

OFWIM Conference and Business Meeting  
Unicoi State Park and Lodge  
October 3 – 6, 2022



*Resilience: Challenges, Opportunities, Solutions*

## **Organization of Fish and Wildlife Information Managers Annual Conference and Business Meeting Unicoi State Park and Lodge, Helen GA October 3-6, 2022**

Conference Proceedings and Business Meeting Agenda and Reports

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**Monday, October 3<sup>rd</sup>**

8:00 am - 9:00 am [Eastern Daylight Time]	Registration Desk Open	Fireside Ballroom
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**Welcome**

9:00 am – 9:20 am	Welcome: Dyan Pursell, OFWIM President	Fireside Ballroom
9:20 am – 9:50 am	Plenary Speaker: Ryan Boyles, Deputy Director, SE Climate Adaptation Science Center	Fireside Ballroom

**Session 1**

Moderator – Jim Husband

10:05 am - 10:50 am	Beth Stys, USFWS, [Landscape Recovery Tool Team]: <i>The Landscape Recovery Tool – A Dashboard for Trust Species Information</i>	Fireside Ballroom
10:55 am – 11:40 am	Dyan Pursell, MDC, [Deb Hudman]: <i>Citizen Science: Statewide Survey of Ticks and Tick-Borne Pathogens</i>	Fireside Ballroom
11:45 am – 12:30 pm	Joe Weber, VDCRNH: <i>Conserve Virginia, Virginia’s Land Conservation Strategy</i>	Fireside Ballroom
12:30 pm – 2:00 pm	Lunch On your own	

**Session 2**

Moderator – Sabra Tonn

2:05 pm – 2:40 pm	Laysa Venigalla, MDC, [Dr. Fang Qiu]: <i>Object Based Image Classification Using Fully Connected Convolution Neural Networks</i>	Fireside Ballroom
2:45 pm – 3:30 pm	Keith Hurley, NGPC: <i>FinCatch DE – The Rest of the Story</i>	Fireside Ballroom
3:30 pm – 3:40 pm	Break	
3:45 pm – 4:30 pm	Don Schrupp, CDW-retired: <i>Quantum GIS Plugins – A Brief Review</i>	Fireside Ballroom
4:35 pm – 5:20 pm	Shannon Albeke, Univ. of Wyoming, [Nicholas W. Case, Jerod Merkle]: <i>DEVISE: Enabling Natural Resource Managers through Integrated Cyberinfrastructure</i>	Fireside Ballroom

6:00 pm – 8:00 pm	Hacker’s Ball Poster Session and Networking with food and beverages	Fireside Lobby/Outdoor Courtyard
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**Tuesday, October 4<sup>th</sup>**

9:00 am	Meet in Parking Lot
10:00 am – 12:00 pm	Guided Tour: Anna Ruby Falls Recreation Area  <a href="https://www.fs.usda.gov/recarea/conf/recarea/?recid=10517">https://www.fs.usda.gov/recarea/conf/recarea/?recid=10517</a>
12:00 pm – 1:00 pm	Boxed Lunch
1:00pm	Load up for departure
2:00 pm – 4:00 pm	Guided Tour: Brasstown Bald Visitors Center and Recreation Area  <a href="https://www.exploregeorgia.org/hiawassee/outdoors-nature/hiking/brasstown-bald-visitors-center-recreation-area">https://www.exploregeorgia.org/hiawassee/outdoors-nature/hiking/brasstown-bald-visitors-center-recreation-area</a>
5:00 pm	Return to Unicoi

**Wednesday, October 5<sup>th</sup>**

8:00 am - 9:00 am	Registration Desk Open	Fireside Ballroom
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**Session 3**

Moderator – Susan Watson

9:00 am – 9:45 am	Emma Jones*, VDEQ: <i>Deploying R Shiny Applications for Science Nerds</i>	Fireside Ballroom
9:50 am – 10:35 am	Jessica Perkins, WVDNR, [ESA Sitka]: <i>WVDNR Wildlife Resources Section Data Systems Assessment</i>	Fireside Ballroom
10:35 am – 10:45 am	Break	
10:50 am – 11:35 am	Keith Hurley, NGPC: <i>Meet Your Presentation Team</i>	Fireside Ballroom
12:00 pm – 2:00 pm	OFWIM Annual Business Lunch and Committee Reports (agenda and reports follow Bios and Abstracts in these proceedings)	Fireside Lobby

\* virtual





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**Session 4  
 Resiliency Workshop**

2:15 pm – 3:00 pm	Topic 1: The Workplace, Staff and Constituents – Diversity, Retention, and Recruitment Moderator - Keith Hurley	Fireside Ballroom
3:05 pm – 3:50 pm	Topic 2: Wildlife and Habitats – Climate Change, Sea Level Rise, and Reduced Funding Moderator – Beth Stys	Fireside Ballroom
3:50 pm – 4:00 pm	Break	
4:00 pm – 4:45 pm	Topic 3: Resiliency of our Profession and How Restoring America’s Wildlife Act (RAWA) Will Help Moderator – Dyan Pursell	Fireside Ballroom

6:00 pm – 8:00 pm	Banquet and Awards Speaker: John Ambrose, GA DNR	Fireside Lobby
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**Thursday, October 6<sup>th</sup>**

**ESRI Workshop**

9:00 am – 12:00 pm	Environmental professionals, including wildlife managers, are tasked with collaborating and communicating scientific information. This is especially true in light of new policies and initiatives that seek to build and maintain infrastructure in more environmentally sensitive ways. In this 3 hour workshop, Esri will teach participants how to conduct home range analysis and presence-only species modeling (MaxEnt) in ArcGIS Pro, publish the results to ArcGIS Online, create an ArcGIS Story Map to interpret the information and build an ArcGIS Hub that provides context, transparency and open data for stakeholders.	Fireside Ballroom
12:00 pm	Conference Adjourns	





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## Biographies and Abstracts

### Welcome

#### **Dyan Pursell, Missouri Department of Conservation**

Dyan Pursell is a GIS Specialist in the Science Branch of the Missouri Department of Conservation. Dyan has been in the GIS field since 2004. She has a BA in History and a MA in Geography from the University of Missouri. Dyan spent the first 11 years of her GIS career at Missouri Resource Assessment Partnership (MoRAP) before moving to MDC in 2015. Her major duties include providing GIS expertise to a variety of research programs, developing LiDAR projects, and creating custom tool kits for non-GIS users. Dyan is currently serving as the President of OFWIM until October 2022. When not at work, Dyan spends her time reading, knitting, weaving, and running her small farm with her husband Scot

#### **Dr. Ryan Boyles, Deputy Director of the Southeast Climate Adaptation Science Center (SE CASC)**

Dr. Ryan Boyles is the Deputy Director of the Southeast Climate Adaptation Science Center (SE CASC), one of the nine regional centers that form the National and Regional Climate Adaptation Science Center network. He is an applied climatologist focused on using weather and climate science and data to support effective management of natural resources.

Ryan is an applied climatologist with emphasis on developing and delivering climate information and climate services relevant to decision making on various time scales for a range of sectors. His work is focused on how climate science can improve the understanding of impacts and adaptation for management of fish, wildlife, and ecosystems in the Southeastern US.

Over the past decade, he has lead development of climate datasets, web tools, and climate services targeted for use by human health, agriculture, and natural resource management sectors. These activities focus on the use of historical climate observations to assess the sensitivity of these sectors, experimental forecasting to provide short-term and seasonal guidance, and climate model downscaling to explore the potential changes in longer-term risk. Ryan led the development of more than 40 online tools for climate data search, analysis, visualization and applied decision support. He has received more than \$11M in external grant funding between 2007-2016, and has given more than 100 invited community and professional presentations since 2007.





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Session 1

**Beth Stys, US Fish and Wildlife Service, Co-author: Landscape Recovery Tool Team**

Beth Stys is the Regional Climate Adaptation Ecologist within the Southeast Science Applications and Migratory Birds Program of the USFWS, stationed in Tallahassee, FL. She has been in this new position since October 2021. She has been working on projects including a pilot landscape conservation initiative with DoD in Georgia, implementation of the Florida NRCS wildlife strategy, development of a framework for a regional chapter for SWAPs in the southeast, and the Landscape Recovery Tool. Prior to her current position, she spent 30 years working for the Florida Fish and Wildlife Conservation Commission (FWC), Fish and Wildlife Research Institute.

*The Landscape Recovery Tool – A Dashboard for Trust Species Information*

The southeast region of the US FWS has the national lead for 447 listed species and partners have recognized over 7,000 additional species of conservation need. Collaboration within the Service programs and with stakeholders is essential to achieve species recovery. The number of recovery documents has significantly increased with the number of new species in the list. Implementing effective recovery efforts for our listed species based on hundreds of documents is a daunting endeavor. The Landscape Recovery Tool (LRT) is being developed to synthesize, standardize and analyze the existing information on Service recovery plans and five-year review documents to maximize species recovery and restore ecosystem functions. The LRT is designed to improve the effectiveness and performance of our conservation actions by avoiding duplication, inconsistencies, competition, and biases. The purpose of the LRT is to: further collaborate across and within conservation agencies, identify and assist with prioritizing actions, species, habitats, and landscape conservation opportunities, and assist managers and biologists with bringing focus, alignment, and accountability to their conservation decisions. The LRT is being developed in Power BI (Microsoft) and will, in later phases, be linked to the FWS ECOSphere platform. A user interface dashboard has been developed to allow users to filter content by geography (states), habitats, species, taxa, and recovery actions.

**Dyan Pursell, Missouri Department of Conservation, Co-author: Deb Hudman**

Dyan Pursell is a GIS Specialist in the Science Branch of the Missouri Department of Conservation. Dyan has been in the GIS field since 2004. She has a BA in History and a MA in Geography from the University of Missouri. Dyan spent the first 11 years of her GIS career at Missouri Resource Assessment Partnership (MoRAP) before moving to MDC in 2015. Her major duties include providing GIS expertise to a variety of research programs, developing LiDAR projects, and creating custom tool kits for non-GIS users. Dyan is currently serving as the

President of OFWIM until October 2022. When not at work, Dyan spends her time reading, knitting, weaving, and running her small farm with her husband Scot.





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*Citizen Science: Statewide Survey of Ticks and Tick-Borne Pathogens*

There is a pressing need to increase tick surveillance in Missouri. The state has a diverse and abundant tick community that is poorly understood, and new human pathogens transmitted by ticks are being discovered. Citizen science is when members of the public collaborate with scientists to collect data and samples. Using citizen science, we can develop information on patterns in tick borne health issues statewide and simultaneously convert the public from passive recipients of information to active participants in scientific study. A.T. Still University (ATSU) and the Missouri Department of Conservation (MDC) formed a collaboration to develop a comprehensive map that illustrates what tick species are present at the county level and the geographic distribution of what pathogens those ticks are carrying.

**Joe Weber, Virginia DCR Natural Heritage Program**

Joe Weber leads a team of spatial ecologists, conservation planners, and GIS specialists in the Information Management section of the Virginia Natural Heritage Program in the Virginia Department of Conservation and Recreation. He and his staff catalog locations of rare species and natural communities and conduct geospatial analyses to model and prioritize habitats to develop products for conservation planning and environmental review.

*ConserveVirginia, Virginia's Land Conservation Strategy*

Launched in April 2018, ConserveVirginia provides a data-driven approach to prioritizing land conservation efforts in Virginia, building on spatial data developed and provided by an array of state and federal agencies, universities, and conservation non-profits. The strategy prioritizes the most important and resilient lands from a statewide perspective, focuses limited land-conservation resources towards those areas, and measures progress made towards achieving multiple conservation goals. Developed to identify how and where to achieve the best conservation outcomes, ConserveVirginia has already shown success in steering land conservation actions to protect natural habitats and ecosystems; floodplains; water quality; working agricultural and forest lands; and cultural and scenic resources, while seeking public access opportunities. ConserveVirginia, codified into law in 2021, and now on its third version, identifies 7.8 million acres of unprotected farmlands, natural lands, and culturally significant sites as high conservation priorities. This presentation will provide an overview of its implementation, improvements, successes stories, and current maps.

Session 2

**Laysa Venigalla, Missouri Department of Conservation, Co-author: Dr. Fang Qiu**

Laysa Venigalla is from Vijayawada, Andhra Pradesh, on the east coast of India. After completing her Bachelor's degree, Laysa was accepted into the Department of Geography Master's program at the University of Missouri-Columbia. After graduating in May 2018, Laysa entered the PhD Program at UT-Dallas, majoring in Remote Sensing. She expects to graduate in May 2023. Her







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dissertation is titled “Object based Image classification using Fully Connected Convolution Neural Networks”. In her spare time, Lasya enjoys listening to music, drinking coffee, spending time with her husband, Subhash, and has started learning to play the violin.

*Object Based Image Classification Using Fully Connected Convolution Neural Networks*

Machine learning algorithms have long been used in classifying remote sensing (RS) images. A recent development in machine learning is deep learning (DL), especially the Convolution Neural Networks (CNN), which quickly becomes one of most used algorithms for processing remote sensing data. Simultaneously, Geographic Object-Based Image Analysis (GEOBIA) is a widely accepted paradigm for analyzing RS images, due to its capability to consider both spatial and spectral characteristics of a RS image. Incorporating DL into GEOBIA for classifying RS data may improve the overall image classification accuracy, but the constraint is incompatibility of the shape and size of the image objects and training image chips for DL. The image objects generated for object-based image classification vary in shape and size, while shape and size of the training image chips for CNN require to be fixed. To perform GEOBIA using DL, several studies generated multiple image chips to cover a single image object and used these image chips to train the DL model. The disadvantage of covering a single image object via multiple image chips is that an image object with a bigger size will need a higher number of image chips compared to that for an image object with a smaller size. For example, an image object of ‘river’ class is often bigger than an image object of ‘building’ class. As a result, there exists a disproportionality of training image chips among different classes for DL. In this paper, we propose to generate image objects with a fixed size by setting a small segmentation scale for the image. As a result, large features such as rivers will be over-segmented into multiple images objects. Fixed sized image chips are then derived by enclosing the resulting small image objects and fed into a fully connected CNN as training sample. After the training, all small image objects are classified using the trained fully connected CNN. The new method has achieved an overall classification accuracy close to 93%, while the total classification accuracy using default segmentation scale is 86%. This paper also explores the impact of segmentation scale and disproportionality on classification accuracy.

**Keith Hurley, Nebraska Game and Parks Commission**

Keith is a Fish and Wildlife Specialist – Database Manager with the Nebraska Game and Parks Commission. He holds a B.S. from South Dakota State University in Fish and Wildlife Science and a M.S. in Zoology (Fisheries Ecology) from Southern Illinois University in Carbondale. Current job duties include creation, maintenance, and operation of fisheries division databases; data-mining of divisional data stores; coordination of the statewide creel project; statewide fisheries research; fisheries human dimensions research; and whatever other odd jobs that can be assigned that might possibly involve the use of electrons and a keyboard.







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*FinCatch DE – The Rest of the Story*

FinCatch is the NGPC Fisheries Division’s new standard sampling database and analysis system. The system provides a tremendous increase in capabilities over the previous database. Today we will explore the new mobile, electronic-entry platform for the system – FinCatchDE. The application is a progressive web app designed for disconnected use and pushes field data to a centralized, SQL server. FinCatchDE allows for the efficient capture of individual fish data (length, weight, gender, tag/marks, samples taken), length-frequency data, and non-length based data. In addition, we will talk about the development of FinCatchDE and hear the rest of the story.

**Don Schrupp, Colorado Department of Wildlife (retired)**

Don Schrupp is a wildlife ecologist (retired from the Colorado Division of Wildlife in 2006) and a founding member of OFWIM. At CDOW he oversaw their Wildlife Resource Information System, was Principal Investigator for the Colorado Gap Analysis Project and Co-principal Investigator for the Colorado Component of the Southwestern Regional Gap Analysis. He enjoys bluegrass music events and dabbling with Open Source software in the Linux environment, such as QGIS, PostGIS, MySQL and PostgreSQL. He is a past OFWIM President (2000) and has chaired or participated in a number of OFWIM Committees.

*Quantum GIS Plugins – A Brief Review*

From the Quantum GIS Website: Quantum GIS (QGIS ) has been designed with a plugin architecture. This allows many new features and functions to be easily added to the application. Some of the features in QGIS are actually implemented as plugins. Core Plugins are maintained by the QGIS Development Team and are automatically part of every QGIS distribution. They are written in one of two languages: C++ or Python. Most of External Plugins are currently written in Python. They are stored either in the ‘Official’ QGIS Repository at <https://plugins.qgis.org/plugins/> or in external repositories and are maintained by the individual authors. Detailed documentation about the usage, minimum QGIS version, home page, authors, and other important information are provided for the plugins in the Official repository. For other external repositories, documentation might be available with the external plugins themselves. External plugins documentation is not included in the manual. I will present an overview of QGIS plugs (of which there are 843 to choose from), and provide some additional detail on some of the interesting offerings.

**Shannon Albeke, University of Wyoming, Co-authors: Nicholas W. Case, Jerod Merkle**

Dr. Shannon Albeke has been part of WyGIS since 2010 and is a Senior Research Scientist and Faculty member. His primary research focuses around applied GIS, programming and statistics. As such, he provides research support for faculty and graduate students within the Program in Ecology as well as many other departments and programs within UW. His teaching centers on database management and applied GIS methods using primarily open source software. Shannon earned a B.A. in Environmental Sciences with minors in Geography and Geology in 1997 from the University of Colorado – Boulder. He then began an 8-year career as an Aquatic





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Habitat Biologist for the Colorado Division of Wildlife, and by necessity, learned how to be a Spatial Data Scientist. In 2006, he resigned from CDOW to become a PhD student at the University of Georgia where he worked on Coastal River Otters in Prince William Sound, AK, earning his PhD in 2010.

#### *DEVISE: Enabling Natural Resource Managers through Integrated Cyberinfrastructure*

Harnessing the data revolution has been particularly arduous for on-the-ground land and wildlife managers because of the data skills necessary to download, organize, visualize, and synthesize large amounts of data. For instance, without strong data science skills, a state, federal, or non-governmental manager out of Powell, Wyoming would have a tough time creating a spatially explicit graph of how summer max temperature, winter precipitation, or date of spring run-off all have changed over the last few decades – even though the data are freely available. Over the last 2 years, we have been developing DEVISE (Derived Environmental Variability Indices Spatial Extractor) to overcome this disconnect between the data revolution and on-the-ground application by developing a database and analytical system to calculate derived metrics from federated data products and algorithms; and a front-end, easy-to-use interface for users to download and visualize metrics for specific management areas. Our initial effort has yielded an alpha-version of an integrated data system, developed in close consultation with Wyoming Game and Fish Department (WGFD) staff, to streamline how environmental data can be used by land managers and biologists, which ultimately will facilitate informed decision making such as where to conduct habitat restoration, how many animals to harvest, and optimal placement of future development (e.g., wind farms). While DEVISE (<https://devise.uwyo.edu/>) is up and running well, several crucial features and cyberinfrastructure are needed to fully empower managers and associated management decisions. In this presentation we will cover our data pipeline and future aspirations, hopefully inspiring others with this workflow and outreach tool.

## Session 3

### **Emma Jones\*, Virginia Department of Environmental Quality**

Emma Jones is a Water Quality Assessment Team Leader and Freshwater Probabilistic Monitoring Coordinator who works to identify and improve analytical processes across programmatic boundaries for the Virginia Department of Environmental Quality. This R and Linux hack has recently developed an internal R server to increase access to internal data resources and advance analytical capabilities of VDEQ employees regardless of their technological or statistical experience.

#### *Deploying R Shiny Applications for Science Nerds*

The Shiny package allows R users to seamlessly transform complicated scripts into user friendly tools, but sharing these tools has been a challenge for government entities. The specific technological resources required to distribute these data products can be problematic for





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government IT departments. The Virginia Department of Environmental Quality (VDEQ) has implemented multiple sharing techniques on its journey to overcome challenges unique to government IT protocols and developed a centralized, internal publishing platform to host shiny apps, interactive/automated reports, dashboards, shared data repositories, and connect to internal databases using the RStudio Connect software. By sharing our seven year journey using various deployment platforms, each with their own benefits and pitfalls, we aim to guide interested parties more efficiently through the labyrinth of sharing options and governance hazards. By implementing a centralized sharing platform, VDEQ can harness the power of a few skilled R developers to create novel tools, visualizations, quality assurance protocols, and business efficiencies across programmatic boundaries, saving the agency time, money, and improving data products.

**Jessica Perkins, West Virginia Department of Natural Resources, Co-author: ESA Sitka**

Jessica Perkins is a Certified GIS Professional with over twenty years of geospatial and data management experience working with several state and federal agencies across the United States and abroad. She has worked for the West Virginia Division of Natural Resources for seven years. Jessica leads the GIS and Technical Support Program, Operations Unit, Wildlife Resources Section, supporting Game Management, Fish Management, Environmental Coordination, Wildlife Diversity and Natural Heritage with geographic information systems, data, and planning needs. Jessica holds a Master of Forestry with a Certificate in Geospatial Information Technology (2007) and a Bachelor of Science in Wildlife Science (2000) from Virginia Tech.

*WVDNR Wildlife Resources Section Data Systems Assessment*

The West Virginia Division of Natural Resources, Wildlife Resources Section (WRS) recently conducted a Data Systems Assessment to identify the best path forward to meet current and future information management and reporting needs for WRS staff and key partners.

The objectives included:

- Understand and document the current portfolio of applications, databases, and processes under WRS oversight.
- Provide an assessment of data management systems, key audiences, and user needs associated with managing and reporting on agency goals and activities.
- Conduct detailed analysis to define an action for each based on risk and strategic alignment.
- Consider a range of alternatives for system improvements.

The WRS collects and manages a wide range of data. Although some data centralization exists (e.g., Electronic Licensing and Game Check System, Biotics 5, Geographic Information System), each Unit has independently managed the bulk of its tabular data, mostly in Microsoft Access databases and Excel spreadsheets. Individual employees or subgroups dictate data structures, standards, storage locations, backup protocols, etc. Consequently, data is disparately managed





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both within Units and within the WRS as a whole. This has worked well for a number of years but the WRS wishes to modernize data processes, and improve data integrity, collaboration, and security.

The WRS is in the process of developing a request for proposal (RFP) for a custom cloud database application. The aim of this presentation will be to present findings from the Data Systems Assessment project and collect input and lessons learned from colleagues in other states to better refine our RFP and data needs moving forward.

**Keith Hurley, Nebraska Game and Parks Commission**

Keith is a Fish and Wildlife Specialist – Database Manager with the Nebraska Game and Parks Commission. He holds a B.S. from South Dakota State University in Fish and Wildlife Science and a M.S. in Zoology (Fisheries Ecology) from Southern Illinois University in Carbondale. Current job duties include creation, maintenance, and operation of fisheries division databases; data-mining of divisional data stores; coordination of the statewide creel project; statewide fisheries research; fisheries human dimensions research; and whatever other odd jobs that can be assigned that might possibly involve the use of electrons and a keyboard.

*Meet Your Presentation Team*

Communication skills are a necessary skill for any information manager; however, giving a presentation is one of the scariest tasks that many of us undertake in our jobs. In addition, as a profession, we're not very good at it either. We all have a team available to help us get better at giving presentations if we would only utilize them. Join me today, meet that team, and learn some concepts that can help you give a talk like you have always dreamed of.

Banquet

**Jon Ambrose, Georgia Department of Natural Resources**

Jon Ambrose is Chief of the Wildlife Conservation Section of the Georgia Department of Natural Resources, Wildlife Resources Division. His primary duties include statewide coordination of research and resource management projects and implementation of the State Wildlife Action Plan. He also assists in environmental outreach, conservation planning, land protection, review of policy and legislation, and development of funding sources for wildlife conservation. Jon received a B.A. in Biology and M.S. in Ecology from the University of Tennessee and a Ph.D. in Ecology from the University of Georgia.



# OFWIM Business Meeting Agenda

## Hybrid Virtual Conference

October 5, 2022

1. Call to Order – Dyan Pursell
2. Determination of Quorum (10% of registered members)
3. Old Business
  - a. Approval of 2021 Business Meeting Minutes (posted on website)
  - b. OFWIM Strategic Planning – Action Results & Next Steps – Dyan Pursell
  - c. Officer Reports
    - i. President – Dyan Pursell
    - ii. Secretary – Susan Watson
    - iii. Treasurer – Michael Barbour
    - iv. Member-at-Large – Don Schrupp
  - d. Committee Chair Reports
    - i. Communications, Membership & Outreach – Heather Power
    - ii. Conference Planning – Amy Martin
    - iii. Elections, Nominations & Awards – Sabra Tonn
    - iv. Training & Education – Chelsea Krause
4. Awards
  - a. Innovation Award – Sabra Tonn
  - b. Service Awards – Dyan Pursell
5. Elections – Sabra Tonn
  - a. President Elect Nominee
    - i. Lynn Barrett
  - b. Member-at-Large Nominee
    - i. Jessica Perkins
  - c. Election results and installation of new offices – delayed until mid-October
6. President's Service Award for Dyan Pursell – Amy Martin
7. New Business – Amy Martin
  - a. New President's Message
  - b. Vote on Proposed Amendments of Bylaws
  - c. 2023 OFWIM Annual Meeting location and dates
8. Comments and Discussion
9. Adjourn
10. Breakout to Committee

## Officer Reports

President – Dyan Pursell

1. Conducted monthly meetings of EXCOM
2. Attended monthly meetings of CPC
  - a. Build event in Cvent
3. Continue with Strategic Planning. Implement Action Items.
  - a. On 2/16/2022 I requested that all committees work toward achieving Goal 1 by 3/31/22. I suggested they update Groupsite with members.
  - b. On 4/6 I requested that all committees work toward achieving Goals 2, 3, & 4 by 8/1/2022.
  - c. 4/20/22 GroupSite Manager discussion
  - d. 7/13/22 Venmo/Paypal account discussions for upcoming conference
4. Attempted to attend monthly meetings of ENA (I think I only made it to 3 or 4)
5. Review Proposed Bylaws changes submitted by CMO. Move them forward to a full vote at the meeting.
6. Sent quarterly President messages for Newsletter
7. Sent email reminder to renew memberships
8. Sent Welcome emails to each new member of OFWIM

*Goal 1: To continue to support and enhance networking opportunities*

*Goal 2: Directly target recruiting new members*

*Goal 3: Provide relevant training*

*Goal 4: Recruit more member articles for the newsletter*

*Goal 1 actions:*

**CMO** has met the Goal 1: To continue to support and enhance networking opportunities” by keeping the CMO groupsite up to date. We continue to update the groupsite to include new membership, update existing membership and upload our monthly meeting notes (special thank you to Susan)!

**CPC** has met Goal 1 by updating the Groupsite. Michael posted a Featured Announcement to Dashboard about the upcoming conference.

**ENA** has met Goal 1: To continue to support and enhance networking opportunities” by keeping the CMO groupsite up to date. We continue to update the groupsite and have updated members and upload forms that can then be utilized annually. These forms include the Student Scholarship and Innovation Award.

**EXCOM** has updated the Groupsite and began using the Calendar option in Groupsite to schedule upcoming meetings. Dyan created a folder in Media for the “2022 Conference at Unicoi Photos” and hopes everyone will contribute. Susan posted monthly and archived Excom minutes to the Dashboard.

**TNE** has updated the Groupsite. Sabra posted the Innovation Award Application to Dashboard.



**Member use:** Dyan, Susan, and Michael posted jobs to the Groupsite Discussions. Dyan posted some Captain Jack photos. Rebecca posted a Call for Abstracts for ETIS in November. Rebecca posted a call for 2022 National AFS Symposium. Michael posted a webinar series on climate. Michael posted a link to free R and R Studio courses.

*Goal 2 actions:*

**CMO** Committee-We have removed the requirement for students to have faculty advisor signature when applying for membership which we identified as easing the burden of new student membership and therefore hopefully\* recruiting new membership.

**CPC** - Amy invited Karen, Susan, Lynn, and MaryEllen to join

**EXCOM** – Dyan reached out to a new contact at UGA with information about the upcoming conference “in their backyard”. Dyan invited a former hourly to attend and to apply for the student scholarship.

*Goal 3 actions:*

**CPC** – Organized ESRI Storymaps Workshop for Annual conference

*Goal 4 actions:*

**CMO** Committee- We created a new section of the newsletter titled “Data Dash” where members submit new and interesting articles for each new release of the newsletter. The first Data Dash section was a major success for the winter newsletter.

## Officer Reports

### Secretary – Susan Watson (for 2022 Business Meeting at Annual Conference)

1. Recorded the minutes of monthly Executive Committee (ExCom) meetings
  - a. Distributed minutes to ExCom members
  - b. Posted archival copies to the OFWIM Groupsite ExCom Folder, under the Home Folder's Committee Folders
2. Maintained the OFWIM membership database
  - a. Entered new 2022 members (10 as of 9/27/22)
  - b. Recorded 2021 membership renewals for 2022 (45 as of 9/16/22, and two of these also renewed for 2023)
  - c. 2021 memberships will expire after 2022 Conference (29 as of 9/16/22)
  - d. Created updated email distribution lists as needed. Supplied member information to President for welcome and renewal letters; invited new members to join Groupsite
  - f. Maintained electronic copies of all 2022 (& 2023) membership renewals processed by the Treasurer
3. Served on the Communications, Membership, and Outreach Committee
  - a. Maintained current member email distribution list
  - b. Sent email notices (announcements and one membership renewal notice) to members via the email distribution list (4 mailings as of 9/16/22)
  - c. Provided updated email lists for a membership renewal notice and for three Newsletter distributions (new online distribution for the Newsletter, no longer sent through OFWIM email)
  - d. Recorded minutes of monthly committee meetings; posted archival copies to the OFWIM Groupsite Communications, Membership & Outreach Folder, under the Home Folder's Committee Folders
4. Business Meeting Minutes
  - a. Will compile 2022 Business Meeting Minutes, to be submitted and posted to the OFWIM website as Minutes of Business Meeting under 2022 Conference Archives.

Switched to using Wave online app for managing financial accounts information.

## Account Balances

Date Range: Sep 01, 2021 to Aug 31, 2022

ACCOUNT	STARTING BALANCE	DEBIT	CREDIT	NET MOVEMENT	ENDING BALANCE
<b>Assets</b>					
OFWIM Checking (079)	\$39,083.04	\$5,902.67	\$7,894.57	-\$1,991.90	\$37,091.14
PayPal	\$1,912.80	\$2,166.00	\$3,337.39	-\$1,171.39	\$741.41
<b>Total Assets</b>	<b>\$40,995.84</b>	<b>\$8,068.67</b>	<b>\$11,231.96</b>	<b>-\$3,163.29</b>	<b>\$37,832.55</b>
<b>Income</b>					
Account - Interest		\$0.00	\$48.14	\$48.14	
Conference - Raffle		\$0.00	\$385.00	\$385.00	
Conference - Silent Auction		\$0.00	\$392.00	\$392.00	
Conference Registration		\$0.00	\$1,337.14	\$1,337.14	
Membership		\$0.00	\$30.00	\$30.00	
PayPal T ransfer		\$0.00	\$4,206.39	\$4,206.39	

**Income**

Program Income – Membership Dues	\$0.00	\$1,670.00	\$1,670.00
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<b>Total Income</b>	<b>\$0.00</b>	<b>\$8,068.67</b>	<b>\$8,068.67</b>
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**Expenses**

Conference - planning	\$1,114.37	\$0.00	\$1,114.37
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Conference - Swag	\$5,504.99	\$0.00	\$5,504.99
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Equipment	\$90.82	\$0.00	\$90.82
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Fees - Groupsite	\$600.00	\$0.00	\$600.00
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Fees - PayPal	\$60.55	\$0.00	\$60.55
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Fees - Software license	\$716.02	\$0.00	\$716.02
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Fees -Tu rbobridge	\$55.56	\$0.00	\$55.56
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Fees - WebEx	\$189.14	\$0.00	\$189.14
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Operating Expense	\$166.00	\$0.00	\$166.00
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Postage & Delivery	\$469.41	\$0.00	\$469.41
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Transfer to IAA	\$2,265.10	\$0.00	\$2,265.10
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<b>Total Expenses</b>	<b>\$11,231.96</b>	<b>\$0.00</b>	<b>\$11,231.96</b>
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<b>Total for all accounts</b>	<b>\$19,300.63</b>	<b>\$19,300.63</b>	
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# 2021 Annual Conference Final Accounting

## Total Income

\$ 2,900.00

## Total Expenses

\$ (5,375.72)

## Net Total

\$ (2,475.72)

Income			
Registrations			
Type	Number	Fee	Total
Virtual	48	(\$ 50.00)	(\$ 2,400.00)
<b>Income from Registration</b>			<b>(\$ 2,400.00)</b>
Sponsors			Amount
Timmons Group	Advertising		(\$ 250.00)
Surdex Corporation	Advertising		(\$ 250.00)
<b>Sponsorship Total</b>			<b>(\$ 500.00)</b>
<b>Total Income</b>			<b>(\$ 2,900.00)</b>
<b>Net Total</b>			<b>(\$ (2,475.72))</b>

Expenses			
Type	Description	Amount	Cost
Fee	cvent registration fee	(\$ (3.95)	(\$ (189.60)
Fee	taxes		(\$ (11.21)
Fee	credit card processing fees	4.95%	(\$ (74.26)
Fee	PayPal fees		(\$ (10.94)
License	WebEx		(\$ (27.08)
Scholarship	Transfer to Scholarship Fund		(\$ (240.00)
SWAG	SWAG (4imprint)		(\$ (4,504.63)
SWAG	Postage for shipping swag		(\$ (318.00)
<b>Total Expenses</b>			<b>(\$ (5,375.72))</b>

<b>OFWIM Student Scholarship</b>		
<b>2020 End of Year Student Scholarship Account Balance</b>		<b>(\$ 5,616.44)</b>
<b>2021 Conference</b>		
<u>Type</u>	<u>Description</u>	<u>Value</u>
Income	2021 Meeting Registration - 10% of Registration Revenue	(\$ 240.00)
Income	2020 Raffle Revenue	(\$ 385.00)
Income	2020 Silent Auction Revenue	(\$ 392.00)
Expense	PayPal fees	(\$ (26.51)
<b>2021 End of Year Student Scholarship Account Balance</b>		<b>(\$ 6,606.93)</b>



Member – at – Large – **Don Schrupp**

This was my first opportunity to serve on the OFWIM Executive Committee in a number of years. It's always eye-opening to experience the workload that the OFWIM Executive Committee takes on in support of OFWIM. Thanks for the opportunity. In accordance with the OFWIM By-Laws, The Member-at-Large . . .

Serves as advisor to the Executive Committee, and is to coordinate special projects at the direction of the President or Executive Committee.

I did participate in such an advisory capacity, but was assigned no special projects by the President or Executive Committee. I did offer to coordinate aspects of the "Hacker's Ball" as the President or Executive Committee should see fit to request.

The Member-at-Large is responsible for coordinating the selection of the next years meeting (two years out from the meeting date elected).

In regards to this duty, I note that since the previous two years Annual Meetings were targeted for Ft. Collins, Colorado but due to COVID-19 concerns, those meetings were virtual ones (2020, 2021). And for this years meeting (2022), Beth Stys had been pro-active enough to have arranged for our meeting at Unicoi State Park and Lodge, near Helens, Georgia. It is my understanding that the OFWIM Executive Committee intends to hold the OFWIM 2023 in Ft. Collins, Colorado.

The Member-at-Large must be a member of the Conference Planning Committee and can participate on other committees, if desired.

I did participate on the OFWIM 2022 Conference Planning Committee, joining in on as many calls as I could manage. While I had anticipated more 'online' (Web-Ex, Google Meeting, etc.) meetings, the availability of a 'dial-in' option afforded me at least some connectivity while I was out-of-town and away from network connectivity. I hope my participation level was satisfactory.

In addition to the OFWIM Executive Committee and Conference Planning Committee, I was also a member of the OFWIM Communications, Membership and Outreach Committee. I did miss a number of those conference calls. I offer my sincere apology for that. I noticed I am listed as a member of the Data Standards and Technology Trends Committee, but note I did not receive any communications from them this year.

I do thank OFWIM for the privilege to serve as Member-at-Large this year and am looking forward to our return to 'in-person' meetings this year.

## Committee Reports

Communications, Membership, & Outreach

<b>Chair:</b>	Heather Power
<b>Vice-Chair:</b>	Susan Watson (Secretary)
<b>Website Manager:</b>	Karen Horodysky (backup Dyanne Cortez)
<b>Newsletter Editor:</b>	Heather Power
<b>Newsletter Content Manager:</b>	Susan Watson
<b>Social Media Manager:</b>	Karen Horodysky
<b>Membership Manager:</b>	Susan Watson (Secretary)
<b>Travel Grants Manager:</b>	Julie Prior-Magee
<b>Historian (ad hoc):</b>	Donald Schrupp
<b>Additional Members:</b>	MaryEllen Wickett, Chris Gerecke, Mike Bialousz

### 2022 Accomplishments

#### In Accordance with the OFWIM CMO 2022 “Goals and Objectives”:

1. **Continue to support and enhance networking opportunities**
  - a. **CMO Groupsite**- Groupsite, our social media tool for OFWIM members only, is used for discussion forums, posting announcements, sharing calendar events, and file storage. We continue to update the groupsite to include new membership, update existing membership and upload our monthly meeting notes
  - b. **Public Website** – Karen Horodysky serves as the primary website master and is doing an excellent job developing the website to improve navigability and accessibility. The CMO has worked through approving new website format and layout inspired by other natural resource management websites. The site is kept updated with news, publications, and other primary module updates. Dyanne has been a huge support to Karen throughout this process.
  - c. **VYOND video** – Heather Power has created a new Vyond video to advertise the In-Person 2022 Conference and Business Meeting.
  - d. **Facebook** – The Facebook page has been maintained with regular updates along with the website. The page currently has 200 likes, an increase of 41 since last year.
  - e. **YouTube** – Vyond videos continue to be posted on the YouTube channel, good opportunity to post more outreach materials. Total of 5 OFWIM YouTube videos currently, total of 105 views.
2. **Directly target recruiting new members**
  - a. **Faculty Advisor Signature Removal** - We have removed the requirement for students to have faculty advisor signature when applying for membership which we identified as easing the burden of new student membership and therefore recruiting new membership.
  - b. **Email Lists** – maintained an email list of current members plus members from the previous two years.

- c. **Online payment and membership**– Continue to use PayPal as the best option to allow the convenience of paying for a membership via credit card. These features were available to the membership in summer 2017 and continue to be very well received by the membership.
- d. **Annual Conference** – encouraged both members and non-members to attend the annual conference.
- e. **Renewals** – maintained individual membership renewals from previous year to current year. Sent out renewal reminders to past OFWIM members according to the Membership Rules and Renewal Protocol.
- f. **Summary of OFWIM membership from this year (as of 8/22/2022) plus the past 7 years:**

	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Individual Memberships</b>	33	38	36	39	38	34	18	25	18
<b>Organizational Memberships</b>	8	8	8	9	10	9	7	8	7
<b>Total</b>	84	83	84	85	99	92	65	81	57

3. **Goal 3: Provide relevant training**

4. **Goal 4: Recruit more member articles for the newsletter**

- a. We created a new section of the newsletter titled “Data Dash” where members submit new and interesting articles for each new release of the newsletter
- b. The first Data Dash section was a major success for the winter newsletter.
- c. The newsletter was posted on the OFWIM website and Groupsite
- d. Newsletter highlights include:
  - i. President’s Message
  - ii. Virtual Conference announcements and call for abstracts
  - iii. Officer Elections
  - iv. Innovation award call
  - v. Vyond Videos
  - vi. Data Dash section
    - 1. NOTICE: Heather Power took over creation and compilation of newsletter. Susan Watson handles newsletter outreach and call for new content.

5. **Professionally complete the duties of the committee.**

- a. **Conference calls** – the committee met monthly via conference call to discuss ongoing committee business. Notes were taken during each meeting, circulated among members for comment, and posted to the OFWIM Groupsite.
- b. **Newsletter creation** – the committee compiled newsletter meeting materials and approved content and timeline prior to distribution.

**Annual report** – prepared this annual report of the CMO’s 2022 activities for presentation during the annual conference business meeting, inclusion in the

## Conference Planning

**Committee Members:** Amy Martin, Andrew Treble, Beth Stys, Chelsea Krause, Dyan Pursell, Mary Ellen Wickett, Michael Barbour, Susan Watson, Karen Horodysky, Keith Hurley, Sabra Tonn, Don Schrupp, Lynn Barrett

The Conference Planning Committee (CPC) met formally every month to develop and plan the OFWIM 2022 Conference. The contract at Unicoi was already in-place (Thanks, Beth), so the committee had a great framework from which to start planning. With support from OFWIM, Beth and Amy visited Unicoi in June and met with the staff on-site, developing menus and confirming logistics, and also toured some local areas and attractions to get a feel for the area.

We appreciate attendance by our Speakers – Ryan Boyles from the Climate Adaptation Science Center, who we heard from on Monday, and John Ambrose from GA DNR, who we will hear from tonight. And, as always, we greatly appreciate support from our Sponsors, ESRI, Timmons and VDWR and look forward to our ESRI Workshop on Thursday.

While we had hoped for a larger crowd for our first in-person meeting since 2019, we appreciate the small but mighty group of participants we do have this year and hope that everyone found this week's activities valuable.

We look forward to seeing you, and other OFWIM members and associates, in Fort Collins in 2023!

## Elections, Nominations, and Awards

ENA received 3 nominations this year, and is putting forward 2 candidates for open positions:

### Member at Large:

#### Jessica Perkins

Jessica Perkins is a Certified GIS Professional with over twenty years of geospatial and data management experience working with several state and federal agencies across the United States and abroad. She has worked for the West Virginia Division of Natural Resources for seven years. Jessica leads the GIS and Technical Support Program, Operations Unit, Wildlife Resources Section, supporting Game Management, Fish Management, Environmental Coordination, Wildlife Diversity and Natural Heritage with geographic information systems, data, and planning needs. Jessica holds a Master of Forestry with a Certificate in Geospatial Information Technology (2007) and a Bachelor of Science in Wildlife Science (2000) from Virginia Tech.

### President Elect:

#### Lynn Barrett

Lynn Barrett is a GIS Analyst with Tennessee Wildlife Resources Agency (TWRA) where she has been employed since 1995. Her work at TWRA has been devoted to supporting agency staff in data management and decision making and ensuring the public has access to user-friendly resources for enjoying the great outdoors of Tennessee. She is constantly researching and learning about new ways to implement GIS technology in support of TWRA's programs and research. Lynn received her B.S. in Geography with an emphasis in Remote Sensing and GIS from Middle Tennessee State University in 1995 and began working with TWRA soon thereafter. She is currently a member of the Conference Planning Committee. Lynn makes her home in Smyrna just outside of Nashville with her husband Steve and granddaughter Hollie. Learning new things is a passion of Lynn's and encouraging others to learn is important to her.

ENA is awarding a student scholarship this year to Lasya Venigalla. In addition to the usual \$1000 award towards her research and \$1000 toward next year's conference travel, and the conference registration waiver for both years, we are going to award Lasya \$400 towards her travel this year as well.

Training and Education Committee

No Report