

2018 Scope of Services - City of Peoria Long Term Control Plan - Task Order 11

Task 01 – Project/Program Management

Work under this task will include overall project management as well as subcontractor/subconsultant management and preparation of required reports for submittal to U.S. EPA and Illinois EPA. Work will also include schedule updates and project summary submittals to the City.

- Project team coordination
- Monthly progress reports to City
- Team meetings
- Develop program management information system (see task 03)

Task 02 - Consent Decree Deliverables and Settlement/Litigation Support

Amec Foster Wheeler will assist the City in responses to U.S. EPA's complaint for settlement. This will include technical review of U. S. EPA's complaint as well as analysis of potential supplemental environmental projects, SEPs, that can be implemented to offset a portion of civil fines that may be proposed by U. S. EPA.

- Finalize CSO Reduction GI Plan Approach and Initial Implementation Plan (proposed in 4/27/17 submittal to USEPA)
 - Update/finalize GI monitoring plan for EPA reporting
 - Update/finalize post construction monitoring plan
- Update/finalize GI Monitoring Plan for EPA reporting
- Update/finalize Post Construction Monitoring Plan
- Respond to additional questions regarding Existing Conditions Hydrologic and Hydraulic Modeling Report and update report as necessary
- Update O&M plan & schedule
- Technical support for negotiations with USEPA/DOJ/IEPA
- SEP project development
- Review of revised draft Consent Decree and related appendices

Task 03 – Management Tracking System for EPA Implementation and Monitoring Plans

Amec Foster Wheeler will develop a web based system to support EPA Implementation and Monitoring Plans that the City can use to easily plan and share information with regulatory agencies, GI designers, and the public for planning, design, construction, operation and maintenance as well as compliance tracking. The web based system will be used to implement GI project standards, site metrics parameters, performance measurement criteria, and project selection matrix. See concept below:

1. Design Guidance

- a. *Street Based Ranking System by Block or Subcatchment*

- i. All combined sewer system streets and alleys divided into 1 block long or small subcatchment GIS segments
 - ii. Each segment contains the following attributes:
 - 1. Pavement condition rating
 - 2. GI suitability rating (per space available, utility conflicts, etc.)
 - 3. GI effectiveness rating (based on location in modeled subcatchment, drainage area – see below)
 - 4. Corridor improvement priority (per Innovation Team analysis)
 - 5. Aldermanic District
 - 6. Associated model subcatchment(s)
 - 7. Other (watermain condition, sewer condition, other GI co-benefits, etc.)
 - iii. Can dynamically highlight blocks in GIS and sort in tabular format based on combinations of ratings to prioritize projects.
- b. *Modeled subcatchments dynamically graphically displayed, with the following attributes:*
 - i. Total peak flow rate and volume to be captured for LTCP design storm
 - 1. from pervious areas
 - 2. from impervious areas
 - ii. Appropriate GI type and size ideas
 - iii. Assumed areas
 - 1. directly connected impervious area
 - 2. disconnected impervious area (discharge to pervious areas)
 - 3. pervious area
 - iv. Drainage overview description
 - v. Assumed native soil infiltration rate
 - vi. etc.
- c. *GI design standards and guidance*
- d. *Data on previous GI projects*
 - i. See tracking below

2. Design Review

- a. *Review of GI design plans and calculations to:*
 - i. Ensure appropriate drainage area delineation and storm water capture
 - ii. Provide tips from lessons learned on other projects
 - iii. Enter projects into model and tracking geodatabase (see below)
- b. *Design review submittal can be setup via web-based GIS interface*

3. Tracking

- a. *All designed and constructed GI projects dynamically graphically displayed, with the following attributes:*
 - i. dates
 - 1. construction start date
 - 2. construction end date

3. maintenance
 - ii. maintenance tracking
 1. data entry form
 2. maintenance history
 - iii. Storm water capture volume
 - iv. Associated street, subcatchment, and sewershed
 - v. Design/record drawings
 - vi. Pre- and post-construction flow monitoring data summary, when applicable
 - vii. Photos
 - viii. Other?
- b. *Modeled subcatchments updated to reflect installed projects, dynamically graphically displayed*
- c. *Sewershed/outfall based summaries*
 - i. storm water gallons managed
 1. installed to date
 2. designed to date
 3. estimated to meet LTCP goal
 - ii. annual monitored flow reduction from start of implementation – total flow and CSO flow
 1. actual flow reduction
 2. projected LTCP design storm flow reduction (typical year or 10-year design storm)

Task 04 - Flow Monitoring

Based on Amec Foster Wheeler recommendations and discussions with City staff, permanent flow monitoring activities will be suspended until a consent decree is reached. Permanent flow monitoring will resume once a consent decree is fully executed but is anticipated to be limited to the recreation season – May to October. Temporary flow monitoring for the Western Avenue project will continue.

- Flow monitoring results analysis
- Development and refinement of permanent flow monitoring program
- Maintain flow meters and rain gages and review, cleanup, and host flow monitoring and rain gage data
- ADS and GPSD flow monitoring data processing and review for model calibration/verification and improved understanding of system behavior
- Processing and analysis of rainfall data for use in meter data review and modeling
- Processing and analysis of river stage data for use in meter data review and modeling

Task 05 - GPSD Negotiation Assistance

Provide technical assistance to the City in ongoing negotiations with GPSD. Update flow monitoring and model projections on regulator optimization and riverfront interceptor capacity for use in development of CSO control that ties together City and GPSD components.

- Finalize existing conditions modeling of regulators and Riverfront Interceptor based on input from GPSD
- Review, share, and troubleshoot regulator, Riverfront Interceptor, and flow monitor problems with GPSD
- Estimate/negotiate future conditions of regulators, Riverfront Interceptor, and flow monitoring for CSO reduction planning efforts
- CSO cost/responsibility negotiations with GPSD

Task 06 - Miscellaneous GI Design Assistance (School and Park Districts, Western Ave., Etc.)

Assist in establishing suitability criteria for green infrastructure projects, and GI components of larger projects, to consider potential CSO impact, sewer system condition and acceptability, appropriate connection and overflow points, ability to monitor results, and ability to analyze performance. Amec Foster Wheeler will work with the City and project consultant(s) focusing on the GI and CSO control aspects of selected projects.

- Existing conditions/data review - flow monitoring locations
- Field data collection - sewer verification; perc tests; flow monitors
- Identify drainage basins & calculate runoff rates and volumes
- Determine GI sizing and storage requirements
- Identify and design GI components
- Construction assistance to meet GI standards
- Post construction evaluation & monitoring

Task 07 – Out of Scope

- Miscellaneous tasks to be determined