

**RESOLUTION NO. 2680**

**A RESOLUTION OF THE CITY OF WILSONVILLE AUTHORIZING THE CITY MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT CONTRACT AMENDMENT WITH CH2M HILL ENGINEERS INC. FOR PHASE 3 CONSTRUCTION ENGINEERING SUPPORT SERVICES FOR THE WASTEWATER TREATMENT PLANT OUTFALL REPLACEMENT PROJECT (CAPITAL IMPROVEMENT PROJECT #2095).**

WHEREAS, the City has planned and budgeted for the completion of Capital Improvement Project #2095, known as the Wastewater Treatment Plant Outfall Replacement project (the "Project"); and

WHEREAS, the City solicited Requests for Proposals from qualified consultants for the Project that duly followed the State of Oregon Public Contracting Rules and the City of Wilsonville Municipal Code; and

WHEREAS, CH2M Hill Engineers, Inc. was selected as the most qualified consultant, was awarded a contract for Phase 1 preliminary design and permitting services, and performed and completed Phase 1 services to the satisfaction of the City; and

WHEREAS, the City amended the Professional Services Agreement contract with CH2M Hill Engineers, Inc. to perform Phase 2 final design and bid support services, and performed and completed Phase 2 services to the satisfaction of the City; and

WHEREAS, the City desires to amend the Professional Services Agreement contract with CH2M Hill Engineers, Inc. to perform Phase 3 construction engineering services;

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. The procurement process for the Project duly followed Oregon Public Contracting Rules, and CH2M Hill Engineers, Inc. has provided a responsive and responsible proposal for Phase 3 services.
2. The City of Wilsonville, acting as the Local Contract Review Board, authorizes the City Manager to enter into and execute, on behalf of the City of Wilsonville, a Professional Services Agreement contract

amendment with CH2M Hill Engineers, Inc. for a not-to-exceed amount of \$338,539.00.

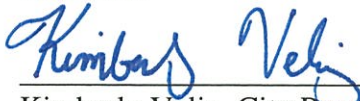
3. This resolution becomes effective upon adoption.

ADOPTED by the Wilsonville City Council at a regular meeting thereof this 7<sup>th</sup> day of May 2018, and filed with the Wilsonville City Recorder this date.



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Scott Starr, Council President

ATTEST:



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Kimberly Veliz, City Recorder

SUMMARY OF VOTES:

Mayor Knapp	Excused
Council President Starr	Yes
Councilor Stevens	Yes
Councilor Lehan	Yes
Councilor Akervall	Yes

Attachments:

1. Exhibit A – WWTP Outfall Replacement Project Phase 3 – Scope of Work

# **Exhibit A**

## ***Amendment 4 to Contract Agreement***

### ***City of Wilsonville***

#### ***WWTP Outfall Replacement Project Phase 3 - #2095***

##### ***Scope of Work and Estimated Fee***

In June 2013, an Original Agreement was developed for Engineering Services between City of Wilsonville and CH2M HILL Engineers, Inc. This Original Agreement was for Phase 1 of the City of Wilsonville Waste Water Treatment Plant (WWTP) Outfall Replacement Project Phase I – CIP #2095.

This Amendment No. 4 amends the original Agreement between CH2M HILL Engineers, Inc., (CH2M) and the City of Wilsonville (City). This Amendment No. 4 defines changes in contract scope, cost, and schedule specific to Preliminary Design.

The original Scope of Work remains in effect except as modified herein. Tasks noted below as ‘amended’ refers to the Task numbering from the Original Agreement. New tasks are also noted.

##### **Background & Objectives**

The outfall improvement project for the City of Wilsonville Wastewater Treatment Plant (WWTP) provides the engineering and scientific information that defines the basis of design for outfall improvements. This outfall improvement project removes a shoreline manhole structure and the existing outfall pipe, and installs a buried outfall pipeline on the shoreline and in the Willamette River with a multiport diffuser section. The replacement outfall and new diffuser are designed to relocate the submerged discharge offshore to greater depth with more exposure to river currents (allowing for nearshore passage of migrating fish), provide hydraulic capacity, minimize effects to biological resources, and meet state water quality standards. This Amendment #4 represents Phase 3 work and includes four tasks to support the City of Wilsonville; engineering services during construction, construction administration services, project closeout, and an outfall dilution performance study (post-construction).

##### **Scope of Work**

*A.1 Add the following subtasks:*

##### **Task 9 Engineering Services During Construction**

*Amendment No. 4 adds Task 9.*

##### **Task 9.1 Services During Construction**

Review submittals, respond to requests for information (RFI), and participate in weekly progress meetings via telephone. On-site construction management will be provided as part of Task 10.

##### ***Deliverables***

- One electronic response per submittal review.

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### ***Assumptions***

- Only complete submittal packages will be accepted and reviewed.
- Includes document management of submittals and RFIs.
- Discipline leads will be engaged as necessary to process submittals.
- Assumes one, 30-minute weekly progress meeting by telephone.

### **Task 9.2 Site Visits**

Conduct site visits by engineering design staff as required, to assist the City with ensuring compliance with contract documents and that the integrity of the design concept as reflected in the contract for construction has been implemented and preserved by the Contractor.

CH2M observations of the work is not an exhaustive observation or inspection of all work performed by the Contractor. CH2M does not guarantee the performance of the Contractor. CH2M observations shall not relieve the Contractor from responsibility for performing the work in accordance with the contract for construction, and CH2M shall not assume liability in any respect for the construction of the project.

Should CH2M discover or believe that any work by the Contractor is not in accordance with the contract for construction, or is otherwise defective, or not conforming to requirements of the contract or applicable rules and regulations, CH2M will bring this to the attention of the Contractor and the City but will not be responsible for monitoring the Contractor's corrective actions or advising the City as to the acceptability of the corrective actions.

The presence or duties of CH2M personnel at a construction site, whether as onsite representatives or otherwise, do not make CH2M or CH2M personnel in any way responsible for those duties that belong to the City and/or the construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction Contract Documents and any health or safety precautions required by such construction work.

CH2M and CH2M personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the construction contractor(s) or other entity or any other persons at the site except CH2M own personnel.

### ***Deliverables***

- One report for each site visit.

### ***Assumptions***

- Includes 24 hours for site visits.
- One daily report per site visit.
- Daily report will include general site observations and specific items brought to the attention of CH2M by the Contractor or the City.
- The City will make its facilities accessible to CH2M.

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### Task 9.3 Permitting Assistance during Construction

Conduct site visits as required to assist with oversight of permitting requirements; recommend regulatory compliance actions, if required.

#### **Assumptions**

- Includes 24 hours of permitting support.

### Task 9.4 Record Drawings

Utilizing the marked-up contract documents from the construction phase provided by the Contractor, electronically incorporate these mark ups and provide one electronic copy of the record drawings in AutoCAD format.

#### **Deliverables**

- Digital PDF copy of record drawings.
- AutoCAD files for record drawings.

#### **Assumptions**

- Hand marked-up field drawings will be complete and legible when submitted to CH2M for drafting.

## Task 10 Construction Administration Services

*Amendment No. 4 adds Task 10.*

CH2M will provide services to assist in coordinating the site activities, administering the contract for construction, monitoring the contractor's performance, and managing responses to design and technical submittals.

### Task 10.1 Site Coordination

Pre-Construction Conference: CH2M shall attend and participate in a pre-construction conference, led by the City, with the Contractor to review the project communication, coordination and other procedures and discuss the Contractor's general work plan and requirements for the project. CH2M will take minutes or otherwise record the results of this conference.

Communications: CH2M will implement and maintain regular communications with the Contractor during the construction. CH2M will receive and log all communications from the Contractor and will coordinate the communications between the City and Contractor. CH2M will not communicate directly with the Contractor's subcontractors.

Project Site Meetings: CH2M will conduct periodic meetings with the Contractor and will prepare the minutes of these meetings.

Field Instructions and Orders: CH2M will issue field instructions, orders or similar documents during construction as provided in the contract for construction.

#### **Deliverables**

- Field instructions and orders, as applicable.

#### **Assumptions**

- 1 pre-construction conference, not to exceed 3 hours including travel. Up to two CH2M employees may attend in person.

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## Task 10.2 Construction Contract Administration

Payments to Contractor: CH2M will receive and review the Contractor's requests for payment. CH2M will determine whether the amount requested reflects the progress of the Contractor's work and is in accordance with the contract for construction. CH2M shall provide recommendations to the City as to the acceptability of the requests.

Recommendations by CH2M to the City for payment will be based upon the contract provisions, and CH2M's knowledge, information, and belief from its observations of the work on site and selected sampling that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by CH2M to ascertain that the Contractor has completed the work in exact accordance with the contract for construction; that CH2M has made an examination to ascertain how or for what purpose the Contractor has used the moneys paid; that title to any of the work, materials or equipment has passed to the City free and clear of liens, claims, security interests, or encumbrances.

Correspondence and Communications: CH2M will coordinate all written communications among the Contractor, CH2M and City during the construction. CH2M will prepare written communications to the Contractor and provide recommendations to the City for written communications between the City and Contractor.

### ***Deliverables***

- Approved contractor payments.

### ***Assumptions***

- Contractor will invoice monthly.

## Task 10.3 Changes

Minor Variations in the Work: CH2M may authorize minor variations in the work which do not involve an adjustment in the Contractor's contract price nor time for construction and are not inconsistent with the intent of the contract documents.

Coordinate Issuance of Changes: CH2M will assist the City with the issuance of changes to the contract for construction.

CH2M will receive and review the Contractor's response to the request for change and will obtain such further information as is necessary to evaluate the basis for the Contractor's proposal. CH2M will assist the City with negotiations of the proposal.

Review of Contractor's Requested Changes: CH2M shall review all Contractor -requested changes to the contract for construction. CH2M shall coordinate with the Design Team make recommendations to the City regarding the acceptability of the Contractor's request and, upon approval of the City, assist the City in negotiations of the requested change. At the request of the City, CH2M will prepare an independent cost estimate of the proposed change.

Design and engineering services of CH2M to review Contractor initiated changes and to prepare drawings and specifications for issuance to the Contractor shall be considered as Additional Services, entitling CH2M to additional compensation.

## Task 10.4 Interpretations of Contract Documents

CH2M will coordinate with the City and Design Team and will provide written responses to the Contractor's request for interpretation or clarification of the contract documents.

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***Deliverables***

- One electronic response per request for interpretation, clarification, and/or RFI.

***Assumptions***

- Excludes document management and issuing of RFIs.
- Includes 40 hours for RFI review
- Request for interpretation, clarification, and/or RFIs will include sufficient information to respond without a site visit.

**Task 10.5 As-Built Drawings and Record Documents**

CH2M will coordinate the Contractor's submittal of as-built drawings, specifications and other as-built or record documents and shall transmit these to the City. CH2M will meet with the Contractor as necessary to discuss the preparation and submittal of as-built or record drawings.

**Task 10.6 Claims and Disputes**

CH2M will receive, log, and notify the City about all letters and notices from the Contractor concerning claims or disputes between the Contractor and City pertaining to the acceptability of the work or the interpretation of the requirements of the contract for construction. CH2M will review all such letters and notices and will discuss them with the Contractor as necessary to understand each such claim or dispute. CH2M will advise the City regarding the Contractor's compliance with the contract requirements for such claims and disputes. CH2M will assist the City in discussions with the Contractor to resolve claims and disputes.

CH2M will not issue decisions on Contractor claims or disputes. CH2M will not, except as part of Additional Services, undertake comprehensive and detailed investigation or analysis of Contractor's claims and disputes, nor participate in judicial or alternative dispute resolution procedures for the claims or disputes.

**Task 10.7 Project Controls**

Contractor's Schedule Submittal: CH2M will review the Contractor's construction schedule and verify that it is consistent with the requirements of the contract for construction. CH2M will advise the Contractor of any areas where the schedule is not in compliance with the contract for construction. CH2M will provide comments to the City to assist the City in approving, accepting or taking other action on the contractor's schedule, in accordance with the contract for construction.

CH2M review and comments shall not be considered as a guarantee or confirmation that the Contractor will complete the work in accordance with the contract for construction.

Contractor's Schedule Updates: CH2M will review the Contractor's periodic schedule updates or other schedule submissions. CH2M will advise the Contractor if the updates or other submissions are not in accordance with the contract for construction. CH2M will provide comments to the City regarding the updates or other submissions.

Effect of Change Orders: CH2M will review information submitted by the Contractor regarding the effect of proposed or issued Change Orders upon the construction schedule, duration and completion date. CH2M will advise the City as to the potential impact of proposed or issued Change Orders. CH2M will assist the City in discussions with the Contractor concerning the potential impact of proposed or issued Change Orders.

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## Task 10.8 Field Inspection

Field Office: CH2M will staff a field office on the project site for purposes of providing an inspector to observe the work of the Contractor.

Review of Work: CH2M will conduct regular on-site observations of the Contractor's work for the purposes of determining if the work generally conforms to the contract for construction and that the integrity of the design concept as reflected in the contract for construction has been implemented and preserved by the Contractor. CH2M will document the on-site observations and make reports available to the City.

CH2M observation of the work is not an exhaustive observation or inspection of all work performed by the Contractor. CH2M does not guarantee the performance of the Contractor. CH2M observations shall not relieve the Contractor from responsibility for performing the work in accordance with the contract for construction, and CH2M shall not assume liability in any respect for the construction of the project. CH2M shall, with the assistance of the City, obtain written plans from the Contractor for quality control of its work, and will monitor the Contractor's compliance with its plan.

Deficient and Non-Conforming Work: Should CH2M discover or believe that any work by the Contractor is not in accordance with the contract for construction, or is otherwise defective, or not conforming to requirements of the contract or applicable rules and regulations, CH2M will bring this to the attention of the Contractor and the City. CH2M will there upon monitor the Contractor's corrective actions and shall advise the City as to the acceptability of the corrective actions.

Regulatory and Third-Party Testing and Inspections: CH2M will monitor the Contractor's coordination of inspection and testing by regulatory and third party agencies that have jurisdiction over the project.

Subsurface and Physical Conditions: Whenever the Contractor sends notice of subsurface or physical conditions at the site for which the construction contract requires such notification, CH2M will notify the City and Design Team for a response and assist the City in responding to the Contractor.

Substantial and Final Completion: CH2M will assist the City with inspections at substantial and final completion, in accordance with the construction contract. CH2M will prepare up to two (2) separate punch lists of items requiring completion or correction. CH2M shall make recommendations to the City regarding acceptance of the work based upon the results of the final inspection.

Specialty Inspections: Specialty inspections and/or testing services are anticipated to be required for compaction of trench backfill per 31 23 23.15. CH2M will assist the City with coordination of contacting the special inspections company for inspections during construction.

### ***Deliverables***

- One field report per day.

## Task 10.9 Shop Drawings, Samples and Submittals

Submittal Schedule: CH2M will obtain from the Contractor a proposed shop drawing and submittal schedule, which shall identify all shop drawings, samples and submittals required by the contract for construction, along with the anticipated dates for submission.



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Review of Shop Drawings, Samples and Submittals: CH2M will coordinate with the Design Team for the reviews of the Contractor's shop drawings, samples, and other submittals. Contractor will log and track all shop drawings, samples and submittals.

***Deliverables***

- One electronic response per submittal review.

***Assumptions***

- Only complete submittal packages will be accepted and reviewed.
- Excludes document management of submittals.
- Discipline leads will be engaged as necessary to process submittals.

**Task 10.10 Contractor Clarifications and Requests for Information (RFI/CCIR)**

Requests for Information: CH2M will review the Contractor's requests for information or clarification of the contract for construction. CH2M will coordinate such review with the Design Team and with the City as appropriate. CH2M will coordinate and issue responses to the requests.

CH2M HILL will log and track the Contractor's requests.

Proposed Substitutions: CH2M will assist the City and Design Team in reviewing and responding to the Contractor's requests for substitution of materials and equipment.

***Deliverables***

- One electronic response per RFI review.

***Assumptions***

- Only complete RFIs will be accepted and reviewed.
- Excludes document management of RFIs.
- Discipline leads will be engaged as necessary to process RFIs.

**Task 10.11 Safety**

CH2M will manage the health, safety and environmental activities of its staff and the staff of its subcontractors to achieve compliance with applicable health and safety laws and regulations.

CH2M will coordinate its health, safety and environmental program with the responsibilities for health, safety and environmental compliance specified in the contract for construction. CH2M will coordinate with responsible parties to correct conditions that do not meet applicable federal, state and local occupational safety and health laws and regulations, when such conditions expose CH2M staff, or staff of CH2M subcontractors, to unsafe conditions.

CH2M will notify affected personnel of any site conditions posing an imminent danger to them which CH2M observes.

CH2M is not responsible for health or safety precautions of construction workers. CH2M is not responsible for the Contractor's compliance with the health and safety requirements in the contract for construction, or with federal, state, and local occupational safety and health laws and regulations.

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### **Assumptions**

- The Construction Administration services fee estimate is based on providing the services outlined above. The amount of time furnished and the cost of performing such services are estimates generally based upon the contract times set forth in Contract Documents. The amount of time furnished is based on a 120-day contract duration from the date of the Contractor's mobilization on site to the date of final completion as evidenced by the CM's written recommendation for final payment.
- Throughout the duration of Task 10, the commitment is assumed to be as shown in the attached level of effort. The amount of time furnished does not include overtime, if required by the Project or the Contractor to achieve final completion. Overtime, if deemed required by the City, will be addressed in a subsequent amendment.
- CH2M is only responsible for the health, safety and environmental activities of its staff and the staff of its subcontractors.

### **Deliverables**

- Copy of CH2M Field Safety Instructions for its staff and the staff of its subcontractors.

## **Task 11 – Closeout Services**

*Amendment No. 4 adds Task 11.*

CH2M will assist the City in closing out the contract for construction and commencement of the City's use of the completed work. CH2M services shall include the following.

### **Task 11.1 Substantial Completion**

CH2M will assist the City and take the lead in issuing documents for substantial completion and acceptance of the work. CH2M will advise the City on payment, and release of retention.

### **Task 11.2 Final Completion**

CH2M will assist the City and take the lead in issuing documents for final completion and acceptance of the work. CH2M will advise the City on final payment, release of retention, and release of insurance and bonds.

### **Task 11.3 Close-out File and Records**

CH2M will provide to the City an organized set of project documents and records. Project documents and records are as described in the above tasks.

## **Task 12 Outfall Diffuser Mixing Zone/Dilution Performance Study**

*Amendment No. 4 adds Task 12.*

The Oregon DEQ letter (issued September 16, 2016) approving the 30% Predesign for the Wilsonville Outfall Improvement Project includes requirements that the City perform a dye tracer study and additional modeling to confirm the dilution performance of the new outfall diffuser. After completion of the outfall replacement construction, a mixing zone/dilution performance study will be conducted with the new diffuser structure discharging, and the field measurements and modeling results will be presented in a study report submitted to the City for submittal to Oregon

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DEQ. The purpose of this mixing zone/dilution performance study is to validate the model-predicted design dilutions for the new outfall diffuser structure, and DEQ requires that outfall mixing zone studies align with the requirements of the DEQ's Regulatory Mixing Zone Internal Management Directive (RMZ-IMD) (DEQ, 2012).

### **Task 12.1 Outfall Mixing Zone/Dilution Study Plan**

In accordance with the DEQ's RMZ-IMD, a detailed Outfall Mixing Zone/Dilution Study Plan will be developed for submittal to DEQ for approval prior to performing the field tracer study. The study plan will define the approach and methodologies for the field tracer study and dilution modeling. Dilution modeling will cover the field study conditions and seasonal 7Q10 low and high river flow conditions. The study plan will specify the objectives and approach, data to be collected, quality control and quality assurance procedures, and field dilution study process and results. The study plan will be prepared to allow submittal to DEQ in July 2018, so that approval is secured and the field tracer study can be conducted in September or October 2018 under low river flow conditions (assuming construction is completed by early September 2018). If necessary, the study will be delayed until the low flow period in 2019.

#### ***Deliverables***

- Draft and Final Outfall Mixing Zone/Dilution Study Plan.

### **Task 12.2 Field Measurements & Tracer Study**

CH2M will conduct a field performance test of the new Wilsonville WWTP outfall diffuser during low river flow conditions in either September or October 2018 or 2019 (depending on construction completion). The field study will be conducted during a five-day period using a team experienced with tracer studies, and the study will include specific QA/QC activities. The field study will include simultaneous measurements of ambient current speed and direction, water depth, and tracer dye during a period that corresponds with low river stage. Dye will be injected into the Wilsonville WWTP effluent and measured in the river during an 8 hour period. The focal points for in-stream dye measurements will be the defined acute and chronic mixing zone boundaries downstream from the diffuser, and additional measurements will be recorded within and outside of the define regulatory mixing zone boundary lengths and widths.

CH2M will provide all instruments for the study including two InterOcean S4 current meters (or equivalent ADCP meter), SeaBird SBE-19 water quality instruments, Turner Designs Model 10-AU fluorometers and/or SCUFA fluorometers, and injection and sample pumps. The tracer, Rhodamine WT dye, will be purchased for the study. One survey vessel with DGPS will be contracted from Solmar Hydro Inc. to provide the work vessel for instrument installations, tracer sampling, and site-specific field measurements. Prior to the field dye test, CH2M will install cabled buoy systems with current meters (or a bottom-mounted ADCP meter) upstream of the diffuser for in-situ continuous measurements during the field test. The field study will include the following activities: field safety meetings, setup and calibrate the dye injection, fluorometer calibration and testing, installation and retrieval of instruments in the river, water column measurements of dye, temperature, and conductivity during daylight hours, data download from instruments, and the post-study instrument calibrations. These data collections will be used to define the range of effluent concentrations (dilutions) at the acute and chronic mixing zone boundaries in the river.

Following the completion of the field study, the collected field data will be developed and summarized to represent the plume within and at the mixing zone boundaries. The dye tracer study

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field data will be analyzed and summarized, and these data will be used for the dilution modeling and in the study report development.

***Deliverables***

- Raw data collection during mixing zone study.

**Task 12.3 Dilution Modeling**

Modeling will be used to predict wastewater dilutions and temperatures for the field-measured conditions (river flow during dye tracer study) and for the seasonal critical river flow conditions defined in the RMZ-IMD. The dilution and plume behavior will be predicted using the selected model, either Visual Plumes (UDKHW or UM3) or CORMIX2. The focal points for dilution modeling results will be acute and chronic mixing zone boundaries in accordance with the study plan agreement with DEQ. Dilution modeling will be developed to represent the same conditions as the dye tracer study and seasonal critical river flow conditions defined in the RMZ-IMD.

Measured receiving water and effluent conditions will be used in the dilution modeling to represent the field-measured conditions and to “calibrate” the model predictions. After modeling the field-measured condition, the model that provides the most accurate representation of the field-measured dilutions will be applied for subsequent dilution modeling of seasonal 7Q10 river flow conditions. The comparison of model-predicted versus field-measured dilutions will also be summarized in the report.

**Task 12.4 Study Report and Meetings**

A draft and final mixing zone/dilution study report will be prepared based on the results of the field tracer study, dilution modeling, and updated effluent and receiving water data. The draft report will be prepared for review by the City. This report will summarize the results of the field data collections, diffuser dilution performance measurements, dilution modeling, and an assessment of the attainment of water quality standards. Water column measurements of dye concentrations, temperatures, and current speeds will be summarized in graphical and tabular formats. The comparison of model-predicted dilutions to field-measured dilutions will be summarized in the report, along with the basis for the dilution model selection. The dilution modeling will be summarized in the report and model input and output will be in report appendices. The existing effluent chemical concentration data and available river background data will be used to calculate chemical concentrations in the receiving water at the edge of the defined mixing zone boundaries (reasonable potential analyses). The City or the WWTP operators will provide the effluent chemistry (metals, organics, and ammonia) data to CH2M for developing the RPA.

The draft and final mixing zone/dilution study report will be provided to the City for review within twelve weeks of the completion of the field study. A draft report review meeting will be held with the City to review the results presented in the draft report and discuss comments. CH2M will incorporate the City’s comments and a final report will be provided for submittal to DEQ within two weeks of the receipt of the City’s comments.

CH2M will arrange for the following meetings with the City and WWTP operations staff: 1) draft study plan review meeting, 2) field study safety and logistics meeting, 3) preliminary results review meeting (teleconference one month after field study), and 4) draft report review meeting. If requested by the City, CH2M will attend a meeting with the City at DEQ to review the results of the final report.

***Assumptions***

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- Two CH2M employees will attend the following meetings:
    - Draft study plan review meeting
    - Field study safety and logistics meeting
    - Preliminary results review meeting (teleconference one month after field study)
    - Draft report review meeting

***Deliverables***

- Draft and Final Mixing Zone Study Report.

## **Task 13 Project Management**

Provide services to manage the work tasks and team to achieve the objectives of this scope of work. This work task includes regular communications with District staff and monthly invoicing. In addition, this task includes those elements necessary to properly manage, lead, and control the Project. Participate in periodic meetings (calls) with the District to review project status, not to exceed 4 meetings. Assumes 8 hours per month of effort for the Project Manager to coordinate project activities over the 10-month construction period. Should construction extend beyond the 10-month construction period, CH2M shall be entitled to additional compensation.

Prepare monthly progress reports and review these with the District. The reports will include a status summary of current tasks, activities planned for the next month, an action issues checklist, performance compared to budget, and identification of items of concern.

Monitor Project activities for potential changes. Should change occur, and with District approval, modify tasks, task budgets, and approach. Inform District if any changes will impact the cost of engineering services, the construction cost, or the schedule. Maintain records, manage and process communications, and coordinate Project administrative matters.

**Assumptions:**

- Assume 8 hours per month of effort for the Project Manager to coordinate project activities during the 6-month construction period.
- Assume 4 hours per month of effort for the Project Manager to coordinate project activities during the 3-month period during execution of Mixing Zone/Dilution Performance Study.
- Document Management System and Procedures excluded.

**Deliverables:**

- Monthly project status reports.
- Monthly invoices.
- Completed change management forms, as needed, to document impacts of potential changes on engineering fee, construction cost, or schedule.