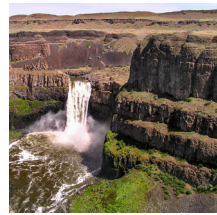


WASHINGTON STATE  
**Academy of Sciences**

Science in the Service of Washington State

# 2020 ANNUAL REPORT



For activities July 2019 - June 2020  
Prepared in November 2020 for Governor Jay Inslee

# HIGHLIGHTS



## In the 2020 fiscal year, WSAS

- **Inducted** 21 new members<sup>1</sup>
- **Completed** 3 state-funded projects; **secured** 4 new state-funded projects<sup>2</sup>
- **Organized** the 12th Annual Symposium on 'Wildfire in Washington State'<sup>3</sup>
- **Sponsored** 10 Washington high school students to participate in the annual AJAS Conference<sup>4</sup>
- **Hired** WSAS's first Program Officer, Dr. Yasmeen Hussain<sup>5</sup>

# FROM THE PRESIDENT

*After serving for 10 years on the WSAS Board, I am more convinced than ever before of the importance of our mission to advise the state on matters of science, technology, health, and the environment. -Ronald Thom*



2020 was a remarkable year, with many high points for our young organization, even in the face of an uncertain future.

WSAS secured funding for four projects from three state agencies: one each from the WA Department Fish and Wildlife and the Governor’s Salmon Recovery Office, and two from the WA Department of Ecology. In addition, project committees on Salmon Hatcheries (WDFW) and the Skagit Water Supply (ECY) completed their work.

Seventeen stellar new members joined WSAS, along with four newly inducted NASEM members, bringing our total membership to 311. The Board of Directors approved the implementation of membership dues beginning in FY 21 (July 1, 2020).

**Ron Mittelhammer** led the development of the 12th annual symposium “Wildfire in Washington State,” which examined a range of issues associated with wildfires including health impacts, fuel

and ecosystems, economics, and government regulations and policy. The proceedings were published in November 2019 and [can be found on our website](#).

The WSAS Board established two new ad hoc committees: the COVID-19 Steering Committee is charged with developing Academy actions to assist the state in dealing with the pandemic. Actions may involve near-term advice and longer-term assessments of outcomes and recommendations on how to prepare for future emergencies. The Diversity, Equity, and Inclusion Committee is charged to develop a DEI statement to guide our programs and operations.

In these challenging times, we are thankful to state legislators and agencies for their requests for us to provide independent peer review of the science that informs important policy decisions. We also are thankful to our members and other leading researchers who have become involved in our work – *science in the service of Washington State*.

A handwritten signature in black ink that reads "Ronald M. Thom".

Ronald Thom  
WSAS President, Sept. 2018 - 2020

## Who We Are

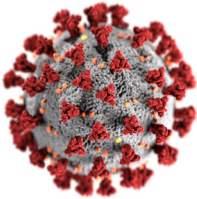
The Washington State Academy of Sciences (WSAS) is a non-profit organization of more than 300 elected members who are nationally recognized for their scientific and technical expertise.

## Our Mission

WSAS provides expert scientific and engineering assessments to inform public policy making and works to increase the impact of research in Washington State.

## Our Members

In 2020, WSAS inducted 21 new members; seventeen elected members and four members from the National Academies of Sciences, Engineering, and Medicine, bringing total membership to 311. [Our membership directory is available online.](#) Throughout this report, WSAS members are noted in bold.



### NEW: COVID-19 STEERING COMMITTEE

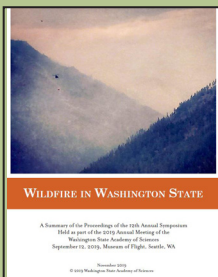
The [COVID-19 Steering Committee](#) will develop actions to be taken by the Academy to assist the state in responding to the pandemic and planning for the future.

### NEW: DIVERSITY, EQUITY, AND INCLUSION COMMITTEE

The Diversity, Equity, and Inclusion Committee is charged with developing a policy statement for WSAS that will apply across our programs.

A list of WSAS's standing and ad hoc committees can be found on our [website](#).

## 2019 SYMPOSIUM PROCEEDINGS PUBLISHED



WSAS's 2019 symposium explored wildfire issues that continue to play out today in Washington and across the western United States. The proceedings summarize topics such as management of public and tribal lands, firefighting and smoke inhalation, and economic and environmental trade-offs of mitigation measures. [Read it here.](#)

# ACTIVE PROJECTS

## SKAGIT RIVER BASIN WATER SUPPLY

January 2020 – June 2021  
WA Department of Ecology

As requested by the Joint Legislative Task Force on Water Supply, WSAS is conducting an independent third-party review of the estuary study portion of a 2001 technical report that informed the Skagit Instream Flow Rule and an independent third-party review of a supply and demand analysis of the Skagit Basin prepared by the Water Research Center (WSU) and Climate Impacts Group (UW).

### Committee

**Michael Goodchild**, chair (UCSB Emeritus)  
**Rebecca Flitcroft** (USDA Forest Service)  
**Eric Grossman** (USGS)  
**Se-Yeun Lee** (Seattle University)  
**John Rybczyk** (WWU)  
**Mark Wigmosta** (PNNL)

## PFAS IN PLANT FIBER-BASED FOOD PACKAGING

January – December 2020  
WA Department of Ecology

As requested by [RCW 70A.222.070](#), WSAS is conducting an independent third-party peer review of a report by the WA Department of Ecology identifying safer alternatives to per- and polyfluoroalkyl substances (PFAS) in plant fiber-based food packaging.

### Committee

**Elaine Faustman**, chair (UW)  
Simona Balan (CA Dept. of Toxic Substances Control)  
Lauren Heine (ChemForward)  
**Pat Hunt** (WSU)  
Donatien Pascal Kamdem (Michigan State University)  
**Michael Skinner** (WSU)  
Huqiu Zhang (Sevee & Maher Engineers)

*“I have enjoyed working on the review and believe that the report that has resulted will be of great value to government and to the community and will help to build a strong reputation for WSAS’s programs.”*

- MICHAEL GOODCHILD, CHAIR, SKAGIT VALLEY WATER SUPPLY COMMITTEES; WSAS MEMBER

# ACTIVE PROJECTS

## REVIEW FOR THE GOVERNOR'S SALMON RECOVERY OFFICE

April 2020 – June 2021  
Governor's Salmon Recovery Office

WSAS is conducting an independent third-party review of the scientific and technical aspects of the Governor's Salmon Strategy Update. WSAS is reviewing both an initial summary of stakeholder input and options, and an additional review of the scientific elements of the draft Strategic Plan report to the Governor.

### Committee

**Daniel Schindler**, chair (UW)  
**Ray Hilborn** (UW)  
Terrie Klingler (UW)  
George Pess (NOAA)  
**Robin Waples** (NOAA)  
**James Winton** (USGS)

## UNDERWATER ACOUSTICS AND DISTURBANCE

December 2019 – November 2020  
WA Department of Fish and Wildlife

As requested by [SSSB 5577](#), WSAS is advising the WA Department of Fish and Wildlife about the scientific and technical aspects of disturbance and noise impacts to Southern Resident Killer Whales from small vessels and whale watching. The committee's work will inform WDFW rulemaking and WSAS work products for this project can be found [on the WDFW website](#).

### Committee

**Ronald Thom**, chair (PNNL Emeritus)  
Peter Dahl (UW)  
Marla Holt (NOAA)  
David Lusseau (Technical University of Denmark)  
Dawn Noren (NOAA)  
Susan Parks (Syracuse University)  
Dom Tollit (SMRU Consulting)

**"The Academy played a critical role in WDFW's commercial whale watching rulemaking process. The impact of small vessels on Southern Resident Killer Whales is a contentious, dynamic issue with dueling expert positions on how to interpret the science in our modern management context. The independent nature of the science panel was extremely important in developing an objective baseline on the best available science for our policy and management needs."**

- JULIE WATSON, KILLER WHALE POLICY LEAD, WASHINGTON  
DEPARTMENT OF FISH & WILDLIFE

# COMPLETED PROJECTS

## SKAGIT RIVER BASIN WATER SUPPLY

June 2019 – January 2020  
WA Department of Ecology

As requested by the Joint Legislative Task Force on Water Supply, WSAS conducted an independent peer review of three consultant reports prepared for the Department of Ecology and the Task Force. This project was the precursor to WSAS's current projects on the Skagit Water Supply.

### Committee

**Michael Goodchild**, chair (UCSB Emeritus)  
Jennifer Adam (WSU)  
Rick Dinicola (USGS)  
**Dennis Lettenmaier** (UCLA/UW)  
Andy Long (USGS)  
Mark Wigmosta (PNNL)

## SCIENCE OF SALMON HATCHERIES

January – December 2019  
WA Department of Fish and Wildlife

WSAS facilitated a process to engage technical experts for the development of a science synthesis report on salmon hatcheries by providing input and comments on the report outline, facilitating a workshop with the WDFW project team and stakeholders, and reviewing the penultimate draft of the report.

### Committee

**Larry Dalton**, chair (UW)  
Barry Barejikian (NOAA)  
Mike Ford (NOAA)  
Shawn Narum (CRITFC)  
**Thomas Quinn** (UW)  
**Robin Waples** (NOAA)  
Peter Wesley (University of Alaska, Fairbanks)  
**Jim Winton** (USGS)

## PUGET SOUND PARTNERSHIP SCIENCE PANEL REVIEW

January 2020 - March 2020  
Puget Sound Partnership

Each year, a WSAS committee reviews the nominees for the PSP Science Panel.

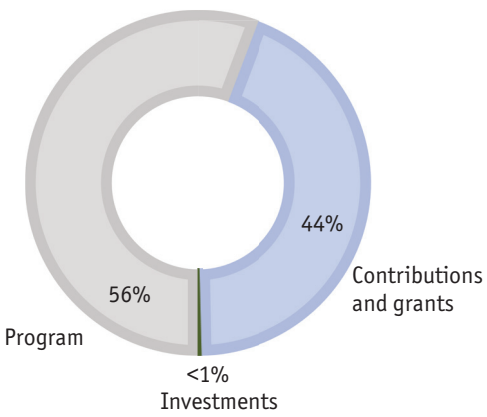
### Committee

**Gordon Orians** (UW Emeritus)  
**Andre Punt** (UW)  
**John Stark** (WSU)  
**Usha Varanasi** (UW)

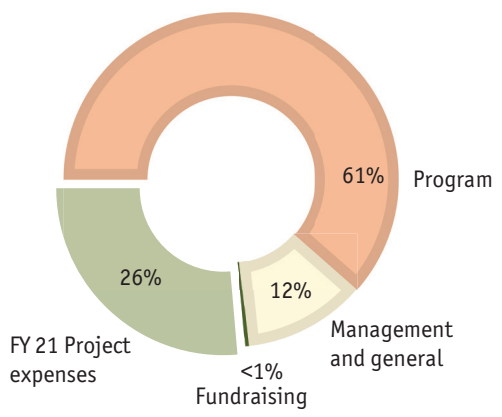
# FINANCES

Revenues are categorized as **program** (projects and programs), **contributions and grants** (state appropriation and donations), and reinvestment of **investment** income. Expenses are categorized as **program** (projects and programs), **management and general** (overhead), and **fundraising**. Also included are project expenses from FY 20 Project Revenue earmarked for expenses in FY 21. Many projects span multiple fiscal years.

**REVENUE**  
**\$571,805**



**EXPENSES**  
**\$526,746**



WSAS is a 501(c)3 non-profit organization. More information is available upon request. EIN: 68-0668369.

**- Thank you to our program funding partners -**



**- Thank you to our project sponsors -**





# THANK YOU TO OUR DONORS

**Donations** allow WSAS to explore topics that are not supported by core funding and expand the activities of our committees, Board, and Topical Working Groups.

*Up to \$249*

Amazon Smile

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**Academy of Sciences**

901 5th Avenue  
Suite 2900  
Seattle, WA 98164  
[washacad.org](http://washacad.org)

**OFFICERS (2019-20)**

**Ronald Thom**, PRESIDENT

Pacific Northwest National Laboratory (EMERITUS)

**Don Baer**, SECRETARY

Pacific Northwest National Laboratory (EMERITUS)

**Cathryn Booth-LaForce**, TREASURER

University of Washington

**Roger Myers**, PRESIDENT ELECT

Aerojet Rocketdyne (RETIRED)

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Pacific Northwest National Laboratory

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Washington State University

**Michael Smerdon**

Washington State University

**Jud Virden, Jr.**

Pacific Northwest National Laboratory

**Donna Gerardi Riordan**, EXECUTIVE DIRECTOR

*Ex-officio*

**STAFF**

**Donna Gerardi Riordan**

Executive Director

[donna.riordan@washacad.org](mailto:donna.riordan@washacad.org)

**Yasmeen Hussain**

Program Officer

[yasmeen.hussain@washacad.org](mailto:yasmeen.hussain@washacad.org)

**Devon Emily Thorsell**

Program Operations Manager

[devon.thorsell@washacad.org](mailto:devon.thorsell@washacad.org)

