

ROSSANA SALLENAVE
Extension Aquatic Ecology Specialist/College Professor
Department of Extension Animal Sciences and Natural Resources
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EDUCATION

Ph.D. 1994. Environmental Biology, University of Guelph, Ontario, Canada
M.Sc. 1986. Biology, University of Waterloo, Ontario, Canada
B.Sc. 1983. Environmental Biology, McGill University, Quebec, Canada

PROFESSIONAL EXPERIENCE

2018-present Extension Aquatic Ecology Specialist, College Professor, Department of
Extension Animal Sciences and Natural Resources, New Mexico State University
2013-2018 Extension Aquatic Ecology Specialist, Associate College Professor, Department
of Extension Animal Sciences and Natural Resources, New Mexico State
University
2008-2013 Extension Aquatic Ecology Specialist, Assistant College Professor, Department
of Extension Animal Sciences and Natural Resources, New Mexico State
University
2002-2008 Research Specialist, Department of Fish, Wildlife and Conservation Ecology,
New Mexico State University
2000-2002 College Assistant Professor, Department of Chemistry and Biochemistry, New
Mexico State University
1997-2000 Post-Doctoral Research Associate, Michigan State University
1994-1997 Post-Doctoral Fellow, University of Hohenheim, Germany

AWARDS

- Epsilon Sigma Phi, Early Career Award, NM Chapter of Epsilon Sigma Phi (2016)
- Distinguished Extension Award, New Mexico State University, CAHE (2015)
- New Specialist Award, New Mexico Specialists' Association (2013)
- Outstanding Integrated Program Water Resources Team Award, Rio Grande Basin Initiative, USDA-CSREES (2007)

PROFESSIONAL AFFILIATIONS AND SERVICE

Society of Freshwater Science
American Fisheries Society
Aquaponics Association
New Mexico Aquaponics Association
Western Regional Aquaculture Center (WRAC) Extension Technical Committee
WRAC Board of Directors
USDA/NOAA Sea Grant National Aquaculture Extension Steering Committee
New Mexico Extension Specialists Association

PUBLICATIONS

Extension Publications, Proceedings, Published Abstracts, Newsletter articles:

- Sallenave, R. 2020. Cyanobacteria (Blue green algae) in our waters: Agricultural Best Management Practices (BMPs) to increase resilience to algal blooms. https://aces.nmsu.edu/pubs/_w/W106.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R. and R.C. Schulz. 2019. Decoupled Aquaponics: A comparison to Single-loop Aquaponics. https://aces.nmsu.edu/pubs/_h/H173.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R. 2019. Understanding and preventing fish kills in your pond. (Revised) https://aces.nmsu.edu/pubs/_w/W105.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R., Ziegler, K., Ganguli, A. C. (2018). Monitoring your water well. https://aces.nmsu.edu/pubs/_m/M118/welcome.html New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R. (2018). Toxic Golden Algae (*Prymnesium parvum*). (Revised). http://aces.nmsu.edu/pubs/_circulars/CR647.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R., Carrasco, C., Cowley, D. E. (2018). Fishes in the Middle and Lower Rio Grande irrigation system of New Mexico. (Revised). http://aces.nmsu.edu/pubs/_circulars/CR653.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R. 2017. Nitrate in drinking water (Revised). Guide M-114. http://aces.nmsu.edu/pubs/_m/M114.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R. 2017. Treating and storing water for emergency use (Revised). Guide M-116. http://aces.nmsu.edu/pubs/_m/M116.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R. 2016. Important water quality parameters in aquaponics systems. Circular 680 http://aces.nmsu.edu/pubs/_circulars/CR680.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences.
- Sallenave, R. 2016. Water quality for livestock and poultry (Revised). Guide M-112. http://aces.nmsu.edu/pubs/_m/M112.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences
- Sallenave, R. 2016. Managing aquatic weeds. Circular 681. http://aces.nmsu.edu/pubs/_circulars/CR681.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences
- Sallenave, R. 2015. Stream biomonitoring using benthic invertebrates. Circular 677. http://aces.nmsu.edu/pubs/_circulars/CR677.pdf New Mexico State University Cooperative Extension Service. College of Agricultural, Consumer and Environmental Sciences

- Sallenave, R. 2015. New Mexico Aquaculture. (Revised). Circular 543
<http://aces.nmsu.edu/pubs/circulars/CR543.pdf> New Mexico State University
 Cooperative Extension Service. College of Agricultural, Consumer and Environmental
 Sciences.
- Sallenave, R. 2014. Is Aquaponics right for you? Guide H-170
<http://aces.nmsu.edu/pubs/h/H170.pdf>
- Sallenave, R. 2012. Understanding water quality parameters to better manage your pond. Guide
 W-104. <http://aces.nmsu.edu/pubs/w/W104.pdf> New Mexico State University
 Cooperative Extension Service. College of Agricultural, Consumer and Environmental
 Sciences.
- Sallenave, R. 2011. Managing filamentous algae in ponds.
<http://aces.nmsu.edu/pubs/w/W103.pdf> Guide W-103. New Mexico State University
 Cooperative Extension Service. College of Agricultural, Consumer and Environmental
 Sciences.
- Sallenave, R., P. Torres, T. Dominguez, and J. Turner. 2016. Consecuencias criminales de la
 negligencia y del abuso equino en Nuevo México. (Criminal consequences of equine
 neglect and abuse in New Mexico) Guía B-714 <http://aces.nmsu.edu/pubs/b/B714sp.pdf>
- Sallenave, R., P. Torres, T. Dominguez, and J. Turner. 2016. ¿Está preparado para ser dueño de
 un caballo? (Are you ready to own a horse?). Guía B-715
<http://aces.nmsu.edu/pubs/b/B715sp.pdf>
- Sallenave, R. New Mexico and other Western states on high alert for the invasive Zebra and
 Quagga mussels (Vol 45, May 2019). Cooperative Extension Service.
- Sallenave, R. Recent vote for NOSB supports organic certification for aquaponics growers (Vol.
 33, April 2018). Cooperative Extension Service.
- Sallenave, R. Upcoming National Aquaculture Conference Focuses on Aquaculture Extension
 Education across the Nation (Vol. 22, May 2017). Cooperative Extension Service.
- Sallenave, R. Water quality: protecting aquatic resources Newsletter, Pajarito Environmental
 Education Center, Los Alamos, NM Nature Notes (3rd ed., Vol 16. July 2016.
- Sallenave, R. State of New Mexico Waters. Newsletter, New Mexico State University, Extension
 Animal Sciences and Natural Resources Department, Volume 77, May 2016.
- Sallenave, R. House Bill 201 could be a game changer for New Mexico aquaponics growers.
 Newsletter, New Mexico State University, Extension Animal Sciences and Natural
 Resources Department, Volume 66, June 2015.
- Sallenave, R. Some facts about cyanobacterial harmful algal blooms. Newsletter, New Mexico
 State University, Extension Animal Sciences and Natural Resources Department, Volume
 56, June 2014
- Sallenave, R. Growing shrimp sustainably in New Mexico. Newsletter. New Mexico State
 University, Extension Animal Sciences and Natural Resources Department, Volume 43,
 May 2013.
- Sallenave, R. Oxygen depletion in recreational ponds. Newsletter. New Mexico State University,
 Extension Animal Sciences and Natural Resources Department, Volume 30, April 2012.
- Sallenave, R. Best Management Practices to reduce pesticide and fertilizer inputs to our water
 bodies. Newsletter. New Mexico State University, Extension Animal Sciences and
 Natural Resources Department, Volume 21, June 2011.
- Sallenave, R. Aquatic Invasive Species in New Mexico. Newsletter. New Mexico State
 University, Extension Animal Sciences and Natural Resources Department, Volume 7,
 March 2010.
- Sallenave, R. and R.L. Horn. 2016. Tadpole shrimp (Branchiopoda: Notostraca: *Triops*) diversity
 and distribution in the arid Southwestern United States. Proceedings from the IV Russian
 International conference "Biodiversity: global and regional processes", June 23-27, Ulan
 Ude, Russia.

Refereed Journal Articles:

- Serena, M., Schiavon, M., **Sallenave, R.**, Leinauer, B. (2019). Drought avoidance of warm-season turfgrasses affected by irrigation system, surfactant and Trinexapac-Ethyl. Crop Science doi:10.2135/cropsci2019.03.0203.
- Serena, M., Sportelli, M., Sevostianova, E. B., **Sallenave, R.**, Leinauer, B. (2018). Combining trinexapac-ethyl with a soil surfactant reduces bermudagrass irrigation requirements. Agronomy Journal, 110(6), 2180-2188.
- Pornaro, C., Macolino, S., De Luca, A., **Sallenave, R.**, Leinauer, B. (2018). Plant species diversity of naturalized roughs as affected by conversion strategies. Agronomy Journal, 110, 1709-1717.
- Serena, M., Schiavon, M., **Sallenave, R.**, Leinauer, B. (2017). Nitrogen fertilization of warm-season turfgrasses irrigated with saline water from varying irrigation systems. 2. carbohydrate and protein content. Journal of Agronomy and Crop Science, 1-9., DOI: 10.1111/jac.12256.
- Serena, M., Schiavon, M., **Sallenave, R.**, Leinauer, B. (2017). Nitrogen fertilization of warm-season turfgrasses irrigated with saline water from varying irrigation systems. 1. Quality, spring green-up and fall color retention. Journal of Agronomy and Crop Science, 1-13., DOI: 10.1111/jac.12254.
- Ganjegunte, G., Clark, J. A., **Sallenave, R.**, Sevostianova, E., Serena, M., Leinauer, B., Alvarez, G. (2017). Soil salinity of an urban park after long-term irrigation with saline ground water. Agronomy Journal, 109(6), 3011-3018.
- Alvarez, G., Sevostianova, E., Serena, M., **Sallenave, R.**, Leinauer, B. (2016). Surfactant and Polymer-Coated Sand Effects on Deficit Irrigated Bermudagrass Turf. Agronomy Journal, 108(6), 2245-2255
- Schiavon, M., Serena, M., Leinauer, B., **Sallenave, R.**, Baird, J.H. (2015). Seeding date and irrigation system effects on establishment of warm-season turfgrasses. Agronomy J. 107(3):880-886
- Serena, M., B. Leinauer, M. Schiavon, B. Maier, and **R. Sallenave**. (2014). Establishment and Rooting Response of Bermudagrass Propagated with Saline Water and Subsurface Irrigation. Crop Science 54(2):827-836.
- Schiavon, M., B. Leinauer, M. Serena, B. Maier, and **R. Sallenave**. (2014). Plant Growth Regulator and Soil Surfactants' Effects on Saline and Deficit Irrigated Warm-season Grasses: I. Turf Quality and Soil Moisture. Crop Science 54(6):2815-2826.
- Stoeckle, B.C., D.E. Cowley, Y. Schaack, K.S. Macdonald III, **R. Sallenave**, and R. Kuehn. 2013. Microsatellites for North American species of *Triops* (Branchiopoda: Notostracan). Journal of Crustacean Biology 33(1): 48-55.
- Schiavon, M., B. Leinauer, M. Serena, **R. Sallenave**, and B. Maier. 2013. Establishing Tall Fescue and Kentucky Bluegrass Using Subsurface Irrigation and Saline Water. Agronomy Journal Volume 105 issue 1 pages 183-190
- Serena, M., B Leinauer, **R. Sallenave**, M. Schiavon, and B. Maier. 2012. Turfgrass Establishment from polymer-coated seeds under saline irrigation. HortScience 47(12): 1789-1794.
- Schiavon, M., B. Leinauer, M. Serena, **R. Sallenave**, and B. Maier. 2012. Bermudagrass and Seashore paspalum establishment from seeds using different irrigation methods and water quality. Agronomy Journal 104(3): 706-714.
- Serena, M., B. Leinauer, **R. Sallenave**, M. Schiavon, and B. Maier. 2012. Media selection and seed coating influence germination of Turfgrasses under salinity. HortScience 47(1):116-120.

- Sevostianova, E., B. Leinauer, **R. Sallenave**, D. Karcher, and B. Maier. 2011. Soil Salinity and Quality of Sprinkler and Drip Irrigated Warm-Season Turfgrasses. *Agronomy Journal* 103(6):1773-1784
- Sevostianova, E., B. Leinauer, **R. Sallenave**, D. Karcher, and B. Maier. 2011. Soil Salinity and Quality of Sprinkler and Drip Irrigated Cool-Season Turfgrasses. *Agronomy Journal* 103(5):1503-1515.
- Macdonald III, K.S., **R. Sallenave**, and D.E. Cowley. 2011 Morphological and genetic variation in Triops (Branchiopoda: Notostraca) from ephemeral waters in the northern Chihuahuan Desert of North America. *Journal of Crustacean Biology*. *Journal of Crustacean Biology* 31(3): 468-484.
- Cowley, D.E, J.C. Alleman, **R. Sallenave**, R.R. McShane and P.D. Shirey. 2009 Effect of salinity on specific gravity and viability of eggs of North American minnows (Ciprinidae). *Scientia Marina* 73S1: 47-58.
- Sallenave, R. 2011. Environmental issues surrounding turf-dominated urban landscapes. *In*: S. Cockerham and B. Leinauer (Eds): Turfgrass water conservation, second edition. University of California Division of Agriculture and Natural Resources Publication 3523 (pp. 15-29). Richmond, CA: ANR Communication Services.
- Shirey, P.D., D.E. Cowley and **R. Sallenave**. 2007. Diatoms from gut contents of museum specimens of an endangered minnow suggest long-term ecological changes in the Rio Grande (USA). *Journal of Paleolimnology* 40: 263-272.
- Cowley, D.E., R.C. Wissmar and **R. Sallenave**. 2007. Fish assemblages and seasonal movements of fish in irrigation canals and river reaches of the middle Rio Grande, New Mexico (U.S.A.). *Ecology of Freshwater Fish* 16(4): 548-558.
- Shemai, B., **R. Sallenave** and D.E. Cowley. 2007. Competition between hatchery-raised Rio Grande cutthroat trout and wild brown trout. *North American Journal of Fisheries Management* 27: 315-325.
- Cowley, D.E. and **R. Sallenave**. 2006. Conservation and Management of Aquatic Resources in Arid Lands. *Reviews in Fishery Sciences* 14: 25-27.
- Sallenave, R. and D.E. Cowley. 2006. Science and effective policy for managing aquatic resources. *Reviews in Fishery Sciences* 14: 203-210.
- Sallenave, R., J. Alleman, J. Padilla, and D.E. Cowley. 2005. First record of *Daphnia lumholtzi* in the Rio Grande Basin, New Mexico. *Journal of Freshwater Ecology* 20(4): 775.
- Sallenave, R. and D.E. Cowley (guest editors). 2004. Aquatic resources in arid lands: Issues and opportunities. *Aquatic Sciences* 66: 343-345.
- Leinauer, B.L, **R. Sallenave**, D. VanLeeuwen and H. Schulz. 2004. A comparison of construction types and their associated irrigation systems: effects on turfgrass quality, drought avoidance and irrigation water use. *Acta Horticulturae (ISHS)* 661: 123-129.
- Leinauer, B., P.E. Rieke, D. VanLeeuwen, **R. Sallenave**, J. Makk and E. Johnson. 2001. Effects of soil surfactants on water retention in turfgrass rootzones. *International Turfgrass Society Research Journal* 9: 542-547.
- Sallenave, R.M. and Fomin, A. 1997. Some advantages of the duckweed test to assess the toxicity of environmental samples. *Acta Hydrochim. Hydrobiol.* 25(3):135-140
- Sallenave, R.M. and K.E. Day. 1997. Uptake and bioconcentration of 2,2',4,4',5,5'-Hexachlorobiphenyl by lotic periphyton. *Water Quality Research Journal of Canada* 32(3):619-635.
- Fomin, A. and **R. Sallenave**. 1996. The effects of gaseous NO₂ on nitrate assimilation and growth in *Spirodela polyrhiza*. *Angewandte Botanik* 70: 144-149.
- Sallenave, R.M. and A. Fomin. 1996. The feasibility of using insects as on-line biomonitors of industrial emissions. *In*: Bio-indication: Neue Entwicklungen Nomenklatur synökologische Aspekte. Verlag Günter Heimback, Ostfildern. pp 123-134.
- Sallenave, R.M., K.E. Day and D.P. Kreutzweiser. 1994. The role of grazers and shredders in the

- retention and downstream transport of a PCB in lotic environments. Environmental Toxicology and Chemistry 13(11): 1843-1847.
- Sallenave, R.M. and K.E. Day. 1991. Secondary production of benthic stream invertebrates in agricultural watersheds with different land management practice. Chemosphere 23(19): 57-76.
- Sallenave, R.M. and D.R. Barton. 1990. Changes in the benthic invertebrate community along a natural turbidity gradient in Lake Temiskaming, Ont.-Que. Hydrobiologia 206: 225-234.

GRANTS AWARDED:

- Co-PI Participatory Approaches to Agroecosystem Resilience in Times of Drought (ARID): An Example from the Southern Great Plains. USDA-NIFA/Agriculture and Food Research Initiative. 2018-2023. Ganguli, A. (PI), Sallenave, R. Ghimire, R., Dubois, D., Steele, C., Gleason, J.B., \$594,000,
- Co-PI Pairing Groundwater and Climate Data to Inform Sustainable Ranch Management in Uncertain Times. USDA-SARE, Utah State University 2018-2021. \$27,159.
- PI Educational programming in watershed stewardship, water quality, and aquatic ecology. USDA-NIFA Renewable Resources Extension Act Capacity Grant 2020. \$5,000.
- PI Educational programming in watershed stewardship, water quality, and aquatic ecology. USDA-NIFA Renewable Resources Extension Act Capacity Grant 2019. \$3,600.
- PI Educational programming in watershed stewardship, water quality, and aquatic ecology. USDA-NIFA Renewable Resources Extension Act Capacity Grant 2018. \$5,000.
- PI Extension programming in water quality monitoring, biomonitoring using macroinvertebrates, and watershed stewardship. USDA-NIFA Renewable Resources Extension Act Capacity Grant. 2017. \$6,000.
- PI Extension programming in watershed stewardship, stream ecology and aquatic ecosystem health and water quality. USDA-NIFA Renewable Resources Extension Act Capacity Grant. 2016. \$6,000.
- Co-PI Biodiversity of Natural and Man-made ephemeral catchments in New Mexico. 2011-2012. NM Game and Fish Department. Macdonald and Sallenave. \$8000.00
- Co-PI Ecology of Irrigation Drainage Canals and Ephemeral Wetlands along the Rio Grande of New Mexico. Rio Grande Basin Initiative, USDA. 2007–2011, Cowley and Sallenave. \$179,568
- Co-PI Agricultural Irrigation Systems and Conservation of Native Fishes. Rio Grande Basin Initiative, USDA. 2004-2007. Cowley and Sallenave. \$257,896