MICHIGAN STATE
UNIVERSITY

August 27, 2015

MEMORANDUM

TO: The Steering Committee of Academic Governance

FROM: Provost June Pierce Youatt

RE: Name Change, Department of Geological Sciences

I am requesting the advice of Academic Governance on the proposed name change of the Department of Geological Sciences to the "Department of Earth and Environmental Sciences."

The proposed name change has been carefully considered by the Department and College, and is endorsed by Dean James Kirkpatrick. Background and rationale are provided on the attached materials, along with a letter of support from Geography Chair Alan Arbogast.

Your advice is appreciated as I make my recommendation to President Simon, who in turn will make a recommendation to the Board of Trustees.

Attachments

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From: <Kirkpatrick>, Jim <rjkirk@cns.msu.edu>
Date: Thursday, February 26, 2015 12:16 PM
To: June Youatt <youatt@msu.edu>
Cc: "Peterson, Faith" <PETERSOF@CNS.MSU.EDU>, "Hyndman, Dave" <hyndman@cns.msu.edu>, "Dewitt, Dave" <dewittd@cns.msu.edu>, "Ribnicky, Sonya" <RIBNICKY@MSU.EDU>, "Schwartz, Richard" <schwart9@cns.msu.edu>, "Voit, Mark" <voit2@cns.msu.edu>, Debra Dotterer <dotterer@msu.edu>, "Fata-Hartley, Cori" <fatahart@msu.edu>, "Longley, Corey" <longleyc@cns.msu.edu>
Subject: Fw: Name Change document

June,

Here is the proposal from the Department of Geological Sciences to change its name. It has been approved by the CNS Faculty Advisory Committee and has my strong support. The name change truly reflects a change in the intellectual focus of the Department.

The Department has discussed this change broadly across campus, and especially with Social Science and Geography. Geography will be proposing a parallel name change, and Dave Hyndman will provide a comparable support letter for them.

Thank you for considering this request.

Jim

MICHIGAN STATE
UNIVERSITY

February 25, 2015

R. James Kirkpatrick
College of Natural Science
Michigan State University
104 Natural Science Building
East Lansing, MI 48824

Dear Dean Kirkpatrick,

In the context of my role as Chairperson of the Department of Geography, I write to offer my support for the proposed name change for Geological Sciences to the *Department of Earth and Environmental Sciences*. Please feel free to contact me if you have any questions.

Sincerely,

Alan F. Arbogast
Chairperson
Department of Geography

College of Social Science

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Proposal to Change the Name of the Department of Geological Sciences to the *Department of Earth and Environmental Sciences*

(February 19, 2015)

Action Requested

Approval of the request by the Department of Geological Sciences to change its name to the ***Department of Earth and Environmental Sciences*** in the College of Natural Science.

Summary

The Department of Geological Sciences has been undergoing a substantial revitalization of its research and educational programs and proposes to change its name to the ***Department of Earth and Environmental Sciences*** to more accurately reflect its focus and mission. This new name would signal its change and rejuvenation to the scientific community, and to help the Department attract strong new faculty members and graduate students.

The proposed name change reflects the growth of areas of expertise in the department over the last 40 years. It more accurately describes the breadth of research in the department and will enhance recruitment of future faculty and graduate students. The proposed name is the most common new name for Departments of Geology or Geological Sciences, as many have changed their name in the last five years for the same reasons we present.

Description of the Department

The Department of Geological Sciences offers the Bachelor of Science degree in three programs: Environmental Geosciences, Geological Sciences, and Earth Science Interdepartmental (for education majors). We offer the Master of Science and Ph.D. degrees in Environmental Geosciences and Geological Sciences. The Department currently comprises 14 tenure-stream faculty, 6 fixed-term faculty, 5 post-docs, 2 research support staff, 25 graduate students and 111 undergraduate majors. Research in the Department is currently focused in three areas: Environment, Geodynamics, and Education and Cognition. Faculty and students in the department study the changes in and interactions among the hydrosphere, geosphere, biosphere, and atmosphere on temporal scales ranging from "deep time" (millions and billions of years) to those influenced by humans and at spatial scales from microscopic to global. The department provides preparation for those interested in educational, academic, industry and government careers. Our faculty, students, and alumni serve as resources to private and public sector enterprises, teachers, and government agencies at all levels, providing knowledge and scientifically informed comment on important local, regional, global, and extra terrestrial events, such as causes and effects of climate change, contaminants in the environment, natural disasters, the evolution of and search for life throughout our solar system, the environment and resource issues, and science education.

The role of the geosciences in the 21st century and our mission statement

Changes in the physical, chemical, and biological environment impact Earth and its systems from microscopic to global scales. These changes are evident in the geologic record. Earth scientists are trained to decipher the physical record of physical, chemical, and biological change and work to understand what future changes are possible. The goal of a geoscientist is to understand how and when these changes occur, the phenomena which attend them, and their potential impact. Of particular concern is the observation that many recent changes on Earth (e.g., pollution of soil, water, and air; disruption of global biogeochemical cycles; decreases in habitat diversity) are a direct or indirect consequence of human activities.

The Earth scientist brings a unique perspective to addressing global change issues, as summarized by the phrase "the present is the key to the past and the past is the key to the future." No other discipline has this perspective. In fact, there are consequences of human activities that have yet to be felt. This concept, known as "environmental legacy," was first recognized by Earth scientists who develop science-based strategies to evaluate affected systems in the context of past natural physical, chemical, and biological processes. Thus, the Earth scientist is an important partner to evolutionary biologists, environmental engineers, ecologists, and policy makers.

The roles of Earth scientists are to better understand Earth's physical environment, predict the likely outcomes of interacting processes, identify and quantify natural resources for a sustainable planet, and understand the role of anthropogenic forces and societal choices that impact the Earth system. The ability to investigate processes over a wide range of spatial and temporal scales is central to the Earth science perspective. As a part of MSU's land grant philosophy, it is our mission to discover new knowledge, apply fundamental research insights to societal problems, and train the next generation of citizens, scholars, and policy makers.

Rationale for proposed name change

The Department of Geological Sciences has undergone previous name changes, reflecting the evolution of administrative program alignment and changing research foci. Originally the Department of Geology and Geography, we became the Department of Geology when Geography became independent as an academic unit. In the 1970s, to encompass the broadening scope of geological research beyond the traditional "solid earth" subjects such as mineralogy and structural geology, to include emerging areas such as hydrology and environmental geochemistry, we became the Department of Geological Sciences. The scope of geoscience research has evolved significantly in the last 40 years. New sub-disciplines, such as geomicrobiology, have emerged. Even the term "geomicrobiology" points to the increasingly transdisciplinary nature of 21st century STEM research. After 40 years, it is time for our department name to reflect these system-wide changes.

The word "environmental" is used across campus to describe departments and units in which environmentally related research is done, for example, the Department of Civil and Environmental Engineering and the Environmental Science and Policy Program. There are also many undergraduate majors in the colleges of Natural Science, Social Science, Agriculture and Natural Resources, and Engineering that use the word environmental their names, including our own Environmental Geosciences degrees at the undergraduate, M.S. and Ph.D. levels. Clearly, study of the environment and environmental impacts of human activity is trans-disciplinary.

The proposed name indicates that it is not our intention to build *only* in environmental areas. Solid Earth areas such as geophysics and geodynamics that examine processes within the Earth remain vibrant and well-funded research. These, along with the study of ancient earth-surface environments and processes through sedimentology, glacial geology, and paleobiology are vital to undergraduate and graduate geoscience education and future employment prospects for our students. The proposed name will be recognizable to prospective students and employers interested in both solid earth and environmental programs, effectively doubling our recruiting population.

Support for our mission as a department to pursue both solid earth and environmental research is evident in the sources of our major funding. In the past 4 years, the Department has hired 4 new faculty members who direct environmentally focused research programs (Table 1). Several of these hires were made possible through the University Water initiative. The Department also received alumni support for one named chair and three named professorships. Searches for the named chair and two named professorships are underway and offers are being made to three individuals.

Table 1. Recent Faculty Hires and Current and Upcoming Searches

Faculty	**Research expertise**
Bruno Basso	Crop sustainability, climate change
Masako Tominaga	Marine geodynamics, oceanography
Jay Zarnetske	Hydrology and Hydroecology
Matt Schrenk	Geomicrobiology
Vogel Endowed Chair	Solid Earth, geodynamics
Endowed Professorships	Geodynamics

Comparison to peer institutions.

This scientific refocusing and name change are in line with significant trends in the geological sciences. In recent years many geological sciences departments have changed their names to include both environmental and geological or geology, including five in the CIC (Table 2).

Table 2. Geoscience departments that have incorporated "Environment" in their name

School	Department Name
CIC Institutions	
University of Michigan	Department of Earth and Environmental Sciences (Formerly Geological Sciences)
University of Illinois Chicago	Department of Earth and Environmental Sciences
Indiana University	Center for Earth and Environmental Science
University of Illinois	School of Earth Society and the Environment
Rutgers University	Department of Earth and Environmental Sciences
University of Minnesota Duluth	Department of Earth and Environmental Sciences
University of Iowa	Department of Earth and Environmental Sciences
Other Institutions	
Columbia University	Department of Earth and Environmental Sciences
Stanford University	Department of Geological and Environmental Sciences
"" ""	& Department of Environmental Earth System Science
University of Pennsylvania	Department of Earth and Environmental Science
Rensselaer Polytechnic	Department of Earth and Environmental Sciences
Boston College	Department of Earth and Environmental Sciences
University of Texas Arlington	Department of Earth and Environmental Sciences
Vanderbilt University	Department of Earth and Environmental Science
Wright State University	Department of Earth and Environmental Sciences
University of New Orleans	Department of Earth and Environmental Sciences
Temple University	Department of Earth and Environmental Sciences
University of Kentucky	Department of Earth and Environmental Sciences
Tulane University	Department of Earth and Environmental Sciences
New Mexico Tech.	Department of Earth and Environmental Science
Boston College	Department of Earth and Environment
Franklin & Marshall Univ.	Department of Earth and Environment
Case Western University	Department of Earth, Environmental, and Planetary Science
University of Arizona	School of Earth and Environmental Sciences
Vanderbilt University	Department of Earth and Environmental Sciences
Lehigh University	Department of Earth and Environmental Sciences

Benefits of the name change

The proposed name change will more clearly communicate to prospective students, employers of current students, alumni, and the general public that the Department offers programs that reflect the broad subheadings of "earth science" (mineralogy, petrology, paleontology, structural geology, tectonics, geophysics) and the heading of "environmental science" (hydrogeology, environmental geochemistry, ecosystem evolution). The Department received endowments of more than $9,000,000 in the last 5 years to support graduate fellowships and endowed positions, and again the name change will be important in attracting strong candidates from a broader pool than would be likely without this change.

The proposed name change will help develop new connections and strengthen existing collaborative ties to other units at MSU by more effectively communicating the range and versatility of the faculty's research and teaching. The name change will also help graduate students, postdoctoral researchers, research scientists, and faculty colleagues to perceive potential opportunities for interdisciplinary research, collaboration on proposals, and access to laboratories and areas of expertise. Most importantly, it will add to the visibility of Michigan State University as one of the premier institutions engaged in the study of environmental issues from a wide variety of perspectives.

College and University support for the proposal

This proposal was approved by a unanimous vote of the members of the Department and was recommended for approval, again by a unanimous vote, by the College of Natural Science Dean's Advisory Committee. Over the last three years there have been extensive discussions with a range of Deans, Chairs and Directors about this proposed change, and all involved in the discussions have been supportive. As a part of one of these discussions, we were asked if we would support a name change for the Geography Department. We do support the request by the Geography Department to change their name to be the Department of *Geography, Environment, and Spatial Sciences*. In fact, to show our support we delayed the submission of our request until their name change proposal was approved by their faculty and ready for submission.

Effect on students and faculty

Current students will not be affected by the proposed department name change. Graduate students, postdoctoral fellows, and faculty with backgrounds outside of geology are increasingly being recruited to this Department. The proposed name will communicate more clearly the focus and strengths of the department and will help to align student and faculty expectations with the mission of the department.