Steve
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The
NEBRASKA ENVIRONMENTAL TRUST

preserving NATURAL NEBRASKA™ for future generations

January 12, 2004

Mr. Roger Patterson
Nebraska Dept. of Natural Resources
INTERAGENCY MAIL

RE: Project No. #03-164 – LB 1003 Water Policy Study/Project

Dear Mr. Patterson:

We are in receipt of your modification request dated November 25, 2003. You are requesting a change in the use of funds on this grant. You would like to use the remaining balance of approximately $200,000 for additional cost-share on water meters in the Republican River Basin. You have an application #04-168 pending for water meters in the Republican River Basin as well, and have received a preliminary recommendation to be awarded $400,000 of your request.

We have received additional information from your staff throughout the review process on the new application and were able to determine that the current need for funds is $400,000 instead of the $600,000 requested. We have scheduled a meeting with you and your staff for January 20th at 8:00 a.m. to review these numbers one last time.

Due to the nature of the change in use of funds from the original application #03-164 we will be presenting this modification request to our full board at a meeting on January 29, 2004 at Mahoney State Park. The meeting will begin at 9:30 a.m.

Thank you for providing this information to us. If you have any additional information that you would like to present to the board in considering this request, please forward it to our office by January 26, 2004. If you have any questions please call the office at (402) 471-5409.

Sincerely,

Mary A. Harding
Executive Director

MAH/lb

2200 N. 33rd St. • PO Box 30370 • Lincoln, NE 68503-0370
Phone: 402-471-5409 • Fax: 402-471-5528 • E-mail: trust@ngpc.state.ne.us
www.environmentaltrust.org

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Mike Johanns, Governor
Mary Harding, Executive Director

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JAN 14 2004
DEPARTMENT OF
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Middle Republican NRD	December 31, 2003	29	230
	December 31, 2004	27	215
Lower Republican NRD	January 1, 2004	31	398
	April 1, 2004	11	570
	April 1, 2005	6	504
Tri-Basin NRD	December 31, 2004	129	546
	December 31, 2005	129	457
	TOTALS:	**362**	**2920**
		Grand Total:	**3282**

Remaining Appropriation (Dec 17)	$ 721,214
Remaining Bureau of Reclamation Funds	$ 125,462
Remaining Tri-Basin Env Trust Grant	$ 67,000
TOTAL REMAINING UNEXPENDED METER FUNDS	$ 913,676

3,282 Meters @ $408 per meter	$1,339,056
Current Available Funding	$ 913,676
Remaining Funding Needs	$ 425,380

Let Jack Daniel Know what Rogue Did

800 AM mtg with Mary Harding & Lisa Beethe
1st Thing Tuesday Morning

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January 15, 2004

To: Roger Patterson

From: Steve Gaul

Subject: Nebraska Drought Assistance Proposals

Below is a table showing the amounts we requested in Bureau Drought Assistance in 2002 and 2003 that have still not been funded. I have given the amount of our original request and a best guess as to what we still need. For a few items where I have not heard back from people or a judgement call must be made I have included a question mark or asterisk. Call me back if you'd like to discuss any of these.

2003 Proposals

Current Suggestion	Original Request	
0	922,690	Bruno Public Water Supply (Probably Ineligible)
$300,000?	1,480,594	DeWitt Public Water Supply (Only About $300,000 likely eligible)
0	644,000	Republican Basin Water Meter (We may have alternate funding)
7,500	17,600	Proposal to Equip DNR Field Staff with flow Measurement Equip
10,000*	9,000	Proposal to Add Real Time Capabilities to Blue River Gaging St.
20,000**	40,000	Proposal to Purchase a Surface Water Management Program
50,000	50,000	Proposal on Value Study to Meet State line Target Flows on Blues

Leftover 2002 Proposals

12,500	16,000	Proposal for More Monitoring/Predictive Capabilities on L Platte
65,000	65,000	Proposal for on-site computer aided capabilities on SW distribution
25,000	25,000	Drought Mitigation Planning (Talked with Svoboda)
23,200	23,200	Upgrade All USBR Headgates with Sutron Satellite Tranmitters
0	70,000	Install Measuring Devices/Sutron Tranmitters on canal wasteways
0	70,000	Install RadioTransmitters on pump diversions over1cfs on part Rep
30,000***	-	Soil Moisture Monitoring

Totals

$543,000	3,433,084

? Jack hasn't called back and I really don't have a good idea on the viability of this

* In a meeting with Jeff, Keith and Guy the suggestion was $10,000 to $30,000. This was to be to help in administration. I left it in at the smaller amount. I know you felt still less is needed here.

** If we act quickly we may be able to get the program for under $18,000. However we may want to use existing funds and then use these funds to help implement real-time. We are struggling with what we need in this area and it would be realistic to zero it out or give it still more funds.

*** This is a major guess. This is based on Mark Svoboda's guess they might need 10 updated sites and an average cost per site of $3,000. The people he needs to talk to aren't there today.

Proposal to Add Real-time Capabilities to Blue River Gaging Stations
March 26, 2003

Background

In 1971, Nebraska entered into the Kansas-Nebraska Big Blue River Compact. Part of the compact sets out "target" state-line flows on both the Big Blue and Little Blue rivers. In order to make appropriate decisions concerning administration of water rights junior to those "targets" it is necessary to have upstream streamflow information available in a timely matter.

Statement of Need

Currently all but two gages used by the Department of Natural Resources to make flow adminstration decisions are available in realtime over the internet. In order to learn streamflow at the other two gages staff dialing up the gage, download the stage information, and finally upload the stage information into the record-keeping software. Adding realtime capabilities to the gages on would provide critical information to the Department in a more timely manner.

Benefits

The benefits to equipping the gages on Big Sandy Creek near Alexandria and Big Blue River at Beatrice with realtime capabilities allows the Department to make better and more timely decisions on administering flows for the state-line "targets".

Budget

The cost of upgrading each gage is $4,500 for a total of $9,000.

2/2/04

Upgrade Gaging Equipment in the Republican Basin

This proposal would upgrade streamgaging equipment and reporting capabilities in a basin where drought has taken a heavy toll in recent years. Included in this package would be 4 new satellite links at $4,500 apiece. Also included would be a walkway bridge for the cableway at Cambridge and a ladder at Medicine Creek. The equipment would help with management in a basin that is currently implementing an interstate settlement.

Equip the Nebraska Department of Natural Resources With Flow Measurement Equipment

This proposal would equip the Nebraska Department of Natural Resources with two Ultrasonic flow meters at $5,000 apiece to assist with measurements in the Bridgeport Division. The western portion of the Platte Valley, like the Republican Valley has been especially hard hit by drought in recent years. It is also an area where conformance with requirements is likely to be especially important in implementing the Platte River Cooperative Agreement. The meters would help to more closely manage surface flows. In addition a dopler meter would be purchased for about $1,600 for use in the Blue Basin, an area that has experienced water administration in recent years. Finally, several aquacalcs would be purchased to help more efficiently operate NDNR's water administration.

Project Budget

Phase	Description	Due	Cost
1	GOES DCS Authorization and Documentation	4 wks	$2,000
2	Field training on installing and maintaining a GOES station	8 wks	$2,000
3	DCP Data Collection Software and Training	8 wks	$5,000
4	Data Visualization and Web Generation Software and Training	8 wks	$8,500
	Travel and Expenses (Will be billed actual)[1]	8 wks	$1,500
	Project Total		$19,000

[1]-Maximum of 5 days in one trip. Can be used to provide training in all four phases, combined.

Principal Investigator

The Principal Investigator, Mark Heggli, specializes in the GOES Data Collection System (DCS). Mark was previously employed by both the federal government and the State of California, working with GOES DCS applications since 1979. During his tenure with the State of California he led the California Department of Water Resources in developing the GOES DCS as the primary means to collect data for their vast flood-warning and water management network. He also managed the California Data Collection Center (CDEC), which utilized the Internet as a dissemination tool for California water resource information as early as 1994. This site can be viewed at http://cdec.water.ca.gov . Marks work has been commended by numerous cooperating agencies, and was formally commended by the National Weather Service, Western Regional Headquarters, for outstanding work and developing cooperation in the application of the technology in meeting public safety needs of the State of California in response to the devastating floods of 1995.

Mark graduated with a degree in Meteorology from San Jose State University in 1977. Mark has published numerous research papers focusing on technology and analysis. He served as the President of the ALERT (Automated Local Evaluation in Real Time) Users Group (1998-2000). The ALERT Users Group was an organization of various agencies tasked with managing flood warning networks in the Western United States. Mark also served as the chairman of the National Hydrologic Warning Council (1998-2001). The National Hydrologic Warning Council is involved in the development of national strategy of vital importance to water management and flood warning.

Most recently, Mark has helped various agencies both domestically and internationally, in utilizing the GOES Data Collection System, and continues to provide expertise in this area.

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Benefits

The benefits to equipping the gages on Big Sandy Creek near Alexandria and Big Blue River at Beatrice with realtime capabilities allows the Department to make better and more timely decisions on administering flows for the state-line "targets".

Budget

The cost of upgrading each gage is $4,500 for a total of $9,000.

DRAFT

Proposal to Provide State-Operated Stream Gaging Information via the Internet

January 21, 2004

Background

The Nebraska Department of Natural Resources currently operates over 100 stream and canal gages through their Stream Gaging program. "Real-time" data from these gages are available only after it has been downloaded and processed by the field office personnel. In additional, the Department annually produces a "Hydrographic Report" detailing the years record of flows for many of the gages.

Statement of Need

In order for the Department to make the transition to serving "real-time" stream gage data over the Internet, three upgrades would be necessary. First, the Department will need to purchase or develop the software necessary to serve the data over the Internet, secondly, the Department will need to upgrade the surface water management program it uses to calculate "real-time" flows and the annual records, and third, the Department will need to upgrade the communication capabilities in both the field and at the office.

Benefits

Providing stream gage data through the Internet would allow for better and quicker water management decisions. Field office personnel would be able to access the data while in the field and make timely and accurate decisions regarding the regulation of water rights. A secondary benefit would be that the Floodplain Program would be able to better track flood events as they happen.

Budget

The total budget necessary to upgrade the Departments ability to serve gage data through the Internet is $74,500. The costs can be split into $10,000 to develop the software necessary to serve the data over the Internet, $20,000 to purchase a surface water management program, and a total of $44,500 dollars to upgrade the communication capabilities. The $44,500 would be split into $12,000 dollars to upgrade 6 gages in the Blue River Basin, $12,500 to upgrade 2 gages in the lower Platte River, and $20,000 dollars for upgrading equipment in the office.

Proposal to Purchase a Surface Water Management Program
March 26, 2003

Background

The Nebraska Department of Natural Resources operates 72 continuous stream and reservoir gages, 4 partial year gages, 91 canal and canal return gages, and makes spot measurements or observations of stage at some sites operated by other agencies or districts. Ten additional gages are operated in cooperation with the U.S. Geological Survey.
As part of the gaging system the Department also publishes an annual hydrographic report detailing the flow records at each of those gaging stations.

Statement of Need

The software that the Department currently uses is adequate to compute records and publish the hydrographic report, but is now not supported by the company that produced it. The Department would like to purchase new software and training for a new surface water management program.

Benefits

The benefits that the new software over the old are:

- Full Support
- Realtime Internet Capabilities
- Statistic Tools for flow relationships
- GIS compatible

Budget

The cost requested for the software and training is $40,000.

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