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Submitted by Sylvia Rains Dennis, Coordinator for Cultural and Ecological Sustainability Education, UNM-Taos (ph. 505-737-6216 or email sdennis@unm.edu)

## Sustainability Education Profile #2

### New Mexico Higher Education/Sustainability Offerings and the UNM-Taos Outlook

As promised in the last update, this email focuses on higher education programs and offerings identified as “sustainability” related. The following text (tables sometimes scramble over the internet) lists institutions according to comparable academic goals, with a focus on student populations and a community/regional base. There are two main categories of concern in terms of proposed educational direction at UNM-Taos: (1) ecocultural sustainability, and (2) green innovations, with the Arts consisting of strong threads that easily weave into either fabric (e.g.1, artesanos and sustainable forestry practices/cultural philosophies of sustainability; or e.g.2, architectural creativity and green building/sustainable energy projects). Literacy and oral knowledge, mathematics, and core academic offerings also form a strong supporting framework to any discussion of sustainability objectives in higher education.

The strength of incorporating sustainability education as an overall objective of UNM-Taos lies in its integrated focus, something that allows a measure of relevance and accessibility for all participants without needing additional justification in order to tie disciplines or practical experience together. From a cultural and ecological perspective, I strongly believe that our constituency already approaches learning in this manner. All we need to do to serve their needs is to open windows for participation and collaboration and to listen to the range of voices who offer tremendous sources of knowledge and understanding on all things sustainable. *Sustainability* accordingly assumes that there is a *continuum* in place, that there is something to *sustain*. We have the most remarkable examples of that here, in Northern New Mexico.

### Brief Summary of Sustainability Education Opportunities in Northern New Mexico

#### I. The Ecocultural Perspective, or sustainability education *with a context!*

Especially from the sustainability perspective, I believe that the UNM-Taos Branch Campus has a unique “bioregional” focus not served elsewhere. While Northern New Mexico College (NNMC) in Española (including the El Rito and a new Los Luceros location) comes closest to addressing the needs of the rural and tribal cultures of Northern New Mexico, their jurisdiction lies mostly south of our service area. Fortunately, their offerings often represent compatible disciplines and practical vocational opportunities that fit well with our degree-oriented structure, as well as providing mutual/reciprocal transfer-level education for our own extended community. We have already collaborated on several events and educational programs, so our emphasis here could focus on strengthening relationships.

As at the UNM-Taos campus, some of NNMC’s offerings and programs are either in an initial planning/tentative funding phase, or are very new, growing from core offerings that support other degree and certificate opportunities. Field classes and internships may start out with lower enrollment, then gain---often by word of mouth and personal outreach by instructors---until a greater need to serve the students and community is reached. In both the Española Valley and the greater Taos area, there are strong reasons to support an integrated curriculum addressing Cultural and Ecological Sustainability in particular, as many of the traditional and land-based/watershed dependent livelihoods and their unique communities face displacement or decline due to rapid changes in the socioeconomic

profile of a region that has otherwise served a stable population and all of its land and water features for many centuries.

Two additional institutions also seek to serve the educational needs of the unique rural/tribal populations of Northern New Mexico: New Mexico Highlands University in Las Vegas and the New Mexico State University “Sustainable Agriculture Center” in Alcalde, the only extension-type program to my knowledge that focuses on small, traditional farm and watershed issues. Both institutions offer strong incentives for local recruitment and practical training in scientific disciplines, such as courses offered through the newly established New Mexico Forest and Watershed Restoration Institute (NM Highlands) or through research on groundwater/Río Grande/acequia relationships (NMSU), to name two current examples.

## II. The Green Innovators (technological and related economic streams) & course offerings

With a wind energy commitment, green designed build-out of the Klauer campus, and all things solar, green technology does seem to be a strong focus for Sustainability Education at UNM-Taos. The concepts promoted by Karlis Viceps’ campus planning/solar design, Jim Gilroy’s many suggestions and active support, Larry Mapes’ renewable energy systems, James Rannefeld’s Applied Green Technology instructors and others have helped create a substantial momentum for UNM-Taos to ride a green innovators wave into our sustainable future. The primary emphasis here is on problem solving, such as that promoted by Scott Evans (Taos Sustainability Institute and Green Building instructor), rather than on an integrated land-based or culturally continuous curriculum.

To me, this arm of sustainability education can happen anywhere, at any scale, and will consequently make significant contributions in many varying contexts of application, whether discussing solar energy vs. fossil fuel dependency or another socioeconomic focus for community systems or services. The idea of a sustainability think-tank derives mostly from this perspective, where solutions rely on creating new working templates. Follow-through is important, as the hands-on practical examples and learning at Klauer Campus and the Solar Summer School Intensives demonstrated. Unsurprisingly, the applied sustainability practitioners in our region often discover that many of the so-called innovations have older roots in traditional practices, such as adobe building, organic or “natural” agriculture, or local water conservation. My strongest suggestion for this impressive momentum is to keep it going, including the summer intensives, but also to integrate the courses into our ecocultural context to anchor their objectives for the longer term educational focus.

### **Selected Higher Education Offerings on Sustainability Themes, New Mexico Institutions<sup>1</sup>**

Please note that this summary offers only a few details regarding *sustainability educational directions* for the institutions listed, with further discussion or feedback/input on program directions still wide open in terms of our own constituency at UNM-Taos. The institutions listed may otherwise have very divergent needs and focuses, as they range from community colleges to undergraduate to private institutions with specific areas of concentration. However, I hoped to consider a kind of “bioregional” cross-section of educational opportunities by looking at the respective curricula and any stated regional opportunities. All make distinct contributions to their defined communities and student populations. The reason I researched their offerings was primarily to determine whether other New Mexico institutions of higher learning had embraced sustainability education and, if so, with what particular focus and context. This might help UNM-Taos discover not only unique leadership

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<sup>1</sup> Note: information summarized here may not reflect recent changes in these programs; please feel free to offer any known updates to the content or details of program changes since I investigated these campuses. Thank you!

opportunities, particularly in the aforementioned ecocultural context, but also identify further potential collaborators in our collective objectives for higher education in New Mexico.

### **1. UNM-Albuquerque:**

While our branch campus has a different purpose and demographic considerations, the recent focus on sustainability education at the main University of New Mexico campus in Albuquerque is certainly pertinent to this discussion, as are any such programs that may pertain to UNM's additional branch campuses and satellite locations. UNM-Albuquerque students deserve much recognition for supporting curriculum innovations and for pursuing sustainability themes in several interrelated areas, including academic and community/city outreach. As a result of their persistence and some key faculty support, e.g., Prof. Bruce Milne, a new Sustainability Certificate program began this past fall term. Also, Peter Gilroy has coordinated the sustainability film series for two years running, while additional extracurricular campus events have gained momentum mostly within the past year and a half. We have strong faculty representation for both the unique cultural learning matrix, e.g., Prof. Gregory Cajete, and for ecological studies (from natural heritage to watershed themes), as well as Dr. Milne and several collaborators on the green innovators side.

Depending on how UNM-Taos wishes to define its own sustainability education focus, we may participate or feed into some of these opportunities, as well as offering stand-alone certificates and programs of study. In any case, our own cultural-ecological context provides many unique land-based educational opportunities not as feasible in the urban setting, as well as direct access to several streams of knowledge on sustainability themes. To give one conceptual contrast, the concept of an ecological footprint means something very different in Albuquerque, where it is often rendered as a quantifiable resource allocation/use level re. energy or food consumed. In rural Northern New Mexico, our *footprints* take on the cumulative additional requirements of living compatibly in terms of both an ecological and a cultural balance with a significant track record.

### **Brief highlights and selected notes on relevant curriculum follow for several NM institutions:**

- 2. New Mexico State University:** strongest offerings in Las Cruces, with an established, successful field setting at Alcalde (science based, extension service oriented; all degree programs and courses through NMSU campuses). The Grants campus has a developed Geographic Information Systems program, which holds tremendous potential as an integrated land-based sustainability education-in-practice tool.
- 3. Northern New Mexico College, Española:** strengths include supporting traditional agricultural methods, cultural practices, and the arts for Northern New Mexico's rich mosaic of cultures and place-defined practices. Strongest in apprenticeship, hands-on and internship programs, with more potential exploration of sustainability education opportunities since NNMC's acquisition of the Los Luceros property last summer. Northern's El Rito campus has traditionally offered practical field courses and artesano workshops, etc., though the emphasis is shifting based on new campus growth and student enrollment.
- 4. New Mexico Highlands University, Las Vegas:** strong cultural studies/sociology and local/regional offerings, including the newly formed NM Forest and Watershed Restoration Institute; Highlands also offers an innovative field-based program for Spanish-language seasonal agriculture workers.

5. **College of Santa Fe** (private): oral history projects in rural areas, sustainability curriculum supported by degree programs in Environmental Sciences, Conservation Biology, Conservation Studies; affiliated with the School for Field Studies, which conducts international conservation research and practice. CSF offers courses with the MSE or “Managing Sustainable Enterprise” heading, to provide tools and ideological platforms for putting sustainable concepts in practice from social, economic, and environmental perspectives. (This is an integrated, well developed curriculum with many significant contributions to sustainability education on a philosophical, local to global scale, but I did not find a cultural-ecological focus specific to N. NM.)
6. **Santa Fe Community College:** green building and renewable energy programs in place; certificates and trades; green technology and economics; very strong green innovators and program funding, presumably supported by growing enrollment in applied sustainability education.
7. **Institute of American Indian Arts, Santa Fe:** primarily a studio arts tribal-supporting institution, IAIA does offer sustainability focused courses in botany and wellness, ecological and cultural connectivity, and several native studies courses concentrating on “indigenous perspectives on knowledge and culture,” including courses covering the cultural histories of tribal nations from different biogeographic regions.
8. **New Mexico Tech, Socorro:** several science degree programs include field opportunities in environmental science, earth science, biology, geologic disciplines, and the applied sciences, which sometimes touch on sustainability issues. Tribal and land-grant peoples seem to be represented in a mainstream natural resources curriculum as reflected in descriptions of the student population, instructors, and field sites, though I do not have statistical information on this. The cultural-ecological sustainability and green industries areas seem less developed.
9. **Clovis Community College:** included because of its location and rural demographic, however the emphasis is on trades and other associate degree programs, including educational certifications and the construction industry. (I wasn’t able to find any sustainability initiatives in place, though some may occur in more detailed course bulletins, such as solar heating?)
10. **College of the Southwest, Hobbs** (private): offers biological science and environmental management/environmental studies degree programs, sometimes including a regional cultural and/or field context. The latter degree offerings are worth considering in terms of practical sustainability education models for internships, etc.
11. **Western New Mexico University, Silver City:** from a sustainability perspective, the main strengths are in field applications or study opportunities to support science degrees.
12. **Luna Community College, Las Vegas & other satellite locations:** while many UNM-Taos staff are very familiar with Luna CC and our collaborative programs, I did not find any further sustainability oriented focus other than one amazing Environmental Science course (ENVS102) that seemed to capture everything in four semester credits: “a survey of environmental science and ecology with an introduction to problems of pollution, population, land use, energy, nutrients cycling, agriculture and pest control.” If we surveyed individuals on their definition of the term “sustainability” (which I have, informally!), several of these topics would tend to arise.

Beyond New Mexico, yet still in the western states or Rocky Mountain region, the following may provide further touchstones for discussing overall Sustainability Education objectives: University of Colorado at Boulder, Adams State College (Alamosa, Colorado; includes regional field studies to support diverse disciplines); Colorado College, Colorado Springs; Portland State University, Oregon, and a few of the smaller campuses in Washington State. Any additional suggestions?

*Note: distinguishing regional land/culture based programs vs. universal sustainability discussions should help keep the comparisons relevant to growing our own campus..*

### **Preliminary Observations on UNM-Taos' Potential Leadership**

Clearly, there are many feasible options for UNM-Taos to fulfill some of the educational needs identified above while also collaborating within the matrix of existing programs, e.g.1, scientific agricultural studies through NMSU-Alcalde, or e.g.2, sustainable forestry methods at NMHU. However, by looking at sustainability objectives even in these two examples, we must also remember to address the site-specific, cultural and ecological/land use/watershed settings that enable successful agricultural or forestry outcomes. We do not need to compete for students from existing programs as long as our offerings focus on unique cultural-ecological opportunities and/or courses not available elsewhere. Fortunately, the Taos area has a wealth of collaborative expertise on topics ranging from traditional seed saving, small land use (e.g., ranching from sheep to wool, from cattle to beef, or maybe sometime in the recoverable future, from cows to dairy; all naturally raised, hands-on operations), and many off-the-grid, renewable energy, and innovative green design projects.

In this regard, UNM-Taos holds the potential to lead Sustainability Education initiatives by incorporating *all* of the voices that contribute locally and regionally to our collective sustainability, many of whom offer the strongest opportunities for meeting educational goals. Through this lens, even a piñon beetle epidemic and the consequent high fire hazard ratings can serve as a collaborative, interdependent learning opportunity in which we all move forward in the working concept of sustainability that represents not so much a “cutting edge” academic advantage but more of a cumulative, integrated, practical, inclusive and comprehensive educational experience.