

Repositioning Rangeland Education for a Changing World

Chris Call – Utah State University

Karen Launchbaugh – University of Idaho

Laurie Abbott – New Mexico State University

Karen Hickman – Oklahoma State University

Patricia Johnson – South Dakota State University

Mel George – University of California, Davis

Susan Marshall – Humboldt State University

Ed Krumpe – University of Idaho

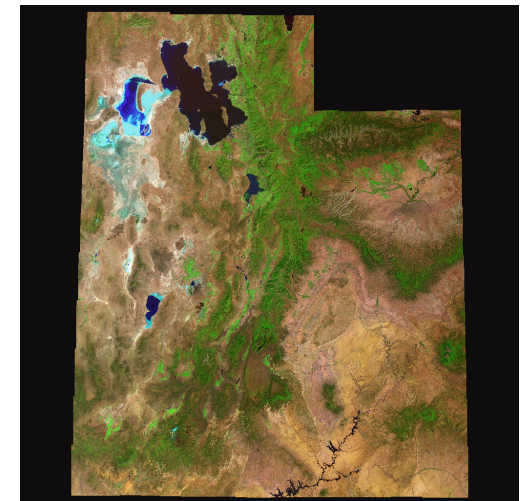
Importance of Rangelands: Land Area



47%

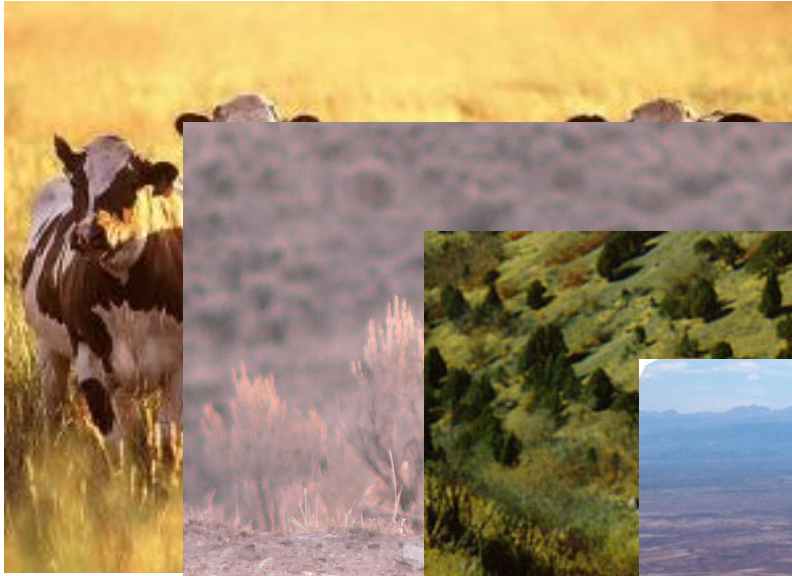


36%



80 %

Importance of Rangelands: Uses



Undergraduate Rangeland Education Challenges

- Small enrollments in degree programs
- Reductions in teaching resources
- Loss of faculty positions
- Curriculum content and delivery
- Faculty preparedness
- Student awareness and recruitment
- Too few students to meet job demand

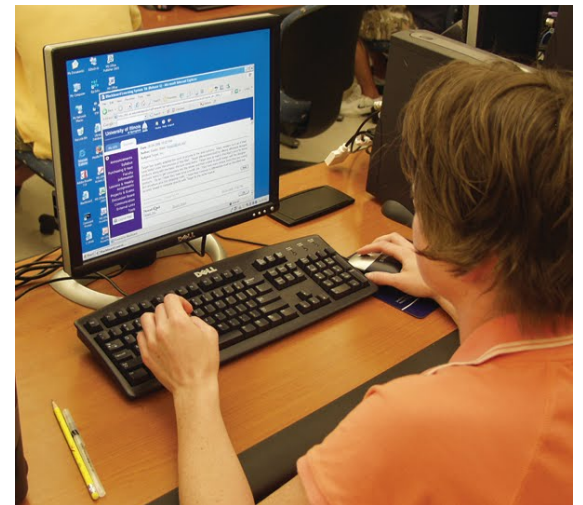


Rangeland Degree Program and Curriculum

- 27 universities offer undergraduate degree programs
- Curriculum formalized in 1970s
- Basis for SRM accreditation and OPM hiring standards
- Degree characterized by 6 core courses:
 - Principles of range management
 - Range plants
 - Range ecology
 - Range inventories and assessment
 - Range improvements
 - Ranch or rangeland planning
- No significant changes in curriculum in last 40 years

Addressing Curriculum Challenges

- Clarify emerging issues and the knowledge and skills needed by future rangeland professionals
- Revitalize rangeland curricula and instruction
- Provide simple and free access to quality teaching resources for new and current faculty



Needs Assessment

- Focus groups with stakeholders
- Survey of recent range student graduates
- Use findings to:
 - Identify current and future rangeland issues
 - Identify associated knowledge and skills
 - Identify important gaps in education
 - Build a forward-looking rangeland education program
 - Modernize SRM accreditation and OPM hiring standards

Focus Groups with Stakeholders

- Focus groups in 8 western states
- Variety of stakeholders; 8-12 per group
- Discussion questions:
 - What will rangelands look like in 10-15 years – economically, environmentally, socially and institutionally?
 - What topics/issues should range graduates have in-depth knowledge of to be effective land managers, successful land owners, or respected rangeland advisors?
 - What alternative class formats/teaching approaches will help people become more effective rangeland ecologists or managers?

Survey of Recent Range Graduates

- Internet survey of range graduates from past 6 years
- Survey questions ask:
 - Level of knowledge gained in core topics (resource mgmt., quantitative concepts, social sciences, communication skills, and natural sciences).
 - Courses or skills inadequately covered in degree program.
 - Level of proficiency needed and regularly used in several topics in your current job.
 - Topics/skills you commonly use that you wish you had learned more about in degree program.

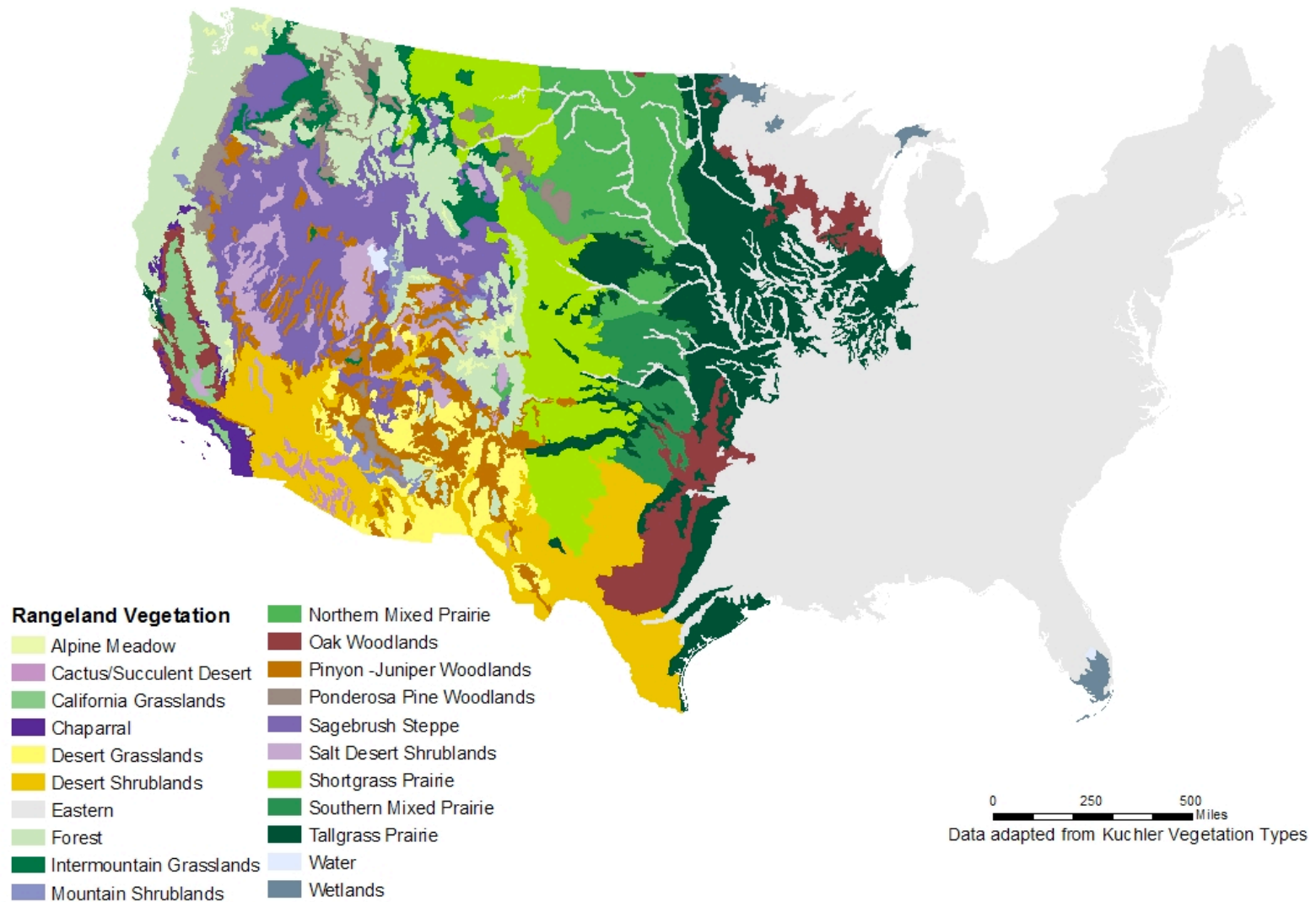
Online Clearinghouse of Educational Resources

- Searchable catalog of online, workshop-style, and traveling field courses:
 - Undergraduate, graduate and certificate programs
 - 152 range-related courses at 13 universities
 - To be posted on Rangelands West website (rangelandswest.org)
- Innovative online, open-source instructional materials:
 - Peer-reviewed, thematic modules
 - Multimedia format includes narratives, simulations, animations, case studies, tutorials, image collections, manager interviews, reference materials, and assignments

Online Clearinghouse of Educational Resources

- Open-source materials developed/posted in 2 stages
 - Initial set of modules emphasizing fundamental aspects of rangeland ecology and management
 - Subsequent set of modules meeting curriculum needs identified by needs assessment
- Proposed initial modules:
 - What are Rangelands?
 - Virtual Exploration of Rangeland Ecosystems
 - Ecology and Management of Grazing
 - Understanding Ecosystem Dynamics through Repeat Photography

Virtual Exploration of Rangeland Ecosystems



World Rangelands Learning Experience website (wrangle1.com)

Course Delivery Across Institutional Borders

- Next step in curriculum delivery – entire courses
- Develop a consortium to share courses and instructors
- Similar to:
 - Great Plains IDEA (Great Plains Interactive Distance Education Alliance)
 - ACCEPtS (Alliance for Cooperative Course Exchange in the Plant Sciences)
- Work with Institute for Academic Alliances (IAA) at Kansas State University

Faculty Teaching Development

- Professional development workshops
- Webinars
- Symposia
- Mentorship program



Student Recruitment

- Market research
- Activities and products posted online and disseminated via professional/popular publications
- Similar to *Agronomy for ME* (www.agronomy.org)



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