

January 15, 2016–ELT Meeting Minutes

In-person attendees:

Jan Taylor, Elisabeth Kager, Ulises Toledo, John Maher, Charles Somerville, Jeffrey Carver

Calling attendees:

Fred King, Jim Anders, Maura McLaughlin, Jessica Martone, Aubrey Roy, Lisa Kohne

Campus Visits:

- WVSU: Friday, January 22, 2016
- WVU: Dr. King is going to ask Sandy Kisner to help arrange the on-campus visit.
- MU: Dr. Maher is going to seek help from Amanda Plumley in arranging campus visit.

Budget Update:

- There are still over \$3 million not drawn down yet

AFI Update (provided by Jim Anderson)

Infrastructure Development and Recruitment:

- Internal collaboration development by getting everybody involved in AFI together and discussing project details and needs, such as for WVSU and MU to gain access to WVU's library system (with great help from Fred King).
- Developed AFI listserv and website (at least a skeleton)
- Hired Jason Hubbart as a Water Resource Faculty
- Recruited one post-doc (Eric Merriam), 6 Ph.D. and Masters students
- Question raised: How do we balance the need to recruit UREP/URM students with the need to actually fill the position?
- Weekly group meetings
- Monthly AFI Team Leader Meeting

Research Updates: Group 1 (Sensor Array)

- Mike Norton is developing a carbon nanotube reporter system
- Bin Wang designed DNA template
- Jennifer Weidhaas published a paper on Microarrays (in press)
- Philippe Georgel's ingenuity pathway analysis is in progress

Research Updates: Group 2 (Watershed)

- Identified outdoor lab with Boy Scouts
- Have almost identified outdoor lab near Morgantown but have one more meeting
- Jeffrey Kovatch has gathered data and preliminary findings that low levels of Manganese show increased level of Boldness and decreased level of mobility in crayfish
- Mindy Armstead is continuing Mayfly testing method development and already improved the survival rates

- Nadia Spitzer submitted CAREER Award proposal
- Jen Mosher has done a preliminary community survey on the Kanawha River
- Jim Anderson published paper on Blackwater watershed
- David Huber collected initial samples and evaluated them. He came across problems with the collection but has resolved them through experimental testing
- This group is trying to develop a universal data collection form

Research Updates: Group 3 (Modeling)

- Not much yet since the modeling depends on the data
- Jack Smith set up HubZero (data storage and sharing) and demonstrated it during last face-to-face meeting; Smith is working on integrating external data groups as well.
- Robert Burns (Social Scientist) did a preliminary study with a Social Science Survey to the general public. This study will inform a template to replicate survey throughout the state. The survey wants to quantify/characterize residents' perceptions of water quality criteria and how they influence the population.

MU Update (provided by Charles Somerville)

- Dr. Spitzer was recommended for the CAREER Award
- Dr. Kovatch joins NSF EPSCoR RII Track II, a merged project with Kentucky (Lead State)
- Modeling Group is in touch with the National Guard to improve tools functions as well as the security of their use (right now they are running the program from a laptop because connecting it to the government desktop is not secure enough)
- Nearly have a Technician hired
- Temporary faculty hire because of budget but the person is a viable candidate for the permanent position
- Senior hire is endorsed by president and provost

GW Update (provided by Maura McLaughlin)

Infrastructure Updates:

- A lot of conversation on how collaboration between universities is going to work
 - Links are existing between Physics and Astronomy Department and the Math Department and the Computer Science Department
 - More needs to happen to build on links with WV Wesleyan College and Marshall University
- Monthly meetings in person at WVU (NRAO and Greenbank call in)
 - Useful to first talk about procedural things to get synergy in projects over the first few months and now we are getting more into the science)
- We have a listserv and started a Wiki and are working on a webpage at the moment
- We haven't had an in-person meeting with everybody yet (planning one for early February)
 - Need to invite Jeffrey Carver to monthly meetings to talk about GW education and workforce development objectives

- It takes time to hire people. Have hired a post-doc from Oxford but it will take time to get him here.
- WVU Center to foster Interdisciplinary work and they will hire a Center Post-doc.
- Search for a faculty has lead to four candidates being interviewed in January and beginning of February. The plan is to make an offer by the End of February.
- We have already hired some students: Maria Babiuc-Hamilton(MU), Zach Etienne (WVU, Math), Maura McLaughlin (WVU), and Katharina Goseva-Popstojanova (WVU) have students working in their labs.
- We have been working on the work plan and made some changes and additions because we have a much better idea now of what everyone's responsibilities are (especially for people at other institutions)

Research Updates:

- New Faculty (Kevin Bandura) in Computer science is building instruments to use with the Greenbank Telescope. He has an Astro student, who is interested in instrumentation, working with him
- Tracey DeLaney also has undergrads building mini Radio telescopes with the support of a DSR Instrumentation Grant.
- Students from MU & WWC will be brought in for Pulsar Search Collaboratory so they become mentors
- Dr. McLaughlin and Computer Scientists are developing artificial intelligence to test data

WVSU Update (provided by Ulises Toledo)

- The position description of the Aquatic Toxicologist has been created and approved. It will be advertised as early as next week. The second position, Environmental Engineer specialized in Water Quality, is being developed and will be advertised mid-spring. This position is expected to be hired by August 2016 (beginning of second year cycle).

Administration

- Dr. Jan Taylor and her team will be visiting WVSU on the morning of January 22, 2016 to conduct the first visit to campus and program review (postponed due to inclement weather to February 2)
- First and second quarter expenditures (Aug-Dec) were below target. We expect to get caught up during the spring and summer periods as research and outreach activities intensify.

Research

- All participating faculty are actively engaged in their respective AFI subgroups.
- A temporary postdoctoral position will be hired from February to June, as a permanent position for the Aquatic Toxicologist is filled. The postdoctoral temporary employee will assist AFI faculty at WVSU with research related to toxicology and genomics.
- Dr. Andrea Dietrich from Virginia Tech has agreed to come to West Virginia State University in April to give a presentation on her research on the environmental ramifications of the MCHM spills. She received a Rapid Response Grant soon after

the spill to do the studies and wants to share those results. She is going to bring some of her Environmental Engineering students who did the work as well. She is particularly interested in learning more about the AFI and what can be done together.

Outreach

- WVSU is planning to conduct a GLOBE training for 15- pre- and/or in-service teachers at the start of summer (after Kanawha County lets school out)
- Pre-service teachers are currently being recruited to be paired with an EPSCoR faculty member to participate in research this summer in conjunction with our SURE program
- Since WVSU did not allocate funding in their budget for water and space days, we will not be able to conduct those programmatic activities.

Education and Workforce Development Update (provided by Jeffrey Carver):

Objective 1 – Enhance Continuing Ed

Activity - Authentic Research as a Graduation Requirement

- WVU - Initial changes to Graduate Level Certification pathways has been changed and approved to include a research experience prior to recommendation for student teaching.
- WVU - Three new courses have been approved (Research Methods) that will provide a mini research experience to undergraduate WVU Teach Certification candidates in Secondary Math and Science. (More Authentic experiences are encouraged through advising, particularly in the sciences).
- WVU - The 5-year program remains the only program without a research experience for secondary science. This will be the target for future changes.
- MU and WVSU – in the process of meeting with secondary education content faculty to develop a plan by April.

Objective 2 – Early Career Teacher Program

Activity – Be Representative at WVSTA

- Vendor Table hosted at WVSTA in November. This table represents all of Science Education at WVU but prominently placed are program recruitment materials for all RII EdWFD programs, including those at MU and WVSU.
- Promote EPSCoR programs in November 2016

Activity – Professional Learning Communities

- Special topics course developed – C&I 693C – SPTP: Dialogue and Praxis in Education –
- Course runs online from March 2 – April 29 with an initial face to face meeting mid Feb (at stonewall). Currently have 8 committed to participating. 14 spots available and still recruiting. Three more teachers are actively considering participation.

Objective 3 – Engage Pre-service and Early Career teachers in authentic Research

Activity – Project WET workshop

- Project WET at MU - One day training tentatively scheduled for the second week of July - will recruit 15 pre/in-service teachers to attend

Activity – GLOBE program workshop

- MU has a 1 day training tentative scheduled for early June (dependent on the local school schedules and snow days)
- WVSU has a 1 day training tentatively scheduled for when Kanawaha Co. Schools let out for summer (dependent on school schedules and snow days. Fifteen spots for a mixture of pre-service and in-service teachers.
- Folks who deliver training have been contacted

Activity – Recruit Pre-service teachers

- All institutions have begun recruiting pre-service and in-service teachers for AY or summer research experiences
 - MU – 4 teams (team = 1 pre-service, 1 in-service, 1 high school student)
 - WVSU – 2
 - WVU – 5 pre/5 inservice

Activity – Recruit Research Mentors for Research Experiences

- In progress at all institutions.

Activity – Define educationally appropriate research experiences to connect to classroom

- In progress at all institutions

Objective 4 – Engage the community to disseminate information about our research areas

Activity – NOT LISTED – Conduct Water Festival

- MU held the Water Festival in September - attended by 200+ elementary school students

Activity – Sky Festival

- The Sky Festival will be held in April or May - this inaugural MU event will be kept small - expect around 60 to 90 elementary school students

Objective 5 – Improve Workforce Development

- No updates.

Diversity Update (provided by Elisabeth Kager)

- GW recruited 2 female SPOT presenters and reached three schools in the Fall. One with a large UREP population (rural)
- Dr. Anderson sent recruitment materials for AFI to historically black colleges and Hispanic serving institutions. He also sent Emails to listservs and MANPRS chapters. Materials were also presented at MCNairs Graduate School Fair and the SACNAS

(Society for Advancement of Chicanos and Native Americans in Science) Annual Conference

- GW had an informational booth at the AAS meeting. They handed out flyers and lapel pins. One female undergrad emailed about graduate work and coming to WVU this summer to do research
- GW hung fliers advertising summer research opportunities (but also the project more generally) around the Physics building. Will hang them in other STEM buildings soon.

Partnerships Update (provided by Ulises Toledo):

- Right now, partnerships are mostly connected to GW
- We need to find a way that is most effective to capture Partnership development → Jessica Martone mentioned to use Science of Team Science website as a help in that
- Dr. Carver brought up a new partnership with Carnegie Mellon Robotics that might be developing

ACTION ITEMS

Annual Reporting:

- Report needs to be succinct because we only have 8000 characters for reporting each section (4000 for AFI and 4000 for GW)
- Reports and appendices are due by March 31st to Jan
- Dr. Taylor needs to submit the Annual Report by May 1st
- Basically, the report is only on 9 months of activity with precise projection to what is going to happen in the next 3 months (need to be justified later)
- Strategic Plan changes are due by January 27th.
- Elisabeth Kager asked to get list of publications (for the annual report) in the form of BibTex files if researchers already use BibTex files because it will make the reporting a lot less tedious. If researchers don't already use it that's ok. But will send information to about BibTex to Dr. Anderson.
- Dr. Kager will send email about how to collect participant information for annual reporting.

Evaluation Updates (provided by Jessica Martone)

- Explained Logic Model (=unified vision) (see below) and wants to have a first draft by the end of the project year.
- Encouraged researchers to fill out the Project and Evaluation Implementation Timeline (see below) and explained the document and how to fill it out properly.

Other thoughts:

- For AFI, SPOT could stand for Stem Public Outreach Training
- For the one-day events at MU, how best can we collect demographic data?

- Estimate (female vs. male)? But it is always going to be about 50/50. The interesting data are ethnicities, low SES, first generation, etc.
- Assume that demographics for 3rd graders is similar to school demographics (which are available online)
- Let teachers fill out a quick survey in advance (registration procedure) to get these demographics as teachers know their students and can easily answer the questions.
- At Pulsar Collaborative, they ask teachers to bring 50% female and 50% male students with them.
- Dr. Kager is working on an interactive map to make it easier for everyone to pick middle and high schools that have a high population of UREP/URM students.
 - Questions were raised what will be considered low SES (national definition or what?)
 - So far, it's broken down into three levels, but Dr. Kager will talk more to Dr. Carver about it.

Attachments



ACTIVITY

TABLE-PROJECT AND



Logic Model

development.docx