

# JESSE W. JUCHTZER

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## *Professional Preparation*

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|--|------|------|
| Sierra Nevada College, Incline Village, NV Environmental Science & Ecology   | B.S. | 2009 |
| Truckee Meadows Community College, NV Environmental Science                  | A.S. | 2007 |
| Embry Riddle Aeronautical University, CA Airframe and Powerplant Maintenance | VTS. | 2004 |
| United States Navy, NASNI, CA, Naval Aviation Mechanic, Structural/Hydraulic | VTS. | 2001 |

## *Selected Certifications*

|   |           |
|---|-----------|
| Weather Modification Association - Weather Modification Operator              | 2019-2023 |
| FAA/UAS Recurrent Remote Pilot License - Small Unmanned Aircraft (Part 107)   | 2019-2023 |
| FAA/UAS Remote Pilot License - Small Unmanned Aircraft (Part 107)             | 2017      |
| United States Geological Survey - Surface Water Records Computation           | 2012      |
| United States Geological Survey - Streamflow Measurements using ADCPs         | 2011      |
| United States Geological Survey - Backcountry Snowmobile/Wilderness First Aid | 2010      |
| Embry Riddle Aeronautical University - Airframe and Powerplant Maintenance    | 2004      |
| United States Navy- MIG/TIG/MAG/SMAW/Other metallurgy fabrication processes   | 2002      |
| United States Navy - Federal OSHA Hazardous Materials HAZWOPER                | 2002      |

## *Selected Awards*

|  |      |
|--|------|
| Desert Research Institute - Technical Employee of the Year (Nominee Recognition)   | 2019 |
| Desert Research Institute - Distinguished Service (5 Years Recognition)            | 2018 |
| Sierra Nevada College - Science and Technology Departmental Exemplary Scholar      | 2009 |
| Sierra Nevada College - Magna Cum Laude Honor Student                              | 2009 |
| United States Navy - Sea and Air Warfare Service Aviator Production Excellence     | 2003 |
| United States Navy - Airman Technical Training Honors with Accelerated Advancement | 2002 |

## *Memberships*

|  |           |
|--|-----------|
| Civil Air Patrol (US Air Force Auxiliary) – Reno Composite Squadron, Senior Member | 2022-2023 |
| DRI Environmental Health and Safety Office- Field Safety Committee Member          | 2019-2023 |
| Weather Modification Association- Individual Member                                | 2017-2023 |
| American Heart Association- Northern Nevada Heart Walk Team Member                 | 2015-2019 |

## *Publications, Conference Proceedings and Presentations*

Watts, A. C., Ottmar, R., Grimm, D., Juchtz, J. W., Melarkey, P. M., Page, D. J., Kobziar, L., Nelson, K. N., Boehmler, J., 2019: Unmanned aircraft systems (UAS) for data collection at the Fire and Smoke Model Evaluation Experiment (FASMEE), 8th International Fire Ecology and Management Congress: Tucson, AZ, November 18, 2019-November 22, 2019, Presented

Collins, M. J., McDonough, F., Juchtz, J. W., Arienzo, M. M., Dean, J., 2019: Stories in the Snow: Crowd-Sourced Snow Crystal Images to Identify Tahoe Winter Cloud Structures, Annual Western Snow Conference: Reno, NV, April 16, 2019-April 18, 2019

Juchtz, J. W., 2019: A Hexacontagonal History of Sierra Snowflakes, Desert Research Institute - 60 Years of Weather Modification, Weather Modification Association - Annual Conference: C handler, AZ, April 24, 2019-April 26, 2019

***Publications, Conference Proceedings and Presentations, cont.***

McDonough, F., Mejia, J. F., Shourd, K. N., Carroll, R. W., Lutz, A. D., Dean, J., Juchtzer, J. W., Huggins, A. W., Kaplan, M. L., DeLuna, R., Trembath, C., 2017: Weather Modification Feasibility Study – Laramie Range Siting and Design, Level III Study, April 30, 2017, Project report prepared for the Wyoming Water Development Office, Cheyenne, WY.

McDonough, F., Juchtzer, J. W., Shourd, K. N., Dean, J., 2017: Supercooled Liquid Water Observations within Storms over the Sierra Nevada Mountains, Weather Modification Association Annual Meeting: Boise, ID, April 17, 2017-April 20, 2017

***Career Appointments***

**2013 - Present**     **Desert Research Institute**- Division of Atmospheric Science  
Weather Modification Program, Reno, NV

Principal Research Technician (Mar 2020- Present)  
Interim Principal Research Technician (Aug 2019-Mar 2020)  
Research Technician I (Feb 2019-Aug 2019)  
Lead Field Technician II (July 2016-Feb 2019)  
Field Technician II (Oct 2013- July 2016)

- Leadership oversight of all activities conducted at DRI -Weather Modification Research Facility
- Management of all inventoried assets, project purchases/budgets, land use permits/MOU's, cooperator and program metadata archives for each site's historic and annual reporting needs.
- Supervision of all field technicians, grad students, hourly hires, guests, media groups and K-12 outreach visitors associated with Stead facility and field work operations.
- Facilitate all training needs for personnel safety, office/shop facility equipment, field work environment hazards/first aid/survival, vehicle maintenance/repair, chemical mixing/hazmat storage.
- Assist with employee performance reviews and professional development needs.
- Coordinate and direct all field operations using backcountry outfitted snowmobiles and/or heavily loaded 4x4 trucks while towing trailers on high altitude on/off road terrain in all weather conditions throughout the western states for extended time periods while working in extreme hot/cold climates.
- Lead fabricator, troubleshooter, equipment operator with extensive experience in metal, wood, composite, electrical, plumbing fabrication of all DRI ground-based silver iodide cloud seeding generators, liquid propane cloud seeding dispensers, UAV research payloads and meteorological (weather, precipitation, digital imagery, icing, PM, albedo) sensory equipment.
- Primary innovator and developer of all new (2013-Present) research equipment, tools and proprietary DRI intellectual property components with intent of DRI commercialization to fund future projects.
- Chief equipment programmer and installation specialist of Weather Modification Research Facility equipment, calibration procedures, data acquisition systems, digital archives, automated data analysis tools, public website configurations and operational dissemination platforms.
- Proficient in the use of GIS/ArcMap/ TOPO/GPS products for field equipment siting, analytical and statistical reporting for State/Public presentations using Excel/PowerPoint/Video production software.
- Skillfully conduct a multitude of FAA (Part 107) UAV operational research sorties in all-weather environments with proprietary developed sensors/logic programs and customizable modular payloads that can be used for a variety of atmospheric, earth, and ecosystem science applied research needs.
- Cooperatively developed (2015-Present) a multi-faceted Educational Outreach "citizen science" program/kit with implementation of worldwide interactive open-source data portal for macro-imagery of freshly fallen snowflake crystal morphology observations.

**2008 - 2013**      **Hydrologic Technician**, United States Geological Survey  
California Water Science Center, Carmelien Bay, CA

- Surface water discharge measurement collection, analysis and record computation using graphical rating database systems.
- Multi parameter water quality probe installation, continuous monitoring sampling and precipitation sensor calibrations.
- Perform QA/QC hydrographic review for real-time data on National Water Information System for publication.
- Installation, troubleshooting, maintenance, utilization of GOES satellite HDR radios with multiple data logger collection platforms.
- Provided annual lecture to UC San Francisco and Feather River College students about stream gauging and the operational mission of the US Geological Survey.
- Extensive use of mechanical velocity meters (Price AA/Pygmy), acoustic doppler velocity meters (ADV-Flowtracker), Acoustic doppler current profilers (ADCP-Sontek/RDI).
- Surveying field sites with Sokkia digital levels and bar-coded rods.

**2006 - 2008**      **Biodiesel Plant Operator**, Bently Nevada Corporation  
Bently Biofuels, Minden, NV

- Allocation and collection of renewable/recycled feedstock oils from local and regional restaurants.
- Production of biodiesel fuel using transesterification (methanol) batch process with composted waste stream and final QA/QC of manufactured biodiesel.
- Distribution of biofuel through public service pump, bulk deliveries and participating vendors.

**2005 - 2006**      **Water Resource Survey Intern**, Carson City Public Works  
Well Head Protection Program, Carson City, NV

- Promoting public awareness of the proper wellhead abandonment procedures for any unused private water wells.
- Acquisition of field data using GPS coordinates, digital photography, and GIS mapping overlays.
- Results from data evaluated for possible groundwater contamination sources within wellhead protection areas.

**2001 - 2005**      **Petty Officer 2<sup>nd</sup> Class Naval Aviation Mechanic**, United States  
Navy Sea Control Squadron, Coronado Naval Air Station, San Diego, CA

- Deployed as Depot Level-Structural/Hydraulic Mechanic on CVN74-USS Stennis Aircraft Carrier.
- Repair, installation and maintenance of aircraft parts, metal/composite structures, and flight control systems in accordance with US military standard operating procedures (SOP's).
- Regularly conducted MIG/TIG/MAG/SMAW welding, acetylene torch welding, cold riveting, and other metallurgy fabrication processes in a timely manner in order to meet Naval Aviation needs.
- Testing and troubleshooting failed structural hydraulic/electrically actuated components along with performing preflight operational inspections on land and at sea during 24/7 flight operations.
- Participated in international/multi-continent training missions to provide US Navy Sea Control Squadrons with combat ready pilots and aircraft during both peace and wartime operations.