CITY OF CORONA
SECOND AMENDMENT TO
PROFESSIONAL SERVICES AGREEMENT
WITH MICHAEL BAKER INTERNATIONAL, INC.
(POTABLE WATER MASTER PLAN UPDATE AND PROGRAM ENVIRONMENTAL IMPACT REPORT, PROJECT NO. 2020-05)

1. PARTIES AND DATE.

This Second Amendment to the Professional Services Agreement ("Second Amendment") is made and entered into this _____ day of _____ 2024 by and between the City of Corona ("City") and Michael Baker International, Inc., a Pennsylvania corporation ("Consultant"). City and Consultant are sometimes individually referred to as "Party" and collectively as "Parties" in this Second Amendment.

2. RECITALS.

2.1 Agreement. City and Consultant entered into that certain Professional Services Agreement dated August 5, 2020 ("Agreement"), whereby Consultant agreed to provide professional Potable Water Master Plans and Program Environmental Impact Reports necessary for the project ("Project") as set forth in the Agreement.

2.2 Prior Amendments. City and Consultant entered into that certain First Amendment to the Professional Services Agreement dated November 10, 2022 ("First Amendment").

2.3 Amendment. City and Consultant desire to amend the Agreement for the second time to (1) extend the Term of the Agreement retroactively from August 5, 2020 through June 30, 2025; (2) amend the Rate & Total Compensation to $870,385;(3) replace Exhibit "A" (Scope of Services) with Exhibit "A-1" (Scope of Services), and (4) replace Exhibit "C" (Compensation) with Exhibit "C-1" (Compensation),

3. TERMS.

3.1 Term. Section 3.1.2 (Term) of the Agreement is hereby deleted in its entirety and replaced with the following:

> "3.1.2 Term. The term of this Agreement shall be from August 5, 2020 to June 30, 2025 ("Term"), unless earlier terminated as provided herein. Consultant shall complete the Services within the Term of this Agreement and shall meet any other established schedules and deadlines. The Parties may, by mutual, written consent, extend the Term of this Agreement one or more times by executing a written amendment pursuant to Section 3.6.8 below (each a "Renewal Term") The terms "Term" and

"Renewal Term" may sometimes be generally and collectively referred to as Term" in this Agreement."

3.2 Rates & Total Compensation. Section 3.3.1 (Rates & Total Compensation) of the Agreement, are hereby deleted in their entirety and replaced with the following:

"3.3.1 Rates & Total Compensation. Contractor shall receive compensation, including authorized reimbursement, for all Services rendered under this agreement at the rates set forth in Exhibit "C" attached hereto and incorporated herein by reference. The total compensation, including authorized reimbursements, shall not exceed Eight Hundred Seventy Thousand Three Hundred Eighty-Five Dollars ($870,385) per fiscal year ("Total Compensation") without the written approval of the City's Representative. Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement."

3.3 Continuing Effect of Agreement. Except as amended by this Second Amendment, all provisions of the Agreement shall remain unchanged and in full force and effect. From and after the date of this Second Amendment, whenever the term "Agreement" appears in the Agreement, it shall mean the Agreement as amended by this Second Amendment.

3.4 Adequate Consideration. The Parties hereto irrevocably stipulate and agree that they have each received adequate and independent consideration for the performance of the obligations they have undertaken pursuant to this Second Amendment.

3.5 Counterparts. This Second Amendment may be executed in duplicate originals, each of which is deemed to be an original, but when taken together shall constitute but one and the same instrument.

[SIGNATURES ON FOLLOWING PAGE]

CITY'S SIGNATURE PAGE FOR
SECOND AMENDMENT TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE CITY OF CORONA
AND MICHAEL BAKER INTERNATIONAL, INC.
(POTABLE WATER MASTER PLAN UPDATE AND PROGRAM ENVIRONMENTAL IMPACT REPORT, PROJECT NO. 2020-05)

IN WITNESS WHEREOF, the Parties have entered into this Second Amendment to Professional Services Agreement as of the date first written above.

CITY OF CORONA

By: Savat Khamphou
Savat Khamphou
Public Works Director

Reviewed By: Dylan Goldsmith
Dylan GoldSmith
Senior Engineer

Reviewed By: DocuSigned by: Yasmin Lopez F8EEBE3136B4492...
Yasmin Lopez
Purchasing Manager

Attest By: _____
Sylvia Edwards, City of Corona, CA
City Clerk

CONSULTANT'S SIGNATURE PAGE FOR
SECOND AMENDMENT TO
PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE CITY OF CORONA
AND MICHAEL BAKER INTERNATIONAL, INC.
(POTABLE WATER MASTER PLAN UPDATE AND PROGRAM ENVIRONMENTAL IMPACT REPORT, PROJECT NO. 2020-05)

IN WITNESS WHEREOF, the Parties have entered into this Second Amendment to Professional Services Agreement as of the date first written above.

MICHAEL BAKER INTERNATIONAL, INC.
a Pennsylvania corporation

By: DocuSigned by: Christopher Alberts 69C6076A8D96434...
Christopher Alberts
Vice President

By: DocuSigned by: Richard Beck 74819E2427A3400...
Richard Beck
Assistant Secretary

EXHIBIT A-1
(SCOPE OF SERVICES)

The project scope generally consists of reviewing and updating the City's 2005 PWMP. There have been changes to the City's water infrastructure since the completion of the previous PWMP including development projects and implementation of Capital Improvement Program (CIP) projects. The tasks to be completed as part of this project are detailed and summarized below:

1) Project Management
2) Data Collection and Review
3) Land Use, Population and Planning
4) Water Supply
5) Water Demand Analysis
6) Planning Criteria
7) Hydraulic Model Update (modeling will be performed by City staff)
8) Existing System Evaluation
9) Future System Evaluation
10) Capital Improvement Program (CIP)
11) Program Environmental Impact Report (PEIR)
12) Sub Area Master Plan (SAMP) Template
13) Final Report

The intent of the PWMP Update is to create a living document addressing all the above items in a user-friendly format suitable for use by management, operations, and engineering to assist in the planning, funding, construction, and operation of water supply, treatment, and distribution facilities. Information shall be provided in a logical, easy-to-find format, either in the body of the report, or in appendices. Where appropriate, information shall be provided in tables, graphs, sketches, and photos.

The Consultant is to provide one or two of the consultant's project members to work on City premises for the project duration. One of the consultant's onsite project members will be responsible for creating the master plan exhibits, figures, and tables and performing data collections. Working on City premises will provide the team members the ability to access information more securely and communicate with City staff more frequently and as needed.

The City is currently adding the Info360 (Legacy SCADAWatch) software to its existing modeling, SCADA, and GIS software capabilities. Info360 will enable the City to have a real-time calibrated model including a monitoring and reporting dashboard. Info360 brings business intelligence into interaction processes in the control room. It enables water utilities to conduct zonal mass balance and water audits to determine non-revenue water and monitor everything from uptime to analytics, access timely information to make better decisions, react faster to important events and identify opportunities to drive operational efficiencies as they happen. It is a valuable system improvement, regulatory compliance tool, and financial planning tool.

The consultant shall incorporate Info360 processes into the PWMP Update. Although implementation of Info360 is under a different contract, the Consultant shall make use of the software capabilities and incorporate its results in the PWMP Update.

City staff will be responsible for performing the hydraulic modeling using InfoWater and Info360 software. The Consultant shall work closely with City staff (Modeler) during the data collection task to gather data needed for modeling.

Info360 implementation will require approximately six (6) months. The Consultant shall include the Info360 schedule in the PWMP Update schedule by allowing the analysis and hydraulic modeling tasks to appear later within the schedule. The Info360 implementation is expected to be complete by July 2020. The maximum duration to fully complete this PWMP Update and PEIR shall NOT exceed 24 months.

TASK 1: PROJECT MANAGEMENT

The following Project Management activities, submittals and meetings are the minimum level of Project Management considered acceptable to the City:

1.1) Project Kick-off Meeting:

The Consultant shall coordinate and attend a Project Kick-off meeting with City staff. At a minimum, the Consultant's Project Manager, Project Engineer and other key staff shall attend. The Consultant shall prepare and submit an agenda one week in advance of the meeting. A sign-in sheet shall be used to record attendance at the meeting. Within one week after the meeting, the Consultant shall provide Meeting Minutes to the City.

1.2) Monthly Project Progress Reports:

The Consultant shall submit Monthly Project Progress Reports that provide a summary of the project's progress for the most recent calendar month and include the following as a minimum: Summary of work completed by task, list of proposed activities for the upcoming month, list of pending information needed to support the planned activities for the upcoming month, list of out of scope items, percent complete/budget status summary, and an updated project schedule showing work completed through the reporting period and any revisions to the overall project schedule.

1.3) Monthly Project Progress Reports:

The Consultant shall coordinate and attend monthly Project Coordination Meetings with the City. At a minimum, the Consultant's Project Manager and Project Engineer shall attend with other key staff, if relevant, to discuss the issues identified for the respective meeting. Consultant shall prepare and submit an agenda at least one week in advance of the meeting. A sign-in sheet shall be used to record attendance at the meeting. Within one week after the meeting, Consultant shall provide Meeting Minutes to the City.

1.4) Weekly Project Updates:

The Consultant shall provide weekly updates via Email summarizing the progress of the work, list critical data collection items needed to support the ongoing work, identify items impacting the project schedule, and any other relevant project issues.

1.5) Workshops:

The Consultant shall prepare for, coordinate and attend a maximum of ten (10) workshops for the duration of the project to present various topics to City staff to obtain feedback and direction related to the topics presented. Workshops may be scheduled adjacent to monthly Project Coordination Meetings, or any other meetings between City staff and Consultant. Provide a summary of the workshops included in your proposal and the topics for each workshop.

1.6) Quality Control:

The Consultant's Project Manager shall review all submittals prior to submitting to the City. Submittals that contain significant grammar and/or punctuation errors, or where the submittal has serious quality control issues, will not be accepted by the City.

TASK 2: DATA COLLECTION AND REVIEW

The purpose of this task is to collect, document and review any pertinent data to be used during this project, including operational conditions. The Consultant is to develop a Data Tracking List as part of this task to document the date/version of data collected and used so it is easy to perform future updates.

- Water and Sewer System Master Plan Initial Study and Mitigated Negative Declaration (see Appendix A)
- 2005 Potable Water Master Plan (see Appendix B)
- 2005 Sewer Master Plan (see Appendix C)
- Aquifer Evaluation for the Temescal Sub Basin (see Appendix D)
- Recharge Master Plan for the Temescal Basin (see Appendix E)
- Water Use Efficiency Master Plan (see Appendix F)
- 2015 Urban Water Master Plan (see Appendix G)
- 2018 Reclaimed Water Master Plan (see Appendix H)
- Other ongoing updates developed by City's staff since 2010
- Latest General Plan, Specific Plans and approved Development Plans
- Population projections
- Historical water use data
- Water billing records for the past 5 years
- Treatment plant production records
- Well production records
- Imported water records

- Water supply studies
- Tanks, Pressure Reducing Stations/Valves, flow control, wells, and booster pumps data
- Operational controls/SCADA set points
- Water Quality reports
- Pipeline repair/leak history
- Missing pipeline data (where available)
- Pressure zone boundary maps
- As-built drawings needed to update GIS
- Any other relevant planning documents
- Water Treatment as-built plans

All data collected shall be recorded in the Data Tracking List and logged for future use and reference. Where information appears outdated, it will be noted as such and the project team will determine if newer data is needed. The appendices include a portion of the documents listed above.

The Data Collection List shall be updated regularly and distributed with the Weekly Project Updates. A chapter in the final report shall identify all references used in the preparation of this master plan.

TASK 3: LAND USE, POPULATION AND PLANNING

The Consultant shall review previously compiled land use, population and planning data as part of Task 2 and utilize the most current land use, population, and planning information available. One of the goals of this task is to characterize the type of water users that are part of the City's water distribution system as of year 2019.
Some of the main components include:

- Update existing and future population estimates.
- Update existing and future land use information.
- Update City service boundary, existing and future water service areas (annexations or de-annexations, etc.).
- Calculate persons per household (pph) for existing and future conditions to determine where future growth and densification may occur.
- Hold on-going meetings/workshops with the City Planning Department to keep the PWMP Update and PEIR aligned with the General Plan, Specific Plans, etc.
    - Keeping the Planning Department engaged is a key element to making a master plan document that is accurate and accepted across various City departments.
- Identify (from the Reclaimed Water Master Plan) locations suitable for conversion to reclaimed water service.

The effort completed during this task sets the foundation for all subsequent work during this project, so it is important to track the work in a logical and updateable manner. Utilize tools such as Geographic Information Systems (GIS) to develop or update existing land use and population datasets and document assumptions made. Once the information is collected, organized, and all parties agree on its validity, it will be used as the basis for completing the PWMP Update

without further revisions. The master planning team will revise the data only in cases where the land use, population, or planning data will have a substantial effect on the modeling and planning results.

TASK 4: WATER SUPPLY

The City has a complicated water supply system with many operational variables that can change frequently, sometimes daily. Exhibit 2 is the water supply schematic. The Consultant shall meet with the City's Department of Water and Power (DWP) Operations staff to knowledge-capture how they typically supply, treat, and deliver water to the system. While not every operational condition can be identified due to the complexity of the system, it is important that we document typical operations in order to conduct hydraulic model simulations and identify potential improvement projects.

The Consultant shall add a section to provide details about the well system, common well configuration, well collection system, how water travels from the wells to the Ion Exchange plant and the RO plant to the blending cells. Exhibit 3 shows the well collection system. The well collection system shall discuss the current water quality conditions, future projections and planning. Plan and recommendation shall cover current and future use of the Coldwater Basin.

The 2005 PWMP predicted a water supply deficiency for future conditions based on information and data collected at the time the plan was drafted. Part of this task is to determine if, given updated economic conditions and projections, a future deficiency is still anticipated. To determine this, the Consultant shall review and update the following items as part of this task:

- Water rights for groundwater (the Temescal basin is not adjudicated)
- Hydrogeologic conditions of the Temescal, Bedford and Coldwater Creek basins (including water quality)
- Development of additional local groundwater supply, including treatment and delivery infrastructure required for beneficial use
- Future of groundwater and Colorado River water availability
- State Water Project (SWP) entitlements
- Groundwater recharge using reclaimed water
- Groundwater recharge using stormwater capture

Another part of this task is to determine reliability of future water sources. The Consultant shall take a realistic approach to determining which water supply sources will be available in the future, and the quantity, quality and cost to supply water from the various sources. We will also investigate potential alternate sources of water and strategies if a future supply shortage is anticipated, such as:

- Water banking
- Water conservation and rationing
- Conjunctive use
- Purchase of additional SWP entitlements
- Stormwater recharge

The Consultant shall discuss the Direct Potable Reuse (DPR) as a potential future supply.

TASK 5: WATER DEMAND ANALYSIS

One of the key elements to having a defendable PWMP Update and CIP is proper allocation of water demands. The accuracy of the hydraulic model and resulting improvement projects is largely dependent on having the correct quantity and location of demands assigned in GIS. The Consultant shall establish a parcel-to-meter link as part of this task.

Once the parcel-to-meter link is established the Consultant shall use the monthly billing records for the past 5 calendar years (2014 through 2019). Due to the change in economic conditions it is important to look at the past 5 years to understand water usage characteristics in the City. Existing demand shall be calculated from meter billing records for a calendar year which the project team agrees to be reflective of typical conditions and that forms a good basis for this master plan. After existing demand is calculated, the Consultant will update the Unit Flow Factors previously compiled in the 2005 PWMP.

Future water demand will be based on the General Plan zoning designations for the planning horizon (the current General Plan extends to year 2025) and population projections. The Consultant shall develop future demand by utilizing existing land use-based Unit Flow Factors and incorporating predicted population changes to determine the location and quantity of future demand in the City. The Consultant shall compare future demand projections with the water supply analysis completed as part of Task 4 to determine if water shortages are anticipated within the planning horizon. *(Add "high-density urban" land use and determine water usage rate. The North Main apartments will provide some useful water use information for newly developed high-density apartment/condo developments.)*

The Consultant shall estimate water loss in the system by comparing the past 5 years of water billing records with water supply/production records. For the hydraulic model, the water demand will be increased by the difference between the water production and billing records (typically 5-10%) to simulate the realized flow the City's water infrastructure experiences.

Updated average day and maximum day 24-hour diurnal usage patterns will be created as part of this task. For average day conditions, the sum of the area under the diurnal must be equal to 1 in order to obey the conservation of mass law. For maximum day conditions, the peak hour flow will occur at one point during the day.

The Consultant shall submit a draft chapter of the report that summarizes existing and future water demands. Information shall be presented in tabular and graphical formats. The submittal shall describe the process used to develop the projections. The Consultant shall present the demand projections to City staff in a workshop format. Consultant shall submit a final version of the report chapter that incorporates comments provided during the workshop or written comments provided during the review period. The final chapter shall be included in the final PWMP Update and PEIR report.

TASK 6: PLANNING CRITERIA

Planning criteria is used in the evaluation of both existing and future system hydraulic models. In general, the criteria from the 2005 PWMP will be updated, as needed, to meet any changes in municipal code or operational changes. General categories of criteria shall include the following:

- • Storage (including operational, fire protection, emergency, and blending)
- • Pump Stations
- • System pressures under various demand conditions
- • Intra-zone water sharing
- • Inter-agency water sharing
- • Pipeline criteria (flow, velocities, head loss)
- • System redundancy and reliability

The Consultant shall document the planning and design criteria for this PWMP Update to analyze the existing water system and to evaluate recommended improvements. The criteria shall address the size of replacement, parallel, and new facilities for pipelines, pumping stations, storage facilities and regulating stations.

The Consultant shall develop unit costs to estimate Project Costs. Unit costs shall cover pipelines, pumping stations, storage facilities, regulating stations, and other improvements as appropriate. The unit costs shall incorporate cost information based on the City's experience with similar facilities. Additional cost information available to the Consultant may also be used where appropriate.

The planning criteria shall be compiled in a separate chapter of the PWMP Update, generally in a tabular format, for easy identification and access.

The Consultant shall prepare and submit a draft Technical Memoranda that summarize the Planning Criteria and Unit Cost Criteria proposed by Consultant for this PWMP Update. The Consultant shall present this information to City staff in a workshop format. The Consultant shall submit the final versions of the Technical Memoranda that incorporate comments by the City provided during the workshop(s) or written comments provided during the review period. The final Technical Memoranda shall be included in an appendix to the final PWMP Update and PEIR report.

The Consultant shall develop planning level cost estimates for all recommended facilities. The cost estimates shall be based on a variety of cost data sources, such as City and other local project bidding history, and other sources reflecting cost of utility construction in southern California, adjusted to the then current ENR 20-City construction cost index, including appropriate contingency factors. Define other factors needed to generate Total Project Costs (soft costs). Construction and Total Project Costs shall be developed using the Unit Costs Technical Memorandum developed for this PWMP Update. Escalate costs to future years using historical construction cost inflation factors. Provide a summary of costs for each planning year, by service area. Present the cost summaries using tabular and graphical formats. The final report shall include a discussion of the basis for the cost estimates.

TASK 8: EXISTING SYSTEM EVALUATION

The Consultant shall utilize the results of the updated, calibrated hydraulic model to evaluate existing system hydraulics. The following core scenarios will be used as well as any sub-scenarios needed to evaluate the existing system hydraulic model:

- Existing Average Day Demands (7-day Extended Period Simulation (EPS))
- Existing Maximum Day Demands (7-day EPS, which includes the Peak Hour in the diurnal)
- Existing Maximum Day Demands + Fire Flow (Steady-State)

This set of scenarios and conditions provides a good basis for evaluating the existing system capacity and possible improvements resulting from the hydraulic model. The Consultant shall use the results from these scenarios to evaluate it against the Planning Criteria developed during Task 6. The Consultant shall produce maps/tables identifying facilities that do not meet criteria. The Consultant shall handle the fire flow simulations in the following way:

1) One global Maximum Day Demand + Fire Flow Steady-State scenario shall be run to identify:
    a. Nodes not meeting fire flow criteria
    b. Critical nodes (i.e. bottleneck node(s) that may prevent other nodes from meeting fire flow criteria)

2) From the global fire flow simulation, identify nodes that need additional investigation, for example if nodes near hospitals or schools cannot deliver the required fire flow. These nodes will be evaluated in individual scenarios since Infowater does not display simulation details for a given single node during the global fire flow simulation as it is designed to look at system-wide results.

For any work involving fire flows, the Consultant shall consult with the fire department to request their input and requirements.

In addition to the model results, the Consultant shall evaluate other existing system parameters such as:

- Pump performance (SCE pump tests will be provided where available)
- Tank type and design (inlet/outlet configuration, use of baffles, mixing, etc.)
- Turnover time in tanks
- Pressure Reducing Valve (PRV) configurations
- • Flow control stations
- • Hydraulic settings of sub-zones supplied by pumping or by PRV’s
- • Seasonal groundwater well operation scenarios
- • Blending facility operation to maximize use of local groundwater supply
- • Desalter operation

- • Pipe distribution system materials, age, size, and history of leaks and repairs

Facilities not meeting planning criteria in the model shall be flagged with a user-defined field explaining the reason. This will make developing and prioritizing the CIP more accurate since the reason for the recommendation will have been recorded at the time of evaluation.

As part of this task the Consultant shall perform a storage capacity analysis to determine if additional storage is needed, and where. This is likely to be done in a spreadsheet outside of the hydraulic model. As part of the storage capacity analysis we will account for any intra-zone water-sharing capabilities the City has. The storage surplus in one pressure zone can sometimes offset a storage deficit in another. Inter-agency connections and agreements for mutual support shall be described and presented in tabular format.

The Consultant shall also provide a narrative and graphical description of the well system, desalter, and blending system operation on a seasonal basis.

TASK 9: FUTURE SYSTEM EVALUATION

This task involves loading the existing system model with future (2025) demands and running simulations to identify where system improvements are needed during the planning horizon. During this task, changes to some operational controls will likely be needed, as well as infrastructure improvements. In addition, the Consultant shall review prospective water conversion sites identified in the PWMP Update to determine potential reductions in potable water use. The following core scenarios shall be used as well as any sub-scenarios needed to evaluate the future system hydraulic model:

- 2025 Average Day Demands (7-day EPS)
- 2025 Maximum Day Demands (7-day EPS, which includes the Peak Hour in the diurnal)

Results from these scenarios shall be evaluated against the Planning Criteria developed during Task 6. The Consultant shall produce maps/tables identifying facilities that do not meet criteria.

In addition to the model results, the Consultant shall evaluate other future system parameters such as:

- Pump capacity and controls
- Tank sizing and location (if new tanks are needed)
- Turnover time in tanks
- PRV configurations, sizing and location (if new PRVs are needed)
- Hydraulic configuration of future sub-zones supplied by pumping or by PRV’s
- Local groundwater development and future well locations
- Changes to groundwater blending operation
- Wellhead treatment of nitrates
- Development of additional desalter facilities
- Providing redundancy in the distribution system to minimize customer service outages for planned and unplanned shutdowns

- Distribution system crossings of key infrastructure, such as freeways, railroad tracks, and storm drainage channels

Facilities not meeting planning criteria in the model shall be flagged with a user-defined field explaining the reason. Additional/future facilities input into the model shall be flagged as future facilities for easy tracking and identification in tables and figures. The storage capacity analysis developed as part of Task 8 shall be updated for future system conditions and demands. Like the existing system, the Consultant shall account for any intra-zone or inter-agency water-sharing capabilities the City possesses.

TASK 10: CAPITAL IMPROVEMENT PROGRAM

The results of the existing and future system evaluations done as part of Tasks 8 and 9, respectively, shall be grouped into logically constructible improvement projects as part of this task. It is important to vet across multiple departments and disciplines the recommendations produced from this effort, including management, to evaluate the feasibility of the recommended improvements. Projects requiring alignment changes or other edits will be addressed as part of this task.

The CIP shall include a desktop level analysis of available condition assessment information, such as any pump station and tank field condition evaluations previously performed. DWP Operations staff will assist with field visits to pump stations, valves, or tank sites as required to determine asset conditions. Information obtained through the Corona Enterprise Asset Management System (NEXGEN) shall be utilized where available. The PWMP Update effort is not a full condition assessment task like inspecting CCTV records for wastewater systems, but rather another layer of data to help prioritize facilities not meeting the planning criteria in either existing or future conditions.

Findings and recommendations from the 2005 PWMP shall be evaluated with the recommendations resulting from this project. The CIP shall be prioritized and phased over the planning horizon based on capacity, condition, financial feasibility, and economic feasibility needs with each project given a priority/ranking score. For example, nodes not meeting average day demand pressures in an area where pipe is greater than 50 years old would receive a higher priority than nodes not meeting average day demand pressures in an area with newer pipe, all else being equal.

The Consultant shall develop and use a prioritization matrix/ method to prioritize and schedule CIP projects. The prioritization matrix/ method shall be discussed, developed, and agreed upon with City staff and management.
Cost shall be assigned to each project based on a combination of references including, but not limited to recent local construction cost experience, Engineering News & Record Construction Cost Index (ENR CCI), cost estimating programs, and DWP staff input. The CIP will include tables with individual project costs phased over the planning horizon to establish a financial planning guide for the City.

TASK 11: PROGRAM ENVIRONMENTAL IMPACT REPORT

The City is committed to updating, adopting, and implementing the master plans for its reclaimed water, potable water, and wastewater systems. A PEIR for the 2018 Reclaimed Water Master Plan (RWMP) is currently underway and will integrate an environmental analysis across the City's three systems including a wide range of individual projects, the ability to tiering of subsequent project-level environmental assessments and eliminate the need for repetitive discussions of large-scope issues when project-level potable water or wastewater system EIRs are needed. The scope of work for the preparation of the PEIR for the PWMP shall consider and integrate the work to be executed within the PEIR for the 2018 RWMP which include but not limited to; Air Quality, Greenhouse Gas, Noise , Biological Studies, Cultural Studies, and Tribal Consultation.

The Consultant shall prepare a PEIR for the PWMP update in accordance with the latest procedural and substantive requirements of the California Environmental Quality Act (CEQA). The PEIR shall encompass the geographic area to include current City limits, service areas, and the Sphere of Influence as identified in the PWMP. The PEIR format and organization should follow and comply with the latest approved CEQA Guidelines. A link to the Final Adopted Text for Revisions to the CEQA Guidelines is provided: https://resources.ca.gov/About-Us/Legal/CEQA-Supplemental-Documents.

The City has determined that a PEIR is appropriate to address the PWMP Update, consistent with CEQA Guidelines Section 15163. The PEIR for the 2018 RWMP can be used as a tool to prepare the PEIR for the PWMP. The Consultant shall be responsible for all procedural steps, including (but not limited to) the following:

- • Preparation of public notices (Notice of Preparation, Notice of Availability, Notice of Completion, Notice of Determination, and newspaper advertisements);
- • Tribal and Native American Consultation including AB 52 & SB 18 notifications;
- • Resolutions;
- • Ordinances;
- • Draft PEIR and technical reports (two screencheck drafts and one public review draft);
- • Final PEIR and responses to comments (one screencheck final draft and one final version);
- • Filing notices with County Offices and State Clearinghouse;
- • Providing notices to local and state agencies as needed;
- • Mitigation Monitoring and Reporting Program;
- • Statement of Overriding Considerations (if necessary);
- • Public Outreach;
- • Candidate Findings of Fact; and
- • Draft City of Corona staff report to adopt the PWMP Update and PEIR by the City Council.

The Consultant shall also be responsible for scheduling and conducting a scoping meeting pursuant to CEQA Guidelines Section 15082(c), as the project is of areawide significance. The scoping meeting shall be noticed to all affected responsible and trustee agencies, any city or county that borders the City, as well as interested organizations and individuals, in order to

identify and discuss issues, actions, alternatives, potential and significant environmental effects and potential mitigation measures.

The Consultant will prepare project-specific technical reports, to be included as PEIR appendices, including but not limited to the following: traffic, geotechnical, biological resources, air quality, noise, GHG emissions, paleontological and cultural resources reports. The proposal should include revisions to technical reports based on City review.

The proposal should include the Consultant's attendance at meetings and hearings. In addition to the scoping meeting, the Consultant should include attendance at up to six project-related in-person meetings, two project-related hearings, and 10 teleconferences with City staff.
The City shall review and approve all documents prior to distribution by the Consultant. The level of detail in the PEIR analysis and technical reports should be appropriate for a program-level project, in order to adequately cover future project impacts, the details of which may not currently be known.

A Mitigation Measures and Monitoring Program (MMRP) shall be prepared pursuant to CEQA. This document shall be a separately bound document from the PEIR. The Consultant shall develop recommended implementation measures appropriate for future projects under the program and identify the appropriate party responsible for implementation, monitoring, and confirmation of implementation. Recommendations shall be developed for a mitigation monitoring system designed to ensure accomplishment of the PWMP Update goals.

The Consultant shall also provide professional advice on items which must or should be included in the PEIR that are not specifically called out in this RFP.

The proposal shall provide a detailed scope of work, including methodology and approach for each environmental category, as well as a cost estimate for the PEIR broken down by task. The cost proposal should include revision time for all submittal documents based on City review and comments. The discussion must cover the following topics:

- Developing a detail project description, that includes the project's technical, economic, and environmental characteristics, including construction and operation. The project objectives will also need to be thoughtfully developed with input from the City, as these are also relevant to the selection or rejection of the project alternatives.

- Developing the environmental setting/existing conditions for each environmental impact category. The environmental categories anticipated to be addressed include:

    - Aesthetics
    - Air Quality (including CO2 and GHG)
    - Biological Resources
    - Cultural and Tribal Cultural Resources
    - Geology/Soils including Paleontological Resources
    - Greenhouse Gas Emissions and Energy

  - Hazards and Hazardous Materials
  - Hydrology/Water Quality
  - Noise
  - Traffic

- Developing methodologies for evaluating each environmental impact area.
- Identifying potential environmental impacts of future projects, including direct, indirect and cumulative impacts.
- Recommending performance standard mitigation measures to be implemented by future projects in order to reduce significant impacts.
- Identifying significance threshold criteria, which should be generally consistent with the General Plan PEIR.
- Developing PEIR Alternatives. The alternatives analysis must evaluate the environmental effects of each alternative on each impact category. A total of four alternatives, including the No Project Alternative, should be addressed.
- Developing a cumulative impacts analysis based on the build-out of adopted and proposed land use plans, in addition to any relevant past, present and reasonably foreseeable probable future projects.
- Identifying any additional technical studies/evaluations determined to be necessary to augment the program-level analysis. The proposal shall include a discussion of the need, cost, and schedule implications of the additional tasks.
- The proposal should be comprehensive to cover all necessary PEIR tasks from start to finish such that change orders are not required except in extenuating circumstances.

Proposals must adequately identify all the assumptions being made by the consultant, such as the work and data expected to be delivered by City staff, in response to this RFP. Proposals shall outline the analysis and data that each consultant expects to be reasonably available from the City and list the data needs anticipated for each environmental impact area.

TASK 12: SUB AREA MASTER PLAN (SAMP) TEMPLATE

The Consultant shall prepare a Sub Area Master Plan (SAMP) template and provide it in an appendix with the PWMP Update and PEIR report. The SAMP template report shall be utilized for any new development or redevelopment within the service area. The SAMP template report shall cover the Potable and Reclaimed Systems.

TASK 13: FINAL REPORT

The final report shall be organized as a reference live document designed for accessibility and ease of use and shall include the following sections:

- **EXECUTIVE SUMMARY**

The executive summary includes an overview of the historical and current status of the potable water system, a summary of system analysis conclusions, and a summary of recommendations.

- **INTRODUCTION**
  This section establishes the basis of the report in terms of the City's mission and vision. It provides details related to report organization, sources of data, conventions, and units of measure.

- **STUDY AREA**
  This section delineates the water service area and describes the demographic, land use, jurisdictional, and physical characteristics that impact potable water planning.

- **POTABLE WATER SUPPLY**

  This section identifies and quantifies the City's sources of potable water supply (Imported and Ground water). The imported water system and the ground water wells system shall be illustrated with extensive tables, charts, figures, and exhibits. The well collection system shall include complete information and hydraulic analysis for the existing and future system. The well collection system shall include detailed information about the wells, pumps, pipes, treatment systems, blending, and water quality. The well collection system was not covered in detail in the previous master plans.

- **POTABLE WATER USE**
  This section identifies allowable and current potable water uses. It identifies customers by type and location. It quantifies trends in demand fluctuation.

- **SERVICE CRITERIA**
  This section clarifies the goals of City policy concerning potable water use in terms of economic, technical and financial feasibility.

- **EXISTING SYSTEM**
  This section describes the facilities and substructure currently in use. It includes the existing hydraulic modeling analysis.

- **FUTURE SYSTEM**
  This section describes projects recommended for future implementation. It includes the future hydraulic modeling analysis. Improvement projects will be listed here. Each improvement project shall have an individual project sheet (Cut Sheet). Each project sheet should have the following information: Project Title, Project Type, Impacted Zone(s), Purpose, 2020 Cost Estimate, Project Location, Project Description, Project Detail, and Project Map.

- **WATER QUALITY**

This section describes the water quality standards, system water quality sampling locations and results, water quality for water supply (Ground and Imported) sources, water quality for the distribution system, dead ends, flushing program…etc.

- **CAPITAL IMPROVEMENT PROGRAM**
  This section evaluates and prioritizes recommended projects. It schedules the projects for implementation of a ten-year period.

- **APPENDICES**
  This section of the report shall contain the big volume reference data used on the report. Some of the data information that shall be in this section but not limited to existing facilities field collection data sheets, various hydraulic modeling results, Sub Area Master Plan (SAMP) Template…etc.

Upon completion of each the above listed sections, a draft section report shall be produced for internal distribution to City staff. The Consultant shall meet with various divisions, as needed, to present (using Power Point presentation) findings, methods and procedures and to address any questions or concerns. The intent of having the Consultant submit a draft section report is to have involvement from all parties throughout the duration of the project in an effort to minimize comments when the report is fully compiled, it also helps reviewers focus on small information and allow them to fit it within their busy schedule in order to provide quality reviews.

Second Amendment - Additional Scope of Work

A. Project Management & QA/QC

1. Facilitate up to three (3) virtual meetings with City and sub-consultant.
2. Facilitate up to six (6) virtual internal coordination meetings with the sub-consultant.
3. Maintain QA/QC procedures and prepare periodic updates on the Data Needs List.

B. Hydraulic Modeling

1. Provide hydraulic modeling services as outlines in the sub-consultant proposal.

C. Master Plan Updates

1. Populate and complete Section 6 – Existing System Analysis
2. Populate and complete Section 7 – Future System
3. Update and revise Section 9 – Capital Improvement Program

Scope to be completed by Mission Consulting Services (sub-consultant)

D. Data Collection

1. Prepare and submit a Data Needs list to MBI for submission to the City. This will include a list of necessary GIS layers, as-built drawings were applicable, SCADA information, operational settings, etc.
2. Review the hydraulic model and other submitted information for completeness. Discuss with the Consultant if the information is incomplete or not usable.
3. Obtain and review other pertinent documentation.

E. Supply and Demand Analysis

1. Per our discussion with the City and the Consultant, the modeled demand data should be aligned with the appropriate billing data. Consultant staff is to provide the demand and methodology for MCS to verify with the model.

F. Hydraulic Model Development

1. Review potable water GIS database for completeness with regards to the hydraulic model.
2. Correct the hydraulic model using the most current GIS database provided. Development of the model will include all pipes down to 4-inches in diameter. Smaller pipelines will only be added if hydraulically necessary.
3. Obtain operational settings for summer/winter periods. Set model controls accordingly.

G. Hydraulic Model Calibration – SCADA "Macro-Level" Calibration

1. Collect available SCADA and production information from City Operations Staff for the calibration time frame. Develop diurnal curves, by zone if possible. Calibrate the hydraulic model by adjusting C-factors, validating pump curves, and reviewing valve status (open vs. closed). Any potential issues will be brought to City staff's attention for discussion and field verification.
2. Review calibration efforts with the Consultant and the City periodically to discuss potential areas of concern, or where calibration may not match recorded field or SCADA data.
3. Provide industry standard calibration goals.
4. Provide calibration graphs and goal achievements.

H. Existing System Analysis

1. 1. Prepare a system analysis of the existing system to identify areas of deficiency. Review projects identified by MBI during the Master Plan process and verify projects. Identify and discuss any potential projections beyond those identified by the Consultant.
2. Prepare and review up to five (5) scenarios. Scenarios to be discussed with the Consultant and City staff with outlined parameters prior to commencing with modeling effort.

I. Buildout System Analysis

1. Obtain maps, associated reports, and projected demands for build-out areas from the Consultant and the City. Discuss future vacant parcel methodologies.
2. Load demands into the hydraulic model on a point-basis to be used in the buildout model and CIP Project development.
3. Perform a system analysis using the buildout demands. Phases/increments to be discussed with the Consultant and City staff. However, up to five (5) scenarios are included in this estimate.

J. Report Assistance

1. Assist with the revised Master Plan document as needed.
2. Respond to comments and resubmit a final TM.

K. **Model Training Workshop**

L.

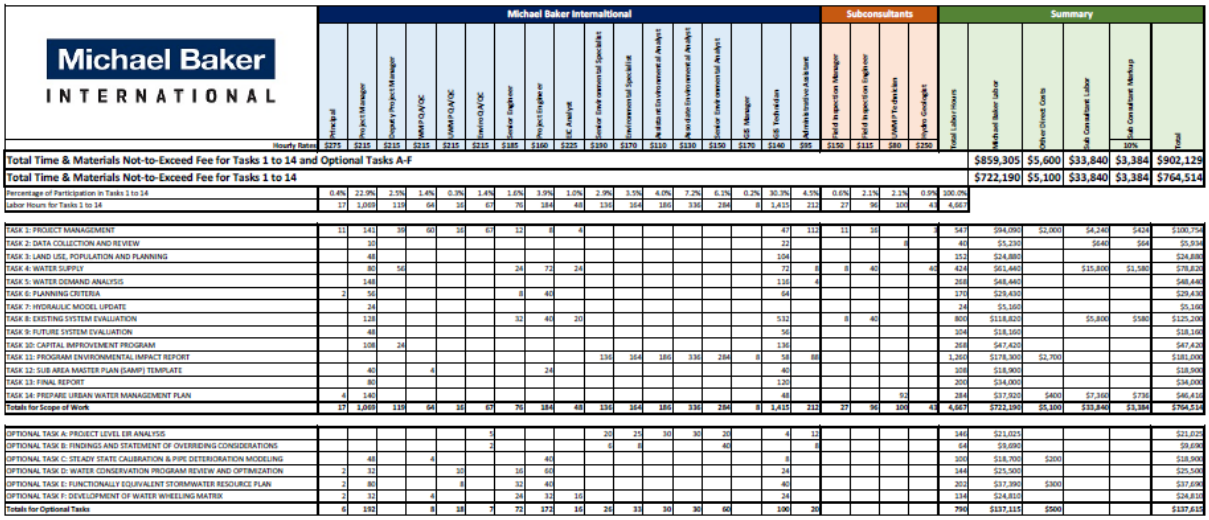
1. 1. If requested, MCS will provide up to two (2) days of hands-on model training with up to four (4) City staff. Training materials will be provided. The training is intended for those who have a basic understanding of how to use and manipulate models and is strictly intended to educate City staff on its specific model and uses.

City/Consultant Provided Services

1. GIS database for potable water system, to include streets, parcels, and topography.
2. Meter billing information and methodology used to determine demands for the hydraulic model.
3. Metered supply information, size/make/manufacturer of said meters.
4. SCADA as requested.
5. Pump curve information, test results, etc.
6. As-built tank information.
7. Operational settings and preferences.
8. Resolution of items on the Data Needs List.

EXHIBIT "C-1"
(COMPENSATION)

Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth herein.



Michael Baker INTERNATIONAL	Michael Baker International																Subconsultants				Summary					
Hourly Rates	Principal $275	Project Manager $215	Deputy Project Manager $215	QA/QC Manager $215	QA/QC Technical Expert $215	QA/QC Technical Advisor $215	Senior Engineer $185	Project Engineer $160	GIS Analyst $225	Senior Environmental Specialist $190	Environmental Specialist $170	Assistant Environmental Analyst $110	Associate Environmental Analyst $130	Senior Environmental Analyst $150	GIS Manager $170	GIS Technician $140	Administrative Assistant $95	Field Inspection Manager $150	Field Inspection Engineer $115	CMMP Technician $80	Hydro Geologist $250	Total Labor Hours	Michael Baker Labor	Other Direct Costs	Sub Consultant Labor	Sub Consultant Markup 10%	Total
Total Time & Materials Not-to-Exceed Fee for Tasks 1 to 14 and Optional Tasks A-F																							**$859,305**	**$5,600**	**$33,840**	**$3,384**	**$902,129**
Total Time & Materials Not-to-Exceed Fee for Tasks 1 to 14																							**$722,190**	**$5,100**	**$33,840**	**$3,384**	**$764,514**
Percentage of Participation in Tasks 1 to 14	0.4%	22.9%	2.5%	1.4%	0.3%	1.4%	1.6%	3.9%	1.0%	2.9%	3.5%	4.0%	7.2%	6.1%	0.2%	30.3%	4.5%	0.6%	2.1%	2.1%	0.9%	100.0%					
Labor Hours for Tasks 1 to 14	17	1,069	119	64	16	67	76	184	48	136	164	186	336	284	8	1,415	212	27	96	100	43	4,667					
TASK 1: PROJECT MANAGEMENT	11	141	39	60	16	67	12	8	4							47	112	11	16		8	547	$94,090	$2,000	$4,240	$424	$100,754
TASK 2: DATA COLLECTION AND REVIEW		10														22				8		40	$5,230		$640	$64	$5,934
TASK 3: LAND USE, POPULATION AND PLANNING		48														104						152	$24,880				$24,880
TASK 4: WATER SUPPLY		80	56				24	72	24							72	8	8	40		40	424	$61,440		$15,800	$1,580	$78,820
TASK 5: WATER DEMAND ANALYSIS		148														116	4					268	$48,440				$48,440
TASK 6: PLANNING CRITERIA	2	56					8	40								64						170	$29,430				$29,430
TASK 7: HYDRAULIC MODEL UPDATE		24																				24	$5,160				$5,160
TASK 8: EXISTING SYSTEM EVALUATION		128					32	40	20							532		8	40			800	$118,820		$5,800	$580	$125,200
TASK 9: FUTURE SYSTEM EVALUATION		48														56						104	$18,160				$18,160
TASK 10: CAPITAL IMPROVEMENT PROGRAM		108	24													136						268	$47,420				$47,420
TASK 11: PROGRAM ENVIRONMENTAL IMPACT REPORT										136	164	186	336	284	8	58	88					1,260	$178,300	$1,700			$181,000
TASK 12: SUB AREA MASTER PLAN (SAMP) TEMPLATE		40		4				24								40						108	$18,900				$18,900
TASK 13: FINAL REPORT		80														120						200	$34,000				$34,000
TASK 14: PREPARE URBAN WATER MANAGEMENT PLAN	4	140														48				92		284	$37,920	$400	$7,160	$736	$46,416
Totals for Scope of Work	17	1,069	119	64	16	67	76	184	48	136	164	186	336	284	8	1,415	212	27	96	100	43	4,667	$722,190	$5,100	$33,840	$3,384	$764,514
OPTIONAL TASK A: PROJECT LEVEL EIR ANALYSIS						5				20	25	30	30	20		4	12					146	$21,025				$21,025
OPTIONAL TASK B: FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS						2				8	8			40			8					64	$9,690				$9,690
OPTIONAL TASK C: STEADY STATE CALIBRATION & PIPE DETERIORATION MODELING		48		4				40								8						100	$18,700	$200			$18,900
OPTIONAL TASK D: WATER CONSERVATION PROGRAM REVIEW AND OPTIMIZATION	2	32			10		16	60								24						144	$25,500				$25,500
OPTIONAL TASK E: FUNCTIONALLY EQUIVALENT STORMWATER RESOURCE PLAN	2	80			8		32	40								40						202	$37,390	$300			$37,690
OPTIONAL TASK F: DEVELOPMENT OF WATER WHEELING MATRIX	2	32		4			24	32	16							24						134	$24,810				$24,810
Totals for Optional Tasks	6	192		8	18	7	72	172	16	28	33	30	30	60		100	20					790	$137,115	$500			$137,615

Fee

The cost estimate is based on the anticipated level of effort to perform the Scope of Work as described above. A time and materials fee anticipated for this Project is as follows:

Task A: Project Management & QA/QC	$1,320
Task B: Data Collection	$1,320
Task C: Supply and Demand Analysis	$660
Task D: Hydraulic Modeling	$9,900
Task E: Model Calibration	$13,200
Task F: Existing System Analysis	$7,920
Task G: Future System Analysis	$9,900
Task H: Report Assistance	$6,600
	$50,820

Task I: Model Workshop (Optional) $5,000

Table 1 Summary of Remaining Budget in Existing Contract

ITEM	DESCRIPTION	ORIGINAL CONTRACT TOTAL	BALANCE REMAINING
1	Project Management	$ 100,754.00	$ 15,324.20
2	Data Collection and Review	$ 5,934.00	$ -
3	Land Use, Population and Planning	$ 24,880.00	$ 940.00
4	Water Supply	$ 78,820.00	$ -
5	Water Demand Analysis	$ 48,440.00	$ 178.75
6	Planning Criteria	$ 29,430.00	$ 3,955.00
7	Hydraulic Model Update	$ 5,160.00	$ 5,160.00
8	Existing System Evaluation	$ 125,200.00	$ -
9	Future System Evaluation	$ 18,160.00	$ 12,927.50
10	Capital Improvement Program	$ 47,420.00	$ -
11	Program Environmental Impact Report	$ 181,000.00	$ 172,000.00
12	Sub Area Master Plan (SAMP) Template	$ 18,900.00	$ 6,770.00
13	Final Report	$ 34,000.00	$ -
14	Prepare Urban Water Management Plan	$ 46,416.00	$ 3,592.70
	TOTALS - ORIGINAL CONTRACT	**$ 764,514.00**	**$ 220,848.15**
	TOTAL- EXCLUDING PEIR (TASK 11)		**$ 48,848.15**
	TOTAL- EXCLUDING TASK OVERAGES		**$ 19,769.40**

Fee Schedule

		Project Manager	Project Engineer	Associate Engineer	GIS Analyst	Total Estimated Hours	Labor Cost	Direct/Repro Subcontract Costs	Total Estimated Fee	Remaining Budget	Proposed Amendment
		$ 245.00	$ 175.00	$ 135.00	$ 125.00						
Corona Master Plan Updates											
1	Project Management	8	20			28	$ 5,460.00	$ 100.00	$ 5,560.00	$ 15,324.20	$ (9,764.20)
2	Data Collection and Review					0	$ -	$ -	$ -	$ -	$ -
3	Land Use, Population and Planning					0	$ -	$ -	$ -	$ 940.00	$ (940.00)
4	Water Supply					0	$ -	$ -	$ -	$ (3,280.00)	$ 3,280.00
5	Water Demand Analysis					0	$ -	$ -	$ -	$ 178.75	$ (178.75)
6	Planning Criteria					0	$ -	$ -	$ -	$ 3,955.00	$ (3,955.00)
7	Hydraulic Modelling	8	16	20		44	$ 7,460.00	$ 50,820.00	$ 58,280.00	$ 5,160.00	$ 53,120.00
8	Existing System Evaluation	8	16	40		64	$ 10,160.00	$ 50.00	$ 10,210.00	$(10,077.50)	$ 20,287.50
9	Future System Evaluation	8	16	40		64	$ 10,160.00	$ 50.00	$ 10,210.00	$ 12,927.50	$ (2,717.50)
10	Capital Improvement Program	8	24	40	40	112	$ 16,560.00	$ 50.00	$ 16,610.00	$(12,933.75)	$ 29,543.75
12	Sub Area Master Plan					0	$ -	$ -	$ -	$ 6,770.00	$ (6,770.00)
13	Final Report					0	$ -	$ -	$ -	$ (2,787.50)	$ 2,787.50
14	Prepare UWMP					0	$ -	$ -	$ -	$ 3,592.70	$ (3,592.70)
15	Revision of Sections 2, 3, 4, 5, & 8	10	44	52	20	126	$ 19,670.00	$ 100.00	$ 19,770.00	$ -	$ 19,770.00
	SUBTOTAL AMOUNT:	50	136	192	60	438	$ 69,470.00	$ 51,170.00	$ 120,640.00	$ 19,769.40	$ 100,870.60

Tasks that are included in revised Amendment

Remaining Budget from original Contract (Excludes Task 11 - PEIR). Numbers in paranthesis are Task overages.