

AGREEMENT FOR THE PROVISION OF PROFESSIONAL ENGINEERING SERVICES

This agreement for professional water system assessment services (“Agreement”) is made and entered in this 16th day of July, 2013 (“Effective Date”), by and between the City of Redlands, a municipal corporation (“City”) and GHD Inc. (“Consultant”). City and Consultant are sometimes individually referred to herein as a “Party” and, together, as the “Parties.” In consideration of the mutual promises contained herein, City and Consultant agree as follows:

ARTICLE 1 – ENGAGEMENT OF CONSULTANT

- 1.1 City hereby engages Consultant to provide water system assessment services for City (the “Services”).
- 1.2 The Services shall be performed by Consultant in a professional manner, and Consultant represents that it has the skill and the professional expertise necessary to provide the Services to City at a level of competency presently maintained by other practicing professional consultants in the industry providing like and similar types of Services.

ARTICLE 2 – SERVICES OF CONSULTANT

- 2.1 The Services that Consultant shall perform are more particularly described in Exhibit “A,” entitled “Scope of Services,” which is attached hereto and incorporated herein by reference.
- 2.2 Consultant shall comply with applicable federal, state and local laws and regulations in the performance of the Services.

ARTICLE 3 – RESPONSIBILITIES OF CITY

- 3.1 City shall make available to Consultant information in its possession that may assist Consultant in performing the Services.
- 3.2 City designates Chris Diggs, Deputy Municipal Utilities and Engineering Director, as City’s representative with respect to performance of the Services, and such person shall have the authority to transmit instructions, receive information, interpret and define City’s policies and decisions with respect to performance of the Services.

ARTICLE 4 – PERFORMANCE OF SERVICES

- 4.1 Consultant shall complete the Services in a prompt and diligent manner within one hundred fifty days (150) calendar days from and after the date of City’s issuance to Consultant of a written Notice to Proceed.

ARTICLE 5 – PAYMENTS TO CONSULTANT

- 5.1 The total compensation for Consultant’s performance of the Services shall not exceed the amount of one hundred eighty eight thousand nine hundred eighty dollars (\$188,980.00),

based upon the rates shown in Exhibit “B,” entitled “Rate Schedule” which is attached hereto and incorporated herein by this reference.

- 5.2 Consultant shall submit monthly invoices to City describing the Services performed during the preceding month. Consultant’s invoices shall include a brief description of the Services performed, the dates the Services were performed, and the number of hours spent and by whom. City shall pay Consultant no later than thirty (30) days after receipt and approval by City of Consultant’s invoice.
- 5.3 All notices shall be given in writing by personal delivery or by mail. Notices sent by mail should be addressed as follows:

City
Chris Diggs
Deputy MUED Director
City of Redlands
35 Cajon Street, Suite 15A
Redlands, CA 92373

Consultant
Paul Hermann
Office Manager
GHD Inc.
16451 Scientific Way
Irvine, CA 92618

When so addressed, such notices shall be deemed given upon deposit in the United States Mail. Changes may be made in the names and addresses of the person to whom notices and payments are to be given by giving notice pursuant to this section 5.3.

ARTICLE 6 – INSURANCE AND INDEMNIFICATION

- 6.1 Insurance required by this Agreement shall be maintained by Consultant for the duration of its performance of the Services. Consultant shall not perform any Services unless and until the required insurance listed below is obtained by Consultant. Consultant shall provide City with certificates of insurance and endorsements evidencing such insurance prior to commencement of the Services. Consultant shall not permit cancellation or modification of any policy except upon thirty (30) days prior written notice to City.
- 6.2 Consultant shall secure and maintain Workers’ Compensation and Employer’s Liability insurance in accordance with the laws of the State of California, with an insurance carrier acceptable to City as described in Exhibit “C,” entitled “Workers’ Compensation Insurance Certification,” which is attached hereto and incorporated herein by this reference.
- 6.3 Consultant shall secure and maintain comprehensive general liability insurance with carriers acceptable to City. Minimum coverage of One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate for public liability, property damage and personal injury is required. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.
- 6.4 Consultant shall secure and maintain professional liability insurance throughout the term of this Agreement in the amount of One Million Dollars (\$1,000,000) per claim made.

- 6.5 Consultant shall have business auto liability coverage, with minimum limits of One Million Dollars (\$1,000,000) per occurrence, combined single limit bodily injury liability and property damage liability. This coverage shall include all Consultant owned vehicles used in connection with Consultant's provision of the Services, hired and non-owned vehicles, and employee non-ownership vehicles. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self insurance maintained by City.
- 6.6 Consultant shall defend, indemnify and hold harmless City and its elected officials, employees and agents from and against any and all claims, losses or liability, including attorneys' fees, arising from injury or death to persons or damage to property occasioned by and negligent act, omission or failure to act by Consultant, its officers, employees and agents in performing the Services.

ARTICLE 7 – CONFLICTS OF INTEREST

- 7.1 Consultant covenants and represents that it does not have any investment or interest in any real property that may be the subject of this Agreement or any other source of income, interest in real property or investment that would be affected in any manner or degree by the performance of Consultant's Services. Consultant further covenants and represents that in the performance of its duties hereunder, no person having any such interest shall perform any Services under this Agreement.
- 7.2 Consultant agrees it is not a designated employee within the meaning of the Political Reform Act because Consultant:
- A. Does not make or participate in:
- (i) the making or any City governmental decisions regarding approval of a rate, rule or regulation, or the adoption or enforcement of laws;
 - (ii) the issuance, denial, suspension or revocation of City permits, licenses, applications, certifications, approvals, orders or similar authorization or entitlements;
 - (iii) authoring City to enter into, modify or renew a contract;
 - (iv) granting City approval to a contract that requires City approval and to which City is a party, or to the specifications for such a contract;
 - (v) granting City approval to a plan, design, report, study or similar item;
 - (vi) adopting, or granting City approval of policies, standards or guidelines for City or for any subdivision thereof.
- B. Does not serve in a staff capacity with City and in that capacity, participate in making a governmental decision or otherwise perform the same or substantially the same duties for City that would otherwise be performed by an individual holding a position specified in City's Conflict of interest Code under Government Code section 87302.

- 7.3 In the event City officially determines that Consultant must disclose its financial interests, Consultant shall complete and file a Fair Political Practices Commission Form 700, State of Economic Interests with the City Clerks' office pursuant to the written instructions provided by the City Clerk.

ARTICLE 8 – GENERAL CONSIDERATIONS

- 8.1 In the event any action is commenced to enforce or interpret any of the terms or conditions of this Agreement the prevailing Party shall, in addition to any costs and other relief, be entitled to the recovery of its reasonable attorneys' fees, including fees for the use of in-house counsel by a Party.
- 8.2 Consultant shall not assign any of the Services, except with the prior written approval of City and in strict compliance with the terms, and conditions of this Agreement.
- 8.3 Project related documents, records, drawings, designs, cost estimates, electronic data files, databases and any other documents developed by Consultant in connection with its performance of the Services, and any copyright interest in such documents, shall become the property of City and shall be delivered to City upon completion of the Services, or upon the request of City. Any reuse of such documents, and any use of incomplete documents, shall be at City's sole risk.
- 8.4 Consultant is for all purposes under this Agreement an independent contractor and shall perform the Services as an independent contractor. Neither City nor of its agents shall have control over the conduct of Consultant or Consultant's employees, except as herein set forth. Consultant shall supply all necessary tools and instrumentalities required to perform the Services. Assigned personnel employed by Consultant are for its account only, and in no event shall Consultant or personnel retained by it be deemed to have been employed by City or engaged by City for the account of, or on behalf of City. Consultant shall have no authority, express by City for the account of, or on behalf of City. Consultant shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent, nor shall Consultant have any authority, express or implied, to bind City to any obligation.
- 8.5 Unless earlier terminated as provided for below, this Agreement shall terminate upon completion and acceptance of the Services by City; provided, however this Agreement may be terminated by City, in its sole discretion, by providing thirty (30) days prior written notice to Consultant (delivered by certified mail, return receipt requested) of City's intent to terminate. If this Agreement is terminated by City, an adjustment to Consultant's compensation shall be made, but (1) no amount shall be allowed for anticipated profit or unperformed Services, and (2) any payment due Consultant at the time of termination may be adjusted to the extent of any additional costs to City occasioned by any default by Consultant. Upon receipt of a termination notice, Consultant shall immediately discontinue its provision of the Services and, within five (5) days of the date of the termination notice, deliver or otherwise make available to City, copies (in both hard copy and electronic form, where applicable) of project related data, design calculations, drawings, specifications, reports, estimates, summaries and such

other information and materials as may have been accumulated by Consultant in performing the Services. Consultant shall be compensated on a pro-rata basis for Services completed up to the date of termination.

- 8.6 Consultant shall maintain books, ledgers, invoices, accounts and other records and documents evidencing costs and expenses related to the Services for a period of three (3) years, or for any longer period required by law, from the date of final payment to Consultant pursuant to this Agreement. Such books shall be available at reasonable times for examination by City at the office of Consultant.
- 8.7 This Agreement, including the Exhibits incorporated herein by reference, represents the entire agreement and understanding between the Parties as to the matters contained herein, and any prior negotiations, written proposals or verbal agreements relating to such matters are superseded by this Agreement. Except as otherwise provided for herein, an amendment to this Agreement shall be in writing, approved by City and signed by City and Consultant.
- 8.8 This Agreement shall be governed by and construed in accordance with the laws of the State of California.

IN WITNESS WHEREOF, duly authorized representative of the City and Consultant have signed in confirmation of this Agreement.

CITY OF REDLANDS

GHD Inc.

By: _____
Pete Aguilar, Mayor

By: _____
Paul Hermann, Office Manager

ATTEST:

Sam Irwin, City Clerk
+

Exhibit “A”

Scope of services:

Consultant to provide guidance to enhancing efficiency of water supply, treatment and delivery of high quality water to its customers. The City owns and operates two water treatment plants that treat water from the Santa Ana River, Mill Creek, State Water Project, and groundwater wells. The distribution system is comprised of nearly 400 miles of pipeline and booster stations, with storage capacity of 54.4 million gallons among 16 reservoirs, and includes 7 pressure zone elevations.

As part of the Services, Consultant to perform a thorough review of its existing assets and operations to maximize the Operational and Maintenance (O&M) efficiency of the City’s water supply system and to investigate opportunities to adopt green technologies that bring sustainability to the operations. Consultant will evaluate a number of scenarios, conditions and parameters to develop recommendations to optimize the system operation for efficiencies and to reduce cost. Consideration will be given to demands, supply, energy use, chemical use, staffing, water quality and institutional constraints.

As part of the Services, Consultant shall review the operations at the City with a holistic approach addressing the significant in-built capacity of the system and the flexibility opportunities available.

The energy and operations optimization opportunities include:

- Understanding how the seasonal and diurnal patterns can yield insight as to the base load and opportunities for temporary and permanent shift in operations.
- Development of a productions database that will help synchronize the City’s vision and improve the ability to optimize individual and shared goals across departments.
- Detailed written operating strategies that will drive a deeper understanding of the whole-business nature of operation and the focus of efficiency.
- Linking the operations strategy to the hydraulic model will help quantify and verify the potential of flexible operations.
- Review of tariff options and SCE programs to identify opportunities where inherent flexibility at these facilities can be effectively leveraged while still maintaining water quantity and quality goals.
- Undertake a cost drill-down approach to identify operational and energy efficiency and cost savings projects that will yield a quick return on investment.

Consultant will review the entire energy and operations landscape. Of particular interest are the following items: energy used by the groundwater extraction pumps is directly related to the magnitude of the water level drawdown in the well under pumping conditions. Therefore, selecting wells for operation which can produce the required flow but operate at less drawdown

can result in significant energy savings. The available data will be evaluated to identify the current operational pumping rate and the steady-state drawdown for each well. These two numbers will be used to calculate the specific capacity of each well. The specific capacity (units of gpm/ft.) is a measure of the production of the well (gpm) per foot of drawdown and this can be directly related to the energy efficiency of water production from each well. The use of wells with a higher specific capacity is preferred because there is more groundwater production for each foot of drawdown and pumping energy costs are less.

Consultant's analysis of the pumping options will address the unique pumping cost efficiency of each well.

Potable water is distributed to an estimated 21,500 metered connections through approximately 400 miles of pipeline comprised of seven major pressure zones and several sub-zones. Water loss and pipe failures in the City's distribution system can result in significant loss revenue and increased costs. We will use our experience with water metering systems, pressure management and methodologies for establishing statistically correct water balances, along with improvements in efficiency of processes to reduce the volume of water loss, frequency of pipe bursts and optimize energy required to distribute water within your service area.

City has already participated in some of the SCE energy audit programs. As a part of this project, Consultant will meet with the SCE Account Representative and perform a comprehensive review of current tariff rates with SCE, e.g. identify demand response potential, permanent load shifting, capacity bidding, On-Bill 0% financing programs, Energy Savings Bid (ESB), Energy Efficiency Business Incentives (EEBI), Energy Efficiency Business Rebates, feed-in tariff options, interconnection agreement modifications, etc. and other programs currently under planning and deployment. The aim of this exercise will be to identify and recommend the best-fit program(s) for the City and to build a strong mutually beneficial relationship with SCE. Certain capital improvement projects recommended during this study may also qualify for incentives and we will identify them.

Other energy saving measures will be identified as a result of meetings with system operators and site visits Consultant energy experts.

As a result of this study, Consultant will deliver a searchable database with production and source water options. This will be the first step towards a system that will identify which water sources are the least costly to access, treat and distribute. Additionally, this information will be useful in prioritization of assets in an asset management system for the City.

Consultant will identify and evaluate opportunities that show promise, including opportunities to incorporate the latest green technologies to improve efficiency, reduce carbon footprint and waste disposal, and make recommendations for implementable opportunities.

Utilizing the appropriate number of properly certified and qualified operator staff is critical to fulfilling the mission of providing the safe drinking water in a cost-effective manner. Ensuring that personnel are deployed as effectively as possible is key to efficient operation and lowest possible water rates. Consultant will analyze the City's operating staff levels, staff assignments

and shift assignments and investigate the opportunity for sharing staff between water and wastewater staff during peak demand or emergency operations.

At the completion of this project, Consultant will ensure City has a sound understanding of its current O&M processes and practices and a robust, efficient, and prioritized improvement plan for implementation. Improvements will be calculated so that cost/benefit analyzes can be presented to show the return on investment from implementing recommendations with costs associated. Consultant will prepare recommendations that consider green technology, promote sustainability, and present a more sustainable long-term plan for cost-effective operations. With the implementation of the improvement plan, the City wishes to not only enhance the efficiency of the current O&M practices but also realize cost savings while promoting enhanced sustainability practices.

TECHNICAL APPROACH

Consultant will analyze the source water quality, treatment processes, chemical and energy usage, capacity, reliability, redundancy and, procurement practices, to look for opportunities to streamline operations and maintenance, increase efficiencies and reduce costs within the City's water treatment and distribution system while continuing to meet regulatory requirements.

Establish Strategic Intent

Consultant will initiate the project by establishing and documenting the Strategic Intent for the City, and must understand what the City's direction is with regards to O&M, sustainability, asset management, and other areas. Key performance indicators will be identified and established to track the performance, and tactical recommendations will be developed to support the City's overall vision

Key tasks include:

- Run visioning workshop (mission, goals, and objectives)
- Identify levels of service / key performance indicators
- Interview staff and review reference material
- Score evaluation elements
- Identify areas of strengths and for improvement

Benchmark O&M Processes and Practices

Operations and Maintenance

With the strategic direction established, Consultant will perform a thorough assessment of the City's current water system O&M practices. Consultant's assessment process will involve preliminary data review, interviews, on-site verification, and validation. The assessment process will be based on the evaluation of the City's O&M processes and practices and their supporting information systems. Elements influencing current O&M processes, supporting technology, and staff practices will be evaluated and scored. Productivity improvement opportunities (greatest gap between best practice and current practice) will be identified. Consultant's O&M review will be based on the eight strategies listed below. O&M functions are those that are directly related to providing services to customers. As such, these O&M best practices can be linked to the Effective Utility Management (EUM) attributes as shown in the table in **Figure 3**.

1. Operations and Maintenance United (OMU) Enables Effective Achievement of Common Goals

Under this strategy, less distinction exists between various jobs (such as equipment operators and laborers or operations and maintenance personnel) and tasks (such as site preparation and job execution or facility operation and asset maintenance), job planning is maximized, and staff utilization is optimized so that everyone has a full workload throughout the day. Logistics are optimized to maximize productivity. This best practice is linked to the Operational Optimization EUM attribute.

2. Program-Driven Maintenance (PDM) Maximizes Productivity and Reduces Costs

PDM maximizes productivity and can reduce the cost of maintenance by up to 40%. It requires optimization of resources to accomplish routine/schedulable activities. It involves planning, prioritizing, and performing maintenance and rehabilitation in advance of equipment and/ or infrastructure failure. This best practice is linked to the Infrastructure Stability EUM attribute.

3. Base-Load and Off-Shift Staffing Optimizes Labor Utilization

The best service providers in the U.S. employ a strategy of staffing for the “base” workload and importing resources for seasonal peaks and/or emergency conditions. This strategy assures optimum utilization of labor (hours worked), equipment, and materials. The same strategy is applicable to off-shift staffing and overtime. This best practice is linked to the Operational Optimization EUM attribute.

4. Workforce Flexibility (WFF) Maximizes Productivity

WFF can enhance productivity by up to 20% by cross-training and developing a labor pool of multi-skilled staff. A major factor in lost productivity is people waiting for others with the right skills to perform associated tasks. WFF minimizes this waiting and increases the value of a worker’s time on the job; this practice leads to improved employee morale and job satisfaction. This best practice is linked to the Employee & Leadership Development, Operational Optimization, and Operational Resiliency EUM attributes.

5. Technology Minimizes Costs

The best service providers are leading-edge users of technology as a strategy to maximize productivity and minimize costs. They employ the right quantity and type of state-of-the-art materials and equipment for enhanced productivity and reduced life-cycle cost. This best practice is linked to the Water Resource Adequacy EUM attribute as a significant tool for achieving this attribute.

6. Strategic Organization Engagement Produces Flexible Organization that Empowers and Motivates Employees

Significant improvements in organizational performance are being accomplished through innovative approaches in the ways people work together. Removing organizational barriers, developing teams, providing training for supervision and management, and adopting improvement practices such as performance management allow organizations to

be driven by the energy of engaged employees. This best practice is linked to the Employee & Leadership Development and Operational Resiliency EUM attributes.

7. Customer Advocacy Manages Performance for Customer Satisfaction

Every customer contact is an opportunity to collect data on customer perception and confidence. By collecting the data, we turn customers into advocates and customer satisfaction improves. This best practice is linked to the Customer Satisfaction, Community Stability, Water Resource Adequacy, and Stakeholder Understanding & Support EUM attributes.

8. Asset Management – Managing Your Infrastructure Investment

Utilities need to collect work and cost history against assets for improved asset management. They need to maximize asset performance, reliability, and availability and to minimize cost of asset preservation. Assets should be replaced based on sound economic assessments, and we need to involve all parties in creating new assets. This best practice is linked to the Financial Viability and Infrastructure Stability EUM attributes.

Perform Energy Benchmarking

Energy Benchmarking will be the first step of the Consultant’s energy evaluation process. The Energy Benchmarking tool for Water and Wastewater Treatment Facilities will be developed by Consultant, and will compare the energy use with that of other, similar facilities across the country.

The tool will output a ‘benchmarking score’ between 0 and 100.

Benchmarking Score	
>75	Great job
65 - 75	Energy Saving Opportunities exist, may require significant investment
<65	Energy Savings Opportunities exist! Many at no or low costs with quick payback periods

Understanding Energy Use

Consultant will gather the information required to develop a conceptual model of the energy flows through the systems, which may indicate some early energy saving opportunities. Initially Consultant, working jointly with City staff, will identify the energy information and data that will be required for the assessment, and will involve development of the data collection checklist.

This review of energy information collected will inform Consultant for the site assessments at the treatment plant, water storage reservoirs, groundwater wells and pumping station sites.

With the benchmark established, Consultant will perform a detailed analysis through site visits, interviews, and desk top analysis to identify areas where the City can save energy.

Key Energy Efficiency Opportunities Evaluation tasks include:

- Data collection
- Facilities walk-through and staff interviews
- Identify and evaluate potential energy saving alternatives with City staff
- Develop energy savings plan with respect to short, medium, and long-term timeframe
- Present findings

Following a walkthrough at each of the sites, Consultant will prepare a summary document, reviewing the data collected and also indicating any initial opportunities that have been identified that will be reviewed with City staff at a project status meeting.

Identify High Risk Asset and Develop Long-Range Asset Replacement Needs

Risk, composed of Probability of Failure (PoF) and Consequence of Failure (CoF), not only provides an insight on the timing to failure, but also on the impact of failure. In asset management, risk is used to help prioritize assets. A risk assessment will identify high risk assets and low risk assets. High risk assets must be managed to prevent premature failure. The failure cost, with respect to economic, environmental, and social effects, for a high risk asset will be too high for the City to chance. Appropriate O&M strategies will be developed based on risk. High risk assets will receive a more proactive maintenance schedule to ensure non-failure. The maintenance strategy for a low risk asset may include *run-to-failure*, as that option may yield the most efficient life-cycle cost decision.

The Probability of Failure provides an indication of the timing of failure. During Consultants risk assessment process, Consultant will identify and estimate the replacement timing for each asset. Consultant will consolidate the probability of failure information to provide the City with its projected long-range replacement needs. The planning horizon will be set by the City. For each year, Consultant will identify assets projected to be need replacement. Understanding the timing to an asset failure provides the City with an opportunity to apply the most efficient treatment option. The City will be able to optimize the O&M strategies to maximize the asset's life.

Key tasks include:

- Perform risk assessment (probability of failure and consequence of failure)
- Develop long-range replacement needs
- Identify risk-based O&M management strategies

Identify Alternative Optimization Opportunities

There are numerous alternative optimization opportunities for water systems. Water loss reduction from potable water distribution systems can recover lost revenue and pressure management can reduce costs.

Water Supply and Distribution System

Apparent losses can result from metering measurement errors (e.g. inaccuracies), data acquisition and transmission errors, estimating errors and estimated of unauthorized consumption.

Consultant shall address water loss reduction and water supply system efficiency improvements. Areas to be evaluated include are:

- Water loss strategies and management (water balance)
- Water metering and monitoring strategies
- Active leak detection strategies
- Pressure management strategies
- System maintenance and renewal strategies

This comprehensive approach includes:

- Data pathway analysis
- Institutional (e.g. organizational) process analysis and a risk assessment
- In-depth understandings of water audit requirements
- Dynamics that various measures and processes have on the determination of the volumes of apparent losses, real losses and non-revenue

Wells

The energy used by the groundwater extraction pumps is directly related to the magnitude of the water level drawdown in the well under pumping conditions. Therefore, selecting wells for operation which can produce the required flow but operate at less drawdown can result in significant energy savings. Consultant's analysis of the pumping options will address the unique pumping cost efficiency of each well, and based on this Consultant will create a hierarchy for wells to be operated.

PROJECT COMMENCEMENT

Task 0: Project Management

Consultant shall use robust project management tools and practices. Consultant shall be committed to industry-recognized management standards, as our ISO certification attests. Consultant will deliver the results the City desires in line with scope, budget and schedule expectations.

Consultant will lead a project kick-off meeting that will:

- Provide a project overview
- Identify project objectives
- Outline work tasks and processes
- Review the proposed project schedule
- Review the information request developed by Consultant

The kick-off meeting will include a brainstorming session with the team to refine and finalize our proposed assessment process. All key project team members will participate. The kick-off meeting will provide data necessary to finalize the project approach and schedule, including such details as monthly progress reporting and review processes.

Deliverables

- Monthly project progress reports
- Review workshops following the reports
- Draft and Final Report

Task 1: Benchmark Current Performance

As described in the above, Consultant will benchmark the City's O&M and energy management processes and practices. This task shall provide the foundation for developing a useful operational and energy cost analysis of the City's water production facilities. The work effort includes collecting data from production facilities and from the City's operational staff.

A Benchmark assessment findings presentation/ workshop will be held to present:

- Productions Facility information database
- Operations organizational overview memo

Task 2: Labor Productivity and Processes Improvements

An evaluation of major labor practices and processes will be conducted and recommendations to improve the labor productivity and processes will be made. Where appropriate, performance indicators will be developed to measure and to track the improvements. Technical Memorandum will be drafted that will be comprised of:

- Workflow mapping
- Resource loading verification
- Recommendations

Task 3: Inventory and Asset Management

The City's asset management and inventory processes and systems will be reviewed. The review process will be based on the process' effectiveness and efficiency, as well as the functionality and usability of the supporting technology.

Asset management efforts will extend to risk assessment. During this process, the City's high risk assets will be identified and a risk-based O&M strategy will be recommended considering efficiency and criticality.

Task 4: Chemical Usage Recommendations

Based on the findings of O&M, Asset Management, Energy Efficiency, Desktop Optimization, chemical usage improvement recommendations will be made. The recommendation will be based on:

- Technological optimization in chemical usage;
- Alternative chemicals and purchasing procedures or alternative methods;
- Exploration of alternative and sustainable green energy sources to preserve the environment.

Task 5: Energy Optimization Recommendations

Based on the findings of the energy benchmarking, data review, staff interviews and facility site visits a Technical Memorandum will be developed that will include:

- Development of a conceptual model of the energy flows through the systems under assessment;
- Energy saving opportunities identified and evaluated;
- Recommendations.

Task 6: O&M Efficiency Recommendations

Based on the findings of O&M, Asset Management, Energy Efficiency, Alternative Optimization, and asset management risk assessment tasks, O&M recommendations will be made. The recommendations will be based on:

- Increase of productivity and efficiency
- Risk reduction
- Cost reduction

Recommendations will be supported by quantification of potential impact on expenses, and will outline any barriers to implementation. Where the recommendation requires capital investment, Consultant will assist the City in development of a business case incorporating concepts of benefit/cost ratio, projected payback period, and projected funding outlets.

Task 7: New/State of the Art Technology Recommendations

New/state of the art technologies that would enhance productivity, reduce costs and/or increase sustainability will be evaluated and recommendations provided. The recommendations will be based on:

- Vitality to the future operations of the systems
- Enhancement of existing operations (e.g., reducing power consumption, staff effort, or increase quality of treatment)

Task 8: Draft Report

Recommendations generated from:

- O&M benchmark assessment
- Energy Efficiency benchmark assessment
- Labor productivity assessment
- Alternative Optimization Opportunities
- Risk Assessment

Findings and recommendations will be consolidated and documented. Recommendations will be categorized and prioritized based on a short (1 to 5 years), medium (6 to 14 years), and long-term (over 15 years) timeframe.

A Draft Recommendations Report will be produced and submitted to the City for review and comments. There will be two comment periods. The first comment period shall be no less than 30 calendar days; the second 20 days.

Deliverables

- Draft Recommendation Report

Task 9: Final Report

Consultant will review and incorporate the City's comments to the Draft Recommendations Report. Once the comments are addressed, Consultant will finalize the report and present the final findings to the City. The date and location of the final presentation will be as requested by the City.

Deliverables

- Final Recommendations Report

Task 10: Implementation Assistance

Upon request, Consultant will assist the City in the implementation of the recommendations. A separate scope of services, fee schedule, and project schedule will be developed for each implementation assistance request.

DELIVERABLE QA/QC

All deliverables will be reviewed by a Consultant QA/QC team member. This person shall understand the expectations for this project and will serve as our sounding board to review issues that may occur during project execution. QA/QC is an ongoing process (30, 50, 90 percent complete) to ensure that the project is heading in the right direction from early stages through completion.

Exhibit "B"

Rate Schedule

Position	Fee (\$)
Principal in Charge/QA/QC Officer	\$235-240
Senior Project Manager	195-230
Project Manager	175-190
Project Engineer	160-170
Engineer	140-155
Staff Engineer	110-140
CAD Designer	110-140
Construction Manager	165-185
Resident Engineer	110-135
Drafter	70-90
Project Assistance	65-75
Senior Inspector	85-90
Inspector	70-80

Reimbursable

Mileage at \$0.555 per mile

Direct expenses at cost plus 10%

Exhibit "C"

**WORKERS' COMPENSATION INSURANCE CERTIFICATION TO PERFORM
WATER SYSTEM ASSESSMENT SERVICES**

Every employer except the State, shall secure the payment of compensation in one or more of the following ways:

- (a) By being insured against liability to pay compensation in one or more insurer duly authorized to write compensation insurance in this State.
- (b) By securing from the Director of Industrial Relations, a certificate of consent to self-insure, either as an individual employer or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.

I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Agreement. (Labor Code §1861).

GHD Inc.

By: _____

Paul Hermann, Office Manager

Date: