyer K, Bah AR, Bao R, Bartrons M, Berger SA, Biernaczyk M, Breider F, Brookes J, Cañedo-Argüelles M, Canle M, Capelli C, Carballeira R, Cereijo J, Christensen ST, Christoffersen KS, Clayer F, de Eyto E, Senerpont Domis LN, Delgado MJ, **Doubek JP**, Eaton A, Erdogan S, Erina O, Ersoy Z, Feuchtmayr H, Fugère V, Galafassi S, Gonçalves V, Grossart H-PF, Hamilton D, Hanson PC,

Harris T, Kankılıç GB, Kessler R, Jacquet S, Kangur K, Kiel C, Knoll L, Kokorīte I, Lavoie I, Leiva-Presa À, Lepori F, Lusher A, MacIntyre S, Matias M, Matsuzaki SIS, McCarthy V, McElarney Y, McNally D, Mekonen Belay B, Messyasz B, Mlambo M, Nandini S, Nodine E, Özen A, Ozkundakci D, Perez RV, Pociecha A, Raposeiro P, Rõõm EI, Salmaso N, Sarma SSS, Saulnier-Talbot É, Scordo F, Sibomana C, Stepanowska K, Tavşanoğlu ÜN, Tolotti M, Udoh A, Urrutia Cordera P, Valois A, Vandergoes M, Verburg P, Volta P, Wain D, Wesolek B, Weyhenmeyer G, Wightman R, Wood S, Wu N, Zawiska I, Zawisza E, Zink L, Leoni B. Plastic debris in lakes and reservoirs worldwide. 2023. *Nature* 619: 317-322.

Wallace Hoffelt RK*****, **Doubek JP**. 2023. Bladderwort Relationship to Zooplankton in Two Northern Michigan Lakes. *Diversity* 15: 171.

2022 Weyhenmeyer GA, Obertegger U, Rudebeck H, Jakobsson E, Jansen J, Zdorovennova G, Bansal S, Block BD, Carey CC, **Doubek JP**, Dugan H, Erina O, Fedorova I, Fischer JM, Grinberga L, Grossart H-P, Kangur K, Knoll LB, Laas A, Lepori F, Meier J, Palshin N, Peternell M, Pulkkanen M, Rusak JA, Sharma S, Wain D, Zdorovennov R. 2022. Towards critical white ice conditions in lakes under global warming. *Nature Communications* 13: 4974.

2021 **Doubek JP**, Anneville O, Dur G, Lewandowska AM, Patil VP, Rusak JA, Salmaso N, Seltmann CT, Straile D, Urrutia-Cordero P, Venail P, Adrian R, Alfonso MB, DeGasperi CL, de Eyto E, Feuchtmayr H, Gaiser EE, Girdner SF, Graham JL, Grossart H-P, Hejzlar J, Jacquet S, Kirillin G, Llames ME, Matsuzaki SS, Nodine ER, Piccolo MC, Pierson DC, Rimmer A, Rudstam LG, Sadro S, Swain HM, Thackeray SJ, Thiery W, Verburg P, Zohary T, Stockwell JD. The extent and variability of storm-induced temperature changes in lakes measured with long-term and high-frequency data. *Limnology and Oceanography* 66: 1979-1992.

2020 Stockwell JD, **Doubek JP**, Adrian R, Anneville O, Carey CC, Carvalho L, de Senerpont Domis LN, Dur G, Frassl MA, Grossart H-P, Ibelings BW, Lajeunesse MJ, Lewandowska AM, Llames ME, Matsuzaki SS, Nodine ER, Noges P, Patil VP, Pomati F, Rinke K, Rudstam LG, Rusak JA, Salmaso N, Seltmann CT, Straile D, Thackeray SJ, Thiery W, Urrutia-Cordero P, Venail P, Verburg P, Woolway RI, Zohary T, Andersen MR, Bhattacharya R, Hejzlar J, Janatian N, Kpodonu ATNK, Williamson TJ, Wilson HL. 2020. Storm impacts on phytoplankton community dynamics in lakes. *Global Change Biology* 26: 2756-2784.

Doubek JP, Goldfarb SK*****, Stockwell JD. 2020. Should we be sampling zooplankton at night? *Limnology and Oceanography Letters* 5: 313-321.

Dugan HA, Skaff NK, **Doubek JP**, Burke SM, Krivak-Tetley FE, Summers JC, Hanson PC, Weathers KC. 2020. Lakes at risk of chloride contamination. *Environmental Science & Technology* 54: 6639-6650.

Moore MR, **Doubek JP**, Xu H, Cardinale BJ. 2020. Hedonic Price Estimates of Lake Water Quality: Valued Attribute, Instrumental Variables, and Ecological-Economic Benefits. *Ecological Economics* 176: 106692.

Zhikharev VS, Erina O, Tereshina MA, **Doubek JP**, Goldfarb SK*****, Shurganova GV, Stockwell JD. 2020. Day-night differences in crustacean zooplankton in Lake Glubokoe and Mozhaysk Reservoir (European Russia). *Limnology and Freshwater Biology* 4: 765-766.

2019 **Doubek JP**, Campbell KL*****, Lofton ME, McClure RP, Carey CC. 2019. Hypolimnetic hypoxia increases the biomass variability and compositional variability of crustacean zooplankton communities. *Water* 11:2179.

Carey CC, Ward NK, Farrell KJ, Lofton ME, Krinos AI*****, McClure RP, Subratie KC, Figueiredo RJ, **Doubek JP**, Hanson PC, Papadopoulos P, Arzberger P. 2019. Enhancing collaboration between ecologists and computer scientists: lessons learned and paths forward. *Ecosphere* 10:e02753

Doubek JP, Carey CC, Lavender M, Winegardner AK, Beaulieu M, Kelly PT, Pollard AI, Straile D, Stockwell JD. 2019. Calanoid copepod zooplankton density is positively associated with water residence time across the continental United States. *PLoS ONE* 14:e0209567.

Munger ZW, Carey CC, Gerling AB, **Doubek JP**, Hamre KD, McClure RP, Schreiber ME. 2019. Hydrological vs. oxygenation control on iron and manganese mass budgets in a drinking water reservoir. *Lake and Reservoir Management* 35:277–291.

2018 Mantzouki E, Beklioğlu M, Brookes JD, de Senerpont Domis LN, Dugan HA, **Doubek JP**, Grossart H-P, Nejstgaard JC, Pollard AI, Ptacnik R, Rose KC, Sadro S, Seelen L, Skaff NK, Teubner K, Weyhenmeyer GA, Ibelings BW. 2018. Snapshot surveys for lake monitoring, more than a shot in the dark. Frontiers in Ecology and Evolution 6:10.3389/fevo.2018.00201.

Doubek JP, Campbell KL*****, Doubek KM, Hamre KD, Lofton ME, McClure RP, Ward NK, Carey CC. 2018. The effects of hypolimnetic anoxia on the diel vertical migration of freshwater crustacean zooplankton. *Ecosphere* 9:e02332.

McCullough IM, Dugan HA, Farrell KJ, Morales-Williams AM, Ouyang Z, Roberts D, Scordo F, Bartlett SL, Burke SM, **Doubek JP**, Krivak-Tetley FE, Skaff NK, Summers JC, Weathers KC, Hanson PC. 2018. Dynamic modeling of organic carbon fates in lake ecosystems. *Ecological Modelling* 386:71–82.

Hamre KD, McClure RP, Munger ZW, **Doubek JP**, Gerling AB, Schreiber ME, Carey CC. 2018. In situ fluorometry reveals a persistent, perennial hypolimnetic cyanobacterial bloom in a seasonally anoxic reservoir. *Freshwater Science* 37:483–495.

Carey CC, Hanson PC, **Doubek JP**, McClure RP. 2018. Oxygen dynamics control the burial of organic carbon in a eutrophic reservoir. *Limnology and Oceanography-Letters* 3:293–301.

Carey CC, McClure RP, **Doubek JP**, Lofton ME, Ward NK, Scott DT. 2018. *Chaoborus spp.* transport CH_4 from the sediments to the surface waters in a seasonally anoxic reservoir, but their contribution to water column CH_4 concentrations and diffusive efflux is minor. *Environmental Science & Technology* 52:1165–1173.

2017 Dugan HA, Bartlett SL, Burke SM, **Doubek JP**, Krivak-Tetly FE, Skaff NK, Summers JC, Hanson PC, Weathers KC. 2017. A database of chloride trends in North America and European freshwater lakes. *Nature: Scientific Data* 4:170101.

Hamre KD, Gerling AB, Munger ZW, **Doubek JP**, McClure RP, Cottingham KL, Carey CC. 2017. Spatial variation in dinoflagellate recruitment along a reservoir ecosystem continuum. *Journal of Plankton Research* 39:715-728.

Doubek JP, Carey CC. 2017. Catchment, morphometric, and water quality characteristics differ between reservoirs and naturally formed lakes on a latitudinal gradient in the conterminous United States. *Inland Waters* 2:171-180.

Dugan HA, Bartlett SL, Burke SM, **Doubek JP**, Krivak-Tetley FE, Skaff NK, Summers JC, Farrell KJ, McCullough IM, Morales-Williams AM, Roberts D, Scordo F, Ouyang Z, Hanson PC, Weathers KC. 2017. Salting our freshwaters. *Proceedings of the National Academy of Sciences* 114:4453-4458.

2016 Munger ZW, Gerling AB, Carey CC, Hamre KD, **Doubek JP**, Klepatzki SD, McClure RP, Schreiber ME. 2016. Effectiveness of hypolimnetic oxygenation for preventing accumulation of Fe and Mn in a drinking water reservoir. *Water Research* 106:1-14.

Gerling AB, Munger ZW, **Doubek JP**, Hamre KD, Gantzer PA, Little JC, Carey CC. 2016. Whole catchment manipulations of internal and external loading reveal the sensitivity of a century-old reservoir to hypoxia. *Ecosystems* 19:555-571.

2015 **Doubek JP**, Carey CC, Cardinale BJ. 2015. Anthropogenic land use is associated with N-fixing cyanobacterial dominance in lakes across the continental United States. *Aquatic Sciences* 77:681-694.

2014 **Doubek JP**, Lehman JT. 2014. Historical trophic position of *Limnocalanus macrurus* in Lake Michigan. *Journal of Great Lakes Research* 40: 1027-1032.

2013 Jackson EW, **Doubek JP**, Schaeffer JS, Lehman JT. 2013. Historical and recent biomass and food web relations of *Limnocalanus macrurus* in Lake Huron. *Journal of Great Lakes Research* 39: 404–408.

Lehman JT, **Doubek JP**, Jackson EW. 2013. Effect of reducing allochthonous P load on biomass and alkaline phosphatase activity of phytoplankton in an urbanized watershed, Michigan. *Lake and Reservoir Management* 29: 116–125.

2011 **Doubek JP**, Lehman JT. 2011. Historical biomass of *Limnocalanus* in Lake Michigan. *Journal of Great Lakes Research* 37: 159–164.

Lehman JT, Bell DW, **Doubek JP**, McDonald KE. 2011. Reduced additions to river phosphorus for three years following implementation of a lawn fertilizer ordinance. *Lake and Reservoir Management* 27: 390–397.

PUBLISHED DATA PRODUCTS

Doubek JP, Goldfarb SK, Stockwell JD. 2019. Zooplankton paired night and day density and biomass estimates, worldwide literature survey, 1900 - 2016. Environmental Data Initiative. DOI: 10.6073/pasta/ec7dc9192af0d9b95d1b0e2411bc4e73.

Carey C.C., A.B. Gerling, **J.P. Doubek**, K.D. Hamre, R.P. McClure, M.E. Lofton, K.J. Farrell. 2018. Secchi depth data and discrete depth profiles of photosynthetically active radiation, temperature, dissolved oxygen, and pH for Beaverdam Reservoir, Carvins Cove Reservoir, Falling Creek Reservoir, Gatewood Reservoir, and Spring Hollow Reservoir in southwestern Virginia, USA 2013-2017. Environmental Data Initiative. DOI:10.5072/FK2/b31780b17d3d3db6ec6d7df45142501c

Carey C.C., M.E. Lofton, A.B. Gerling, R.P. McClure, **J.P. Doubek**, B.R. Niederlehner, K.J. Farrell. 2018. Water chemistry time series for Beaverdam Reservoir, Carvins Cove Reservoir, Falling Creek Reservoir, Gatewood Reservoir, and Spring Hollow Reservoir in southwestern Virginia, USA 2013-2017. Environmental Data Initiative. DOI:10.5072/FK2/eaa71d3b41d6f9ecc6adb9f2107159fc

Carey C.C., **J.P. Doubek**, R.P. McClure, P.C. Hanson. 2017. Organic carbon, temperature, oxygen, and inflow volume time series for Falling Creek Reservoir, Vinton, Virginia: Summer 2014. Environmental Data Initiative. DOI:10.5072/FK2/bbb9fa55889a48cd6ee9e89c0b0636d3

Carey C.C., R.P. McClure, A.B. Gerling, **J.P. Doubek**, S. Chen, M.E. Lofton, K.D. Hamre. 2018. Time series of high-frequency profiles of depth, temperature, dissolved oxygen, conductivity, specific conductivity, chlorophyll a, turbidity, pH, and oxidation-reduction potential for Beaverdam Reservoir, Carvins Cove Reservoir, Falling Creek Reservoir, Gatewood Reservoir, and Spring Hollow Reservoir in Southwestern Virginia, USA 2013-2017. Environmental Data Initiative. DOI: 10.5072/FK2/cc1752d66a6740da3c011d6ba96842ba

Carey C.C., **J.P. Doubek**, K.L. Campbell. 2018. Crustacean zooplankton density and biomass and rotifer density for Beaverdam Reservoir, Carvins Cove Reservoir, Gatewood Reservoir, and Spring Hollow Reservoir in southwestern Virginia, USA 2014-2016. Environmental Data Initiative. DOI: 10.5072/FK2/d6be483c54cda96939a23dd78fe00783

NON PEER-REVIEWED PUBLICATIONS OR REPORTS

Doubek JP. 2017. The probability of zebra mussel invasion in Smith Mountain Lake, VA. Invited report to the Smith Mountain Lake Association.

Lawson R, Riggs E, Weiker D, **Doubek JP.** 2011. Phosphorus Reduction Implementation Plan for the Middle Huron River Watershed. Ann Arbor, MI: Huron River Watershed Council.

Lawson R, Weiker D, **Doubek JP.** 2011. Phosphorus Reduction Implementation Plan for Brighton Lake. Ann Arbor, MI: Huron River Watershed Council. Accessible online: http://www.hrwc.org/wp-content/uploads/2011/10/Brighton_Lake_plan_FINAL.pdf

Lawson R, Weiker D, **Doubek JP.** 2011. Phosphorus Reduction Implementation Plan for Strawberry Lake. Ann Arbor, MI: Huron River Watershed Council. Accessible online: http://www.hrwc.org/wp-content/uploads/2011/10/Strawberry_Lake_plan_FINAL.pdf

GRANTS & AWARDS

- The Cooperative Ecosystem Studies Units (CESU) with the United States Geological Survey (USGS). $56,491. 2025. Age-0 lake whitefish and zooplankton relations in the North Channel of Lake Huron. **Doubek JP (PI)**, and KL Kapuscinski (co-PI).
- The Cooperative Ecosystem Studies Units (CESU) with the United States Geological Survey (USGS). $91,741. 2025. Age-0 lake whitefish and zooplankton relations in the North Channel of Lake Huron. **Doubek JP (PI)**, and KL Kapuscinski (co-PI).
- Michigan Sea Grant. $216,352. 2024. An Ecosystem-Scale Approach to Understanding Changing Winters in the Great Lakes. Vick-Majors TJ (PI), Carrick H, Uzarski D, **Doubek JP**, Wagner N, Paterson G.

- The Cooperative Ecosystem Studies Units (CESU) with the United States Geological Survey (USGS). $107,637. 2023. Age-0 lake whitefish and zooplankton relations in the North Channel of Lake Huron. **Doubek JP (PI)**, and KL Kapuscinski (co-PI).
- Government of Canada. Multi-Partner Research Initiative (MPRI). International Consortium of Oil Research – Biological Impacts of Oil. $1,756,000 CAD. 2023. Moerke A (PI), Twiss M (PI).
- National Science Foundation. $197,808. 2022. Kolomyjec SH (PI), Wright D, Southwell B, Kandel HP, Clause HK, Teymorian S, Garvon J, Li J, Evans B, **Doubek JP**, Zimmerman G, Kelso P. MRI: Acquisition of a low vacuum scanning electron microscope (SEM) with EDS detector and STEM capability to advance research and undergraduate research training.
- The Cooperative Ecosystem Studies Units (CESU) with the United States Geological Survey (USGS). $81,454. 2022. Age-0 lake whitefish and zooplankton relations in the North Channel of Lake Huron. **Doubek JP (PI)**, and KL Kapuscinski (co-PI).
- Great Lakes Fishery Trust. 2022. $194,739. Spatial, temporal, and diel relations between zooplankton and age-0 lake whitefish in the Upper Great Lakes. **Doubek JP (PI)**, J Smith (co-PI), N Barton, B Diffin, K Donner, SDD Freeman, I Harding, C Hessell, A Honsey, S Johnston, J Jonas, KL Kapuscinski, C LaFaver, K McDonnell, S McNaught, E Olsen, S Rayford, P Ripple, J Tuomikoski, and JB Weldon, Jr.
- Project for a CESAB AFTER by the group GEISHA: Global Evaluation of the Impacts of Storms on freshwater Habitat and structure of phytoplankton Assemblages. ~€10,500. 2021. O. Anneville (PI), JD Stockwell (PI), VP Patil (PI), JA Brentrup, R Bruel, **JP Doubek**, JA Rusak, P Venail, G Dur, AM Lewandowska, P Urrutia-Cordero, R Adrian, RI Woolway, SJ Thackeray.
- Fish and oxygen-induced alterations to the migration of zooplankton, part II. ~€10,000. 2021. JD Stockwell (PI), **JP Doubek (co-PI)**.
- US Department of Commerce, Economic Development Administration. $956,658. Building capacity at LSSU's Center for Freshwater Research and Education. PIs: A. Moerke (lead), K. Kapuscinski, **J. Doubek**, A. Molina-Moctezuma, 2021-2022.
- LSSU Foundation's Enrichment Grant, $1510, 2020.
- Fish and oxygen-induced alterations to the migration of zooplankton. ~€10,000. 2019. JD Stockwell (co-PI), **JP Doubek** (co-PI).
- Virginia Tech Global Change Center Interdisciplinary Research Grant, $5000, December 2016 – 2017.
- National Science Foundation Doctoral Dissertation Improvement Grant, $20,880, June 2016 – June 2018.
- Mary and George Schaeffer Stream Team Excellence Award, $500, October 2016.
- Noel Krieg Graduate Fellowship for Research and Teaching Excellence, $1200, June 2016
- GLEON Travel Grants, 2013-2018: ~$15,000.
- Virginia Water Resources Research Center Graduate Student Research Grant: $5000, May 2015 – May 2016.
- Virginia Lakes and Watershed Association Leo Bourassa Scholarship: $3000, July 2015.
- Noel Krieg Graduate Fellowship for Research and Teaching Excellence: $1200, May 2015.
- PRAGMA Travel Grant: $1200, October 2014.
- Rackham Graduate Student Research Grant: $1000, 2012.

INVITED SEMINARS

Doubek JP. Full moon fever: why not sampling at night should give you the shivers. Invited Research Seminar, Department of Biological Sciences, Virginia Tech, Blacksburg, VA, February 2023.

Doubek JP. Reservoir characteristics and hypoxia as important drivers of zooplankton community structure. Invited Seminar, School of Natural Sciences and Mathematics, Ferrum College, Ferrum, VA, November, 2016.

SELECTED CONTRIBUTED PRESENTATIONS Underlined name refers to presenter)

2025 Phillips G*, Prow E*, Bonilla-Gomez J, Breaker B, Bruening K, DePauw E, Diffin B, Dunn S, Freeman S, Harding I, Hessell C, Honsey A, Hug J, Johnston S, Jonas J, Kapuscinski K, McDonnell K, Michaud G, Olsen E, Ripple P, Skubik K, Smith J, Spiess M, Synnott J, Tuomikoski J, VanDoornik C, Woody S, **Doubek J**. 2025. Where the Lake Whitefish are in the upper Great Lakes. Poster presentation, Midwest Fish & Wildlife conference, St. Louis, MO, USA.

Pothoven A*, Carrick H, **Doubek J**, O'Loughlin C, Paterson G, Smith J, Uzarski D, Vick-Majors T, Wagner N, with the Winter Grab Network. 2025. Crustacean zooplankton and rotifer community dynamics during a warm winter in the Laurentian Great Lakes. Poster presentation, Michigan American Fisheries Society, Marquette, MI, USA.

Dunn S, Brant C, Bunnell D, **Doubek J**, Egedy L, Freeman S, Kapuscinski K, Tingley R. 2025. Crustacean zooplankton density and biomass are greater in beach and nearshore habitats of the North Channel versus in southern Lake Huron. Oral presentation, Michigan American Fisheries Society, Marquette, MI, USA.

2024 Goldfarb SK*, **Doubek JP**, Antão-Geraldes AM, Armengol X, Avilés-Vargas L, Bartrons M, Kankılıç GB, Berger SA, Bess Z, Brentrup J, Brucet S, Bruesewitz D, Burnet S, Calderó-Pascual M, Carey CC, Chandra S, Chapina R, de Eyto E, Erdoğan S, Erina O, Figary S, Gerrish G, Glass L*, Johnson B, Kainz M, Kalingali A, Khan S, Kimirei IA, Leoni B, Lepori F, McCarthy V, Nava V, Nejstgaard JC, Ogorelec Ž, O'Reilly C, Pate WM, Paterson M, Pinheiro-Silva L, Qiu Q, Richardson D, Rusak JA, Silver DB, Straile D, Suenaga E, Tartarotti B, Tavşanoğlu ÜN, Tereshina M, Umaña-Villalobos G, Walles TJW, Wander HL, Wurtsbaugh W, Xu Y, Zhikharev V, Stockwell JD. 2024. Environmental drivers of night versus day zooplankton population estimates in lakes around the world. Invited oral presentation, Association for the Sciences of Limnology and Oceanography, Madison, WI, USA.

Prow E*, Bonilla-Gomez J, Breaker B, Bruening K, DePauw E*, Diffin B, Dunn S, Freeman S, Harding I, Hessell C, Honsey A, Hug J, Johnston S, Jonas J, Kapuscinski K, McDonnell K, Michaud G, Olsen E, Phillips G*, Ripple P, Skubik K, Smith J, Spiess M, Synnott J, Tuomikoski J, VanDoornik C, Woody S, **Doubek J**. 2024. Zooplankton beach and nearshore densities and their relation to larval coregonines at day versus night in the Upper Great Lakes. Invited poster presentation, Association for the Sciences of Limnology and Oceanography, Madison, WI, USA.

Phillips G*, Baker K*, Bonilla-Gomez J, Breaker B, Bruening K, DePauw E*, Diffin B, Dunn S, Freeman S, Harding I, Hessell C, Honsey A, Hug J, Johnston S, Jonas J, Kapuscinski K, McDonnell K, Michaud G, Olsen E, Prow E*, Ripple P, Skubik K, Smith J, Spiess M, Synnott J, Tuomikoski J, VanDoornik C, Woody S, **Doubek J**. 2024. The occurrence, abundance, and type of microplastics in larval Lake Whitefish (*Coregonus clupeaformis*) diets in relation to water depth and watershed land use. Invited poster presentation, Association for the Sciences of Limnology and Oceanography, Madison, WI, USA.

2023 Freeman SDD, Brant CO, **Doubek JP**, Kapuscinski KL, Tingley RW. Early-season succession of zooplankton in the North Channel of Lake Huron. Poster Presentation, Michigan American Fisheries Society Conference, Bellaire, MI, March 2023.

2022 Kandel HP, Wright DD, **Doubek JP**, Southwell B. Uranium in groundwater wells in Sugar Island, Michigan: a water supply and public health concern. Poster Presentation, American Geophysical Union Meeting, Chicago, IL, December 2022.

Dur G, Yusuke K, Anneville O, Stockwell J, Patil V, Adrian R, Bentrup J, Bruel R, **Doubek JP**, Lewandowska A, Matsuzaki SI, Rusak JA, Salamazo N, Straile D, Thackeray SJ, Venail P. Does solar activity affect the dynamics of cyanobacteria community worldwide and how? Poster Presentation, International Society of Limnology, Berlin, Germany, August 2022.

Straile D, Adrian R, Anneville O, Arnott SE, Beisner BE, Beklioğlu M, de Senerpont Domis LN, **Doubek JP**, Gal G, Hayes NM, Horn W, Iglesias C, Jeppesen E, Korponai J, Leavitt PR, Mackay EB, Meerhoff M, Romo S, Rudstam LG, Rusak JA, Sarvala J, Schindler DE, Stockwell J, Thackeray SJ. Zooplankton dynamics in lakes of different trophic state, depth and climatic region. A test of the PEG model. Oral Presentation, International Society of Limnology, Berlin, Germany, August 2022.

Scharnowski DE, **Doubek JP**, Moerke AH. Zooplankton community phenology shifts in the St. Marys River under climate change. Oral presentation, Joint Aquatic Sciences Meeting, Grand Rapids, MI, May 2022.

Tolles JJ*, **Doubek JP**. Winter versus summer prey preferences of piscivorous fish in Michigan bays. Poster presentation, Joint Aquatic Sciences Meeting, Grand Rapids, MI, May 2022.

Freeman SDD*, Barton NT, Diffin BJ, Donner K, Grulke* HN, Hessell CR, Jonas J, LaFaver CJ, Olsen EJ, Rayford SV, Smith JD, **Doubek JP**. Day versus night relations between larval lake whitefish and zooplankton in the Upper Great Lakes. Oral presentation, Joint Aquatic Sciences Meeting, Grand Rapids, MI, May 2022.

2021 Bruel R, Brentrup J, Anneville O, Carvalho L, **Doubek J**, Dur G, Lewandowska A, Rusak J, Salmaso N, Thackeray S, Urrutia-Cordero P, Woolway I, Stockwell J, and many other contributors. Impact of extreme weather events frequency and intensity in shaping phytoplankton communities. Virtual Oral Presentation, Symposium for European Freshwater Sciences, July 2021.

Stockwell J, Adrian R, Anneville O, Brentrup J, Bruel R, Carvalho L, **Doubek J**, Dur G, Lewandowska A, Patil V, Rusak J, Salmaso N, Thackeray S, Urrutia-Cordero P, Woolway RI, and many other contributors. A global dataset on weather, lake physics, and phytoplankton dynamics. Virtual Oral Presentation, Symposium for European Freshwater Sciences, July 2021.

Stockwell J, Chapina R, **Doubek J**, Fiorini S, Goldfarb S, Lacroix G, Rickwood J, Wander H, Zigic S. 2021. Fish and oxygen-induced alterations to the migration of zooplankton (FOAMZ). Virtual Oral Presentation, AQUACOSM: 2nd International Aquatic Mesocosm Research Symposium, April 2021.

2020 **Doubek JP**, Johnston SJ, Slater BD, Kapuscinski KL, Moerke AH. 2020. Environmental and morphometric drivers of zooplankton community composition in lakes across the eastern Upper

Peninsula of Michigan. Virtual Oral Presentation, Michigan Inland Lakes Convention, September 2020.

2019 Goldfarb SK, **Doubek JP**, Antão-Geraldes A, Bartrons M, Berger S, Brentrup JA, Brucet S, Burnet S, Galarce LC, Carey CC, de Eyto E, Dur G, Erdoğan S, Erina O, Grossart HP, Kainz M, Kankılıç GB, Khan S, Leoni B, Lepori F, McCarthy V, Nava V, Nejstgaard J, Ogorelec Z, Ozen A, Pascual M, Paterson M, Patelli M, Qiu Q, Richardson D, Rusak J, Sepulveda-Jauregui A, Pinheiro-Silva L, Straile D, Tartarotti B, Tavşanoğlu UN, Tereshina M, Umaña-Villalobos G, Walles T, Wander HL, Wurtsbaugh W, Stockwell JD. Day 'N' NightZ: The effects of hypoxia on pelagic zooplankton population estimates and migration patterns. Poster presentation at GLEON 21, Huntsville, Ontario, Canada, 2019.

2018 **Doubek JP**, Adrian R, Alfonso MB, Anneville O, Bhattacharya R, DeGasperi CL, de Eyto E, Feuchtmayr H, Dur G, Gaiser EE, Girdner SF, Graham JL, Grossart HP, Hejzlar J, Ibelings BW, Jacquet S, Lewandowska A, Llames ME, Shin-ichiro SM, Nodine ER, Nõges P, Patil VP, Rimmer A, Rudstam LG, Rusak JA, Seltmann CT, Swain HM, Thackeray SJ, Thiery W, Urrutia-Cordero P, van Lipzig NPM, Verburg P, Woolway RI, Zohary T, Stockwell JD. The extent and variability of storm-induced epilimnetic temperature changes in lakes worldwide using long-term and high-frequency data. Poster presentation at GLEON 20, Rottnest Island, Australia, 2018.

Doubek JP, Campbell KL, Lofton ME, McClure RP, Carey CC. Hypolimnetic anoxia intensifies the variability of crustacean zooplankton communities across four reservoirs. Poster presentation at the Department of Biological Sciences Research Day 2018, Blacksburg, Virginia, February 2018.

2017 **Doubek JP**, Campbell KL, Lofton ME, McClure RP, Carey CC. Hypolimnetic anoxia intensifies the variability of crustacean zooplankton communities across four reservoirs. Poster presentation at GLEON 19, Mohonk Lake, NY, December 2017.

Doubek JP, Campbell KL, Doubek KM, Hamre KD, Lofton ME, McClure RP, Ward NK, Carey CC. Oxygen-induced trade-offs on zooplankton diel vertical migration: caught between fish and an anoxic place. Oral presentation at the Ecological Society of America, Portland, OR, August 2017.

Doubek JP, Lavender M, Winegardner AK, Beaulieu M, Kelly PT, Carey CC, Pollard AI, Straile D, Stockwell JD. Reservoir discharge and management are important drivers of zooplankton community structure across the continental United States. Oral presentation at Virginia Water Conference, Richmond, VA, March 2017.

Doubek JP, Campbell KL, Doubek KM, Hamre KD, Harrell CW, Lofton ME, McClure RP, Ward NK, Carey CC. Hypoxia-induced trade-offs on zooplankton vertical distribution and community structure in reservoirs. Invited oral presentation at Department of Biological Sciences Research Day 2017, Blacksburg, Virginia, February 2017.

2016 Dugan HA, Bartlett SL, Burke SM, **Doubek JP**, Krivak-Tetley FE, Skaff NK, Summers JC, Farrell KJ, McCullough IM, Morales-Williams AM, Roberts D, Scordo F, Ouyang Z, Hanson PC, Weathers KC. Salting our freshwaters. Poster presentation at GLEON 18, Gaming, Austria, July, 2016.

Doubek JP, Bierlein KA, Campbell KL, Gerling AB, Hamre KD, McClure RP, Munger ZW, Figueiredo RJ, Hanson PC, Carey CC. Hypoxia-induced trade-offs on zooplankton vertical

distribution and community structure in reservoirs. Poster presentation at GLEON 18, Gaming, Austria, July, 2016.

Doubek JP, Burke SM, Summers JC, Bartlett SL, Dugan HA, Krivak-Tetley FE, Skaff NK, Farrell KJ, McCullough IM, Scordo F, Hanson PC, Weathers KC. Cyanobacteria like it hot, nutrient-rich, and a little salty: increased chloride alters phytoplankton and zooplankton community structure in lakes and reservoirs. Poster presentation at GLEON 18, Gaming, Austria, July, 2016.

Burke SM, **Doubek JP**, Dugan HA, Ewing HA, MacDonald LA, Morales-Williams AM, Skaff NK, Stockwell JD, Summers JC. Global trends and drivers of lake primary production. Poster presentation at GLEON 18, Gaming, Austria, July, 2016.

Doubek JP, Bierlein KA, Gerling AB, Hamre KD, McClure RP, Munger ZW, Figueiredo RJ, Hanson PC, Carey CC. Hypoxia-induced trade-offs on zooplankton vertical distribution and community structure in Virginia reservoirs. Oral presentation at Virginia Water Conference, Richmond, VA, March 2016.

Doubek JP, Bierlein KA, Gerling AB, Hamre KD, McClure RP, Munger ZW, Carey CC. Hypoxia-induced trade-offs on zooplankton vertical distribution and community structure in reservoirs. Oral presentation at Department of Biological Sciences Research Day 2016, Blacksburg, Virginia, February 2016.

2015 **Doubek JP**, Lavender M, Winegardner AK, Beaulieu M, Kelly PT, Stockwell JD. Drivers of zooplankton abundance and richness across the continental USA. Poster presentation, GLEON 17, Chuncheon, South Korea, October 2015.

Dugan HA, Bartlett SL, Burke SM, **Doubek JP**, Krivak-Tetley FE, Skaff NK, Summers JC, Farrell KJ, McCullough IM, Morales-Williams AM, Roberts D, Scordo F, Ouyang Z, Hanson PC, Hong G, Weathers KC. A macroscale study of global chloride trends, drivers, and ecological impacts in lakes. Poster presentation, GLEON 17, Chuncheon, South Korea, October 2015.

Doubek JP, Bierlein KA, Gerling AB, Hamre KD, McClure RP, Munger ZW, Carey CC. Effects of reservoir hypoxia on zooplankton community composition and vertical distribution in Virginia reservoirs. Poster presentation, International Water Association (IWA) Symposium on Lake and Reservoir Management 2015, Pembroke, Virginia, August 2015.

Doubek JP, Hamre KD, Gerling AB, Munger ZW, Gantzer PA, Little JC, Schreiber ME, Carey CC. Effects of hypolimnetic oxygenation on the plankton community of a drinking water reservoir. Oral presentation, Virginia Water Conference, Richmond, VA, March 2015.

2014 **Doubek JP**, Carey CC, Cardinale BJ. Anthropogenic land use increases N-fixing cyanobacterial dominance in lakes across the continental United States. Poster presentation, Pacific Rim Applications and Grid Middleware Assembly (PRAGMA), Indiana University, Bloomington, IN, October 2014.

Doubek JP, Carey CC, Cardinale BJ. Anthropogenic land use is associated with N-fixing cyanobacterial dominance in lakes across the continental United States. Poster presentation, GLEON 16, Orford, Canada, October 2014.

Doubek JP, Gerling AB, Carey CC. Importance of long-term water quality monitoring in Carvin's Cove, Roanoke. Oral presentation, Coca Cola, Roanoke, VA, June 2014.

Doubek JP, Carey CC. Phytoplankton communities are more likely to positively respond to increased temperatures and nutrients in natural lakes than in man–made reservoirs. Oral presentation, Joint Aquatic Sciences Meeting, Portland, OR, May 2014.

Doubek JP, Carey CC. Temperature and nutrients interact to promote the dominance of potentially toxic, nitrogen–fixing cyanobacteria in man–made reservoirs. Poster presentation, Research Day, Virginia Tech, Blacksburg, VA, February 2014.

2013 **Doubek JP**, Carey CC. Temperature and nutrients interact to promote the dominance of potentially toxic, nitrogen–fixing cyanobacteria in man–made reservoirs. Poster presentation, GLEON 15, Bahía Blanca, Argentina, November 2013.

Doubek JP, Lehman JT. Historical and seasonal food web relationships of zooplankton in Lake Michigan. Oral presentation, School of Natural Resources and Environment, Ann Arbor, MI, April 2013.

Doubek JP, Cardinale BJ. Land use change is associated with cyanobacterial dominance in U.S. Lakes. Poster presentation, Midwest Ecology and Evolution Conference (MEEC) 2013, University of Notre Dame, South Bend, IN, March 2013.

2012 **Doubek JP.** How humans influence the recruitment of cyanobacteria: implications for water quality. Oral presentation, Program in the Environment, Ann Arbor, MI, November 2012.

Doubek JP. Predicting causes for blue green algal blooms, and resulting impacts on the phytoplankton community structure. Oral presentation, School of Natural Resources and Environment, Ann Arbor, MI, October 2012.

Doubek JP. The importance in understanding phyto- and zooplankton interactions as indicator species of water quality. Oral presentation, Department of Mathematics, Ann Arbor, MI, July 2012.

Lawson R, Weiker D, **Doubek JP.** The procedures and effective means to collect and process water quality samples. Invited seminar, Huron River Watershed Council, Ann Arbor, MI, April 2012.

Doubek JP, Lehman JT. Seasonal changes in zooplankton biomass and food web relations in Lake Michigan. Oral presentation, School of Natural Resources, Ann Arbor, MI, February 2012.

2011 **Doubek JP**, Lehman JT. Recent proportional changes in zooplankton biomass in Lake Michigan, and the resulting bioenergetic consequences for the zooplankton community. Oral presentation, Department of Ecology and Evolutionary Biology, Ann Arbor, MI, November 2011.

Doubek JP, Lehman JT. Reduced river phosphorus following a local ordinance to reduce phosphorus in fertilizers. Oral presentation, School of Natural Resources, Ann Arbor, MI, March 2011.

2009 **Doubek JP**, Lehman JT. Role of hydrology and spring diatom bloom on *Dreissena polymorpha* (zebra mussel) recruitment. Poster presentation, Department of Biology, Ann Arbor MI, December 2009.

Doubek JP, Gale S. Genetic and geographic differences of an invasive snail species, *Bithynia tentaculata*, in North America. Poster presentation, 23rd National Conference on Undergraduate Research, La Crosse, WI, April 2009.

PROFESSIONAL MEMBERSHIPS

- Global Lake Ecological Observatory Network (GLEON)
- Michigan Chapter of the American Fisheries Society (MI AFS)
- Association for the Sciences of Limnology and Oceanography (ASLO)
- Ecological Society of America (ESA)
- Pacific Rim Applications and Grid Middleware Assembly (PRAGMA)
- International Society of Limnology (SIL)

OUTREACH AND SERVICE ACTIVITIES

Gatewood Reservoir Water Quality Report 2017

- An undergraduate student and I designed an educational pamphlet for Gatewood Reservoir that highlighted the water quality of the reservoir from 2014-2016

Spring Festival (SEEDS Nature Center, Blacksburg, VA) April 2017

- Created interactive activities and visual displays to educate the community in aquatic sciences

Virginia Tech Biological Graduate Student Association (BGSA)-Treasurer Sep. 2014 – Dec. 2015

- Organized and participated in BGSA meetings and events and overseeing the monetary transactions within the organization

GLEON zUSA Working Group Workshop Sep. 2015

- Co-led the organization of a three-day workshop for a research working group (six members) within GLEON at the University of Vermont
- Face-to-face workshop where we solidified research questions, performed statistics, created figures, outlined a manuscript, and prepared a poster that I presented at the GLEON 17 meeting

IGC Professional Development Committee Dec. 2013 – Dec. 2014

- Facilitate monthly discussion meeting groups for IGC students at Virginia Tech
- Organized a workshop where IGC students and six scientists met and discussed job differences between different scientific fields
- Acquired an interdisciplinary scientist to be a seminar speaker through the Ecology, Evolution, and Behavioral Biology seminar series in Winter 2015

Passport to Discovery (SEEDS Nature Center, Blacksburg, VA) 2013, 2014

- Organized outreach event for public through Interfaces of Global Change (IGC) at Virginia Tech
- Educated individuals on how multiple factors such as nutrient concentrations and climate change can influence plankton and lake water quality

OTHER POSITIONS HELD

U.S. Geological Survey, Aquatics Technician (Ann Arbor, MI) Aug. 2011 – May 2013

- Quantified zooplankton abundance, biomass and distribution for 17 sampling sites during three sampling seasons in Lake Huron

Huron River Watershed Council, Water Quality Monitoring Coordinator (Ann Arbor, MI)
Apr. – Oct. 2011; Apr. – Jul. 2012

- Trained 60 volunteers over two seasons on water quality monitoring techniques and the collection of nutrient samples
- Assisted with field reconnaissance of new sampling sites, data entry, review and analysis in a larger effort to develop watershed management plans and promote environmental stewardship
- Solely directed and coordinated the Livingston County, MI monitoring program in 2012

City of Ann Arbor, Aquatics Research Assistant (Ann Arbor, MI)
Aug. – Oct. 2009; May – Oct. 2010, Aug. – Oct. 2012

- Collected weekly water samples from historical sites on the Huron River, and measured nutrient concentrations (total phosphorus, dissolved phosphorus, soluble reactive phosphorus, nitrate, ammonium, silicate, pH, and conductivity)
- Measured chlorophyll, phycocyanin, and alkaline phosphatase concentrations of algal communities
- Studied how nutrient run-off affected riverine water quality, and subsequent changes in the planktonic community

Evolution/Parasitology Research Assistant, U.S. Geological Survey (De Pere, WI)
May – Aug. 2008

- Extracted and amplified DNA using PCRs to identify the ITS regions of DNA in the snails *Bithynia tentaculata*
- Conducted gel electrophoresis to view amplified DNA, and sent DNA to GenBank to assess against current research
- Selected to present results at the National Conference on Undergraduate Research in La Crosse, WI

SKILLS

R, ArcGIS, MATLAB, plankton taxonomy, programming, Spanish (moderate), sensor/equipment repair and maintenance, electrofishing certified