

Memorandum

To: Interested Engineering Consultants

From: Steve Oltmans, General Manager

Date: October 3, 2003

Re: Request for Proposals to Updated Flood Hazard Data for the West Branch Papillion Creek and its Tributaries

The Papio-Missouri River Natural Resources District (P-MRNRD) is requesting proposals for professional engineering services to develop new and/or updated flood hazard data for the West Branch Papillion Creek and its Tributaries including production of a Digital Flood Insurance Rate Map (DFIRM) for the study area and revisions to the Flood Insurance Study (FIS) report for Douglas and Sarpy County, Nebraska. The District is currently a Cooperation Technical Partner with the Federal Emergency Management Agency (FEMA) and is managing this project according to the Mapping Activity Statement agreed upon by the P-MRNRD and FEMA. In addition, the District has received a federal grant to accomplish the activities required for the referenced project.

The attached map illustrates the location of the West Papillion Creek Watershed as the southwestern basin with subwatersheds identified as WB-1 to WB-35. Overall, the proposed project includes: performing hydrologic analysis of a 134 square mile watershed; surveying and performing detailed hydraulic analyses for nearly 50 miles of channels; and delineating multiple floodplain and floodway boundaries. Further details on the proposed scope of services for the project are as follows:

- Field Surveys and Reconnaissance** - Conduct a detailed field reconnaissance of the specific study area to determine conditions along the floodplain(s), types and numbers of hydraulic and/or flood-control structures, apparent maintenance or lack thereof of existing hydraulic structures, locations of cross sections to be surveyed, and other parameters needed for the hydrologic and hydraulic analyses. Conduct field surveys to obtain channel cross sections, identify or establishing Temporary Bench Marks, and obtain the physical dimensions of hydraulic and flood-control structures. All field surveys will be completed in NAVD 1988.
- Hydrologic Analyses** - Perform hydrologic analyses for approximately 134 square miles of drainage area and calculate peak flood discharges for the 10-, 2-, 1-, and 0.2-percent-annual-chance storm events representing existing and future (2040) conditions using the HEC-HMS computer program. These flood discharges will be the basis for subsequent hydraulic analyses. In addition, all

concerns or questions regarding hydrologic analyses that are raised during the independent QA/QC review shall be addressed.

- ❑ **Hydraulic Analyses** - Perform hydraulic analyses for approximately 49.5 miles of channels by modeling the 10-, 2-, 1-, and 0.2-percent-annual-chance events based on prior hydrologic analyses along with collected channel cross-sections, field data, and available over bank topographic data. The hydraulic methods used for this analysis will include a step-backwater HEC-RAS model of one-dimensional steady-state flow. The hydraulic analyses will be used to establish flood elevations and regulatory floodways for the designated flooding sources. FEMA CHECK-2 or CHECK-RAS checking program shall be used to check the reasonableness of the hydraulic analyses. In addition, all concerns or questions regarding hydrologic analyses that are raised during the independent QA/QC review shall be addressed.
- ❑ **Floodplain Mapping** - Delineate the 1-percent-annual-chance floodplain boundaries representing existing and future (2040) conditions and the regulatory floodway boundaries for the flooding sources for which detailed hydraulic analyses were performed. Incorporate all new or revised hydrologic and hydraulic modeling and use available topographic data to delineate the floodplain and regulatory floodway boundaries on a digital work map. In addition, the results of all effective Letters of Map Change (LOMCs) within the revised areas will be incorporated as appropriate. Also, all concerns or questions regarding floodplain mapping that are raised during the independent QA/QC review shall be addressed. All mapping will need to meet standards for DFIRM database and mapping production.
- ❑ **Public Appeals** – Review the DFIRM and FIS report before the Preliminary copies of the DFIRM and FIS report have been issued to community officials and the public for review and comment. Support P-MRNRD in reviewing and resolving appeals and protests received during or after the 90-day public appeal period including attendance at any public meetings. Revise the DFIRM and FIS report at the direction of the P-MRNRD.

If interested in the proposed project, the following information should be submitted with your proposal in a form of your choosing not to exceed 100 pages in length:

1. Firm name, address and telephone number.
2. Names of principals of the firm and states in which they are registered.
3. Names of personnel you would expect to utilize, with experience of each and length of time in the organization.
4. Specific project contact person.
5. List of similar completed projects of which the firm was principle planner and references for each project.
6. General overview of your approach to the project.
7. Proposed project schedule.

An Ad-Hoc Subcommittee of the District's Board of Directors will be responsible for reviewing and evaluating the responses on the said requested services. Final selection of the firm to perform such services will be determined by the following timetable:

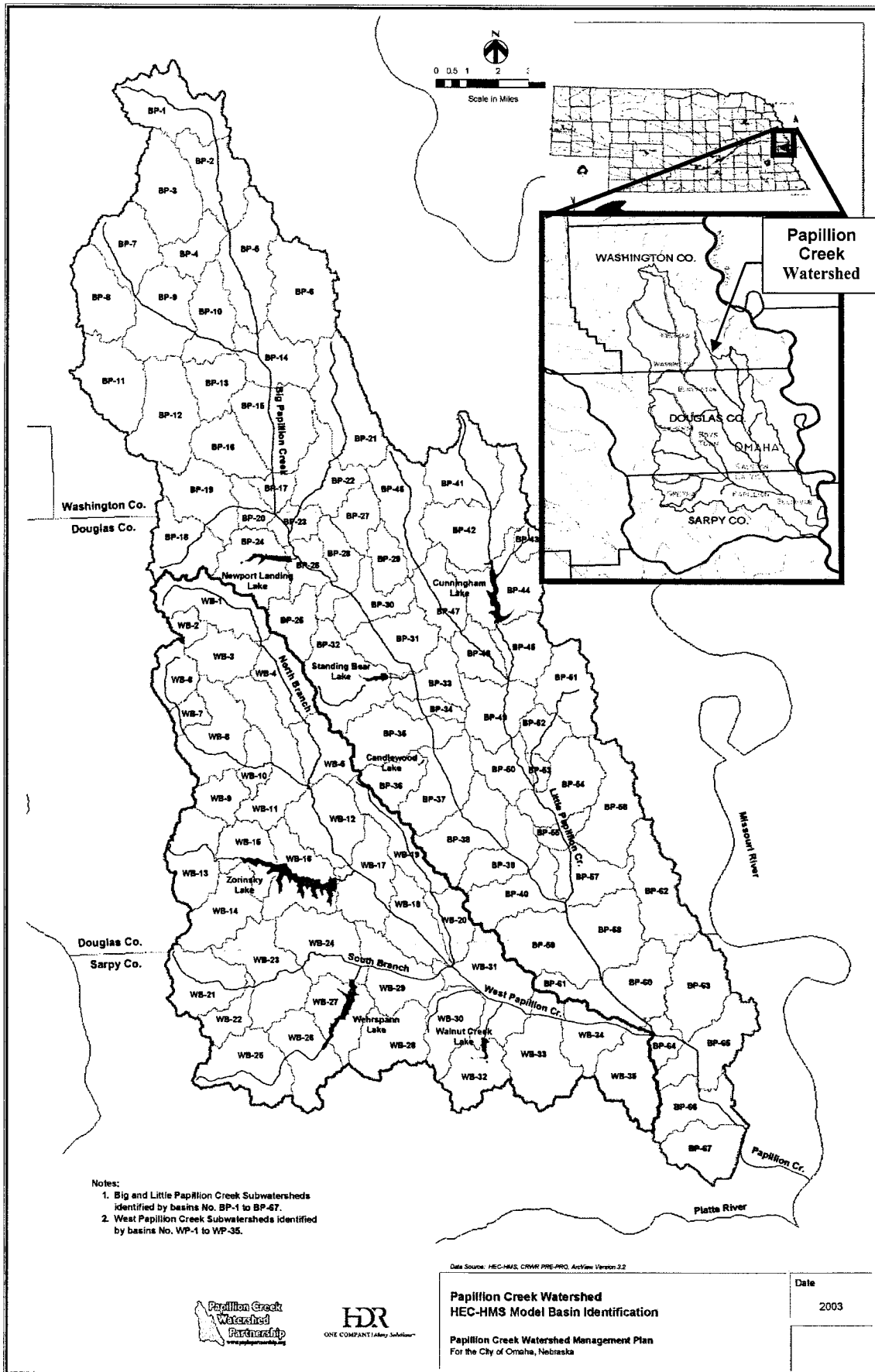
<u>Date</u>	<u>Description</u>
October 6, 2003	Mail out RFP to engineering consultants
October 28, 2003	Final date for receipt of proposals.
November 11, 2003	Ad-Hoc Subcommittee meeting on the initial screening of proposals received. Three (3) firms selected for interview.
November 14, 2003	Send letter to selected firms notifying them of the interview time and date.
December 4, 2003	Ad-Hoc Subcommittee Meeting to interview selected firms. Subcommittee will rank each firm by preference.
December 11, 2003	NRD Board of Directors advised on Subcommittee rankings of firms interviewed.
February 10, 2004	Ad-Hoc Subcommittee negotiate contract with first choice firm.
February 12, 2004	District Board of Directors adopts Subcommittee recommendation on entering into contract with selected engineering firm.

Interested firms should submit nine (9) copies of its proposal to the District's Omaha office, at the letterhead address, no later than 4:30 p.m. on October 28, 2003, if they are to be considered.

Inquiries regarding this matter may be addressed to Paul Woodward, Project Manager, at 444-6222 or pwoodward@papionrd.org.

Cc: West Papio Watershed Flood Plain Mapping Project Ad-Hoc Consultant Selection Subcommittee:

Joe Neary, Chairperson
John Conley
Rich Jansen
Barb Nichols
Rich Tesar



- Notes:
1. Big and Little Papillion Creek Subwatersheds identified by basins No. BP-1 to BP-47.
 2. West Papillion Creek Subwatersheds identified by basins No. WP-1 to WP-35.

Data Source: HEC-HMS, CRRM PRE-PRO, ArcView Version 3.2



Papillion Creek Watershed
HEC-HMS Model Basin Identification

Papillion Creek Watershed Management Plan
 For the City of Omaha, Nebraska

Date
 2003