

Agenda Item 6

Project Update on Zorinsky Basin #1 and #2 at the PPO Meeting.

MEMORANDUM

TO: Programs, Projects & Operations Subcommittee

SUBJECT: Request from Olsson Associates for Additional Engineering Fees
for Silver Creek Watershed

DATE: December 3, 2007

FROM: Ralph Puls

At their November 18, 2004, meeting, the P-MRNRD Board of Directors approved an Agreement with the Natural Resources Conservation Service that would accelerate the design and construction of 10 of the erosion/sediment control dams remaining in the Silver Creek Watershed Project (a map of the project area is attached). This Agreement called for the selection of a Technical Service Provider (TSP) to provide the necessary professional services. Olsson Associates was the Technical Service Provider that was chosen to do this work. A contract with Olsson's was approved by both the P-MRNRD and the NRCS; the dollar amount of this contract was \$416,742.00. The costs were to be divided equally between the District and the NRCS. The same was true for the construction costs for the 10 dams in the plan; they were to be shared by the District and the NRCS.

To date, seven of the structures have been built, two were deleted from the contract and one structure, Site 11, is designed and remains to be built. The costs to complete this work and thus to complete the work contracted for have increased since the project was approved. Due to some inaccuracies in the preliminary information and some geotechnical concerns, Site 11 is much larger and much more complicated to design and build than was originally envisioned by the NRCS, the District and Olsson Associates. The November 30, 2007 letter from Olsson Associates that details the proposed cost increases is attached.

Site 11 is being designed as a "High Hazard Potential" structure because there is inhabited property downstream that is in harm's way if the dam would fail. Significantly more work is involved to design and build a "High Hazard Potential" dam. In addition, the cost to obtain a 404 permit from the Corps of Engineers (COE) has increased greatly because the COE is requiring extensive documentation and input from the District to show that this structure meets their requirements. Rather than a National Permit, the Corps of Engineers requests that an Individual permit be obtained. **Of the \$81,850 requested by Olsson, \$70,500 is for the preparation of a 404 permit.**

Primarily because of the reasons stated above, the cost to design and to build is much higher today than what was expected in 2004, when the original contract with Olsson Associates and the NRCS was approved. The contract was amended in October 2006, to pay for some of the increases in cost; the current contract is for \$495,233.24. The increase in professional service fees requested for Site 11 is \$81,850.

Attached is a letter from Olsson Associates that further explains their request for additional professional service fees in the amount of \$81,850. If approved it would increase the contract to \$577,803.24.

It is recommended by staff that the Subcommittee recommend to the Board that the maximum, not to exceed amount for professional services contract with Olsson Associates for the Silver Creek Watershed Project, be increased to \$577,803.24

Memorandum

To: Programs, Projects, and Operations Subcommittee

Subject: US Geological Survey (USGS) Water Quality Monitoring

Date: December 4, 2007

From: Gerry Bowen

As part of the District's Groundwater Management Plan (GWMP), routine monitoring of wells has occurred since 1992. It was determined at that time that the District did not possess enough data to make decisions regarding groundwater management. It was decided to initiate an irrigation well monitoring effort to build a database to help manage groundwater in the District. In 1999, the District established a series of well nests throughout the District to further define groundwater quality. Both programs are described below.

Irrigation Well Monitoring:

In 1992 and with guidance from USGS, the District identified ninety-four (94) irrigation (primarily) wells in five different groundwater areas for monitoring water quality. The groundwater areas are Missouri River, Platte River, Elkhorn River, Upland, and Dakota. Each well is sampled for nitrates (mainly as an indicator) every four years. In addition, some of the wells are tested for a wide variety of parameters. The data is maintained for each well, used for comparison with other wells, and to determine if a water quality problem exists. If a problem is identified, we follow the procedures outlined in the GWMP. USGS also measures the water level in each well as an indicator to see if recharge is keeping up with usage. The network was established in 1992 and sampling has proceeded annually thereafter.

Well Nest Monitoring:

Again to build a data base of water quality and quantity in the District, we established 9 well nests in the groundwater areas listed above (one nest in the Dakota, and two each in the other areas). Each well nest contains two or three wells screened at different levels (shallow, medium, or deep) so that a complete picture of the aquifer can be drawn. Shallow wells sample the upper five feet, medium measures the middle five feet, and deep wells sample the lowest five of the aquifer. This sampling has been occurring for the past six years. Each sample is analyzed for a wide array of parameters on a semi-monthly pattern between April and November.

The sampling and analysis is done by USGS personnel and the costs are shared via a cooperative agreement. The NRD share of the costs comes partially from the Natural Resources Water Quality Fund (NRWQF). The District has been budgeting approximately \$95,000 each year for this program, offset by approximately \$32,000 in NRWQF funds as a revenue source.

The District has received a proposal from USGS to conduct a Trends Analysis of the data collected since 1992 (see attached letter and proposal). In addition, USGS is proposing an analysis of the monitoring well network and alternative sampling program to better suit the needs of the District. The total cost of the sampling, analyzing, and trends report is estimated at \$311,000 over the next three fiscal years broken down as follows:

Agency	FY 2008	FY2009	FY2010	Totals
USGS	\$13,900	\$32,650	\$18,750	\$65,300
P-MRNRD	\$67,400	\$155,500	\$88,100	\$311,000
Total	\$81,300	\$188,150	\$106,850	\$376,300

The differences between the table above and that in the USGS proposal (FY's 2008 & 2009) result since the federal fiscal year starts October 1 each year, while the District's starts on July 1 each year. The District's previous agreement with USGS expired on September 30, 2007 (end of FY 2007). The proposal summarized above would involve a new agreement with USGS to accomplish.

The proposed Trends and Well Monitoring Network Analysis will provide information on the water quality trends in the District and recommendations on the adequacy and sampling schedule of the monitoring network. This information can then be used to aid in the decision to adjust the monitoring program and possibly create a groundwater management area in the District in the future. Another outcome of the project would be the development of a web page so up to date water quality data will be more readily available to the public.

To date, the District has paid \$40,700 under Account #05-00-4485 to satisfy the previous agreement, leaving a balance in that account of \$53,975. If adopted, the new agreement would require an additional \$13,425, or a total of \$67,400. This would make this account increase more than 10%, requiring Board approval.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute an agreement with the U.S. Geological Survey to conduct a Water Quality Trends and Monitoring Well Network Analysis as proposed, in addition to the routine sampling of groundwater wells in the District, up to a maximum District expenditure of \$311,000 over the next three fiscal years, and that Account #05-00-4485 be allowed to go over 110% of the budgeted amount on the FY 2008 Budget.

Memorandum

To: Programs, Projects and Operations Subcommittee

Subject: Site D-4 Dredging Request from Game and Parks Commission (NGPC)

Date: November 29, 2007

From: Gerry Bowen

As a part of the Papillion Creek Watershed P.L. 566 Project, the Natural Resource Conservation Service, with the District as local sponsor, constructed Site D-4 above Cunningham Lake to correct an erosion problem on one of the tributaries above Cunningham Lake in Douglas County. The project was completed in 1985.

As you may be aware, Cunningham Lake and D-4 were drained for a renovation project for Cunningham Lake. The NGPC and the City of Omaha has nearly completed the renovation project for that included fishery rehabilitation and selective dredging of the main lake. NGPC believes that an opportunity exists to continue the dredging operation into D-4 which will provide additional sediment storage above Cunningham Lake, but also will help reestablish a fishery in D-4.

The District has received a request from the NGPC to assist on a project to dredge Papio Site D-4 (see attached). They plan to dredge approximately 100,000 cubic yards of sediment from D-4 at an estimated cost of \$500,000. They have requested that the NRD cost share half of this amount, or \$250,000. If approved by the Board, the funds would be included in the FY 2009 Budget.

A draft interlocal agreement is attached for your consideration. Management recommends approval.

- **It is recommended that the Subcommittee recommend to the Board that the General Manager be authorized to execute an Interlocal Cooperation Act Agreement with the Nebraska Game and Parks Commission to equally share the cost of construction, up to a maximum District cost of \$250,000 on a project to dredge Papillion Creek Watershed Site D-4, subject to changes deemed necessary by the General Manager, and accepted as to form by District Legal Counsel.**

MEMORANDUM

TO: Programs, Projects and Operations Subcommittee

SUBJECT: Turtle Creek Watershed PL566 Site #2
Rehabilitation Project Agreement

DATE: December 3, 2007

FROM: Martin P. Cleveland

In 2001, the USDA – Natural Resources Conservation Service (NRCS) initiated a dam rehabilitation assistance program to address the needs of aging dams throughout the United States, in particular those dams built through their Public Law (PL) 566 Program. The PL 566 Program has been designing/building dams for about 65 years.

The District owns/operates 83 dams, 50 of which were built via the PL 566 Program. The District's PL 566 dams were built in the period from 1962 to 1997. Turtle Creek Structure #2 was built in 1962 by the Sarpy County Soil & Water Conservation District (SCSWSD) and was transferred to Papio NRD in the 1970's. Attached is a location map. In March 2005, the District initiated dam rehabilitation with NRCS on Turtle Creek Site #2 via execution of Memorandum of Understanding for rehabilitation assistance.

The NRCS has completed draft plans and specifications for the proposed rehabilitation project. The existing earthen dam spillways are planned to be replaced with a concrete baffled chute (approximately 30 ft. wide by 150 ft. long). Enclosed are some plan sheets for proposed Turtle #2 and photos of a completed baffled chute structure, but at a much larger scale, located in North Dakota.

Enclosed is the Turtle Creek Watershed Site #2 Project Agreement for your review. This agreement provides for rehabilitation (with cost share and estimated costs for referenced dam). This agreement is subject to NRCS and NRD funding.

<u>Works of Improvement</u>	<u>Sponsors (NRD)</u>	<u>NRCS</u>	<u>Estimate Project Costs</u>
#2	\$282,692.00 2/ (35%)	\$525,000.00 (65%)	\$807,692.00 1/ (100%)

1/ Estimated Project Costs do not include NRCS Engineering and Project Administration costs. NRCS pays for 100% of planning and engineering costs.

2/ Sponsor (NRD) is required to secure land rights for these structures and this cost is credited towards sponsor's 35%.

It is management's recommendation that the Subcommittee recommend to the Board that the General Manager be authorized to execute the proposed Turtle Creek Watershed Site #2 Project Agreement with NRCS rehabilitation for PL 566 Grade Stabilization Structure Turtle Creek Site #2, subject to changes deemed necessary by the General Manager and approved to as to form by District Legal Counsel.