

**COMMITTEE RECOMMENDATION FOR
College of Natural Science and Mathematics
Department of Natural Resources and Environment**

DEGREES UNDER REVIEW:

1. BS in Natural Resources and Environment
2. MS in Natural Resources and Environment
3. MNRE (Master of Natural Resources and Environment)
4. PhD in Natural Resources and Sustainability (joint with School of Management)

The difference between the MS and the MSNRE is that the MS is a traditional research-based degree. The MSNRE is a professional degree emphasizing coursework over research, project is not necessarily research but more on development.

The Department has morphed through several phases in its 25+ years with its beginnings as the school of Agriculture and Resources Management and several other incarnations before its current status as the Department of Natural Resources and Environment which reflects their ability to change with the times to meet the current needs.

A 5-year effort was made to merge this Department with Cooperative Extension Services but that effort was abandoned in 2019 and the Department was moved into the College of Natural Science and Mathematics (CNSM).

STRENGTHS:

- Diversity in faculty and courses with offerings that focus on a wide variety of aspects of the issues related to the environment from policy related to natural resources, climate change, collaborative planning strategies, food security, renewable resource management, specialty crops, and biomass energy.
- They offer the only GISc (Geographic Information Science) training that is needed for a number of programs at UAF including Biology, Geology, Geophysics, Geography, Atmospheric Science, and multiple branches of engineering, as well as several Federal and State agencies.
- Courses fulfill some of the GER learning outcomes and have the ability to tie a wide variety of topics together.
- Lecture components of all courses are available synchronously online.
- Graduates are happy with their degrees (based on post-graduation contacts and exit interviews) and employment opportunities are reportedly excellent, particularly for those who want to stay in Alaska.
- The department is competitive nation-wide and offers access to the rapidly changing Arctic for research opportunities.

WEAKNESSES:

- Need to get the word out about the program to a broader audience outside of Alaska.

- Most students don't start out in the program; they "migrate" from other majors, learning about the program only after they get to UAF. This transfer of students (incoming from other universities and other departments) hinders continuity.
- When DNRE was split from AFES (Agricultural and Forestry Experiment Station) instruction was no longer supported by research and outreach activities.
- Graduate program is lacking resources (few faculty, zero TA's, only a few RA's available).

OPPORTUNITIES:

- Pursuing an increase in student credit hour production and tuition revenue (both within programs and in collaborations across the university).
- The program is in discussions with (College of Fisheries and Ocean Sciences) CFOS and Biology (Wildlife) regarding possible development of cooperative programs to share faculty resources and expose students to an integrated approach to these fields.
- Collaborative ideas in development:
 - a) Climate scholars' honors program (environmental change/studies minor) for the honors program that will include some NRM courses.
 - b) New BA in Environmental Studies/Environmental Policy in collaboration with Political Science.
 - c) Extend existing UAS BS in Environmental Science to UAF.
 - d) Develop programs in support of environmental and natural resource education: CASE institution programs, STEM expertise in NRE, exchange opportunities.
- Develop a 1-year online GISc. (Geographic Information Science) Certificate program which could attract national and international students.
- Develop courses in cannabis cultivation which could expand in collaboration with the Department of Chemistry and SOM (School of Management) into a certificate or minor.
- Develop a long-term NSF research experience for undergrads (REU) program.
- Develop a graduate program in public policy and sustainability.
- Work with Alaska Native Studies Council to develop an Alaska Native Themed course on Alaska Natives and Natural Resources: Past, Present, and Future.
- Propose including NRM 101 (Natural Resources Conservation and Policy) or NRM 111 (Introduction to Sustainability Science) in GER social science options.

THREATS:

- Declining Alaska High School graduates and UA enrollment.
- Budget issues drive students away and may eliminate some faculty lines as retirements are coming along.
- Dramatic reduction in faculty; of the 8 faculty members, all but 1 have been with DNRE for at least 15 years and 4 for 24+ years, so they anticipate several retirements in the near future and are concerned about continuation of these faculty lines.

CENTRALITY TO MISSION:

This fits squarely into UAF's Mission focusing on teaching, research and public service emphasizing the circumpolar North and its unique environmental resource issues. Also, this

Department is a key component in UAF maintaining its status as Alaska's research university and America's arctic university, particularly in the land grant aspects of the mission.

INDICATORS OF QUALITY:

Currently this department is still in a new configuration, having been split from AFES and placed under CNRM for only one year. They are still learning to function as a standalone Department so they are working to develop their measures of quality for the programs.

COST-EFFECTIVENESS:

SCH

Metric	Detail	FY16	FY17	FY18	FY19	FY20
SCH	HLRM - External	16	0	36	34	0
SCH	NRM - Lower	496	431	442	365	210
SCH	NRM - Upper	713	745	745	606	468
SCH	NRM - Grad	453	431	324	302	167
SCH	NRM - External	217	155	136	99	96
SCH	NRM - Prof	0	0	21	38	18

Majors

Metric	Detail	FY16	FY17	FY18	FY19	FY20
Majors	BI Premajor - Natural Resourc Mgt	2	1	0	0	0
Majors	BS Natural Resources Environment	73	74	63	55	42
Majors	MNRE Natural Resources Environment	0	0	0	1	1
Majors	MNRM Natural Resources Management	12	10	10	5	0
Majors	MS Natural Resources Environment	0	0	0	2	3
Majors	MS Natural Resources Management	30	24	13	10	6
Majors	PHD Natural Res. & Sustainability	13	12	14	14	14

Degrees

Metric	Detail	FY16	FY17	FY18	FY19	FY20
Degrees	BS Natural Resources Environment	5	9	12	12	11
Degrees	MNRE Natural Resources Environment	0	0	0	0	1
Degrees	MNRM Natural Resources Management	1	3	5	3	1
Degrees	MS Natural Resources Management	5	8	2	3	3
Degrees	PHD Natural Res. & Sustainability	2	2	2	0	5

FTEs

Metric	Detail	FY16	FY17	FY18	FY19	FY20
FTEs	Adjunct FTEs	0	0	0	0	0.4
FTEs	Faculty FTEs	0	0	0	0	3.3
FTEs	Staff FTEs	0	0	0	0	1.2
FTEs	Student FTEs	0	0	0	0	0.2

Expenditures

Metric	Program	Detail	FY20
Instructional Expenditures	CNSM Natural Resources & Environment	Unrestricted	715388.2
Salaries and Benefits	CNSM Natural Resources & Environment	Unrestricted	689583.3

The committee recommends that the Department follow through with the opportunities listed in their SWOT analysis noting that the programs are not viable on their own. The committee recommends developing a plan for merging the degrees with other CNSM area(s) such as Geosciences or the new Earth Systems Science program. The committee recommends keeping in mind the responsibility to our institution's land grant requirements when considering any structural change.

Natural Resources and Environment BS

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan: 1 vote		
Revision or restructure: 7 votes	See paragraph above.	2 years

Natural Resources and Environment MS

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan: 1 vote		
Revision or restructure: 7 votes	See paragraph above.	2 years

Natural Resources and Environment MNRE

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan: 1 vote		
Revision or restructure: 7 votes	See paragraph above.	2 years

Natural Resources and Sustainability PhD

RECOMMENDATION:	ADDITIONAL COMMENTS:	DATE FOR FOLLOW-UP:
Continuation w/ improvement plan: 1 vote		
Revision or restructure: 6 votes	See paragraph above.	2 years
Abstain: 1 vote		