



# UNL INTERAGENCY BILLING INVOICE

**REMIT TO:**

UNIVERSITY OF NEBRASKA-LINCOLN  
 INTERAGENCY BILLING # 512  
 P.O. BOX 880439  
 LINCOLN, NE 68588-0439

Invoice Number *900 6835*

Page: 1 of 1

Invoice Date: 10/15/08

Due Upon Receipt

**BILLING ADDRESS:**

NE Dept of Natural Resources  
 PO Box 94676  
 301 Centennial Mall South  
 Lincoln, NE 68509-4676

**CUSTOMER/SHIP TO ADDRESS:**

Item Number	Description of Charges	Amount
001	Request for reimbursement for project "Enhancing the Value of Water Through Management Education" directed by Ronald Yoder	7,458.36

**RECEIVED**  
 OCT 15 2008  
**UNACCOUNTING**

Balance Due 7,458.36

Departmental Information:	
Campus Billing Dept.	SPONSORED PROGRAMS
Contact Name:	KATHI MALONE
Phone:	472-3430

*Kathi Malone*  
 20980498

SAP Coding:		
SAP Cost Object	G/L Account	Amount
26-6321-0159-001	462102	7,458.36
Total		7,458.36

Crop Production

# Pivot makers, UNL join forces on water conservation effort

By DON McCABE

**A** NEW water conservation effort in Nebraska will rely on the partnership of the state's four center-pivot manufacturers, the University of Nebraska and the state.

This unusual union, which has met for more than a year, is designing an education and information program in order to get more irrigators to use best-management practices and adopt the newest technology to use less water.

In an era of increasing pumping restrictions, drought, endangered-species regulations and river-compact conflicts, groundwater irrigators in Nebraska are under more pressure than ever to use less water.

"Water is critical to the state, community and economy," Gov. Dave Heineman told the group at a recent meeting in Lincoln. "Water is the issue of the decade, perhaps the century."

Derrel Martin, University of Nebraska water resources engineer, agreed. "There is a huge paradigm shift in water management due to these factors as well as the impact of higher crop prices."

Valley, Lindsay, T-L and Reinke are

### At a glance

- New water task force includes Nebraska Department of Natural Resources.
- Getting farmers to use less irrigation water is primary objective.
- Part of education program would be conducted through dealers.

involved because, combined, center-pivot systems water nearly 75% of the nearly 8 million irrigated acres in Nebraska. Pivots allow individual irrigators to pump less water than they do with gravity systems.

Representatives of the firms first approached Heineman over a year ago to propose the task force and to offer their aid in finding solutions to the state's water problems.

"There is considerable irrigation technology available today that will let you use less water," says Charlie Meis, Lindsay vice president of research and development and one the company's representatives on the Center Pivot Water Conservation Task Force.

Dave Thom of T-L, Irrigation in Hastings says, "We in the industry have the best water-conserving technology [center pivots] available."

According to the four Nebraska-based pivot giants, it's the first time they've come together on such an effort.

### Outreach to irrigators

UNL's Martin says the task force will focus on educational outreach to irrigators, although specific details and a timetable have not been ironed out. Ultimately, a logo, Web site and brochure will be developed, and educational sessions will be scheduled.

Despite Nebraska's status as an irrigation state and the vast amount of irrigation information available, there is a concern that irrigators aren't being reached effectively. "We are not reaching as many people as we'd like in our programs," Martin says.

One key goal of the task force is to work through pivot dealers to assist in conducting meetings with their customers. It's felt that irrigators work closely with their dealers. UNL would be a significant part of the effort, with its Extension irrigation experts distributing and speaking on topics such as center-pivot nozzling, irrigation scheduling, field cultural practices, soil water content and pumping efficiency, among other topics.



Martin talks of a two-level approach to the water conservation curriculum to be developed — one at the more basic level and the other a more technical approach for those considered leading-edge farmers and adapters.

Ann Bleed, director of the Nebraska Department of Natural Resources, says, "The group wants to help producers make more profit per acre-foot of water pumped, not necessarily more production. By using the right tools and practices, including getting water to the crop at the right time, we can lower non-beneficial consumptive use and help producers save pumping costs."

Bleed's office has applied for a \$215,000 grant from the Nebraska Environmental Trust to assist in the task force program. Pivot manufacturers will also contribute cash and in-kind services. UNL and DNR also will contribute financially, she says.

**Draft Notes from Governor's Water Team Meeting  
Friday, July 11, 2008  
UNL Chase Hall Room 225**

**Attendance**

Chuck Burr  
Ron Yoder  
Derrel Martin  
Suat Irmak  
John Davis  
Steve Gaul

Dave Thom  
Robert Meaney  
Wendell Dorsett  
Charles Meis  
Darrin Neff

**Attending by Conference Call**

Bill Kranz  
Bob Bettger  
Dean Yonts

Yoder introduced Chuck Burr and reported that Burr had been hired to coordinate the program. He indicated that Burr is a long-time extension educator from Holdrege. Yoder reported that the initial quarter of the Nebraska Environmental Trust Grant was now complete and asked Gaul about reporting procedures for expenditures of in-kind match.

Gaul said that the reporting deadline for the grant was July 15 for the University to report to the Department of Natural Resources and that the Department in turn needed to report to the Nebraska Environmental Trust and send billings by the end of July. He said that in-kind expenditures should be placed on a separate sheet indicating the billing category. The form for the in-kind expenditures was distributed. Gaul noted that the grant application had indicated the pivot manufacturer's group cash in-kind would be supplied at a rate of \$25,000 per year over a 3 year period. He reported that in addition to the \$215,000 Nebraska Environmental Trust grant and the \$75,000 pivot manufacturer's group cash contribution, the Department of Natural Resources is to supply \$10,000 in cash.

The manufacturers requested billing in September of each year. There was discussion of whether billing in September of the third year will be too late; the billing date for the third year will be reconsidered at the beginning of that year.

Yoder indicated that content development was still needed and that despite having held workshops, the material was not yet packaged as curriculum. He suggested that an introduction needs to be developed first.

After some discussion it was suggested that UNL irrigation extension staff hold a retreat in October to determine what topics will be included in Level 1, Level 2, and Level 3. Thom noted that it will be important to have a plan for varied lengths of programs in each level, i.e., dealers will likely allot different lengths for time for the programs.

Martin suggested that it would be particularly good if participants could have a notebook to which they could first add Level 1 material and then later the other levels. He also said that it would be good to have a subcommittee decide where presentations should be held. Meis asked if there should be a certification program with some types of incentives. Dorsett will collect information about approaches for certification, and will prepare of summary of his findings.

Yoder said that it was important for the group to come up with a logo. Burr noted that one logo that had been suggested was an upside down umbrella with the handle being a pivot. The slogan below it could be: "*Conserving water for future generations*". The logo would then list the partners. Meaney said that he liked the idea of having "Conservation" in a logo, since that is what the effort is about.

There was discussion of whether sprinkler manufacturers should be brought in on the process. Thom indicated that while it was a little late to bring them in as full partners, they have always been helpful. He said they should be informed of what the group is doing. There was also discussion of whether safety is an issue that should be added to the sessions. Members did agree that it is an issue.

Martin noted that Level-3 material will require considerable effort to prepare and that we need to begin work on developing this material early in the project, as well as installing technology on equipment of cooperators.

A timeline was discussed and concurred on:

- |             |  |
|-------------|--|
| Oct 8, 2008 | Content development retreat – UNL irrigation group   |
| Mid-Nov     | 1) Have Level 1 complete and ready for demo with selected dealers<br>2) Formulate objectives for Level 3 technology demonstration, and identify irrigators who will serve as cooperators |
| Nov – Feb   | Deliver programs at dealer events  |
| Jul – Aug   | Second program delivery period   |

DRAFT  
August 3, 2007

To: Jasper Fanning, Dan Smith, Mike Clements, John Thorburn, Ron Cacek,  
Rod Horn, Kent Miller, Ron Bishop

From: Ann Bleed

Subject: Request for Partners for Environmental Trust Proposal on "*Reduced Water Use through Water Management Education*"

The Department of Natural Resources is currently working with the UNL Biological Systems Engineering Department and a water team including Nebraska's pivot manufacturers to develop a Environmental Trust grant proposal entitled "*Reduced Water Use through Water Management Education*". We expect to target most early activity to fully and overappropriated basins and to deliver water conservation and water efficiency information to irrigators and those advising irrigators from a variety of parties and venues including: Cooperative Extension meetings, pivot manufacturers, and potentially courses or meetings cosponsored (if you agree) by natural resources districts.

The water use reduction education program would be coordinated by an Extension educator who would be responsible for developing the material in consultation with partners and then working with partners to schedule on-site workshops, deliver portions of workshops and interfacing with client groups. A three level educational program is proposed, with each level including progressively more advanced material. The current program budget is expected to be about \$100,000 per year for three years.

**The purpose of this memo is to ask whether you are willing to be a partner with us in this effort and write a letter to be included with the Environmental Trust application indicating the specific activities, staff hours, material and associated costs you would be willing to contribute on an in-kind basis for this effort.** The letter should specify the contribution to be made and confirm the partner's commitment to the project. Although a cash contribution would also be appreciated, it is not essential as any in-kind assistance you can provide (such as holding workshops, creating and distributing material and promotional efforts) is even more important. The Environmental Trust application is due no later than September 4 and we would need to include partner letters at that time. We would also need to incorporate the in-kind contributions noted in those letters prior to that time. **Therefore, I would like to ask that we receive any letter agreeing to partner, including the value of the related in-kind contribution by no later than August 29.**

At this time we do not have a copy of the full proposal, although I have attached the brief material currently available. We do expect to have additional material available shortly and I will send it to you as soon as it is available. We have received a substantial verbal commitment of both cash and in-kind staff time from a team of the pivot manufacturers.

With the fully and overappropriated status experienced in much of western and central Nebraska, it has become important that we reduce water use in the most economic manner possible. I believe this program would provide excellent educational opportunities to irrigators working to reduce use. If you have any questions on the program, please don't hesitate to contact me, Steve Gaul (402-471-3955) of my staff, or Dr. Ron Yoder of the University of Nebraska. If we do not hear from you, we will follow up in a few weeks concerning your decision on this important proposal. Thank you for your consideration.

Attachment

Cc: Ron Yoder  
Dean Edson

**Draft**

## **Reduced Water Use Through Water Management Education**

### **Partners**

Nebraska Department of Natural Resources  
Center Pivot Manufacturers of Nebraska  
University of Nebraska  
(Environmental Trust)

### **Objective**

To promote efficient use and good stewardship of the water resources of Nebraska through education and demonstration by pooling the resources of the partners.

### **Proposed Plan of Action**

Develop and deliver an organized educational program to provide irrigators and those advising irrigators with the knowledge and skills necessary to obtain the maximum benefit from a constrained water supply. The educational program will be developed in three-levels (Levels One and Two would be three to four hours, and Level Three would be slightly longer) as follows:

- Level One - three to four hours of instruction with basic principles of soil and water management for efficient irrigation, evapotranspiration (ET), and application uniformity and efficiency
- Level Two - three to four hours of instruction using principles in Level One to manage irrigation water efficiently, e.g., soil water measurement, ET measurement and estimation, and measuring application efficiency
- Level Three - six to eight hours of instruction on advanced irrigation water management including the use of state-of-the-art sensing, decision-making, and control technology (with demonstration of this technology)

The educational program will be coordinated by an Extension Educator, who will be responsible for developing the materials (for both on-site and distance delivery) in consultation with the partners, for liaison among the partners, for organizing and scheduling on-site workshops, for delivering portions of the workshops, and for interfacing with the client groups, e.g., irrigation dealers, consultants, NRDs, and ??

### **Roles**

Nebraska Department of Natural Resources – actively promote program and coordinate information among various entities within the state of Nebraska  
Center Pivot Manufacturers of Nebraska – actively promote program, provide access to irrigators through dealers, and provide resources such as meeting venues, meals, promotional materials, and equipment for Level Three  
University of Nebraska – provide educational program and coordinate program with ongoing research efforts  
(Environmental Trust) – provide initial funding

**Budget** - to be determined, but approximately \$100,000/ year for three years

- ✓ Reporting Requirement - Forecasting of water supply
- ✓ What we do when - all fully covered
- ✓ WPTF Agenda
- ✓ Jessica Flood mt

545,000

365,000

213,000

1123,000

### Conservation Study

NET Money

DNR Money

CPURD Money

Explore getting done to get handle on cons activities

GET ET nailed to rest so recharged or held in soil

3 or 4 NET Grant Proposal

Req agent / ET -

ET work TO # 10

701 - Int write agent

Cons Study

NET STAFF

Water Resources Advisory  
Panel (WRAP)

# on how much streamflow impacted by cons activities  
before implement IMP - some work



Proposal #5 Does environmental effects which is not  
a part of the others

Check at Repaman NEQ TF Objective

Cost Effect of soil veg treated

Call & work with Bobbi

Env Impacts

NET Can't do anything required by law

Call Daniel Scott

Get Partners where Possible

Proposal #2 Quant of Soil

① Research

② Outreach in OA of Republicans

Try Rompe as Partner

Contact Sust Ironk

Go over a Talk on NET Requirements &  
Guidelines - He can write Tech

Proposal #3 ET US Recharge

mgmt. Alter/ECON tracked on

Corps as Partner

Daniel Martin as contact

#4 Call Mike Hayes & Study Schofield - may have  
money that she is willing to spend

Our focal point for NET is in fact what  
researchers are doing