

## URNRD Augmentation Questions, and Answers

**Did the NRD buy water or land in Dundy County?** The NRD approved a contract to purchase land – nearly 4,000 acres, 3,262 of which are irrigated – and the associated water allocation. The land is located in an ideal spot for an augmentation project and was on the open market so the NRD acted quickly to purchase it and analyze the potential benefits of a project.

**What will it cost?** The purchase agreement approved by the NRD board is \$10 million. The price that that NRD agreed to pay per irrigated acre is approximately \$2,600. Also included in the sale is about \$1.2 million of improvements, including 787,500 bushel grain storage, a calving barn, shop buildings and a couple of small homes. The NRD will likely sell these facilities at some point in the future. Including the installation of a pipeline needed to occasionally increase stream flows in Rock Creek and the Republican River, the approximate, preliminary estimate of the total cost of the project is between \$12 million and \$15 million, less the price received for the future sale of any part of the property.

**How will it be paid for?** Using the occupation tax on irrigated land. Approximately \$5 million that has been and will soon be collected can be used to pay for the property. Future occupation tax revenues are expected to pay for the rest. The occupation tax rate will dictate how quickly it is paid for. Should the NRD decide to use its maximum occupation tax authority and levy \$10 per irrigated acre, for example, it could be paid off in as few as two years.

**What will happen to the land when it is taken out of production?** The sellers will rent the ground in 2011 and will be allowed to irrigate it. After that, it's expected that the property will be replanted to natural rangeland. The sellers will have a five-year lease option. Long-term, the land could be retained by the NRD and leased, or sold as non-irrigated land with the NRD holding easements to operate the pipeline project. There are many options to explore.

**How does this make financial sense for the district?** The project is significantly cheaper than relying solely on retiring acres or occasionally shutting down irrigation close to the stream to generate enough stream flow to maintain compliance with the Republican River Compact. Maintaining compliance with the compact is essential to prevent drastic irrigation regulations that would be needed to comply with the compact, absent an augmentation program. In the current land market, permanently retiring enough acres to generate a similar amount of stream flow as the augmentation project could cost twice as much as the augmentation project. And paying farmers in the rapid-response area near the stream not to irrigate for just one year to stay in compliance with the compact in a dry year could cost about as much as the property the NRD is purchasing.

**Will water be pumped into Rock Creek all the time?**

No. Water is expected to be pumped into Rock Creek only during dry times when needed to help the district and state stay within its compact allocation. How often pumping will occur is expected to vary greatly, as drought conditions strike irregularly, but history suggests that pumping may only be needed every three or four years and that only about 60% of the historical pumping would be needed.

**How much water will be pumped?**

This will also vary significantly and be dependent on official state forecasts of how much the district may exceed its compact allocation if actions are not taken. In the most challenging, recent year for compact compliance, 2005, the NRD exceeded its portion of the compact allocation by approximately 10,350 acre feet. If Kansas approves the augmentation project, the project could prevent a shortfall of that magnitude. If Kansas doesn't approve, the project would still have significant benefits – the NRD and state would get credit for 69 percent of the water pumped. By pumping approximately 10,000 acre feet of water – which is roughly the maximum amount that would be allowed every three years without exceeding historical consumptive use on the retired acres – the district and state would get credit for up to approximately 6,900 acre feet of the 10,000 acre feet pumped.

**Is there an existing stream gauge that will measure how much water is added, and is the gauge able to be used for compact compliance purposes?** Yes, there is a compact gauge on Rock upstream of the confluence with the Republican River near Parks.

**When will the pipeline be built, and how large will it be?** Expectations are the pipeline will begin being installed this year and that it will be operational in 2012. Engineers will determine how large the pipe will be. Roughly 10 miles of pipeline is expected to be needed, though that could change based on engineering design. The amount of pipeline is less than the 30-plus miles engineers determined would be needed for possible sites in the eastern end of the Republican basin.

**Is this the final solution for compact compliance issues in the NRD?** No. While it could significantly ease the burden of complying with the compact during dry times, reduced water consumption through acreage retirement and regulations will be necessary to ensure compliance over the long term and to extend the life of water resources. The augmentation project will help prevent sudden regulatory measures and instead allow regulations to evolve over time so they track with the advancement of crop and irrigation technologies that will conserve water.

24 CONTIGUOUS IRRIGATED CIRCLES:

10 – 8000 VALLEY SPRINKLERS [#1, 2, 3, 4, 5, 6, 7, 10, 14, 19]

14 – ZIMMATIC SPRINKLERS [#8, 9, 11, 12, 13, 15, 16, 17, 18, 20, 21, 22, 23, 24]

All pivots have drops

POWER UNITS:

14 – ELECTRIC POWER UNITS [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 16, 17]

1 - DIESEL POWER UNIT [18]

8 - PROPANE POWER UNITS [11, 12, 13, 19, 20, 21, 22, 23]

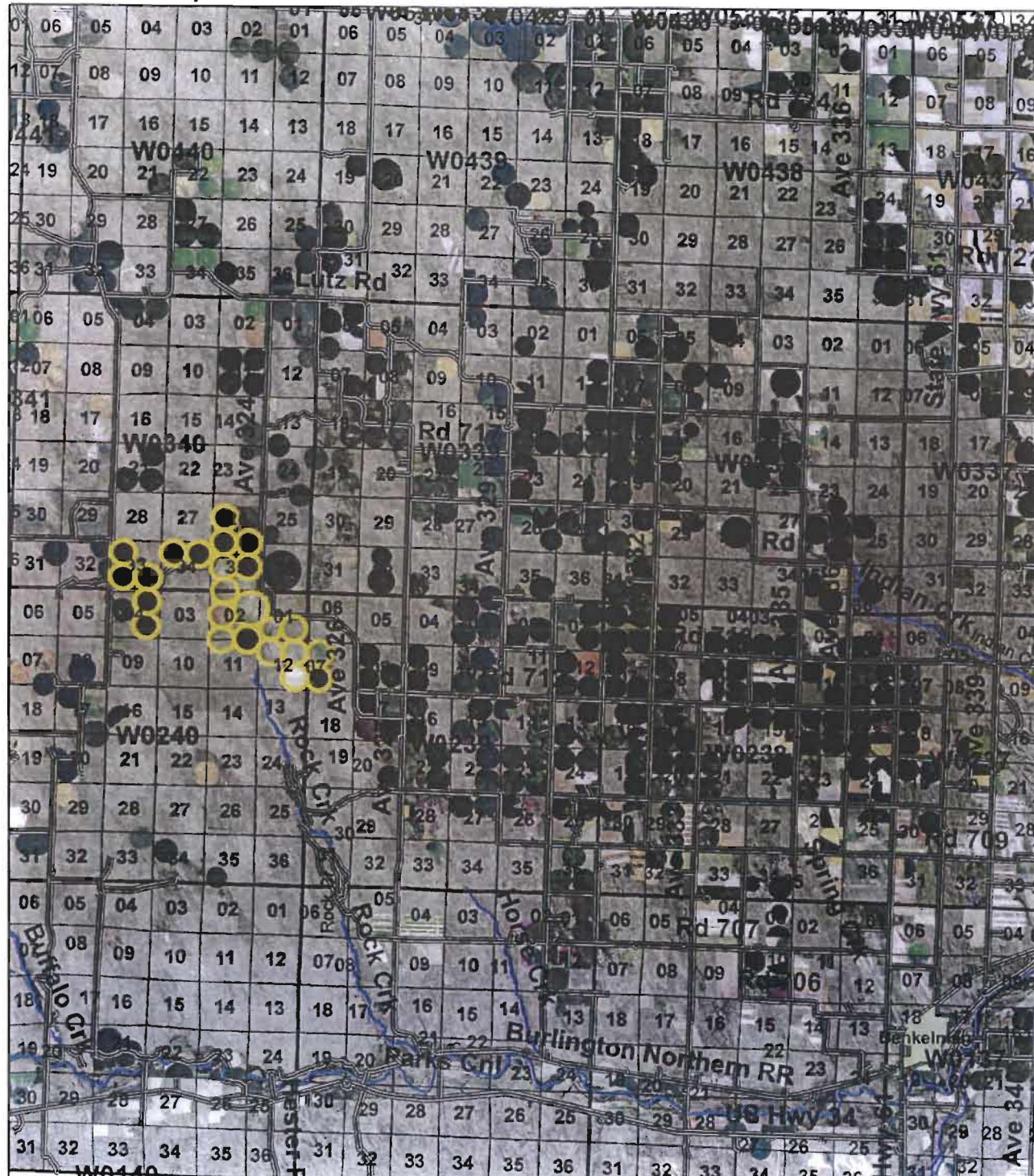
2009 DIRECT PAYMENT	\$57,507
FSA CROPLAND ACRES	3184 AC
FSA BASE ACRES	2,407.6 CORN
FSA BASE ACRES	211.4 WHEAT
NRD REMAINING ALLOCATION FOR 2010-2012	36.15 INCHES

ACRES/BUILDINGS/HOUSES/BARNS/& OTHER RELATED AMMENITIES:

NRD ALLOCATED ACRES:	3,261.6 AC	\$8,757,500
GRAIN STORAGE	525,000 BU	787,500
BULK SEED STORAGE	2,000 BU	10,000
MACHINE STORAGE SHED/HANGER		80,000
HEATED SHOP		75,000
DOUBLE WIDE MOBILE HOME		35,000
MODULAR HOME		35,000
SCALES AND SCALE HOUSE		50,000
TRAILER HOUSE		20,000
CALVING BARN & FACILITIES		<u>150,000</u>

*SALES PRICE:* **\$10,000,000**

# Upper Republican NRD Proposed Streamflow Enhancement Site





Perkins Chase and  
Dundy Counties  
Headquarters in Imperial

## Upper Republican NATURAL RESOURCES DISTRICT

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### **Upper Republican Natural Resources District Project To Help Keep State in Compliance with Republican River Compact**

IMPERIAL, NE – A multi-million dollar project that will reduce groundwater use by agriculture while boosting stream flow to help keep Nebraska in compliance with the three-state Republican River Compact during dry periods has been approved by the Upper Republican Natural Resources District.

The irrigator-funded acre retirement and pipeline project approved Tuesday night will be the largest of its kind in the state and has the potential to help keep farmers throughout Nebraska's Republican River Basin, where 1.2 million acres are irrigated, from being shutdown to stay in compliance with the Republican River Compact that divides water use between Nebraska, Colorado and Kansas. Complying with the compact has been a source of conflict that is expected to be considered by the U.S. Supreme Court.

The project greatly reduces chances that producers who farm close to the Republican and its tributaries in the Upper Republican will have to be shutdown during dry times to help increase stream flow so the district doesn't exceed its allotted amount of allowable stream flow depletions caused by groundwater irrigation.

"This project is a cost-effective way to stay in compliance with the compact while protecting our water resources and keeping farmers in the basin in business," said Jasper Fanning, Ph.d., general manager of the Upper Republican Natural Resources District. "It doesn't negate the need for reduced water use to stay in compliance and the district, as it has for 30 years, will continue to be at the regulatory forefront of groundwater management."

The district's Board of Directors on Tuesday night unanimously approved the purchase of nearly 3,300 irrigated acres with 24 center-pivot systems located just north of Rock Creek State Fish Hatchery, which is seven miles north of Parks in Dundy County, at a cost of \$10 million. A portion, not all, of the water that historically has been used to irrigate the land will instead be piped into nearby Rock Creek, which flows into the Republican River near Parks. The water will be piped only when needed, during dry times, to stay in compliance with the compact. The land is expected to eventually return to natural vegetation. It is hoped that the pipeline will be in place in 2012.

The project may only need to be used every three or four years, at the most. History suggests that during the driest of years, the district may need an additional 10,000 acre feet of water to stay in compliance with the compact. The proposed project has the potential to supply roughly that amount of water, and more water could be provided in the future granted the district retires more acres.

The Upper Republican NRD worked cooperatively with the Nebraska Department of Natural Resources to analyze the feasibility and benefits of the project.

“We believe this project has the potential to significantly aid efforts to stay in compliance with the Republican River Compact and the local integrated management plan,” said Brian Dunnigan, director of DNR. “This is the type of initiative needed to help farmers throughout the Republican River Basin.”

Compact-compliance guidelines ensure that the amount of water piped into Rock Creek will not exceed what has historically been pumped for irrigation on the land or other acres that could potentially be retired in the future to expand the project. To get credit for creating stream flow, enough acres must be retired so that overall pumping that affects stream flow does not increase. In other words, water put into the stream must be offset by reducing irrigation by the same or more amounts of water than what is put into the stream.

The land is in an ideal location for such a project because of its proximity to Rock Creek. Only about 10 miles of pipeline is expected to be needed to occasionally collect groundwater on the land and dispense it into Rock Creek. Including the cost of the pipeline and land costs, total project costs are expected to be between \$12 million and \$15 million.

The project is part of the district’s adaptive, holistic management approach to water issues: The conservation-minded project will help ease a transition into tighter water regulations that will become more economically feasible as drought-resistant crops and other technologies are developed. That transition has already begun.

For example, the district’s compact-compliance plan that is outlined in the Integrated Management Plan it crafted with the state and that was approved this summer by the NRD and state calls for groundwater pumping across the three-county district to be 20 percent less than it was between 1998 and 2002. Farmers in the district surpassed the goal last year, pumping about 9 percent less than what is targeted in the IMP goal. Groundwater levels responded, rising nearly ½ a foot on average. Also, the district is launching a program to retire irrigated acres.

In addition to aiding compact compliance, the pipeline and water conservation project will help preserve water resources for future generations by requiring less groundwater pumping than has historically occurred on the ground the NRD purchased.

“This project will actually reduce the amount of water that is consumed and is for dry times, not all the time. We’ll continue to take actions throughout the district to reduce water consumption for long-term compact compliance and the preservation of water resources in the region including the Ogallala Aquifer,” said URNRD board member and farmer Tom Terryberry.

The district’s occupation tax on irrigated land will finance the project. Approved by lawmakers, the tax was designed for the type of projects the Upper Republican NRD is embarking upon.

The Upper Republican NRD encompasses Dundy, Chase and Perkins Counties in extreme southwestern Nebraska. It was the first NRD in the state to restrict irrigation and meter groundwater wells, doing so in the late 1970’s.