

WRAP Meeting Brief

The University of Nebraska Water Resources Advisory Panel met Thursday, September 15, 2011 in the Whittier Building, which houses the Robert B. Daugherty Water for Food Institute.

Recognized for service to WRAP, their terms having ended over the summer were Frank Kwapnioski, H2Options Engineering, LLC; John Miyoshi, Lower Platte North Natural Resources District; and Dennis Strauch, Pathfinder Irrigation District.

New WRAP members welcomed were Brian Barel, water resources manager, Nebraska Public Power District; Lyndon Vogt, general manager, Upper Niobrara-White Natural Resources District; and Jerry Kenny, executive director, Platte River Recovery Implementation Program. Returning to the panel are Frank Albrecht, assistant division administrator, Realty and Environmental Services Division, Nebraska Game and Parks Commission, and Mike Linder, director, Nebraska Department of Environmental Quality. Ronnie Green, NU Vice President and IANR Harlan Vice Chancellor, noted it was his one year anniversary of meeting with this group.

Green offered the latest on the Water for Food Institute, noting that Roberto Lenton would begin February 1, 2012 as the institute's founding director. Marc Andreini joined the Water for Food Institute as an international research fellow on July 1. As a result of NU's partnership with UNESCO-IHE, Ed Harvey is in the Netherlands to help establish a joint graduate degree program and develop research partnerships and collaborations in the area of water and food production. Current plans focus on developing an executive management short course.

In five years Green expects the Water for Food Institute to have leveraged resources and shown measurable progress in reducing the amount of water used for irrigating crops at both the local and global level, thus achieving "more crop per drop."

While the University of Nebraska already has over 100 faculty working in water arenas, a recent gaps analysis was done to identify what was missing and needed to achieve even more. A "Cluster Hire of Faculty Addressing the Efficient and Sustainable Use of Water for Food" funded by IANR and the Water for Food Institute is underway and will result in the addition of a systems agronomist (targeted hire), a crop simulation modeler, an irrigation engineer, a ground/surface water modeler and geospatial hydrologist, and a hydrogeophysicist to NU faculty.

When asked about recent efforts by the university to focus on agriculture policy, Green mentioned that the next cluster hire will occur in this area, and the university intends to develop an agriculture policy group in the next five years.

John Gates, an assistant professor in UNL's Department of Earth and Atmospheric Sciences, presented his research on tracer hydrology. Gates described how he uses natural tracers to understand how aquifers are recharged and replenishment rates are determined.

For example, his research shows that mean recharge in the Nebraska High Plains aquifer is 1.5 inches per year, while mean recharge in the Texas High Plains aquifer is 0.1 inches/year. The difference is soils – Nebraska benefits from the porous Sandhills, while Texas has very clay-like soils. Gates also pointed-out that Texas has quite a bit more data about natural tracers than Nebraska does; thus he is currently working on the Nebraska Groundwater Tracers Project to add a new level of precision to his analysis. He also noted - there is nothing permanent about recharge rates, which are impacted by variables such as vegetation (e.g., salt cedars in the Sandhills) and others.

WRAP members reviewed information being assembled as part of the Nebraska Legislature's LR 314 interim study to examine all possible sources of revenue that could be used to establish a dedicated funding source for water management activities in Nebraska. Information about available research, data sources, and studies are being compiled as part of the study.

Jim Schneider, deputy director of the Nebraska Department of Natural Resources, concluded the meeting by describing the department's plan to develop INSIGHT, an Integrated Network of Scientific Information and GeoHydrologic Tools, to provide a series of web-based interactive maps, freely available to the public, that are directly linked to basin specific data on water supply and demand. INSIGHT will provide a one-stop shop where water managers can access hydrologic data and analyses maintained by the state. Release of the tool is planned for July 2013. This tool should serve to meet the basic-specific research needs identified and prioritized by WRAP in 2008-2009.