

**CITY OF WEST ALLIS
AMENDED WORK ORDER #2**

TO: **AECOM TECHNICAL SERVICES, INC.**

DATE: **October 7, 2020**

PROJECT: **ENGINEERING SERVICES FOR STORM WATER QUALITY MANAGEMENT PLAN**

SUBJECT: **Engineering Consultant Services**

REVISIONS TO TASK 2.3: Updating language in contract and budget to include additional modeling requirements based on discussion with WDNR. Revise first sentence under Task 2.3 to the following: It is assumed that up to thirty-seven (37) prior analyzed BMPs will need to be remodeled in WinSLAMM and have drainage basins delineated in order to determine updated TSS and TP removal efficiencies. Total project not to exceed costs will now equal $\$117,520 + \$10,000 = \$127,520$

In accordance with Resolution No. 2020-0538 and 2020-0019 and the Agreement for Professional Services dated as of February 4, 2020 (the "Agreement"), you are directed to proceed with work on the Project as outlined below:

Work: See Attachment A – Amended Scope of Services for Task 2.3 and Attachment B - Scope of Services dated October 7th, 2020.

Estimate: \$10,000.00

Schedule: Work to commence immediately. To be completed as part of the Basic Services under the Agreement.

This Work Order, including any attachments, is incorporated into the Agreement. All work defined in this Work Order and payment therefor shall be performed in accordance with the terms and conditions of the Agreement, unless otherwise modified herein. Any modification(s) of this Work Order is subject to approval and acceptance pursuant to the Agreement.

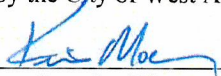
Issued: CITY OF WEST ALLIS
Received and Approved: AECOM TECHNICAL SERVICES, INC.

By: 
Peter C. Daniels, P.E.
By: 
Thomas J. Holtan, P.E.

Title: City Engineer
Title: Associate Vice President

Date: 10/12/2020
Date: 10/07/2020

ATTACHMENTS:
Attachment A
Attachment B

COMPTROLLER'S CERTIFICATE
Countersigned this 12 day of October, 2020 and I certify that the necessary funds have been provided to pay the liability that may be incurred by the City of West Allis under this Contract.

Kris Moen, Interim Director of Finance



AECOM
 1555 N. River Center Drive, Ste 214
 Milwaukee, WI 53212

414.944.6080 tel
 414.944.6081 fax

Attachment A – Amended Scope of Services for Task 2.3

To Peter Daniels, P.E., City of West Allis Page 1 of 1

CC

Subject Amendment #2 Storm Water Management Plan Update
 AECOM Project No.: 60627311

From Joshua Jacak, P.E., AECOM
 Ashley Leisgang, P.E., AECOM

Date September 24th, 2020

Project Background

The City of West Allis contracted AECOM to update their Storm Water Management Plan (SWMP) on February 4th, 2020. Since that original contract there have been conversations with the WDNR that will now require additional modeling of the City's existing best management practices (BMP's) to meet WDNR requirements. This includes modeling all of the City's existing BMP's in WinSLAMM to obtain their respective Total Phosphorus (TP) loading reductions.

Contract Amendment #2

This Contract Amendment modifies the Scope of Services from the original contract and previous Contract Amendments as follows:

Adding contract value/hours to existing Task 2.3 and amending the original contract language for Task 2.3 to "It is assumed that up to thirty-seven (37) prior analyzed BMPs will need to be remodeled in WinSLAMM and have drainage basins delineated in order to determine updated TSS and TP removal efficiencies.". The breakdown of that additional work is as follows:

- 35 BMPs that have SWMP's that would need to be remodeled to get TP efficiencies (3 hours each)
 - 2 BMPs that do not have SWMP's or Record Drawings that would need some field verification or digging up additional documents in order to model in WinSLAMM (6 hours each)
 - Existing scope included time to model 6 existing BMP's (5 hours each)
 - **$(35 \times 3) + (2 \times 6) - (6 \times 5) = \text{Total of 87 additional hours}$**
- Contract Value Modifications:

Task	Task Descriptions	Cost
1.0-7.0	Contract Value through Amendment 1	\$117,520.00
2.3	Model Existing Structural BMP's (Change Order Value)	\$10,000
	Total	\$127,520.00

Attachment B – Scope of Services

A. BACKGROUND

In March of 2008 AECOM (Earth Tech) completed the City of West Allis' original storm water modeling efforts to address the control and management of storm water throughout the City and reported these results in a Memo. The Memo identified critical non-point source pollution areas and provided recommendations to achieve improvement in water quality and quantity to meet the NR 216 and NR 151 regulations. The plan included analyzing the City-wide non-point source pollution using WinSLAMM to evaluate base ("no controls") and existing ("with controls") pollutant loadings. It was found that the City was not close to meeting the 20 percent Total Suspended Solids (TSS) reduction and was achieving a 5 percent TSS reduction from the baseline conditions. Various future best management practices were developed to bring the City in compliance with the 20 percent TSS reduction requirements and the anticipated 2013 – 40 percent TSS reduction requirements.

In April of 2014, AECOM completed an updated storm water management plan that incorporated several major BMPs that were constructed as well as updated modeling techniques. This analysis included updating the WinSLAMM water quality model to incorporate the updated modeling guidance from the Wisconsin Department of Natural Resources (WDNR). The updated storm water management plan found the City was in compliance with the required reductions at the time by achieving 23.0 percent TSS reduction and 16.2 percent TP reduction.

With the total maximum daily load (TMDL) limits associated with the Milwaukee River Basin TMDL, finalized March 19, 2018, the City of West Allis is seeking assistance with updating the previous storm water management plan to identify necessary efforts for future compliance with the TMDL regulations. The City is applying for a Wisconsin Department of Natural Resources Urban Nonpoint Source & Storm Water Management Grant to partially offset the cost of this project. This project will:

- Calculate the City's existing TMDL annual no-controls load for TSS and TP,
- Conduct a full evaluation of the City's existing best management practices to calculate the annual with-controls loading,
- Evaluate the cost effectiveness of additional measures to improve water quality in order to meet TMDL reduction requirements,
- Summarize the project efforts in a TMDL Storm Water Management Plan, and
- Review and provide recommendations for updates to current City ordinances including Erosion Control, Post Construction Storm Water Management, and Illicit Discharge and Prohibition

The Consultant understands that the City meets the MS4 requirements, so this project will only focus on the TMDL requirements. This project is a detailed planning level study to develop a storm water quality management plan with recommended alternatives for each reachshed that will enable the City to achieve its goals. We further understand that the recommended plan must be implementable, cost effective, sustainable, and politically acceptable in comparison to a range of alternatives.

B. SCOPE OF SERVICES

1.0 Establish TMDL No-Controls Load Using Most Recent WDNR Guidance

The data used for the TMDL analysis is somewhat different than the data used for the original WDNR MS4 permit analysis. The TMDL analysis will follow the WDNR document “TMDL Guidance for MS4 Permits: Planning, Implementation, and Modeling Guidance”.

The Consultant will incorporate or update the following GIS coverages as needed for use in the TMDL analysis:

- Excluded Areas
 - Undeveloped/Agricultural lands
 - Industrial permitted lands
 - Riparian lands
 - County/State right-of-way areas within the municipal boundary Land use
- Land Use
- Soils
- Municipal boundary
- TMDL watershed/reachshed boundaries

If there are more recent files than from the 2014 SWMP update, it is assumed that the City will provide files in a GIS format.

1.1 Review/Gather GIS Data

Review past project and existing City GIS data and obtain any data needed for the project.

1.2 Update Watershed Boundaries

Review the watershed boundaries used in the prior study based on current storm sewer system mapping and municipal limits. The Consultant will then group the boundaries into reachsheds that align with the TMDL analysis. TMDL boundaries provide by WDNR will also be updated to align with City watershed boundaries, storm sewer mapping, and more precise topographic information.

1.3 Excluded Areas

Review and update required and optional excluded areas to align with the current guidance document.

1.4 Land Use

Utilize/update current land use mapping.

1.5 Soils

Utilize USGS Soil Survey data.

1.6 Create WinSLAMM Base Files

Create standard land use WinSLAMM files for each loading scenario in the city to use in the calculation of the TMDL No-Controls Load.

1.7 Calculate TMDL No-Controls Load

The TMDL no-controls load for each TMDL reachshed will be calculated using data developed in Tasks 1.1 through 1.6.

2.0 Establish TMDL “with controls” Loads

The Consultant will conduct the following subtasks to analyze the pollution reduction achieved by the City’s existing storm water best management practices.

2.1 Update Street Cleaning

The model will be updated to reflect the City’s current street cleaning practices, schedule, and equipment.

2.2 Evaluate Existing Structural Best Management Practice (BMP) Performance

The Consultant will review existing structural BMPs and determine the TSS and TP removal efficiencies as well as the drainage basin. It is assumed that BMP efficiencies will either come from individual site storm water management plans (to be provided by the City) or prior modeling. This task will include, if necessary, reading through and locating old storm water management plans that the City may have.

2.3 Model Existing Structural BMP’s

It is assumed that up to thirty-seven (37) prior analyzed BMPs will need to be remodeled in WinSLAMM and have drainage basins delineated in order to determine updated TSS and TP removal efficiencies (Amend. #2).

2.4 Calculate With-Controls Conditions TMDL Load/Summarize Results

The Consultant will model annual loadings of storm water pollutants for Particulate Solids (TSS) and Total Phosphorus (TP) using WinSLAMM for the City’s existing storm water control practices.

2.5 Summarize Results

Results will be provided in both tabular and graphical formats and compared to the City’s calculated no-controls load.

3.0 Evaluation of Potential Future Storm Water Control Practices

Based on prior storm water management plan updates, it is anticipated that the City has exceeded the current 20% TSS reduction goal but additional BMPs will be required to move towards compliance with the Milwaukee River TMDL Waste Load Allocations (WLA’s). This task provides for a review of previously identified potential BMP’s as well as new potential BMPs to further reduce storm water runoff pollutants and move the City towards meeting the TMDL WLA’s.

3.1 Proposed Storm Water Control Practice Evaluation

The Consultant will first review BMP’s that were outlined in prior SWMP updates in 2008 and 2014. If these BMP’s still remain practical based on current land use conditions and storm sewer mapping these BMP’s will be included in this analysis.

This scope includes time allocated to run two (2) “what-if” city-wide solutions, i.e., what it would take to get the City to meet the TMDL reduction requirements. In addition, the scope assumes an additional ten (10) sites will be evaluated as potential locations for future storm water control practices (Amend. #1). A meeting with City staff will be conducted to get input on any potential locations. All existing BMP’s will also be analyzed for their potential to be retrofitted to increase storm water pollutant removal efficiencies (i.e., converting a dry pond to wet pond).

The evaluation will include additional information available from existing public files including: wetland information, depth of storm sewer entering/exiting the proposed location, size of proposed storm water control practice and land availability. The Consultant will use data that is readily available (such as the WDNR Surface Water Data Viewer or the City's GIS information). The Consultant will not conduct field investigations (such as soil borings or wetland delineations) for this evaluation.

Other potential practices may be considered such as enhanced street cleaning, leaf collection strategies, redevelopment, and others.

3.2 Develop TSS and TP Removal for Proposed Storm Water Control Practices

Consultant will calculate TSS and TP efficiencies for the potential storm water control practices identified in Task 3.1 using WinSLAMM. Proposed storm water control practice efficiencies will be applied to the existing city-wide modeling results from tasks 2.0 to determine "future" TMDL TSS and TP loading results.

This scope assumes no more than 12 sites will ultimately be modeled for their proposed TSS and TP reductions. Other pollutant removal effectiveness values for site specific or broader practices will be estimated based on supplemental information/research sources and engineering judgement.

3.3 Develop Storm Water Control Practice Cost Estimates and Identify Funding Mechanisms

The Consultant will develop planning level cost estimates for the proposed storm water control practices. The cost estimates will be developed with information from recent bid tabs for other storm water quality projects within the City and surrounding area or other sources. The cost estimates will include a contingency to address engineering and other unknown cost items.

A number of potential funding mechanisms are available to the City and a brief review of potential revenue sources will be discussed, including general revenue, grants, and storm water utility funding.

3.4 Develop Implementation Schedule

The Consultant will work with the City to develop a draft implementation schedule for the potential BMP's. This implementation schedule will be included in the report and can be used as a roadmap for meeting the TMDL goals and capital improvement planning.

4.0 Prepare Report

The Consultant will prepare a report which: 1) the current water quality regulations and TMDL requirements 2) documents modeling methodology, 3) compiles TSS and TP pollution loading results into an appropriate tabular format, 4) documents the pollution control (TSS and TP reductions) achieved by existing best management practices, and 5) summarizes the potential new storm water best management practices efficiency and cost.

The report will also contain figures displaying the results of the modeling, existing BMP locations, excluded areas, soil conditions, TMDL reaches, and the potential locations of proposed BMP's.

The consultant will provide one (1) hard copy and one (1) PDF copy of the draft Report to the City for review. Upon approval by the WDNR, AECOM will provide (2) hard copies and one (1) PDF copy of the final Report to the City. AECOM will also provide all additional electronic files develop as part of the project including: GIS shapefiles, geodatabase, WinSLAMM modeling files, and Microsoft Excel and Word documents.

5.0 Ordinance Review

Several municipal ordinances will be reviewed as part of this storm water management plan update process to reflect updates to MMSD Chapter 13, and recommendations provided by Clean Wisconsin.

City of West Allis Storm Water Management Plan Update

Ordinances will also be reviewed for potential modifications to benefit water quality such as being more open to green infrastructure practices and current TMDL requirements. Ordinances planned for review and potential update include:

- Chapter 11.19 – Post Construction Stormwater Management (includes Illicit Discharge and Prohibition and Disconnection updates)
- Chapter 13.32 – Construction Site Erosion Control

6.0 Review and Update Illicit Discharge Plan

The city already has a robust Illicit Discharge Detection and Elimination Plan that AECOM has been implementing annually. This task would include discussions with local and/or county health departments on current and recommended bacteria screening and analysis to help meet the Bacteria criteria identified in the Milwaukee River TMDL.

7.0 Meetings and Presentation

Three meetings with City staff and The Consultant staff are budgeted during the course of the project. WDNR staff will also be invited. The first meeting is anticipated during Task 1. The second meeting is expected to occur during Tasks 3 and 4 to fine tune the potential storm water control practices. The third meeting would take place after the preparation of the draft or final report and prior to a presentation to the City Common Council or other stakeholders.

A presentation to the City Common Council will be conducted at a point in the project that the City feels is appropriate to inform and gain the feedback and concurrence of public officials.

C. Schedule and Deliverables

Schedule:

Milestone	Target Completion Date
Kick-Off Meeting	February 2020
Data collection/mapping	March 2020
Ordinance drafting	May 2020
No Controls Pollutant Loading	June 2020
With Controls Pollutant Loading	August 2020
Future BMP Planning	December 2020
Final Draft Report	May 2021
Deliverables & Submit to DNR	June 2021

Deliverables:

AECOM will provide one (1) hard copy and one (1) PDF copy of the draft Report to the City for review. Upon approval by the WDNR, AECOM will provide (2) hard copies and one (1) PDF copy of the final Report to the City. AECOM will also provide all additional electronic files develop as part of the project including: GIS shapefiles, geodatabase, WinSLAMM modeling files, and Microsoft Excel and Word documents.

D. Assumptions

City of West Allis Storm Water Management Plan Update

1. The City shall furnish AECOM all available maps, orthophotographs, storm water conveyance system drawings, storm water management plans, parcel graphical and tabular data, and other relevant storm water management data, all of which may be relied upon without independent verification in performing the Scope of Work. It is also assumed that the above information will be provided at no cost to the project. Data files will be provided digitally to AECOM.
2. Some information provided by the City may be inaccurate or unreliable. AECOM cannot be responsible for inaccuracies in the data supplied by the City. Field verification of the data is not included in the Scope of Work.
3. Preparation of design plans, specifications, or construction documents are not included in this scope of work.