



**NEBRASKA ENVIRONMENTAL TRUST FUND
APPLICATION BUDGET JUSTIFICATION**

H1. Project Sponsor: Nebraska Department of Natural Resources

H2. Project Name: Republican Basin Water Meter Proposal

1. Have other sources of funding not listed in the Budget Worksheet been approached for project support? If yes, name them and explain the outcome of your request.

SUPPLEMENTARY BUDGET TABLES

TOTAL METER COST SHARE PROGRAM FUNDS EXPENDED OR COMMITTED TO DATE PLUS ENVIRONMENTAL TRUST FUNDS SOUGHT IN THIS APPLICATION (1)

<u>COST SHARE SOURCE</u>	<u>AMOUNT</u>
State Appropriation	\$1,500,000 — 6.5
Transfer of State Lawsuit Appropriation	\$ 800,000
U.S.Bureau of Reclamation Grant	\$ 200,000
Transfer of Tri-Basin NRD Environmental Trust Grant	\$ 67,000 + 90000
<u>Environmental Trust Grant Being Applied for with This Application</u>	<u>\$ 600,000</u>
TOTAL COST SHARE COMMITTED PLUS TRUST GRANT	\$3,167,000
REMAINING COST SHARE NEEDS	\$ 301,760(2)
TOTAL COST SHARE INITIATION TO COMPLETION	\$3,468,760
TOTAL LANDOWNER MATCH	\$3,468,760
TOTAL PROGRAM COST	\$6,937,520(2)

- (1) Assumes \$408 per meter average cost share for the approximately 4845 meters remaining after July 1, 2003. This is the average cost of all meters purchased under the program in the Republican Basin up until that date.
 (2) There has been a \$644,000 grant application to the U.S. Bureau of Reclamation but there is no indication as yet as to whether any of that amount will be funded.

TOTAL STATE APPROPRIATION METER COST SHARE EXPENDED THROUGH JUNE 30, 2003

State Appropriation	\$1,492,000
Landowner Match	\$1,492,000
TOTAL	\$2,984,000

of Meters Installed with State Appropriation Cost Share through June 30, 2003 - 3,512

2/27/04

DRAFT DROUGHT ASSISTANCE PROPOSAL FUNDING PACKAGE – 2004

Requested Budget

\$ 175,000

\$ 400,000

\$ 225,000

\$ 225,000

\$ ~~320,000~~

426,618

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1 771 618

✓ Meter Cost Share Assistance for South Platte NRD

✓ Meter Cost Share Assistance for North Platte NRD

✓ Platte/McConaughy Water Set-Aside

Republican Basin Water Set-Aside

Community Public Water Supply Enhancement (York)

✓ Cortland Canal Automation – Initial Work

~~TOTAL~~

Drought Center - Soil Moisture Monitoring ??

Plus Drought Center Money

2/27/04

Platte McConaughy Water Set-Aside - 2004

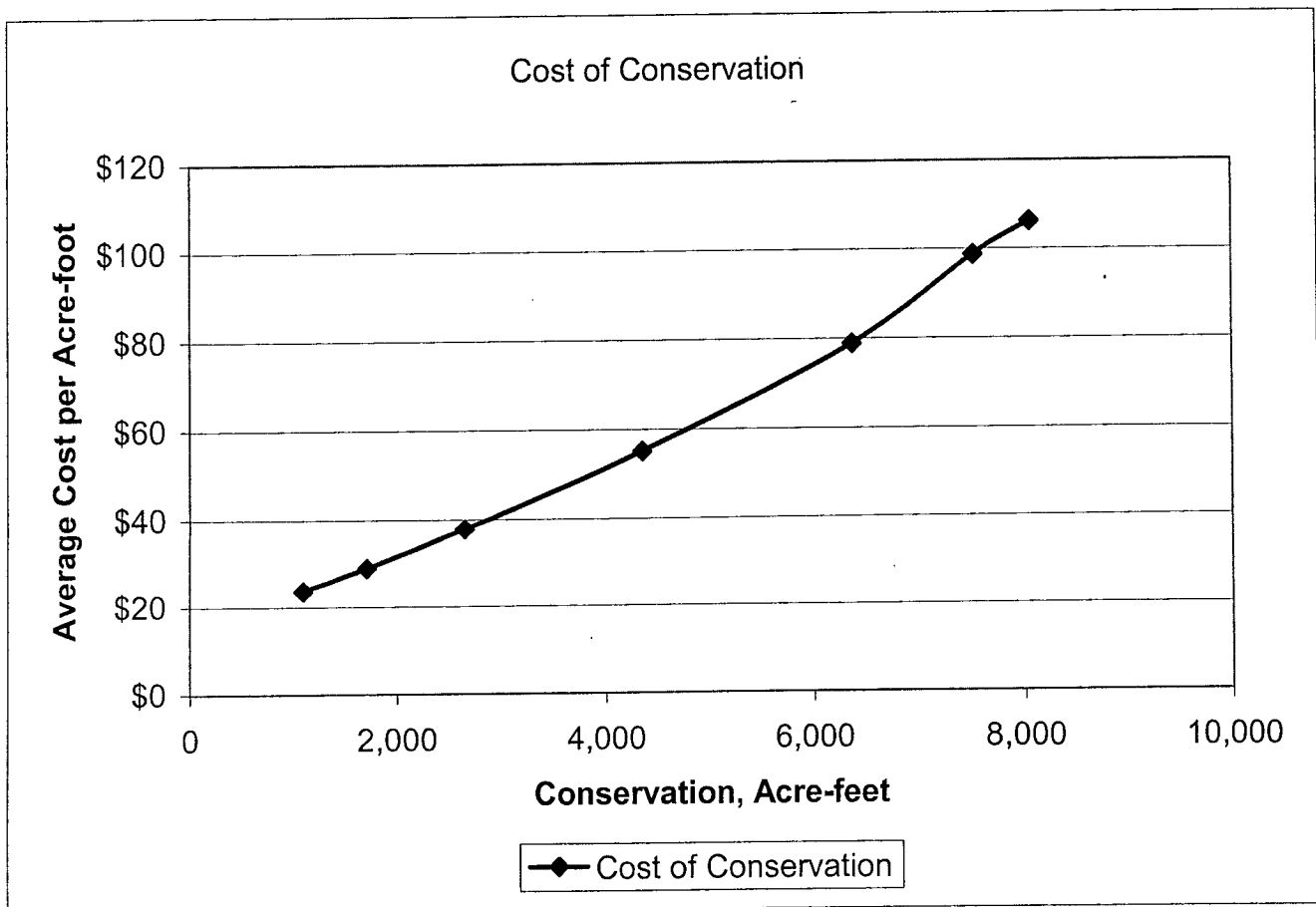
This proposal would pay irrigators in certain high priority areas not to irrigate in times of drought/water shortage, thereby saving water for environmental and other uses. Central Nebraska Public Power and Irrigation District took bids from their irrigators for not using surface water next summer. The results are attached to this page. This proposal would help retain flows and water levels at critical times. Information contained in the attached bid table makes it appear likely that \$225,000 could be used to purchase between 3,000 and 4,000 acre feet of water were the process to be used this summer. This project, at a smaller funding level, is being submitted by the state as part of the 2003 Drought Assistance Proposal package. If both proposals were to be accepted they would likely be used to fund different years.

The Central Nebraska Public Power and Irrigation District

Surface Water Use Reduction Pilot Program

Bid Summary:

Funding Level	Acre-feet of savings	Avg. Cost per AF
\$25,769	1,097	\$23
\$49,202	1,718	\$29
\$99,659	2,647	\$38
\$240,115	4,359	\$55
\$502,786	6,373	\$79
\$742,055	7,520	\$99
\$853,950	8,046	\$106



Meter Cost Share Assistance for the South Platte Natural Resources District - 2004

Background

Over the past four years, conditions in the South Platte Natural Resources District have been dry and drought conditions have continued into early 2004. Managing water resources with precision and equity has become even more of a priority given these conditions. The South Platte Basin is also part of an area where conditions for recovery of threatened and endangered species are being examined as part of a Platte River Cooperative Agreement. Significant surface water – ground water interrelationship issues also exist in the basin and new options for addressing those have potentially been made available through the findings of a state Water Policy Task Force. The South Platte Natural Resources District has remained very active in these challenging conditions and has adopted a variety of policies to address its water related issues. One cornerstone of its adopted approach is mandatory installation of meters on a phased schedule between May 1, 2004 and March 1, 2009. Monitoring is especially important in dry years. This proposal provides for cost share for meters to monitor ground water use.

Benefits

Cost share for meters would help address drought in a number of ways. First, it would allow landowners to better manage their water, resulting in less pumping by water users. The conservation that meters allow is most important in drought years. The better knowledge of pumping rates will also be useful in implementing whatever decisions are made under the Platte River Cooperative Agreement. Finally, the meters are essential to the districtwide groundwater management area being implemented by the Natural Resources District. That plan is being used to facilitate the proper management of ground water for concerns of quality, quantity, and integrated management. The usefulness of the funds would be extended by the 50% cost share provided by individual landowners.

Budget

The South Platte Natural Resources District currently has about 1,200 irrigation wells of which approximately 250 already have meters. At approximately \$480 per meter in cost share, the \$200,000 grant would supply cost share for about 365 meters. Future additional cost share funds can be sought from state and local sources.

Note: The final version of our 2003 drought assistance proposal package is likely to contain \$200,000 for this activity. However, nothing has yet been expended on it and the funds are not officially available for expenditure or allocated by item at this time.

2/27/04

Meter Cost Share Assistance for the North Platte Natural Resources District - 2004

Background

The North Platte Natural Resources District has experienced drought conditions and reduced river inflows in recent years. Managing water resources with precision and equity has become even more of a priority given these conditions. The North Platte Basin is also part of an area where conditions for recovery of threatened and endangered species are being examined as part of a Platte River Cooperative Agreement. Significant surface water – ground water interrelationship issues also exist in the basin and new options for addressing those have potentially been made available through the findings of a state Water Policy Task Force. The District has been addressing its challenges through its groundwater management planning process. This proposal provides for cost share for meters to monitor ground water use.

Benefits

Cost share for meters would help address drought in a number of ways. First, it would allow landowners to better manage their water, resulting in less pumping by water users. The conservation that meters allow is most important in drought years. The better knowledge of pumping rates will also be useful in implementing whatever decisions are made under the Platte River Cooperative Agreement. Finally, the meters could assist in the districtwide groundwater management area being implemented by the Natural Resources District. The usefulness of the funds would be extended by the 50% cost share provided by individual landowners. At the current time meters have not been required in most of the District because of the cost involved.

Budget

The North Platte Natural Resources District currently has about 3000 irrigation wells of which approximately 500 already have meters. At approximately \$480 per meter in cost share, the \$400,000 grant would supply cost share for about 833 meters. Future additional cost share funds can be sought from state and local sources.

Note: The final version of our 2003 drought assistance proposal package is likely to contain \$150,000 for this activity. However, nothing has yet been expended on it and the funds are not officially available for expenditure or allocated by item at this time. This was also a very late addition and may as a result receive a relatively lower priority on available 2003 funds.

Courtland Canal Automation – Initial Work

The Republican Basin is an area of the state that has been especially affected by drought in recent years. A recent lawsuit settlement between Kansas and Nebraska included provisions to make better use of water in the region. The following provisions are excerpted from the settlement stipulation:

“The States agree to pursue in good faith, and in collaboration with the United States, system improvements in the Basin, including measures to improve the ability to utilize the water supply below Hardy, Nebraska on the main stem.”

“Kansas and Nebraska, in collaboration with the United States, agree to take actions to minimize bypass flows at Superior-Courtland Diversion Dam.”

The U.S. Bureau of Reclamation has conducted a value study and currently is reviewing a draft appraisal study on the Lower Republican River Basin in Nebraska and Kansas. One of the alternatives in the appraisal study is for automation of Courtland canal. This would significantly improve the ability of the states to better utilize water in times of drought.

The draft appraisal study indicates:

“The automation component consists of automation of the radial gates at 11 check structures and the canal headworks at the Diversion Dam. A local control mode would be used, based on upstream and downstream water depths to control the radial gate. A RTU would provide the control at the individual radial gate. The RTU would consist of a PC-based controller which would receive input from gate position and water depth sensors. The RTU would provide local control of the radial gate based on control algorithms and control software.

Power would be provided to the RTU. The radial gates would be provided with a motor operator to allow the RTU to automatically raise or lower the gate position.

Stilling wells would be installed at the 11 check structures for monitoring the depth upstream and downstream of the radial gate. A pressure transducer would be placed in each stilling well for water depth measurement. The pressure transducer would transmit water depth data back to the RTU.”

Budget

Long term, full automation of the Courtland Canal would involve automating gates at 12 sites, stilling wells at 11 sites and furnishing and installing bubblers at 11 checks and the diversion dam at a total project cost of around \$2 million. The requested funds would be used to do a portion of that work at a cost of \$426,618. The following costs are derived

from calculations using *Appendix B of Draft Report – Appraisal Study Lower Republican River Basin, Nebraska and Kansas, Bureau of Reclamation, January 2004.*

Costs would include:

Furnishing and Installing remote terminal unit (RTU), PC type box, for the control of the existing motorized radial gates including basic RTU software and RTU special function software (3 of 12 sites) - \$30,000

Furnishing and installing 120v power for RTU from Power drop. Assume 250' steel conduit and single phase power cable (3 of 12 sites) - \$12,000

Furnishing and installing motor operator w/combination motor/starter NMA type 4 enclosure, 240 single V phase (7 of 20) - \$49,000

Stilling wells at 3 of 11 sites - \$70,000

Furnishing and installing power line for the bubblers at 2 of 12 sites - \$40,000

Mobilization, contingencies, contract cost, field cost, non contract cost, escalation – \$225,618

TOTAL COST \$426,618

REQUEST FOR REIMBURSEMENT

We are requesting reimbursement in the amount of \$31,033.71 for expenses incurred on Project #03-164 *Nebraska Water Policy Task Force* during the period of October 1, 2003 to December 31, 2003. Those expenses are for the following items:

Legal notice publications:	\$ 212.71
Meeting room rentals	\$ 406.75
Travel	\$12,298.29
CDR (Facilitation Consultant)	\$18,116.46
Total	\$31,033.71

We have provided billing information for the legal notices, meeting room rentals, and the Facilitation Consultant. However, the travel expenses included a large number of cost reimbursement vouchers by task force members that have already been through the state system. If you wish we can provide these to you separately.