

Faculty Activity Report 1999-2006

Prepared By

Steve Taylor, Ph.D.  
Associate Professor of Geology  
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Submitted To

Steve Scheck, Dean  
College of Liberal Arts and Sciences  
Western Oregon University  
Monmouth, Oregon 97361

October 2, 2006

Dr. Steve Taylor – Earth Science

Curriculum Vitae

**Stephen B. Taylor**  
Earth and Physical Sciences Department  
Western Oregon University  
Monmouth, OR 97361

**EDUCATION**

- 1999 **Ph.D. - Geology**, West Virginia University, Morgantown, WV. Emphasis Area: Geomorphology and Surficial Processes. GPA: 4.0/4.0. Dissertation Topic: Geomorphic Controls on Sediment-Transport Efficiency in the Central Appalachians - A Comparative Analysis of Three Watersheds Underlain by the Acadian Clastic Wedge.
- 1988 **Post-Master's Graduate Work (PhD)**, Geology, University of New Mexico, Albuquerque, NM. Graduate course work in Geomorphology-Surficial Processes, Soil Genesis-Chemistry, Process Sedimentology, Volcaniclastics, and Paleomagnetism. GPA: 3.8/4.0. Preliminary Dissertation Topic: Tectonics and Sedimentation of East Pisco Basin, Central Peru. Personal leave from program in 1989 for family reasons.
- 1985 **M.S. - Geology**, Washington State University, Pullman, WA. Emphasis: Clastic Depositional Systems, Fluvial Sedimentology, Sedimentary Basin Analysis. GPA: 3.96/4.0. M.S. Thesis Topic: Stratigraphy, Sedimentology, and Paleogeography of the Swauk Formation in the Liberty Area, Central Cascades, Washington.
- 1982 **B.S. - Geology**, Slippery Rock University, Slippery Rock, PA. Cumulative GPA: 3.8/4.0, Major GPA: 3.96/4.0. Senior Thesis Topic: Subsurface Basin Analysis of Silurian Strata, Northwestern Pennsylvania.

**PROFESSIONAL EXPERIENCE**

- 2004-Present **Associate Professor of Geology**, Earth and Physical Science Department, Western Oregon University, Monmouth, OR. Serving as faculty member in the Earth and Physical Science curriculum. Primary teaching and research interests include environmental geology, hydrogeology, surficial processes, geomorphic hazards, and geographic information systems.
- 2005-Present **Graduate Faculty** (Courtesy Appointment), Water Resources Graduate Program, Oregon State University, Corvallis, OR. Serving as graduate advisor and instructor in fluvial geomorphology, watershed analysis, environmental geology, and geographic information systems.
- 2005-Present **Oregon State Board of Geologist Examiners**, Governor-appointed board member associated with the regulation of the public practice of geology and engineering geology in the state of Oregon. Serving as chair of the OSBGE public outreach committee and a state delegate to the Association of State Boards of Geology (ASBOG) Council of Examiners

## PROFESSIONAL EXPERIENCE (Cont.)

- 2005            **Visiting Professor of Environmental Geology**, Environmental Science Department, Willamette University, Salem, OR. Part-time retirement replacement position, duties included teaching topics in applied and environmental geology.
- 1999-2004      **Assistant Professor of Geology**, Earth and Physical Science Department, Western Oregon University, Monmouth, OR (refer to job description above).
- 2000-2003      **Project Coordinator**, PT3 Grant Initiative (Preparing Tomorrow's Teachers to Use Technology), College of Liberal Arts and Sciences, Western Oregon University, Monmouth, OR. Part-time grant project coordinator (0.25 FTE) for institution-wide initiative to infuse technology across the College of Liberal Arts and Sciences and College of Education curricula.
- 2001            **Visiting Professor of Geography**, Dept. of Geography, University of Oregon, Eugene, OR. Part-time sabbatical replacement, duties included teaching graduate courses in surficial processes, geomorphology, and alluvial fan depositional systems.
- 1999            **Project Geologist**, U.S. Filter - Chester Engineers, Inc., Pittsburgh, PA. Consulting geologist involved with industrial waste-water treatment studies, soil and water contamination investigations, environmental restoration projects, and regulatory compliance issues.
- 1995-1999      **Research Assistant**, Department of Geology and Geography, West Virginia University, Morgantown, WV. Funded PhD student working on surficial process studies in the Appalachians. Duties included field mapping of surficial and bedrock geology, data analysis, GIS development, report writing, grant writing.
- 1993-1997      **Adjunct Instructor**, Earth Sciences Department, California University of Pennsylvania, California, PA. Served as department instructor in the graduate and undergraduate Earth Science program (geology and geography).
- 1990-1995      **Adjunct Instructor**, Division of Science and Technology, Westmoreland County Community College, Youngwood, PA. Served as part-time geology and geography instructor in the Division of Sciences.
- 1990-1994      **Senior Hydrogeologist**, Anderson Geological Services, P.O. Box 1059, Washington, PA. Geologist involved with environmental and resource evaluation studies. Work activities included hydrogeologic investigations, aquifer assessments, soil and water contamination studies, energy-resource evaluations, technical report preparation, CAD layout, cartography, and field oversight.
- 1990            **Adjunct Geology Instructor**, School of Arts and Sciences, Waynesburg College, Waynesburg, PA. Served as part-time geology instructor through an extension program with the Pennsylvania Department of Corrections.

## **PROFESSIONAL EXPERIENCE (Cont.)**

- 1989-1990     **Hydrogeologist**, Geraghty and Miller, Inc., Environmental Consultants, Washington Trust Building, Washington, PA. Geologist involved with RCRA/CERCLA hydrogeologic investigations for private industry. Duties included site reconnaissance, supervision of soil borings, monitoring well installation, water sampling, data analysis, and report preparation. Also included experience with air pollution monitoring and environmental site assessments.
- 1988-1989     **Research Assistant**, Dept. of Geology, University of New Mexico, Albuquerque, NM. Duties included research in sedimentary basin analysis, field geology, library research, computer-assisted data management and information transfer, report writing, cartography, and technical drafting.
- 1986-1987     **Project Scientist**, Dept. of Agronomy and Soils, Washington State University, Pullman, WA. Duties included design and implementation of foliar fertilizer experiments, sample collection and preparation, chemical analysis of soil and plant samples, computer- assisted data management, report writing, statistical analysis and management of lower-level service workers.
- 1985           **Geophysical Survey Technician**, Practical Geophysics, Inc., 1634 Winder Lane, Salt Lake City, UT. Geologist involved with geophysical mineral exploration. Duties included preparation and operation of resistivity, induced polarization, self-potential, magnetic, very-low-frequency electromagnetic, and gravity surveys.
- 1983-1984     **Teaching/Research Assistant**, Dept. of Geology, Washington State University, Pullman, WA. Duties included instruction of Physical Geology, field geology, isotopic dating analysis, cartography, and technical drafting.

## **PROFESSIONAL CERTIFICATION**

- 2002-Present   **Oregon Registered Professional Geologist (G1968)**, State Board of Geologist Examiners, Salem, OR.
- 1994-1999     **Registered Professional Geologist (PG-001002-G)**, Commonwealth of Pennsylvania Department of State, Bureau of Professional and Occupational Affairs, Harrisburg, PA (current license status: inactive).

## **PROFESSIONAL TRAINING**

- 1993           National Institute of Construction Engineering Technicians (NICET) Short Course on the Installation of Geosynthetic Liner Systems: Environmental Applications and Quality Assurance/Quality Control.
- 1989, 1993     40 Hr OSHA Health and Safety Training for Hazardous Waste Workers

## ACADEMIC HONORS

- 1998 Selected as outstanding PhD student in Geology at West Virginia University with departmental nomination to Phi Kappa Phi honor society.
- 1997 Honorable Mention, J. Hoover Mackin Research Grant, Geological Society of America
- 1995-1996 Meritorious Graduate Scholarship, Dept. of Geology and Geography, West Virginia University, Morgantown, WV.
- 1982 Graduated Summa Cum Laude, Geology, from Slippery Rock University.
- 1982 Charter member of Slippery Rock Chapter of Sigma Gamma Epsilon.
- 1981 Recipient of National Association of Geology Teachers Scholarship for Summer Field Studies.
- 1981 Recipient of Outstanding Junior Award in Geology, Slippery Rock University.
- 1980 Recipient of Outstanding Sophomore in Geology, Slippery Rock University.
- 1978-1982 Dean's List Honor Student at Slippery Rock University.

## GRANTS-FELLOWSHIPS-FUNDED PROJECTS

- 2005-2006 Northwest Invasive Weed Management Partnership (\$2000)
- 2005-2006 Oregon Community Foundation Grant (\$5000)
- 2004-2006 Center for Water and Env. Sustainability / U.S. Geological Survey (\$15,000)
- 2004-2005 Western Oregon University Foundation Grant (\$1000)
- 2004-2005 WOU Center for Teaching and Learning Undergraduate Research Grant (\$800)
- 2004-2005 Western Oregon University Faculty Professional Development Grant (\$6000)
- 2003-2004 Oregon Community Foundation Grant (\$7000)
- 2002 Western Oregon University, Student Technology Fund (\$150,000)
- 2002 Western Oregon University, Faculty Professional Development Grant (\$3000)
- 2002 Western Oregon University, PT3 (U.S. Dept. of Education) Faculty Grant (\$7000)
- 2002 Murdock Trust Partners in Science Extension Grant (\$2000)
- 2001 Western Oregon University, Faculty Professional Development Grant (\$3000)
- 2001 Western Oregon University, PT3 (U.S. Dept. of Ed.) Faculty Grant (\$10,000)
- 2000-2001 Murdock Trust Partners in Science Research Grant (\$15,000)
- 2000-2001 OCEPT Faculty Fellowship (\$1000)
- 2000 ESRI University GIS Software Donation Award (\$10,000)
- 1999 Western Oregon University, Faculty Professional Development Grant (\$3000)
- 1997-1999 NASA Earth System Science Fellowship (ESS/97-0080) (\$70,000)
- 1997 U.S. Geological Survey - EDMAP Program (1434-HQ-97-AG-01782) (\$10,000)
- 1996 The Vehse Award for Travel and Research, West Virginia University (\$500)
- 1996 Sigma Xi Society for Scientific Research - Research Grants (\$300)
- 1996 Geological Society of America - Research Grants (\$1500)
- 1996 Office of Academic Affairs and Research, West Virginia University (\$800)
- 1996 U.S. Geological Survey - EDMAP Program (1434-HQ-96-AG-01561) (\$15,000)
- 1989 Student Research Allocation Committee, University of New Mexico (\$800)
- 1989 The Geological Society of America - Research Grants (\$2000)
- 1984 Student Travel Award, The Graduate School, Washington State University (\$800)
- 1983 Shell Oil Company, Western Exploration and Production (\$2000)

## **PUBLICATIONS (Reverse Chronological Order)**

- Taylor, S.B., In Press, Comparative Geomorphic Analysis of Surficial Deposits at Three Central Appalachian Watersheds: Implications for Controls on Sediment-Transport Efficiency: Revision accepted and in press for Journal of Geomorphology, Mountain Rivers Volume, Wohl, E.E. and Chin, A., eds.
- Smith, G.A., Taylor, S.B., and Larsen, D.L., In Preparation, Volcaniclastic Facies Deposited Adjacent to Extruded Laccoliths, Espinazo Formation (Paleogene) of Central New Mexico: manuscript in preparation to be submitted to Journal of Sedimentology.
- Dutton, B.E., Myers, J.A., Taylor S.B., Poston, P.E., and Schepige, A., In Review, An Environmental Science Institute as a Vehicle to Promote Teaching and Research: manuscript submitted to the Journal of College Science Teaching.
- Taylor, S.B., Templeton, J.H., Budnick, J., Drury, C., Fisher, J., and Runyan, S., 2005, Spatial Analysis of Cinder Cone Distribution at Newberry Volcano, Oregon: Implications for Structural Control on Eruptive Process: Geological Society of America Abstracts with Programs, Annual Meeting, Salt Lake City, UT.
- Taylor, S.B., 2005, Lithologic Controls on Watershed Morphology in the Central Oregon Coast Range: Towards Extrapolation of Tyee-Based Models to Other Bedrock Types – Mountain Rivers Session: Association of American Geographers, Abstracts with Programs, v. 37, Annual Meeting, Denver, CO
- Taylor, S.B., Templeton, J.H., and Giles, D.E.L., 2003, Cinder Cone Morphometry and Volume Distribution at Newberry Volcano, Oregon: Implications for Age Relations and Structural Control on Eruptive Process: Geological Society of America Abstracts with Programs, v. 35, no. 6, Fall National Meeting, Seattle.
- Giles, D.E.L., Taylor, S.B., and Templeton, J.H., 2003, Compilation of a Digital Geologic Map and Geodatabase for Newberry Volcano, Central Oregon: A Framework for Gis-Based Analyses of Volcanic Process And Products in a Back-Arc Setting: Geological Society of America Abstracts with Programs, v. 35, no. 6, Fall National Meeting, Seattle.
- Collett, C., Halverson, B., and Taylor, S.B., 2003, Preparing for Oregon's 21<sup>st</sup> Century Schools by Integrating Technology Across the Curriculum: Forging Partnerships Between Education and Liberal Arts and Science: National Education Computing Conference, Abstracts with Programs, Seattle.
- Taylor, S.B., 2002, Bedrock Control on Slope Gradients in the Luckiamute Watershed, Central Coast Range, Oregon: Implications for Sediment Transport and Storage: American Geophysical Union Abstracts with Programs, Fall Meeting 2002, San Francisco, California.

## **PUBLICATIONS (Cont.)**

- Taylor S.B. and Copa, P.M., 2002, Integrating Technology Across the Curriculum: Forging Partnerships Between Education and Liberal Arts and Science (abstract): U.S. Dept. of Education, Preparing Tomorrow's Teachers to Use Technology (PT3) National Meeting, Abstracts with Programs, Washington, D.C.
- Taylor, S.B., Dutton, B.E., and Poston, P.E., 2002, Luckiamute River watershed, upper Willamette Basin, Oregon – An integrated environmental study for K-12 Educators, in Moore, G.W., ed., Field Guide to Geologic Processes in Cascadia: Oregon Department of Geology and Mineral Industries Special Paper 36, p. 167-186.
- Taylor, S.B. and Swartzentruber, R.L., 2002, Year 2 Partners in Science Research Project - Case Study of Anderson Creek Debris Flow Site, Lincoln County, Oregon: Abstracts with Program, Partners in Science National Conference, San Diego, California.
- Taylor, S.B., Madarish, D., and Kite, J.S., 2001, Gravel distribution analysis of three channel systems in the central Appalachians: Comparative evaluation of sediment-transport efficiency and valley-erosion dynamics: Abstracts with Program, Binghamton Symposium, Mountain Geomorphology: Integrating Earth Systems, University of North Carolina, Chapel Hill, North Carolina, p. 49-50.
- Dutton, B.E., and Taylor, S.B., 2001, A course in Natural Science: A model for integrating content, research, and pedagogy: Abstracts with Program, Oregon Collaborative for Excellence in Preparation of Teachers (OCEPT) Showcase 2001, Salem, Oregon.
- Taylor, S.B. and Swartzentruber, R.L., 2001, Year 1 Partners in Science Research Project - Geomorphic Hazards Assessment in West-Central Oregon: Abstracts with Program, Partners in Science National Conference, San Diego, California.
- Taylor, S.B., 2000, Sediment-storage budgets for colluvium-dominated watersheds in the central Appalachians: Geological Society of America, Abstracts with Program, Fall 2000 National Meeting, v. 32, no. 7.
- Davis, E.N., Taylor, S.B., Kite, J.S., and Fedorko, N., 1999, Periglacial landforms and deposits of Canaan Valley, Tucker County, West Virginia: Field Trip Guide Book for the Annual Meeting, West Virginia Soc. of Professional Soil Scientists, Morgantown, WV, 30 p.
- Taylor, S.B., 1998, Geomorphic analysis of small-scale debris fans at three central Appalachian watersheds: Implications for controls on sediment transport efficiency [abs.]: Geological Society of America, Abstracts with Program, Fall National Meeting, v.30, no.7, p. A-141.
- Kite, J.S., Taylor, S.B., Davis, E.N., and D'Urso, G.J., 1998, Optimum scales for surficial geology maps of mountainous areas in the eastern United States [abs.]: Geological Society of America, Abstracts with Program, Fall 1998 National Meeting, v. 30, no. 7, p. A-137.

## **PUBLICATIONS (Cont.)**

- Taylor, S.B., 1997, Sandstone lithofacies, regolith production, and surficial processes in the central Appalachians: Preliminary analysis of landscapes underlain by the Acadian clastic wedge [abs.]: EOS Transactions of the American Geophysical Union, v. 78, no. 46, Fall Meeting Supplement, p. F286.
- Taylor, S.B., 1997, The influence of sedimentary lithofacies on hillslope processes in the central Appalachians: A conceptual model based on analysis of landscapes underlain by the Acadian clastic wedge [abs.]: Geological Society of America, Abstracts with Program, Fall 1997 National Meeting, v. 29, no. 7, p. A-411.
- Taylor, S.B., Kite, J.S., and Kuhn, K., 1996, Surficial map criteria for unglaciated humid-mountainous landscapes - linkage of process and landform: An example from the Fernow Experimental Forest, Tucker County, West Virginia [abs.]: Geological Society of America, Fall 1996 National Meeting, Abstracts with Programs, v. 28.
- Larsen, D., and Taylor, S.B., 1991, Stratigraphy and sedimentology of the Espinaso Formation in the Cerrillos area, in Smith, G.A. and others, A tale of two volcanoclastic aprons: Field guide to the sedimentology and physical volcanology of the Oligocene Espinaso Formation and Miocene Peralta Tuff, north-central New Mexico: New Mexico Bureau of Mines and Mineral Resources Bulletin 137, p. 90-92.
- Smith, G.A., Larsen, D., Harlen, S.S., McIntosh, W.C., Erskine, D.W., and Taylor, S.B., 1991, A tale of two volcanoclastic aprons: Field guide to the sedimentology and physical volcanology of the Oligocene Espinaso Formation and Miocene Peralta Tuff, north-central New Mexico: New Mexico Bureau of Mines & Mineral Resources Bulletin 137, p.87-103.
- Wright, R., and Taylor, S. B., 1989, Small-scale changes in relative sea-level in the East Pisco Basin, Peruvian Forearc Margin, central Peru [abs.]: Abstracts with Program, International Association of Sedimentologists and British Sedimentological Research Group Symposium, Eustatic Sea-Level Changes at Active Plate Margins, London, U.K.
- Taylor, S. B., Johnson, S. Y., Fraser, G. T., Roberts, J. W., 1988, Sedimentation and tectonics of the lower and middle Eocene Swauk Formation in eastern Swauk Basin, central Cascades, central Washington: Canadian Journal of Earth Science, v. 25, 7, p. 1020-1036.
- Taylor, S. B., Johnson, S. Y., Fraser, G. T., Roberts, J. W., 1987, Depositional and tectonic framework of the lower to middle Eocene Swauk Formation, eastern Swauk Basin--A model for early Tertiary basin development beneath the Columbia River Plateau [abs.]: American Association of Petroleum Geologists Bulletin, v. 71, no. 8, p. 1016.
- Taylor, S. B., Johnson, S. Y., Fraser, G. T., Roberts, J. W., 1984, Reversals of paleo-drainage patterns in Eocene Swauk basin, Washington: implications for strike-slip basin evolution [abs.]: Geological Society of America Abstracts with Program, v. 16, no. 6, p. 674.

## **PUBLICATIONS (Cont.)**

Johnson, S. Y., Fraser, G. T., Roberts, J. W., Taylor, S. B., 1984, Eocene strike-slip faulting and basin formation in Washington [abs.]: American Association of Petroleum Geologists Bulletin, v. 68, no. 4, p. 493.

## **UNPUBLISHED TECHNICAL REPORTS**

Taylor, S.B., 2004, Geology of the Luckiamute River watershed, upper Willamette Basin, Polk and Benton Counties, Oregon: *in* Garono, R.J., Anderson, B.D., Harma, K., Buhl, C., and Adamus, P., Luckiamute / Ash Creek / American Bottom Watershed Assessment: Unpublished Technical Document, Luckiamute Watershed Council, Western Oregon University, Monmouth, Oregon, Appendix A – 19 p., available on line at <URL: [http://www.wou.edu/las/natsci\\_math/geology/luckiamute/Appendix A Geology of Luckiamute River Watershed.pdf](http://www.wou.edu/las/natsci_math/geology/luckiamute/Appendix_A_Geology_of_Luckiamute_River_Watershed.pdf), updated June 2204.

Taylor, S.B., 2000, Geomorphic Controls on Debris Flow Hazards and Sediment-Transport Efficiency in the Central Appalachians - Final Technical Report to the NASA Earth System Science Program (Contract No. ESS/97-0080): Submitted to the ESS Program, NASA Headquarters, Washington, D.C.

Anderson, R.W. and Taylor, S.B., 1999, Proposed remediation strategy for groundwater contaminated with chlorinated hydrocarbons at the Trent Tube and Steel Plant, southeast Wisconsin: Submitted to Trent Tube and Steel, Inc.

Taylor, S.B. 1999, Recommendation for abatement of coal-bed methane degassing at the Girty's Run Sewer Project Site, Allegheny County, Pennsylvania: Submitted to Pine Township.

Taylor, S.B., 1999. Geomorphic controls on sediment transport efficiency in the Central Appalachians: A comparative analysis of three watersheds underlain by the Acadian Clastic Wedge. Ph.D. Dissertation, West Virginia University, Morgantown, WV, 463 p.

Taylor, S.B. and Kite, J.S., 1998, Surficial and bedrock geology of the Little River basin, George Washington National Forest, Augusta County, Virginia: Submitted to the U.S. Geological Survey National Cooperative Mapping Program (EDMAP Contract 1434-HQ-97-AG-01782), Reston, VA, multiple map sheets with report.

Taylor, S.B. and Kite, J.S., 1997, Surficial and bedrock geology of the upper North Fork drainage basin, Monongahela National Forest, Pocahontas County, West Virginia: Submitted to the U.S. Geological Survey National Cooperative Mapping Program (EDMAP Contract 1434-HQ-96-AG-01561), Reston, VA, multiple map sheets with report.

## **UNPUBLISHED TECHNICAL REPORTS (Cont.)**

- Taylor, S.B., Kite, J.S., and Kuhn, K., 1996, Bedrock and surficial geology of the Fernow Experimental Forest, Tucker County, West Virginia: Submitted to the USDA Northeastern Forest Experiment Station, Timber and Watershed Laboratory, Parsons, WV, multiple map sheets with report.
- Anderson, R.W. and Taylor, S.B., 1993, Preliminary statistical analysis of landfill water quality data: J & J Landfill, Fayette County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.
- Anderson, R.W. and Taylor, S.B., 1993, Results of groundwater impact assessment at disposal cell 1, J & J Landfill, Fayette County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.
- Anderson, R.W. and Taylor, S.B., 1993, Sewage facility planning module section G. Preliminary hydrogeology of a small flow sewage treatment facility, Mystic Rocks Golf Course, Fayette County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.
- Anderson, R.W. and Taylor, S.B., 1993, Pump-testing and preliminary hydrogeologic impact assessment of the production well-field at Mystic Rocks Golf Course, Fayette County, Pennsylvania: Submitted to Nemaquin Woodlands, Inc.
- Anderson, R.W. and Taylor, S.B., 1993, Impact assessment of a small-flow sewage treatment facility at the Bosmyer property, Allegheny County, Pennsylvania: Submitted to Century 21 Real Estate Services Division.
- Anderson, R.W. and Taylor, S.B., 1993, Private water supply impact assessment at the Gould Mine permit area, Washington County, Pennsylvania: Submitted to PA Dept. of Environmental Resources.
- Anderson, R.W. and Taylor, S.B., 1992, Municipal waste permit application: geology and hydrogeology of an abandoned surface mine complex, southern coal district, Illinois: Submitted to Laidlaw Waste Systems, Inc.
- Anderson, R.W. and Taylor, S.B., 1992, Expert witness testimony: Angerman vs. Buskey, hydrogeologic impact assessment of gas well drilling in Westmoreland County, Pennsylvania: submitted for review to Westmoreland County Court.
- Anderson, R.W. and Taylor, S.B., 1992, Coal surface mining permit application: geology and hydrogeology of the Prep. II mine permit area, Washington County, Pennsylvania: submitted to PA Dept. of Environmental Resources.
- Anderson, R.W. and Taylor, S.B., 1992, Residual solid waste permit application: geology and hydrogeology of the White Pines permit area, Lycoming County, Pennsylvania: submitted to PA Dept. of Environmental Resources.

## **UNPUBLISHED TECHNICAL REPORTS (Cont.)**

Anderson, R.W. and Taylor, S.B., 1992, Installation of methane gas monitoring probes and groundwater monitoring wells at the M.C. Arnoni Landfill, South Park Township, Pennsylvania: submitted to J&L Engineering, Inc.

Anderson, R.W. and Taylor, S.B., 1991, Small operators assistance program: geology and hydrogeology of the Maderia permit area, Washington County, Pennsylvania: submitted to PA Dept. of Environmental Resources.

Anderson, R.W. and Taylor, S.B., 1990, Coal surface mining permit application: geology and hydrogeology of the Gould Mine permit area, Washington County, Pennsylvania: submitted to PA Dept. of Environmental Resources.

Taylor, S. B., 1985, Stratigraphy, sedimentology, and paleogeography of the Swauk Formation in the Liberty area, central Cascades, Washington: Unpub. M. S. Thesis, Washington State University, Pullman, WA, 199 p.

## **REFERENCES**

Dr. Jeff Templeton, Division of Natural Sciences and Mathematics, Western Oregon University, Monmouth, OR, 97361, (503) 838-8207, courtna@wou.edu

Dr. J. Steven Kite, Associate Professor, Department of Geology, West Virginia University, Morgantown, WV, 26506, (304) 293-5603, jkite@wou.edu

Robert W. Anderson, Manager of Geosciences/Solid Waste, U.S. Filter - Chester Engineers, Cherrington Corporate Center, 600 Clubhouse Drive, Pittsburgh, PA 15108, (412) 269-5700

Dr. Steve Taylor – Earth Science

Compendium of Faculty Activity Reports 1999-2006

Reverse Chronological Order

Year 7 Faculty Status Report  
Academic Year 2005-2006

Stephen B. Taylor, Ph.D.  
Associate Professor of Geology  
Earth and Physical Sciences Department  
Western Oregon University  
Monmouth, Oregon 97361

## SECTION 1. TEACHING ACTIVITIES

### Course List for 2005-2006 Academic Year

Term	Course No.	Course Name/Section	Cr. Hr/ FTE	No. Students	Student: FTE Ratio
Fall 2005	ES322	Geomorphology / Air Photo	4.0	5	1.3
Fall 2005	ES331	Oceanography	3.0	25	8.3
Fall 2005	ES106	Intro Earth System Science	3.0	62	20.6
Fall 2005	ES106L	Earth System Science Lab	1.3	21	16.2
Fall 2005	ES104L	Earth System Science Lab	1.3	23	17.7
Winter 2006	202	Physical Geology Lec/Lab	4.0	24	6.0
Winter 2006	ES492/592	GIS Applications	3.0	11	3.7
Winter 2006	ES302	Geotechniques: Quantitative	1.0	5	5.0
Spring 2006	ES106	Earth System Science Lec.	3.0	51	17.0
Spring 2006	ES106	Earth System Science Lec.	3.0	41	13.7
Spring 2006	ES473	Environmental Geology	3.3	10	3.3
Spring 2006	ES106L	Earth System Science Lab	1.3	23	17.7
Summer 2006	ES458-558	River Environments	3.0	12	4.0
Summer 2006	GS407-507	Intro to ArcGIS	3.0	5	1.7

### Curriculum Development

Fall 2005-  
Spring 2006 Continued development of multi-media and online resources for a spectrum of Earth Science courses including ES104, ES106, ES331, ES202, ES322, ES473, ES476, and ES492

Fall 2005-  
Spring 2006 Continued developed capstone assessment tools for Earth Science program and use in ES407 Senior Seminar. Earth Science program exit exam based on GRE-style assessment process.

Summer 2005 Continued developing curriculum, field exercises, and web site for ES458/558 River Environments of Oregon and GS407 Introduction to Geographic Information Systems.

### Field Trip Activities

Summer 2005 "Hydrology and Geomorphology of the Middle Deschutes and Lower Columbia Rivers". Field trip in conjunction with ES458/558 River Environments.

- Fall 2005 “Hydrology and Geomorphology of the Luckiamute Watershed, Polk and Benton Counties, Oregon”. Field trip in conjunction with ES322 Geomorphology.
- Fall 2005 “Tombstone Weathering Rates in Polk County Oregon – A Proxy for Climatically-Induced Rock Weathering in Western Oregon”. Field trip in conjunction with ES322 Geomorphology.
- Spring 2006 "Landfill Technology and Hydrogeology of the Coffin Butte Landfill, Benton County, Oregon". Field trip in conjunction with ES473 Environmental Geology.
- Spring 2006 “Environmental Geology of the Monmouth-Independence Area”. Field trip in conjunction with ES473 Environmental Geology
- Spring 2006 Field trip to “Student Night” at the Oregon Chapter of the Association of Engineering Geologists, Portland State University. The excursion provided student exposure to a meeting of a professional society, interaction with PSU graduate students, and commingling with professional geologists (i.e. potential employers). Field trip in conjunction with ES473 Environmental Geology.

## **SECTION 2. RESEARCH-SCHOLARSHIP-PROFESSIONAL DEVELOPMENT**

- Fall 2005 Presented paper entitled “Spatial Analysis of Cinder Cone Distribution at Newberry Volcano, Oregon: Implications for Structural Control on Eruptive Process”, Geological Society of America 2005 Annual Meeting, Salt Lake City, UT (collaborative work with Dr. Templeton).
- Fall 2005 Attended Geological Society of America Field Trip: “Neotectonics and Seismic Hazards of the Wasatch Front, Utah”.
- Fall 2005 – Spring 2006 Funded Research Project (work in progress): “Geomorphic and Anthropogenic Influences on the Distribution of Invasive Plant Species in the Luckiamute Watershed, Polk and Benton Counties, Oregon”, in collaboration with Dr. Dutton
- Fall 2005 – Spring 2006 Funded Research Project (final project report submitted May 2006): Hydrogeomorphic Analysis of the Luckiamute Watershed, Central Coast Range, Oregon: Integrating Applied Watershed Science with Undergraduate Research and Community Outreach”, Center for Water and Environmental Sustainability (CWEST) / U.S. Geological Survey Small Grants Program.
- Fall 2005- Spring 2006 Ongoing compilation of research literature and reference library related to watershed analysis, regional geomorphology, hillslope / fluvial processes.
- Fall 2005- Spring 2006- Research project (work in progress): “Spatial Analysis of Cinder Cone Morphology and Distribution at Newberry Volcano: Implications for Age and Structural Control on Magma Emplacement”, in collaboration with Dr. Templeton.

- Fall 2005-  
Spring 2006      Manuscript Preparation (work in progress): “Volcaniclastic facies deposited adjacent to extruded laccoliths, Espinazo Formation (Paleogene) of central New Mexico”, in collaboration with Dr. Gary Smith, University of New Mexico.
- Fall 2005-  
Spring 2006      Manuscript Editing : “Comparative Geomorphic Analysis of Surficial Deposits at Three Central Appalachian Watersheds: Implications for Controls on Sediment-Transport Efficiency”, revision accepted and in press, Journal of Geomorphology, Mountain Rivers Volume, Wohl, E.E. and Chin, A., eds. Scheduled for publication in fall 2006.
- Fall 2005-  
Spring 2006      Funded and sponsored three undergraduate research assistants: Jeff Kent, B.S. Earth Science; Katie Noll, B.S. Earth Science; and Rachel Pirot, B.S. Earth Science. The primary research activities conducted by the students included literature review, data compilation, GIS analysis, scientific visualization, and field geomorphology
- Fall 2005-  
Summer 2006      Funded Research Grant (work in progress): “Stream Temperature Analysis of the Luckiamute Watershed, Central Coast Range, Oregon”, \$2500, (private WOU Foundation match to CWest/USGS funding above).
- Winter 2006  
Spring 2006      Initiated new geomorphic research project entitled “Comparative Geomorphic Analysis of Oregon Coast Range Landscapes Underlain by the Tyee Formation”; this work is an outgrowth of the Luckiamute Watershed research, extending the study to the south in the central Oregon Coast Range (work in progress).
- Spring 2006      Developed a collaborative relationship with the Andrews Experimental Forest, Pacific Northwest Research Station (U.S. Forest Service). I’ve started proposal development with Dr. Fred Swanson that will form the basis for a portion of sabbatical activities next academic year. The tentative title of the new research project is “Long-Term Effects of Forest Management Practices on Watershed Sediment Budgets in the Western Cascades: A Thirty-Year Record of Post-Logging Geomorphic Response from Watersheds 9 and 10 at Andrews Experimental Forest”. This work will form part of a Research Opportunities Award (ROA) proposal to be submitted to the National Science Foundation in late fall, 2006.
- Spring 2006      Preliminary Proposal Development: “Earth System Science as a Contextual Learning Platform: Forging Linkages Between Physical Science Concepts and Lecture-Lab Curricula”; in collaboration with Dr. Templeton and Adjunct Professor Phil Wade.

### **SECTION 3. PROFESSIONAL SERVICE**

(1) Continued serving as faculty advisor and university liaison to the Oregon Geographic Information Council, Salem Oregon. The function of the organization is to set standards for acquisition of Geographic Information Systems data in the state of Oregon.

(2) Initiated duties as a board member to the Oregon State Board of Geologist Examiners (OSBGE), Salem Oregon. The function of the organization is to set licensing standards for professional geologists in the state of Oregon. I am serving as chair of the public outreach committee and as a delegate to the national standards exam committee of the Association of State Boards of Geologist Examiners (ASBOG)

(3) Continued serving as faculty advisor and university liaison to the State Geologic Map Advisory Committee, Oregon Dept. of Geology and Mineral Industries, Portland, Oregon. The function of the committee is to provide guidance and set priorities for state and federal geologic mapping initiatives in Oregon.

(4) Maintained active registration as a Professional Geologist in the State of Oregon (Registration Number G1968), State Board of Geologist Examiners, Salem, Oregon.

(5) Active membership in the following professional organizations: Geological Society of America, American Geophysical Union, Association of American Geographers, Friends of the Pleistocene.

(7) Continued serving as faculty advisor and university liaison for the Luckiamute Watershed Council, Monmouth, Oregon (co-serving along with Dr. Turner and Dr. Galvan). The purpose of the watershed council is to promote awareness of natural resource and sustainability issues in the Luckiamute watershed, as per the goals of the Oregon Salmon Recovery Plan and the Oregon Watershed Enhancement Board.

(8) Continued serving as a volunteer GIS consultant and university liaison for the Pudding River Watershed Council, Salem, Oregon. Actively maintaining the council web site and disseminating assessment reports to the public.

(9) Continued serving as courtesy faculty in the Water Resources Graduate Program at Oregon State University. I serve as a graduate thesis advisor and allied instructor in areas of fluvial geomorphology, watershed science, GIS, and environmental geology. The purpose of the program is to train graduate students broadly in water resources with an emphasis on connections between the biosphere, hydrosphere, and ecohydrology.

(10) Served as expert peer reviewer for one grant proposal (spring 2006): Steinmann and others, "West-Wide Drought Forecasting System: A Scientific Foundation for NIDIS"; submitted to U.S. Geological Survey, National Institutes for Water Resources Program (\$250,000 project).

(11) Conducted a community outreach presentation to the Luckiamute Watershed Council: "Geology and Geomorphology of the Luckiamute Watershed"; Spring 2006.

## **SECTION 4. INSTITUTIONAL SERVICE**

### **2005-2006 University Committees**

NSM Professional Concerns Committee

NSM Technology Planning Committee

NSM Curriculum Committee

Member of the Environmental Sciences Institute Steering Committee

Chair of the Academic Infrastructure Committee, faculty senate

### **Other Service-Related Activities**

(1) Continued as informal computer lab coordinator in RM 216, Natural Sciences Building. Activities include interaction with computing services for maintenance and upgrade of the computer lab, also consulted on smart-room design and installation in Natural Science Building.

(2) Continued as ESRI GIS licensing liaison for WOU. Part of this work includes ongoing implementation of a central GIS server for use by both the colleges of Education and LAS (in collaboration with Travis Knabe at University Computing)

(3) Continued as faculty advisor in Environmental Studies and Earth Science programs.

(4) Continued lead role in guiding the Academic Infrastructure Committee. The primary product of the year's activity was outreach to UCS personnel and submission of two proposals: (a) expanded faculty and student representation on the technology fee committee, and (b) free wireless access to WOU faculty, staff, and students

(5) Served as chair of the NSM Technology Planning and Curriculum Committees.

(6) Served as one of the Earth Science faculty representatives at Preview Days and Natural Sciences career day at WOU.

(7) Informally worked on career placement for Earth Science-related graduates from WOU (maintain a job board and placement contacts for students in government and industry)

(8) Continued soliciting funds and campus-wide services to further develop the Geo-Data Processing Lab in NS218A. The Geolab has received greater use the past year by Earth Science students and faculty for research and teaching activities.

(9) Served on graduate exam committee for two M.S. Education students with science specialties.

(10) Served as ad-hoc administrator of the WOU Earth Science program web site and related public relations activities.

(11) Served as faculty co-author on a draft of Earth Science accreditation report (with Dr. Templeton).

(12) Served as session chair and active faculty participant in the 2006 WOU Academic Showcase (comprising part of the new “PURE” initiative, Program for Undergraduate Research Experiences). The session was entitled “Environmental Geology of the Upper Klamath Basin: Crisis at the Crossroads of Science and Society”. The work involved 11 undergraduate students actively engaged in seminar-style research and science poster presentations.

Year 6 Faculty Status Report  
Academic Year 2004-2005

Stephen B. Taylor, Ph.D.  
Associate Professor of Geology  
Earth and Physical Sciences Department  
Western Oregon University  
Monmouth, Oregon 97361

## SECTION 2. TEACHING ACTIVITIES

### Course List for 2004-2005 Academic Year

Term	Course No.	Course Name/Section	Cr. Hr/ FTE	No. Students	Student: FTE Ratio
Fall 2004	ES322	Geomorphology / Air Photo	4.0	8	2.0
Fall 2004	ES331	Oceanography	3.0	26	8.7
Fall 2004	ES104	Intro Earth System Science	3.0	32	10.7
Fall 2004	ES104L	Earth System Science Lab	1.3	16	12.3
Fall 2004	ES104L	Earth System Science Lab	1.3	21	16.2
Winter 2005	202	Physical Geology Lec/Lab	4.0	19	4.8
Winter 2005	G476/576	Hydrology	3.0	5	1.7
Winter 2005	G302	Geotechniques: Quantitative	1.0	8	8.0
Spring 2005	ES106	Earth System Science Lec.	3.0	55	18.3
Spring 2005	ES106	Earth System Science Lec.	3.0	41	13.7
Spring 2005	ES407	Senior Seminar	1.0	7	7.0
Spring 2005	ES473	Environmental Geology	3.0	10	3.3
Spring 2005	ES106L	Earth System Science Lab	1.3	23	17.7
Summer 2005	ES458-558	River Environments	3.0	8	2.7
Summer 2005	GS407-507	Intro to ArcGIS	3.0	4	1.3

### Curriculum Development

Fall 2004- Spring 2005	Continued development of multi-media and online resources for a spectrum of courses including ES104, ES106, ES331, ES202, ES322, ES473, ES276, and ES492
Winter 2005	Continued development of lab exercises, software tutorials, lecture materials, and class web site for G302 Geotechniques: Quantitative Methods (second time offered).
Spring 2005	Developed capstone assessment tools and seminar study for use in ES407 Senior Seminar. Course content focused on applied research topic entitled: "Geomorphic Effects of Dams on Watershed Ecosystems". Developed Earth Science program exit exam based on GRE-style assessment process.
Summer 2005	Continued developing curriculum, field exercises, and web site for ES458/558 River Environments of Oregon and GS407 Introduction to Geographic Information Systems.

### **Field Trip Activities**

- Fall 2004 "Neotectonics of the Central Oregon Coast, Coos County Oregon". Field trip in conjunction with ES322 Geomorphology and ES450 Petrology.
- Spring 2005 "Landfill Technology and Hydrogeology of the Coffin Butte Landfill, Benton County, Oregon". Field trip in conjunction with ES473 Environmental Geology.
- Spring 2005 "Environmental Geology of the Monmouth-Independence Area". Field trip in conjunction with ES473 Environmental Geology
- Summer 2005 "Hydrology and Geomorphology of the Middle Deschutes and Lower Columbia Rivers". Field trip in conjunction with ES458/558 River Environments.

### **SECTION 3. RESEARCH-SCHOLARSHIP-PROFESSIONAL DEVELOPMENT**

- Fall 2004 Funded Research Grant: "Geomorphic and Anthropogenic Influences on the Distribution of Invasive Plant Species in the Luckiamute Watershed, Polk and Benton Counties, Oregon", \$6000, Western Oregon University Faculty Development Grant Program, in collaboration with Dr. Dutton (match to OCF funding above).
- Fall 2004 – Summer 2005 Funded Research Grant (work in progress): "Geomorphic and Anthropogenic Influences on the Distribution of Invasive Plant Species in the Luckiamute Watershed, Polk and Benton Counties, Oregon", \$7000, Oregon Community Foundation, in collaboration with Dr. Dutton
- Fall 2004 – Summer 2005 Funded Research Grant (work in progress): "Hydrogeomorphic Analysis of the Luckiamute Watershed, Central Coast Range, Oregon: Integrating Applied Watershed Science with Undergraduate Research and Community Outreach", \$15000, Center for Water and Environmental Sustainability (CWEST) / U.S. Geological Survey Small Grants Program.
- Fall 2004- Summer 2005 Ongoing compilation of research literature and reference library related to watershed analysis, regional geomorphology, hillslope / fluvial processes.
- Spring 2005 Presented paper entitled "Lithologic Controls on Watershed Morphology in the Central Oregon Coast Range: Towards Extrapolation of Tyee-Based Models to Other Bedrock Types", at the Mountain Rivers Session, Association of American Geographers, 2005 Annual Meeting, Denver, CO.
- Spring 2005 Submitted curriculum-development proposal entitled "Development of an Outdoor Groundwater Laboratory at Western Oregon University", submitted to Dean's Office, College of Liberal Arts and Sciences, Western Oregon University (proposal pending).

- Spring 2005-  
Summer 2005      Funded Research Project (work in progress): “Knotweed Distribution in the Riparian Zone of the Luckiamute Watershed, Polk and Benton Counties, Oregon”, \$2000, Northwest Invasive Weed Management Partnership, in collaboration with Dr. Dutton.
- Winter 2005-  
Fall 2005-      Research project (work in progress): “Spatial Analysis of Cinder Cone Morphology and Distribution at Newberry Volcano: Implications for Age and Structural Control on Magma Emplacement”, in collaboration with Dr. Templeton.
- Summer 2005-  
Fall 2005      Funded Research Grant (work in progress): “Stream Temperature Analysis of the Luckiamute Watershed, Central Coast Range, Oregon”, \$1500, College of Liberal Arts and Sciences, Western Oregon University (match to CWest/USGS funding above).
- Summer 2005-  
Fall 2005      Manuscript preparation entitled: “Comparative Geomorphic Analysis of Surficial Deposits at Three Central Appalachian Watersheds: Implications for Controls on Sediment-Transport Efficiency”, revision accepted and in press, Journal of Geomorphology, Mountain Rivers Volume, Wohl, E.E. and Chin, A., eds.

#### **SECTION 4. PROFESSIONAL SERVICE**

- (1) Continued serving as faculty advisor and university liaison to the Oregon Geographic Information Council, Salem Oregon. The function of the organization is to set standards for acquisition of Geographic Information Systems data in the state of Oregon.
- (2) Governor appointment as a board member to the Oregon State Board of Geologist Examiners, Salem Oregon (service duty to begin in January 2005). The function of the organization is to set licensing standards for professional geologists in the state of Oregon.
- (3) Continued serving as faculty advisor and university liaison to the State Geologic Map Advisory Committee, Oregon Dept. of Geology and Mineral Industries, Portland, Oregon. The function of the committee is to provide guidance and set priorities for state and federal geologic mapping initiatives in Oregon.
- (4) Maintained active registration as a Professional Geologist in the State of Oregon (Registration Number G1968), State Board of Geologist Examiners, Salem, Oregon.
- (5) Active membership in the following professional organizations: Geological Society of America, American Geophysical Union, Association of American Geographers, Friends of the Pleistocene.
- (6) Continued serving as faculty advisor and university liaison for the Ash Creek Trail Project in Monmouth-Independence. I have worked with students to develop a GIS and set of digital maps for Ash Creek riparian corridor, Polk County, Oregon.

(7) Continued serving as faculty advisor and university liaison for the Luckiamute Watershed Council, Monmouth, Oregon (co-serving along with Dr. Turner and Dr. Galvan). The purpose of the watershed council is to promote awareness of natural resource and sustainability issues in the Luckiamute watershed, as per the goals of the Oregon Salmon Recovery Plan and the Oregon Watershed Enhancement Board. Received the LWC 2005 University Educator Award for providing lead role in establishing WOU-community partnership.

(8) Continued serving as a volunteer GIS consultant and university liaison for the Pudding River Watershed Council, Salem, Oregon. Actively maintaining the council web site and disseminating assessment reports to the public.

(9) Appointed as courtesy faculty in the Water Resources Graduate Program at Oregon State University. I serve as a graduate thesis advisor and allied instructor in areas of fluvial geomorphology, watershed science, GIS, and environmental geology. The purpose of the program is to train graduate students broadly in water resources with an emphasis on connections between the biosphere, hydrosphere, and ecohydrology.

(10) Served as expert peer reviewer for several grant proposals and journal publications:

- (A) Fall 2004 – Peer Review of: Heathman, C., “Seismic Hazards Analysis of OUS College Campuses in Oregon - Western Oregon University”, Special Publication of the Oregon Dept. of Geology and Mineral Resources.
- (B) Winter 2005 - Proposal Review for U.S. Bureau of Land Management, Research Office, Science and Technology Program:
  - a. Raff, D., Nelson, M., and Bledsoe, B., “GeoTools for Rapid Dynamic Channel Analysis and Biological Assessment”, \$170,000 Proposal.
  - b. Yong, L., Greimann, B., England, J., and Elliot, W., “A New Approach towards Erosion and Sedimentation Prediction for Rivers and Overlands”, \$240,000 Proposal.
  - c. Miller, R., and others, “Evaluating Remote Sensing Technology to Facilitate Detection of River System Changes, \$52,000 Proposal.
  - d. Baird, D., and others, “In Channel Systems for Providing Endangered Species Habitat While Providing Continued Water Delivery, Use, and Power Production”, \$165,000 Proposal.
- (C) Spring 2005 – Peer Review of: Mills, H., and others, “Distribution of high-level alluvial deposits in the Valley and Ridge of Polk County, southeastern Tennessee: Implications for river history and drainage evolution”: Reviewed for the journal “Southeastern Geology”.
- (D) Spring 2005 – Proposal Review for U.S. Geological Survey, National Institutes for Water Resources Program:
  - a. Napton, D., Bouchard, M., and Higgins, K., “A Comprehensive Synthesis of River Gauge and Historic Non-Traditional Data Records Relative to Extreme Hydrologic Conditions (Drought/Flood Events) in the Missouri River During the Past 1000 Years”, \$129,000 Proposal.

- (E) Spring 2005 – Peer Review of: Robertson, D.M., Saad, D., and Heisey, D., “Land-Use-Adjusted Spatial Regression-Tree Analysis: A Regional Classification Scheme for Estimating Potential Water Quality in Streams”, Reviewed for the journal “Environmental Management”

## **SECTION 5. INSTITUTIONAL SERVICE**

### **2004-2005 University Committees**

NSM Professional Concerns Committee  
NSM Technology Planning Committee  
NSM Curriculum Committee  
Member of the Environmental Sciences Institute Steering Committee  
Chair of the Academic Infrastructure Committee

### **Other Service-Related Activities**

- (1) Continued as informal computer lab coordinator in RM 216, Natural Sciences Building. Activities include interaction with computing services for maintenance and upgrade of the computer lab.
- (2) Continued as ESRI GIS licensing liaison for WOU. Part of this work includes ongoing implementation of a central GIS server for use by both the colleges of Education and LAS (in collaboration with Travis Knabe at University Computing)
- (3) Continued as faculty advisor in Environmental Studies and Earth Science programs.
- (4) Continued lead role in reorganizing the faculty senate “Academic Information Services Committee” into the “Academic Infrastructure Committee”. The 2004-2005 year focused on establishing the AIC agenda and list of action items. The primary product of the year’s activity was submission of a university-wide academic infrastructure status report to WOU administration.
- (5) Continued development of an Environmental Sciences Institute at WOU. A work in progress that has great potential to alter the course of the Natural Sciences Division.
- (6) Served as chair of the NSM Technology Planning and Curriculum Committees for the 2004-2005 academic year.
- (7) Served as one of the Earth Science faculty representatives at Preview Days and Natural Sciences career day at WOU.
- (8) Informally worked on career placement for Earth Science-related graduates from WOU (maintain a job board and placement contacts for students in government and industry)

(9) Continued soliciting funds and campus-wide services to further develop the Geo-Data Processing Lab in NS218A. The Geolab has received greater use the past year by Earth Science students and faculty for research and teaching activities.

(10) Summer 2005: served on graduate exam committee for two M.S. Education students with science specialties.

(11) Served as ad-hoc administrator of the WOU Earth Science program web site.

(12) Served as lead faculty planning of a new B.S./B.A. program in Environmental Studies at WOU (in collaboration with Dr. Geier and Dr. Henkels, plus a host of allied faculty at WOU).

(13) Served as faculty co-author on development of the 2005 Earth Science program strategic plan at WOU (with Dr. Templeton and Dr. Myers).

**Year 5 Faculty Status Report  
Academic Year 2003-2004**

**Stephen B. Taylor, Ph.D.  
Assistant Professor of Geology  
Earth and Physical Sciences Department  
Western Oregon University  
Monmouth, Oregon 97361**

## SECTION 2. TEACHING ACTIVITIES

### Course List for 2003-2004 Academic Year

Term	Course No.	Course Name/Section	Cr. Hr/ FTE	No. Students	Student: FTE Ratio
Fall 2003	G322	Geomorphology / Air Photo	3.0	11	3.7
Fall 2003	G331	Oceanography	3.0	26	8.7
Fall 2003	GS104	Intro Earth System Science	3.0	52	17.3
Fall 2003	GS104L	Earth System Science Lab	1.7	24	14.1
Fall 2003	GS104L	Earth System Science Lab	1.7	23	13.5
Winter 2004	G202	Physical Geology Lec/Lab	4.0	55	13.8
Winter 2004	G492/592	GIS Applications	3.0	12	4.0
Winter 2004	G302	Geotechniques: Quantitative	1.0	11	11.0
Spring 2004	GS106	Earth System Science Lec.	3.0	13	4.3
Spring 2004	G473	Environmental Geology	3.0	14	4.7
Spring 2004	GS106L	Earth System Science Lab	1.7	26	15.3
Summer 2004	GS407-507	River Environments	3.0	11	3.7

### Curriculum Development

- Fall 2003 Collaborated with Dr. Templeton and Dr. Myers on the final upgrade and modernization of the Earth Science curriculum at Western Oregon University. Proposals were submitted to reorganize the course catalog, upgrade course designations, change to 4-credit course model, drop courses, and add new courses to the curriculum.
- Fall 2003 Continued development of online homework exercises for GS331 Oceanography.
- Fall 2003 Proposed one summer 2004 course offering via DEP and the Environmental Science Institute: "River Environments of Oregon: Float Trip and Applied Field Geology", a 1 week river adventure focusing on fluvial processes and geomorphology of the lower Deschutes and Columbia River.
- Winter 2004 Continued development of lab exercises, software tutorials, lecture materials, and class web site for G302 Geotechniques: Quantitative Methods (second time offered).
- Winter 2004 Continued development of lab exercises, lecture materials, and web site for G492/592 GIS Applications in Earth Science (second time offered).

- Spring 2004 Finalized reorganization of Earth Science curriculum with Dr. Templeton and Dr. Myers. Formally updated catalog descriptions, course designations, and implemented 4-credit course model.
- Spring 2004 Completed / implemented online digital image library for GS106 Earth System Science III. Created series of online powerpoint slide shows to augment lectures and to provide students with study materials.
- Summer 2004 Continued developing curriculum, field exercises, and web site for GS407/507 River Environments of Oregon (second time offered)

### **Field Trip Activities**

- Fall 2002 "Field Hydrology and Mass Transport of Sediment in the Luckiamute Watershed". Field trip in conjunction with G322 Geomorphology.
- Spring 2004 "Landfill Technology and Hydrogeology of the Coffin Butte Landfill, Benton County, Oregon". Field trip in conjunction with G473 Environmental Geology.
- Spring 2004 "Water quality of the Luckiamute Watershed". Field trip in conjunction with G473 Environmental Geology
- Spring 2004 G473 field trip to OSU seminar series: "Environmental Degradation Related to Gold Mining in Southeast Australia"
- Spring 2004 G473 field trip to PSU Association of Engineering Geologist Symposium "Natural Hazards and Engineering Geology of Oregon".
- Summer 2004 "Hydrology and Geomorphology of the Middle Deschutes and Lower Columbia Rivers". Field trip in conjunction with GS407/507 River Environments.

### **SECTION 3. RESEARCH-SCHOLARSHIP-PROFESSIONAL DEVELOPMENT**

- Fall 2003 Presented paper entitled "Cinder Cone Morphometry and Volume Distribution at Newberry Volcano, Oregon: Implications for Age Relations and Structural Control On Eruptive Process" at the 2003 National Meeting of the Geological Society of America, Seattle , Washington (with J. Templeton and D. Giles, co-authors).
- Fall 2003 Attended the Rocky Mountain Section of the Friends of the Pleistocene Field Trip: "Post-fire erosional events and changes in fire-related sedimentation recorded in alluvial fan stratigraphy – North Fork Boise and South Fork Payette River, Idaho".

- Fall 2003 Presented paper entitled “Compilation of a Digital Geologic Map and Spatial Database for Newberry Volcano, Central Oregon: A Framework for Comparative Analysis” at the 2003 National Meeting of the Geological Society of America, Seattle , Washington (with J. Templeton and D. Giles, co-authors).
- Fall 2003 – Funded Research Grant (work in progress): “Geomorphic and Anthropogenic  
Winter 2004 Influences on the Distribution of Invasive Plant Species in the Luckiamute Watershed, Polk and Benton Counties, Oregon”, \$7000, Oregon Community Foundation, in collaboration with Dr. Dutton
- Fall 2003 – Funded Research Grant (work in progress): “Hydrogeomorphic Analysis of the  
Winter 2004 Luckiamute Watershed, Central Coast Range, Oregon: Integrating Applied Watershed Science with Undergraduate Research and Community Outreach”, \$15000, Center for Water and Environmental Sustainability (CWest) / U.S. Geological Survey Small Grants Program.
- Winter 2004 Funded Research Grant (work in progress): “Geomorphic and Anthropogenic Influences on the Distribution of Invasive Plant Species in the Luckiamute Watershed, Polk and Benton Counties, Oregon”, \$6000, Western Oregon University Faculty Development Grant Program, in collaboration with Dr. Dutton (match to OCF funding above).
- Winter 2004 Funded Research Grant (work in progress): “Hydrogeomorphic Analysis of the Luckiamute Watershed, Central Coast Range, Oregon: Integrating Applied Watershed Science with Undergraduate Research and Community Outreach”, \$1000, Western Oregon University Foundation Grant (match to CWest/USGS funding above).
- Spring 2004 Funded Research Grant (work in progress): “Quantitative Analysis of Geographic Distribution of Cinder Cones at Newberry Volcano, Central Oregon”, \$1000, Center for Teaching and Learning Undergraduate Research Program, Western Oregon University, in collaboration with Dr. Templeton.
- Summer 2004 Funded Research Grant (work in progress): “Hydrogeologic Analysis of the Luckiamute Watershed, Central Coast Range, Oregon: Integrating Applied Watershed Science Research and Community Outreach”, \$1500, College of Liberal Arts and Sciences, Western Oregon University (match to CWest/USGS funding above).
- Fall 2003- Ongoing compilation of research literature and reference library related to  
Spring 2004 watershed analysis, regional geomorphology, hillslope / fluvial processes.

## **SECTION 4. PROFESSIONAL SERVICE**

(1) Currently serving as faculty advisor and university liaison to the Oregon Geographic Information Council, Salem Oregon. The function of the organization is to set standards for acquisition of Geographic Information Systems data in the state of Oregon.

(2) Currently serving as faculty advisor and university liaison to the Oregon State Board of Geologist Examiners, Salem Oregon. The function of the organization is to set licensing standards for professional geologists in the state of Oregon.

(3) Currently serving as faculty advisor and university liaison to the State Geologic Map Advisory Committee, Oregon Dept. of Geology and Mineral Industries, Portland, Oregon. The function of the committee is to provide guidance and set priorities for state and federal geologic mapping initiatives in Oregon.

(4) Maintained active registration as a Professional Geologist in the State of Oregon (Registration Number G1968), State Board of Geologist Examiners, Salem, Oregon.

(5) Active membership in the following professional organizations:  
Geological Society of America, American Geophysical Union, National Association of Geoscience Teachers, Friends of the Pleistocene.

(6) Currently serving as faculty advisor and university liaison for the Ash Creek Trail Project in Monmouth-Independence. I have worked with a student to develop a GIS and set of digital maps for use by the City of Independence and local citizens in planning/construction of a recreational trail along Ash Creek.

(7) Currently serving as faculty advisor and university liaison for the Luckiamute Watershed Council, Monmouth, Oregon (co-serving along with Dr. Turner and Dr. Galvan). The purpose of the watershed council is to promote awareness of natural resource and sustainability issues in the Luckiamute watershed, as per the goals of the Oregon Salmon Recovery Plan and the Oregon Watershed Enhancement Board. The primary outcome of the past year's activity was to help the LWC complete a Phase 1 Watershed Assessment; I served as a contributing author and peer-reviewer on the assessment. I also worked with Dr. Turner and Dr. Galvan to assist in housing the LWC Coordinator on campus at WOU.

(8) Currently serving as a volunteer GIS consultant and university liaison for the Pudding River Watershed Council, Salem, Oregon. Supervising a student in compilation of GIS data for the Pudding River, Marion and Clackamas counties.

(9) Currently serving as an interested stakeholder and partner in development of the Willamette Basin Long Term Hydrologic Observatory. Work is currently in the pre-proposal stage, conducted in conjunction with colleagues at Oregon State University, CUAHSI (Consortium of Universities for the Advancement of Hydrological Sciences), and NSF.

(10) Currently engaged as a charter member of the Earth System Scholars Network (ESSN), a NASA-sponsored organization comprised of past and present Earth System Science Fellows (the NASA/ESS program funded my dissertation work at West Virginia University). The organization is currently forming with a focus on a fall conference.

## **SECTION 5. INSTITUTIONAL SERVICE**

### **2003-2004 University Committees**

NSM Professional Concerns Committee  
NSM Technology Planning Committee  
NSM Curriculum Committee  
Member of the Environmental Sciences Institute Steering Committee  
Chair of the newly reorganized Academic Infrastructure Committee

### **Other Service-Related Activities**

(1) Continued as informal computer lab coordinator in RM 216, Natural Sciences Building. Activities include interaction with computing services for maintenance and upgrade of the computer lab.

(2) Continued as ESRI GIS licensing liaison for WOU. Part of this work includes ongoing implementation of a central GIS server for use by both the colleges of Education and LAS (in collaboration with Travis Knabe at University Computing)

(3) Continued as faculty advisor in Environmental Studies and Earth Science programs.

(4) Took a lead role in reorganizing the faculty senate “Academic Information Services Committee” into the “Academic Infrastructure Committee”.

(5) Continued development of an Environmental Sciences Institute at WOU. Working with Dutton, Poston, Myers, and Schepiege to establish a Board of Advisors. A work in progress that has great potential to alter the course of the Natural Sciences Division.

(6) Served as chair of the NSM Technology Planning and Curriculum Committees for the 2003-2004 academic year.

(7) Served as the Earth Science faculty representative at the Fall 2003 Natural Sciences career day at WOU; and Summer 2004 SOAR Early Bird Registration.

(8) Informally worked on career placement for Earth Science-related graduates from WOU (maintain a job board and placement contacts for students in government and industry)

(9) Continued soliciting funds and campus-wide services to further develop the Geo-Data Processing Lab in NS218A. The Geolab has received greater use the past year by Earth Science students and faculty for research and teaching activities.

(10) Spring-Summer 2004: served on graduate exam committee for two M.S. Education students with science specialties.

(11) Served as ad-hoc administrator of the WOU Earth Science program web site.

**Year 4 Faculty Status Report  
Academic Year 2002-2003**

**Stephen B. Taylor, Ph.D.  
Assistant Professor of Geology  
Earth and Physical Sciences Department  
Western Oregon University  
Monmouth, Oregon 97361**

## SECTION 2. TEACHING ACTIVITIES

### Course List for 2002-2003 Academic Year

Term	Course No.	Course Name/Section	Cr. Hr/ FTE	No. Students	Student: FTE Ratio
Fall 2002	GS104	Earth System Science Lec.	3.0	61	20.3
Fall 2002	GS331	Oceanography	3.0	34	11.3
Fall 2002	G322	Geomorphology Lec/Lab	3.0	8	2.6
Winter 2003	G202	Physical Geology Lec/Lab	4.0	49	12.3
Winter 2003	G476/576	Hydrology	3.0	10	3.3
Winter 2003	G302	Geotechniques: Quantitative	1.0	5	5.0
Spring 2003	GS104	Earth System Science Lec.	3.0	53	17.7
Spring 2003	G473	Environmental Geology	3.0	9	3.0
Summer 2003	GS407-507	River Environments	3.0	11	3.7

### Curriculum Development

- Fall 2002 Development and upgrade of GS331 Oceanography Lab exercises and in-class activities. The focus of the upgrade was to create additional lab exercises, keyed to coastal issues in western Oregon, also to better integrate computer technology.
- Fall 2002-  
Spring 2003 Developed digital image library and slide collection for a spectrum of geology courses including: GS104, GS106, G202, G321, GS331, G473, and G476. This work was conducted in conjunction with student assistance provided by PT3 and the Student Technology Associate program.
- Fall 2001 Proposed new summer 2003 course offering: "River Environments of Oregon", offered under the umbrella of the Natural Sciences Summer Institute.
- Fall 2001 Continued development of GS104 course web site and online homework exercises using the WebCT software environment.
- Winter 2003 Development of lab exercises, software tutorials, lecture materials, and class web site for G302 Geotechniques: Quantitative Methods This course represented a new preparation.
- Winter 2003 Continued development of lab exercises, lecture materials, and web site for G476/576 Hydrology (second time offered).

Spring 2002 Continued work with Dr. Templeton and Dr. Myers on upgrade of General Science Sequence, development of new lab exercises, lectures notes, and web site content for GS106.

Summer 2003 Developed curriculum, field exercises, and web site for GS407/507 River Environments of Oregon. This course represented a new preparation and included development of a field trip itinerary and field guide for a 1 week float / camping trip to the Deshutes Basin and Columbia Gorge.

### **Field Trip Activities**

Fall 2002 "Field Hydrology and Mass Transport of Sediment in the Luckiamute Watershed". Field trip in conjunction with G322 Geomorphology.

Spring 2003 "Landfill Technology and Hydrogeology of the Coffin Butte Landfill, Benton County, Oregon". Field trip in conjunction with G473 Environmental Geology.

Spring 2003 G473 field trip to OSU seminar series: "Flood Restoration on the Colorado River"

Spring 2003 G473 field trip to OSU seminar series: "Landslide Hydrology"

Spring 2003 G473 field trip to OSU seminary series: "Fluvial Disturbance in Active Volcaniclastic Landscapes".

Summer 2003 "Hydrology and Geomorphology of the Middle Deschutes and Lower Columbia Rivers". Field trip in conjunction with GS407/507 River Environments.

### **SECTION 3. RESEARCH-SCHOLARSHIP-PROFESSIONAL DEVELOPMENT**

Fall 2003 Presented paper entitled "Bedrock Control on Slope Gradients in the Luckiamute Watershed, Central Coast Range, Oregon: Implications for Sediment Transport and Storage" at the Fall 2002 Meeting of the American Geophysical Union, San Francisco, California.

Winter 2003 Co-authored and submitted paper with Dutton, Myers, Poston, and Schepige entitled "Collaborative Approaches to Contextual, Field-Based Interdisciplinary Environmental Science: Why More Heads are Better Than One", currently in review by the Journal of College Science Teaching (Dutton lead author).

Fall 2002-  
Spring 2003 Honors thesis advisor, Tammy Baker, "Geomorphologic Hazards Analysis of Select Watersheds in the Central Oregon Coast Range", proposal approved by Honors thesis committee, May 2002.

Fall 2002-  
Spring 2003 Completed collaborative research project with Dr. Templeton: "Building a Geographic Information System for the Newberry Volcanic Complex". Taylor served as project lead and principle student supervisor.

- Fall 2002-  
Spring 2003 Completed collaborative research project with Dr. Templeton: "Geomorphic Analysis of Cinders at Newberry Volcano". Taylor served as project lead and principle student supervisor.
- Fall 2002-  
Spring 2003 Ongoing compilation of research literature and reference library related to watershed analysis, regional geomorphology, hillslope / fluvial processes.
- Fall 2002-  
Winter 2003 Participated in a working group of NSM faculty to explore and develop a proposal to the "Math-Science Partnership" program at NSF. Collaborated with Dutton, Templeton, Myers, Schepige, Turner, Galvan, and Collett to create a pre-proposal for summer workshops with a focus on interdisciplinary watershed research and curriculum development (note: a "white paper" and preliminary proposal was developed, but the proposal was not submitted due to lack of administrative commitment at the OUS level).
- Spring 2003 Attending professional development training workshop on use of GPS/GIS field data collectors; Corvallis Microtechnology, Corvallis, Oregon.
- Summer 2003 Presented paper entitled "Preparing for Oregon's 21<sup>st</sup> Century Schools by Integrating Technology Across the Curriculum: Forging Partnerships Between Education and Liberal Arts and Science" at the National Education Computing Conference, Seattle, Washington.
- Summer 2003 Successfully co-authored and submitted paper to be presented at the Fall 2003 Meeting of the Geological Society of America, entitled: "Cinder Cone Morphometry and Volume Distribution at Newberry Volcano, Oregon: Implications for Age Relations and Structural Control on Eruptive Process" (Taylor lead author with Dr. Templeton and Denise Gilels (student) as co-authors).
- Summer 2003 Successfully co-authored and submitted paper to be presented at the Fall 2003 Meeting of the Geological Society of America, entitled: "Compilation of a Digital Geologic Map and Geodatabase for Newberry Volcano, Central Oregon: A Framework for Gis-Based Analyses of Volcanic Process And Products in a Back-Arc Setting" (Denise Giles lead author with Taylor and Dr. Templeton as co-authors).
- Summer 2003 In progress: collaboratively working with Dutton, Turner, Myers, Templeton, Galvan, and Collett to develop an interdisciplinary research-curriculum initiative under the auspices of the Environmental Sciences Institute. The goal of the working group is to identify watershed-based research projects that will provide the foundation for external proposals to granting agencies in the 2003-2004 academic year. Collaborative effort between Dutton, Taylor, and Collett lead to securing \$5000.00 in funds from the Center for Teaching and Learning to support summer student research assistants from biology and geology.

#### **SECTION 4. PROFESSIONAL SERVICE**

- (1) Currently serving as faculty advisor and university liaison to the Oregon Geographic Information Council, Salem Oregon. The function of the organization is to set standards for acquisition of Geographic Information Systems data in the state of Oregon.
- (2) Currently serving as faculty advisor and university liaison to the Oregon State Board of Geologist Examiners, Salem Oregon. The function of the organization is to set licensing standards for professional geologists in the state of Oregon. I've been involved with a working group to revise the registration requirements for academic professionals at Oregon institutions of higher education.
- (3) Currently serving as faculty advisor and university liaison to the State Geologic Map Advisory Committee, Oregon Dept. of Geology and Mineral Industries, Portland, Oregon. The function of the committee is to provide guidance and set priorities for state and federal geologic mapping initiatives in Oregon.
- (4) Maintained active registration as a Professional Geologist in the State of Oregon (Registration Number G1968), State Board of Geologist Examiners, Salem, Oregon.
- (5) Active membership in the following professional organizations:  
Geological Society of America, American Geophysical Union, National Association of Geoscience Teachers, Friends of the Pleistocene.
- (6) Currently serving as faculty advisor and university liaison for the Ash Creek Trail Project in Monmouth-Independence. I have worked with a student to develop a GIS and set of digital maps for use by the City of Independence and local citizens in planning/construction of a recreational trail along Ash Creek.
- (7) Currently serving as faculty advisor and university liaison for the Luckiamute Watershed Council, Monmouth, Oregon (co-serving along with Dr. Turner and Dr. Galvan). The purpose of the watershed council is to promote awareness of natural resource and sustainability issues in the Luckiamute watershed, as per the goals of the Oregon Salmon Recovery Plan and the Oregon Watershed Enhancement Board. The primary outcome of the past year's activity was to help the LWC secure an \$80,000 watershed assessment grant and to establish a collaborative relationship so that LWC can house a coordinator on campus at WOU.
- (8) Winter 2003 - Conducted a two-day geomorphology and landscape analysis training workshop for instructional staff at OMSI Camp Hancock, Fossil, Oregon.
- (9) Spring 2003 – Invited as expert witness to testify at an Oregon State Senate Subcommittee hearing on protocol for geologists licensing of academic professionals.
- (10) Spring 2003 – Planned and coordinated the third annual “Environmental Geology Speaker Series” at WOU. The speaker series resulted in WOU visits by practicing Earth Science professionals from state agencies and academic institutions.

(11) Spring – Summer 2003: Currently serving as a volunteer GIS consultant and university liaison for the Pudding River Watershed Council, Salem, Oregon. Supervising a student in compilation of GIS data for the Pudding River, Marion and Clackamas counties.

## **SECTION 5. INSTITUTIONAL SERVICE**

### **2002-2003 University Committees**

NSM Professional Concerns Committee

NSM Technology Planning Committee

Faculty Advisor to the Central Student Technology Fee Committee (~10 advisees)

Member of the Environmental Sciences Institute Steering Committee

### **Other Service-Related Activities**

(1) Completed the 2002-2003 academic year as LAS PT3 Project Coordinator (0.25 FTE) for institution-wide initiative to infuse technology across the College of Liberal Arts and Sciences and College of Education curricula. Significant activities include administration of the PT3 faculty mini-grant program, conceptual development of a new Student Technology Assistant Program (i.e. student technology teaching assistants), weekly oversight meetings, report writing, and administrative representative at the national level.

(2) Continued as informal computer lab coordinator in RM 216, Natural Sciences Building. Activities include interaction with computing services for maintenance and upgrade of the computer lab.

(3) Continued as ESRI GIS licensing liaison for WOU. Part of this work includes ongoing implementation of a central GIS server for use by both the colleges of Education and LAS (in collaboration with Travis Knabe at University Computing)

(4) Continued as faculty advisor in Environmental Studies and Earth Science programs.

(5) Took a lead role in organizing and distributing the \$150,000 student technology fee award to the Division of Natural Sciences and Mathematics for upgrade of laboratory and technology infrastructure.

(6) Continued development of an Environmental Sciences Institute at WOU. Working with Dutton, Poston, Myers, and Schepiege to establish a Board of Advisors. A work in progress that has great potential to alter the course of the Natural Sciences Division.

(7) Served as chair of the NSM Technology Planning Committee for the 2002-2003 academic year.

(8) Served as the Earth Science faculty representative at the Fall 2002 Natural Sciences career day at WOU.

(9) Informally worked on career placement for Earth Science-related graduates from WOU (maintain a job board and placement contacts for students in government and industry)

(10) Continued soliciting funds and campus-wide services to further develop the Geo-Data Processing Lab in NS218A. The Geolab has received greater use the past year by Earth Science students and faculty for research and teaching activities.

(11) Served as Earth Science faculty advisor for the Early Bird Registration program in Spring 2003.

(12) Spring-Summer 2003: served on graduate exam committee for two M.S. Education students with science specialties.

(13) Served as Earth Science faculty representative at spring 2003 LAS student recognition night.

**Year 3 Faculty Status Report  
Academic Year 2001-2002**

**Stephen B. Taylor, Ph.D.  
Assistant Professor of Geology  
Earth and Physical Sciences Department  
Western Oregon University  
Monmouth, Oregon 97361**

## SECTION 2. TEACHING ACTIVITIES

### Course List for 2001-2002 Academic Year

Term	Course No.	Course Name/Section	Cr. Hr/ FTE	No. Students	Student: FTE Ratio
Fall 2001	GS104	Found. Phys. Science Lec.	3.0	54	18.0
Fall 2001	GS331	Oceanography	3.0	28	9.3
Fall 2001	G322	Geomorphology Lec/Lab	3.0	12	4.0
Winter 2002	G202	Physical Geology	4.0	35	8.8
Winter 2002	G492	GIS Applications	3.0	17	5.7
Spring 2002	GS106	General Science Lecture	5.0	50	10
Spring 2002	G473	Environmental Geology	3.0	10	3.3
Spring 2002	GS106	General Science Lab	N/A	24	N/A
Spring 2002	GS106	General Science Lab	N/A	23	N/A
Summer 2002	GS407-507	Workshop: GIS / ArcView	3.0	18	6.0
Fall 2002	G322	Geomorphology / Air Photo	3.0	10	3.3
Fall 2002	G331	Oceanography	3.0	35	10.2
Fall 2002	GS104	Intro Earth System Science	3.0	60	20

### Curriculum Development

- Fall 2001      Development and upgrade of G322 Geomorphology Lab exercises and in-class activities. The focus of the upgrade is to create additional lab exercises, keyed to geologic hazards issues in western Oregon, also to better integrate computer technology.
- Fall 2001      Development of lab exercises, lecture materials, and class web site for GS331 Oceanography. Oceanography represents a new course preparation.
- Fall 2001      Development of lab and lecture materials for the new G492/592 GIS Applications in Earth Science, which will be offered in Winter 2000 term for the first time.
- Fall 2001      Upgrade of a summer 2002 Natural Summer Sciences Institute course in collaboration with Dr. Bryan Dutton, Dr. Jeff Myers, and Dr. Pete Poston.
- Fall 2001      Proposed new summer 2002 course offering: "Introduction to ArcView GIS", to be offered under the umbrella of the Natural Sciences Summer Institute.
- Fall 2001      Continued work with Dr. Templeton and Dr. Myers on upgrade of General Science Sequence, development of new lab exercises, revision of course content, compilation of digital image library and course web site.

- Winter 2002 Development of lab exercises, software tutorials, lecture materials, and class web site for G492/592 GIS Applications in Earth Science. This course represents a new preparation.
- Spring 2002 Continued work with Dr. Templeton and Dr. Myers on upgrade of General Science Sequence, development of new lab exercises, lectures notes, and web site content for GS106.
- Summer 2002 Developed curriculum, lab exercises, and software tutorials for a one week GIS workshop using ArcView software. The workshop targeted practicing education professionals.

### **Field Trip Activities**

- Fall 2001 "Geomorphology of the Quartzville District, Linn County, Oregon" (team field trip between the G322 Geomorphology class and Petrology)
- Fall 2001 Class trip to the OSU Hydrology Speaker Series: Julia Jones, OSU Geosciences, "Hydrology of Rain-on-Snow Events in Western Oregon". Field trip in conjunction with G322 Geomorphology.
- Fall 2001 "Field Hydrology and Mass Transport of Sediment in the Luckiamute Watershed". Field trip in conjunction with G322 Geomorphology.
- Spring 2002 "Landfill Technology and Hydrogeology of the Coffin Butte Landfill, Benton County, Oregon". Field trip in conjunction with G473 Environmental Geology.
- Spring 2002 "Environmental Geology of the Monmouth-Independence Area". Field trip in conjunction with G473 Environmental Geology".
- Spring 2002 Class trip to the Monthly Meeting of the Oregon Chapter of the Association of Engineering Geologists, Portland State University. Field trip in conjunction with G473 Environmental Geology.
- Spring 2002 Class trip to the "Natural Hazards Warning and Monitoring Systems" symposium, Oregon State University. Field trip in conjunction with G473 Environmental Geology.

### **SECTION 3. RESEARCH-SCHOLARSHIP-GRANTS**

- Fall 2001 Presented paper entitled "Gravel distribution analysis of three channel systems in the central Appalachians: Comparative evaluation of sediment-transport efficiency and valley-erosion dynamics". Binghamton Symposium, Mountain Geomorphology: Integrating Earth Systems, University of North Carolina, Chapel Hill, North Carolina,
- Fall 2001 Beginning Research Collaboration: "Field-Validation of Debris Flow Hazard

Models in the Luckiamute Watershed", work in conjunction with Jon Hofmeister, Oregon Dept. of Geology and Mineral Industries.

- Fall 2001 Proposal Submission: "Facilitating Data Collection and Enhancing Student Presentations at North Salem High" (\$8000.00) - Murdock Trust Extension Grant for Partners-in-Science Program at North Salem High, in conjunction with Mr. Rich Swartzentruber (fully funded as of January 2002).
- Fall 2001 Grant Proposal - "Integrating Electronic Measurement Technologies into the General Science Laboratory Curriculum: Enhancing the Preparation of Pre-Education Majors at Western Oregon University" (\$5000.00), prepared in collaboration with Dr. Templeton (fully funded as of 11/15/01)
- Fall 2001 Grant Proposal - "Dissemination of the Natural Sciences Institute Model to Geoscience Educators" (\$700.00) - OCEPT Dissemination Grant (fully funded as of November 15, 2001)
- Winter 2002 Grant Proposal – "Comparative Geomorphic Analysis and Sediment-Transport Efficiency in the Central Oregon Coast Range" (\$3000.00), submitted to the Faculty Development Grant program at Western Oregon University (fully funded as of January 2002).
- Winter 2002 Published Abstract: Taylor, S.B. and Swartzentruber, R.L., Year 2 Partners in Science Research Project - Case Study of Anderson Creek Debris Flow Site, Lincoln County, Oregon: Abstracts with Program, Partners in Science National Conference, San Diego, California.
- Winter 2002 Presented paper entitled "A Course Model for Integrated Science: The Natural Sciences Summer Institute at Western Oregon University": Dutton, B.E., Taylor, S.B., and Poston, P.E., presented at the third annual OCEPT Showcase and Pre-Oregon Academy of Sciences Symposium, Portland, Oregon.
- Spring 2002 Published manuscript Oregon Geology Special Paper 36: Taylor, S.B., Dutton, B.E., and Poston, P.E., Integrated environmental studies for K-12 educators: A field guide to the Luckiamute River watershed, upper Willamette Basin, west-central Oregon.
- Spring 2002 Honors thesis advisor, Tammy Baker, "Geomorphic Hazards Analysis of Select Watersheds in the Central Oregon Coast Range", proposal approved by Honors thesis committee, May 2002.
- Spring 2002 Initiated collaborative research project with Dr. Templeton: "Building a Geographic Information System for the Newberry Volcanic Complex". Project is in progress and has involved 4 students to date.

#### **SECTION 4. PROFESSIONAL SERVICE**

- (1) Served as co-chair of theme session at Geological Society of America Cordilleran Section Meeting May 2002 in Corvallis Oregon. Session Topic: "Natural Hazards Monitoring and Warning Systems". Worked in conjunction with Dr. Mark Darienzo, Oregon Emergency Management, to assemble experts in the field of natural hazards monitoring from agencies and universities around the U.S.
- (2) Organized a field trip for the National Association of Geoscience Teachers and the Geological Society of America (conducted May 2002): "Integrated Environmental Studies for K-12 Educators: A Field Trip to the Luckiamute River Watershed, Upper Willamette Basin, West-Central Oregon", in conjunction with Dr. Dutton and Dr. Poston.
- (3) Successfully passed a series of written exams and officially registered as a Professional Geologist in the State of Oregon (Registration Number G1968), State Board of Geologist Examiners, Salem, Oregon.
- (4) Active membership in the following professional organizations:  
Geological Society of America, American Geophysical Union, National Association of Geoscience Teachers

## **SECTION 5. INSTITUTIONAL SERVICE**

### **2000-2001 University Committees**

NSM Professional Concerns Committee  
 NSM Computer Committee  
 LAS Student Tech. Fee Committee  
 Faculty Advisor to the Central Student Technology Fee Committee

### **Other Service-Related Activities**

- (1) Continuing as LAS PT3 Project Coordinator (0.25 FTE) for institution-wide initiative to infuse technology across the College of Liberal Arts and Sciences and College of Education curricula. Significant activities include administration of the PT3 faculty mini-grant program, conceptual development of a new Student Technology Assistant Program (i.e. student technology teaching assistants), administrative representative at the National PT3 meeting.
- (2) Served as member of the Physics Faculty Search Committee (with Poston, Kazerouni, and Templeton).
- (3) Continued as informal computer lab coordinator in RM 216, Natural Sciences Building. Activities include interaction with computing services for maintenance and upgrade of the computer lab. Part of this effort included the installation of wireless networking in the Natural Sciences Building.
- (4) Continued as ESRI GIS licensing liaison for WOU.

- (5) Continued as faculty advisor in Environmental Studies and Earth Science programs.
- (6) Organized and convened student lobby group to address instructional technology needs within Natural Sciences: "Science Students for Technology Advancement at WOU".
- (7) Collaborated on development of an Environmental Sciences Summer Institute at WOU. Working with Dutton, Poston, Myers, and Schepiege to create a set of By-Laws, Mission Statement, Board of Advisors, and Steering Committee. A work in progress that has great potential to alter the course of the Natural Sciences Division.
- (8) Volunteered as Natural Science faculty liaison to the Central Student Technology Fee Committee. Worked with students and faculty colleagues to petition the Student Tech. Fee Committee to dedicate funds for upgrade of science technology infrastructure at Western Oregon University. Efforts resulted in \$150,000 of student tech. fee funds to be targeted for science infrastructure upgrade in academic year 2002-2003 (hard funds awarded as of July 1, 2002).
- (10) Organized the development of a new committee in the Division of Natural Sciences, "Technology Planning Committee". Elected as chair of the committee for the 2002-2003 academic year.
- (11) Presented GIS workshop/presentation at Junior Science and Humanities Symposium (JSHS) in Spring, 2002
- (12) Informally worked on career placement for Earth Science-related graduates from WOU. This outreach has resulted in the placement of four graduates with the Oregon Dept. of Forestry GIS lab.
- (13) Worked with colleagues from the Professional Concerns Committee to update the Natural Science Division By-Laws
- (14) Volunteered as faculty janitor to lead the clean-up and organization of the Receiving Room / Storage Area in the Natural Sciences Building.
- (15) Continued soliciting funds and campus-wide services to further develop the Geo-Data Processing Lab in NS218A. The Geolab has received greater use the past year by Earth Science students and faculty for research and teaching activities.

**Year 2 Faculty Activity Summary  
Academic Year 2000-2001**

**Stephen B. Taylor, Ph.D.  
Assistant Professor of Geology  
Earth and Physical Sciences Department  
Western Oregon University  
Monmouth, Oregon 97361**

## INTRODUCTION

This report provides a summary of my relevant teaching, research, and service activities for the 2000-2001 academic year. The activities discussed herein represent completion of my second full year of service at Western Oregon University, as pertaining to the tenure-track process. The activity summary is organized into the following sections (1) Teaching Activities, (2) Research and Scholarship, (3) Professional Service, and (4) Institutional Service.

## TEACHING ACTIVITIES

The following is an itemized summary of teaching duties assigned during the 2000-2001 academic year. Please note that for the 2000-2001 academic year, my appointment was 0.25 FTE Project Coordinator for PT3 and 0.75 FTE teaching.

### Course List

Term	Course No.	Course Name/Section	Cr. Hr/ FTE	No.	Student: Students	FTE Ratio
Fall 2000	GS104	Found. Phys. Science Lec.	3.0	61	20.3	
Fall 2000	GS104	Found. Phys. Science Lec.	3.0	58	19.3	
Fall 2000	G322	Geomorphology Lec/Lab	3.0	7	2.3	
Winter 2001	G202	Physical Geology (W)	3.0	55	18.3	
Winter 2001	G202L	Physical Geology Lab	1.33	19	14.3	
Winter 2001	G202L	Physical Geology Lab	1.33	17	12.8	
Winter 2001	G202L	Physical Geology Lab	1.33	19	14.3	
Winter 2001	G476/576	Hydrology	3.0	25	8.3	
Winter 2001	G406	SIS: GIS App. Earth Sci.	0.0	1	n/a	
Spring 2001	GS104	Found. Phys. Science Lec.	3.0	59	19.7	
Spring 2001	GS104L	Found Phys. Science Lab	1.33	22	16.5	
Spring 2001	GS407	Senior Seminar	1.0	4	4.0	
Spring 2001	G473/573	Environmental Geology	3.0	12	4.0	
Spring 2001	G406	SIS: GIS App. Earth Sci.	0.0	1	n/a	
Summer 2001	NS481/581	NSSI Institute Course	0.25	10	n/a	
Total Students:					370	
Total FTE / Cr Hr:					27.6	
Total Preparations:					12	
Total Contact Hours:					368	
Avg. Student:FTE Ratio per Term					12.8	

## Curriculum Development Summary

- Fall 2000-  
Winter 2001 Proposed and successfully implemented a major program change from B.S./B.A. Natural Sciences Major (Geology / Earth Science Option) to B.S./B.A. Earth Sciences. The program change involved extensive realignment of curriculum, creation of new courses, and modification of existing courses. Approval was received from the OUS board. This work was conducted in conjunction with Dr. Templeton and Dr. Myers.
- Fall 2000-  
Spring 2001 Implemented curriculum change for the General Science sequence. This work represents a shift from disconnected modules of geology (GS104), chemistry (GS105), and physics/astronomy (GS106). The new curriculum embraces Earth System Science in which the Earth is holistically used as a platform to study traditional concepts of geology, physics, chemistry, and astronomy. This work was conducted in conjunction with adjunct faculty, Dr. Templeton, Dr. Myers, Dr. Schepiege, and Dr. Matson.
- Fall 2000 Continued development of a student note set and web site for GS104 Foundations of Physical Science. Refer to related URL <http://www.wou.edu/taylor> - GS104 and Section VII of this report.
- Fall 2000 Adapted and implemented on-line homework, quizzes, and discussion groups for GS104. WebCT software and the campus network were used to development an interactive, web-based component for Taylor GS104 lecture sections.
- Fall 2000 Continued development and refinement of quantitative lab exercises for G322 Geomorphology and Aerial Photo Interpretation. Exercises were both newly created and modified from published sources. Refer to related URL <http://www.wou.edu/taylor> - G322 and Section VII of this report.
- Fall 2000 Contributed to the editing and development of the lab exercise manual for GS104 Foundations of Physical Science. This work was a by-product of teaching the GS104 Lab; conducted in conjunction with Dr. Templeton.
- Fall 2000 Developed and proposed a new course through the Division of Extended and Summer Studies for Summer 2000: NS481/581 Natural Sciences Summer Institute (Integrated watershed science). Work was conducted in conjunction with Dr. Dutton, Dr. Poston, and Dr. Myers.
- Winter 2001 Continued development and refinement of a student note set and web site for G202 Physical Geology (Surficial Processes). Refer to related URL <http://www.wou.edu/taylor> - G202 and Section VII of this report.
- Winter 2001 Contributed to the creation, editing, and development of the lab exercise manual for GS105 Foundations of Physical Science. This work was conducted in conjunction with Dr. Templeton.

- Winter 2001 Created and implemented curriculum for a new course G476/576 Hydrology. This work involved compiling a student note set and web site, as well as developing quantitative and computer-based lab exercises. Refer to related URL <http://www.wou.edu/taylor> - G476/475 and section VII of this report.
- Winter 2001 Created and implemented curriculum for a graduate course as an adjunct at the University of Oregon - Geog522 Advanced Topics - Geomorphology of Alluvial Fans. This work involved compiling an extensive set of electronic journal readings, class notes, web site, quantitative lab exercises, and GIS-based lab exercises. Refer to related URL <http://www.wou.edu/taylor> - Geog522 (UO) and section VII of this report. Note: Although this work was for the University of Oregon, it also benefits WOU students in that much of the curriculum has been adapted and utilized in G322 Geomorphology and G407 Senior Seminar.
- Spring 2001 Continued development of interactive on-line homework assignments and discussion groups (WebCT) for GS104 Foundations of Physical Science. Refer to related URL <http://www.wou.edu/taylor> - GS104 and Section VII of this report.
- Spring 2001 Created and implemented a new course, G407 Senior Seminar, as part of the new B.S./B.A. Earth Science. The course involves a combination of library research, digital presentation, and career counseling (resume preparation, etc.) for seniors preparing to graduate.
- Spring 2001 Continued development of a student note set and web site for G473/573 Environmental Geology. Refer to related URL <http://www.wou.edu/taylor> - G473 and Section VII of this report.
- Spring 2001 Developed the framework for an introductory GIS Applications in Earth Science course via G406 / Specialized Individual Study. Supervised one student in the use of Geographic Information Systems. Refer to Section VII of this report.
- Spring 2000 Conceptualized and developed a geomorphology / GIS module for the Natural Sciences Summer Institute at WOU. This work was conducted in collaboration with Dr. Bryan Dutton, Dr. Jeff Myers, and Dr. Pete Poston.
- Summer 2001 Compiled notes, field exercises, and GIS data that was incorporated into the Natural Sciences Summer Institute course (NS481/581). Refer to related URL <http://www.wou.edu/taylor> - NS481/581 and Section VII of this report.

### **Field Trip Activities**

- Fall 2000 "Fluvial Geomorphology and Flood History of the Luckiamute River": Class field trip in conjunction with G322 Geomorphology and Aerial Photo Interpretation.
- Fall 2000 "Geomorphic Mapping and Recent Debris Flow Impacts to the Anderson Creek Watershed, Lincoln County, Oregon": Class field trip in conjunction with G322 Geomorphology.
- Fall 2000 Field Trip to the U.S. Geological Survey Experimental Debris Flow Flume at H.J. Andrews Experimental Forest, Lane County, Oregon. Class field trip in conjunction with G322 Geomorphology.
- Winter 2001 Field trip to Oregon State University Hydrology Speaker Series: "Geologic Conditions for Catastrophic Flooding in the Western United States", Dr. Jim O'Connor, U.S. Geological Survey. Class field trip in conjunction with G476/576 Hydrology.
- Spring 2001 "Hydrogeology and Engineering Technology Associated with Coffin Butte Landfill": Class field trip in conjunction with G473 Environmental Geology.
- Spring 2001 "Hydrogeology of the Mid-Willamette Valley and Independence City Well Field": Class field trip in conjunction with G473 Environmental Geology.
- Spring 2001 "Geologic Hazards of Western Oregon": Environmental Geology (G473) class field trip to the Marion County Emergency Management Workshop Series.
- Spring 2001 Field trip to Oregon State University Volcanology Seminar Series: "Fluid Mechanics and Numerical Modelling of Debris Flow and Lahar", Dr. Dick Iverson, U.S. Geological Survey. Class field trip in conjunction with G473 Environmental Geology.
- Summer 2001 Summer field trips to selected localities in the Luckiamute River basin (Sulpher Springs, Black Rock, Helmick Park): Class field trips in conjunction with the Geomorphology module of NS481/581 Natural Sciences Summer Institute.

## RESEARCH AND SCHOLARSHIP

### Summary of Research Activities

Advances on the research front for 2000-2001 have been slow but sure. I have continued my work with Rich Swartzentruber (North Salem High School) on the Murdock Trust Partners-in-Science Project. Our work in year 2 of the grant became more focused, documenting the impacts of historic debris flow on the riparian ecosystem of Anderson Creek in Lincoln County. The results of this work will be presented at a national Partners-in-Science meeting in San Diego, January 2002. I have completed a regional reconnaissance survey of geomorphic hazards in western Oregon as per a WOU faculty development grant awarded in the 1999-2000 academic year. This work included extensive literature review and acquisition of GIS coverages / digital elevation data for portions of western Oregon. The summer science institute field course in the Luckiamute watershed has dove-tailed with the geomorphic hazards project, resulting in a shift from regional reconnaissance to focused mapping and data collection in the Luckiamute.

I continue to work on follow-up activities related to my dissertation research on geomorphic processes in the central Appalachians. Along these lines, I've been re-analyzing alluvial fan data using discriminant function analysis and working in consultation with Dr. Joel Alexander in Psychology. I have several dissertation-related manuscripts in various stages of preparation, and receive constant "encouragement" from my dissertation advisor to get the final publications out. Along these lines, I presented two Appalachian geomorphology papers at national meetings in the past year. The goal will be to get a series of final publications out within the next academic year. Refer to Section IV for examples of abstracts and manuscripts.

Other research-related work includes building a web-distributed GIS for the WOU campus and geomorphic analysis of a Holocene lava-dammed lake near Bend. I am also in the nascent stages of conducting GIS/morphometric analyses of cinder cones at the Newberry volcanic complex, in conjunction with volcanology work by Dr. Templeton.

These latter projects are in the early stages of development, and will serve as a platform for research over the next several years.

### Professional Presentations

- Fall 2000 "Sediment-storage budgets for colluvium-dominated watersheds in the central Appalachians", oral presentation at the National Meeting of the Geological Society of America, Reno, NV. Invited talk at topical session entitled "Recent Advances in Colluvium Research"
- Winter 2001 "Lithofacies control on geomorphic processes in the central Appalachians", oral presentation at the Geoscience Seminar Series, University of Oregon.
- Winter 2001 "Watershed dynamics and sediment transport in the Central Appalachians", oral presentation at the Geoscience Seminar Series, Oregon State University.

Spring 2001 "Overview of the New B.S./B.A. Earth Science Program at Western Oregon University", oral presentation to select members of the OUS Board, in conjunction with Dr. Templeton and Dr. Myers.

Summer 2001 "A course in Natural Science: A model for integrating content, research, and pedagogy", oral presentation at OCEPT Showcase 2001, in conjunction with Dr. Dutton.

### **Conferences, Meetings, and Professional Development**

Fall 2001 Attended Friends of the Pleistocene, Eighth Annual Pacific Northwest Cell Field Trip: "What's New at Newberry Volcano, Oregon". Sponsored by the U.S. Forest Service - Deschutes National Forest, Bend, Oregon.

Fall 2001 Attended the National Meeting of the Geological Society of America, Reno, NV.

Summer 2001 Attended the ESRI International GIS Users Conference in San Diego, CA. Conference involved presentations, and colloquia on uses and applications of Geographic Information Systems software.

Summer 2001 Attended a special workshop, "Hydrologic Modeling with GIS", part of the ESRI GIS Users Conference, San Diego, CA

Summer 2001 Attended a special workshop, "Web-Distributed GIS Using ArcIMS (internet map server)", part of the ESRI GIS Users Conference, San Diego, CA

### **Grants and Proposals**

Fall 2000 Grant Proposal - "Travel Support for the Natural Sciences Summer Institute at WOU" (\$920.00): Submitted to the WOU Foundation, Western Oregon University (project not funded).

Fall 2001 Grant Request for Continuation - "Geomorphic Hazards in Western Oregon" (\$7500.00): Submitted to the Murdock Trust, Vancouver, WA (year 2 continuation approved).

Spring 2001 Grant Proposal - "Integrating Digital-Based Pedagogy into the Earth and Physical Science Curriculum at WOU" (\$9000.00): Submitted to the PT3 Faculty Grants Project at Western Oregon University, with Dr. Templeton and Dr. Myers (project fully funded).

Spring 2001 Grant Proposal - "Implementation of Smart Classroom Technology in NS Room 101" (\$25,000.00): Submitted to the WOU Student Technology Fee Committee, Western Oregon University, with Dr. Templeton and Dr. Myers

(project fully funded).

Spring 2001 Grant Proposal - "Natural Science, Field-Based Technologies for K-12 Education Majors" (\$8500.00): Submitted to the PT3 Faculty Grants Project at Western Oregon University, with Dr. Dutton, Dr. Poston, and Dr. Myers (project fully funded).

Spring 2001 Grant Proposal - "Request for Travel Funds to Support the Environmental Geology Speaker Series" (\$400.00): Submitted to ASWOU Special Grants Committee, Western Oregon University (project funded for \$200.00).

Fall-Winter 2001 Exploratory Letters of Inquiry - "Development of an Earth Systems Information Laboratory at WOU": Letters of inquiry for funding opportunities submitted to the College of Liberal Arts and Sciences, Western Oregon University; the Murdock Trust, NSF Geoscience Education Directorate.

Summer 2001 Grant Proposal - "Development of a Summer Science Institute at Western Oregon University" (\$7500.00): Submitted to OCEPT Portland State University, with Dr. Dutton, Dr. Myers, and Dr. Poston (project fully funded).

### **Publications and Manuscripts in Preparation**

Taylor, S.B., Madarish, D., and Kite, J.S., 2001, Gravel distribution analysis of three channel systems in the central Appalachians: Comparative evaluation of sediment-transport efficiency and valley-erosion dynamics: Abstracts with Program, Binghamton Symposium, Mountain Geomorphology: Integrating Earth Systems, University of North Carolina, Chapel Hill, North Carolina, p. 49-50.

Dutton, B.E., and Taylor, S.B., 2001, A course in Natural Science: A model for integrating content, research, and pedagogy: Abstracts with Program, Oregon Collaborative for Excellence in Preparation of Teachers (OCEPT) Showcase 2001, Salem, Oregon.

Taylor, S.B. and Swartzentruber, R.L., 2001, Year 1 Partners in Science Research Project - Geomorphic Hazards Assessment in West-Central Oregon: Abstracts with Program, Partners in Science National Conference, San Diego, California.

Taylor, S.B., 2000, Sediment-storage budgets for colluvium-dominated watersheds in the central Appalachians: Geological Society of America, Abstracts with Program, Fall 2000 National Meeting, v. 32, no. 7.

Surficial Map Criteria for Sandstone Landscapes of the Central Appalachians: Linkage of Landform, Material and Process: co-authored with Steve Kite (West Virginia University). Refer to Section IV for a draft version.

The Occurrence of Small-Scale Debris Fans in Sandstone Landscapes of the Central

Appalachians: Fan Preservation as a Function of Erosional Accommodation Space: co-authored with Steve Kite (West Virginia University). Refer to Section IV for a draft version.

Sedimentology and Stratigraphy of an Ancient Volcaniclastic Alluvial Fan: A Case Study from the Oligocene Espinazo Formation, Cerrillos Hills, North-Central New Mexico: co-authored with Gary Smith (University of New Mexico).

The Influence of Sedimentary Lithofacies on Surficial Processes in the Central Appalachians: A Conceptual Model Based on Analysis of Landscapes Underlain by the Acadian Clastic Wedge: co-authored with Steve Kite (West Virginia University).

Comparative Geomorphic Analysis of Surficial Deposits at Three Central Appalachian Watersheds: Implications for Controls on Sediment-Transport Efficiency: co-authored with Steve Kite (West Virginia University).

### **Status of Geo-Data Processing Laboratory**

Significant advances were made in the 2000-2001 academic year towards the development of a state-of-the-art Geo-Data Processing Laboratory in Rm 218A of the Natural Sciences Building. This facility will ultimately serve as an integrated teaching-research facility available to faculty and staff in the Natural Sciences Division. The following is an updated list of equipment and software procured for the lab:

#### *Software Applications*

- ESRI ArcIMS - internet GIS/map server software
- ESRI ArcView 3.2 - GIS data capture and analysis software
- ESRI ArcPad - portable GIS data capture software for field mapping
- ESRI ArcGIS8.0 - State of the Art GIS software
- Clark Labs IDRISI - a raster based, 32-bit GIS / image analysis package
- Clark Labs Cartalynx - a vector based, GIS data capture software
- Adobe Photoshop - image analysis / graphics software
- Adobe Acrobat - web document preparation software
- Golden Surfer 7.0 - a raster-based, digital elevation modelling software
- Golden Grapher 2.0 - scientific graphing software
- Golden Didger 2.0 - map digitizing software
- AutoCAD 14.0 - CAD drafting software
- Adobe Illustrator - drafting / illustration software
- River Tools - Fluvial modeling software
- Slicer/Dicer - 3-D visualization software
- RockWorks - Geologic modeling and data reduction software
- Groundwater Vistas - Numerical modeling software for groundwater flow

#### *Hardware*

- Sun Ultrasparc 5.0 Unix-based workstation (Purchased with Dr. Poston)
- Intel-based Win NT 4.0 Workstation (pentium class)
- Digitizing Tablet set (large-format and small format tablets)
- Digital Map Series for Western Oregon

Four Pentium-Class PC's (with memory upgrades) Recycled from NS216  
HP1055CM DesignJet 36-in Color Plotter  
Two Ultrasparc 5.0 Unix-based workstations (recycled from Biology)

## **PROFESSIONAL SERVICE**

### **Professional Organizations and Memberships**

Geological Society of America (GSA)  
American Geophysical Union (AGU)  
National Water Well Association (NWWA)  
Society of Professional Groundwater Scientists and Engineers  
Society of Miscellaneous Oregon Geologists  
Registered Professional Geologist - State of Pennsylvania  
Phi Kappa Phi Honor Society  
Sigma Gamma Epsilon Honor Society  
National Association of Geoscience Teachers (NAGT)

### **Summary of Professional Activities**

*2000-2001*

With an extensive background as a consulting environmental geologist, my faculty objectives include maintaining a presence as an industry professional in the State of Oregon. Industry contacts will be most beneficial in promoting the Earth Science program at Western Oregon University, and will be helpful in providing leads for graduates in the job market. As such, my application is currently pending for professional geologist's registration in the State of Oregon (Application No. 01085164). I will be taking registration exams in the winter and spring of 2001.

I served as an at-large panelist on the Howard-Mackin Award Committee for the Quaternary Geology and Geomorphology Division of the Geological Society of America. I reviewed and scored over 20 research proposals from M.S.- and Ph.D.-level graduate students from universities around the country. The Howard-Mackin Awards are nationally recognized, serving on the panel provided a high-degree of visibility for the Earth Science program at WOU.

## **INSTITUTIONAL SERVICE**

### **Division of Natural Science Committees**

2000-2001 NS Professional Concerns Committee  
2000-2001 NS Computer Committee  
2000-2001 LAS Technology Fee Committee

### **University-Wide Service**

2000-2001 Member of Environmental Studies Minor Advisory Committee.  
2000-2001 Natural Sciences faculty representative on the LAS Committee for Distribution of Student Technology Fee software funds.  
2000-2001 LAS Project Coordinator for PT3 (Preparing Tomorrow's Teachers to Use Technology - 0.25 FTE).

### **Academic Advising**

2000-2001 Earth Science Program Advisor (currently 5 advisees)  
2000-2001 Environmental Studies Minor Advisor (currently 4 advisees)

### **PT3 LAS Project Coordinator Activities (2000-2001)**

- (1) Assisted in organizing and planning the Fall 2000 PT3 Retreat for WOU administrators, faculty, and staff interested in technology applications in the classroom.
- (2) Served as lead in the design and implementation of the PT3 Faculty Mini-Grants Proposal process for distribution of technology-related funds to WOU faculty.
- (3) Assisted in organizing and planning Faculty Mini-Grant workshops on proposal preparation.
- (4) Participated in development of a public relations video on the direction of technology applications in teaching and research at WOU (filmed by collaborators from Western Illinois University).
- (5) Participated in strategy meeting with PT3 community consortium members from school districts throughout western Oregon.
- (6) Served as primary liaison between the PT3 project and LAS faculty.
- (7) Initiated faculty grant support activities in collaboration with the Center for Teaching and Learning at WOU.
- (8) Principal lead in organizing a summer PT3 staff retreat and planning session

at Gentle House.

(9) Attended weekly meetings and planning sessions with PT3 staff and steering committee members.

(10) Coordinator for all PT3-related activities in the College of Liberal Arts and Sciences.

(11) Conducted a PT3-related GIS training workshop for Education faculty (in conjunction with Dr. Dutton).

### **Other Service-Related Activities**

(1) Serving as ad hoc (volunteer) faculty coordinator for NS216 Computer Lab. Activities include monitoring student use, cleaning and organizing the facility, working with University Computing Services to upgrade computers, recycling and distributing surplus computers to division labs, and generally problem solving and serving as a faculty catalyst.

(2) Working with Bill Kernan, Director of University Computing, to establish a web-based GIS map server on the campus of WOU. Possible applications include web-distributed research, administration management of the physical plant, and campus emergency management.

(3) Presented an informal demonstration on integrating classroom curriculum and web technologies to the Biology Department.

(4) Serving as WOU university liaison for an OUS system-wide site license covering all ESRI GIS software products. Working in conjunction with GIS colleagues at EOU, SOU, OSU, PSU, and UO.

(5) Served as curriculum advisor at the Western Oregon University SOAR and Early Bird Registration programs for incoming students. Served as faculty representative at Fall Open House.

(6) Served as Earth Science representative at Western Oregon University Preview Day for High School Students (in conjunction with Dr. Myers). Developed an interactive display regarding opportunities for Earth Science majors at WOU.

(7) Maintained a Partners in Science web site promoting the collaboration between Western Oregon University, North Salem High School, and the M.J. Murdock Trust.

(8) Served as web master for WOU Geology / Earth Science web page.

(9) Faculty participant in 2001 Oregon Junior Academy of Sciences meeting. Served as session chair, paper reviewer, and workshop presenter.

- (10) Active faculty participant at WOU 2001 Commencement ceremony.
- (11) Faculty coordinator for Natural Sciences visit / field trip by the Corvallis Home Schoolers Association.
- (12) Student Career / Placement Services: actively seeking employment for graduates from WOU, helped place three students versed in GIS technology at the Oregon Dept. of Forestry. Served as faculty contact for two students seeking employment at the Oregon Water Resources Dept. and Pacific Northwest Research Lab.
- (13) Served as faculty lead on clean-up and organization of the NS Glassware Storage Room and NS102 media room.
- (14) Served as faculty-peer expert on the use of ArcView GIS software at WOU. Conducted informal and formal training session for faculty colleagues in Education, Geography, Natural Science, and Anthropology.
- (15) Planned and organized the Spring 2001 Environmental Geology Lecture Series in conjunction with G473 Environmental Geology. The lecture series involved outside speakers from government and industry, discussing a wide range of environmental topics .

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*Environmental Geology Speaker Series - Spring Term 2001*

Frank Reckendorf, Geomorphologist, Reckendorf and Associates, Salem, OR: "Landscape Geomorphology as Related to Environmental Restoration Issues in Oregon"

Ken Schump, Hydrogeologist, CH2M Hill, Inc., Portland, OR: " Natural Attenuation of Chlorinated Hydrocarbons in Groundwater Systems in Southern Puget Sound"

Valerie Panek, Hydrogeologist, CH2M Hill, Inc., Corvallis, OR: " Case Studies in Groundwater Contamination and Related Remediation Strategies"

Scott Reaves, Geoline Positioning Systems, Portland, OR: "Field Mapping and GIS/GPS Technology"

Gordon Grant, Research Hydrologist, US Forest Service Pacific Northwest Research Station, Corvallis, OR: "Applied Fluvial Geomorphology and the Science Behind Dam Removal Issues in the Pacific Northwest"

Danny Katzman, Environmental Scientist, Integrated Geosciences Group, Los Alamos National Laboratory, Los Alamos, NM: "An Earth Science-Based Approach to Investigations of Manhattan-Project and Cold War-Era Contamination at Los Alamos National Laboratory"

Year-End Activity Report  
Academic Year 1999-2000

Submitted By

Steve Taylor, Assistant Professor  
Earth and Physical Sciences Department  
Division of Natural Sciences  
Western Oregon University  
Monmouth, OR 97361

## 2. TEACHING ACTIVITIES

### Course List

Term	Course No.	Course Name/Section	Cr. Hr/ FTE	No. Students	Student:FTE Ratio
Fall 1999	GS106	Found. Phys. Science Lec.	3.0	57	19.0
Fall 1999	GS106	Found. Phys. Science Lec.	3.0	20	6.7
Fall 1999	GS106L	Found. Phys. Sci. Lab	1.33	25	18.8
Fall 1999	GS106L	Found. Phys. Sci. Lab	1.33	25	18.8
Fall 1999	G322	Geomorphology Lec/Lab	3.0	10	3.3
Winter 2000	GS106	Found. Phys. Sci. Lec.	3.0	47	15.7
Winter 2000	GS106L	Found. Phys. Sci. Lab	1.33	22	16.5
Winter 2000	GS106L	Found. Phys. Sci. Lab	1.33	22	16.5
Winter 2000	G202	Physical Geology (W)	3.0	43	14.3
Winter 2000	G202L	Physical Geology Lab	1.33	18	13.5
Winter 2000	G202L	Physical Geology Lab	1.33	8	6.0
Winter 2000	G202L	Physical Geology Lab	1.33	17	12.8
Spring 2000	GS104	Found. Phys. Science Lec.	3.0	29	9.7
Spring 2000	GS104	Found. Phys. Science Lec.	3.0	59	19.7
Spring 2000	GS104L	Found Phys. Science Lab	1.33	22	16.5
Spring 2000	GS104L	Found Phys. Science Lab	1.33	25	18.8
Spring 2000	G473/573	Environmental Geology	3.0	12	4.0
Spring 2000	G406	SIS: GIS App. Earth Sci.	0.0	2	n/a
Summer 2000	GS104	Found Phys. Science	3.0	15	5.0
Summer 2000	GS104L	Found. Phys. Science Lab	1.33	15	11.3
Summer 2000	G470/570	Regional Landscapes / Oregon	3.0	19	6.3
Summer 2000	G406	SIS: GIS App. Earth Sci.	0.0	1	n/a

Total Students:	513
Total FTE / Cr Hr:	43.30
Total Preparations:	15
Total Contact Hours:	560
Avg. Student:FTE Ratio per Term	12.7

\*Total classroom statistics calculated/projected through the end of Summer Session 2000

## Course Development

- Fall 1999 Developed a student note set and web site for GS106 Foundations of Physical Science. Refer to related URL <http://www.wou.edu/taylor> - GS106.
- Fall 1999 Developed a student note set and web site for G322 Geomorphology and Aerial Photo Interpretation. Refer to related URL <http://www.wou.edu/taylor> - G322.
- Fall 1999 Contributed to the editing and development of the lab exercise manual for GS106 Foundations of Physical Science. This work was a by-product of teaching the GS106 Lab; conducted in conjunction with Dr. Adele Schepige and Dr. Bradley Matson.
- Fall 1999 Compiled a set of lab exercises to accompany G322 Geomorphology and Aerial Photo Interpretation. Exercises were both newly created and modified from published sources.
- Fall 1999 Preliminary planning for field trips and seminar speakers for G473 Environmental Geology and G476 Water Resources.
- Fall 1999 Proposed a new course through the Division of Extended and Summer Studies for Summer 2000: G400/G500 Regional Landscapes and Environmental Geology of Oregon.
- Winter 2000 Developed a student note set and web site for G202 Physical Geology (Surficial Processes). Refer to related URL <http://www.wou.edu/taylor> - G202.
- Winter 2000 Developed a set of weekly writing exercises to accompany G202 Physical Geology, satisfying the writing intensive component of the course.
- Winter 2000 Compiled a set of lab exercises to accompany G202 Physical Geology. Exercises were both newly created and modified from published sources.
- Spring 2000 Developed a student note set and web site for GS104 Foundations of Physical Science (Geoscience). Refer to related URL <http://www.wou.edu/taylor> - GS104.
- Spring 2000 Contributed to the editing and development of the lab exercise manual for GS104 Foundations of Physical Science. This work was a by-product of teaching the GS104 Lab; conducted in conjunction with Dr. Jeff Templeton.
- Spring 2000 Developed a student note set and web site for G473/573 Environmental Geology. Refer to related URL <http://www.wou.edu/taylor> - G473.
- Spring 2000 Compiled a set of lab exercises to accompany G473/573 Environmental Geology. Exercises were both newly created and modified from published sources.
- Spring 2000 Developed the framework for an introductory GIS Applications in Earth Science

course via G406 / Specialized Individual Study. Supervised two students in the use of Geographic Information Systems through independent study projects.

### **Field Trip Activities**

- Fall 1999      Fluvial Geomorphology and Flood History of the Luckiamute River: Class field trip in conjunction with G322 Geomorphology and Aerial Photo Interpretation.
- Spring 2000    Hydrogeology and Engineering Technology Associated with Coffin Butte Landfill: Class field trip in conjunction with G473 Environmental Geology.

### **Other**

- Fall 1999      Prepared written proposal for the development of a new B.S. Earth Science major in the Earth and Physical Sciences Department. This work is being conducted in conjunction with Dr. Jeff Templeton and Dr. Jeff Myers. We are presently in the process of planning course modifications to accommodate the new major requirements.
- Winter-  
Spring 2000    Modified and defended the proposed B.S. Earth Science major at the university-wide committee level. The associated course modifications and major changes were formally approved by the campus curriculum committees and administration.
- Winter-  
Spring 2000    Vigorously and successfully marketed upper division Summer Session 2000 courses with phone calls, brochures, and direct solicitation to local clientele in the mid-Willamette Valley.
- Spring 2000    Planned and organized the Spring 2000 Environmental Geology Lecture Series in conjunction with the Natural Sciences Noon Seminar Program and G473 Environmental Geology. The lecture series involved nine (9) outside speakers from government and industry, discussing a wide range of topics associated with environmental hazards in western Oregon.
- Winter -  
Spring 2000    Reviewed and evaluated the WOU Library geology holdings, in conjunction with Dr. Jeff Templeton and Dr. Jeff Myers. I have submitted a number of new book acquisitions and recommended upgrades to the geology periodicals. The goal is to update and modify the geology holdings so that students gain adequate exposure to relevant Earth Science literature.

### **3. RESEARCH AND SCHOLARSHIP**

#### **Summary of Research Activities**

*Fall 1999*

As a new faculty member, my research activities thus far have focused on background reading and networking within the Western Oregon region. Recent research-related contacts include: Mr. Mark Nay (Project Scientist), U.S. Forest Service - Pacific Northwest Laboratory; Mr. Daniel Hafley (Hydrogeologist), Oregon Dept. of Environmental Quality, Hazardous Waste Clean-Up Program; Dr. Grant Meyer (Process Geomorphology), Dept. of Geography, University of Oregon; Dr. Scott Burns (Geomorphology / Engineering Geology), Portland State University; Dr. John Selker (Hydrology), Dept. of Bioresource Engineering, Oregon State University; and Mr. Doug Terra (Geographic Information Systems), Oregon Dept. of Environmental Quality.

The potential for research and collaboration in the Western Oregon region is significant; particularly in the areas of GIS, geomorphic hazards, and water resources. Preliminary attempts at networking have been quite successful, with invitations to give research-oriented presentations at Portland State University, Oregon State University, and University of Oregon. Through networking, literature review, and proposal development (see below), I hope to have a student-focused research program off the ground by Summer 2000.

*Winter-Spring 2000*

During this time, I have successfully received research-related funding from the WOU Faculty Development Fund, the Murdock Trust, and Environmental Research Systems Institute (ESRI). The funds are being used to establish the GEO-Data Acquisition Laboratory and to initiate regional hazards-related research during the Summer of 2000. During the summer, I will be working with Jeff Shultz (WOU undergraduate) and Mr. Rich Swartzentruber (Murdock Trust Partner in Science Collaborator) to assess the current status of geomorphic hazards research in western Oregon. The research will focus on obtaining available GIS coverages for the region and conducting reconnaissance mapping. This work will also include cultivating research-related contacts at the Oregon Dept. of Geology and Mineral Industries, Oregon Dept. of Forestry, and Oregon Office of Emergency Management. I am also in the process of outlining a plan for student-related, hydrogeologic research at the Riddle Mine site south of Roseburg, OR. This abandoned mine site is associated with extreme heavy metals contamination and comprises a project in the Oregon State Superfund Program. To this end, I have contacted Mr. Karl Morgenstern, DEQ Project Manager, and am in the process of designing a plan of study for students over the next several years.

#### **Professional Presentations**

Spring 2000 "Comparative Geomorphic Analysis of Surficial Deposits at Three Central Appalachian Watersheds: Implications for Controls on Sediment-Transport Efficiency". Presented to the Department of Geology at Portland State University, Portland, OR.

Spring 2000 "The Occurrence of Small-Scale Debris Fans in Sandstone Landscapes of the

Central Appalachians: Fan Preservation as a Function of Erosional Accommodation Space". Presented to the Department of Geography at the University of Oregon, Eugene, OR.

### **Conferences, Meetings, and Professional Development**

- Winter 2000 Coast Range Geomorphology Conference, H.J. Andrews Experimental Forest, Eugene, OR. Sponsored by the U.S. Forest Service - Pacific Northwest Research Laboratory, Corvallis, OR.
- Spring 2000 Hydrology Seminar Series, Dept. of Bioresources Engineering, Oregon State University: Dr. Tom Dunne, UC - Santa Barbara, "The Amazon Basin: From Source to Sink".

### **Grants and Proposals**

- Fall 1999 Grant Proposal Preparation- Geomorphic Hazards Assessment in West-Central Oregon (\$3,775.00): Submitted to the Faculty Development Committee, Western Oregon University.
- Fall 1999 Grant Proposal Preparation - Reconnaissance Mapping and Preliminary Geomorphic Hazards Analysis in Polk County, Oregon (\$1805.00): Submitted to the Western Oregon University Foundation.
- Fall 1999 New Faculty Laboratory Fund - Awarded funds to establish a GEO-Data Acquisition Laboratory in the Earth and Physical Science Department (\$4500.00): Submitted as part of a new-hire package to the Provost's Office, Western Oregon University.
- Fall 1999 Grant Proposal Preparation - Geomorphic Hazards Assessment in West-Central Oregon (\$14,000.00): Submitted to the Murdock Trust.
- Fall 1999 Faculty Development Committee Grant, Western Oregon University (\$3000.00). Awarded funds for project entitled: "Geomorphic Hazards Assessment in West-Central Oregon".
- Winter 2000 Murdock Trust Grant (\$14,000.00). Awarded funds as part of the "Partners in Science" program at the Murdock Trust. This two-year project involves summer research collaboration with a science teacher from North Salem High School.
- Spring 2000 ESRI (Environmental Systems Research Institute, Inc.) University Software Donation Award (\$10,000.00). Proposed and received a software donation package from ESRI for the GEO-Data Acquisition Laboratory. The donated licensing agreement includes the following GIS Software: ArcView, ArcInfo, ArcPad, ArcSDE, and ArcIMS.

- Spring 2000 Grant Proposal Preparation - "Development of a Summer Science Institute at Western Oregon University", prepared in collaboration with Dr. Bryan Dutton, Dr. Jeff Myers, and Dr. Pete Poston. Submitted to OCEPT (Oregon Collaborative for Excellence in the Preparation of Teachers).
- Spring 2000 2000-2001 OCEPT Faculty Fellowship Award (\$9,200.00 - final award amount pending). OCEPT funds will be used to develop a Surficial Process / Geomorphology module for a collaborative summer science institute at Western Oregon University.
- Summer 2000 Proposal to National Science Foundation Faculty Early Career Development (CAREER) Program (in preparation). The final proposal will consist of a minimum budget of \$250,000.00 over five years to develop an integrated undergraduate research-education program in Surficial Process Studies at Western Oregon University.

### **Publication Manuscripts in Preparation**

Sedimentology and Stratigraphy of an Ancient Volcaniclastic Alluvial Fan: A Case Study from the Oligocene Espinazo Formation, Cerrillos Hills, North-Central New Mexico: co-authored with Gary Smith (University of New Mexico).

Surficial Map Criteria for Sandstone Landscapes of the Central Appalachians: Linkage of Landform, Material and Process: co-authored with Steve Kite (West Virginia University).

The Occurrence of Small-Scale Debris Fans in Sandstone Landscapes of the Central Appalachians: Fan Preservation as a Function of Erosional Accommodation Space: co-authored with Steve Kite (West Virginia University) and Hugh Mills (Tennessee Technological University).

The Influence of Sedimentary Lithofacies on Surficial Processes in the Central Appalachians: A Conceptual Model Based on Analysis of Landscapes Underlain by the Acadian Clastic Wedge: co-authored with Steve Kite (West Virginia University).

Comparative Geomorphic Analysis of Surficial Deposits at Three Central Appalachian Watersheds: Implications for Controls on Sediment-Transport Efficiency: co-authored with Steve Kite (West Virginia University).

## 4. PROFESSIONAL SERVICE

### Professional Organizations and Memberships

Geological Society of America  
American Geophysical Union  
National Water Well Association  
Society of Professional Groundwater Scientists and Engineers  
Society of Miscellaneous Oregon Geologists  
Registered Professional Geologist - State of Pennsylvania  
Phi Kappa Phi Honor Society  
Sigma Gamma Epsilon Honor Society

### Summary of Professional Activities

*Fall 1999*

With an extensive background as a consulting environmental geologist, my faculty objectives include maintaining a presence as an industry professional in the State of Oregon. Industry contacts will be most beneficial in promoting the Earth Science program at Western Oregon University, and will be helpful in providing leads for graduates in the job market. As such, I am currently in the process of obtaining my professional geologist's registration in the State of Oregon. I have also recently volunteered as the WOU liaison for the State Board of Professional Geologists, and have offered to serve on the professional review committee. I am presently assessing the viability of offering a Professional Geologists Exam Preparation Course through the WOU Division of Extended and Summer Studies. The RPG course would be tailored to working professionals (e.g. weekend/evening workshops), with the objective of preparing individuals to pass the Oregon geologist certification exam.

## 5. INSTITUTIONAL SERVICE

### Division of Natural Science Committees

Fall 1999 Professional Concerns Committee  
Fall 1999 Computer Committee

### University-Wide Service

Fall 1999 Adhoc Member of Environmental Studies Minor Advisory Committee  
Spring 2000 Appointed Division of Natural Sciences Co-Advisor for the Environmental Studies Minor, in partnership with Dr. Mark Henkels, Social Science.  
Spring 2000 Appointed as Division of Natural Sciences faculty representative on the LAS Committee for Distribution of Student Tech. Fee software funds.

### **Other Service-Related Activities**

- Winter 2000 Served as Earth Science representative at Western Oregon University Preview Day for High School Students (in conjunction with Dr. Jeff Templeton). Developed an interactive display regarding opportunities for Earth Science majors at WOU.
- Winter 2000 Cleaned, organized, and re-tooled rooms NSB 017, NSB 218, and NSB218A; in conjunction with Dr. Jeff Templeton, Dr. Jeff Myers, and Dr. Bradley Matson. The goal of this project was to increase the functionality, appearance, and professionalism of the classrooms.
- Winter 2000 Served as Environmental Science reviewer and panel judge for the Oregon Junior Academy of Sciences convened at Western Oregon University.
- Winter 2000 Organized and prepared an interactive GIS Applications display in conjunction with the Oregon Junior Academy of Sciences. The display was designed to showcase and market science initiatives at Western Oregon University.
- Spring 2000 Served as Earth Science curriculum advisor at the Western Oregon University Early Bird Registration for transfer students.
- Spring 2000 Serving as WOU university liaison for an OUS system-wide site license covering all ESRI GIS software products. Working in conjunction with GIS colleagues at EOU, SOU, OSU, PSU, and UO.
- Spring 2000 Faculty participant in WOU 2000 commencement ceremony.
- Winter-Spring 2000 Serving as Geology program web site developer and administrator.