Education Outreach Meeting Minutes

LTER office: ECS268

Wednesday, March 1st 2011 – 3:30pm

Persons present:

Gail Hollander

Nicholas Oehem

Michael Ross

Affiliations: FIU – Department of Earth & Environment, Southeast Environmental Research Ctr Discipline: Plant community ecology, landscape ecology, resource management Email: <u>rossm@fiu.edu</u> Phone: off., 305-348-1420; cell, 305-781-4986

Carlos Escobar

Gary Hallbrook

Affiliation: TERRA Environmental Research Institute Discipline: Sociology/Anthropology teachers.dadeschools.net/gholbrook <u>gdholbrook@dadeschools.net</u> (at the meeting Jeff Oehem introduced Gary as recognized by the Board (of Education I suppose) as the teacher who had the highest number of Hispanic students passing successfully the AP exams)

Mountserrat Paradelo

Affiliation: Divison of Advanced Academic Programs – Miami Dade County Title: District Supervisor

Catherine Laroche Affiliation: Felix Varela Senior High School – Miami Dade Discipline: Geologist Teaches: Earth Science, CISCO networking, Intro to Technology,

Suzana Mic

Emily Eisenhauer

Rosanna G. Rivero, Ph.D.

Affiliation: Everglades Foundation Discipline: Environmental/land use planning and landscape ecology; applications of geographic information systems (GIS), geostatistics and remote sensing, with a focus in quantitative methods for mapping of ecological/biogeochemistry/environmental properties. Phone: (305) 251-0001 x 232 / Fax: (305) 251-0039 E-mail: <u>rrivero@evergladesfoundation.org</u> www.evergladesfoundation.org

1. Introductions

2. Gail Hollander introduced the basic ideas that guide ULTRA

3. Catherine Laroche presented her idea of creating an AP geo curriculum; she presented a draft course plan for grades 9 to 12. The plan is focused on determining the value of trees in a suburban environment and the impact that built environment has on the natural environment. The curriculum can be modified depending on where the high school is situated (urban or rural region). The curriculum would have a GIS component. She would like to introduce GIS lessons to high school students, more specifically a simplified version of ARCGIS, called My World GIS created by ESRI, since in her opinion GIS is the new Microsoft Word and students will need to have GIS skills to be competitive on the job market.

She thinks that due to software costs high schools could start by using Google Earth. She asked for feedback on it and she remained to send an electronic version of it.

Following on the software cost issue, Ms. Mountserrat Paradelo, announced that she would be able to obtain funds to buy the software (My World GIS) for those high schools that do not have it already. She also said that if she would get a concrete description of the ways in which GIS could fit into the 'science' curriculum, she would try to convince the district to create the GIS class at the high-school level. Gail Hollander proposed Susanna Rose as possible person to be approached in relation to teaching the GIS component (I think this was referring to the workshop for the teachers described below).

Commenting on the ways in which the course presented above could be improved, Emily Eisenhauer suggested a component that would look at the different cultural uses/understandings of trees.

Mike Ross would be willing to look into ways in which the data obtained from his research in Key Biscayne, where he will be collecting data on tree densities and compositions using a sample of plots across the Key, could be used for high school research related to the course objectives that Catherine proposed.

4. Flowing from this conversation, Nicholas Oehem, asked how could AP teachers be linked to ULTRA and LTER. He suggested cooperation between university professors and the high school teachers and introduced Pat Houle, an instructor at FIU in Ecology and a PhD candidate in Education in Environment, as a possible person willing to create these types of connections.

Nicholas Oehem announced that Mike Heithaus had just received an NSF grant, who's purpose was to pair graduate students and K12 students. Graduate students are supposed to introduce high school students to their own research. This grant could be a path through which AP teachers and university professors connections could be made.

Also, Gail Hollander suggested Dianna Ter-Ghazaryan – a previous research assistant for ULTRA, currently working in the FIU GIS lab, as a good contact to Mike Heithaus, with whom she is working currently to get the GIS lab started at the North Campus.

5. Teachers Workshop planning. This workshop seems to be mainly the responsibility of Gary Halbrook. It seemed that the purpose of this workshop was to have two or three AP teachers help the participants prepare the curriculum for the whole year for the course in Earth and Environment.

Gail Hollander suggested introducing in this curriculum a component that looks at food systems and food deserts in Miami –Dade. Referring to this suggestion, Gary Holbrook reminded everybody that they have to be mindful that the lessons have to respond to the needs of the AP tests that the students will have to take. Carlos Escobar commented that it should not be a problem to connect the objectives of the course to the AP exam. Gail Hollander and Nicholas Oehem suggested that Gary Holbrook and Carlos Escobar would give everybody a crash course on the requirements of the AP exams and the scoring system. Nicholas Oehem concluded on this subject, that the members should think about ways to incorporate ULTRA and LTER objectives in the AP curriculum.

GIS was suggested as an important component of the workshop and Gail Hollander proposed approaching Mike Heithaus in relation to this component. Mike could have a good venue for the GIS workshop component – the new BBC GIS lab that is currently under construction.

The possible dates for the workshop would be June 13 - 15 and possible extensions to 16, 17 and further, are depending on available incentives and funds. It was suggested that the workshop be held at Terra High School where Gary teaches, due to its beautiful park –like location. It was suggested that a part of the workshop be held at FIU in the GIS lab if a GIS component will be introduced to the teachers. Following this meeting, Gary Halbrook would draft a plan of the workshop and present it to the group after the Spring break.

Ms. Mountserrat Paradelo would look into ways that teachers would be compensated for their attendance in the workshop. Nicholas Oehm suggested using the My World GIS software as an incentive for an extra two or three days of workshop.

Conference Call: April 4th – 2011 – 11:00am

- Gail talking about the AIG conference Gail is going to have her first major presentation at this conference related to ULTRA accomplishments
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