

UPPER ELKHORN The Oracle

"Making Wise Decisions Concerning Our Natural Resources"

<http://www.uenrd.org>

Natural
Resources
District

Fall/Winter 2010

UENRD Board of Directors Adopt Rules and Regulations Changes Which Includes Groundwater Irrigated Acre Certification and Groundwater Transfers

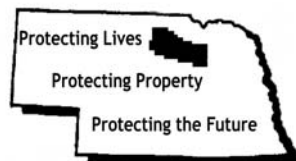
The Upper Elkhorn NRD Board of Directors held a public hearing on Monday, September 13, to receive testimony on the proposed changes to the NRDs Groundwater Management Plan (GWMP) Rules and Regulations. Testimony was given by Gregg Felker, Chairman of the UENRD Water Resources and Watershed Committee in support of the changes. Felker outlined those changes which were drafted in an effort to protect existing water users, the development of ground water models and allow future ground water development while protecting ground water supplies. These changes pertained to Rules 15, 20, 21, 22 and 25.

Rule 15 allows for cooperators to complete their Nitrogen Management Certification by means of a take home test. Rule 20 pertains to when a ground water well withdraws 500 acre feet of water it will need to have a hydrological evaluation of the aquifer system. This rule was developed to evaluate the aquifer system and to determine if it can support that type of pumping and the impacts to surrounding users within a two mile radius. Rule 21 was developed when the district adopted the Rules for LB483 acre expansion

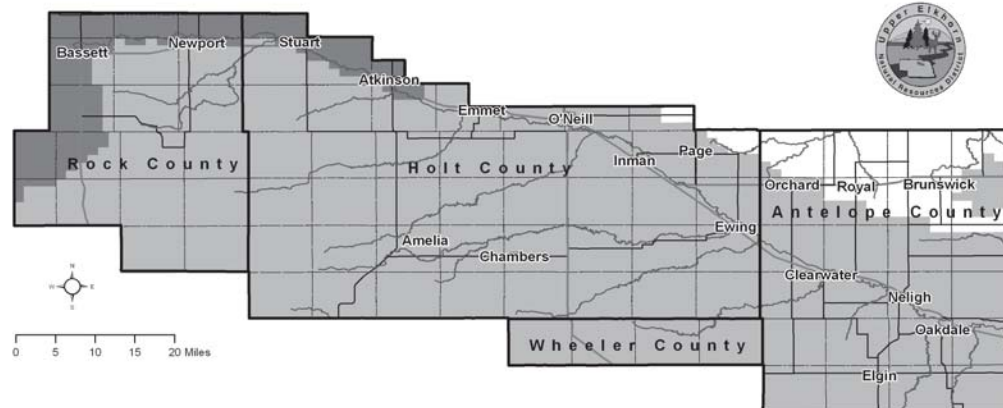
and outlines when a flowmeter is required. This rule was created because the NRD is lacking the actual amount of ground water withdrawals from wells pumping more than 50 gallons per minute. The Rule will require a flowmeter to be installed and the volume of water pumped to be reported to the Upper Elkhorn NRD on new and replacement wells pumping more than 50 gallons per minute, any expansion of irrigated acres under LB483 and replacement of wells pumping more the 50 gallons per minute. This information will be utilized in the development of better water management practices by cooperators and modeling efforts within

the district. Rule 22 pertains to the certification of irrigated acres. Upon being labeled fully-appropriated, the district had become aware of the importance of certifying irrigated acres. Currently, there are approximately 4,100 irrigation wells within the district that may service 410,000 to 533,000 acres. This disparity needs to be accurately documented to develop any type of trustworthy model and to protect existing ground water rights now and into the future.

continued on page 2



Upper Elkhorn NRD
Moratorium and Stay Designations
as of April 6, 2009 (Signing of L.B. 483)



■ Niobrara River Basin 10/50 (October 16, 2007)
■ Lower Platte Basin 10/50 (December 16, 2008)
□ Not Fully Appropriated

Upper Elkhorn NRD Areas
Niobrara Designation: 233 square miles
Lower Platte Designation: 2,803 square miles
Not Designated: 249 square miles
Total District: 3,052 square miles

Newsletter Highlights

- ◆ Expansion of New Irrigated Acres
- ◆ UENRD Report Card
- ◆ New Irrigated Acres Revoked
- ◆ Chemigation Update
- ◆ 2011 Trees
- ◆ Water Resources Report
- ◆ Poster Contest
- ◆ Scholarships

Sign Up for Third Expansion of New Irrigated Acres to begin January 3, 2011

As of January 3, 2011, the Upper Elkhorn NRD will have 4,027 acres available for the expansion of new irrigated acres. Applications will be accepted during the entire month of January during regular office hours (8-12 & 1-5). Cooperators with approved acres will be notified by mid February. Once the acres have been approved, Cooperators will have until October 1, 2011 to irrigate their new acres. Acres not meeting the criteria by October 1, 2011 will be revoked.

**PHASE II
REPORTS
ARE DUE
FEBRUARY
1, 2011**

**SIGN UP FOR
THIRD
EXPANSION
OF NEW
GROUND
WATER
IRRIGATED
ACRES TO BE
HELD DURING
JANUARY
2011!!**

09-10 Upper Elkhorn NRD Report Card

- ◆ Approved the expansion of 3,564 new irrigated acres
- ◆ Revoked 573 acres of expanded irrigation due to non compliance of LB 483 Rules and Regulations
- ◆ Planted 92,021 conservation tree seedlings
- ◆ Installed 257,928 feet or 48 miles of conservation weed mulch
- ◆ Sold 628 weed mulch squares for seedling protection
- ◆ Sold 5,648 feet of drip irrigation hose
- ◆ Sold 4,560 pounds of poison barley
- ◆ Grass Seed Available
- ◆ Distributed \$78,054 in NSWCP/NRD Cost Share for Windbreaks, Planned Grazing Systems, Irrigation Water Management, Pasture Planting & Range Seedings
- ◆ Distributed \$3,351 in Water Well Decommissioning funds to properly abandon 10 wells
- ◆ Distributed \$2,342 to cooperators through the Domestic Water Quality Program
- ◆ Distributed \$4,972 in costshare to cooperators for flowmeters through the UENRD and Environmental Trust Grant
- ◆ Sponsor the East Branch Verdigris Creek Project which distributed over \$35,000 is costshare and other conservation measures for the watershed in conjunction with the Nebraska Environmental Trust
- ◆ Distributed \$3,463 to cooperators participating in the Buffer Strip Program
- ◆ Distributed \$8,045 to cooperators participating in the Corners for Wildlife Program
- ◆ Distributed \$889 to cooperators participating in the Wild NE Program
- ◆ Maintain weather stations in the Brunswick, Elgin, O'Neill and Newport areas
- ◆ Worked with the Northeast Research & Extension Center on a crop rotational study in northern Antelope County
- ◆ Continue monitoring Phase I and Phase II Groundwater Management Areas (GWMA)
- ◆ Issued 51 water well permits (greater than 50 gpm)
- ◆ Certified 200 cooperators in nitrogen management
- ◆ Sampled approximately 500 irrigation wells for water quality parameters and tested 54 dedicated monitoring wells for pesticides
- ◆ Measured static water levels in approximately 148 irrigation wells & 54 dedicated monitoring wells across the district
- ◆ The District maintains 54 dedicated monitoring wells at 24 different locations for quality and quantity parameters
- ◆ The District maintains a private drinking water sampling program which includes testing for bacteria and other household contaminants
- ◆ The District maintains a vadose zone sampling program to analyze nitrates in the soil

Citizen Scientist Water Test Day – April 2011

The UNO Aquatic Toxicology Laboratory is sponsoring a citizen scientist water testing day to test for pesticides in the Elkhorn River and we want YOU to help us! We have simple tests for Atrazine (a common pesticide used in the Elkhorn River Basin) that can be used by anyone – no training required. All you have to do is go out to your local stream or river site and dip the test strip in the water for 10 minutes to get a positive or negative reading for Atrazine. If you are interested in participating, check our website, www.unomaha.edu/envirotox for updates through the winter or contact Gwen at (402) 554-3302 or email gryskamp@unomaha.edu.

UENRD Adopts Rules & Regulations...continued from pg 1

Acre certification will begin within the next 12 months and landowners should be watching for letters from the Upper Elkhorn NRD requesting documentation of irrigated acres. Documentation for irrigated acres will be based off of FSA and County Assessor records. Acres will be determined by when the basin was labeled fully appropriated, the frequency of irrigation within a designated time period and when LB 483 was enacted. The last major change the GWMP Rules and Regulations refers to Rule 25 and the transfer of groundwater rights. Once the irrigated acres within the Upper Elkhorn NRD are certified, the district will allow for the transfer of ground water rights. Eligibility to transfer water rights will be determined by district sub-areas/basins,

stream depletion factors and stability of the static water and water quality levels.

Since there was no further testimony the public hearing was closed and the Upper Elkhorn NRD adopted the changes to the Groundwater Management Plan Rules and Regulations at its regular monthly board meeting later that evening. The changes to the GWMP Rules and Regulations are necessary to protect existing water user rights, to protect the future of economic development and to protect the ground water resources of the Upper Elkhorn NRD. The order for the newly adopted rules and regulations went into effect on October 29, 2010.



Attention Chemigators We Must Continue to Protect Our Environment

There seems to be some confusion with the updates to the UENRD Chemigation Program. Anyone who permits a chemigation site this year will receive pre-printed renewal forms for the 2011 chemigation season. These forms will contain the landowner information, certified chemigator and legal description. Cooperators receiving these forms will need to make sure the pre-printed information is correct, list any fertilizer or chemicals used the previous year (2010) through the system, sign and return with the proper fee. **Renewal forms sent out are nontransferable. If you rent different quarters**

from year to year, you will need to fill out new forms for the rented quarters with your information; however, this does not mean it would be a new fee. If the quarter was permitted the previous year it would still be a renewal. If you are not sure of the status of a quarter you can contact the NRD office for this information. If you are no longer farming a quarter, you may either return the form with a notation that you are not farming that quarter this year or completely disregard the form in question. **Also, cooperators should not alter the pre-printed forms with a different legal**

Upper Elkhorn NRD Revokes Previously Approved New Expansion of Irrigated Acres

The Upper Elkhorn NRD Board of Directors voted to cancel 674 acres of expanded irrigation at its October board meeting. Cooperators who signed up to expand irrigated acres in October of 2009 and January of 2010 and did not fulfill the requirements laid out in the LB 483 Rules and Regulations for the Expansion of Irrigated acres were revoked. These acres will now be available during the January 2011 expansion of irrigated acres sign up. A total of 3,936 acres will be available in January.

“With water issues being what they are, its not fair to keep these acres from a cooperator who would truly like to develop them. That is why the 2009 and 2010 acres that didn't meet regulations were revoked.”

description because this will not match the chemigation permit number attached contained on the form. Pre-printed renewal forms may be returned to the NRD office anytime from the time they are received to the June 1 deadline to maintain their renewal status.

Anyone found to be out of compliance in regard to the Chemigation Act may be subject up to \$1,000 civil penalty or Class II misdemeanor and ineligible for UENRD cost share programs.

If you have any questions please contact the NRD office at 336-3867.

Cost Share Eligibility Requirements

Any person who fails to comply with any of the Upper Elkhorn Natural Resources District's Rules and Regulations shall not be eligible to participate in any programs or receive payments that are administered by the District. Programs requiring compliance include but are not limited to the following: UENRD Groundwater Management Plan - Phase I and Phase II Rules & Regulations; Nitrogen Certification

Program, LB483 Rules and Regulations Chemigation Act; Irrigation Runoff and Erosion and Sediment Control. Cost share programs that may be affected due to lack of compliance include but are not limited to the following: Nebraska Soil and Water Conservation Program; Upper Elkhorn NRD Conservation Program - Land Treatment Fund; WILD Nebraska/Wildlife Habitat Improvement Program; Nebraska

Buffer Strip Program; Corners for Wildlife; Liquid/NH₃ Application Program; Livestock Manure Analysis Program; Domestic Water Quality Program; Nitrogen Management Program; and, the Water Well Decommissioning Program. Anyone who is already a participant in any of these programs or may be a participant will not receive any payments as long as they fail to comply with any District rules and regulations.

Irrigation Development Pushes Trees Aside!

Due to the passage of LB 962 in 2004, its association with well moratoriums and growing commodity prices over the past few years, a number of trees have been removed to develop areas for crop production. The Upper Elkhorn NRD estimates that over 3,128 acres of trees have been removed from pivot corners, shelterbelts and wildlife habitat areas over the last 12 years. This is an average of 4 acres of trees per quarter. The Upper Elkhorn NRD would like to encourage all those landowners who removed trees to consider replacing them this upcoming spring. There are several incentive programs to help offset the cost of installing a new windbreak on the federal, state and local level. Federal programs include the Environmental Quality Incentives Program (EQIP); Wildlife Habitat Improvement Program (WHIP); Wetlands Reserve Program (WRP-limited to appropriate wetland sites); and, Continuous Conservation Reserve Program (CCRP). State programs include Nebraska Soil and Water Conservation Program (NSWCP); individual NRD programs; Nebraska Buffer Strip Incentives Program; and, WILD Nebraska. Private organizations also offering assistance to promote tree planting are Corners for Wildlife, Pheasants Forever and Quail Forever chapters.

The Upper Elkhorn NRD will be taking orders from now until March 1st. Trees are available on a first come first serve basis and are available in a variety of species consisting of conifers, broadleaves and shrubs. Hand plant trees should be ordered in bundles of 25 while machine plant orders will be based on the windbreak design. The NRD can also provide technical assistance to cooperators who would like help designing a new windbreak or renovating an old one. The technician will suggest the type of trees best suited for your soil type and design a layout beneficial to your area.

The NRD also offers two practices to help increase the survival rate of new seedlings, drip irrigation and conservation weed mulch. Drip irrigation is a flat hose installed at the time the trees are planted and is used when there is a water source at the site. Conservation weed mulch is installed over the seedlings to help control weeds and retain moisture. Both practices can be very beneficial to young windbreaks and should be considered when placing your order.

Remember, the Upper Elkhorn NRD is also your one-stop shop to order trees and weed mulch. The NRD can plant and install the trees and fabric as we have for the past 30+ years. Trees and mulch purchased from the Upper Elkhorn NRD could be eligible for local or state funds. For further information or to place an order contact your local NRCS office or the Upper Elkhorn NRD at 301 N. Harrison Street, O'Neill or (402) 336-3867.

Available Tree Species

Conifers	Broadleaves	Shrubs	
Eastern Red Cedar	Native Cottonwood	Caragana	Manchurian Apricot
Rocky Mountain Juniper	Swamp White Oak	Hazelnut	Skunkbush Sumac
Colorado Blue Spruce	Bur Oak	American Plum	Diamond Willow
Black Hills Spruce	Black Walnut	Cranberry	Sandcherry
Scotch Pine	Kentucky Coffee	Black Cherry	Elderberry
Jack Pine	Hackberry	Buffaloberry	Redosier Dogwood
Ponderosa Pine	Honeylocust	Russian Almond	Harbin Pear
Austrian Pine	Amur Maple	Cotoneaster	Lilac
Southwestern White Pine	Aspen	Chokecherry	
Norway Spruce	Green Ash		
	Pecan		
	Red Oak		

Cost for Trees & Materials

Handplant Trees - Handling & Tax	\$ 90.20 per 100
Machine Plant Trees - Storage & Tax	\$ 143.43 per 100
Drip Irrigation	\$ 0.15 per foot
Weed Mulch - Installed	\$ 0.60 per foot
Weed Mulch - by the roll	\$ 105.00 for 300 foot roll
Weed Mulch Squares	\$ 2.00 each
Prices Subject to Change	

Sign Up Underway for NRD Cost Share Programs to Protect Lives and Property

Anyone wishing to participate in an Upper Elkhorn NRD cost share program should contact the Upper Elkhorn NRD office or their local NRCS office. Cost share is available for the installation of the practice itself and will not include any sales tax on the materials or labor. Cost share programs are based on available funding and include:

NSWCP/NRD: The UENRD in conjunction with the Department of Natural Resources offers cost share practices to landowners wishing to install conservation practices. Some practices included in the program are: windbreaks; planned grazing systems; irrigation water management; pasture planting and range seeding; grade stabilization; and, windbreak renovation. Cost share is available at a rate of 50%.

Water Well Decommissioning: The UENRD in conjunction with the Department of Natural Resources offers cost share funds at a rate of 75% to landowners who wish to properly decommission an abandoned well.

Domestic Water Quality: The UENRD offers cost share to cooperators whose drinking water is contaminated with nitrates over the federal health standard of 10 parts per million. Cost share is available at a rate of 50% or a maximum of \$800.

Anhydrous Ammonia Application: The UENRD offers 50% cost share to landowners for the purchase of a flow control monitor not to exceed \$900; and, \$200 for the purchase of a vertical dam manifold.

Livestock Manure Analysis: The UENRD offers 50% cost share not to exceed \$200 for manure analysis to credit useful materials into the soil.

Nitrogen Management: The UENRD offers 50% cost share not to exceed \$200 to cooperators to encourage producers to manage fertilizer application better by accounting for residual nitrate-nitrogen which already exists in the soil root zone and irrigation water.

Cost share applications are approved by the Upper Elkhorn NRD Board of Directors and available on a first come first serve basis and Do Not include sales tax.

NeRAIN Volunteers Needed!!!

If you are a weather enthusiast and would like to volunteer for the NeRAIN Program contact the Upper Elkhorn NRD at 402-336-3867! Volunteers will receive a new quality rain gauge, installation and brief training (on internet) to record data. All you need is a computer with internet access and a few minutes each day to report readings from your gauge! NeRAIN is sponsored by the Nebraska Department of Natural Resources, Environmental Trust and the UENRD.

The Oracle is the official publication of the Upper Elkhorn Natural Resources District. It is produced for the purpose of educating the public regarding natural resources issues. Any comments or questions should be sent to Beth Walsh, Upper Elkhorn NRD, 301 N. Harrison Street, O'Neill, NE 68763 or e-mailed to bwalsh@uenrd.org.

UENRD Offers Scholarships to Graduating High School Seniors

Each year, the Upper Elkhorn Natural Resources District offers three \$500 scholarships to graduating High School Seniors from the District. These scholarships are available for students who are planning to further their education in a field related to natural resources or agriculture. Seniors who are interested should contact the Upper Elkhorn NRD or visit the website at www.uenrd.org/education.html for further information, eligibility requirements and applications. The deadline for all scholarship applications is April 8, 2011.

Upper Elkhorn NRD Announces Annual Poster Contest Winners

The 19th annual Upper Elkhorn NRD Poster Contest was held this fall with 14 students from two area schools participating in the competition. Each year the NRD invites Kindergarten through Twelfth Grade students throughout the District to participate in the poster contest giving them an opportunity to showcase their artistic talents regarding our soil, water and other natural resources. This year students were asked to incorporate the "Conservation habits = Healthy Habitats" theme into their posters, which were judged in mid November. This year's winners were Seth Hytrek, First Place in the 4th-6th Grade Category; Aaron Seger, First Place in the 7th-9th Grade Category; Ryan Linders, Second Place in the 7th-9th Grade Category; and, Sawyer Williams, Third Place in the 7th-9th Grade Category.

All first place posters were forwarded on to the Nebraska Association of Resources Districts State Poster Contest where they will compete against student posters from all across Nebraska. The Upper Elkhorn NRD Directors and Staff would like to thank everyone who participated in this year's Poster Contest.

UENRD Water Resources Report Precipitation and Evapotranspiration (ET)

The 2010 growing season was characterized by normal average temperatures and above normal precipitation. However, a large portion of the precipitation occurred over a two-week period at the end of May and the beginning of June. Crop water use is estimated in terms of evapotranspiration (ET). This term describes the movement of water to the atmosphere from surfaces, such as the soil (evaporation), and from vegetation (transpiration). Crop growth is dependent upon water availability and solar inputs, or latent heat. A certain number of 'heat units' are required for the plant to move through the development process to full maturity. Heat units are calculated for each crop as the difference between the daily maximum and minimum temperatures. Plant growth slows if daily temperatures fall outside the minimum or maximum threshold limits. For corn the thresholds are between 86.0 F and 50.0 F. Summation of daily heat units for corn in 2010 suggests that there was sufficient energy to reach full maturity.

The chart below depicts growing-season precipitation totals, percentage of precipitation received compared to the 30-year average, and estimated evapotranspiration of corn from 2006-2010.

	2006			2007			2008			2009			2010		
	Precip. April 1 - Sept. 30	% of Normal Precip.	Estimated Corn ET	Precip. April 1 - Sept. 30	% of Normal Precip.	Estimated Corn ET	Precip. April 1 - Sept. 30	% of Normal Precip.	Estimated Corn ET	Precip. April 1 - Sept. 30	% of Normal Precip.	Estimated Corn ET	Precip. April 1 - Sept. 30	% of Normal Precip.	Estimated Corn ET
Brunswick	14.12	72	25.01	20.2	103	22.27	18.55	95	24.29	14.85	76	23.98	21.47	112	23.54
Elgin	15.01	79	23.61	22.53	118	21.31	22.9	120	23.86	16.47	86	25.67	22.86	120	22.62
Newport	16.55	93	26.94	15.63	88	24.75	17.6	99	26.83	17.13	96	23.94	23.63	129	26.01
O'Neill	14.49	79	26.15	17.73	97	22.39	17.76	97	25.47	16.35	89	23.39	23.98	121	24.79

Precipitation and ET in Inches

UNO Sponsoring High School Research Competition

UNO High School Research Competition – sponsored by the Aquatic Toxicology Laboratory. To enter, design an experiment to be performed on the Elkhorn River and submit a proposal for the design. Proposals can be submitted electronically or by paper from December 1, 2010 to February 7, 2011. Winners receive a \$2,000 research stipend to conduct the experiment in June, 2011 and each student will receive \$100 cash and a UNO prize pack. For more information about guidelines, eligibility, and application materials, visit www.unomaha.edu/envirottox/errscmp.

Happy Holidays

Upper Elkhorn Natural Resources District Board of Directors

Tim Knuth - Chairman	Subdistrict 5 ~ Brunswick	(402) 358-5430
Gregg Felker - Vice Chair	Subdistrict 3 ~ O'Neill	(402) 336-2864
Dale Wiles - Treasurer	Subdistrict 3 ~ O'Neill	(402) 336-1805
Ted Hughes - NARD Rep	Subdistrict 6 ~ Neligh	(402) 887-4942
Jerry Childers	Subdistrict 4 ~ Chambers	(402) 482-5688
Chris Dierks	At Large ~ Ewing	(402) 485-2618
James Dvorak	Subdistrict 2 ~ Atkinson	(402) 925-5776
Janet Koinzan	Subdistrict 7 ~ Elgin	(402) 843-2410
Curtis Gotschall	Subdistrict 2 ~ Stuart	(402) 925-2504
Reg Green	Subdistrict 5 ~ Creighton	(402) 358-5479
Jim Keller	Subdistrict 1 ~ Newport	(402) 244-5448
Jerry Heithoff	Subdistrict 7 ~ Elgin	(402) 843-2467
Jeff Krebs	Subdistrict 6 ~ Neligh	(402) 887-5215
Mike Russman	Subdistrict 4 ~ Ewing	(402) 485-2638
Roy Stewart	Subdistrict 1 ~ Newport	(402) 244-5360

UENRD Board Meetings are held the 4th Monday of every month.

March through October at 8:00 P.M. and November through February at 2:30 P.M.

UENRD Staff

Dennis Schueth	General Manager e-mail: dschueth@uenrd.org
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Kelly Kloppenborg	Water Resources Technician e-mail: kloppenborg@uenrd.org
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Beth Walsh	Information & Education/Chemigation Coordinator e-mail: bwalsh@uenrd.org
Joy Knapp	NRCS Clerk, Neligh
Mary Zakrzewski	NRCS Clerk, O'Neill

Upper Elkhorn NRD Crop Water Use Report 2010

BRUNSWICK	Total Inches	Emergence	Maturation
Corn Total ET	23.54	5/1/2010	9/16/2010
Soybean Total ET	17.13	5/15/2010	9/6/2010
Potato Total ET	17.16	5/10/2010	9/30/2010
Precipitation from 5/1/2010	19.6		
ELGIN	Total Inches	Emergence	Maturation
Corn Total ET	22.62	5/1/2010	9/16/2010
Soybean Total ET	16.33	5/15/2010	9/6/2010
Potato Total ET	16.59	5/10/2010	9/30/2010
Precipitation from 5/1/2010	19.92		
NEWPORT	Total Inches	Emergence	Maturation
Corn Total ET	26.01	5/1/2010	9/16/2010
Soybean Total ET	19.05	5/15/2010	9/6/2010
Potato Total ET	18.61	5/10/2010	9/30/2010
Precipitation from 5/1/2010	20.84		
O'NEILL	Total Inches	Emergence	Maturation
Corn Total ET	24.79	5/1/2010	9/16/2010
Soybean Total ET	17.93	5/15/2010	9/6/2010
Potato Total ET	17.67	5/10/2010	9/30/2010
Precipitation from 5/1/2010	22.04		