

WORK EXPERIENCE

Assistant Professor of Practice

Oregon State University, College of Forestry,
Klamath Basin Research and Extension Center,
Klamath Falls, Oregon
Aug 2014 - Current

Summary:

Plan, develop, and deliver educational programs in the areas of forestry, natural resources, and fire science while serving with the Klamath Basin Research and Experimental Station. Participate in providing educational services to other parts of the State as requested.

Achievements, Responsibilities, Projects:

Consultation: Provides private landowners with latest research and with Extension core curricula during on-site visits, workshops, classroom. Offers advice and recommendations as requested. Assists with land management plans and plans for fire prevention. Working in partnership with the Oregon Small Woodland Association and Oregon Forest Resources Institute.

Landscape Management: Providing assistance to all landowners (private, State, and Federal) to increase the scope and scale of landscape restoration. Organized a summit of major land managers. Participates in non-profit Klamath/Lake Forest Health Partnership. Submitting grant proposals to fund efforts of collaboration of landscape management across boundaries.

Outdoor Education: Organizing a collaborative partnership to all outdoor education providers to make delivery of outdoor education more efficient and effective. Facilitating the train-the-trainers for teachers to deliver Project Learning Tree and the Oregon Environmental Literacy Program to city and county schools. Give presentations as requested on outdoor education to various audiences.

Education: Working with a Partnership of State, County, and Federal fire managers and trainers to bring a Public Safety Training Center to southern Oregon. Put in a proposal to establish a Center that would integrate continuing education, for-credit academic curricula, and practical experience for forestry, natural resources, and fire science. The Center will emphasize structure and wildland firefighting, emergency medical, and law enforcement training, education, and experience. I assumed the responsibilities of interim Director (part-time) to manage a set of emergency medical technician classes. Developed core curricula for fire science for Extension and the Natural Resources Program, State-wide.

Peer Group Assistance: Provided a series of presentations in silviculture, fire ecology, and forestry/botany to various venues across the State for Tree Schools, and other organized events for colleagues in Extension and for classes on campus.

Research: Currently listed as Co-Investigator on two research projects: "Go Big or Go Home? Tools and Processes for Scaling up Collaborative Forest Restoration" and "Opportunities for Biochar Production to

Reduce Forest Wildfire Hazard, Sequester Carbon, and Increase Agricultural Productivity of Dryland Soils".

Volunteer Efforts: Served as firefighter and EMT for a local volunteer Fire Department (2014 to 2016).

Consultant Forester/Ecologist

SMTL Enterprises
Libby, Montana
Jan 2010 - Jun 2014

Summary:

After retirement in January of 2010, I formed a small, independent consulting firm named SMTL Enterprises. Entered into contracts as requested for forestry, ecology, wetland projects.

Achievements, Responsibilities, Projects:

Fulfilled a contract that co-instructed habitat type training for the Northern Region held in Coeur d'Alene, Idaho; Supervised and completed a survey for insect and disease risk for the Kootenai National Forest (including a pre-published and ready report); Conducted wetlands assessments for a minerals firm; taught ecology/botany/forestry classes at the local community college.

Forest Ecologist/Silviculturist

USDA Forest Service/Kootenai National Forest
Libby, Montana
Jun 1992 - Jan 2010

Summary:

Lead Vegetation Program Manager for the 3 million-acre National Forest, including five Ranger Districts.

Achievements, Responsibilities, Projects:

Program management: (includes assisting with annual budget coordination with Region and districts; submitting accomplishment reports, mentoring, consulting with districts for silviculture, ecology, botany, weeds, native revegetation, Special Interest Areas, and Research Natural Areas);

Fire suppression/management: (includes membership on incident management teams and working on prescribed burn crews); data and database management (national, state, and local).

Planning: (contributing to assessments and analyses for landscape and stand management. Extension consulting with the public sector within Lincoln County for any natural resource questions that may arise, such as insect and disease, plant identification.

Certified Forest Steward/Instructor

The University of Montana, Extension Service and Flathead Valley Community College (Libby campus)
Libby, Montana
Sep 1994 - Jun 2014

During off hours while working at the Kootenai Forest, I became involved with the Montana State Stewardship Advisor program. I successfully completed the training, became certified, and taught classes as needed. I have since certified stewardship plans for private landowners and given lectures for continuing education efforts.

Over the years I taught classes in Botany, Plant taxonomy, fire ecology, forest tree genetics and tree improvement (2009, 2010, 2011, and 2012), Ecology (1994 and 2002), and many fire courses (2004, 2005, and 2006, 2007).

Wildland Firefighter/Emergency Services Responder

USDA Forest Service, OSU Extension

From Florida to Alaska, and all areas in-between
Jun 1978 – Aug 2016

I was involved in wildland fire suppression and prescribed fire management from June, 1978 to August of 2012. I have been involved with fire behavior and disturbance ecology since March of 1973. My experience with wildland firefighting from 1978 to 2012 included being qualified and having had experience as firefighter, squadboss, crewboss, helitac support crewmember, division group supervisor, safety officer, situation unit leader, infrared interpreter, field observer, Incident Commander Type 3, and Operations Section Chief for Type 1 and 2 incident management teams. I have been a member of several Type 1 and Type 2 incident management teams (including wildland fire use teams) for the Northern Rockies. I was responsible for all operations, tactics (short- and long-term), and personnel on fire incidents. I directly supervised all ground and air personnel, information (including advanced fire behavior predictions), and resources. I ordered and directed these resources to meet objectives in a safe and cost effective manner. I have had 30+ years of firefighting experience in complex and diverse fuel types and terrain throughout the Pacific Northwest, Rocky Mountains, Southwest, Southeast, and Alaska and have been cited for excellent leadership and the ability to strategize and direct all resources for immediate, efficient, and effective attainment of objectives. I have served on fires ranging in size from 5 to over 100,000 acres, and have managed and been directly responsible for thousands of human and mechanical resources. And after serving on over 300 fires (including several hurricane relief efforts), only two people I have been responsible for have had minor reported injuries and no fatalities. I am very glad and proud of that and have worked hard to achieve that claim. My experience in fire management has greatly benefited my knowledge and expertise within the field of fire ecology and my knowledge of fire ecology greatly aided my efforts in fire suppression/ management.

Fire Chief

Cabinet View Fire Department

Libby, Montana
Jun 2006 - Aug 2012

My initial experience with structure fires was in 1969 during my first structure/shipboard fire training in the Navy. I also received training for fighting fires on shipboard structures and

participated in several actual shipboard fire incidents in the Navy (1970 to 1974). My experience as a back country Emergency Medical Technician at a remote Ranger District from 1978 to 1980 gave me invaluable experience that I applied to my organization and leadership of the volunteer Fire Department (2006 to 2012). I also learned from and used the experience gained in search and rescue in the Navy in waters around the world, and as a fatality incident investigator while working for another remote Ranger District in northeast Oregon.

As Fire Chief, I was responsible for all operations, administration, and management (equipment, personnel, and resources) of our fire department within our fire service area (about 8700 acres, 250 homes, 12 businesses, one city/county airport, 1500 people) and as mutual response for adjacent fire service areas. During my tenure, we had 20 to 25 firefighters/ EMT's on our roster, with approx. 10 responding to all calls. I also supervised a Fire Department Auxiliary for Fire Dept. and community support. The Auxiliary consisted of 5 to 10 dedicated volunteers.

Our department handled all 911 calls for wildland fire, structure fires, vehicle accidents, and any other assistance calls we received. I coordinated our responses with the Sheriff's Department, County emergency medical services, adjacent fire departments, State of Montana and Forest Service firefighting organizations.

Under my leadership, our Dept. developed from an ISO rating of 0 (or 10) to an 8 in one year. This involved drastic improvements in personnel training, equipment maintenance, and overall readiness and water supply effectiveness. This was a great accomplishment for the community. Success in grant writing resulted in obtaining an SCBA grant from FEMA for over \$400,000.

EDUCATION

Bachelor of Science Oregon State University School of Forestry 1973-1977	Master of Science Oregon State University College of Forestry 1989-1992	PhD University of Montana School of Forestry 1997-2000
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PUBLICATIONS

Sensitive Plant Program for the Kootenai National Forest. D. Leavell and Triepke, J., 1995. Policy and Methodology for PETS Plant Species Management. Kootenai National Forest, Libby, MT.

Mapping Forest Alliances and Associations Using Fuzzy Systems and Nearest Neighbor Classifiers. F. Jack Triepke, C. Kenneth Brewer, Daniel M. Leavell and Stephen J. Novak, *Remote Sensing of the Environment*, March 18, 2008 (Vol. 112, No. 3, doi:10.1016/j.rse.2007.07.014)

Vegetation and process of the Kootenai National Forest. D. Leavell, (2000). School of Forestry, University of Montana, Missoula, MT. In: dissertation abstracts, catalog #9970-793, vol. 61-04B, p. 1744. Ann Arbor, Michigan. 508 pp.

Relationships between plant associations and environment within McDonald-Dunn Forest. D.

Leavell, (1992). Thesis for the Master of Science (M.S.) degree in Forest Science, College of Forestry, Oregon State University, Corvallis, Oregon. 175 pp.

Fire-Adapted Communities: The Next Step in Wildland Fire Preparedness. D. Leavell. (2015). OSU Extension Service, Corvallis, Oregon. EM 9116.

AFFILIATIONS

Ecological Society of America (1996 to 2013); National Geographic Society (1974 to 2013); International Association of Arson Investigators (2013); International Association of Emergency Managers (2012 to 2013); Society of American Foresters (off and on, 1973 to 2016)

JOB-RELATED TRAINING COURSES

Courses taken during Bachelor's efforts - 1973 to 1977; Basic wildland firefighting, 1978, 40 hours; Basic Air Operations training, 1978, 40 hours; Genetics Education for the Northern Rocky Ecosystem, 1977, 80 hours; Courses taken during silvicultural certification effort - 1985 to 1987; Management of Forest Ecosystems and Landscapes (Silviculture Institute) - 1985-1987; Courses taken during Master's efforts - 1989-1991; Ecology of Western Larch Symposium; 1992 Fire Ecology and Ecosystem Management; 1993 Range and Ecosystem Management - 1993 Social Impact Analysis - 1993; Courses taken during Ph.D. effort - 1997-2000; Completed Crewboss training, 1983, 40 hours; Completed Intermediate Air Operations training, 1984, 40 hours; Completed Silvicultural Certification in Region 6, 1985 to 1987, and certified for four years (1987 to 1992); Completed Strike Team/Task Group Leader training, 1987, 40 hours; Completed Field Observer training, 1990, 40 hours; Completed Situation Unit Leader training, 1991, 40 hours; Completed Division/Group Supervisor training, 1992, 40 hours; Completed Fire Ecology and Ecosystem Management, 1993, 40 hours; Completed Infra-red Interpreter training, 1994, 40 hours; Completed Command and General Staff training, 1998, 40 hours; Completed Operations Section Chief training, 1997, 40 hours; Completed Incident Commander Training, 2002, 40 hours; Completed Infrared Interpreter training, 2002, 40 hours; Completed Fire Regime Condition Class, 2003, 40 hours; Completed Safety Officer Training, 2005, 40 hours; Completed Smoke Management Techniques training, 2007, 40 hours; Completed Advanced Fire Use Applications, 2007, 40 hours; Completed TERRA/INRIS training, 2004, 40 hours; Completed FACTS training at the RO, 2006, 24 hours; Completed TERRA TESP training, 2006, 24 hours; Completed Structure Fire Fighting Academy, 2007, 150 hours; Completed Structure Fire Officer Training, 2008, 24 hours; Completed Structure Fire Engineer Training, 2008, 32 hours; Completed Plans Section Chief Training, 2010, 40 hours; Completed Emergency Medical Technician Training, 2010, 80 hours; Completed Emergency Medical Technician Refresher, 2011, 24 hours; Completed continuous hours of training (100 to 300 each year) for Fire Department qualification maintenance (2006 to 2012 and from 2014 to present); Completed 50+ hours of training for arson investigation (2013): A Ventilation-Focused Approach to the Impact of Building Structures and Systems on Fire; Development an Analysis of the Station Nightclub Fire; Arc Mapping Basics; Charleston Sofa Super Store Fire Critical Thinking Solves Cases; Digital Photography and the Fire Investigator; DNA; Documenting the Event; Ethics and the Fire Investigator; Explosion Dynamics; Fundamentals of Residential Building Construction; NFPA1033 and Your Career; The Practical Application of the Relationship Between NFPA 1033 and NFPA 921; The Scientific Method for

Fire; and Explosion Investigation.

JOB-RELATED SKILLS:

Computer Software including: word processing; spreadsheets (Excel, Lotus, QuattroPro); databases (Oracle, dBase); GIS (ArcView, ArcInfo, ArcMap); multivariate and univariate statistical analysis software (TWINSPAN, DECORANA, CANOCO, PCORD, SYSTAT, SAS); SQL; graphics (Paint Shop Pro, Word Publisher); FACTS; IWeb, Adobe software (InDesign, Illustrator, Acrobat). Chief Officer for structure firefighting (NFPA-qualified). Operator experience for: Type 1 to Type 6 fire engines and water tenders; forwarders; scissor-lifts. Basic carpentry and construction experience.

PERSONAL SKILLS:

Snowmobile competency; ski backcountry and downhill; kayak: whitewater and ocean; backpack and mountaineering skills; handgun, rifle, and shotgun marksmanship; wilderness medicine.

CERTIFICATIONS

Certified Forest Steward/State of Montana (06/1995 - 06/2010);
Certified Senior Ecologist/Ecological Society of America (06/1988 - 06/2010);
Certified Silviculturist/Region 6 (06/1987 - 06/1991);
National NREMT certification (2010-2016);
State of Montana license for Emergency Medical Technician/FR (2010-2016);
State of Oregon license for Emergency Medical Technician/FR (2014-2016);
American Heart Association CPR/First Instructor (2015-2017).

AWARDS

Appreciation award from the Bly Fire Department (2016); Award of a Chief's helmet from the students of the Fire Academy (2016); Distinguished Service Medal for the Cabinet View Fire Department (7/2011); Cash award for Montanore EIS efforts (11/2009); Cash award for participating in Regional habitat type training (09/2009); Cash award (08/2009); Cash award (12/2008); Cash award (09/2004); Cash award for providing high quality and timely support to the Forest's old growth litigation process (09/2003); Cash award for outstanding teamwork on the Forest Plan revision effort (09/2003); Cash award for outstanding teamwork for the Rock Creek Project (09/2001); Forest Supervisor's award for leadership in the botany and ecology programs and for working with the Libby community (09/1999); Cash award for outstanding teamwork in developing an EM approach to a Forest fire assessment (09/1995); Cash award for outstanding leadership in the Forest's Ecosystem Management program (06/1993); Cash award for going above and beyond in creating an ecology program (06/1991); Cash award for superior performance as a team leader (09/1986); Quality Step Increase for outstanding professional attitude and performance (09/1982); Cash award for outstanding performance as an Emergency Medical Technician (09/1980).