

**AGREEMENT FOR SERVICES  
BETWEEN THE  
CITY OF SANTA CLARA, CALIFORNIA,  
AND  
HYDROSCIENCE ENGINEERS, INC**

**PREAMBLE**

This Agreement is entered into between the City of Santa Clara, California, a chartered California municipal corporation (City) and HydroScience Engineers, a California Corporation (Contractor). City and Contractor may be referred to individually as a "Party" or collectively as the "Parties" or the "Parties to this Agreement."

**RECITALS**

- A. City desires to secure the services more fully described in this Agreement, at Exhibit A, entitled "Scope of Services";
- B. Contractor represents that it, and its subcontractors, if any, have the professional qualifications, expertise, necessary licenses and desire to provide certain goods and/or required services of the quality and type which meet objectives and requirements of City; and,
- C. The Parties have specified herein the terms and conditions under which such services will be provided and paid for.

The Parties agree as follows:

**AGREEMENT TERMS AND CONDITIONS**

**1. AGREEMENT DOCUMENTS**

The documents forming the entire Agreement between City and Contractor shall consist of these Terms and Conditions and the following Exhibits, which are hereby incorporated into this Agreement by this reference:

Exhibit A – Scope of Services

Exhibit B – Schedule of Fees

Exhibit C – Insurance Requirements

Attachment A - Example forms

Attachment B - 2019 Calibration TM

Attachment C – Pressure Zone Map

## Attachment D - Infowater Model Build TM

This Agreement, including the Exhibits set forth above, contains all the agreements, representations and understandings of the Parties, and supersedes and replaces any previous agreements, representations and understandings, whether oral or written. In the event of any inconsistency between the provisions of any of the Exhibits and the Terms and Conditions, the Terms and Conditions shall govern and control.

### **2. TERM OF AGREEMENT**

Unless otherwise set forth in this Agreement or unless this paragraph is subsequently modified by a written amendment to this Agreement, the term of this Agreement is five years beginning on the date City executes this Agreement ("Execution Date") and terminate on the five-year anniversary of the Execution Date. In addition, the City may extend the term of this Agreement by written notice for two one-year periods at its sole discretion.

### **3. SCOPE OF SERVICES & PERFORMANCE SCHEDULE**

Contractor shall perform those Services specified in Exhibit A within the time stated in Exhibit A. Time is of the essence.

### **4. WARRANTY**

Contractor expressly warrants that all materials and services covered by this Agreement shall be fit for the purpose intended, shall be free from defect and shall conform to the specifications, requirements and instructions upon which this Agreement is based. Contractor agrees to promptly replace or correct any incomplete, inaccurate or defective Services at no further cost to City when defects are due to the negligence, errors or omissions of Contractor. If Contractor fails to promptly correct or replace materials or services, City may make corrections or replace materials or services and charge Contractor for the cost incurred by City.

### **5. QUALIFICATIONS OF CONTRACTOR - STANDARD OF CARE**

Contractor represents and maintains that it has the expertise in the professional calling necessary to perform the Services, and its duties and obligations, expressed and implied, contained herein, and City expressly relies upon Contractor's representations regarding its skills and knowledge. Contractor shall perform such Services and duties in conformance to and consistent with the professional standards of a specialist in the same discipline in the State of California.

## **6. COMPENSATION AND PAYMENT**

In consideration for Contractor's complete performance of Services, City shall pay Contractor for all materials provided and Services rendered by Contractor in accordance with Exhibit B, entitled "SCHEDULE OF FEES." The maximum compensation of this Agreement is Two Hundred Fifty Thousand Dollars (\$250,000), subject to budget appropriations, which includes all payments that may be authorized for Services and for expenses, supplies, materials and equipment required to perform the Services. All work performed or materials provided in excess of the maximum compensation shall be at Contractor's expense. Contractor shall not be entitled to any payment above the maximum compensation under any circumstance.

## **7. TERMINATION**

- A. Termination for Convenience. City shall have the right to terminate this Agreement, without cause or penalty, by giving not less than Thirty (30) days' prior written notice to Contractor.
- B. Termination for Default. If Contractor fails to perform any of its material obligations under this Agreement, in addition to all other remedies provided by law, City may terminate this Agreement immediately upon written notice to Contractor.
- C. Upon termination, each Party shall assist the other in arranging an orderly transfer and close-out of services. As soon as possible following the notice of termination, but no later than ten (10) days after the notice of termination, Contractor will deliver to City all City information or material that Contractor has in its possession.

## **8. ASSIGNMENT AND SUBCONTRACTING**

City and Contractor bind themselves, their successors and assigns to all covenants of this Agreement. This Agreement shall not be assigned or transferred without the prior written approval of City. Contractor shall not hire subcontractors without express written permission from City.

Contractor shall be as fully responsible to City for the acts and omissions of its subcontractors, and of persons either directly or indirectly employed by them, as Contractor is for the acts and omissions of persons directly employed by it.

## **9. NO THIRD PARTY BENEFICIARY**

This Agreement shall not be construed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever.

**10. INDEPENDENT CONTRACTOR**

Contractor and all person(s) employed by or contracted with Contractor to furnish labor and/or materials under this Agreement are independent contractors and do not act as agent(s) or employee(s) of City. Contractor has full rights to manage its employees in their performance of Services under this Agreement.

**11. CONFIDENTIALITY OF MATERIAL**

All ideas, memoranda, specifications, plans, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for Contractor and all other written information submitted to Contractor in connection with the performance of this Agreement shall be held confidential by Contractor and shall not, without the prior written consent of City, be used for any purposes other than the performance of the Services nor be disclosed to an entity not connected with performance of the Services. Nothing furnished to Contractor which is otherwise known to Contractor or becomes generally known to the related industry shall be deemed confidential.

**12. OWNERSHIP OF MATERIAL**

All material, which shall include, but not be limited to, data, sketches, tracings, drawings, plans, diagrams, quantities, estimates, specifications, proposals, tests, maps, calculations, photographs, reports, designs, technology, programming, works of authorship and other material developed, collected, prepared or caused to be prepared under this Agreement shall be the property of City but Contractor may retain and use copies thereof. City shall not be limited in any way or at any time in its use of said material. However, Contractor shall not be responsible for damages resulting from the use of said material for work other than Project, including, but not limited to, the release of this material to third parties.

**13. RIGHT OF CITY TO INSPECT RECORDS OF CONTRACTOR**

City, through its authorized employees, representatives or agents shall have the right during the term of this Agreement and for four (4) years from the date of final payment for goods or services provided under this Agreement, to audit the books and records of Contractor for the purpose of verifying any and all charges made by Contractor in connection with Contractor compensation under this Agreement, including termination of Contractor. Contractor agrees to maintain sufficient books and records in accordance with generally accepted accounting principles to establish the correctness of all charges submitted to City. Any expenses not so recorded shall be disallowed by City. Contractor shall bear the cost of the audit if the audit determines that there has been a substantial billing deviation in excess of five (5) percent adverse to the City.

Contractor shall submit to City any and all reports concerning its performance under this Agreement that may be requested by City in writing. Contractor agrees

to assist City in meeting City's reporting requirements to the State and other agencies with respect to Contractor's Services hereunder.

#### **14. HOLD HARMLESS/INDEMNIFICATION**

- A. To the extent permitted by law, Contractor agrees to protect, defend, hold harmless and indemnify City, its City Council, commissions, officers, employees, volunteers and agents from and against any claim, injury, liability, loss, cost, and/or expense or damage, including all costs and attorney's fees in providing a defense to any such claim or other action, and whether sounding in law, contract, tort, or equity, in any manner arising from, or alleged to arise in whole or in part from, or in any way connected with the Services performed by Contractor pursuant to this Agreement – including claims of any kind by Contractor's employees or persons contracting with Contractor to perform any portion of the Scope of Services – and shall expressly include passive or active negligence by City connected with the Services. However, the obligation to indemnify shall not apply if such liability is ultimately adjudicated to have arisen through the sole active negligence or sole willful misconduct of City; the obligation to defend is not similarly limited.
- B. Contractor's obligation to protect, defend, indemnify, and hold harmless in full City and City's employees, shall specifically extend to any and all employment-related claims of any type brought by employees, contractors, subcontractors or other agents of Contractor, against City (either alone, or jointly with Contractor), regardless of venue/jurisdiction in which the claim is brought and the manner of relief sought.
- C. To the extent Contractor is obligated to provide health insurance coverage to its employees pursuant to the Affordable Care Act ("Act") and/or any other similar federal or state law, Contractor warrants that it is meeting its obligations under the Act and will fully indemnify and hold harmless City for any penalties, fines, adverse rulings, or tax payments associated with Contractor's responsibilities under the Act.

#### **15. INSURANCE REQUIREMENTS**

During the term of this Agreement, and for any time period set forth in Exhibit C, Contractor shall provide and maintain in full force and effect, at no cost to City, insurance policies as set forth in Exhibit C.

#### **16. WAIVER**

Contractor agrees that waiver by City of any one or more of the conditions of performance under this Agreement shall not be construed as waiver(s) of any other condition of performance under this Agreement. Neither City's review, acceptance nor payments for any of the Services required under this Agreement



shall be constructed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

## **17. NOTICES**

All notices to the Parties shall, unless otherwise requested in writing, be sent to City addressed as follows:

City of Santa Clara  
Attention: Dept. of Water and Sewer  
1500 Warburton Avenue  
Santa Clara, CA 95050  
and by e-mail at \*LTAM@santaclaraca.gov

And to Contractor addressed as follows:

HydroScience Engineers, Inc.  
90 E. Taylor Street, Suite 200  
San Jose, CA 95112  
and by e-mail at [mhoang@hydroscience.com](mailto:mhoang@hydroscience.com)

The workday the e-mail was sent shall control the date notice was deemed given. An e-mail transmitted after 1:00 p.m. on a Friday shall be deemed to have been transmitted on the following business day.

## **18. COMPLIANCE WITH LAWS**

Contractor shall comply with all applicable laws and regulations of the federal, state and local government, including but not limited to "The Code of the City of Santa Clara, California" ("SCCC"). In particular, Contractor's attention is called to the regulations regarding Campaign Contributions (SCCC Chapter 2.130), Lobbying (SCCC Chapter 2.155), Minimum Wage (SCCC Chapter 3.20), Business Tax Certificate (SCCC Section 3.40.060), and Food and Beverage Service Worker Retention (SCCC Chapter 9.60), as such Chapters or Sections may be amended from time to time or renumbered. Additionally Contractor has read and agrees to comply with City's Ethical Standards (<http://santaclaraca.gov/home/showdocument?id=58299>).

## **19. CONFLICTS OF INTEREST**

Contractor certifies that to the best of its knowledge, no City officer, employee or authorized representative has any financial interest in the business of Contractor and that no person associated with Contractor has any interest, direct or indirect, which could conflict with the faithful performance of this Agreement. Contractor is familiar with the provisions of California Government Code Section 87100 and

following, and certifies that it does not know of any facts which would violate these code provisions. Contractor will advise City if a conflict arises.

**20. FAIR EMPLOYMENT**

Contractor shall not discriminate against any employee or applicant for employment because of race, sex, color, religion, religious creed, national origin, ancestry, age, gender, marital status, physical disability, mental disability, medical condition, genetic information, sexual orientation, gender expression, gender identity, military and veteran status, or ethnic background, in violation of federal, state or local law.

**21. NO USE OF CITY NAME OR EMBLEM**

Contractor shall not use City's name, insignia, or emblem, or distribute any information related to services under this Agreement in any magazine, trade paper, newspaper or other medium without express written consent of City.

**22. GOVERNING LAW AND VENUE**

This Agreement shall be governed and construed in accordance with the statutes and laws of the State of California. The venue of any suit filed by either Party shall be vested in the state courts of the County of Santa Clara, or if appropriate, in the United States District Court, Northern District of California, San Jose, California.

**23. SEVERABILITY CLAUSE**

In case any one or more of the provisions in this Agreement shall, for any reason, be held invalid, illegal or unenforceable in any respect, it shall not affect the validity of the other provisions, which shall remain in full force and effect.

**24. AMENDMENTS**

This Agreement may only be modified by a written amendment duly authorized and executed by the Parties to this Agreement.


## 25. COUNTERPARTS

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but both of which shall constitute one and the same instrument.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives.

**CITY OF SANTA CLARA, CALIFORNIA**  
a chartered California municipal corporation

Approved as to Form:

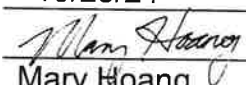
  
f GLEN R. GOOGINS  
City Attorney

Dated: 11/14/24

  
JOVAN D. GROGAN  
City Manager  
City of Santa Clara  
1500 Warburton Avenue  
Santa Clara, CA 95050  
Telephone: (408) 615-2210  
Fax: (408) 241-6771

"CITY"

**HYDROSCIENCE ENGINEERS, INC.** a California corporation

Dated: 10/25/24  
By (Signature):   
Name: Mary Hoang  
Title: Principal  
Principal Place of  
Business Address: 90 E. Taylor Street  
Email Address: mhoang@hydroscience.com  
Telephone: (408) 363-3844  
Fax: ( )  
"CONTRACTOR"



## **EXHIBIT A**

### **SCOPE OF SERVICES**

#### **SECTION 1. OBJECTIVE**

Contractor will provide a fully calibrated InfoWater hydraulic GIS model to be used as a City supplement for in field fire flow testing and evaluate the need for capital improvement projects.

#### **SECTION 2. GENERAL**

- 2.1 Contractor will review the City's existing InfoWater hydraulic model, perform model updates based on water infrastructure improvements, calibrate the model as necessary and perform analysis using the hydraulic model.
- 2.2 City desires to calibrate the model under steady state to serve as a tool to evaluate fire flow availability of the distribution system. Secondly, the data generated in model will be used to support capital improvement projects based on changing supply and demand conditions.
- 2.3 Contractor will provide all resources to complete the projects ensuring that the City of Santa Clara's InfoWater Hydraulic Model is calibrated and ready to be used. After calibration acceptance, Contractor will run the model, and provide documentation that the model generated data reflects the actual operation of the City's water distribution system. Based on the experience and expertise, the Contractor may identify additional tasks or elements needed to meet project goals and such information shall be included in the proposal.
- 2.4 Contractor is responsible for possessing and acquiring all necessary licenses and permits to perform the work specified herein, including but not limited to InfoWater Pro Software License (Note: Contractor's hydraulic modeling software version must be comparable with InfoWater Version 12.5, which is the version currently used by the City). In addition, Contractor agrees to be compatible with any subsequent InfoWater versions that the City may use during the term of this agreement.
- 2.5 Throughout this document, references to "Contractor" refer to HydroScience Engineers, Inc.

#### **SECTION 3. PROJECT TASKS**

##### **3.1 Project Management**

3.1.1 Meetings – Contractor will attend the following meetings at minimum:

3.1.1.1 Project Kickoff Meeting.

3.1.1.2 Model Calibration and Field Data Collection Approach Presentation. This meeting shall be conducted in person at a City of Santa Clara facility.

3.1.1.3 Basis of Design Report (BODR) Presentation.

3.1.1.4 Monthly progress meetings will be virtual) until completion of BODR.

### 3.2 Existing Model and Data Review

3.2.1 Contractor will review and make necessary corrections of the existing model and data for:

- Accuracy of facility and distribution attributes.
- Accuracy of demand allocation.

3.2.2 City will provide operational parameters and verify the pump on/off settings. Data provided will include all available SCADA data on City water distribution facilities in text (.txt), Excel (.xlsx) or comma delimited format (.csv).

### 3.3 Calibration Standards and Technical Memorandum

#### Contractor will:

3.3.1 Provide a Technical Memorandum with the proposed calibration standards for the steady state calibration. In addition, the technical memorandum shall include an overview of the proposed steady state calibration process.

3.3.2 Update and finalize the Technical Memorandum after the model calibration has been completed. The final Technical Memorandum shall include the calibration standards, calibration process, field data, and calibrations performed.

3.3.3 Provide draft and final versions of the Technical Memorandum for City review and comment. The report shall be submitted in MS Word and PDF format.

3.3.4 The hydraulic model was previously calibrated in 2019. See Attachment B for the 2019 Calibration Technical Memorandum.

### 3.4 Field Data Collection

3.4.1 Contractor will develop a testing plan to collect data for the purpose of model calibration. The testing plan shall be submitted to the City for review. Contractor will coordinate with the City to implement the testing plan over a two-day period. City staff will complete the hydrant tests in accordance with the testing plan and provide the Contractor with applicable facility data for the duration of the hydrant tests. Contractor will assume a minimum of two observation hydrants per hydrant test. Contractor will provide guidance on the exact location and number to data collection points. Below are the minimum requirements for field data collection.

3.4.2 Distribution System Data (Hydrant Flow and Pressure) - The hydrant testing plan shall be conducted at minimum of seven (7) locations in the distribution system Zone 1 and minimum five (5) locations in the distribution system zone 2 and 2A.

3.4.2.1 Tank Level Data – The validation of data shall be conducted at four (4) tank sites and seven storage (7) tanks. This includes data collection for booster stations associated with the tanks.

3.4.2.2 Well Flow and Pressure Data – The validation of data shall be conducted at minimum five (5) well locations in Zone 1, five (5) well locations in Zone 2, and one (1) well location Zone 2A.

3.4.2.3 Note that data loggers, flash drives, and other equipment needed to collect the data shall be supplied by the City. Contractor will define the time and duration of the data collection.

### 3.5 Model Calibration

3.5.1 Contractor will calibrate the Steady State Model per the calibration standards developed in the Calibration Standards and Plan Technical Memorandum. Since the City's historical Supervisory Control and Data Acquisition (SCADA) information is limited, City staff will engage with Contractor will define acceptable system operational metrics and data, which will then be utilized against the model data to determine if the model results are accurate. The data produced should be representative of the system operations. Contractor will run the hydraulic model to simulate system operations under Steady State Calibration (Contractor will create the necessary scenarios to accomplish the steady state calibration).

3.5.2 The minimum level of accuracy is defined in the table below:

Application	Hydraulic Grade Line <sup>1</sup>	Flow Percent Error <sup>2</sup>
Master Plan	±10 feet; for all test measurements	±10%
Design	±5 feet; for all test measurements	±5%
Operations	±5 feet; for all test measurements	±5%

1. Based on AWWA M32 (2018)

2. Based on AWWA ECAC (1999)

### 3.6 Design Extended Period Scenarios

- 3.6.1 Contractor will review the appropriate historical data and existing extended period scenarios below and provide recommendations and perform updates as directed by the City.

- 3.6.1.1 Average Day Demand Scenario.

- 3.6.1.2 Maximum Day Demand Scenario.

- 3.6.1.3 Peak Hour Demand Scenario.

### 3.7 Design Fire Flow Scenario

- 3.7.1 Utilizing the Maximum day design scenario, Contractor will develop the design fire flow scenario. Contractor will provide results of simulated fire flow exercise as per National Fire Protection Agency (NFPA) 291 requirements in the fire flow module and recommend improvements in the event of fire flow deficiencies. The results of the model must correspond to the fire flow testing requirements as defined under the NFPA 291 practices for testing and reporting.

### 3.8 Water Quality Analysis and Uni-Directional Flushing Program

#### 3.8.1 Water Quality Analysis

Contractor will perform a water quality analysis to assess water age and water velocities in the system based on the Average Day Demand Extended Period Scenario. The analysis shall identify potential locations in the system where water age or velocities may not meet regulatory requirements or industry standards to develop a Uni-Directional Flushing Program.

#### 3.8.2 Uni-Directional Flushing Program

- 3.8.2.1 Contractor will develop a comprehensive program based on the Water Quality Analysis and other areas of potential concern identified by the City that will serve as a sequential guide providing operations staff with the order in which flushing should occur, the valves and hydrants necessary to isolate a selection of pipeline, the targeted flow rates and period of flow, and targeted outcomes based on specific issues identified by the City (e.g. color, turbidity, chlorine residual).

- 3.8.2.2 The hydraulic model will be used to evaluate the target velocities, the necessary flows and time necessary for pipe turnover, and assure minimum pressures are maintained.

- 3.8.3 Contractor will provide a draft and final report for City review and comment in MS Word and PDF format. The report shall include the criteria used in the water quality analysis, recommended locations for uni-directional flushing and maps identifying the sequencing of valves to be isolated and hydrants to be flushed, target velocities and duration of flushing based on industry standards.

### 3.9 Water Master Plan Update

- 3.9.1 The City is currently preparing an update to the Water Master Plan that is scheduled for completion in 2025.
- 3.9.2 Contractor will update the hydraulic model based on the Water Master Plan including but not limited to the following:
  - 3.9.2.1 System demand projections and scenarios.
  - 3.9.2.2 Develop scenarios for recommended capital improvements.
- 3.9.3 Upon completion of the updates, Contractor will provide a report summarizing the updates.

### 3.10 Documentation and Reporting

- 3.10.1 Contractor will provide a Project Summary Report highlighting the process the project tasks listed in Section 3, ensuring that the model is fully calibrated and ready for use.
- 3.10.2 Contractor will submit draft and final versions of the Project Summary Reports for City review and comment. Submittals shall be in MS Word and PDF format with clickable table of contents links. Contractor will provide two (2) hard copies (color, bound and tabbed) of the final report(s).
- 3.10.3 Contractor will conduct meetings/presentations for the Calibration and Field Data Collection Approach and for the final Basis of Design Report. The Calibration and Field Data Collection Approach meeting shall be conducted in person at a City of Santa Clara facility.

### 3.11 Deliverables:

- 3.11.1 Hydraulic Model Basis of Design Report (BODR)
- 3.11.2 The BODR shall include project tasks as described in Section 3.
- 3.11.3 Water Quality Analysis and Uni-Directional Flushing Report
- 3.11.4 Water Master Plan Update Report

## SECTION 4. AS-NEEDED SERVICES

### 4.1 Fire Flow Analysis

- 4.1.1 Contractor will run the hydraulic model as directed by the City using the Design Fire Flow Scenario developed in Section 3.7 to report static and residual pressures.
- 4.1.2 Contractor will return results no later than 10 working days from date of request.



4.1.3 The City will provide the necessary information to run the analysis including, but not limited to, fire flow demand location(s), fire flow requirements, and duration.

4.1.3.1 It is assumed that this rate accounts for running the analysis once and preparing a report with the static and residual pressures.

4.1.4 The City receives approximately 100 fire flow analysis requests annually.

4.1.5 An example of the forms with information provided to the Contractor is shown in Attachment A.

#### 4.2 Development Impact Analysis

4.2.1 Contractor will run the model using a 24-hour extended period MDD scenario for static and fire flow conditions and provide a recommendation summary for new demand allocations for development projects at capital improvements to address deficiencies on an as needed basis.

4.2.1.1 The City shall provide the Contractor with new demand allocations for commercial or industrial development projects based on assumptions provided by the City. Contractor will update the assets attributes and the potential new demand allocation as directed by the City. The model will be used to validate if the system can support the new development with the minimum fire flow requirements as per City Fire Department.

4.2.1.2 The report shall include figures showing the applied demands and tables presenting static and residual pressures, velocities in adjacent water mains, and status and flow rates from groundwater wells over the 24-hour extended period run.

4.2.1.3 If the model shows fire flow deficiencies, Contractor will include in the report the recommended capital improvements to achieve the minimum fire flow standards.

4.2.2 Contractor will return results no later than 10 working days from date of request.

4.2.3 The City receives approximately 15 Development Impact Analysis requests annually.

4.2.4 An example of the information provided to the Contractor and example report from Contractor is shown in Attachment A.

#### 4.3 Annual Model Updates

4.3.1 Contractor will provide on-going support services for hydraulic model updates on an annual basis or as directed by the City for the length of the agreement.

4.3.2 The current hydraulic model uses InfoWater version 12.5. Contractor will migrate the hydraulic model to InfoWater Pro during the first annual model update or as required.

4.3.3 The City will provide the Contractor GIS shapefiles with the updated water system infrastructure.

- 4.3.4 Contractor will provide support services to update the hydraulic model because of newly installed capital improvement project or changing field operations. The model is assumed to need updating on an annual basis corresponding demand allocations and supply upgrades. Model updates include, but are not limited to, the following:
- Piping improvements: It is anticipated that the volume of annual distribution system upgrades range from 10,000 to 15,000 feet of main added and/or replaced.
  - Supply improvements.
  - Abandonment of facilities.
  - System demands and demand scenarios.
- 4.3.5 Contractor will provide a report documenting changes made to the model upon completion of each annual model update cycle.

## **SECTION 5. OPTIONAL TASKS**

### **5.1 Special Projects**

- 5.1.1 Contractor will provide on-going support services for special projects. Contractor will provide a recommendation summary after the special project simulation.
- 5.1.1.1 On an as-needed basis directed by the Project Manager, provide hydraulic modeling services for specialty projects. Specialty project may involve changing model conditions, running the model under different simulation options, receiving and interpreting results, providing capital improvement recommendations as needed, and supporting master plan development. Upon completion of the specialty project analysis, Contractor will provide a report documenting the finding and providing a recommendation.

### **5.2 Water Quality Analysis**

- 5.2.1 Contractor will perform a water quality analysis such as water age, chemical residue, disinfection byproduct, monitoring, tracer studies, and the like will be completed as requested by the City. All analysis shall be accompanied by a recommendation summary.

### **5.3 GIS Water System Updates**

- 5.3.1 Contractor will perform annual updates to the City's GIS water system database for updates to the water infrastructure such as: pipe replacements or upgrades, active well status, and addition or abandonment of water infrastructure or appurtenances. The City will provide the Contractor PDF utility maps with redlines showing the location and type of infrastructure update(s).
- 5.3.2 It is anticipated that the volume of annual distribution system upgrades range from 10,000 to 15,000 feet of main added and/or replaced.

- 5.3.3 The City utilizes Lucity for asset management which is integrated with the City's enterprise GIS water system. All updates to the GIS system will need to use Lucity tools in ArcGIS to preserve integration with Lucity.
- 5.3.4 The Contractor may perform the GIS updates locally on a City computer or through a VPN connection to a City computer. Contractor will be required to coordinate with the City's IT to obtain access credentials.
- 5.3.5 The City uses ArcGIS version 10.8.2 and Lucity version 20.1SP0. However, the Contractor can expect these applications will be upgraded to ArcGIS Pro and the latest Lucity version.

#### 5.4 Staff Training

- 5.4.1 Contractor will provide staff training specific to the needs of the City to be held at the City of Santa Clara. Items must include but are not limited to:
  - 5.4.1.1 Model updating for new capital improvement projects.
  - 5.4.1.2 Model updating for demand allocation.
  - 5.4.1.3 Running the model under different demand scenarios.
  - 5.4.1.4 Running the model under steady state versus extended simulation.
  - 5.4.1.5 Running additional extended modules such as fire flow and water quality modules.
  - 5.4.1.6 Reviewing model reporting tools and displays.
  - 5.4.1.7 Removal and addition of pressure zones.
  - 5.4.1.8 And other items to be covered as determined to be necessary by the City and the Contractor.
- 5.4.2 Contractor will provide hardcopies of the training material. City to provide training facility, computer, and fully functional software needed for each participant.

## **SECTION 6. GENERAL**

6.1 All tasks described in Section 3 of this Exhibit A, Scope of Services, will be completed within the initial 12 months of contract execution.

### **6.2 Schedules**

6.2.1 Contractor will prepare Gantt chart schedules for Project Tasks listed in this Section 3. Schedule shall show major subtasks and estimated durations. Schedule shall be updated as necessary during monthly progress meetings.

**EXHIBIT B**  
**SCHEDULE OF FEES**

Tasks	Unit of Measure	Estimated Quantity	Unit Cost	Total
<b>Project Tasks</b>				
Project Management	LS	1	\$40,000	\$40,000
Existing Model and Data Review	LS	1	\$5,600	\$5,600
Calibration Standards and TM	LS	1	\$10,200	\$10,200
Field Data Collection	LS	1	\$13,800	\$13,800
Model Calibration	LS	1	\$49,000	\$49,000
Design Extended Period Scenarios	LS	1	\$14,500	\$14,500
Design Fire Flow Scenario	LS	1	\$8,000	\$8,000
Water Quality Analysis and Uni-Directional Flushing Program	LS	1	\$34,400	\$34,400
Water Master Plan Update	LS	1	\$17,000	\$17,000
<b>PROJECT TASK TOTAL</b>				<b>\$192,500</b>
<b>As Needed Services</b>				
Fire Flow Services - SFR	EA		\$640	
Fire Flow Services – Non SFR	EA		\$1,085	
Development Impact Analysis	EA		\$1,200	
Annual Model Updates	EA		\$15,000	
<b>Optional Tasks</b>				
Special Projects	Contractor will provide a cost estimate upon each task request			
Water Quality Analysis	Contractor will provide a cost estimate upon each task request			
GIS Water System Updates	EA		\$12,000	
Staff Training	LS		\$12,500	

**Note: LS = lump sum.**

The unit prices for "As Needed Services" above shall be fixed for the initial year (twelve months) of the agreement. After the first year, Contractor may request price increase(s) subject to approval by the City. Any price increase shall not exceed the annual percentage increase of the Consumer Price Index (CPI) for All Urban Consumers (1987 base year) for the San Francisco Bay Area Region. For purposes of calculating the percentage change, the annual index used will be closest to the month in which the increase is approved, compared with the index for the same month for the previous year. For example, if a price increase is approved in March, then the increase will be calculated based on the CPI index closest to the month of the increase, compared with the same month from the prior year.



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All other pricing shall be fixed for the initial five year term of the agreement.

No guarantee is made or implied as to the actual quantities that will be required throughout the term of the Agreement.

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1. City will pay invoices monthly, in arrears, after successful completion of each milestone as listed under Project Tasks in the table above.
2. As needed and optional tasks will be paid pursuant to the prices listed in Exhibit B above.
3. The invoice must include sufficient detail to enable the City to reconcile the charges with the Schedule of Fees in the Table above. City and Contractor will establish an invoice format prior to Contractor submitting their initial invoice.
4. Invoices shall be submitted using the City's project management software, "e-Builder." An e-Builder user account will be provided to the selected Contractor by the City.



Name: Hydrosience Engineers, Inc.

Account Number: S200002637

Address: 10569 Old Placerville Road, Sacramento, CA, USA, 95827

Status: Compliant with minor/expiring deficiencies.

## Insured

Business Unit(s)

DBA Name

Print Insured Info

## Account Information

Account Number: S200002637

Risk Type: Exhibit C6 - Professional Svc Contract(any amount)

Do Not Call: ☐

Address Updated: ☐

## Address Information

## Mailing Address

Insured: Hydrosience Engineers, Inc.

Address 1: 10569 Old Placerville Road

Address 2:

City: Sacramento

State: CA

Zip: 95827

Country: USA

## Physical Address

HydroScience Engineers, Inc.

1922 The Alameda, Suite 212

San Jose

CA

95126

## Contract Information

Contract Number: possible two one-year renewals periods

Contract Start Date: 07/22/2019

Contract Effective Date:

Description of Services: HYDRAULIC MODELING

Contract End Date: 07/21/2022

Contract Expiration Date:

Safety Form II: No

## Contact Information

Contact Name: Mary Hoang

Phone Number: 4083633884

Fax Number:

E-Mail Address: ltam@Santaclaraca.gov

Misc: possible two one-year renewals periods

Alt Phone Number:

Approval Date:

Rush: Yes

Contract on File: No

Certificate Received: No

Indemnification Agreement: No

Tax Id:

