



City of Grand Island

Tuesday, May 23, 2006

Council Session

Item G9

**#2006-161 - Approving Amendment to the Platte River Well Field
River Channel Flow Analysis Agreement - Utilities Department**

Staff Contact: Gary R. Mader; Dale Shotkoski

Council Agenda Memo

From: Gary R. Mader, Utilities Director

Meeting: May 23, 2006

Subject: Amendment to the Platte River Well Field River Channel Flow Analysis Agreement

Item #'s: G-9

Presenter(s): Gary R. Mader, Utilities Director

Background

In August of 2005, the City, Utilities Department, entered into an agreement with the US Geological Survey (USGS) and the Central Platte Natural Resources District (CPNRD) to study and define the proportional flows in the four river channels at the City's Well Field. The flow distribution is important to the maintenance of water quality in the underlying aquifer. The Agreement provides for a cost shared project among the parties with the USGS being the lead agency. A copy of the original explanatory memo to Council is attached for reference.

Discussion

As this project was undertaken, it generated interest from another entity, the USGS Northern Prairie Wildlife Center, who also had interests in studying river channel geomorphology and the project scope has been increased. The additional party and scope increase added to the time of the project, resulting in the USGS request to extend the contract by one year, from November 2006 to November 30, 2007.

There is no change in the cost to the Utilities Department. A copy of the proposed contract amendment is attached.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee

3. Postpone the issue to a future date
4. Take no action on the issue

Recommendation

City Administration recommends that the amendment to the agreement for *Geomorphic Assessment of Selected Channels of the Platte River near Grand Island, Nebraska* be approved.

Sample Motion

Motion to approve the amendment to the agreement with USGS for *Geomorphic Assessment of Selected Channels of the Platte River near Grand Island, Nebraska*.

Council Agenda Memo

From: Gary R. Mader, Utilities Director

Meeting: August 9, 2005

Subject: Platte River Well Field River Channel Flow Analysis

Item #'s: G 13

Presenter(s): Gary R. Mader, Utilities Director

Background

South of the City, at the municipal Well Field, the Platte River is comprised of four separate channels over a mile and a half in total width. The City Well Field is on the east end of Indian Island which is bordered by the two northern most channels of the four. Previous computer hydraulic modeling of the Well Field, its interaction with surface streams, and its interaction with adjacent groundwater deposits, shows that the maintenance of flows in the adjacent river channels is very important to the maintenance of water quality in the aquifer waters underlying the Well Field. The modeling also shows that during periods of dry river conditions, the continued operation of the Well Field can, after several months, begin to draw adjacent groundwater, contaminated with nitrate levels well above the drinking water standards, toward the City's facilities. Thus the maintenance of flows to the greatest extent possible in the north river channels is important to protecting the Well Field, and particularly maintaining flow in the far north channel.

During the last few years, Utility staff has noted that the north channel does not appear to be maintaining its proportional flow when compared to the other three. Two years ago, Utility and NRD staff flew the river during low flow conditions and noted that there had been substantial modifications made in the river channels at a dividing point upstream of the Well Field. After consultations with the landowner and the Corps of Engineers, a 404 Permit was obtained and a local contractor was hired to do some major restoration in the river to redistribute the flows to return more water to the north channel. That project was successful. However, continued observations indicated that the flow proportions in the channels adjacent to the Well Field were still less than historical levels. The river was again flown last fall, just as the flows were returning to the river. The north channel was the last to see return of surface flow, lagging the south channel by several weeks. It appears that there may be additional channel modifications upstream of the first location corrected, but we are lacking accurate historical data by which to judge changes that have

been made, and to document what modifications need to be made, to restore historical balance.

Discussion

The Utilities Department has been working with the U.S. Geological Survey Division (USGS) and the Central Platte NRD to attempt to develop a program to document the historical and current proportional channel flows in the reach of the river affecting the City Well Field. USGS is the lead agency. The initial proposal from USGS put the cost of the project at just under \$160,000. USGS would cost share about \$40,000 but having the Water Department responsible for \$120,000 was more than its current financial condition would allow. In April, Department staff met with the USGS and the CPNRD. It was decided to modify the research project to place maximum focus on the two most critical division points in the river, to reduce the number of field measurements required in the first data set, and to spread the project over two years. CPNRD also agreed to cost share if the project was done over two years.

USGS subsequently revised the project proposal to reflect a two year time line for completion with a corresponding payment schedule. The proposed project cost is tabulated below.

	Fiscal 2005-2006	Fiscal 2006-2007	
USGS	\$20,000	\$20,000	
CPNRD	\$20,000	\$20,000	
City of Grand Island	\$17,500	\$52,150	
Total	\$57,500	\$92,150	\$149,650

The first year payment by the Water Department is included in the '05-'06 Water Department Budget, as currently proposed.

As the Platte River becomes increasingly regulated and as the river channels continue to be modified by private and public entities for specific beneficial purposes, having sound, complete data on channel water distribution will be very important in maintaining the river to the benefit of the City's Well Field.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve
2. Refer the issue to a Committee
3. Postpone the issue to future date
4. Take no action on the issue

Recommendation

City Administration recommends that the U.S. Geological Survey proposal for *Geomorphic Assessment of Selected Channels of the Platte River near Grand Island, Nebraska* be approved by the City Council.

Sample Motion

Motion to approve the *Geomorphic Assessment of Selected Channels of the Platte River near Grand Island, Nebraska* proposed from U.S. Geological Survey.

GRM/pag

pc: Tim Luchsinger, Asst. Utilities Director
Bob Smith, Asst. Utilities Director
Laura Berthelsen, Legal Assistant

Agreement No. 05C4NE009039001
Customer No. NE009
Cost Center 8626
TIN 47-6006205

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
SUPPLEMENTAL JOINT FUNDING AGREEMENT
FOR
WATER RESOURCES INVESTIGATIONS


THE GEOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and the CITY OF GRAND ISLAND, party of the second part, hereby agree to amend the Joint Funding Agreement No. 05C4NE009040000 dated August 1st, 2005 as follows:

The end date of this agreement is hereby extended to November 30, 2007.

Billing for this agreement will be rendered annually. Payments of bills are due within 60 days after billing date. If not paid by the due date, interest will be charged at the current Treasury rate for each 30-day period, or portion thereof, that the payment is delayed beyond the due date. (31 USC 3717; Comptroller General File B-212222, August 23, 1983.)

Geological Survey
UNITED STATES
DEPARTMENT OF THE INTERIOR

CITY OF GRAND ISLAND

by 
Robert B. Swanson, NWSC Director

by _____

Date May 8, 2006

Date _____

USGS Funding Authority: Statute 43 USC 50
USGS DUNS: 949286512

R E S O L U T I O N 2006-161

WHEREAS, on August 9, 2005, by Resolution 2005-223, the City Council of the City of Grand Island approved a contract with the U.S. Geological Survey Division and the Central Platte Natural Resources District for geomorphic assessment of selected channels of the Platte River near Grand Island, Nebraska; and

WHEREAS, the contract was scheduled to expire in November 2006; and

WHEREAS, the scope of the contract was increased when the U.S.G.S. Northern Prairie Wildlife Center expressed an interest in also studying river channel geomorphology; and

WHEREAS, in order to ensure completion of the contract with the additional scope of the project, it has been recommended that the contract be amended to extend the completion date to November 2007; and

WHEREAS, the amendment to such contract has been reviewed and approved by the City Attorney's office.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the contract between the City and the U.S. Geological Survey Division and the Central Platte Natural Resources District for *Geomorphic Assessment of Selected Channels of the Platte River near Grand Island, Nebraska* is hereby extended until November 30, 2007.

BE IT FURTHER RESOLVED, that Mayor is hereby authorized and directed to execute such contract amendment on behalf of the City of Grand Island.

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Adopted by the City Council of the City of Grand Island, Nebraska, May 23, 2006.

Jay Vavricek, Mayor

Attest:

RaNae Edwards, City Clerk

Approved as to Form	☐ _____
May 17, 2006	☐ City Attorney