**Name of proposed new unit:** A campus-wide school devoted to earth and environmental science. Name to be determined.

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**Current Units to be reorganized/consolidated:**
This new, campus-wide, school would focus the UA’s already-formidable strengths in the natural and social sciences directly related to research, teaching and outreach in the areas of climate, water, energy, sustainability and environmental sciences (including human and ecological impacts). These encompass the UA’s Strategic Plan priority in “Climate, Environmental, Water and Energy Sustainability”. We envisage departments, institutes and other units from several colleges being aligned with the school, with three kinds of membership.

- Core units (for example, ATMO, LTRR, GEOS, HWR, GRD, NSF-AZ AMS, several others and their “descendents”) will have their organizational homes in the school.
- Allied units (Schools, Departments and Institutes, for example, Anthropology, EEB, SNR, OALS, ISPE, Udall Center, BARA) would have specific and formal academic and resource arrangements with the School. Core unit status would be open to these and other units.
- Cooperating units other than these two groups would join through the work of the Earth and Environment Consortium (see below) on an ad hoc basis.

A campus-wide Earth and Environment Consortium (EEC) would have specific responsibilities for ensuring the most efficient and effective use of faculty and staff in promoting teaching, research, and outreach on natural, managed and engineered environments (see Budget page). It is described in another independent proposal (contact person, Lisa Graumlich, SNR). The impact of such a school will be further amplified across campus as the school will promote and contribute to initiatives and programs with allied faculty from other schools and colleges. The whole will clearly be greater than the sum of the parts. We note:

- There are similar, but more limited proposals being prepared in CALS, College of Science, SBS and the College of Engineering, amongst others.
- There are a number of disciplinary strengths embodied within the departments and laboratories under discussion, and we must identify mechanisms to sustain or improve them, and especially to do them no harm.
- Interdisciplinary linkages outside of the current departments and colleges are important and often very effective now and will be in the future. We must assure that mechanisms are in place to maintain or strengthen these linkages.
- This could be a unique opportunity for UA to make a “splash” by doubling the size of ENRB2, or by building ENRB3, in order to realize all the benefits of collocation.
Research

- Strategic hiring will come naturally in a framework such as this, if carefully and transparently managed. A sound management structure would be needed in order to avoid disenfranchisement of certain disciplines.
- The school will provide greater opportunities for collaboration in research and would immediately raise the national and international profile of the UA in the areas of climate, water, geosciences, energy, sustainability, and human behavioral response to environmental stability, variation, and change. In addition to conducting research into problems at the national and global level, this unit would be positioned to more comprehensively contribute to the immediate and impending needs of the State of Arizona as related to identifying and planning for future impacts of climate, human population growth, and human activities on the general environment, water, and natural resources.
- The new school would be the principal locus on campus for research on past and present environments, including climate and water. The combination of observational/instrumental and computational/modeling approaches in the earth and environmental sciences within one school would be a major strength. This combination of disciplines and expertise also would facilitate cooperation with other campus units in the natural and social sciences. The proposed alignment is a natural one.
- Greater application of variable workload agreements with faculty in such a broad school would make it easier to form research teams that would be able to respond to major funding initiatives.
- The new school we envision would put us in a far better position to compete for funding for the coming major initiatives in climate research, water supply and earth resources, and human-environment interaction, energy and sustainability. It also would expand the range of NSF programs and other funding resources that could be exploited well beyond those available to the units individually. Support from NOAA, NASA, NSF and resource industries is likely to increase because of our ability to assemble interdisciplinary teams of faculty and researchers.
- Our enhanced external profile, expanded topical base, and increased funding would also increase our ability to compete for the best students in the world.

Outreach/service

- Many of the existing units have strong outreach and service programs that both deliver information to state, regional, and national stakeholders and generate translational science of broad impact.

How the reorganization will raise the unit’s and the University’s ranking or reputation.

Some of the grand challenges facing the nation are expressed in a transition document prepared by the American Geological Institute, for example, which lists 7 critical needs:

1. Energy and Climate Change
2. Water
3. Waste Treatment and Disposal
4. Natural Hazards
5. Infrastructure Modernization
6. Raw Materials
7. Geoscience Workforce and Education.

The new school would be capable of addressing most, if not all, of these challenges. Re-aligning these departments into a new entity would establish a coherent and more readily recognized program in the natural, managed and engineered environment, with unique capabilities. For example, no other such school in the country includes a hydrology department. If the school is organized in a manner that will capitalize on the different disciplinary strengths (e.g., in curriculum, research initiatives and outreach), while also maintaining the identity and integrity of the unique capacities of the units, it is likely that disciplinary rankings will rise further. Overall, in the coming decades of almost certain climate change and consequent impacts on water, ecosystems and society, the University must better position itself to take scientific and educational leadership in these
disciplines. The school that we envision has potential for helping achieve this distinction and improve the University’s reputation and ranking as a leader in this strategic emphasis area.

*Description of the process of consultation with deans, heads, faculty, staff, appointed personnel and students and the extent to which this proposal has the support of those affected.*

This proposal arises from the 4-unit proposal written within the College of Science for ATMO, GEOS, LTRR and also mentioning HWR. It is one of a number of alternatives discussed in those departments and more widely.
Budget page

Twenty years of budget cuts have resulted in maximum efficiency in many if not all units and so staff layoffs are neither possible nor contemplated in the physically separated school. While it is impossible to assign dollar values at this preliminary stage, it seems feasible that there will be some savings through the collaborating departments. The following are areas in which savings and increased funding opportunities may be realized.

Teaching and Academic Support

- Pooled faculty teaching responsibilities will reduce spending on temporary teaching support. The units of the school and any others joining the Earth and Environment Consortium could, for example, accept responsibility for together designing, and teaching classes yielding an annual target of Student Credit Hours to be agreed with the Provost. In return, requests from those units for faculty lines will receive specifically favorable consideration if it is shown that they will directly and substantially contribute to the fulfillment of this target.
- A shared mission will lead to creative new curriculum at undergraduate and graduate levels, helping insure continued relevance of the UA to the State of Arizona, hence the willingness of public (the Legislature) and private sectors to offer support.
- Teaching support resources (e.g. D2L, Scantron) will be maximized by sharing expertise and equipment.
- Reduced expenses and increased participation by running joint colloquium series.

Business Support

- Efficiencies may be found through coordination and realignments, but definitely not by further reducing the number of staff who are already overextended.

Alumni Outreach & Fund Raising

- Successful existing alumni outreach programs in affected units could be extended to increase fund-raising for all units. Yale, Duke, Stanford, Georgia Tech, University of Virginia, University of Texas, Austin and the University of Washington have all established such broad schools of environment and/ or earth science in recent years, and several have attracted very substantial (10s of millions) private sector money.
- The recent $9 million donation to LTRR for an archive building indicates the potential for this to be done at UA.