

Gretchen Rollwagen-Bollens, Ph.D.

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Education

Ph.D. Integrative Biology, University of California, Berkeley, 2003.

M.S. Biological Oceanography, University of Hawaii, 1996.

A.B. *cum Laude* Biology, Harvard University, 1985.

Positions Held

Washington State University, Vancouver

- Associate Professor 2017 – present
School of the Environment
- University Distinguished Teaching Fellow 2017 – present
- Clinical Professor 2016 – 2017
- Associate Clinical Professor 2010 – 2016
- Assistant Clinical Professor 2006 – 2010
School of the Environment & School of Biological Sciences
- Interim Director of Research and Graduate Education 2007 – 2008
- Assistant Research Professor 2004 – 2006
School of Biological Sciences

San Francisco State University

- Assistant Research Scientist and Lecturer 2003 – 2004
Department of Biology & Romberg Tiburon Center for Environmental Studies

University of California, Berkeley

- Graduate Student Researcher/Instructor 1996 – 2003
Department of Integrative Biology

College of Marin, Kentfield, California

- Biology Instructor 2000 – 2001

University of Hawaii, Manoa

- Lecturer and Graduate Research Assistant 1994 – 1996
Department of Oceanography

Sea Education Association, Woods Hole, Massachusetts

- Science Coordinator and Assistant Scientist 1987 – 1994

PART 1: RESEARCH ACTIVITIES

Research Interests

I am an aquatic microbial ecologist, with expertise in the population biology and community ecology of plankton. I co-direct the Aquatic Ecology Lab at WSU Vancouver, a highly collaborative group of junior and senior researchers, that is focused on interdisciplinary and ‘use-inspired’ research related to aquatic resources. I primarily lead our lab’s efforts focused on the dynamics of harmful algal blooms (HABs) in lakes, rivers and estuaries, with particular emphasis on the role of grazers. I also collaborate with the co-director to investigate the ecology and impacts of aquatic invasive species.

An important third area of my research program is focused on how pedagogical interventions and institutional change affect academic success of students from populations historically underserved in STEM education.

Publications

Note: Order of authors indicates order of proportional contribution; last author is NOT senior author.

Manuscripts in Preparation, Submitted or in Peer Review

*(Under my supervision: *Graduate Students; +Undergraduates; °High School Teachers; #Technicians)*

Wong Rodriguez* B, **Rollwagen-Bollens** G, Bollens S. *(In preparation)* Does nitrogen, phosphorus, and/or silica limit phytoplankton growth and community composition in the lower Columbia River? For submission to *Hydrobiologia*.

Peer-reviewed Publications

*(Under my supervision: *Graduate Students; +Undergraduates; °High School Teachers; #Technicians)*

54. Toskey* E, Bollens S, Kiffney P, Martens K, **Rollwagen-Bollens** G. (2024a) The relative importance of abiotic, biotic, and spatial factors in structuring the stream macroinvertebrate metacommunity in a temperate rainforest. *Aquatic Sciences* 86: 110.
<https://doi.org/10.1007/s00027-024-01122-6>
53. Toskey* E, Bollens S, **Rollwagen-Bollens** G, Kiffney P, Martens K. (2024b) Stream algae biomass associations with environmental variables in a temperate rainforest. *Water* 16: 1533.
<https://doi.org/10.3390/w16111533>
52. Robb-Chavez* S, Bollens S, **Rollwagen-Bollens** G, Counihan T. (2023) BROADSCALE distribution, abundance and habitat associations of the invasive Asian clam (*Corbicula fluminea*) in the lower Columbia River, USA. *International Review of Hydrobiology*.
<https://doi.org/10.1002/iroh.202202134>
51. **Rollwagen-Bollens** G, Kibota T, Crosby C. (2022a) The relative impact of values-based affirmations and metacognitive exercises on introductory biology students attending 2-year and 4-year institutions. *Journal of Microbiology and Biology Education*.
<https://doi.org/10.1128/jmbe.00102-22>
50. **Rollwagen-Bollens** G, Connelly# K, Bollens S, Zimmerman# J, Coker° A. (2022b) Nutrient control of phytoplankton abundance and biomass, and microplankton assemblage structure in a large temperate river (Columbia River, Washington, USA). *Water* 14: 1599
<https://doi.org/10.3390/w14101599>

49. **Rollwagen-Bollens** G, Holmlund T, Wait* J. (2022c) Actively participating in university-sponsored ecological research increases high school students' knowledge of and attitudes about science. *Frontiers in Environmental Science* 9:797769 <https://doi.org/10.3389/fenvs.2021.797769>
48. Jacobs* J, **Rollwagen-Bollens** G, Bollens S. (2022) Feeding dynamics of the invasive calanoid copepod, *Pseudodiaptomus inopinus*, in two northeast Pacific estuaries. *Aquatic Biology* 31: 49-64. <https://doi.org/10.3354/ab00752>
47. Sweeney* K, **Rollwagen-Bollens** G, Hampton S. (2022) Grazing impacts of rotifer zooplankton on a cyanobacteria bloom in a shallow temperate lake (Vancouver Lake, Washington, USA). *Hydrobiologia* 849: 2683–2703. <https://doi.org/10.1007/s10750-022-04885-x>.
46. Hassett* W, Zimmerman[#] J, **Rollwagen-Bollens** G, Bollens S, Counihan T. (2021) An experimental evaluation of the efficacy of imaging flow cytometry (FlowCam) for detecting Dreissenid and Corbiculid bivalve veligers. *Lake and Reservoir Management* 37: 406–417. <https://doi.org/10.1080/10402381.2021.1961176>
45. Rose* V, **Rollwagen-Bollens** G, Bollens S, Zimmerman[#] J. (2021a) Effects of grazing and nutrients on phytoplankton blooms and microplankton assemblage structure in four temperate lakes spanning a eutrophication gradient. *Water* 13: 1085. <https://doi.org/10.3390/w13081085>
44. Rose* V, **Rollwagen-Bollens** G, Bollens S, Zimmerman[#] J. (2021b) Seasonal and interannual variation in lower Columbia River phytoplankton (2005-2018): Environmental variability and a decline in large diatoms. *Aquatic Microbial Ecology* 87: 29-46. <https://doi.org/10.3354/ame01967>
43. Bollens S, Harrison J, Kramer M, **Rollwagen-Bollens** G, Counihan T, Robb-Chavez* S, Nolan[#] S. (2021) Calcium concentration in the lower Columbia River, USA, and its implications for invasive bivalves. *River Research & Applications* 37(6): 889-894. <https://doi.org/10.1002/rra.3804>
42. **Rollwagen-Bollens** G, Bolam* B, Bollens S, Henricksen* S, Sandison^o C, Zimmerman[#] J. (2021) Temperature-dependent functional response of the invasive Asian clam, *Corbicula fluminea*, feeding on natural phytoplankton. *Inland Waters* 11(2): 250-256. <https://doi.org/10.1080/20442041.2020.1843933>
41. Dexter* E, Katz S, Bollens S, **Rollwagen-Bollens** G, Hampton S. (2020a) Modeling the trophic impacts of invasive zooplankton in a highly invaded river. *PLoS One* 15(12): e0243002. <https://doi.org/10.1371/journal.pone.0243002>
40. Dexter* E, Bollens S, **Rollwagen-Bollens** G. (2020b) Native and invasive zooplankton show differing responses to decadal-scale increases in maximum temperatures in a large temperate river. *Limnology & Oceanography Letters* 5: 403-409. <https://doi.org/10.1002/lol2.10162>
39. Dexter* E, Bollens S, Cordell J, **Rollwagen-Bollens** G. (2020c) Zooplankton invasion on a grand scale: Insights from a 20-year time-series across 38 Northeast Pacific estuaries. *Ecosphere* 11(5): e03040. <https://doi.org/10.1002/ecs2.3040>
38. Connelly* K, **Rollwagen-Bollens** G, Bollens S. (2020) Seasonal and longitudinal variability of zooplankton assemblages along a river-dominated estuarine gradient. *Estuarine, Coastal and Shelf Science* 245: 106980. <https://doi.org/10.1016/j.ecss.2020.106980>
37. **Rollwagen-Bollens** G, Bollens S, Dexter* E, Cordell J. (2020) Biotic vs. abiotic forcing of plankton assemblages varies with season and size class in a large temperate estuary. *Journal of Plankton Research* 42: 221–237. <https://doi.org/10.1093/plankt/fbaa010>
36. Rose* V, **Rollwagen-Bollens** G, Bollens S, Zimmerman[#] J. (2019) The effects of run-of-river dam spill on Columbia River microplankton. *River Research and Applications* 35: 1478-1488. <https://doi.org/10.1002/rra.3521>
35. **Rollwagen-Bollens** G, Holmlund T, Bollens S, Wait* J, Zimmerman[#] J, Connelly* K, Bargmann⁺ L (2019) Engaging high school students as collaborators in ecological investigation of the

- Columbia River Estuary: Lessons from a transdisciplinary university-high school partnership. *Limnology & Oceanography Bulletin* 28(2): 45-51. <https://doi.org/10.1002/lob.10315>
34. Nolan* S, Bollens S, **Rollwagen-Bollens** G. (2019) Diverse taxa of zooplankton inhabit hypoxic waters during both day and night in a temperate eutrophic lake. *Journal of Plankton Research* 4: 431-447. <https://doi.org/10.1093/plankt/fbz021>
 33. Bolam* B, **Rollwagen-Bollens** G, Bollens S. (2019) Feeding rates and prey selection of the invasive Asian clam, *Corbicula fluminea*, on microplankton in the Columbia River, USA. *Hydrobiologia* 833: 107-123. <https://doi.org/10.1007/s10750-019-3893-z>
 32. Perkins⁺ K, **Rollwagen-Bollens** G, Harrison J, Bollens S (2019) Variability in the vertical distribution of chlorophyll in a spill-managed temperate reservoir. *Lake and Reservoir Management* 35(2): 119-126. <https://doi.org/10.1080/10402381.2019.1566935>
 31. **Rollwagen-Bollens** G, Lee* T, Rose* V, Bollens S (2018) Beyond Eutrophication: Vancouver Lake, WA, USA as a Model System for Assessing Multiple, Interacting Biotic and Abiotic Drivers of Harmful Cyanobacterial Blooms. *Water* 10(6): 757. <https://doi.org/10.3390/w10060757>
 30. Dexter* E, **Rollwagen-Bollens** G, Bollens S (2018a) The trouble with stress: A flexible method for the evaluation of nonmetric multidimensional scaling. *Limnology & Oceanography Methods* 16: 434-443. <https://doi.org/10.1002/lom3.10257>
 29. Dexter* E, Vuilleumier S, Goudet J, Pfeifer S, Bollens S, **Rollwagen-Bollens** G, Cordell J, Soh H. (2018b) A genetic reconstruction of the invasion of the calanoid copepod *Pseudodiaptomus inopinus* across the North American Pacific Coast. *Biological Invasions* 20: 1577-1595. <https://doi.org/10.1007/s10530-017-1649-0>
 28. Hassett* W, Bollens S, Counihan T, **Rollwagen-Bollens** G, Zimmerman[#] J, Katz S, Emerson[#] J. (2017) Veligers of the invasive Asian clam *Corbicula fluminea* in the Columbia River Basin: Broadscale distribution, abundance and ecological associations. *Lake and Reservoir Management* 33: 234-248. <https://doi.org/10.1080/10402381.2017.1294218>
 27. Rose⁺ V, **Rollwagen-Bollens** G, Bollens S. (2017) Interactive effects of phosphorus and zooplankton grazing on harmful algal blooms in a shallow temperate lake. *Hydrobiologia* 788: 345-359. [10.1007/s10750-016-3011-4](https://doi.org/10.1007/s10750-016-3011-4)
 26. **Rollwagen-Bollens** G, Thiers P. (2017) Socio-environmental synthesis: Linking biology and political science courses to assess hydroelectric dam relicensing. *Teaching Issues and Experiments in Ecology* Vol. 12: Practice #4 [online]. <http://tiee.esa.org/vol/v12/issues/rollwagenbollens/abstract.html>
 25. Hawthorne D, Jiru M, **Rollwagen-Bollens** G, Rashid K, Solomon C, Thiers P. (2017) Engaging undergraduate students in socio-environmental synthesis. *Teaching Issues and Experiments in Ecology*, Vol. 12: Commentary [online]. <http://tiee.esa.org/vol/v12/issues/commentary.html>
 24. **Rollwagen-Bollens** G. (2017a) Oceanography Manual. *WSU Extension Master Naturalist On-line Certificate Program*. Peer-reviewed through the WSU Extension “Fastrack” system.
 23. **Rollwagen-Bollens** G. (2017b) Ecology Manual. *WSU Extension Master Naturalist On-line Certificate Program*. Peer-reviewed through the WSU Extension “Fastrack” system.
 22. Lee* T, Bollens S, **Rollwagen-Bollens** G, Emerson[#] J. (2016) The effects of eutrophication and invasive species on zooplankton community dynamics in a shallow temperate lake. *Fundamental and Applied Limnology* 188: 215-231. [10.1127/fal/2016/0816](https://doi.org/10.1127/fal/2016/0816)
 21. Bowen* A, **Rollwagen-Bollens** G, Bollens S, Zimmerman[#] J. (2015) Feeding of the invasive copepod *Pseudodiaptomus forbesi* on natural microplankton assemblages within the lower Columbia River. *Journal of Plankton Research* 37: 1089-1094. <https://doi.org/10.1093/plankt/fbv078>

20. Lee* T, **Rollwagen-Bollens** G, Bollens S. (2015a) The influence of water quality variables on cyanobacteria blooms and phytoplankton community composition in a shallow temperate lake. *Environmental Monitoring and Assessment* 187: 315. <https://doi.org/10.1007/s10661-015-4550-2>
19. Lee* T, **Rollwagen-Bollens** G, Bollens S, Faber-Hammond# J. (2015b) Environmental influences on cyanobacteria abundance and microcystin toxin production in a shallow temperate lake. *Ecotoxicology and Environmental Safety* 114: 318-325. <https://doi.org/10.1016/j.ecoenv.2014.05.004>
18. Dexter* E, Bollens S, **Rollwagen-Bollens** G, Emerson# J, Zimmerman# J. (2015) Persistent vs. ephemeral invasions: 8.5 years of zooplankton community dynamics in the Columbia River. *Limnology and Oceanography* 60: 527-539. <https://doi.org/10.1002/lno.10034>
17. Breckenridge# J, Bollens S, **Rollwagen-Bollens** G, Roegner C. (2015) Plankton assemblage variability in a river-dominated temperate estuary during late spring (high flow) and late summer (low flow) periods. *Estuaries and Coasts* 38: 93-103. <https://doi.org/10.1007/s12237-014-9820-7>
16. Dresner M, Braun* S, Handelman* C, **Rollwagen-Bollens** G. (2014) Environmental identity, pro-environmental behaviors and civic engagement of volunteer stewards in Portland area parks. *Environmental Education Research* 21: 991-1010. <https://doi.org/10.1080/13504622.2014.964188>
15. Chang H, Thiers P, Netusil N, Yeakley A, **Rollwagen-Bollens** G, Bollens S, Singh* S. (2014) Relationships between environmental governance and water quality in a growing metropolitan area of the Pacific Northwest, USA. *Hydrology and Earth Systems Science* 18: 1383-1395. <https://doi.org/10.5194/hess-18-1383-2014>
14. **Rollwagen-Bollens** G, Bollens S, Gonzalez# A, Zimmerman# J, Lee* T, Emerson* J. (2013) Feeding dynamics of the copepod *Diacyclops thomasi* before, during and following filamentous cyanobacteria blooms in a large, shallow temperate lake. *Hydrobiologia* 705: 101-118. <https://doi.org/10.1007/s10750-012-1385-5>
13. Bollens S, Quenette* J, **Rollwagen-Bollens** G. (2012) Predator-enhanced diel vertical migration in a planktonic dinoflagellate. *Marine Ecology Progress Series* 447: 49-54. <https://doi.org/10.3354/meps09467>
12. Friedenbergs* L, Bollens S, **Rollwagen-Bollens** G. (2012) Feeding dynamics of larval Pacific herring (*Clupea pallasii*) on natural assemblages of microplankton. *Fisheries Oceanography* 21: 95-108. <https://doi.org/10.1111/j.1365-2419.2011.00611.x>
11. Bollens S, Breckenridge# J, Cordell J, **Rollwagen-Bollens** G, Kalata# O. (2012) Invasive copepods in the Lower Columbia River Estuary: Seasonal abundance, co-occurrence and potential competition with native copepods. *Aquatic Invasions* 7: 101-109. <https://doi.org/10.3391/ai.2012.7.1.011>
10. Boyer* J, **Rollwagen-Bollens** G, Bollens S. (2011) Microzooplankton grazing before, during and after a cyanobacterial bloom in Vancouver Lake, Washington, USA. *Aquatic Microbial Ecology* 64: 163-174. <https://doi.org/10.3354/ame01514>
9. **Rollwagen-Bollens** G, Gifford* S, Bollens S. (2011) The Role of Protistan Microzooplankton in the Upper San Francisco Estuary Planktonic Food Web: Source or Sink? *Estuaries & Coasts* 34: 1026-1038. <https://doi.org/10.1007/s12237-011-9374-x>
8. Bollens S, **Rollwagen-Bollens** G, Quenette* J, Bochdanský A. (2011) Cascading migrations and implications for vertical fluxes in pelagic ecosystems. *Journal of Plankton Research* 33: 349-355. <https://doi.org/10.1093/plankt/fbq152>
7. Bochdanský A, Bollens S, **Rollwagen-Bollens** G. (2010) Effect of the heterotrophic dinoflagellate *Oxyrrhis marina* and the copepod *Acartia tonsa* on vertical carbon flux in and around thin layers of the phytoflagellate *Isochrysis galbana*. *Marine Ecology Progress Series* 402: 179-196. <https://doi.org/10.3354/meps08428>

6. Gifford* S, **Rollwagen-Bollens** G, Bollens S. (2007) Mesozooplankton omnivory in the upper San Francisco Estuary. *Marine Ecology Progress Series* 348: 33-46.
<https://doi.org/10.3354/meps07003>
5. Slaughter[#] A, Bollens S, **Rollwagen Bollens** G. (2006) Grazing impact of mesozooplankton in an upwelling region off northern California, 2000-2003. *Deep-Sea Research II* 53: 3099-3115.
<https://doi.org/10.1016/j.dsr2.2006.07.005>
4. **Rollwagen-Bollens** G, Bollens S, Penry D. (2006) Vertical distribution of micro- and nanoplankton in the San Francisco Estuary, in relation to hydrography and predators. *Aquatic Microbial Ecology* 44:143-163. <https://doi.org/10.3354/ame044143>
3. **Rollwagen-Bollens** G and Penry D. (2003) Feeding dynamics of *Acartia* spp. copepods in a large, temperate estuary (San Francisco Bay, CA). *Marine Ecology Progress Series* 257: 139-158.
<https://doi.org/10.3354/meps257139>
2. **Rollwagen-Bollens** G and Landry M. (2000) The biological response to iron fertilization in the eastern equatorial Pacific (IronEx II). II. Mesozooplankton abundance, biomass, depth distribution and grazing. *Marine Ecology Progress Series* 201: 43-56. <https://doi.org/10.3354/meps201043>
1. Coale K, Johnson K, Fitzwater S, Gordon R, Tanner S, Chavez F, Ferioli L, Sakamoto C, Rogers P, Millero F, Steinberg P, Nightingale P, Cooper D, Cochlan W, Landry M, Constantinou J, **Rollwagen** G, Trasvina A, Kudela R. (1996) A massive phytoplankton bloom induced by an ecosystem-scale iron fertilization experiment in the equatorial Pacific Ocean. *Nature* 383: 495-501. <https://doi.org/10.1038/383495a0>

Grantsmanship

Total Grants Awarded at WSU (2004 – present)

	As Principal Investigator	As Co-Investigator	Total Awards	Amount to WSU
Overall Total	\$ 13,099,959	\$ 13,461,921	\$ 26,561,880	\$ 12,759,671

Active Grants

Principal Investigator: **\$3,937,459** (\$3,674,559 to WSU)

Co-Principal Investigator: **\$8,544,672** (\$3,006,695 to WSU)

PI	Co-PI's	Dates	Funder	Title	Award	Amount to WSU
Rollwagen-Bollens G	Bollens, S	2024-2027	Murdock Charitable Trust	The Murdock PIS 2.0 Program at WSU	\$ 337,500	\$ 337,500
Bollens, S	Rollwagen-Bollens	2023-2024	US ACE/PSMFC	Dreissenid mussel early detection monitoring in the Columbia River Basin	\$ 175,842	\$ 175,842
Rollwagen-Bollens, G	Kibota, Myers	2022-2028	HHMI Inclusive Excellence 3	Collaborative Project: HHMI IE3 Learning Community Cluster 7: SW Washington Regional Alliance for Inclusive Science Education (RAISE)	\$ 8,825,000	\$ 823,668
Bollens S	Counihan, Maine, Rollwagen-Bollens , Waste	2022-2025	NW Climate Adaptation Science Center	Native and invasive bivalves in the Pacific Northwest: Co-occurrence, habitat associations and potential competition in the face of climate change	\$ 141,440	\$ 141,440

Rollwagen-Bollens, G		2022-2024	Murdock Charitable Trust	Understanding the Use of Discretion and its Socio-Environmental Consequences for Reservoir Systems: Impacts of Dam Management on Harmful Algal Blooms	\$ 19,000	\$ 19,000
Harrison, J	Bollens, Brady, Rollwagen-Bollens, Yoder	2021-2025	National Science Foundation	DISES: RUI: Understanding the Use of Discretion and its Socio-Environmental Consequences for Reservoir Systems	\$ 1,600,000	\$ 1,600,000
Boll, J	Crespi, Fremier, Higheagle-Strong, Budgen, Rollwagen-Bollens (SP)	2021-2026	National Science Foundation	NRT: Rivers, Watersheds, Communities: Training an Innovative, Cross-Sector Workforce for Equitable, Multi-Scale Decision-Making Towards Human and Ecosystem Health	\$ 2,999,967	\$ 2,999,967

Past Grants

Principal Investigator: \$3,937,459 (\$3,674,559 to WSU)

Co-Principal Investigator: \$8,544,672 (\$3,006,695 to WSU)

Bollens S	Rollwagen-Bollens G	2022 – 2023	US ACE/ PSMFC	Dreissenid mussel early detection monitoring in the Columbia River Basin	\$ 162,349	\$ 162,349
Bollens S	Rollwagen-Bollens G	2022-2023	WA DNR	Stream invertebrates in pretreatment conditions in the T3 watershed experiment	\$ 27,209	\$ 27,209
Offerdahl, E	Kelton, Rollwagen-Bollens, G (SP)	2020-2023	National Science Foundation	REU Site: The RISE Program - Research in Interdisciplinary STEM Education	\$ 359,074	\$ 359,074
Parker, B Rollwagen-Bollens, G (WSU sub)	Bollens, Counihan, Thom	2020-2023	Bureau of Indian Affairs / CRITFC	Outreach and education on established Dreissenid mussels and AIS to PNW tribes	\$ 147,000	\$ 35,000
Rollwagen-Bollens, G	Kibota, Myers	2021-2023	HHMI IE3	SW Washington Regional Alliance for Inclusive Science Education	\$ 30,000	\$ 30,000
Bollens, S	Rollwagen-Bollens, G	2022	WA DNR	Processing of 2020 stream invertebrates in pretreatment conditions in the T3 watershed experiment	\$ 12,209	\$ 12,209
Bollens, S	Rollwagen-Bollens, G	2021-2022	US ACE/ PSMFC	Dreissenid mussel early detection monitoring in the Columbia River Basin	\$ 161,247	\$ 161,247
Bollens, S	Rollwagen-Bollens, G	2021	WA DNR	Processing of 2020 Stream invertebrates in pretreatment conditions in the T3 watershed experiment	\$ 15,975	\$ 15,975
Bollens, S	Rollwagen-Bollens, G	2021	WA DNR	Riparian sample collection for the T3 watershed experiment	\$ 19,200	\$ 19,200
Bollens, S	Rollwagen-Bollens, G	2020-2021	WA DNR	Stream invertebrates in pretreatment conditions in the T3 watershed experiment	\$ 27,000	\$ 27,000
Bollens, S	Rollwagen-Bollens, G	2019-2020	US ACE/ PSMFC	Dreissenid mussel early detection monitoring in the Columbia River Basin – Shallow water, near shore, sampling, lab processing	\$ 151,000	\$ 151,000
Rollwagen-Bollens, G		2019-2020	Murdock Charitable Trust	The impacts of nutrients on algal blooms in the Columbia River Estuary	\$ 15,000	\$ 15,000
Parker, B Rollwagen-Bollens (WSU sub)	Counihan, Bollens	2018-2019	Bureau of Indian Affairs/ CRITFC	Outreach and education on established Dreissenid mussels and other AIS	\$ 140,000	\$ 30,000
Bollens, S	Rollwagen-Bollens, G	2018-2019	US ACE/ PSMFC	Dreissenid mussel early detection monitoring in the Columbia River Basin – Shallow water, near shore, sampling, lab processing	\$ 154,954	\$ 154,954
Rollwagen-Bollens, G		2017-2018	WSU Office of Provost	Engaging undergraduate students in discovery research in their lower division science courses	\$ 20,000	

Rollwagen-Bollens, G		2017-2018	WSU Smith T&L	Incorporating a “Course-based Undergraduate Research Experience” (CURE) into Biology 106L at WSUV	\$ 7,000	
Holmlund, T	Morrison, Rollwagen-Bollens , Kruse	2016-2021	National Science Foundation	Collaborative research: The next generation of STEM teacher preparation in Washington State	\$3,000,000	\$ 296,234
Rollwagen-Bollens, G	Bollens, Holmlund	2016-2019	WA Sea Grant /NOAA	CRESCENDO: A Landscape-scale University-High School Partnership Integrating Scientific & Educational Research	\$ 219,570	\$ 219,570
Bollens, S	Stark, Rollwagen-Bollens , Hufford, L	2017-2019	National Science Foundation	FSML Planning Grant: Developing a Strategic Plan and Infrastructure Needs Assessment for Washington State University's Meyer's Point Environmental Field Station	\$ 24,939	\$ 24,939
Bollens, S	Rollwagen-Bollens	2017-2018	US ACE/ PSMFC	Dreissenid mussel early detection monitoring in the Columbia River Basin – Shallow water, near shore, sampling and lab processing	\$ 38,740	\$ 38,740
Bollens, S	Rollwagen-Bollens	2017-2018	US ACE/ PSMFC	Dreissenid mussel early detection monitoring in the Columbia River Basin – Open water, shipboard sampling and laboratory processing	\$ 26,756	\$ 26,756
Parker, B Bollens, S (WSU sub)	Counihan, Rollwagen-Bollens	2017-2018	Bureau of Indian Affairs / CRITFC	Enhancing Tribal Aquatic Invasive Species (AIS) Monitoring Capacity in the Columbia River Basin - Dreissenid Mussel Early Detection Monitoring	\$ 150,000	\$ 86,400
Strigul, N	Harrison, Rollwagen-Bollens	2017-2018	WSUV Faculty Mini-Grant.	Development of hyperspectral remote sensing approach for detection of algae blooms and methane emissions from SW WA lakes	\$ 7,000	
Rollwagen-Bollens, G	Bollens, S	2015-2018	National Science Foundation	REU SITE: Landscape Ecology and Ecosystem Dynamics: Integrating Aquatic and Terrestrial Perspective	\$ 259,581	\$ 259,581
Bollens, S	Cordell, Rollwagen-Bollens	2016-2017	CA State Lands Comm	Invasive zooplankton of California estuaries	\$ 17,702	\$ 17,702
Bollens, S	Cordell, Rollwagen-Bollens	2016-2017	WA DFW	Invasive zooplankton of Washington estuaries	\$ 8,483	\$ 8,483
Bollens, S	Cordell, Rollwagen-Bollens	2016-2017	WA Sea Grant/ NOAA	Invasive zooplankton of Pacific Northwest estuaries	\$ 9,959	\$ 9,959
Rollwagen-Bollens		2015-2017	Murdock Charitable Trust	Enhanced monitoring and investigation of the spread and potential impact of aquatic invasive mussels in the Columbia River Basin	\$ 15,000	\$ 15,000
Rollwagen-Bollens, G	Bollens, S	2016	National Science Foundation	REU Supplement: Landscape Ecology and Ecosystem Dynamics: Integrating Terrestrial and Aquatic Perspectives	\$ 6,000	\$ 6,000
Bollens, S	Brady, Choiunard, Harrison, Rollwagen-Bollens	2015-2016	WSU CEREO/ Water Research Center/	Seed Grant: An integrated biophysical-economic study of a model FEW system: Columbia River reservoir storage and spill	\$ 24,943	
Rollwagen-Bollens	Bollens, Lock, Holmlund, Tissot	2008-2015	National Science Foundation	New GK-12: Global Change in a Local Context: Partners in Discovery of the Columbia River Watershed	\$2,716,137	\$2,716,137
Rollwagen-Bollens, G		2015	WSU Extension	Master Naturalist Certification Program: Oceanography and Ecology Modules	\$ 10,000	

Bollens, S	Rollwagen-Bollens, Counihan, Goldberg	2014-2015	U.S. DOI/ Bonneville Power Admin	Enhanced monitoring and investigation of the spread and potential impact of aquatic invasive mussels in the Columbia River Basin; Supplement for Pilot Study of eDNA	\$ 83,695	\$ 83,695
Bollens, S	Rollwagen-Bollens, Counihan	2012-2015	U.S. DOI/ Bonneville Power Admin	Enhanced monitoring and investigation of the spread and potential impact of aquatic invasive mussels in the Columbia River Basin	\$ 613,283	\$ 613,283
Bollens, S	Harrison, Rollwagen-Bollens, Thiers, Stephan	2010-2015	National Science Foundation	Collaborative Research: ULTRA-EX: How do feedbacks between governance and biophysical systems affect resilience of urban socio-ecological systems?	\$ 500,000	\$ 81,341
Rollwagen-Bollens, G	Bollens, S	2014-2015	Water Research Center/ USGS	Interactive effects of nutrients and grazing on the control of cyanobacteria blooms: a comparison across a eutrophication gradient in freshwater systems in Washington state	\$ 27,478	\$ 27,478
Thiers, P	Rollwagen-Bollens	2012-2014	NSF/ SESYNC	Socio-environmental Synthesis Teaching Study	\$ 200,000	\$ 59,019
Rollwagen-Bollens, G		2011-2013	Murdock Charitable Trust	The Role of Planktonic Grazers on Toxin Production by Cyanobacteria in Vancouver Lake, WA	\$ 15,000	\$ 15,000
Rollwagen-Bollens, G	Bollens, S	2011-2012	Water Research Center/ USGS	Understanding toxin production by harmful algae: Vancouver Lake as a model system	\$ 30,000	\$ 30,000
Rollwagen-Bollens, G	Bollens, S	2009-2010	Water Research Center/ USGS	Understanding Controls on Cyanobacteria Blooms: Vancouver Lake as a Model System	\$ 27,455	\$ 27,455
Bollens, S	Rollwagen-Bollens	2009-2010	WA DoE/ Clark Cty Public Wks	Cyanobacteria growth and grazing in Vancouver Lake	\$ 64,183	\$ 64,183
Bollens, S	Rollwagen-Bollens	2008-2009	Van Lk Watershed Partnership	Biological Assessment of Vancouver Lake – Process Studies	\$ 80,000	\$ 80,000
Bollens, S	Rollwagen-Bollens	2006-2009	Office of Naval Res	Grazing impacts of diverse zooplankton taxa on thin layers	\$ 378,865	\$ 279,301
Stubbs, J	Tanner, Rollwagen-Bollens, O'Sullivan	2004-2009	National Science Foundation	GK-12 Track 2: SFSU/SFUSD Science Teacher and Research Partnership	\$1,999,464	
Bollens, S	Rollwagen-Bollens	2007-2008	Van Lk Watershed Partnership	Biological Assessment of Vancouver Lake – Process Studies	\$ 100,000	\$ 100,000
Rollwagen-Bollens, G		2005-2006	WSUV Faculty Mini-grant.	Assessing ciliate diversity in the Columbia River Estuary using morphological and genetic techniques	\$ 3,900	
Rollwagen-Bollens, G		2003-2006	CA Sea Grant/ CALFED	Protistan Microzooplankton in the Suisun Bay Food Web: Source or Sink?	\$ 229,338	\$ 229,338

PART 2: TEACHING & MENTORING

Teaching Philosophy

My approach to teaching science is based on three interrelated principles: process, collaboration and critical thinking. First, science is a process of observing the natural world and developing questions, devising both quantitative and qualitative approaches to answer these questions, and then using observations and evidence to support explanations about natural phenomena. Second, science is at its core a collaborative endeavor where the coordinated insights, contributions and expertise of multiple people are critical for the field to move forward. And third, advances in science rely upon the ability of scientists to critically evaluate information, to interpret its significance, and to effectively communicate their conclusions to peers and the general public. I believe that the teaching of science must mirror the conduct of science, and thus I have structured my courses at all levels to emphasize these three principles, in addition to mastering subject matter content.

Teaching Awards

University Distinguished Teaching Fellow

Washington State University

July 2017

Awarded the permanent title of University Distinguished Teaching Fellow, along with a \$20,000 prize, from the WSU Office of the Provost and the Office of Academic Outreach and Innovation, for work to engage undergraduate students in discovery research in their lower division science courses.

2015-16 Students' Award for Teaching Excellence

Washington State University Vancouver

May 2016

The Students' Award for Teaching Excellence recognizes one faculty member each year on the WSU Vancouver campus who commits time outside of the classroom to prevent students from falling through the cracks, demonstrates an enthusiasm for their subject matter, and instills enthusiasm and passion in students.

Courses Taught

Course No.	Course Title	Cred Hrs	Level				Semesters Taught	# Students	Eval Score
				Upper Div	Lower Div				
					majors	non-majors			
SOE 465/565	Aquatic Microbial Ecology	3	*	*			Spr 24	11	4.3
							Fall 21	10	na
							Spr 20	6	5.0
							Spr 16	9	
							Spr 13	12	
							Spr 11	10	4.8
							Spr 10	12	4.5
							Spr 09	9	4.3
							Spr 07	8	4.2
	Fall 04	5	4.7						
BIOL 585	Prof Dev Train for Coll/Univ Teaching	2	*				Spr 18	9	4.6

SOE 593	GK-12 Science Pedagogy Seminar	1	*				Spr 13	11	4.3
							Fall 12	11	
							Spr 12	9	4.5
							Fall 11	9	4.2
							Spr 11	10	4.2
							Fall 10	10	
							Spr 10	10	4.4
							Fall 09	10	
							Spr 09	6	4.1
SOE 501	Graduate Skills Seminar	1	*				Fall 08	6	3.9
							Fall 15	8	
							Fall 06	11	4.8
BIOL 485	Biology of the Oceans [CAPS]	3		*			Fall 05	5	4.6
							Spr 21	33	4.4
							Spr 19	32	4.1
SOE 491	Senior Seminar	1		*	*		Spr 16	5	
							Spr 15	8	
							Spr 14	9	
							Spr 13	10	
BIOL 308	Marine Biology	3		*	*		Spr 16	39	
							Spr 14	42	4.7
							Spr 12	42	4.2
							Spr 11	60	4.5
							Spr 06	56	4.4
							Fall 05	43	4.5
							Spr 05	28	4.5
SOE 230	Introduction to Ocean Science	3				*	Fall 22	50	4.5
							Spr 17	34	4.3
							Spr 15	45	4.5
							Spr 14	24	4.7
							Spr 13	72	4.3
							Spr 12	68	4.2
							Fall 10	72	4.1
							Fall 09	69	
							Spr 08	54	4.3
BIOL 106	Introductory Organismal Biology [BSCI; L]	4				*	Spr 07	55	4.2
							Fall 20	158	4.6
							Fall 19	147	4.2
							Fall 18	154	4.4
							Fall 17	153	4.6
							Fall 16	159	4.4
							Fall 15	162	
							Fall 14	198	4.1
							Fall 13	135	4.3
							Fall 12	130	4.4
							Fall 11	110	4.4
							Fall 10	130	4.2
							Fall 09	132	
							Fall 08	132	4.4
GE 106	Global Change in a Local Context	3				*	Fall 07	100	4.1
							Fall 06	95	4.2
GE 105	Land, River, Sea: People & the Watershed	3				*	Spr 09	122	3.5
						*	Fall 08	143	3.5

Mentoring

Major Professor (Chair)

McKenzie Frasier, MS Environmental & Natural Resource Sciences	2022 – present NSF NRT Fellow
Bianca Wong Rodriguez, MS Environmental & Natural Resource Sciences	2021 – 2024
Jade Jacobs, MS Environmental Science	2019 – 2021
Kathryn Sweeney, MS Environmental Science	2018 – 2021

Major Professor (Co-Chair)

Vanessa Rose, PhD Environmental & Natural Resource Sciences	2014 – 2020 NSF GRFP Fellow
Tammy Lee, PhD Environmental & Natural Resource Sciences	2008 – 2015 NSF GK-12 Fellow
Jeanna Edlund, MS Environmental & Natural Resource Sciences	2024 – present
Jacie Fabela, MS Environmental Science	2023 - present
Kristin Connelly, MS Environmental Science	2017 – 2019
Ben Bolam, MS Environmental Science	2015 – 2018
Sean Nolan, MS Environmental Science	2016 – 2018
Alyssa Bowen, MS Environmental Science	2010 – 2014 NSF GK-12 Fellow
Jennifer Boyer, MS Environmental Science	2007 – 2009 NSF GK-12 Fellow
Scott Gifford, MS Marine Biology (San Francisco State Univ.)	2004 – 2006

Committee Member

Eric Dexter, PhD Environmental & Natural Resource Sciences	2014 – 2019 EPA STAR Fellow
Ted Ballenger, PhD Environmental & Natural Resource Sciences	2024 – present NSF NRT Fellow
John Buster, PhD Environmental & Natural Resource Sciences	2024 – present
Jess Mitchell, MS Environmental Science	2023 – present
Nate Neal, MS Environmental Science	2023 – present NSF NRT Fellow
Riley Baxter, MS Environmental Science (WSU Tri-Cities)	2022 – present
Elsa Toskey, MS Environmental Science	2020 – present
Salvador Robb-Chavez, MS Environmental Science	2019 – 2022
Aaron Pelly, MS Environmental Science (WSU Tri-Cities)	2019 – 2020
Summer Henricksen, MS Environmental Science	2018 – 2020
Whitney Hassett, MS Environmental Science	2013 – 2015
Jesse Adams, MS Environmental Science	2013 – 2014 NSF GK-12 Fellow
Eric Dexter, MS Environmental Science	2012 – 2014 Fulbright Scholar
Josh Emerson, MS Environmental Science	2011 – 2012 NSF GK-12 Fellow
Carl Wepking, MS Environmental Science	2011 – 2012
Keith Sorenson, MS Environmental Science	2010 – 2012 NSF GK-12 Fellow
Sarah Whitley, MS Environmental Science	2010 – 2012 NSF GK-12 Fellow
Joel Quenette, MS Environmental Science	2008 – 2010 NSF GK-12 Fellow
Kate Olson, MS Environmental Science	2008 – 2009 NSF GK-12 Fellow
Laura Friedenberg, MS Environmental Science	2008 – 2009 NSF GK-12 Fellow
Joanne Breckenridge, MS Zoology	2007 – 2009
Kaitlin Graiff, MS Environmental Science	2007 – 2008
Eileen Graham, MS Environmental Science	2007 – 2008
Lisa Marko, MS Environmental Science	2007 – 2008
Jennifer Bright, MS Environmental Science	2005 – 2007

Undergraduate Honors Thesis Mentor

Kate Perkins, BS Biology	2015 – 2017
Joseph McGill, BS Environmental Science/BS Biology	2014 – 2016
Vanessa Rose, BS Environmental Science	2012 – 2014

Undergraduate Research Mentor (NSF REU Mentees)

Carolyn Blum, Lasell University, Newton, Massachusetts	Summer 2023
Sandy Cruz, California State University, Northridge	Summer 2022
Elizabeth Elliot, Pacific Lutheran University	Summer 2021
Marcus Penza, Portland State University	Summer 2018
John Zalusky, Portland State University	Summer 2017
Michelle Devlaeminck, WSU Vancouver	Summer 2016
Kate Perkins, WSU Vancouver	Summer 2015

High School Teacher Mentor (Murdock Charitable Trust “Partners in Science”)

Colleen McKinney, Env Sci & Chemistry teacher, Skyview HS	2024 – present
Corinne Lorch, Environmental Sci & Math teacher, Discovery HS	2022 – 2024
Mariah McClesky, Environmental Science teacher, Jason Lee MS	2019 – 2020
Alli Coker, Environmental Science teacher, Camas High School	2017 – 2019
Carol Sandison, Biology teacher, Columbia River High School	2015 – 2017
Jennifer Dean, Biology teacher, Camas High School	2011 – 2013

High School Student Mentor (Intel Science Fair projects)

Spencer Vines, Skyview High School	2007 – 2008
Jennifer Heer, Columbia River High School	2005 – 2006
Michelle Larson, Columbia River High School	2005 – 2006

PART 3: PRESENTATIONS AND COLLOQUIA (Last 5 years)

*****Order of authors indicates order of proportional contribution; last author is NOT the senior.*****

*(*Graduate students, ⁺Undergraduates, [°]High school teachers, [#]Technicians)*

McKinney[°] C, **Rollwagen-Bollens** G, Bollens S. “How does phytoplankton biomass and abundance vary in relation to the presence and composition of native mussels in the Columbia River Basin?” Murdock Partners in Science Research Symposium, Portland, OR. January 2025.

Frazier^{*} M, **Rollwagen-Bollens** G, Bollens S. “Assessing Differences in Phytoplankton and Microzooplankton Community Structure Between Detroit Lake and Bonneville Reservoir.” Oregon Lakes Association/Washington Lake Protection Association Joint Meeting, Portland, OR. October 2024.

Mitchell^{*} J, Bollens S, **Rollwagen-Bollens** G. “Effects of Reservoir Type (Run-of-River vs. Storage) on Native and Invasive Zooplankton Assemblages.” Oregon Lakes Association/Washington Lake Protection Association Joint Meeting, Portland, OR. October 2024.

Neal^{*} N, Bollens S, Maine A, Counihan T, **Rollwagen-Bollens** G. “Ecological associations of native and invasive bivalves in the Columbia River Basin.” Oregon Lakes Association/Washington Lake Protection Association Joint Meeting, Portland, OR. October 2024.

- Harrison J, Bollens S, Brady M, Rajagopalan K, **Rollwagen-Bollens** G, Yoder J. “Dynamics of Integrated Socio-Environmental Systems: Dams as Adaptive Management Systems (DISES: DAMS).” American Fisheries Society Annual Meeting, Honolulu, HI. September 2024.
- Harrison J, Bollens S, Brady M, Rajagopalan K, **Rollwagen-Bollens** G, Yoder J. “Dynamics of Integrated Socio-Environmental Systems: Dams as Adaptive Management Systems (DISES: DAMS).” International Council on Aquatic Invasive Species Annual Meeting, Halifax, NS, Canada. May 2024.
- Toskey*E, Bollens S, Kiffney P, Martens K, **Rollwagen-Bollens** G. “The relative importance of biotic and abiotic factors in structuring the stream invertebrate assemblage in a temperate rainforest.” Ecological Society of America Annual Meeting. Portland, OR. August 2023.
- Kibota T, Allen M, Frederick K, Neiles K, **Rollwagen-Bollens** G. “From Competitive Exclusion to Collaborative Inclusion: Systemic Change and HHMI Inclusive Excellence 3.0.” ASCN Transforming Institutions Annual Conference, Minneapolis, MN, June 2023.
- Harrison J, Bollens S, Brady M, Rajagopalan K, **Rollwagen-Bollens** G, Yoder J. “Dynamics of Integrated Socio-Environmental Systems: Dams as Adaptive Management Systems (DISES: DAMS).” Society for Freshwater Science Annual Meeting, Brisbane, Australia. June 2023.
- Harrison J, Bollens S, Brady M, Rajagopalan K, **Rollwagen-Bollens** G, Yoder J. “Dynamics of Integrated Socio-Environmental Systems: Dams as Adaptive Management Systems (DISES: DAMS).” AGU Annual Meeting, San Francisco, CA. December 2022.
- Toskey*E, Bollens S, Kiffney P, Martens K, **Rollwagen-Bollens** G. “Stream algae biomass associations with environmental variables in a temperate rainforest.” Society for Freshwater Science PNW Chapter Annual Meeting. Caldwell, ID. October 2022.
- Rollwagen-Bollens** G. “How interactive biotic and abiotic factors drive cyanobacteria bloom dynamics: Synthesizing 14 years of ecological research in Vancouver Lake, WA, USA.” Universities Council on Water Resources/National Institutes for Water Resources Annual Conference. Greenville, NC. June 2022.
- Rollwagen-Bollens** G. “How interactive biotic and abiotic factors drive cyanobacteria bloom dynamics: Synthesizing 14 years of ecological research in Vancouver Lake, WA, USA.” ASLO Aquatic Sciences Annual Meeting. Grand Rapids, MI. May 2022.
- Jacobs* J, **Rollwagen-Bollens** G, Bollens S. “Feeding dynamics of the invasive calanoid copepod *Pseudodiaptomus inopinus* in two Northeast Pacific estuaries.” International Conference on Aquatic Invasive Species (ICAIS). Ostende, Belgium. April 2022.
- Jacobs* J, **Rollwagen-Bollens** G, Bollens S. “Feeding dynamics of the invasive calanoid copepod *Pseudodiaptomus inopinus* in two Northeast Pacific estuaries.” ASLO Ocean Sciences Meeting. March 2022.
- Jacobs* J, **Rollwagen-Bollens** G, Bollens S. “Feeding dynamics of the invasive calanoid copepod *Pseudodiaptomus inopinus* in two Northeast Pacific estuaries.” Ecological Society of America Annual Meeting. August 2021.
- Sweeney* K, **Rollwagen-Bollens** G, Hampton S. “Grazing impacts of rotifer zooplankton over a cyanobacteria bloom cycle in a shallow temperate lake (Vancouver Lake, WA, USA).” Ecological Society of America. August 2021.
- Robb-Chavez* S, Bollens S, **Rollwagen-Bollens** G, Counihan T, Zimmerman[#] J. “Broadscale distribution, abundance, and habitat association of the Asian clam *Corbicula fluminea* in the lower Columbia River, USA.” Ecological Society of America. August 2021.

- Rollwagen-Bollens** G, Connelly[#] K, Bollens S, Zimmerman[#] J, Coker^o A. “Nutrient control of phytoplankton abundance and biomass, and microplankton assemblage structure, in a large temperate river (Columbia River, USA).” ASLO Aquatic Sciences Meeting. June 2021.
- Sweeney* K, **Rollwagen-Bollens** G, Hampton S. “Grazing impacts of rotifer zooplankton over a cyanobacteria bloom cycle in a shallow temperate lake (Vancouver Lake, WA, USA).” ASLO Aquatic Sciences Meeting. June 2021.
- Jacobs* J, **Rollwagen-Bollens** G, Bollens S. “Feeding dynamics of the invasive calanoid copepod *Pseudodiaptomus inopinus* in two Northeast Pacific estuaries.” ASLO Aquatic Sciences Annual Meeting. June 2021.
- Jacobs* J, **Rollwagen-Bollens** G, Bollens S. “Feeding dynamics of the invasive calanoid copepod *Pseudodiaptomus inopinus* in two Northeast Pacific estuaries.” University Council on Water Resources Annual Meeting. June 2021.
- Robb-Chavez* S, Bollens S, **Rollwagen-Bollens** G, Counihan T, Zimmerman[#] J. “Broad-scale distribution, abundance, and habitat association of the Asian clam *Corbicula fluminea* in the lower Columbia River, USA.” University Council on Water Resources Annual Meeting. June 2021.
- Robb-Chavez* S, Bollens S, **Rollwagen-Bollens** G, Counihan T, Zimmerman[#] J. “Broad-scale distribution, abundance, and habitat association of the Asian clam *Corbicula fluminea* in the lower Columbia River, USA.” Society for Freshwater Science. June 2021.
- Rollwagen-Bollens** G, Connelly[#] K, Bollens S, Zimmerman[#] J, Coker^o A. “Nutrient control of phytoplankton abundance and biomass, and microplankton assemblage structure, in a large temperate river (Columbia River, USA).” Society for Freshwater Science. June 2021.
- Sweeney* K, **Rollwagen-Bollens** G, Hampton S. “Grazing impacts of rotifer zooplankton over a cyanobacteria bloom cycle in a shallow temperate lake (Vancouver Lake, WA, USA).” Society for Freshwater Science. June 2021.
- Robb-Chavez* S, Bollens S, **Rollwagen-Bollens** G, Counihan T, Zimmerman[#] J. “Broad-scale distribution, abundance, and habitat association of the Asian clam *Corbicula fluminea* in the lower Columbia River, USA.” US Fish & Wildlife Service “Science of the Service” conference. May 2021.
- Robb-Chavez* S, Bollens S, **Rollwagen-Bollens** G, Counihan T, Zimmerman[#] J. “Broad-scale distribution, abundance, and habitat association of the Asian clam *Corbicula fluminea* in the lower Columbia River, USA.” Pacific Estuarine Research Society Annual Meeting. April 2021.
- Sweeney* K, **Rollwagen-Bollens** G, Bollens S. “Grazing Impacts of Rotifer Zooplankton in a Seasonally Cyanobacteria-Dominated Lake.” Western Society of Naturalists Annual Meeting. October 2020.
- Robb-Chavez* S, Bollens S, **Rollwagen-Bollens** G, Counihan T, Zimmerman[#] J. “Broad-scale distribution, abundance, and habitat association of the Asian clam *Corbicula fluminea* in the lower Columbia River, USA.” Washington Lake Protection Association Annual Meeting. October 2020.

Conference Session Chair and Invited Colloquia

ASLO Aquatic Sciences Annual Meeting, Palma, Spain (held virtually due to COVID). Invited Session Chair: “Phytoplankton ecology and physiology.” Selected the speakers and led the session. June 2021.

Department of Environmental Science and Management, Portland State University, Portland, OR. “Going beyond eutrophication as the driver of cyanobacteria harmful algal blooms: Vancouver Lake, WA, USA as a case study.” April 2020.

ASLO Aquatic Sciences Annual Meeting, Victoria, BC, Canada. Contributed Session Co-Chair: “Freshwater CyanoHABs: Beyond Eutrophication.” Selected the speakers and led the session. June 2018.

The Oceans Institute, University of Western Australia, Perth, Australia. “Integrating Research, Teaching and Outreach Around Harmful Cyanobacteria Blooms in Vancouver Lake, Washington, USA.” June 2017.

Department of Biology, Portland State University, Portland, OR. “Plankton dynamics in the Columbia River Estuary: Harmful algal blooms, invasive species, and climate change.” May 2014.

USGS Oregon Water Center, Portland, OR. “The Role of Zooplankton Grazing on Noxious Cyanobacteria Blooms in Vancouver Lake, WA.” December 2010.

Department of Zoology, University of Otago, Dunedin, New Zealand. “The role of zooplankton grazing on noxious cyanobacteria blooms in Vancouver Lake, Washington, USA.” May 2010.

Department of Marine Science, University of Otago, Dunedin, New Zealand. “Microzooplankton in Pelagic Food Webs: From Blooms to Behavior.” May 2010.

Department of Biology, University of Portland, Portland, OR. “Plankton in Marine Food Webs: From Blooms to Behavior.” February 2010.

PART 4: SERVICE ACTIVITIES

University Service

WSU System-wide:

WSU President’s Commission on the Status of Women	2007 – 2012
Chair, Sexual Misconduct Subcommittee	2010 – 2012
Executive Committee Member and Membership Coordinator	2008 – 2009
Subcommittee on Family-friendly policies	2007 – 2009
WSU Partners for Innovative Education in STEM	2013 – 2015
WSU STEM Education Partnership Executive Committee	2012 – 2013

WSU Vancouver Campus-wide:

WSUV Scholarship Committee	2011 – present
WSUV Enrollment Management Strategy Team	2015 – 2016
1 st and 2 nd Year Experience Sub-Committee	2015 – 2016
WSUV UCORE Transition Committee	2012 – 2013
Interim Director of Research & Graduate Education	2007 – 2008
WSUV Faculty Professional Development Planning Committee	2007 – 2008
WSUV Diversity Council	2005 – 2007
Subcommittee on Student Retention	2005 – 2006
Subcommittee on Curriculum	2006 – 2007
WSUV Annual Teaching Assistant Training Workshop	2011 – present

WSUV/SW Washington Medical Center Grant Review Committee	May 2007
WSUV Faculty Mini-Grant Review Committee	2006 – 2007

WSU Vancouver College of Arts & Sciences:

Program Leader, Environmental Sciences	2016 – 2017
Program Leader, Natural Sciences Graduate Studies	2015 – 2016
Program Leader, Environmental Sciences	2013 – 2015
Arts & Sciences Undergraduate Curriculum Committee	2012 – 2016
Undergraduate advising, BS Biology/BS Env Sci (10-12 students/semester)	2004 – 2018
Faculty Search Committees:	
Tenure-track faculty in Environmental Chemistry	2014 – 2015
Tenure-track faculty in Hydrology	2013 – 2014
Tenure-track faculty in Environmental Geochemistry	2005 – 2006
Coordinator of Science Programs Seminar Series	2004 – 2005

WSU School of the Environment:

Co-Chair, DEI Committee	2022 – present
Graduate Studies committee	2018 – 2022
	2013 – 2015
Student Awards and Scholarships committee	2014 – 2016
Recruitment committee	2007 – 2008

WSU School of Biological Sciences:

Clinical Faculty Mentoring Committee	2018 – 2020
Undergraduate Program Committee	2017 – 2018
Communication Committee	2015 – 2016
Introductory Biology Teaching Laboratory Improvement	2014 – 2015

Community Outreach

Intel Regional Science Fair judge, Columbia River HS	2005, 2019
Southwest Washington College Access Network	2013 – 2016
Invited speaker and host, ESD 112 Principal's Café	December 2012
Invited speaker and host, SW Washington Workforce Development Council and Mt St Helens Institute "STEM Institute" for selected HS students in Clark County	December 2018; May 2012
Teacher Professional Development Committee, Vancouver Public Schools Planning Group for new STEM HS	2010 – 2012
Career Mentor, Jobs Acquisition Skills Program, Washougal HS	2004 – present
Keynote speaker, AAUW Annual Recognition Awards Ceremony (Vancouver, WA, branch)	April 2009
Invited speaker, AAUW Meeting: Status of Women in Science (Vancouver, WA, branch)	January 2009

Keynote speaker, AAUW Annual Recognition Awards Ceremony (Hudson's Bay, WA, branch)	April 2008
Board member, Camas HS Sci-Tech Magnet Advisory Board	2008 – 2013
Research mentor, Skyview HS Intel Science Fair Project	2007 – 2008
Science activity station, SW Washington MESA Math/Science Day	Oct 2006
Co-convener "K-20 STEM Education Summit"	April 2005

Professional service

Editorial Board Member, <i>Water</i>	2019 – present
Peer reviewer of proposals for the National Science Foundation (Ecosystems Studies Program, Polar Programs, Biological Oceanography Program)	2005 – present
Peer reviewer of manuscripts for publication (<i>Marine Ecology Progress Series, Journal of Plankton Research, Hydrobiologia, Estuaries & Coasts, Archiv fur Hydrobiologie, CalCOFI Reports, Northwest Science, Water</i>)	2004 – present

Professional Affiliations

Association for the Sciences of Limnology
 and Oceanography
 Society for Freshwater Science
 Coastal & Estuarine Research Federation
 Pacific Estuarine Research Society
 National Science Teachers Association
 National Association of Biology Teachers
 Society for the Advancement of Biology
 Education Research