



Meeting Minutes

Tuesday, February 26, 2013

12:00 noon to 2:00 p.m.

UMPI Campus Center Allagash Room

- I. **12:00-12:15 Welcome, Overview, Lunch and Introductions-** Ken Murchison welcomed all participants and recognized each party responsible for the organization of this meeting: MEGUG (Maine GIS User Group), NMDC (Northern Maine Development Commission), UMPI (University of Maine at Presque Isle), UMFK (University of Maine at Fort Kent), and UMM (University of Maine at Machias). A total of 28 people were in attendance, both in person at UMPI and via polycom at UMFK and UMM. An attendance list is attached (Attachment A)

- II. **12:15-12:45 Explanation of the Gro-Washington/Aroostook Sustainable Development Communities Project and UMPI's EPSCoR efforts in Land Use Analysis of Croplands for the feasibility and sustainability of producing grass biomass in central Aroostook County-**Ken Murchison provided an explanation of the Gro-Washington/Aroostook Sustainable Project, which contains 16 elements of a plan that addresses climate change, housing, water infrastructure, transportation, land use planning, etc. for both Aroostook and Washington Counties.

Chungzeng Wang, Associate Professor in the College of Arts & Sciences Department at UMPI then presented a powerpoint presentation of EPSCoR.

This project consists of light satellite imagery known as CIR (Color Infrared) spectrum used for mapping. The focus of this 4-year project was to identify possible grass biomass for renewable energy. This type of imagery can also be used for land use purposes, such as identifying plant species, wetlands, cropland habitat, forest, assessing water clarity (turbidity), assessing soil moisture, determining the health of vegetation, etc. The CIR penetrates through the atmosphere so that mapping can occur and with the assistance of town officials, the acreage of each parcel of land can be identified including farmers name, address, and acreage. The first location tested was the Town of Fort Fairfield and Chungzeng Wang intends to continue this summer with the City of Presque Isle and possibly City of Caribou.

Jason Johnston, Assistant Professor of Wildlife Ecology at UMPI explained the purpose of the satellite imagery, which was to identify possible sites of grass for use in biomass through GIS mapping. Andrew Plant of the University Cooperative Extension Service approached UMPI to conduct a test plot in Fort Fairfield for the possibility of growing grass for biomass. The next step in the process is to conduct farmer's and landowner's survey regarding their interest in growing grass.

III. 12:45-1:15 Round Table Discussion Focus "Climate Change"- The following are concerns and issues identified during the round table:

- Invasive species (both plant and animals)
- Flooding
- Economic Development (tourism impact)
- Coastal flooding and inundation, sea rise levels
- Migration
- Impact on agricultural communities
- Food production
- Water quality, availability
- Land use regulations (adaptation of new rules and regs.)

- Soil erosion
- Decreased land value
- Redesign of infrastructure (culvert sizes to address increased water flows. Designs were made for 50 and 100 year floods)
- Emergency management measures (seeing more 100, and 200 year floods)
- Public education
- Providing forecasts and warnings to decision-makers
- Recalibration-Decisions
- Invasive Species (pests and diseases)

According to the National Climate Assessment Report, a copy of the study is available at <http://ncadac.globalchange.gov>, national concerns mirror the concerns noted today.

IV. **1:15-1:45 Open Discussion: Positive conversation centered on concerns and possible mitigation of Climate Change for long-term planning-** Now that these concerns have been noted, what are the next steps! Mitigation and adaptation are examples of short-term and long-term planning. Examples provided included –

- Rotation of crops and creation of buffers
- Move out of flood areas
- Implement controls for invasive species (have serious problems in our chain of lakes)
- Explore different zoning and emergency management practices
- Identify infrastructure, populations, and habitats (For example are people living on a peninsula with only one road in and out. Need to look at who lives there and identify alternative routes)
- There are some things we have no control, such as coastal inundation, lobsters, ocean acidification, shellfish, mud slides. Awareness is probably the only thing that can be done.
- Adjust culvert sizes in land use planning

- Provide warnings to sewage treatment plants that are in the floodplain so that they can prepare for natural disaster
- Identify possible warming and cooling centers for vulnerable populations
- Culvert sizing and also ways to slow down water flows before they enter a water body – controlling flow of water of help soil erosion and water temperatures
- Tourism business will need to adapt to creative and innovative ways of staying in business with loss of winter sports
- Community planning for businesses and residential properties in flood prone areas. Short term ways of mitigating floods for example.
- Awareness of emergency mitigation plans, which are available at all town offices. Plans are updated every 5 years.
- Research is crucial. There are gaps in our knowledge. Before mitigation, we need to understand the impact.
- As a culture, we have become more efficient at the expense of security. Maybe we should look at planting smaller fields and using different equipment. This would be less efficient, but more easily controlled.
- Need interagency collaboration to share information.
- More research. Learn from hydrology experts from other regions to learn of possible impacts in our region,
- More education on effects of what happens today, pay consequences tomorrow.
- Need more accurate research, such as LIDAR, mapping, etc.
- Look at tax incentives for land use
- Focus on data (frequency and severity) sources and gaps in information
- Implement suggested practices at the regional and community level as well as individual
- Implement suggested policies at the regional and community level

- V. **Wrap-up/Other-** NMDC will share information gathered today as well as other materials and documentation gathered thus far. This can be accessed at www.gro-wa.org.