

**Programs, Projects & Operations
Subcommittee Meeting
March 9, 2010
6:40 p.m.
(Or immediately following the Ad Hoc meeting)
Agenda**

Programs, Projects & Operations:

John Conley, Chairman
Rich Tesar, Vice-Chairman
David Klug
Rick Kolowski
John Schwope

Alternate Members: Fred Conley
Tim Fowler

Staff Liaison: Gerry Bowen *
Martin Cleveland
Amanda Grint
Ralph Puls
Dick Sklenar

1. Meeting Called to Order – Chairperson John Conley
2. Notification of Open Meetings Act Posting and Announcement of Meeting Procedure – Chairperson John Conley
3. Quorum Call
4. Adoption of Agenda
5. Proof of Publication of Meeting Notice
6. Review and Recommendation on Farm Process Pilot Groundwater Flow Model – Brian Henkel, Steve Peterson and Derek Ryter, USGS
7. WP-5 Project – Amanda Grint and John Engel, HDR, Inc.
 - a. Report on Phase I
 - b. Review and Recommendation on Phase II HDR Contract for Engineering Services
8. Review and Recommendation on Amendment to Interlocal Agreement with City of Omaha for the Carter Lake Water Quality Project – Gerry Bowen
9. Review and Recommendation on Purchase of CBI Systems Software for the Papillion Creek Watershed Partnership – Lori Laster
10. Adjourn

Memorandum

To: Programs Projects and Operations Subcommittee
Date: March 9, 2010
From: Brian L. Henkel, Groundwater Management Engineer
Re: Farm Process Pilot Groundwater Flow Model

District staff has been developing a plan with the U.S. Geologic Survey (USGS) to cooperatively create a pilot model study utilizing MODFLOW and the Farm Process Package (FMP). MODFLOW was developed by the USGS and is the industry standard for the creation of groundwater flow models. FMP, also developed by USGS, is a state of the art extension to MODFLOW that assesses all of the components of water use, surface water and groundwater, through a complete water budget analysis. The pilot model would cover a portion of the Platte River valley near Ashland, Nebraska (Attachment 1). The application of the Farm Process Package (FMP) for MODFLOW to the Lower Platte River alluvial aquifer system would be the first application of this advanced tool in Eastern Nebraska.

The study area was selected based on the availability of highly detailed topographic and geologic data collected through other cooperative efforts of the District. The Eastern Nebraska Water Resources Assessment (ENWRA) completed a pilot study in the same area which resulted in the collection and processing of highly detailed, three dimensional hydrogeologic information. Additionally, the area is included in the planned LiDAR collection area scheduled for this spring through the Nebraska-Iowa Regional Orthophoto Consortium. The LiDAR collection will provide highly accurate and detailed topographic information for inclusion in the pilot model. These two detailed datasets, combined with the other existing information, will improve the pilot models ability to effectively assess the benefits of using FMP in the Platte River system.

The completed pilot model could be utilized to assess current and proposed District programs related to water conservation measures, on farm conservation practices or controls on invasive species. The level of detail of the model and the advanced tools of FMP would offer a level of assessment greater than that available with more standard approaches. This would give the District the opportunity to better understand the benefits of ongoing and proposed programs as they relate to the overall water budget in a representative area of the Lower Platte River Basin.

A pilot scale model can also guide the Districts continued data collection and future river and basin analyses. The Annual Evaluation of Availability of Hydrologically Connected Water Supplies, completed by the Nebraska Department of Natural Resources (Department), is an assessment of available supplies. The compiled report is the basis for the Departments determination of 'fully appropriated' and is comprised of water budget analysis, extrapolations of current levels of development and comparisons to historic conditions. A more complete understanding of the interactions of the various components of the water budget in the Lower Platte can assist the District with the additional steps needed in assisting the Department's evaluation.

The proposed pilot model would be a cooperative effort involving the District, the USGS Nebraska and California Water Science Centers and ENWRA. It was originally anticipated that ENWRA would be the primary funding source for the project with the USGS providing approximately the same cost share as the current level and the District contributing an equivalent amount. Through refinement of the scope and continued planning with ENRWA, the availability of funds was revised.

The ENRWA grant application and award was based on characterizing the geologic framework of Eastern Nebraska and not on studying specific water budgets. The portion of the ENWRA grant award, specific to water budgets, has been allocated toward this project. A potential source of funds for this project would be from an unutilized budget category. The District originally anticipated sharing the cost of levee evaluation for the City of Omaha's Missouri River Levee. The City has decided to pursue other maintenance and evaluation options and the budgeted amount is no longer needed in this budget cycle. The total project cost and the agency contributions are listed in the following table:

Agency	Cost
USGS	\$25,000
ENWRA	\$10,000
P-MRNRD	\$83,000
Total	\$118,000

- **Staff recommends that the subcommittee recommend to the Board of Directors that the General Manager be authorized to execute a Joint Funding Agreement with the USGS for the development of a pilot model for a maximum fee of \$83,000, subject to changes deemed necessary by the General Manager and approved as to form by District Legal Counsel.**

Agenda Item 7.a.

7.a. WP-5 Project – Report on Phase 1 – John Engel, HDR, Inc., will give a presentation at the PPO Subcommittee Meeting.

Memorandum

To: Programs, Projects and Operations Subcommittee

Re: Phase 2 Contract for Engineering Services with HDR Engineering, Inc. for WP5

Date: March 1, 2010

From: Amanda Grint, Water Resources Engineer

In December 2008, the Board approved the selection of HDR Engineering, Inc. (HDR) for professional services for the planning, permitting, design and construction of West Papillion Regional Basin Number 5 (WP5). The work was planned to be completed in three phases. Phase 1 provided the feasibility and preliminary design of WP5. An update of the progress will be reported at the Subcommittee meeting. Scope and fees for Phase 2, Final Design and Bidding are presented for consideration. Phase 3, Construction Administration, will be presented at a later date.

A summary of the tasks for Phase 2 is as follows:

- Project Management tasks include progress reports, coordination meetings, a newsletter update and a presentation to the Board.
- Preliminary Design of Lincoln Road and bridge crossing includes evaluating four bridge and trail options for cost and feasibility. The task includes geotechnical work to analyze bridge foundation design and coordination to develop layout and design of Lincoln Road with Sarpy County and Papillion.
- Permit coordination for the USACE 404, Nebraska Department of Natural Resources Permit to Impound Water, NPDES Stormwater permit, and assist with floodplain permit and revision process.
- Prepare final design plans, specifications and estimate of construction cost for dam, roadway, bridge, trail, recreation features, in-lake features, utilities and water quality basins
- Prepare Emergency Action Plan (EAP) for dam
- Provide survey services to create necessary easements for mitigation sites, utility corridors, and roadway. Task includes a final boundary survey of the project property.
- Bidding Services

In conclusion, HDR would provide the professional services noted above for Phase 2 of the WP-5 project, Final Design and Bidding, on an hourly basis not to exceed the amount of \$817,700.

- **Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute the enclosed Professional Services Agreement between the District and HDR Engineering, Inc. for Phase 2 Services for the WP-5 Project in an amount not to exceed \$817,700, subject to changes deemed necessary by the General Manager and approved as to form by District Legal Counsel.**

Memorandum

To: Programs, Projects and Operations Subcommittee

Subject: Carter Lake Water Quality Improvement Project – Amendment to Interlocal Cooperation Act Agreement with the City of Omaha

Date: February 25, 2010

From: Gerry Bowen

In November, 2009, the Board approved an interlocal agreement (see attached) with the City of Omaha regarding the water quality improvements to Carter Lake. The agreement called for the District to cost share with Omaha a total of \$250,000 (\$50,000 per year for five years). The City anticipated a five year implementation period.

It now appears that the sponsors would like to accelerate the project to one of three years' (see attached letter) duration. The new proposal is for \$50,000 in FY 10, \$100,000 in FY 11, and \$100,000 in FY 12. The first installment is in the FY 10 Budget.

Therefore, it is proposed that the agreement be changed to read as follows:

“III. RIGHTS DUTIES AND OBLIGATIONS OF PMRNRD

PMRNRD agrees to contribute Two Hundred and Fifty Thousand Dollars (\$250,000.00) (“the Contribution”) for partial reimbursement of the costs of the Improvements.

PMNRD agrees to provide such Contribution in increments as follows: \$50,000 on June 1, 2010, \$100,000 on March 1, 2011, and \$100,000 on March 1, 2012 ~~of \$50,000 annually, over the term of this Agreement, payable on or before March 1 of each year beginning on March 1, 2010 and ending on March 1, 2014~~ as reimbursement for amounts expended by MAPA for the Improvements, upon receipt from MAPA and Omaha of documentation of such expenditures. PMRNRD will provide such reimbursement payments to Omaha within forty five (45) days of receipt of a written reimbursement request from Omaha.”

- **It is recommended that the Subcommittee recommend to the Board that the General Manager be authorized to execute an amendment to the Interlocal Agreement with the City of Omaha for the Carter Lake Water Quality Project, subject to changes deemed necessary by the General Manager, and approve as to form by District Legal Counsel.**

Memorandum

To: Programs, Projects and Operations Subcommittee

Re: Papillion Creek Watershed Partnership Software Purchase

Date: March 1, 2010

From: Lori Ann Laster, Stormwater Management Engineer

On February 25, 2010 the Executive Committee of the Papillion Creek Watershed Partnership (PCWP) voted to request that the NRD Board, as Administering Agent for the PCWP, approve the disbursement of PCWP funds to purchase of CBI Systems, LTD MS4Web Software for use by PCWP members and to enter into a yearly service contract for licensing and technical support for the software.

The MS4Web Software is a web-based computer program used to track activities required by National Pollutant Discharge Elimination System (NPDES) permits. The software will allow the PCWP to maintain databases that are accessible by all members to track monitoring data and activities, as well as automatically generate reports that are required by the NPDES permit. The software will also aid in the event of an EPA audit of an individual community. The program will be customized by CBI to fit the specific requirements of the communities' stormwater management plans (SWMP). All data will be kept in a centralized location and will be easily accessible by each PCWP member.

The total price of the purchase will not exceed \$30,354.02. This price includes \$15,279.02 for the initial software purchase, \$10,000 for software customization, \$3,000 for SWMP setup, and \$2,075 for a one-day training session for PCWP members. The PCWP will be charged a yearly fee of \$4,020 for licensing renewal and technical support. The PCWP currently has \$59,310 in the budget to use towards planning and implementing structural and non-structural strategies.

- **Recommendation that the General Manager be authorized to execute for the Papillion Creek Watershed Partnership the purchase of CBI Systems, LTD MS4Web Software in the amount not to exceed \$30,354.02 and to enter into a yearly service contract with CBI Systems, LTD in the amount of \$4,020 per year**