



32nd Annual Conference

Oct. 30th - Nov. 1st
Lake Chelan, WA

WASHINGTON STATE LAKE

PROTECTION ASSOCIATION

Lakes are for Everyone

WALPA Conference Special Events:

Evening Social

Please join us on Thursday night (Halloween) for appetizers, drinks, good company, and of course, a costume contest! It's a great time to unwind and network with fellow WALPA members. Refreshments provided with the first drink ticket on the house. And cash prizes for "best costume" will be handed out too.

Annual Raffle / Silent Auction

During the evening social, WALPA will be holding its annual raffle & auction to raise funds for student scholarships, research and outreach. This year there will be an action-packed live auction with the latest water quality instrumentation from OTT Hydromet, YSI, and In-Situ. The silent auction and raffle will also have a variety of items including outdoor gear, books, a flight over Puget Sound, and gift certificates from local breweries, restaurants, and spas. You must be there for the raffle, but not the silent auction. We hope to see you there.



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2019 Secchi Disk 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 the science, management, or protection of lakes in Washington or Idaho. In 2019, the Board is honored to present the Secchi Disk Award to two outstanding limnologists in the Pacific Northwest. We would like to recognize and applaud Robin Matthews, Professor emeritus of Western Washington University, and Jean Jacoby, Professor and Dean at Seattle University. Robin's 40-year career in limnology (not to mention the

stream and watershed work) has been essential to improving the science of lake management and advocating for lake protection in Washington State and beyond. A recent retiree, Robin leaves behind a cadre of students moving the profession forward, and a legacy of lake protection.

Jean is currently Associate Dean of Civil and Environmental Engineering at Seattle University, where she started as a professor in 1991. Before that, she gained experience at consulting firms including Tetra Tech and KCM. Her research interests have included applied limnology, harmful and nuisance algae, cyanobacterial toxicity, eutrophication assessment and control, lake restoration and stream ecology. Jean has been an active member of WALPA since the early days of the organization

WALPA Business Meeting Agenda

- 1) **Introduction** – Rachael Gravon, WALPA president
- 2) **Scholarship Awards** – Anthony Gabriel, scholarship committee
- 3) **Retiring & New Board Members** – Rachael Gravon, membership committee
- 5) **WALPA 2019 review** – James Gawel, outgoing WALPA president
- 6) **WALPA 2020 goals** – Sally Abella, incoming WALPA president

REMINDERS

ELECTIONS – Turn in your ballots at the registration table

STUDENT AWARDS – Be sure to pick the best student poster

PHOTO CONTEST – Cast your vote for your favorite photograph

Lakes are for Everyone

SESSION SCHEDULE

Wednesday, Oct 30th

11:00 am– Registration Opens

Stehekin Foyer

Also open to exhibitors for setup

1:00 pm – 5:00 pm Workshops

Stehekin Ballroom

WORKSHOP A– INVASIVE SPECIES: PLANTS & ANIMALS

- Toni Pennington, *Environmental Science Associates*
- Jenifer Parsons, *Washington Department of Ecology*

WORKSHOP B – LAKE SAMPLING: INSTRUMENTATION & METHODS

- Jim Gawel, *University of Washington Tacoma*

Thursday, Oct 31th

7:00 am - Registration/ Breakfast

Centennial Ballroom

EXHIBITOR BOOTHS/RAFFLE & SILENT AUCTION OPEN

Stehekin Ballroom

8:30 am – Welcome & Plenary Session

WOMEN OF WALPA – CHALLENGES, SUCCESSES, AND HOPES FOR THE FUTURE

A panel of four recently (or nearly) retired Limnologists who have been active in WALPA will reflect on their careers in lake research and management and thoughts about future work in limnology

The panelists include:

- Robin Matthews, *Professor emeritus Western Washington University*
- Joan Hardy, *retired from Washington State Department of Health*
- Joy Michaud, *Herrera Environmental*
- Sally Abella, *retired from King County Water and Land Resources Division*

10:00 am - Break

10:30 am - Session 1

Stehekin Ballroom

LAKE CHELAN RESEARCH

- Moderator – Darren Brandt, *Advanced-Eco-Solutions, Inc.*

A preliminary CE-QUAL-W2 model for Lake Chelan: Initial results and identification of data gaps

- Steve Nelson, *RH2 Engineering, Inc.*
- Coauthor: Philip Long

Long-term monitoring of Lake Chelan for nutrients and field parameters

- Philip Long, *Lake Chelan Research Institute*
- Coauthors: Adrienne Roumasset, Matt Holland, Steve Nelson, Joe Heinlen, and Mike Kaputa

Lake Chelan Aquatic Invasive Species Habitat and Vulnerability Analysis

- Toni Pennington, *Environmental Science Associates, and Shannon Brattebo, Tetra Tech*
- Coauthors: Rich Miller and Mike Kaputa

12:00 pm – Lunch

SECCHI AWARD, SCHOLARSHIP WINNERS, & WALPA BUSINESS

Centennial Ballroom

1:30 pm - Session 2

ALGAE AND HARMFUL ALGAE BLOOMS

Stehekin Ballroom

- Moderator – Chris Knutson, *King County Water and Land Resources Division*

An Alum Treatment Alternative to Improve Lake Water Quality: The Water-Column Stripping Project at White Lake, NC

- John Holz, *HAB Aquatic Solutions*

Prevalence and Persistence of Microcystin (MC) in Shoreline Lake Sediments and Associated Potential for Human Health Risk

- Joan Hardy, *WA Department of Health (retired)*
- Coauthors: William Hobbs, Ellen Preece, Lenford O'Garro, Elizabeth Frame, and Francis Sweeney

The Prevalence of Cyanobacteria in Anderson Lake: A historical perspective from lake sediment

- William Hobbs, *Washington State Department of Ecology*
- Coauthors: Rolf Vinebrooke, Theo Dreher, Siana Wong

Predicting the occurrence of harmful algal blooms resulting from wind-related metalimnetic entrainment of high phosphorus hypolimnetic water

- Sarah Burnet, *University of Idaho*
- Coauthor: Frank Wilhelm, *University of Idaho*

3:00 pm - Break

3:30 pm – Session 3

BACTERIA AND TOXICS

Stehekin Ballroom

- Moderator – Wafa Tafesh, *King County Water and Land Resources Division*

Arsenic uptake in crayfish and snails from ASARCO impacted lakes in Western Washington

- Marco Barajas, *University of Washington Tacoma*

Coauthors: Erin Hull, Kenneth Burkart, Ricky Pendergrass, Suji Kim, Julian Olden, and James Gawel

Life's a Beach: Improving the monitoring and management of lake swimming beaches

- Daniel Nidzgorski, *King County Water and Land Resources Division*
- Coauthors: Debra Bouchard and Wafa Tafesh

Fecal Bacteria in King County Waters: Current Conditions, Long-term Trends, and Landscape Factors

- Timothy Clark, *King County Water and Land Resources Division*

5:00 pm - 7:00 pm

Poster Session/ Social Hour

BEER & WINE, RAFFLE DRAWINGS, SILENT AUCTION CLOSES

Sponsored by YSI – Xylem and OTT Hydromet



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Centennial Ballroom

Friday, Nov 1st

7:00 am - Registration/ Breakfast

Centennial Ballroom

8:30 am - Session 4

FOODWEBS

Stehekin Ballroom

- Moderator – Debra Bouchard, *King County Water and Land Resources Division*

Floating Treatment Wetlands to ameliorate stormwater impacts on juvenile coho salmon in the Pacific Northwest

- Lizbeth Seebacher, *Research Scientist University of Washington*

Coherent recovery of zooplankton to whole-lake disturbance

- Angela Strecker, *Western Washington*
- Coauthor: Brian McGann

Trout Stocking Effects on Algae Blooms in Washington Lakes

- Rob Zisette, *Herrera Environmental Consultants*

The influence of season (wet, dry) on periphyton in Southern Ecuador

- Anna Chase, *University of Idaho*
- Coauthor: Frank Wilhelm

10:00 am - Break

10:30 am - Session 5

Stehekin Ballroom

AQUATIC PLANTS

- Moderator – Jenifer Parsons, *Washington Department of Ecology*

Lake and River Draw Down Use of Herbicides For Aquatic Plant Management

- David Kluttz, *Lakeland Restoration Services*

Purple Loosestrife and Yellow-flag Iris: Impacts and Control Strategies for these emergent aquatic weeds

- Ben Peterson, *King County Noxious Weed Program*

Learning to control Hybrid Milfoils

- Terry McNabb, *Aquatechnex, LLC*

POSTERS – ON DISPLAY THROUGHOUT THE CONFERENCE

Grazing Impacts of Rotifer Zooplankton in a Seasonally Cyanobacteria-Dominated Lake

- Kathryn Sweeney, *Washington State University Vancouver*
- Coauthor: Dr Gretchen Rollwagen-Bollens

The Role of Periphyton Community Constituents in Arsenic Speciation in Freshwater Lakes

- Adam Matulich, *University of Washington Tacoma*
- Coauthors: Ken Burkart, Marco Barajas, Erin Hull, Jim Gawel, Jack Vincent

Vertical Flux of Arsenic from Bottom Sediments in a Shallow Urban Lake

- Samantha Fung, *University of Washington*
- Coauthors: Erin Hull, Ken Burkart, Marco Barajas, Alex Horner-Devine, James Gawel, and Rebecca Neumann

Examining arsenic transfer from water to periphyton and grazers in contaminated urban lakes

- Kenneth Burkart, *University of Washington Tacoma*
- Coauthors: Erin Hull, Marco Barajas, and James Gawel

A Seasonal Comparison of Algae Composition in Spirit Lake

- Angelica Lucchetto, *University of Washington Bothell*
- Coauthors: Michelle Nguyen, Avery Cook Shinneman, and James Gawel

The role of atmospheric nitrogen fixation by log mat biofilm in the Spirit Lake ecosystem, Mount St. Helens, WA

- Alexander Barnes, *University of Puget Sound*
- Coauthors: Kena Fox-Dobbs, Emma Sevier, Avery Shinneman, Jeremy Davis, and James Gawel

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WALPA 32nd CONFERENCE SCHEDULE 2019

11am Registration Opens		WED
1 - 5pm Workshops A & B A - Invasive Species: Plants & Animals B - Lake Sampling: Instrumentation & Methods		
7am Registration/Breakfast Exhibitor Booths / Raffle & Silent Auction Open		THURS
8:30 - 10am Welcome & Plenary Session		
10 - 10:30am Break		
10:30 - Noon Session 1 Lake Chelan Research		
Noon - 1:30pm Lunch Secchi & Scholarship Winners, WALPA Business		
1:30 - 3pm Session 2 Algae and harmful algae blooms		
3 - 3:30pm Break		
3:30 - 5pm Session 3 Bacteria and Toxics		
5 - 7pm Poster Session / Social Hour Beer & Wine, Raffle Drawings, Silent Auction Closes Sponsored by OTT Hydromet & YSI - Xylem		FRI
7am Registration/Breakfast		
8:30 - 10am Session 4 Foodwebs		
10 - 10:30am Break		
10:30am Session 5 Aquatic Plants		

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