

October 19-21, 2022

Richland, WA

35th Annual Conference



*Adaptive Lake Management
to Prepare for the Future:
The Future Ain't What It Used to Be*

WASHINGTON STATE LAKE

PROTECTION ASSOCIATION

WALPA Conference Special Events:

Evening Social and Poster Presentations

Please join us on Thursday night for poster presentations, appetizers, drinks, and good company. It's a great time to unwind and network with fellow WALPA members. Refreshments provided with the first drink ticket on the house.

Annual Raffle and Silent Auction

During the evening social, WALPA will be holding its annual raffle & auction to raise funds for student scholarships, research, and outreach. The silent auction and raffle will also have a variety of items including outdoor gear, sports swag, artwork, books, beer and wine, and gift certificates from local breweries and restaurants. You must be there for the raffle, but not the silent auction. We hope to see you there.

2022 Secchi Award

The Secchi Disk Award is nominated by the WALPA membership and voted on by the Board of Directors to honor a member in recognition of their outstanding contribution to science, management, or the protection of lakes in Washington or Idaho. In 2022, the Board is honored to present the Secchi Disk Award to Joan Hardy. Joan recently retired from a long career researching Harmful Algal Bloom issues and developing HAB guidelines for the Washington State Department of Health. She is a long-time and active member of WALPA having presented her work and moderated HAB sessions at numerous annual conferences. Joan also served 9 years on the WALPA Board as a Board Director and WALPA Secretary from 1995 through 2021. WALPA very much appreciates her contributions to WALPA and our lakes.

Photo Contest

Presented by the Washington State Noxious Weed Board

The Washington State Noxious Weed Control Board (WSNSW) would like to create a waterproof reference book with photos for identifying aquatic plants in Washington. Submit your best aquatic plant photos to be part of the publication! WSNSW will offer worthwhile prizes to the winners. All entries will become the property of WSNSW to be used, with photo credits, in future publications.

Student Scholarships

Nancy Weller Memorial Scholarship for PhD (\$1,250)

Samantha Fung - Sam is in the Civil Engineering graduate program at University of Washington, pursuing a PhD in the biochemistry and hydrodynamics of lakes. Her studies focus on arsenic-contaminated lakes in the South-Central Puget Sound.

Dave Lamb Memorial Scholarship for MS (\$1,000)

Tessa Code - Tessa is a graduate student in the University of Washington's School of Aquatic and Fisheries Science. She is researching the effect of artificial light at night on the predation of juvenile sockeye and pelagic prey fish in an urbanized lake.

Undergraduate WALPA Scholarship (\$500)

Hailey Germeau and Heaven Denham - They are both pursuing BAs in Environmental Science: Geosciences at the University of Washington, Tacoma. They are both studying Mount St. Helens' Spirit Lake. Heaven is looking at the impact of dry deposition on nutrient inputs to the lake, and Hailey is quantifying the impacts of the New Zealand mud snail on lake ecology.

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Adaptive Lake Management to Prepare for the Future: The Future Ain't What It Used to Be

SESSION SCHEDULE

Wednesday, Oct. 19

1:00 PM– 5:00 PM

Workshop:

AQUATIC INVASIVE SPECIES

- Ben Peterson, *King County Noxious Weed Program*
 - Brian Turner, *Washington Department of Fish and Wildlife*
- This aquatic invasive species (AIS) workshop is designed to help participants learn about invasive plant and animal species that currently impact or present a threat to lakes in Washington State. The first half of the workshop will focus on plants and the second half of the workshop will focus on animals along with our State AIS management program.

Kennewick/
Pasco Room

Thursday, Oct. 20

7:00 AM – 8:30 AM

Breakfast & Registration

8:30 AM – 11:50 AM

Welcome & DEI Workshop

BUILDING A BETTER WALPA

- Matt Colston, *WALPA President, and Angela Strecker, WALPA DEI Committee Chair*
 - Jerod Grant, *Connecting Cultures*
- Join us to dive into and discuss the Diversity, Equity, and Inclusion Committee's 2021-2022 survey findings. Then Jerod Grant from Cultures Connecting will help us explore what we can do to make our organization a more inclusive place for all members current and future.

Riverview
Room

**11:50 AM – 1:20 PM LUNCH &
WALPA BUSINESS MEETING**

WALPA BUSINESS MEETING AGENDA

Introduction and WALPA 2022 review
- Jen Oden, *outgoing WALPA President*

Scholarship Awards
- presented by the WALPA Board

Secchi Award
- presented by the WALPA Board

Retiring Board Members
- Jen Oden, *outgoing WALPA President*

New Board members & WALPA 2023 Goals
- Matt Colston, *incoming WALPA president*

1:20 PM – 3:00 PM SESSION 1:

CYANOBACTERIA AND ARSENIC

Moderator – Jen Oden, Snohomish County Department of Conservation and Natural Resources

The Role of Conservation Districts in HABs Management in Washington

- Mark Systma, *Whidbey Island Conservation District*
Coauthor: Heather McCoy

A Review of Washington State's Freshwater Cyanotoxin Opportunistic Sampling

- Gopal Mulukutla, *Washington State Department of Health*
Coauthor: Joan Hardy

What We've Learned from Genome Sequencing HAB Cyanobacteria from Oregon and Washington

- Theo W. Dreher, *Oregon State University*
Coauthors: Edward W. Davis II, Ryan S. Mueller, Robin Matthews, Frank M. Wilhelm, Sarah H. Burnet

Short-term Patterns of Summer Arsenic Cycling in a Temperate, Polymictic Lake

- Samantha Fung, *University of Washington, Nancy Weller Scholarship winner*
Coauthors: Erin Hull, Alex Horner-Devine, Rebecca Neumann, James Gawel

Human Health Risk from Arsenic Exposure During Nearshore Play in Three Washington Lakes

- James Gawel, *University of Washington Tacoma*
Coauthors: Jennifer Rynning, Erin Hull, Kirsti Lipphardt

3:00 PM – 3:30 PM BREAK

3:30 PM – 5:10 PM SESSION 2:

PHOSPHORUS MANAGEMENT

Moderator – Curtis DeGasperi, King County Water and Land Resources Division

Effectiveness of Diluting Moses Lake, Washington with Low Phosphorus Columbia River Water

- Shannon Brattebo, *Tetra Tech*
Coauthor: Dr. Gene Welch

Experimental Study of Phosphorus Adsorption by Zero Valent Iron (ZVI): Influence of Grain Size and Water Chemistry

- Jeffrey H Tepper, *University of Puget Sound*
Coauthors: Colin Glaze, Don Russell

Mechanisms for Preventing HABs in Newman Lake, Washington

- Derek Vilar, *Spokane County*
Coauthor: Ben Brattebo

Shoreline Septic System Innovation in Spokane County: Phase 1 of Pilot Study Results and Update on Regulatory Gaps for Decentralized Waste Treatment at Newman Lake

- Lindsay Chutas, *Spokane Conservation District*
Coauthor: Kennet Bertelson

Adaptive Lake Management to Prepare for the Future: The Future Ain't What It Used to Be

SESSION SCHEDULE

Utilizing Adaptive Management Strategies for Improving Water Quality

- Ryan Van Goethem, *EutroPHIX*
Coauthor: Scott Shuler

5:10 PM – 7:00 PM POSTER PRESENTATION & SOCIAL HOUR

Friday, October 21

Riverview
Room

8:30 AM – 9:50 AM

Session 3

LAKE MONITORING AND MODELING

Moderator – Will Hobbs, *Washington State Department of Ecology*

Long-term Limnology: What Can We Learn From 30+ Years of Monitoring an Urbanizing Lake and its Tributaries?

- Angela Strecker, *Institute for Watershed Studies, Western Washington University*
Coauthors: Robin Matthews, Robert Mitchell, Geoffrey Matthews, Joan Pickens

The Lake Washington Sediment Record Revisited. Long-term Trends in Lake Eutrophication Indicators

- Curtis DeGasperi, *King County Water and Land Resources Division*
Coauthor: Will Hobbs

A Causal Model for Identifying Fecal Contamination Threats to Swimming Beaches

- Tim Clark, *Herrera Environmental Consultants (formerly King County)*

Update on Two King County HAB Projects: Drone Imagery and Student-Designed Infographics

- Joan Hardy, *Lake Advocates*

9:50 AM – 10:20 AM BREAK

10:20 AM – 12:00 PM SESSION 4:

AQUATIC INVASIVE SPECIES

Moderator – Shannon Brattebo, *Tetra Tech*

Online Boater Led Check-In/Check-Out Alternative to In-Person Inspections: A COVID-19 Response Pilot

- Mark Apfelbacher, *CD3, General Benefit Corporation*
Coauthor: Edgar Rudberg, Ph.D.

Testing Diver Assisted Suction Harvesting (DASH) for removal of invasive aquatic plants from Lake Chelan

- Jay O'Neal, *Lake Defense Force*
Coauthors: Alex Garry, Philip Long, Lisa Dowling, Adam Pflieger, Drew Stang

Innovative Approach to Aquatic Invasive Weed Control

- Julian Olden, *University of Washington*
Coauthors: Ben Peterson, Adrew Lear

Field Demonstrations for Managing Submersed Flowering Rush in McNary Dam and Reservoir, WA

- Toni Pennington, *Environmental Science Associates*
Coauthors: Bradley T. Sartain, Kurt D. Getsinger, Damian J. Walter, Terry M. McNabb, Rich Miller

Effectively Engaging a Divided Community – Creating a Plant Management Plan for Lake Roesiger

- Marisa Burghdoff, *Snohomish County Department of Conservation and Natural Resources*
Coauthors: Shannon Brattebo, Jennifer Oden, Toni Pennington



POSTERS – ON DISPLAY THROUGHOUT THE CONFERENCE

Quantifying the Impacts of the New Zealand Mudsnaill on the Ecology of Spirit Lake, Mount St. Helens National Volcanic Monument

- Hailey Germeau, *University of Washington Tacoma, Undergraduate WALPA Scholarship winner*
Coauthor: James Gawel

Impact of Dry Deposition on Nutrient Inputs to Spirit Lake, Mount St. Helens National Volcanic Monument

- Heaven Denham, *University of Washington Tacoma, Undergraduate WALPA Scholarship winner*
Coauthor: James Gawel

Successional Terrestrial-Aquatic Linkages in Debris-Avalanche Ponds Created Following the 1980 Mount St. Helens Eruption and Responses to Climate Change

- Katey Queen, *Institute for Watershed Studies, Western Washington University*
Coauthor: Angela Strecker

Using Continuous Monitors to Expand Awareness of Algae in Ecosystems

- Kerry Caslow, *In-Situ, Inc.*
Coauthor: Andrew Luessenhop

WALPA 35th CONFERENCE SCHEDULE 2022

KENNEWICK/PASCO ROOM

1 - 5pm Workshop
Aquatic Invasive Species

WED

RIVERVIEW ROOM

7 - 8:30am Registration/Breakfast

8:30 - 11:50am Welcome & DEI Workshop
Building a Better WALPA

**11:50am - 1:20pm Lunch
& WALPA Business Meeting**

1:20 - 3pm Session 1
Cyanobacteria and Arsenic

3 - 3:30pm Break

3:30 - 5:10pm Session 2
Phosphorus Management

5 - 7pm Poster Session / Social Hour

THURS

RIVERVIEW ROOM

8:30 - 9:50am Session 3
Lake Monitoring and Modeling

9:50 - 10:20am Break

10:20-12:00pm Session 4
Aquatic Invasive Species

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