

**Maumee Watershed Conservancy District
Hancock County Flood Diversion**

***MONTHLY PROGRESS REPORT #4
FOR STANTEC CONSULTING SERVICES INC.***

Period Covered:

3-December-2016 thru 6-January-2017

Submitted by:

**Stantec Consulting Services Inc.
4540 Heatherdowns Boulevard, Suite A
Toledo, Ohio 43614**

**Telephone: (419) 380-8910
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I. Invoice Summary and Project Financial Status

- Invoice Number 1147886 totaling \$117,708.42 for the Phase 2 Proof of Concept efforts is submitted for consideration. To-date approximately 51% of the total authorized funds for the Proof Of Concept have been invoiced.
- The above invoice includes five (5) subconsultant invoices. Invoices from Stormwater Engineering (\$750.00), Jack Faucett Associates (\$5,960.00 and \$17,940.00), and Applied Weather Associates (\$12,065.50 and \$3,500.00) are attached for your records.
- An additional invoice, Invoice Number 1147887 totaling \$87,696.51 for the authorized Supplemental Services related to field investigations for permitting and aerial survey, is also submitted for consideration. This invoice includes two (2) subconsultant invoices. Invoices from Bockrath & Associates (\$38,932.50) and Mannik & smith Group (\$37,216.51) are attached for your records.

II. Major Issues and Decisions

Data Collection & Analysis

- Conversion of the existing hydraulic model to unsteady-state is completed and QA review of the revised model has been executed. New hydrological information is currently being integrated into the hydraulic model.
- Completed QA review of the refinement of the hydrologic model, including the new precipitation model provided by Applied Weather Associates (AWA). AWA has completed a statistical review of 45-50 storm events for inclusion in modeling.
- A coordination conference call was held with Jack Faucett (Faucett) for their review and update of the BCR. Faucett is currently in process of creating an updated BCR utilizing a regional economic development (RED) model, versus the national (NED) model utilized by the USACE. Local meetings and interviews will occur in the coming months to complete this process.
- Supported District staff in the development of a response to a freedom of information act (FOIA) request completed.
- Stantec Gap Analysis memorandum reviewing the USACE data has been finalized and Proof of Concept is well underway.

Concept Refinement

- Continuing analysis and refinements being made for technically feasible alternatives including:
 - Refinement and modification of proposed diversion channel to convey larger flows (1% chance flood, versus 4% chance flood conveyance).
 - Extension of diversion channel connection to Lye Creek and the Blanchard River parallel to SR 15.
 - Removal of low-head dams and riffle structures within the City of Findlay.
 - Stream widening & channel modifications within the City of Findlay.
 - Upstream detention areas.
 - Widening of existing RR bridge opening.
 - Blanchard-to-Lye cutoff levee.
 - Evaluation of easterly drainage channel entering the Blanchard near the City of Findlay reservoir.
- Cost Curves and Impacts/Benefits table development continuing.

- Continuing development of draft Proof of Concept report. A draft report will be provided to the District for review prior to January 31st.
- Local project update provided to District, City and County on 12/13.

Permitting

- Field activities for Wetland delineation along the proposed diversion channel alignment are completed. Threatened and endangered species and wetland surveys indicate the nominal presence of impacted sites. Draft report is has started, but is currently on hold until a preferred alternative/recommended plan is formalized.
- Coordination underway with Mannik & Smith Group (MSG) and SHPO for Section 106 assistance. Field work east of I-75 is complete and MSG is in the process of developing their summary report for the Phase I efforts. Additional field work is currently on hold due to current weather conditions.
- MSG and Stantec staff are collaborating on the development of a formal work plan for permit coordination to follow the steps necessary to provide permitting for the preferred alternative/recommended plan once selected.

Aerial Survey

- Low-level flights for aerial mapping are complete. Aerial images and raw data have been provided to Bockrath by Kucera, the aerial surveying subconsultant.

III. Schedule

Task	Proposed Timeline	Current Status	Anticipated Timeline
A. Data Collection & Analysis			
A.1 – Update Hydraulic Modeling, H&H Data Collection & Analysis	9/9/2016	Complete	N/A
A.2 – Economics Impact Analysis	9/30/2016	Complete	N/A
A.3 – Geotechnical Borings	10/28/2016	Complete	N/A
A.4 – Surveying	9/23/2016	Complete	N/A
A.5 – Pre-Permitting, Mussel Recon, Cultural	10/28/2016	Complete	N/A
A.6 – Transportation	9/30/2016	Complete	N/A
A.7 – Precipitation Modeling	10/31/2016	Complete	12/22/16
A.8.A – Wetland Delineations & Habitat Assessment (Supplemental Task)	1/31/2017	On Hold	1/31/17
A.8.B – Archaeological Survey	1/31/2017	On Hold	4/15/17
A.9 – Aerial Survey	12/31/2016	Complete	N/A
B. - Concept Refinement			
B.1 – Project Adjustments & Improvements	10/14/2016	Nearly Complete	1/31/17

Task	Proposed Timeline	Current Status	Anticipated Timeline
B.2 – Model Refinement	10/14/2016	Nearly complete	1/31/17
B.3 – Estimating & BCR Analysis	10/14/2016	Underway / Estimating Nearly Complete for the Draft Report / Formal BCR to be Completed in March 2017	3/31/17
B.4 – Permitting Coordination	10/31/2016	Nearly Complete for Report Development	1/31/17
B.5 – Report & Presentation	10/31/2016	Draft Report Nearly Complete	2/3/17

Respectfully Submitted

STANTEC CONSULTING SERVICES INC.

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APPROVAL OF PAYMENT:

On behalf of the Maumee Watershed Conservancy District and in accordance with the Memorandum of Agreement, I hereby recommend payment in favor of Stantec Consulting Services Inc. by the Hancock County Commissioners in the amount of \$ 205,404.93.

Clark Lynn Army, General Manager

Date