



**Council Meeting: February 24, 2009**

**SUBJECT: Award of Request for Proposals No. F0810-24 to Develop a Water Utility Master Plan**

**REPORT IN BRIEF**

Approval is requested for the award of a contract in the amount of \$189,892 to Infrastructure Engineering Corporation (IEC) of Oceanside for consulting services required to develop a Water Utility Master Plan for the Department of Public Works Engineering Division (Project No. UW-09/02-10). Approval is also requested for a design contingency in the amount of \$9,495.

**BACKGROUND**

The City of Sunnyvale provides water supply services to residents and businesses within its boundaries. Sunnyvale is an urban industrial and residential community of 137,538 residents with a workday population of about 160,000. The service area for the water utility is contiguous with the City limits and encompasses about 24 square miles. The City's water system includes about 308 miles of distribution pipeline, eight wells, and ten water storage tanks. The water system receives its water from the San Francisco Hetch-Hetchy water supply system, Santa Clara Valley Water District and City owned wells.

Computer modeling of the City's water delivery system was completed in FY 2006/2007 in order to plan and evaluate the existing water system. The Water Utility Master Plan will provide a condition assessment for the water supply, storage and delivery pipeline system and define a priority ranking of capital projects necessary to replace aging infrastructure over the next 25 years. The project will also identify any upgrades of the water system facilities that may be needed as a result of future development of the community and aging infrastructure rehabilitations, and will recommend improvement options and funding strategies.

**DISCUSSION**

In November 2008, Request for Proposals No. F0810-24 was prepared by City staff. The Request for Proposals process was selected because it allows the consideration of consultant evaluation criteria in addition to cost as opposed to an Invitation for Bids which requires award of contract to the lowest responsive and responsible bidder. The RFP was structured to request proposals for a Base Project, plus Alternatives for Study. The Base Project included the Water Utility Master Plan (WUMP), with a detailed 25 year Capital Improvement

Project (CIP) as a product of the WUMP. The Alternatives for Study portion included the following long-range planning issues:

- Review of current utility rate structure and any recommended changes;
- Recommendations for future water conservation programs and techniques;
- Analysis of issues, costs and benefits of serving CalWater clients within City limits;
- Detailed review and recommendations to mitigate the impacts of existing geological/geotechnical conditions in the City;
- Evaluation and recommendation for the use of new well supplies from new wells in the City; and
- Overview of utility staffing needs in the future to provide a safe and efficient maintenance and operations program.

The RFP package was direct mailed to thirteen local engineering design firms and broadcast to other potential consultants through the Onvia DemandStar public procurement network. Thirty six consultants requested the RFP documents.

Sealed proposals were publicly opened on December 17, 2008. Six responsive proposals were received:

- Schaaf & Wheeler, of Santa Clara
- Winzler & Kelly, of West Sacramento
- Infrastructure Engineering Corp. (IEC), of Oceanside
- RBF Consulting, of Walnut Creek
- RMC Water & Environment, of San Jose
- West Yost Associates, of Davis

A selection committee of representatives from the Field Services and Engineering Divisions of Public Works reviewed and evaluated the proposals based on the following criteria:

- Overall responsiveness to the RFP (10%)
- Qualifications, experience and commitment of the proposed Project Manager (25%)
- Firm (and Project Team) qualifications, experience, and referenced projects (25%)
- Project approach and proposed scope of services (20%)
- Project management plan and schedule (20%)

Proposed costs for the Base Project ranged from \$133,736 to \$247,030 depending upon each proposer's understanding of the City's needs and its approach to meeting those needs. Alternative Task totals varied between \$58,600 and \$175,582.

The selection committee selected IEC as the highest ranking proposer, based on their comprehensive response to the RFP, and the extensive experience with water delivery systems shown by both the company and the project team. IEC's proposal pricing of \$198,557 for the Base Project was a little above the median, but subsequent negotiations by the City reduced the proposal amount to \$189,892 without significantly impacting the project scope. Staff therefore recommends the award of a contract for the Base Project only to Infrastructure Engineering Corp., of Oceanside, CA.

**FISCAL IMPACT**

The total costs for the design portion of this project are as follows:

Professional Design Services	\$189,892
Design contingency (5%)	9,495
Total cost	\$199,387

Funds are available in Public Works Project 826960 (Water Utility Master Plan).

**PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's Web site.

**RECOMMENDATION**

It is recommended that Council:

1. Award a contract, in substantially the same form as the attached draft and in the amount of \$189,892 to Infrastructure Engineering Corp. (IEC) for consulting services required to develop a Water Utility Master Plan (Base Project); and
2. Approve a design contingency in the amount of \$9,495.

Reviewed by:

Mary J. Bradley, Director of Finance

Prepared by: Pete Gonda, Senior Management Analyst, Finance

Reviewed by:

Marvin Rose

Director of Public Works

Approved by:

Gary M. Luebbers  
City Manager

**Attachments:**

- A. Draft Consultant Services Agreement
- B. Proposal Pricing

**DRAFT**  
**CONSULTANT SERVICES AGREEMENT BETWEEN CITY OF**  
**SUNNYVALE AND INFRASTRUCTURE ENGINEERING**  
**CORPORATION (IEC) TO DEVELOP A**  
**WATER SYSTEM MASTER PLAN**

THIS AGREEMENT, dated \_\_\_\_\_, is by and between the CITY OF SUNNYVALE, a municipal corporation ("CITY"), and INFRASTRUCTURE ENGINEERING CORPORATION (IEC) ("CONSULTANT").

WHEREAS, CITY desires to secure professional services to develop a Water Utility Master Plan for the Field Services Division of Public Works; and

WHEREAS, CONSULTANT represents that it, and its sub-consultants, if any, possess the professional qualifications and expertise to provide the required services and are licensed by the State of California to practice engineering in the required disciplines;

NOW, THEREFORE, THE PARTIES ENTER INTO THIS AGREEMENT.

1. Services by CONSULTANT

CONSULTANT shall provide services in accordance with Exhibit "A" entitled "Scope of Work." All exhibits referenced in this Agreement are attached hereto and are incorporated herein by reference. To accomplish that end, CONSULTANT agrees to assign Scott Humphrey to this project, to act in the capacity of Project Manager and personally direct the professional services to be provided by CONSULTANT.

Except as specified in this Agreement, CONSULTANT shall furnish all technical and professional services, including labor, material, equipment, transportation, supervision and expertise to perform all operations necessary and required to satisfactorily complete the services required in this Agreement.

2. Notice to Proceed/Completion of Services

- (a) CONSULTANT shall commence services upon receipt of a Notice to Proceed from CITY. Notice shall be deemed to have occurred three (3) calendar days after deposit in the regular course of the United States mail.
- (b) When CITY determines that CONSULTANT has satisfactorily completed the services defined in Exhibit "A," CITY shall give CONSULTANT written Notice of Final Acceptance, and CONSULTANT shall not incur any further costs hereunder. CONSULTANT may request this determination of completion when, in its opinion, it has satisfactorily completed the Scope of Work (Exhibit "A"), and if so requested, CITY shall make this determination within fourteen (14) days of such request.

3. Project Schedule

The Project Schedule is set forth in the attached Exhibit "A-1."

4. Payment of Fees and Expenses

Payments shall be made to CONSULTANT on a monthly basis as set forth in the attached Exhibit "B" entitled "Compensation Schedule." All compensation will be based on monthly billings as provided in Exhibit "B." Compensation will not be due until said detailed billing is submitted to CITY within a reasonable time before payment is expected to allow for normal CITY processing. An estimate of the percent of total completion associated with the various categories of the services shall be furnished by CONSULTANT with said billing. When applicable, copies of pertinent financial records will be included with the submission of billing(s) for all direct reimbursables. Compensation shall not exceed the amounts set forth in Exhibit "B" for each phase. In no event shall the total amount of compensation payable under this agreement exceed the sum of One Hundred Eighty Nine Thousand Eight Hundred Ninety Two and No/100 Dollars (\$189,892.00) unless upon written modification of this Agreement. All invoices, including detailed backup, shall be sent to City of Sunnyvale, attention Accounts Payable, P.O. Box 3707, Sunnyvale, CA 94088-3707.

5. No Assignment of Agreement

CONSULTANT bind themselves, their partners, successors, assigns, executors, and administrators to all covenants of this Agreement. Except as otherwise set forth in this Agreement, no interest in this Agreement or any of the work provided for under this Agreement shall be assigned or transferred, either voluntarily or by operation of law, without the prior written approval of CITY. However, claims for money due to or to become due to CONSULTANT from CITY under this Agreement may be assigned to a bank, trust company or other financial institutions, or to a trustee in bankruptcy, provided that written notice of any such assignment or transfer shall be first furnished to CITY. . In case of the death of one or more members of CONSULTANT's firm, the surviving member or members shall complete the services covered by this Agreement. Any such assignment shall not relieve CONSULTANT from any liability under the terms of this Agreement.

6. Consultant is an Independent Contractor

CONSULTANT is not an agent or employee of CITY but is an independent contractor with full rights to manage its employees subject to the requirements of the law. All persons employed by CONSULTANT in connection with this Agreement will be employees of CONSULTANT and not employees of CITY in any respect. CONSULTANT is responsible for obtaining statutory Workers' Compensation coverage for its employees.

7. Consultant's Services to be Approved by a Registered Professional

All reports, costs estimates, plans and other documents which may be submitted or furnished by CONSULTANT shall be approved and signed by a qualified registered professional in the State of California. The title sheet for calculations, specifications and reports, and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of certificate and signature of the professional responsible for their preparation.

8. Standard of Workmanship

CONSULTANT represents and maintains that it is skilled in the professional calling necessary to perform the services and its duties and obligations, expressed and implied, contained herein, and CITY expressly relies upon CONSULTANT's representations regarding its skills and knowledge. CONSULTANT shall perform such services and duties in conformance to and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California.

The plans, designs, specifications, estimates, calculations reports and other documents furnished under the Scope of Work (Exhibit "A") shall be of a quality acceptable to CITY. The criteria for acceptance of the work provided under this Agreement shall be a product of neat appearance, well-organized, technically and grammatically correct, checked and having the maker and checker identified. The minimum standard of appearance, organization and content of the drawings shall be that used by CITY for similar projects.

9. Responsibility of CONSULTANT

CONSULTANT shall be responsible for the professional quality, technical accuracy and the coordination of the services furnished by it under this Agreement. Neither CITY's review, acceptance nor payment for any of the services required under this Agreement shall be construed 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 and CONSULTANT shall be and remain liable to CITY in accordance with applicable law for all damages to CITY caused by CONSULTANT's negligent performance of any of the services furnished under this Agreement.

Any acceptance by CITY of plans, specifications, calculations, construction contract documents, reports, diagrams, maps and other material prepared by CONSULTANT shall not, in any respect, absolve CONSULTANT for the responsibility CONSULTANT has in accordance with customary standards of good engineering practice in compliance with applicable Federal, State, County and/or municipal laws, ordinances, regulations, rules and orders.

10. Right of CITY to Inspect Records of CONSULTANT

CITY, through its authorized employees, representatives, or agents, shall have the right, at any and all reasonable times, to audit the books and records including, but not limited to, invoices, vouchers, canceled checks, time cards of CONSULTANT for the purpose of verifying any and all charges made by CONSULTANT in connection with this Agreement. CONSULTANT shall maintain for a minimum period of three (3) years from the date of final payment to CONSULTANT or for any longer period required by law, sufficient books and records in accordance with generally accepted accounting practices to establish the correctness of all charges submitted to CITY by CONSULTANT. Any expenses not so recorded shall be disallowed by CITY.

11. Confidentiality of Material

All ideas, memoranda, specifications, plans, calculations, manufacturing procedures, data, drawings, descriptions, documents, discussions or other information developed or received by or for CONSULTANT and all other written information submitted to CONSULTANT in connection with the performance of this Agreement shall be held confidential by CONSULTANT and shall not, without the prior written consent of CITY be used for any purposes other than the performance of the Project services, nor be disclosed to an entity not connected with the performance of the Project services. Nothing furnished to CONSULTANT which is otherwise known to CONSULTANT or is or becomes generally known to the related industry shall be deemed confidential. CONSULTANT shall not use CITY's name, insignia or distribute exploitative publicity pertaining to the services rendered under this Agreement in any magazine, trade paper, newspaper or other medium without the express written consent of CITY.

12. No Pledging of CITY's Credit

Under no circumstances shall CONSULTANT have the authority or power to pledge the credit of CITY or incur any obligation in the name of CITY.

13. Ownership of Material

All material, including information developed on computer(s), which shall include, but not be limited to, data, sketches, tracings, drawings, plans, diagrams, quantities, estimates, specifications, proposals, tests, maps, calculations, photographs, reports and other material developed, collected, prepared or caused to be prepared, under this Agreement shall be the property of CITY, but CONSULTANT may retain and use copies thereof.

CITY shall not be limited, in any way, in its use of said material, at any time, for work associated with Project. However, CONSULTANT 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 for work other than on Project.

14. Hold Harmless/Indemnification

To the extent permitted by law (including, without limitation, California Civil Code section 2782.6), CONSULTANT agrees to indemnify, defend and hold harmless CITY, its officers and employees from any and all claims, demands, actions, causes of action, losses, damages, liabilities, known or unknown, and all costs and expenses, including reasonable attorneys' fees in connection with any injury or damage to persons or property to the extent arising out of any negligence, recklessness or willful misconduct of CONSULTANT, its officers, employees, agents, contractor, subcontractors or any officer, agent or employee thereof in relation to CONSULTANT's performance under this Agreement. Such defense and indemnification shall not apply in any instance of and to the extent caused by the sole negligence, recklessness or willful misconduct of CITY, its officers, employees, agents or representatives.

15. Insurance Requirements

CONSULTANT shall take out and maintain during the life of this Agreement policies of insurance as specified in Exhibit "C" attached and incorporated by reference, and shall provide all certificates and/or endorsements as specified in Exhibit "C."

16. No Third Party Beneficiary

This Agreement shall not be construed or deemed 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 hereunder for any cause whatsoever.

17. Notices

All notices required by this Agreement shall be in writing, and shall be personally delivered, sent by first class mail with postage prepaid, or by commercial courier, addressed as follows:

To CITY:                   Chuck Neumayer, P.E.  
Senior Engineer  
Department of Public Works  
CITY OF SUNNYVALE  
P. O. Box 3707  
Sunnyvale, CA 94088-3707

To CONSULTANT: Infrastructure Engineering Corporation (IEC)  
Attn: Scott Humphrey  
301 Mission Avenue, Suite 220  
Oceanside, CA 92054

Nothing in this provision shall be construed to prohibit communication by more expedient means, such as by telephone or facsimile transmission, to accomplish timely communication. However, to constitute effective notice, written confirmation of a telephone conversation or an original of a facsimile transmission must be sent by first class mail, by commercial carrier, or hand-delivered. Each party may change the address by written notice in accordance with this paragraph. Notices delivered personally shall be deemed communicated as of actual receipt; mailed notices shall be deemed communicated as of three days after mailing, unless such date is a date on which there is no mail service. In that event communication is deemed to occur on the next mail service day.

18. Waiver

CONSULTANT 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.

19. Amendments

No alterations or changes to the terms of this Agreement shall be valid unless made in writing and signed by both parties.

20. Integrated Agreement

This Agreement embodies the agreement between CITY and CONSULTANT and its terms and conditions. No verbal agreements or conversation with any officer, agent or employee of CITY prior to execution of this Agreement shall affect or modify any of the terms or obligations contained in any documents comprising this Agreement. Any such verbal agreement shall be considered as unofficial information and in no way binding upon CITY.

21. Conflict of Interest

CONSULTANT certifies that to the best of its knowledge, no CITY employee or officer of any public agency interested in this Agreement has any pecuniary interest in the business of CONSULTANT and that no person associated with CONSULTANT has any interest that would conflict in any manner or degree with the performance of this Agreement.

22. California Agreement

This Agreement has been entered into in the State of California and this Agreement shall be governed by California law.

23. Records, Reports and Documentation

CONSULTANT shall maintain complete and accurate records of its operation, including any and all additional records required by CITY in writing. CONSULTANT shall submit to CITY any and all reports concerning its performance under this Agreement that may be requested by CITY in writing. CONSULTANT agrees to assist CITY in meeting CITY's reporting requirements to the state and other agencies with respect to CONSULTANT's work hereunder. All records, reports and documentation relating to the work performed under this Agreement shall be made available to City during the term of this Agreement.

24. Termination of Agreement

If CONSULTANT defaults in the performance of this Agreement, or materially breaches any of its provisions, CITY at its option may terminate this Agreement by giving written notice to CONSULTANT. If CITY fails to pay CONSULTANT, CONSULTANT at its option may terminate this Agreement if the failure is not remedied by CITY within thirty (30) days from the date payment is due.

Without limitation to such rights or remedies as CITY shall otherwise have by law, CITY also shall have the right to terminate this Agreement for any reason upon ten (10) days' written notice to CONSULTANT. In the event of such termination, CONSULTANT shall be compensated in proportion to the percentage of services performed or materials furnished (in relation to the total which would have been

performed or furnished) through the date of receipt of notification from CITY to terminate. CONSULTANT shall present CITY with any work product completed at that point in time.

25. Subcontracting

None of the services covered by this Agreement shall be subcontracted without the prior written consent of CITY. Such consent may be issued with notice to proceed if subcontract consultants are listed in the project work plan.

26. Fair Employment

CONSULTANT shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, condition of physical handicap, religion, ethnic background or marital status, in violation of state or federal law.

27. Changes

CITY or CONSULTANT may, from time to time, request changes in the terms and conditions of this Agreement. Such changes, which are mutually agreed upon by CITY and CONSULTANT, shall be incorporated in amendments to this Agreement.

28. Other Agreements

This Agreement shall not prevent either Party from entering into similar agreements with others.

29. Severability Clause.

In case any one or more of the provisions contained herein 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.

30. Captions

The captions of the various sections, paragraphs and subparagraphs, of the contract are for convenience only and shall not be considered nor referred to for resolving questions of interpretation.

31. Entire Agreement; Amendment

This writing constitutes the entire agreement between the parties relating to the services to be performed or materials to be furnished hereunder. No modification of this Agreement shall be effective unless and until such modification is evidenced by writing signed by all parties.

32. Miscellaneous

Time shall be of the essence in this Agreement. Failure on the part of either party to enforce any provision of this Agreement shall not be construed as a waiver of the right to compel enforcement of such provision or any other provision. This

Agreement shall be governed and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the parties have executed this Agreement.

ATTEST:

CITY OF SUNNYVALE ("CITY")

By \_\_\_\_\_  
City Clerk

By \_\_\_\_\_  
City Manager

Infrastructure Engineering Corporation (IEC)  
("CONSULTANT")

APPROVED AS TO FORM:

By \_\_\_\_\_

\_\_\_\_\_  
Name/Title

\_\_\_\_\_  
City Attorney

By \_\_\_\_\_

\_\_\_\_\_  
Name/Title

## SCOPE OF WORK – EXHIBIT “A”

### Task 1 Data Collection / Basic Assumptions / Criteria Development

IEC will have a kick-off meeting with City staff to establish the goals, needs, and desires of the project, as well as confirm project objectives, schedule, discuss approach and criteria, establish departmental contacts and lines of communication, and discuss data availability. In addition, we will meet with the City to decide on a mutually agreeable digital deliverable format for ease of use throughout this project.

A review will be conducted of any data and/or reports identified by the City relating to the planning and engineering of the City's water system. IEC will prepare a Request for Information (RFI), which will clearly illustrate which documents or files IEC wishes to obtain from the City. IEC anticipates that the RFI may include, but may not be limited to, the following items:

- Relevant portions of the City's GIS database including: water facilities, parcels, water demands (if available), streets, pressure zones, topography and land use
- Documents pertaining to the City's design criteria, developed after February 2007 (if available)
- Recent active water service billing records (approximately 27,650 separate accounts)
- City records of purchased and produced water
- The City's previously developed link of APN to Water Account Location ID
- Available planning documents and/or tentative tract maps from all specific plans that have been submitted to the City.
- Association of Bay Area Governments (ABAG) series population projections
- Any Operations and Maintenance and/or SCADA data available for the City's booster plants, storage tanks, pressure reducing valves, SFPUC and SCVWD connections.
- The City's MWHSOft InfoWater Hydraulic Model (available for use only on City computers)
- Any available studies related to the City's water supplies.
- Available corrosion control studies, data, and/or reports pertaining to the City's water infrastructure
- Any available water quality reports and/or data, currently being collected by the City for compliance with the EPA Initial Distribution System Evaluation (IDSE) Stage 2 Disinfectants and Disinfection Byproduct Rule
- The City's 2005 Urban Water Management Plan

Over the course of the project, IEC anticipates spending several days at the City “pulling” various record drawings and maps as the need arises. IEC will submit, in advance, the requested drawings for City approval, and arrange for a mutually convenient time to obtain these documents.

IEC will coordinate with the City IT department for system requirements, licensing, and use of the water model on City computer(s). IEC anticipates utilizing one (1) City computer, one (1) City ESRI ArcInfo license and one (1) MWHSOft InfoWater License for forty (40) hours throughout the duration of this water master plan effort, all Tasks inclusive.

A data/document log will be maintained by IEC that lists the data/documents received from the City, the date received, and if the data needs to be returned to the City. This inventory will be updated as new information is received and supplied to the City at status meetings.

### *Task 1.A-Parcel Level Water Demands*

IEC will develop existing water demands at the parcel-level for use in the hydraulic model. Utilizing the most recent two (2) full years of available water billing records provided by the City, IEC will determine the average daily water demand for the City. Water billing records are anticipated to include the City's Location ID and consumption data for each account. Each active water service billing record from this time period will be assigned to a specific parcel, utilizing the City's previously developed APN to Water Account Location ID Link.

All water accounts with an average daily demand of 10,000 gpd or more will be presented in a separate figure and table, clearly identifying the location of these major water users, as well as the APN, water account owner, address and water billing records associated with each major water user. Separating out these major water users for specific review by the City ensures that the greatest amount of demand is loaded with the greatest accuracy.

IEC will perform an analysis of existing water demands by land use classification to develop unit water duty factors. Utilizing the zoning classifications provided in the City's GIS database, IEC will generate a table clearly illustrating the average daily demands, number of accounts and gross acreage for each land use classification within the City's zoning.

IEC will develop water demand projects, on a parcel-level, for the 5-Year, 15-Year and planning horizon (25-Year) time increments. 5-Year water demands will be developed utilizing any available specific plans, planning documents and/or tentative tract maps that have been submitted to the City, in conjunction with unit water duty factors. Growth rates from the current Association of Bay Area Governments (ABAG) series population projections will be reviewed and a set of recommended growth rates for use in this Master Plan will be recommended. ABAG series population projections will form the bases of the growth rates used to project water demands in the 15-Year and planning horizon (25-year) time increments.

IEC will utilize the City's GIS database to create a map and spreadsheet illustrating all specific plans and proposed developments included in the water demand projections.

Water demands will be verified with the City's current Urban Water Management Plan (UWMP) to ensure conformance to previously developed and accepted demand projections. Consistent with the UWMP, water conservation measures (including recycled water demand projections) will be accounted for in the demand projections and final projections will be adjusted accordingly.

After the existing water demands have been reviewed and approved by the City, IEC will load each parcel's water demand to a hydraulic node in the City's InfoWater hydraulic model. IEC will generate a separate link in the City's GIS database clearly identifying each Water Account Location ID, APN, Existing Demand, and hydraulic model node ID for which the demand was assigned to in the hydraulic model.

**Deliverables:**

Existing and projected water demands, major water users and land use duty factors use will be summarized in Technical Memorandum No. 1 and submitted to the City for review and comment. All City comments will be addressed prior to proceeding with Task 2.

***Task 1.B – Peaking Factors***

Monthly, daily, and hourly peak factors will be developed to account for average day, minimum day, maximum day, and peak hour demand conditions, based upon existing average and peak demand data. The maximum month peak factor will be determined by using the City's records of purchased and produced water, which summarize the monthly demands in the City of Sunnyvale.

Minimum day, maximum day and peak hour factors will be calculated based on available Supervisory Control And Data Acquisition (SCADA) at the City's wells and turn-outs. IEC will utilize the hydraulic model to determine emergency peaking factors, which represent the maximum water the City can deliver during a specific emergency (i.e. SFPUC and/or SCVWD supplies unavailable).

All recommended peaking factors will be compared to those of neighboring agencies, including but not limited to, the City of Mountain View, the City of Santa Clara, Cal Water, SFPUC and SCVWD. Typical industry standards, such as those recommended by the American Water Works Association (AWWA), will also be evaluated.

***Task 1.C – Distribution System Design Criteria***

Distribution system criteria address system pressure and pipeline requirements. These criteria are established to ensure that the proposed distribution system will provide adequate, but not excessive, water pressure and the conveyance system can accommodate peak demands without excessive wear or energy usage. IEC will summarize the City's existing Design Criteria and, if necessary, make recommendations for any outstanding criteria not available. Design criteria include allowable pressures, velocities and headlosses during average, peak and fire flow conditions. IEC will work with the Sunnyvale Public Safety Department to obtain the applicable fire flow requirements.

All recommended design criteria will be compared to those of neighboring agencies, including but not limited to, the City of Mountain View, the City of Santa Clara, Cal Water, SFPUC and SCVWD. Typical industry standard design criteria, such as those recommended by the American Water Works Association (AWWA), will also be evaluated.

IEC will coordinate with the City IT department for system requirements, licensing, and use of the water model on City computer(s). IEC anticipates utilizing one (1) City computer, one (1) City ESRI ArcInfo and one (1) MWHSoft InfoWater License for forty (40) hours throughout the duration of this water master plan effort, all Tasks inclusive.

**Deliverables:**

The peaking factor calculations and analysis, as well as the proposed design criteria, will be summarized in Technical Memorandum No. 2 and submitted to the City for review and comment. All City comments will be addressed prior to proceeding with Task 2.

**Task 2 Water System Modeling**

Using the City's InfoWater Hydraulic Model and the design criteria developed in Task 1, IEC will develop a list of deficient facilities in 5-Year, 15-Year and planning horizon (25-year) time increments. These deficient facilities will be evaluated in context with the information obtained from our initial site-visit, to develop a list of recommended facilities that are specifically tailored to the City's landscape, terrain and equipment preferences.

All analysis performed utilizing the hydraulic model will be done in conjunction with detailed input from IEC's design engineers, thereby ensuring that facility recommendations are "real world" and practical, as well as hydraulically necessary.

IEC will prepare an inventory of all pressure reducing valves, booster plants, storage tanks and SFPUC and SCVWD supply connections within the City's service area, based on the City's GIS database and records obtained in Task 1. Additionally, IEC will create a series of operational spreadsheets which contain details of infrastructure pressure set points, including seasonal and peak variations, to ensure that the City's InfoWater hydraulic model accurately represents the City's current operational strategy. A sample of the booster plan and pump operations spreadsheet is provided below.

**Deliverables:**

The Base Map, along with the inventory and operational spreadsheets, will be summarized in Technical Memorandum No. 3 and submitted to the City for review and comment. All City comments will be incorporated into the City's hydraulic model prior to proceeding with Task 2.A.

**Task 2.A – Hydraulic Model Scenarios**

IEC will update the City's InfoWater hydraulic model with the infrastructure data collected in Task 2, and the water demand projections developed in Task 1. For the 5-Year, 15-Year and planning horizon (25-Year) time increments, IEC will update the City's hydraulic model to include each of the following four (4) Steady-State and four (5) Extended Period Simulation (EPS) scenarios:

- Average day demands (Steady-State)
- Maximum day demands (Steady-State)
- Peak hour demands (Steady-State)
- Maximum day demands plus fire flow (Steady-State)
- 24-hour Extended Period Maximum Day Simulation (EPS)
- 96-hour Extended Period Simulation Minimum Day (EPS)
- Disruption of SFPUC service (EPS)
- Disruption of SCVWD service (EPS)
- Supply from/to Mountain View, Santa Clara and/or Cal Water Emergency Interties (EPS)

### ***Task 2.B – Storage Evaluation***

IEC will develop appropriate storage criteria for the City, that addresses legislative, seasonal and emergency needs. This criteria will account for the current California Department of Health Services (DHS) recommendations for those agencies receiving Hetch-Hetchy water. The City is currently allowed to “float” off of both the SFPUC and SCVWD water connections. IEC will also develop separate storage criteria that addresses the future possibility that SFPUC or SCVWD eliminate the City’s ability to “float” off their supply, thereby requiring the City to utilize a constant flow for large portions of the day.

All water storage recommendations will be examined in context with water quality and tank turn-over rates, thereby ensuring that infrastructure recommendations allow for projected demands while avoiding potential water quality problems.

### ***Task 2.C – Recycled Water Impacts***

IEC will work with City Staff to ensure that all existing and future recycled water demand projections are accounted for, potentially reducing the need for potable water in the future. Water demands will be verified with the City’s current Urban Water Management Plan (UWMP) to ensure conformance to previously developed and accepted demand projections. Consistent with the UWMP, recycled water demand projections will be accounted for in the demand projections and final projections will be adjusted accordingly.

In the event that there are multiple recycled water projections (i.e. uncertainty if certain future customers will utilize recycled or potable water), IEC will perform a demand sensitivity analysis to determine the impacts of these potential users.

### ***Task 2.D – Emergency Intertie Connections***

IEC will evaluate the City’s emergency interties with the City of Mountain View, City of Santa Clara and the California Water Company. As IEC has recently completed the City of Mountain View’s Water and Sewer Master Plan, including an all-pipes water system hydraulic model, it is anticipated that additional collaboration will be necessary with Santa Clara and Cal Water to obtain their emergency intertie requirements and capabilities.

Utilizing the City’s hydraulic model, IEC will evaluate the ability of the City to deliver and receive water through these interties in the event of an emergency (i.e. SFPUC and/or SCVWD supply interruption). IEC will quantify the maximum amount of daily water usage (emergency peak factors) which the City can deliver in the event of these emergencies.

### ***Task 2.E – Fire Flow Demands***

IEC will work with the Sunnyvale Public Safety Department to obtain applicable fire flow requirements. Preliminary investigation indicates a required fire flow of 3,000 gpm for non-residential areas, and 2,000 gpm for residential areas, while maintaining a minimum residual pressure of 20 psi, with non-residential and residential fire flows required for 4 hours and 2 hours respectively. If necessary, IEC will make recommendations that are compliant with the California Building Code, and other germane legislated requirements.

### ***Task 2.F– Water Quality***

IEC will utilize the City’s hydraulic model, specifically the maximum and minimum day Extended Period Simulations, to evaluate water quality throughout the City’s water system. IEC will meet with City Operations Staff to address any water quality issues of concern. Any available water quality reports and/or data, currently being collected by the City for compliance with the EPA Initial Distribution System Evaluation (IDSE) Stage 2 Disinfectants and Disinfection Byproduct Rule, will also be accounted for in the Water Quality analysis.

IEC will develop a list of recommendations that address both infrastructure needs, as well as system operations requirements, that address water quality and turn-over rates during average, maximum and minimum demand variations, as necessary. All recommendation will be confirmed with City Operations Staff to ensure feasibility, practicality and cost-effectiveness of water quality recommendations.

### ***Task 3 Water Supply Evaluation***

IEC has added the services of Kennedy/Jenks Consultants (Kennedy/Jenks) to perform the water supply evaluation for the City. Based on their extensive experience in the preparation of integrated water resource assessments, particularly for State Water Project contractors and their member agencies, Kennedy/Jenks has identified the following important factors that a water supply evaluation needs to consider:

- Quantity – Water supplies must be sufficient to meet current and projected water demands.
- Duration – As the City relies on water supplies imported by other agencies, the duration of these agreements and uncertainties related to renewal or extensions, particularly future costs, must be considered.
- Reliability – Physical and hydrologic reliability are critical. Since the City relies on imported water supplies, the risk of disruption of the delivery or treatment system is important. In addition to large seismic events, other risks include contamination and equipment failures.
- Economics – The City desires to provide cost-effective water service. Accordingly, the fixed and variable prices of the City's water supplies need to be evaluated under various delivery conditions to help ensure low costs for the City.

To evaluate these factors, Kennedy/Jenks will review and summarize available studies related to the City's water supplies. This information will be utilized to evaluate the risks and costs of the City's water supply portfolio. Statistical analyses will be performed when appropriate. These analyses will be utilized to recommend a water supply plan for the City. Recommendations may include modifications to the City's water supply portfolio, operational modifications to water supply utilization, or acquisition of banked water for dry year delivery.

#### ***Task 3.A– Agency Coordination***

Kennedy/Jenks will meet with staff from the City, San Francisco Public Utilities Commission, Santa Clara Valley Water District, and Bay Area Water Supply and Conservation Agency, to begin the collaboration process, and identify efficiencies and deficiencies across inter-agency supplies. This task also includes conducting up to eight two-hour conference calls and five three-hour in person meetings with up to two Kennedy/Jenks staff at the City's office.

#### ***Task 3.B- Evaluation of Cost for Supply Strategy***

Kennedy/Jenks will evaluate the sources of water available to the City in order and determine the most efficient water supply strategy as the need becomes more defined and opportunities arise. Sources of water to consider will include recycled water, additional groundwater, and additional SCVWD supply. This subtask will also consider the effects of climate change on these supplies, on SCVWD's SWP allocation and pipeline capacity, and help to address the following types of questions that may be asked about long-term water supply: What is the current cost (\$/AF) for the available supplies? How can the City provide for a drought year water supply in the future? What long-term drought water supply options are available and what is their relative cost? What ways can the City manage its water supplies to maximize water reliability and minimize cost?

#### ***Task 3.C- Assessment of Water Rates for Supply Strategy***

Kennedy/Jenks will review available information from the San Francisco Public Utilities Commission regarding current and expected water rates. The City of Sunnyvale, as one of the Suburban Customers of the SFPUC, may be subject to new annual rate increases under the new water sales agreement that was recently being negotiated between the Bay Area Water Supply and Conservation Agency (BAWSCA) and SFPUC. The renegotiation of this agreement will be reviewed, to estimate projected water rates. This information will be examined, in conjunction with rates for and potential availability of water from Santa Clara Valley Water District and groundwater wells, to determine a strategy for approaching the City's water supply issues in a cost effective manner. Other issues may be considered and incorporated, depending on availability of information, such as the effects of uncertainty in financial markets affecting bond rates for the SFPUC's Water System Improvement Program, which may lower charges to suburban customers.

### ***Task 3.D - Groundwater Supply Assessment***

To evaluate whether the SCVWD's future can meet potential future water demands, a groundwater supply evaluation will be developed for the sub-basin within which the City is located. As the initial step in estimating the groundwater supply, a conceptual hydrologic budget of the basin is required. This budget correlates inflow and outflow of water to and from the basin and estimates the resulting change in groundwater storage. The conceptual hydrologic budget of the area will be developed based on previous hydrogeological investigations, regional geology, hydrology and the aquifer test results.

As a conceptual hydrologic budget, the estimates of groundwater inflow and outflow will be based on more generalized regional assumptions rather than a more comprehensive detailed accounting. From the existing data, a range of groundwater recharge and outflow volumes will be estimated to provide a preliminary assessment of the perennial yield for these wells. The perennial yield will then be compared to the projected future demand of water in order to determine if the basin will reach overdraft conditions and whether additional source of water may be required.

### **Task 4 Prepare the Base Project Water Utility Master Plan (WUMP)**

IEC's work developed in Tasks 1 through 3 will be summarized in the Water Utility Master Plan (WUMP), and submitted to the City for review and comment. The WUMP will contain an Executive Summary that summarizes the key components, findings and recommendations of the project. Furthermore, the study will be designed to read well to non-technical staff, engineers, City Council members and the general public. IEC will meet with the City to present the WUMP, and address any questions or concerns that the City may have. In addition to a summary of all work completed in Tasks 1 through 3, the WUMP will also include:

- **A description of the water utility as envisioned after all included projects are completed.** As part of this effort, IEC will prepare wall-size maps to illustrate the existing and proposed water system with new facilities identified and prioritized. In addition, schematics of the water system will be prepared showing the water system, water quality results, existing system facilities, and pressure zones. Mapping will be provided to the City in digital format upon completion of the project.
- **Maps and tables identifying all capital improvement and replacement projects, with all pipeline, pressure reducing valve and supply connection recommendations clearly identified.** IEC will develop concept layouts for all booster pump and/or storage recommendations. As part of this effort, a second site-visit may be conducted to re-examine areas of interest. As was done previously, we will accompany City Staff, where we will perform an on-site reconnaissance and obtain photo documentation of these critical areas. IEC will develop concept layouts which consist of a general site/ civil plan that indicates the general arrangement of equipment and site features. These will be conceptual in nature; as no new survey or mapping is proposed at this time. If such information is available from the City in an electronic format, it will be used to enhance the presentation of the final product.
- **IEC will develop a Capital Improvement Program (CIP) for the 5-year, 15-year and planning horizon (25-Year) time-increments.** A comprehensive list of Capital Improvements and Replacements, that address both existing deficiencies and future needs based upon projected water demands, will be included in the CIP. Recommended water system improvements will include pipeline, booster plant, supply connection, valve and storage improvements necessary to meet existing and future demands.
- **IEC will develop a Capital Replacement Program (CRP) for the 5-year, 15-year and planning horizon (25-Year) time-increments utilizing the condition asset management expertise of RFYeager Engineering (RFYeager).** RFYeager will review existing drawings, corrosion control studies, data, and reports, and accompany IEC in conducting a basic, visual inspection of all above ground, major water infrastructure (storage tanks – including treatment, booster plants, etc.) RFYeager will make recommendations for long-term service of the SDWD facilities. The consultants will develop a prioritized list of facilities where corrosion control is deficient and where improvements need to be addressed. Recommendations for corrosion control will be based upon sound corrosion engineering practices, SDWD and AWWA Standards, and available corrosion control methods. IEC will develop a prioritized repair/replacement program that provides a plan for maintaining the City's water infrastructure. Order of magnitude cost estimates for repairs/replacements will be developed and an overall annual cost to maintain existing facilities will be developed to assist the City in adequately funding the scheduled replacement of existing facilities when they reach the end of their useful life.

- **Engineers construction cost estimates will be developed for each capital project, including cost for design, permitting, bidding, construction, and administration.** Estimates of probable capital costs provided will represent Order of Magnitude level costs as established by the American Association of Cost Engineers (AACE) and represent an accuracy of +50% to -30%. Cost estimates presented in the report are linked to the Engineering News Record Construction Cost Index (ENR-CCI) cost index, so that they may be adjusted in the future by comparing cost estimates to the future ENR-CCI index.
- **IEC has again added the services of Kennedy/Jenks to assist the City in developing a funding plan for identified infrastructure recommendations.** Kennedy/Jenks will utilize their long-term experience with potential funding opportunities to match identified projects to potential sources of funding, including: water and wastewater general funds, capital improvement funds, general funds from local Cities, County Department, private organizations, as well as the local, state, and federal funding sources. Kennedy/Jenks will work with City staff to establish a process for reviewing existing programs and projects. Criteria to include in the discussion will involve: how to phase projects to best meet existing funding schedules, total project cost, local cost share, quantified project benefits, whether the project meets the objectives of the current funding opportunity, environmental and regulatory compliance, and schedule for completion (“readiness to proceed”). In this manner, a process would be established for “strategic packaging” of projects for potential funding programs.

A draft electronic copy of the WUMP, in .pdf format, will be submitted to the City for review and comment. Upon incorporation of all comments, five (5) final copies will be submitted to the City. In addition, an electronic copy of the Study in .pdf format will be submitted to the City. The electronic copy will include all figures contained in the original report.

#### Task 5. Project Management

IEC will include the use of management control tools and emphasize client communication. Prior to the implementation of the project, IEC will develop an initial project management and control plan. This plan will include: project instructions, which establish the project goals, schedule, task assignments and communication protocol; project work plan, which merges the scope of services with project milestones and individual task assignments for schedule and budget; and a project cost control program which establishes the benchmark and reporting methodology for the ongoing assessment of project completion and budget.

Client communication will be maintained by the Project Manager. The Project Manager will coordinate all project activities within the project team and will be responsible for the development of progress submittals, will attend project coordination meetings with the City, and will be responsible for the development of interim deliverables and status reports.

IEC will hold a kick-off meeting with City staff to establish the goals, needs, and desires of the WUMP, confirm project objectives, discuss approach and criteria, establish departmental contacts and lines of communication, and discuss data availability. In addition, we will decide on a mutually agreeable digital deliverable format for ease of use throughout this project. IEC will prepare meeting agendas and submit to the City Staff three (3) days prior to all meetings. In addition, the IEC will prepare a set of meeting minutes and submit to City Staff within five business days of the kick-off meeting. IEC will hold coordination meetings at key junctures during the project. Although the meetings will be flexibly scheduled according to the needs of the project as they occur, the following meetings are anticipated in addition to the kick-off meeting:

The Project Manager will be responsible for monthly status updates to City staff. These updates will take place by email and will be in addition to other deliverables required by the City. The updates will include information of tasks in progress, schedule updates, questions or concerns, and any critical path items of importance at the time of the status report. In the event that the schedule is delayed at any point during the project, the Project Manager will identify the cause for the delay, as well as recommendations to bring the project “back on track.”

Monthly invoices will be submitted to the City, clearly identifying the description of work accomplished during the invoice period and a summary of tasks and budget completed to date.

PROJECT SCHEDULE

City of Sunnyvale Water Utility Master Plan Project No. UW-09/02-10			PROJECT SCHEDULE																																																						
ID	Task Name	Duration	Start	Finish	April	May	June	July	August	September	October	November	December	January	February	March																																									
					3/29	4/5	4/12	4/19	4/26	5/3	5/10	5/17	5/24	5/31	6/7	6/14	6/21	6/28	7/5	7/12	7/19	7/26	8/2	8/9	8/16	8/23	8/30	9/6	9/13	9/20	9/27	10/4	10/11	10/18	10/25	11/1	11/8	11/15	11/22	11/29	12/6	12/13	12/20	12/27	1/3	1/10	1/17	1/24	1/31	2/7	2/14	2/21	2/28	3/7	3/14	3/21	3/28
1	Task 1.0 Data Collection / Basic Assumptions / Criteria Development	61 days	Mon 4/6/09	Mon 6/29/09	[Gantt bar]																																																				
2	Task 1A- Parcel Level Water Demands	10 days	Mon 4/27/09	Fri 5/8/09	[Gantt bar]																																																				
3	Present Draft Water Demands to City (Technical Memorandum 1)	1 day	Mon 5/11/09	Mon 5/11/09	[Gantt bar]																																																				
4	City Review of Technical Memorandum 1	10 days	Tue 5/12/09	Mon 5/25/09	[Gantt bar]																																																				
5	Finalize Technical Memorandum 1	5 days	Tue 5/26/09	Mon 6/1/09	[Gantt bar]																																																				
6	Task 1B - Peaking Factors	10 days	Mon 5/4/09	Fri 5/15/09	[Gantt bar]																																																				
7	Task 1C - Distribution System Design Criteria	15 days	Mon 5/18/09	Fri 6/5/09	[Gantt bar]																																																				
8	Present Draft Peaking Factors and Distribution Criteria (Technical Memorandum 2)	1 day	Mon 6/8/09	Mon 6/8/09	[Gantt bar]																																																				
9	City Review of Technical Memorandum 2	10 days	Tue 6/9/09	Mon 6/22/09	[Gantt bar]																																																				
10	Finalize Technical Memorandum 2	5 days	Tue 6/23/09	Mon 6/29/09	[Gantt bar]																																																				
11	Task 2.0 - Water System Hydraulic Modelling	66 days	Tue 6/30/09	Tue 9/29/09	[Gantt bar]																																																				
12	Present Base Map and Facility Inventory (Technical Memorandum No. 3)	1 day	Tue 7/14/09	Tue 7/14/09	[Gantt bar]																																																				
13	City Review of Technical Memorandum 3	10 days	Wed 7/15/09	Tue 7/28/09	[Gantt bar]																																																				
14	Finalize Technical Memorandum 3	5 days	Wed 7/29/09	Tue 8/4/09	[Gantt bar]																																																				
15	Task 2A - Hydraulic Model Scenarios	40 days	Wed 8/5/09	Tue 9/29/09	[Gantt bar]																																																				
16	Task 2B - Storage Evaluation	40 days	Wed 8/5/09	Tue 9/29/09	[Gantt bar]																																																				
17	Task 2C - Recycled Water Impacts	40 days	Wed 8/5/09	Tue 9/29/09	[Gantt bar]																																																				
18	Task 2D - Emergency Inter tie Connections	40 days	Wed 8/5/09	Tue 9/29/09	[Gantt bar]																																																				
19	Task 2E - Fire Flow Demands	40 days	Wed 8/5/09	Tue 9/29/09	[Gantt bar]																																																				
20	Task 2F - Water Quality	40 days	Wed 8/5/09	Tue 9/29/09	[Gantt bar]																																																				
21	Task 3.0 - Water Supply Evaluation	131 days	Mon 4/6/09	Mon 10/5/09	[Gantt bar]																																																				
22	Task 3A - Agency Coordination	115 days	Mon 4/6/09	Fri 9/11/09	[Gantt bar]																																																				
23	Task 3B - Evaluation of Cost for Supply Strategy	35 days	Mon 4/6/09	Fri 5/22/09	[Gantt bar]																																																				
24	Task 3C - Assessment of Water Rates for Supply Strategy	35 days	Mon 5/25/09	Fri 7/10/09	[Gantt bar]																																																				
25	Task 3D - Groundwater Supply Assessment	40 days	Mon 7/13/09	Fri 9/4/09	[Gantt bar]																																																				
26	Present Draft Water Supply Evaluation (Technical Memorandum No. 4)	1 day	Mon 9/7/09	Mon 9/7/09	[Gantt bar]																																																				
27	City Review of Technical Memorandum No. 4	10 days	Tue 9/8/09	Mon 9/21/09	[Gantt bar]																																																				
28	Finalize Technical Memorandum No. 4	10 days	Tue 9/22/09	Mon 10/5/09	[Gantt bar]																																																				
29	Task 4.0 - Prepare the Base Water Utility Master Plan	120 days	Mon 6/29/09	Fri 12/11/09	[Gantt bar]																																																				
30	Prepare Draft Report	95 days	Mon 6/29/09	Fri 11/6/09	[Gantt bar]																																																				
31	City Review of Draft Report	15 days	Mon 11/9/09	Fri 11/27/09	[Gantt bar]																																																				
32	Finalize Base Water Utility Master Plan	10 days	Mon 11/30/09	Fri 12/11/09	[Gantt bar]																																																				
33	Task 11.0 Project Management	180 days	Mon 4/6/09	Fri 12/11/09	[Gantt bar]																																																				
34	Task 5.0 - Alternative 1 - Water Utility Rate Study	60 days	Mon 12/14/09	Fri 3/5/10	[Gantt bar]																																																				
35	Task 6.0 - Alternative 2 - Future Conservation Program Recommendations	50 days	Mon 12/14/09	Fri 2/19/10	[Gantt bar]																																																				
36	Task 7.0 - Alternative 3 - Analysis of Serving Cal Water Customers	30 days	Mon 12/14/09	Fri 1/22/10	[Gantt bar]																																																				
37	Task 8.0 - Alternative 4 - Seismic, Geotechnical and Condition Assessment	75 days	Mon 12/14/09	Fri 3/26/10	[Gantt bar]																																																				
38	Task 9.0 - Alternative 5 - New Well Analysis	50 days	Mon 12/14/09	Fri 2/19/10	[Gantt bar]																																																				
39	Task 10.0 - Alternative 6 - Staffing Need Comparison	30 days	Mon 12/14/09	Fri 1/22/10	[Gantt bar]																																																				

**EXHIBIT "B"**

Fee Proposal  
 City of Sunnyvale  
 Water Utility Master Plan  
 Project No. UW-09/02-10

INFRASTRUCTURE ENGINEERING CORPORATION

Task Number	Subtask Description Summary	Classification	Senior Project Manager/Principal (Planning & IS)	Senior Project Manager/Principal (Design)	Senior Project Engineer (Planning & IS)	Engineer III CAD Operator III	Engineer I/CAD Operator I	Word Processor	Engineering Intern	Subtask Labor-Hours	Subtask Labor Cost	Direct Cost	Subcontract	Total Cost
			Rate	Rate	Rate	Rate	Rate	Rate						
1.0	Data Collection / Basic Assumptions / Criteria Development		\$195.00	\$180.00	\$170.00	\$115.00	\$95.00	\$68.00	\$63.00	76	\$8,610	\$750		\$10,360
1.A	Parcel Level Water Demands		2	2	8	16	24			52	\$6,230	\$300		\$6,730
1.B	Peaking Factors		2	2	8	16	24			52	\$6,230			\$6,230
1.C	Distribution System Design Criteria		2	2	8	12	16			40	\$5,010	\$500		\$5,510
2.0	Water System Modeling		2		8	16	24			50	\$5,870	\$300		\$6,370
2.A	Hydraulic Model Scenarios		2		8					10	\$1,750	\$150		\$2,000
2.B	Storage Evaluation		2		4	8	16			30	\$3,510			\$3,510
2.C	Recycled Water Impacts		2		4	8	16			30	\$3,510			\$3,510
2.D	Emergency Inter-tie Connections		2		8	16	24			50	\$5,870			\$5,870
2.E	Fire Flow Demands		2		4	4	8			18	\$2,290			\$2,290
2.F	Water Quality		2		8	16	20			46	\$5,490			\$5,490
3.0	Water Supply Evaluation		16		24					40	\$7,200		\$50,532	\$57,732
4.0	Prepare Base Project Water Utility Master Plan		8	16	24	40	60	40		40	\$21,540	\$1,500	\$38,830	\$61,870
5.0	Project Management			32						0	\$12,000	\$500		\$12,500
<b>TOTAL - HOURS</b>			78	56	134	176	264	40	0	336				
<b>TOTAL - COSTS</b>			\$16,210	\$10,080	\$22,780	\$20,240	\$25,080	\$2,720	\$0		\$96,110	\$4,400	\$89,382	\$189,832

## EXHIBIT "C" INSURANCE REQUIREMENTS

CONSULTANT shall procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work by CONSULTANT, its agents, representatives, or employees.

### Minimum Scope and Limits of Insurance

CONSULTANT shall maintain limits no less than:

1. **Commercial General Liability**: \$1,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. ISO Occurrence Form CG 0001 is required.
2. **Automobile Liability**: \$1,000,000 per accident for bodily injury and property damage. ISO Form CA 0001 is required.
3. **Workers' Compensation** and **Employer's Liability**: \$1,000,000 per accident for bodily injury or disease.
4. **Errors and Omissions** Liability Insurance appropriate to CONSULTANT's profession: \$1,000,000 per occurrence.

### Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared and approved by CITY. CONSULTANT shall guarantee payment of any losses and related investigations, claim administration and defense expenses within the deductible or self-insured retention.

### Other Insurance Provisions

The **general liability** and **automobile liability** policies are to contain, or be endorsed to contain, the following provisions:

1. CITY, its officials, employees, agents and volunteers are to be covered as additional insureds with respect to liability arising out of activities performed by or on behalf of CONSULTANT; products and completed operations of CONSULTANT; premises owned, occupied or used by CONSULTANT; or automobiles owned, leased, hired or borrowed by CONSULTANT.

The coverage shall contain no special limitations on the scope of protection afforded to CITY, its officers, employees, agents or volunteers, except as follows: Coverage shall not extend to any indemnity coverage for the active negligence of the additional insured in any case where an agreement to indemnify the additional insured would be invalid under Subdivision (b) of section 2782 of the Civil Code.

2. For any claims related to this project, CONSULTANT's insurance shall be primary. Any insurance or self-insurance maintained by CITY, its officers, officials, employees, agents and volunteers shall be excess of CONSULTANT's insurance and shall not contribute with it.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to CITY, its officers, officials, employees, agents or volunteers.
4. CONSULTANT's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, cancelled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to CITY.

#### Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to CITY.

#### Verification of Coverage

CONSULTANT shall furnish to CITY original Certificate(s) of Insurance and endorsements effecting the coverage required. The Certificate(s) shall be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements are to be received and approved by CITY prior to commencement of work.

PROPOSAL PRICING

ATTACHMENT B

Consultant Base Task	IEC		WEST Yost		Schaaf & Wheeler	
	Hours	Cost	Hours	Cost	Hours	Cost
1. Data Collection/Basic Assumptions/Criteria Development	182	\$ 30,050.00	279	\$ 44,073.00	328	\$ 48,030.00
2. Water System Modeling	262	\$ 31,760.00	208	\$ 32,774.00	268	\$ 63,000.00
3. Water Supply Evaluation	328	\$ 59,833.00	324	\$ 51,368.00	32	\$ 57,640.00
4. Prepare Base Project Water Utility Master Plan	355	\$ 64,414.00	290	\$ 47,802.00	260	\$ 56,660.00
11. Project Management	64	\$ 12,500.00	128	\$ 23,904.00	148	\$ 21,700.00
<b>Base Total</b>	<b>1191</b>	<b>\$198,557.00</b>	<b>1229</b>	<b>\$ 199,921.00</b>	<b>1036</b>	<b>\$ 247,030.00</b>
<b>Alternate Tasks</b>						
5. Utility Rate Study	216	\$ 28,920.00	223	\$ 34,176.00	8	\$ 18,700.00
6. Water Conservation Study	16	\$ 23,736.00	80	\$ 15,936.00	12	\$ 19,300.00
7. Analysis of Serving CalWater Clients	140	\$ 18,000.00	102	\$ 14,844.00	8	\$ 20,200.00
8. Evaluation of geological/geotechnical conditions	76	\$ 33,130.00	258	\$ 41,364.00	8	\$ 26,400.00
9. Evaluation of New Groundwater Supplies	16	\$ 23,087.00	166	\$ 27,868.00	24	\$ 17,300.00
10. Review of Staffing Studies	132	\$ 16,440.00	132	\$ 19,412.00	12	\$ 15,500.00
<b>Alternate Total</b>	<b>596</b>	<b>\$143,313.00</b>	<b>961</b>	<b>\$ 153,600.00</b>	<b>72</b>	<b>\$ 117,400.00</b>
<b>Total</b>	<b>1787</b>	<b>\$341,870.00</b>	<b>2190</b>	<b>\$ 353,521.00</b>	<b>1108</b>	<b>\$ 364,430.00</b>

PROPOSAL PRICING

ATTACHMENT B

Consultant	RMC		Winzler & Kelly		RBF	
Base Task	Hours	Cost	Hours	Cost	Hours	Cost
1. Data Collection/Basic Assumptions/Criteria Development	168	\$ 32,322.00	86	\$ 13,772.00		\$ 35,600.00
2. Water System Modeling	108	\$ 19,945.00	186	\$ 30,112.00		\$ 52,040.00
3. Water Supply Evaluation	418	\$ 82,002.00	130	\$ 21,220.00		\$ 15,120.00
4. Prepare Base Project Water Utility Master Plan	224	\$ 44,295.00	328	\$ 51,376.00		\$ 48,770.00
11. Project Management	112	\$ 21,294.00	88	\$ 17,256.00		\$ 30,580.00
<b>Base Total</b>	<b>1030</b>	<b>\$ 199,858.00</b>	<b>818</b>	<b>\$ 133,736.00</b>	<b>1255</b>	<b>\$187,110.00</b>
<b>Alternate Tasks</b>						
5. Utility Rate Study	24	\$ 76,506.00	10	\$ 12,780.00		\$ 10,040.00
6. Water Conservation Study	64	\$ 14,276.00	94	\$ 14,888.00		\$ 10,040.00
7. Analysis of Serving CalWater Clients	32	\$ 6,695.00	46	\$ 13,248.00		\$ 5,840.00
8. Evaluation of geological/geotechnical conditions	12	\$ 24,637.00	418	\$ 87,162.00		\$ 8,920.00
9. Evaluation of New Groundwater Supplies	72	\$ 14,585.00	214	\$ 32,928.00		\$ 12,920.00
10. Review of Staffing Studies	40	\$ 8,158.00	78	\$ 14,576.00		\$ 5,840.00
<b>Alternate Total</b>	<b>244</b>	<b>\$ 144,857.00</b>	<b>860</b>	<b>\$ 175,582.00</b>	<b>280</b>	<b>\$ 58,600.00</b>
<b>Total</b>	<b>1274</b>	<b>\$ 344,715.00</b>	<b>1678</b>	<b>\$ 309,318.00</b>	<b>1535</b>	<b>\$245,710.00</b>