CHALLENGES TO PROFESSIONAL ACCREDITATION OF FORESTRY DEGREE PROGRAMS WITH LOW ENROLLMENTS: THE UTAH STATE UNIVERSITY EXPERIENCE

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Historical Forestry Enrollments

- Low compared to other institutions
- Low compared to other disciplines in natural resources

Why?

- Location/Geography
- Conservation and Restoration Ecology (CREC) degree

Figure 1. Undergraduate enrollments in natural resources by field of study at NAUFRP institutions, 1980-2009.

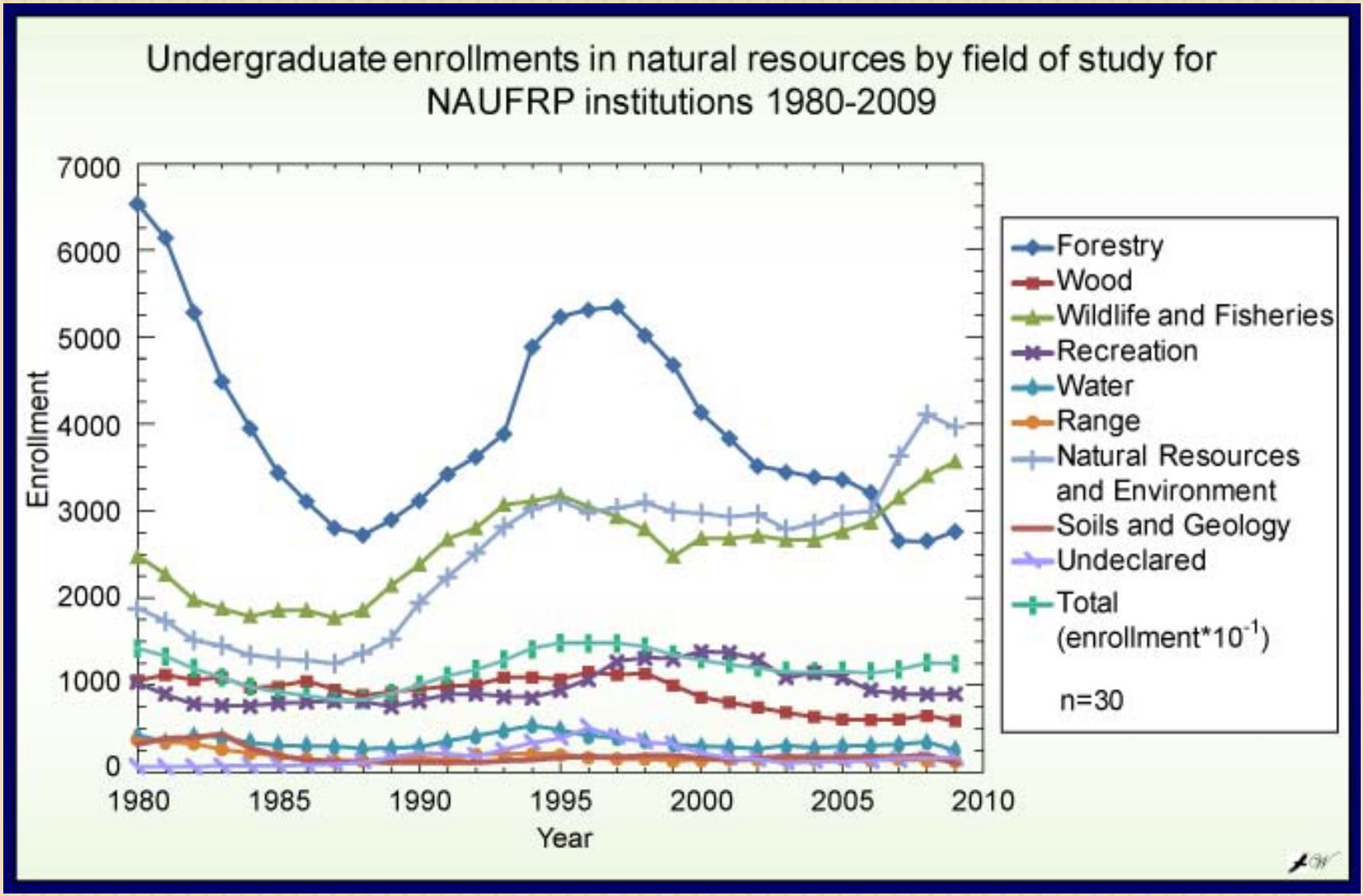
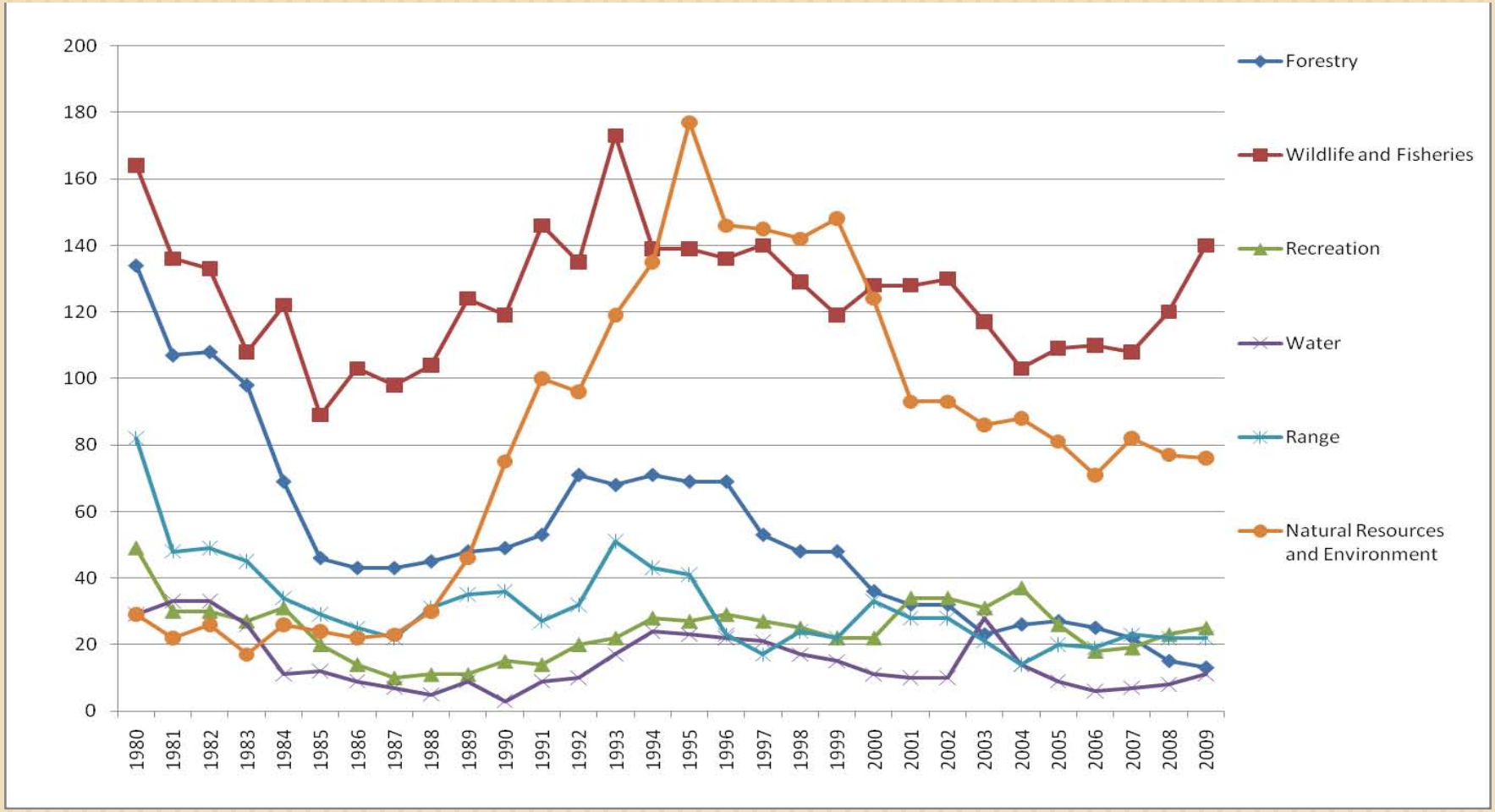


Figure 2. Undergraduate enrollments in natural resources by field of study at USU, 1980-2009.



USU vs. Nation

- USU: Forestry enrollment less than 5% of total natural resources
- Nation: Forestry enrollment less than 25% of total natural resources

The Challenge

- Offering of uniquely forestry courses
- Hiring of faculty with forestry degrees
- Maintenance of professional accreditation in forestry, going back to 1936

Institutional Context

- College of Natural Resources
  - 3 Academic Departments (formed 2002)
  - 10 Undergraduate Degree Programs

Figure 3. Undergraduate degree offerings in the College of Natural Resources at USU.

Environment and Society	Watershed Sciences	Wildland Resources
Environmental Studies	Fisheries and Aquatics Sciences	Conservation and Restoration Ecology
Geography	Watershed and Earth Systems	Forestry
Geography Teaching		Rangeland Resources
Recreation Resource Management		Wildlife Science

Undergraduate degree offerings in the Department of Wildland Resources (WILD)

- Conservation and Restoration Ecology (new, flexible)
  - Teaches students to use ecological principles to restore terrestrial systems that have been damaged or eliminated.
- Forestry
  - Teaches students the knowledge and skills needed to sustainably manage forests for a wide variety of resources such as timber, recreation, water and biological diversity.
- Rangeland Resources
  - Range students learn to manage and conserve rangeland resources to ensure the sustained output of products and values such as habitat, forage, water and scenic beauty.
- Wildlife Science
  - Emphasizes the ecology, behavior, conservation and management of wildlife populations and communities in terrestrial ecosystems.

Our Response, Part 1

- Professional core of courses in the science and management of terrestrial ecosystems
  - Range
  - Forestry
  - Wildlife
- WILD Departmental Commons

Table 1. Professional Core courses (WILD Department Commons).

Course No.	Course Title	Credits
WILD 2000	Introduction to Wildland Resources	1
WILD 3600	Wildland Plant Ecology and Identification	4
WILD 3610	Wildland Animal Ecology and Identification	4
WILD 3800	Wildland Ecosystems	3
WILD 3810	Plant and Animal Populations	3
WILD 4750	Monitoring and Assessment in Natural Resource and Environmental Management	3
WILD 4850	Vegetation and Habitat Management	3
WILD 4910	Assessment and Synthesis in Natural Resource Science	3
	Total	**24**

Our Response, Part 2

- Modest component of specialization in forestry during Junior and Senior years

Table 2. Forestry major-specific professional courses.

Course No.	Course Title	Credits
APEC 3012	Introduction to Natural Resources and Regional Economics	3
ENVS 3010	Natural Resource Policy	3
ENVS 3300	Fundamentals of Recreation Resources Management	3
ENVS 4000	Human Dimensions of Natural Resource Management	3
WILD 5350	Wildland Soils	3
WILD 5420	Forest and Shade Tree Pathology	3
WILD 5700	Forest Assessment and Management	3
WILD 5710	Wildland Disturbance: Ecology and Management	3
WILD 5750	Applied Remote Sensing	3
WATS 3700	Fundamentals of Watershed Science	3
WATS 4930	Geographic Information Systems	4
	Total	**34**

Our Response, Part 3

- Instructors from a wide array of natural resource disciplines and academic departments

Table 3. Instructors for WILD Department Commons.

Instructor	Department	Expertise	Course
F.E. Busby	Wildland Resources	Effects of Livestock Grazing	WILD 2000
C. Call	Wildland Resources	Vegetation Management and Rangeland Ecosystems Ecology	WILD 3600
M. Wolfe	Wildland Resources	Wildlife Ecology and Management	WILD 3610
P. Adler	Wildland Resources	Plant Community Ecology	WILD 3800
D. Koons	Wildland Resources	Animal Population Ecology	WILD 3810
P. Rogers	Wildland Resources	Vegetation Monitoring, Disturbance Ecology	WILD 4750
C. Call, J. Long	Wildland Resources	Vegetation Management and Rangeland Ecosystems Ecology; Forest Ecology, Silviculture	WILD 4850
R. Ryel, D. Ramsey	Wildland Resources	Plant Physiological Ecology; Remote Sensing, GIS, Landscape Ecology	WILD 4910

Table 4. Instructors for Forestry major-specific professional courses.

Instructor	Department	Expertise	Course
P. Jakus	Applied Economics	Environmental Economics	APEC 3012
Z. Ma	Environment and Society	Natural Resource and Environmental Policy	ENVS 3010
S. Sturman	Environment and Society	Outdoor Recreation, Recreation Education	ENVS 3300
M. Wyman	Environment and Society	Forestry, Human Dimensions of Natural Resource Management	ENVS 4000
H. Van Miegroet	Watershed Sciences Wildland Resources	Wildland Soils and Biogeochemistry	WILD 5350
F. Baker	Wildland Resources	Forest Pathology, Computer Applications	WILD 5420
J. Long	Wildland Resources	Forest Ecology, Silviculture	WILD 5700
M. Jenkins	Wildland Resources	Disturbance Ecology and Management	WILD 5710
D. Ramsey	Wildland Resources	Remote Sensing, GIS, Landscape Ecology	WILD 5750
H. Van Miegroet	Watershed Sciences Wildland Resources	Wildland Soils and Biogeochemistry	WATS 3700
J. Wheaton	Watershed Sciences	Physical Geography, Hydrology	WATS 4930

Instructor and Student Perspectives

- Instructors feel that they cover more than the students do about 1/3 of the time.
- Forestry-specific education weak concerning harvesting/utilization and dendrology.
- Students gain a broader understanding of the ecology and management of terrestrial ecosystems in general, not just forests.
- Students are better prepared to perform holistic management as part of a interdisciplinary team.

Conclusions

- Provides our forestry majors with a **broad background** in the science and management of terrestrial ecosystems.
- Approach to forestry education perhaps disadvantageous from the standpoint of **professional accreditation** under current SAF standards.
- Anticipates current discussion at the national level regarding accreditation of **broader programs** in natural resources and ecosystem management.

Questions

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