

CITY COUNCIL

For City Clerk's Use:

☐

APPROVED

☐

DENIED

Reso No. _____

File No. _____

Ord No. _____

Agenda Item No.: 21

Date: June 27, 2012

TO: Honorable Mayor and Members of the City Council

FROM: Christopher W. McKinney, Director of Utilities

SUBJECT: Potable Reuse Program Manager

RECOMMENDATION:

The Utilities Department requests that the City Council:

1. Adopt Resolution No. 2012-105 authorizing the Mayor and City Clerk to execute an as-needed Consulting Agreement with Black & Veatch Corporation for Indirect Potable Reuse (IPR) Program Management services.
2. Adopt Resolution No. 2012-106 authorizing the Director of Utilities to execute Task Order No. 1 for IPR Program Management in the amount of \$1,381,410.
3. Approve a budget adjustment in the amount of \$1,143,469.03 from CIP 801503 (HARRF Storage System) to CIP 807002 (Indirect Potable Reuse Study).

FISCAL ANALYSIS:

Wastewater CIP 807002 (IPR Study) has available funds in the amount of \$342,000. The remaining funds are available from completed CIP 801503 (HARRF Storage System) in the amount of \$1,143,469.03. The requested budget adjustment will transfer the remaining funds in CIP 801503 to CIP 807002. The completed CIP 801503 will be closed.

PREVIOUS ACTION:

At the regular City Council meeting on February 16, 2011, the Council approved the conceptual plan developed by the Utilities Department to address current and future wastewater capacity concerns and to ensure water reliability. At the regular City Council meeting on December 7, 2011, the Council authorized the Utilities Department to issue a Request for Proposal for an IPR Program Manager to guide detailed planning and implementation of the conceptual plan.

BACKGROUND:

As reported at the Council meeting on December 7, 2011, selection of a program manager for the Indirect/Direct Potable Reuse (IPR/DPR) Program Implementation Study is the next step to address wastewater capacity concerns at the Hale Avenue Resource Recovery Facility (HARRF) and to help

ensure water reliability into the future for Escondido. National Pollutant Discharge Elimination System (NPDES) permits require submission of a report and a plan of action to the Regional Water Quality Control Board (RWQCB) when the average flows reach 75% of capacity. The HARRF is nearing this threshold. Plans to design and build facilities which will guarantee wastewater treatment capacity for future growth must begin soon. Additionally, water reliability is a critical concern for the City of Escondido and all of Southern California. Imported water rates continue to rise and availability is subject to environmental, political, and financial influences beyond the City's control.

The capacity of the existing land outfall from the HARRF is the most critical limiting element to the City's wastewater treatment capacity. As wastewater flows grow in the future, conventional disposal to the ocean would require construction of a new outfall with a probable cost greater than \$300M and significant environmental hurdles. A project of this magnitude and uncertainty is not in the best interests of the City if other, less-costly and more certain alternatives can be identified.

The Council-approved conceptual plan includes an alternative to expand existing wastewater water recycling efforts by adding large-volume users (primarily agricultural users) to the non-potable recycled water system. An easterly extension of recycled water distribution system is presently in design and is a first step toward adding new users. Also, Utilities staff are engaged in efforts with other water agencies to provide input to County and State regulators in an attempt to guide further development of regulations for return of advanced treated wastewater to the potable water system (e.g. potable reuse). Potable reuse, either direct or indirect, could be a viable option to maximize water recycling in Escondido. Even prior to implementation of potable reuse, recycling water for non-potable purposes such as agriculture will reduce our demand for expensive imported water and relieves capacity concerns on the land outfall.

The Program Manager will bring specific expertise above and beyond existing staff to identify incremental projects required to achieve both the near term and long term goals of the Department's conceptual plan. The Program Manager will help identify potential funding and grant opportunities, assist with monitoring evolving regulatory requirements, evaluate evolving technologies, generate project alternatives, and evaluate those alternatives for a system-wide (water and wastewater) approach. The Program Manager will also evaluate siting and space requirements for future required facilities.

The Utilities Department issued a Request for Proposals in December 2011 and received proposals in February 2012 from five (5) consulting teams. A selection panel of nine (9) City staff members evaluated the proposals and selected three (3) for interviews in April 2012. The selection panel unanimously selected the team lead by Black & Veatch Corporation which also includes Brown and Caldwell. The Black & Veatch/Brown and Caldwell team is extremely well qualified for this project, having recent experience providing similar services for the City of San Diego.

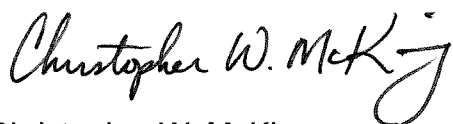
The Scope of Work for Task Order No. 1 has been developed and the cost negotiated. Completion of this initial task should take 12 to 14 months at a cost of \$1,381,410.

A major element of the first task is a programmatic planning study that develops near-term and long-term reuse alternatives and analyzes their feasibility, costs, and benefits. This task will require the transfer of a great deal of historical operating data from our wastewater, recycled water, and water systems to the consultant. The consultant will use this background data to develop flow projections for wastewater and, in turn, the seasonally variable projections for available recycled water distribution. Additionally a wastewater quality and mass balance model will be developed to assess impacts of various alternatives for reuse and water quality impacts at the HARRF.

Another major element of the first task is a cost of service study for the existing recycled water system. The consultant will estimate the various costs of operation for treatment through the HARRF. Following an estimated cost breakdown for the production of recycled water (water treated beyond a secondary level), the consultant will generate up to three alternative rate structures for recycled water. This will include a survey of up to eight other agencies and their rate structures.

Other elements include: reuse alternatives to serve agriculture which optimize the water quality and the cost to serve; disposal considerations to take into account permitting regulations, outfall impacts, live stream discharge, peak flow management, and brine capacity; development and evaluation of up to six alternatives for reuse of both non-potable and potable; and financial evaluation of each option.

Respectfully submitted,

A handwritten signature in black ink that reads "Christopher W. McKinney". The signature is written in a cursive, flowing style.

Christopher W. McKinney
Director of Utilities



CITY OF ESCONDIDO
BUDGET ADJUSTMENT REQUEST

Date of Request: June 13, 2012
Department: Utilities
Division: Water
Project/Budget Manager: Craig Whittemore 4038
Name Extension
Council Date (if applicable): June 27th, 2012
(attach copy of staff report)

For Finance Use Only	
Log #	
Fiscal Year	
	Budget Balances
	General Fund Accts
	Revenue
	Interfund Transfers
	Fund Balance

Project/Account Description	Account Number	Amount of Increase	Amount of Decrease
HARRF Storage System	557-801503		1,143,469.03
Indirect Potable Reuse Study	557-807002	1,143,469.03	

Explanation of Request:

The Utilities department requests approval to close completed project 801503 HARRF Storage System and to transfer the remaining funds to 807002 Indirect Potable Reuse Study. Said study being a system wide Planning Study to optimize the distribution and use of Recycled Water for non-potable reuse, indirect potable reuse and direct potable reuse.

APPROVALS

Department Head

Finance

Date

Date

City Manager

City Clerk

Date

Date

Distribution (after approval):

Original: Finance

RESOLUTION NO. 2012-105

A RESOLUTION OF THE CITY COUNCIL OF
THE CITY OF ESCONDIDO, CALIFORNIA,
AUTHORIZING THE MAYOR AND CITY
CLERK TO EXECUTE, ON BEHALF OF THE
CITY, A CONSULTING AGREEMENT WITH
BLACK & VEATCH CORPORATION FOR
THE INDIRECT POTABLE REUSE
PROGRAM ("IPR") MANAGEMENT

WHEREAS, the City desires to expand their existing recycled water system
and the recycled water use; and

WHEREAS, the City desires to study various alternatives to expand recycled
water use including non-potable, indirect potable, and direct potable reuse; and

WHEREAS, a selection panel has selected Black & Veatch Corporation as
being the most qualified proposer; and

WHEREAS, individual task orders will be brought before this City Council for
authorization to execute with negotiated costs as scopes of work are determined;
and

WHEREAS, the Director of Utilities recommends that the Consulting
Agreement ("Agreement") with Black & Veatch Corporation be approved; and

WHEREAS, this City Council desires at this time and deems it to be in the
best public interest, to approve said Agreement with Black & Veatch Corporation.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of
Escondido, California, as follows:

1. That the above recitations are true.

2. That the Mayor and City Clerk are hereby authorized to execute, on behalf of the City, an Agreement with Black & Veatch Corporation. A copy of the Agreement is attached as Exhibit "1" and is incorporated by this reference.



CITY OF ESCONDIDO
CONSULTING AGREEMENT

This Agreement is made this _____ day of _____, 20__.

Between: CITY OF ESCONDIDO
 a Municipal Corporation
 201 N. Broadway
 Escondido, California 92025
 Attn: Craig Whittemore
 760-839-4038
 ("CITY")

And: Black & Veatch Corporation
 300 Rancheros Drive, Suite 250
 San Marcos, CQA 92069
 Kevin Davis
 760-571-7705
 ("CONSULTANT")

Witness that whereas:

- A. It has been determined to be in the CITY's best interest to retain the professional services of a consultant to assist the City in decisions related to water sustainability, wastewater disposal, and expanding recycled water use through a cost effective and efficient program; and
- B. The CONSULTANT is considered competent to perform the necessary professional services for CITY;

NOW, THEREFORE, it is mutually agreed by and between CITY and CONSULTANT as follows:

- 1. Services. The CONSULTANT will furnish all of the services as described in "Attachment A" which is attached and incorporated by this reference.
- 2. Compensation. The CITY will pay the CONSULTANT in accordance with the conditions specified in "Attachment A," based on individual Task Orders. Any breach of this Agreement will relieve CITY from the obligation to pay CONSULTANT, if CONSULTANT has not corrected the breach after CITY provides notice and a reasonable time to correct it. If this Agreement is amended at any time, additional compensation of CONSULTANT contained in subsequent amendment(s) shall not exceed a cumulative total of twenty-five percent (25%) of the maximum payment provided for in this Section 2.

3. Scope of Compensation. The CONSULTANT will be compensated for performance of tasks specified in "Attachment A" only. No compensation will be provided for any other tasks without specific prior written consent from the CITY.
4. Duties. CONSULTANT will be responsible for the professional quality, technical accuracy, timely completion, and coordination of all reports and other services furnished by the CONSULTANT under this Agreement, except that the CONSULTANT will not be responsible for the accuracy of information supplied by the CITY.
5. Personnel. The performance of services under this Agreement by certain professionals is significant to the CITY. CONSULTANT will assign the persons listed on "Attachment B," which is attached and incorporated by this reference, to perform the Services described in Paragraph 1, and will not add or remove persons from the list without the prior written consent of the CITY. If no designation is made, then CONSULTANT may not assign services without obtaining the advance written consent of the CITY. CONSULTANT will not subcontract any tasks under this Agreement without obtaining the advance written consent of the CITY.
6. Termination. Either CONSULTANT or the CITY may terminate this Agreement with thirty (30) days advance written notice.
7. City Property. All original documents, drawings, electronic media, and other material prepared by CONSULTANT under this Agreement immediately becomes the exclusive property of the CITY, and may not be used by CONSULTANT for any other purpose without prior written consent of the CITY.
8. Insurance.
 - a. The CONSULTANT shall secure and maintain at its own cost, for all operations, the following insurance coverage, unless reduced by the City Attorney:
 - (1) General liability insurance. Occurrence basis with minimum limits of \$1,000,000 each occurrence, \$2,000,000 General Aggregate, and \$1,000,000 Products/Completed Operations Aggregate; and
 - (2) Automobile liability insurance of \$1,000,000 combined single-limit per accident for bodily injury and property damage, unless waived as provided in 8(b) below; and
 - (3) Workers' compensation and employer's liability insurance as required by the California Labor Code, as amended, or certificate of sole proprietorship; and
 - (4) Errors and Omissions professional liability insurance with minimum coverage of \$1,000,000.
 - b. It is the parties' understanding that the use of a motor vehicle is not a primary subject of this Agreement. CONSULTANT acknowledges that operating a motor vehicle is outside the scope of this Agreement and occurs only at the convenience of the CONSULTANT. A waiver of automobile liability insurance is only effective if both sets of initials appear below, otherwise such insurance is required.

Acknowledged by CONSULTANT _____

Waiver appropriate by CITY _____

- c. Each insurance policy required above must be acceptable to the City Attorney.
 - (1) Each policy must provide for written notice within no more than thirty (30) days if cancellation or termination of the policy occurs. Insurance coverage must be provided by an A.M. Best's A- rated, class V carrier or better, admitted in California, or if non-admitted, a company that is not on the Department of Insurance list of unacceptable carriers.
 - (2) All non-admitted carriers will be required to provide a service of suit endorsement in addition to the additional insured endorsement.
 - (3) Both the General Liability and the Automobile Liability policies must name the CITY specifically as an additional insured under the policy on a separate endorsement page. The CITY includes its officials, employees, and volunteers. The endorsement must be ISO Form CG 20 10 11 85 edition or its equivalent for General Liability endorsements and CA 20 01 for Automobile Liability endorsements.
 - (4) The General Liability policy must include coverage for bodily injury and property damage arising from CONSULTANT's work, including its on-going operations and products-completed operations hazard.
 - (5) The General Liability policy must be primary and noncontributory and any insurance maintained by CITY is excess.
- c. In executing this Agreement, CONSULTANT agrees to have completed insurance documents on file with the CITY within fourteen (14) days after the date of execution. Failure to comply with insurance requirements under this Agreement will be a material breach of this Agreement, resulting in immediate termination at CITY's option.
- 9. Indemnification. CONSULTANT (which in this paragraph 9 includes its agents, employees and subcontractors, if any) agrees to indemnify, defend, and hold harmless the CITY from all claims, lawsuits, damages, judgments, loss, liability, or expenses, including attorneys' fees, for any of the following:
 - a. Any claim of liability arising out of the negligence or any acts or omissions of CONSULTANT in the performance of this Agreement;
 - b. Any personal injuries, property damage or death that CONSULTANT may sustain while using CITY-controlled property or equipment, while participating in any activity sponsored by the CITY, or from any dangerous condition of property; or
 - c. Any injury or death which results or increases by any action taken to medically treat CONSULTANT.
- 10. Anti-Assignment Clause. The CONSULTANT may not assign, delegate or transfer any interest or duty under this Agreement without advance written approval of the CITY, and any attempt to do so will immediately render this entire Agreement null and void. Unless CONSULTANT assigns this entire Agreement, including all rights and duties herein, to a third party with the CITY'S written consent, CONSULTANT shall be the sole payee under this Agreement. Any and all payments made pursuant to the terms of this Agreement are otherwise not assignable.
- 11. Costs and Attorney's Fees. In the event that legal action is required to enforce the terms and conditions of this Agreement, the prevailing party will be entitled to reasonable attorneys' fees and costs.

12. Independent Contractor. CONSULTANT is an independent contractor and no agency or employment relationship, either express or implied, is created by the execution of this Agreement.
13. Merger Clause. This Agreement and its Attachments, if any, are the entire understanding of the parties, and there are no other terms or conditions, written or oral, controlling this matter. In the event of any conflict between the provisions of this Agreement and any of its Attachments, the provisions of this Agreement must prevail.
14. Anti-Waiver Clause. None of the provisions in this Agreement will be waived by CITY because of previous failure to insist upon strict performance, nor will any provision be waived by CITY because any other provision has been waived, in whole or in part.
15. Severability. The invalidity in whole or in part of any provision of this Agreement will not void or affect the validity of any other provisions of this Agreement.
16. Choice of Law. This Agreement is governed by the laws of the State of California. Venue for all actions arising from this Agreement must be exclusively in the state or federal courts located in San Diego County, California.
17. Multiple Copies of Agreement/Counterparts. Multiple copies and/or counterparts of this Agreement may be executed, including duplication by photocopy or by computerized scanning device. Each duplicate will be deemed an original with the same effect as if all the signatures were on the same instrument. However, the parties agree that the Agreement on file in the office of the Escondido City Clerk is the copy of the Agreement that shall take precedence should any differences exist among copies or counterparts of the document.
18. Provisions Cumulative. The foregoing provisions are cumulative and in addition to and not in limitation of any other rights or remedies available to the CITY.
19. Notices to Parties. Any statements, communications or notices to be provided pursuant to this Agreement must be sent to the attention of the persons indicated below. Each party agrees to promptly send notice of any changes of this information to the other party, at the address first above written.
20. Business License. The CONSULTANT is required to obtain a City of Escondido Business License prior to execution of this Agreement.
21. Compliance with Applicable Laws, Permits and Licenses. CONSULTANT shall keep itself informed of and comply with all applicable federal, state, and local laws, statutes, codes, ordinances, regulations, and rules in effect during the term of this Agreement. CONSULTANT shall obtain any and all licenses, permits, and authorizations necessary to perform services set forth in this Agreement. Neither CITY, nor any elected nor appointed boards, officers, officials, employees, or agents of CITY shall be liable, at law or in equity, as a result of any failure of CONSULTANT to comply with this section.
22. Immigration Reform and Control Act of 1986. CONSULTANT shall keep itself informed of and comply with the Immigration Reform and Control Act of 1986. CONSULTANT affirms that as an employer in the State of California, all new employees must produce proof of eligibility to work in the United States within the first three days of employment and that only employees legally eligible to work in the United States will be employed on

this public project. CONSULTANT agrees to comply with such provisions before commencing and continuously throughout the performance of this Agreement.

IN WITNESS WHEREOF, the parties below are authorized to act on behalf of their organizations, and have executed this Agreement as of the date set forth below.

CITY OF ESCONDIDO

Date: _____

Sam Abed
Mayor

Date: _____

Diane Halverson
City Clerk

(Consultant name)

Date: _____

(Consultant signature)

Title

(The above signature must be notarized)

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY
JEFFREY R. EPP, City Attorney

By: _____

THE CITY OF ESCONDIDO DOES NOT DISCRIMINATE AGAINST QUALIFIED PERSONS WITH DISABILITIES.

ATTACHMENT 'A'

Consultant shall provide "As-Needed" services to the City as it relates to IPR Program Management. IPR Program Management is a programmatic planning study which encompasses wastewater, recycled water, and water through the development of short and long term alternatives for water sustainability. Elements used in determining alternatives may include but are not limited to; economic and regulatory feasibility, benefits, costs, environmental, asset management, system wide operability and maintenance.

The contract shall be administered through individually approved Task Orders.

ATTACHMENT 'B'

Rate Schedule

BLACK & VEATCH / BROWN AND CALDWELL 2012⁽³⁾ SCHEDULE OF HOURLY FEES FOR PROFESSIONAL SERVICE	
Personnel Classification	2012 Rate ⁽¹⁾
Project Director	\$220 to \$245
Senior Technical Advisor / Senior Staff Specialist	\$200 to \$245
Project Manager / Engineering Manager	\$190 to \$220
Staff Specialist	\$170 to \$190
Senior Engineer II	\$175 to \$195
Senior Engineer I	\$150 to \$170
Project Engineer	\$125 to \$145
Staff Engineer	\$100 to \$120
Senior Architect	\$175 to \$205
Project Architect	\$115 to \$165
QA/QC Manager	\$220 to \$245
QA/QC Specialist	\$160 to \$190
Senior Cost Estimator	\$160 to \$180
Cost Estimator II	\$125 to \$155
Cost Estimator I	\$100 to \$120
CAD Manager	\$130 to \$150
Senior CAD Designer	\$105 to \$125
CAD Technician	\$80 to \$100
Administrative Support	\$85 to \$105
Clerical	\$60 to \$80

- (1).....An \$8.75 hourly surcharge will be added to the rates indicated above to cover basic computer charges, minor reproduction fees, long-distance telephone charges, car mileage for company owned vehicles, and standard postage.
- (2).....Other direct expenses, including the following, will be billed at cost:
- Travel (transportation fares/tickets, vehicle rental and fuel, lodging, meals, parking, tolls, mileage at IRS approved rates, etc.)
 - Delivery (courier, FedEx, UPS, express mail, etc.)
 - Reproduction (printing, reproduction of large sets, submittals, or oversized drawings, etc.)
- (3).....Rates shown in table above will be held for the first two fiscal years, after which rates will be escalated at a fair rate that is acceptable to the City.

RESOLUTION NO. 2012-106

A RESOLUTION OF THE CITY COUNCIL OF
THE CITY OF ESCONDIDO, CALIFORNIA,
AUTHORIZING DIRECTOR OF UTILITIES TO
EXECUTE, ON BEHALF OF THE CITY, TASK
ORDER NUMBER 1 WITH BLACK & VEATCH
CORPORATION FOR INDIRECT POTABLE
REUSE PROGRAM MANAGEMENT

WHEREAS, the City Council has approved Resolution No. 2012-105 for a Consulting Agreement with Black & Veatch Corporation for Indirect Potable Reuse ("IPR") Program Management; and

WHEREAS, City staff have completed negotiations with Black & Veatch Corporation for Task Order No. 1; and

WHEREAS, the Director of Utilities recommends that Task Order No.1 with Black & Veatch Corporation be approved; and

WHEREAS, this City Council desires at this time and deems it to be in the best public interest to approve said Task Order No.1 with Black & Veatch Corporation in an amount not to exceed \$1,381,410.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Escondido, California, as follows:

1. That the above recitations are true.
2. That the Director of Utilities is hereby authorized to execute, on behalf of the City, Task Order No. 1 with Black & Veatch Corporation. A copy of the Task Order is attached as Exhibit "1" and is incorporated by this reference.



CITY OF ESCONDIDO
TASK ORDER #1
IPR PROGRAM MANAGEMENT

The City Council of the City of Escondido adopted Resolution No. 2012-105 to execute an Agreement with Black & Veatch Corporation for IPR Program Management services. The City Council of the City of Escondido adopted Resolution No. 2012-106 authorizing the Director of Utilities to execute **Task Order #1** in an amount not to exceed \$1,381,410. The Scope of Work for said Task Order is attached.

CITY OF ESCONDIDO

Date: _____

Signature

Director of Utilities

Date: _____

Black & Veatch Corporation

Signature

Name & Title (please print)

IPR PROGRAM MANAGEMENT
SCOPE OF WORK – TASK ORDER NO. 1

CITY OF ESCONDIDO

BACKGROUND

The City of Escondido (City) is facing important decisions – decisions on whether to upgrade the wastewater disposal systems or to expand existing water recycling efforts to additional non-potable customers and potentially the use of indirect or direct potable reuse. To address these important issues, the City is embarking on a recycled water program. The program will focus on answering key questions for the City, and then implement the program that addresses the City's needs.

Task Order No. 1 of this program will perform three major functions, summarized as:

1. Perform a programmatic planning study that develops near-term and long-term reuse alternatives and determines their feasibility, costs, and benefits.
2. Prepare a cost of service analysis to evaluate the cost of recycled water in the existing system
3. Support City's asset management program

SCOPE OF WORK- TASK ORDER NO.1 NPR/IPR/DPR PLANNING STUDY

Specific tasks associated with this phase of the project are summarized below:

- ▼ Task 1000 – Meetings and Project Management
- ▼ Task 1100 – Existing Non-potable Recycled Water Cost of Service Study
- ▼ Task 1200 – Background Development
- ▼ Task 1300 – Early Phase Reuse Alternatives to Serve Agriculture
- ▼ Task 1400 – IPR/DPR Project Development
- ▼ Task 1500 – Disposal Considerations
- ▼ Task 1600 – Program Development
- ▼ Task 1700 – IPR/DPR Financial Model
- ▼ Task 1800 - Reuse Program Final Report
- ▼ Task 1900 – Asset Management Program Support

TASK 1000 – MEETINGS AND PROJECT MANAGEMENT

The following tasks will be performed to coordinate efforts, keep the City informed of activities, and attend meetings (in addition to any meetings included in individual tasks).

Task 1001 - Project Administration. Perform administrative tasks as required to facilitate completion of tasks defined within this Scope of Work. The project administrative tasks to be performed include:

- Provide monthly invoices with status report defining progress to date of all tasks, cost expenditures, and an updated schedule.
- Maintain a project schedule identifying major project tasks with duration and milestones. This schedule will be updated monthly and highlight critical path tasks and key milestones.



**Brown
AND
Caldwell**

**IPR PROGRAM MANAGEMENT
SCOPE OF WORK – TASK ORDER NO. 1**

CITY OF ESCONDIDO

- Coordinate team members including work planning, coordination and communications.

Task 1002 – Meetings

Prepare for and attend meetings. Agenda and summary meeting minutes shall be prepared for meetings where appropriate. Level of effort assumed for meetings is per the allowances provided for in the fee estimate. The following meetings are assumed:

- **City Meetings.** The following meetings are anticipated. Meeting budgets include preparation time.
 - **Monthly Meetings.** Up to fourteen (14) monthly meetings with the City
 - **Other City Meetings.** Up to seven (7) other meetings with the City
- **Internal Team meetings.** Hold weekly team coordination meetings. Frequency may be reduced in later stages of the project.
- **Other meetings.** Up to eight (8) meetings are assumed for time spent with stakeholders, regulators, public related meetings, other agencies, or other parties currently not known but may surface during task order execution.
- **Presentations:**
 - **City Council.** Prepare for, attend and present (if required) at up to two (2) City Council meetings. Preparation of a PowerPoint presentation is included per City input and direction..
 - **Other stakeholders (2).** Prepare for, attend and present (if required) at up to two (2) stakeholder briefings. Preparation of a PowerPoint presentation is included per City input and direction.

TASK 1100 – EXISTING NON-POTABLE RECYCLED WATER COST OF SERVICE STUDY

This task will include developing a cost of service study to: 1) evaluate the cost of wastewater treatment, 2) evaluate recycled water treatment and delivery to current customers, and 3) evaluate alternative cost structures.

Task 1101 – Cost of Service Study

- Consultant will work with City staff to prepare a cost-of-service analysis outlining the City's estimated cost for providing wastewater (limited to the cost from the Influent Pump Station through HARRF secondary processes) and the estimated cost of service to treat and deliver recycled water. Subtasks conducted will include the following:
 - Meet with City staff to understand the operation and breakdown of HARRF treatment components and to estimate the transition point between wastewater treatment and recycled water activities.
 - Estimate wastewater cost of service from the Influent Pump Station to the transition point to recycled water (assumed to be at the secondary treatment effluent point). Estimate the cost elements associated with producing water from secondary to tertiary levels.



**IPR PROGRAM MANAGEMENT
SCOPE OF WORK – TASK ORDER NO. 1**

CITY OF ESCONDIDO

- Establish cost allocation percentages for recycled water activities that appropriately reflect key elements including distribution, administrative billing, and labor costs.
 - Work with the City to help establish beneficial use policy for recycled water.
- Consultant will examine the City's current recycled water pricing policy and provide recommendations on up to three alternative rate structures. As part of this subtask, Consultant will conduct a limited recycled water survey of Southern California agencies for the most current year available. No more than eight cities/agencies will be included in this survey.
- It is assumed that costs will be prepared for a specific year (e.g., 2012), which will be determined collaboratively with the City at the beginning of the work for this task.

TASK 1200 – BACKGROUND DEVELOPMENT

Task 1201 - Background Data

Work with the City to collect relevant information for the planning study, including previous reports, GIS files, hydraulic models, etc.

- **Review relevant reports.** Collect and review the following reports and data:
 - 2012 Water, Wastewater and Recycled Water Master Plans
 - 2010 Urban Water Management Plan
 - City of Escondido Indirect Potable Reuse Feasibility Study
 - General Plan with summary of key issues provided by City.
 - Wastewater Treatment and Disposal Capacity Study
 - Most recent City of San Diego groundwater management planning document related to San Pasqual Valley
- **Base Mapping.** Collect and review available City GIS data. Develop aerial and non-aerial base maps using GIS data provided by the City that will be utilized throughout the project.
- **Hydraulic Models.** Obtain the City's water, wastewater, and recycled water models.

Task 1202 – Costs Basis

Develop a costing program for use throughout the Study

- **Unit cost data.** Develop unit cost data (based on \$/MGD, \$/MG, \$/HP, etc.) specific to the City of Escondido and potential project facilities. Utilize existing unit cost data available to the Consultant team from similar past projects, and other City-provided bid estimates.
- **Cost Model.** Develop an MS Excel cost model for calculating budgetary cost estimates for alternatives developed in later tasks. The model will be used to import alternative costs into the financial model. The intent of the model is to make it adaptable to future changes such that updates can be accomplished quickly and efficiently.

Task 1203 – Demands and Flow

- **Water Demands.** Compile existing and future water demands and compare with plant output. Review Urban Water Management Plan (UWMP), Water Master Plan



**Brown and
Caldwell**

**IPR PROGRAM MANAGEMENT
SCOPE OF WORK – TASK ORDER NO. 1**

CITY OF ESCONDIDO

and general plan data, which will serve as the basis for establishing future demands. Compile existing, planned, and future non-potable recycled water flows using similar documents provided by the City. Develop water projections for summer and winter demands. The time horizon for demand projections will be confirmed with the City early in the process.

- **Wastewater Flows.** Compile existing and future wastewater flows and compare with plant output using information from the City's Wastewater Master Plan. Develop wastewater projections including low, average, and high dry weather future flows. Based on flow analysis, quantify the wastewater available for reuse at key locations, including Pump Station No.1. Evaluate additional options for increasing wastewater flow and reuse including Vallecitos Water District's Montiel Pump Station gravity diversion, City of San Diego's Pump Station 77, septic conversions, etc. The time horizon for flow projections will be confirmed with the City early in the process.
- **Initial Reuse Plans.** Review the City's 2012 Reuse Master Plan and meet with the City to determine the intent and extent of planned and desired improvements and how these plans fit into the objectives of this project. Evaluate planned connections and demands, and assess impact to both summer and winter recycled water operations. Estimate seasonal availability of recycled water (wastewater) for agricultural and future IPR/DPR purposes. Obtain and review the latest summary information on the City of San Diego's plans for San Pasqual Valley.

Task 1204 – Wastewater Quality and Mass Balance Model

- Establish an initial list of treatment issues, impacts and potential improvements at HARRF to address existing and future conditions. Using data provided by the City, characterize wastewater quality for evaluation in developing an IPR system. Build a wastewater system mass balance model by updating other recent water quality mass balance models for use in assessing impacts of reuse options and water quality impacts at HARRF. The model shall estimate TSS, BOD and TDS loading at key locations in the wastewater system. The model will be used to evaluate wastewater quality and impacts of reuse.

TASK 1300 – EARLY PHASE REUSE ALTERNATIVES TO SERVE AGRICULTURE

Task 1301 –Early Phase Reuse Alternatives

The first phase of the reuse program is anticipated to focus on developing early phase reuse alternatives that provide lower TDS non-potable recycled water to agricultural customers. The following tasks shall be performed:

- **Customer locations and demands.** Confirm locations and demands of candidate agricultural sites. Confirm agricultural historical demands including an evaluation of seasonal demand fluctuation. Collaborate with EGAP and confirm agricultural customers' ability to use additional water during peak wet weather events, including critical wet weather events that would represent design conditions at HARRF.
- **Onsite Storage Potential.** Determine candidate locations for onsite storage at agricultural sites. Determine whether tanks or open storage ponds could be



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constructed and the management and water quality considerations associated with these facilities. Conceptualize the layouts, ability to use storage during wet weather events, and peak flow management approaches for the wastewater system.

- **Conveyance.** Confirm location and extent of existing and planned recycled water and brine pipelines which would be used to serve candidate sites. Identify technical issues related to the facilities, including waste stream impacts on materials, piping configurations, pressures, and daily peak and non-peak flows seasonally.
- **Treatment Needs and Treatment Siting.** Work with EGAP and their partners to establish water quality objectives for agricultural use (avocados and citrus). Develop candidate locations for treatment systems, which are anticipated to include: 1) consolidation at the HARRF site (with all non-potable flows having an RO side stream), 2) centralized at the brine pipeline eastern terminus, or 3) decentralized at agricultural locations. Quantify reverse osmosis and other treatment needed to meet desired water quality needs at least costs.
- **Treatment System Cost Estimates.** Develop a cost of the treatment systems if located at HARRF, at the brine pipeline terminus, or at individual agricultural sites.
- **Layout Alternatives.** Compile planning level concepts including the general siting of facilities and approximate/conceptual pipeline alignments for serving targeted agricultural customers, and estimate planning level cost impacts. Develop up to three (3) concepts to serve agricultural customers. Alternatives shall be focused on balancing water quality and costs. These concepts are anticipated to include performing treatment at HARRF, at a centralized location at the eastern terminus of the brine pipeline, and a decentralized approach at each agricultural site.
- **Adaptability to IPR/DPR.** Develop an adaptability plan to determine how early phase agricultural service would be adapted if an IPR/DPR approach was employed.

TASK 1400 – IPR/DPR PROJECT DEVELOPMENT

Develop baseline information necessary to evaluate and develop IPR/DPR opportunities within the City. It is anticipated that these opportunities will focus on Lake Dixon, Lake Wohlford and Lake Hodges, however, this task will look at opportunities across the City including San Pasqual Valley.

Task 1401 – Regulatory Update

Prepare a summary of the current state of regulations for IPR and DPR projects.

- Summarize the key parameters that affect the ability to develop an IPR/DPR project.
- Contact CDPH to determine the status and current thinking on pending regulations.
- Contact the RWQCB to determine the status and current thinking on pending regulations (also see disposal task).
- Attend up to one regulatory briefing during the project
- Contact and summarize results from City of San Diego demonstration pilot plant
- Summarize latest treatment trends, treatment technologies, benefits, costs, and phasing potential. This task includes an allowance for Dr. Shane Snyder for early brainstorming on regulatory compliance and to provide a short briefing letter on treatment issues, regulations, current approaches to addressing CECs, monitoring considerations, and a general opinion on health and safety issues.

Task 1402 – Groundwater Basin and Reservoir Siting Evaluation



**Brown AND
Caldwell**

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Review and summarize possible sites for IPR Reservoir Augmentation, Groundwater Recharge, and Direct Potable Reuse. Perform the following:

- Obtain legal opinion from City's general council regarding any water rights that may impact projects (City of San Diego, Native American).
- Review groundwater basins within or in proximity to Escondido and summarize characteristics using CA DWR Bulletin 118 and information provided by the City. Review City of San Diego plans for San Pasqual Valley.
- Review reservoirs and summarize characteristics. Acquire initial data for Dixon and Wohlford and outline the scope required to perform computation fluid dynamic (CFD) modeling of Lake Dixon and Wohlford. The actual CFD modeling is not included in the task order.
- Prepare a summary table of the potential basins/reservoirs and their suitability based on estimated regulatory criteria. Identify related treatment plant sites based on the potential IPR/DPR delivery points. These sites are anticipated to include HARRF, agricultural locations identified in Task 1300, at or near the EVWTP, and a site near San Pasqual Valley/Lake Hodges.
- Review potential DPR tie in points based on demands and ways to minimize pumping
- Review pipeline routes and existing infrastructure that lends itself to accomplishing IPR/DPR projects.
- Evaluate the benefits of a pump storage project between Lake Dixon and Lake Wohlford, including conceptualizing how this operation may help meet regulatory requirements for IPR projects.
- Using high level, triple bottom line approach, estimate the political, institutional and environmental benefits and impacts for the candidate IPR locations identified above.

Task 1403 –Impacts on Existing and Planned Domestic Water Systems

Review and summarize the benefits and impacts of the identified IPR concepts on the existing and planned water system. Summarize the following:

- Potential benefits and impacts to the existing and planned water distribution system
- Potential benefits and impacts to the Escondido canal operation and a future IPR Reservoir Augmentation project
- Potential benefits and impacts to the EVWTP and coordination needs with VID
- Potential benefits and impacts for interconnectivity to SDCWA system
- Potential benefits and impacts on Lake Hodges and downstream water uses (Olivenhain MWD, Santa Fe Irrigation District, San Dieguito Water District, County Water Authority Pumped Storage Project)

Task 1404 – Treatment Analysis

A treatment system analysis will be conducted, including the following tasks

- AWT. Summarize key treatment issues and needs for advanced water treatment processes needed to produce IPR/DPR projects

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- HARRF. Summarize key short-term and long-term treatment issues and needs at HARRF, including pre-treatment and nutrient removal coordination with IPR/DPR/live stream concepts.
- Phasing. Assess the ability to coordinate and phase treatment improvements with other evaluations, including early phase service to agriculture customers and live stream discharge concepts.
- Siting. Decentralized and centralized AWT considerations
- Waste stream treatment needs including biosolids approaches and brine disposal
- Summarize key odor, noise and aesthetic impacts based on future treatment changes

TASK 1500 – DISPOSAL CONSIDERATIONS

The disposal system, particularly the land and ocean outfall represent important considerations in this Study. This task provides the basis for determining the benefits the recycled water program will have on decreasing disposal costs.

Task 1501 – Permitting Requirements

Determine existing permitting requirements and future permitting projections. This task will include an allowance for Dr. Michael Welch. As part of this task, Dr. Welch will work with the team to summarize existing permit requirements, estimate future permit impacts, and develop strategies for alternatives. Tasks include:

Task 1502 – Outfall Impacts

Review recent outfall report entitled Wastewater Treatment and Disposal Capacity Study, which evaluated the outfall capacity. Compare report flow estimates to the latest City estimates. Update budgetary cost estimates for identified improvements by adjusting the ENR CCI index (baseline outfall cost). Soft cost assumptions shall also be reviewed for consistency with totals used in the alternatives analysis. Avoided costs will be quantified based on how much is offloaded by the reuse program (offloaded outfall cost). Address TDS impacts (also see Task 1505).

Task 1503 – Live Stream Discharge

Evaluate live stream discharge including outlining permit requirements and conceptualize two live stream options (assumed to relate to a centralized and decentralized IPR approach). Discuss potential downstream benefits with the City, including the potential to recharge groundwater for downstream customers.

Task 1504 – Peak Flow Management

Evaluate strategies to manage peak wet weather flows with a 10-year recurring frequency. The evaluation will include expanding on the current strategy of using recycled water and secondary effluent reservoirs to reduce the overflows at the land outfall during peak flow events and consideration of equalization basins within the collection system. Peak flow management will also evaluate AWT sizing to accommodate daily diurnal flows.

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Summarize remaining capacity in the outfall and brine pipeline to determine remaining capacity for future City uses. Coordinate with General Plan needs. Confirm brine pipeline configuration at HARRF and connection to the outfall. Evaluate hydraulic conditions caused by upstream brine disposal options at HARRF. Consider impact of brine discharge on condition of outfall with high salinity discharges, discharge characterization of ocean outfall with lower discharge quantity, and impact of salinity on ocean (as required by the RWQCB).

TASK 1600 – PROGRAM DEVELOPMENT**Task 1601 – Framework Workshop**

Prepare and facilitate an interactive workshop program. Workshop shall be a one day interactive session on the following topics:

- Goals: discuss goals and confirm City buy-in
- Criteria: prepare and present candidate project evaluation criteria, discuss criteria and process
- Opportunities: discuss opportunities compiled above
- Constraints: discuss regulatory, infrastructure, political, public and institutional constraints that may limit project development
- Offsets: discuss avoided costs, savings, etc.
- Next steps: outline the following program steps including prioritization

Task 1602 – Develop and Evaluate Alternatives

Develop integrated reuse alternatives based on the concepts discussed during the Framework Workshop. This task includes compiling alternatives with clear conveyance systems, treatment systems, facility sites, delivery points, and disposal plans. The concepts will include maps and details summarizing necessary facilities, and budgetary cost estimates. The alternatives will be evaluated for potential fatal flaws and other significant factors that could affect their feasibility, including: costs, revenue, savings, benefits, impacts, and phasing potential. Up to six (6) alternatives will be developed. Each alternative will also include conceptual layouts for major HARRF facilities. The alternatives are assumed to include the following:

- Non-potable only concept (baseline). Includes the City's planned non-potable reuse approach and any agricultural customers added.
- Lake Dixon/Lake Wohlford centralized concept at HARRF
- Lake Dixon/Lake Wohlford decentralized concept at agricultural site, EVWTP or other identified site
- Lake Hodges groundwater augmentation concept using Escondido facilities/sites.
- Lake Hodges groundwater augmentation concept using City of Escondido and City of San Diego facilities/sites
- One additional alternative or permutation to an alternative listed above.

Task 1603 – Coarse Screening Workshop

City of Escondido
 IPRJOPR Program Manager Task Order No. 1: NRP/PRJOPR Planning Study
 Fee Estimate

Task	Description	Project Manager II	Project Manager I	QA/QC	Engineer	Project Engineer	Staff Engineer	GIS Analyst	Asset Management	QA/QC / Designer	Admin Staff	Project Manager	Sr. Financial Analyst	Technical Advisor / QA/QC - Finance	BAV Total Hours	Total Fee (\$75/hour)	Indirect Expenses (\$75/hour)	BAV Direct Expenses	Brown and Caldwell	Dr. Michael Welch	Dr. Shane Snyder	Surveying / Potolling	Subconsultant Markup (10%, except BC)	
1000	MEETINGS AND PROJECT MANAGEMENT																							
1001	Project Meetings (14724222)	154	42	70	28	112	28	56	28	28	56	28	28	28	128	\$17,500	\$1,100	\$18,200	\$18,200					\$0
1002	Meetings (14724222)	154	112	70	140	112	140	84	84	84	84	84	84	84	488	\$37,104	\$4,280	\$0	\$0					\$0
1003	Subtotal																							
1100	EXISTING NON-POTABLE RECYCLED WATER COST OF SERVICE STUDY																							
1101a	Cost of Service Analysis - Wastewater Processes (JPS - Secondary)	4	4	4	16	16	16	4	4	4	4	4	4	4	82	\$15,304	\$720	\$500	\$18,400					\$0
1101b	Cost of Service Analysis - Recycled Water	8	4	4	24	24	24	4	4	4	4	4	4	4	174	\$32,670	\$1,520	\$500	\$18,400					\$0
1101c	Cost of Service Analysis - Recycled Water	12	8	4	40	40	40	4	4	4	4	4	4	4	255	\$44,174	\$2,240	\$500	\$18,400					\$0
1101d	Subtotal																							
1200	BACKGROUND DEVELOPMENT																							
1201	Background Data	32	16	4	4	32	4	4	4	4	4	4	4	4	100	\$17,940	\$880	\$1,000	\$4,700					\$0
1202	Cross Basins	64	4	4	64	64	32	4	4	4	4	4	4	4	172	\$30,640	\$1,510	\$1,000	\$7,900					\$0
1203	Cross Basins	10	2	1	24	24	32	4	4	4	4	4	4	4	71	\$13,441	\$220	\$1,000	\$16,000					\$0
1204	Wastewater Quality and Mass Balance Model	114	24	13	124	124	32	8	4	4	4	4	4	4	233	\$35,194	\$480	\$1,000	\$25,000					\$0
1205	Subtotal																							
1300	EARLY PHASE REUSE ALTERNATIVES TO SERVE AGRICULTURE																							
1301	Early Phase Reuse Alternatives	28	28	28	28	42	56	4	4	4	4	4	4	4	214	\$35,300	\$1,070	\$250	\$15,000					\$0
1302	Subtotal																							
1400	IPR/OPR PROJECT DEVELOPMENT																							
1401	Regulatory Update	10	20	10	20	4	4	4	4	4	4	4	4	4	70	\$12,790	\$610	\$1,000	\$14,100					\$1,000
1402	Groundwater Basin and Reservoir Siting Evaluation	36	24	24	48	48	4	4	4	4	4	4	4	4	186	\$33,210	\$1,630	\$5,000	\$23,000					\$500
1403	Impacts on Existing and Planned Domestic Water Systems	4	12	28	14	6	2	2	2	2	2	2	2	2	66	\$10,500	\$500	\$1,000	\$4,000					\$0
1404	Treatment Analysis	20	30	60	20	10	2	2	2	2	2	2	2	2	202	\$37,020	\$1,770	\$1,000	\$39,200					\$0
1405	Subtotal																							
1500	DISPOSAL CONSIDERATIONS																							
1501	Permitting Requirements	4	4	4	8	8	2	2	2	2	2	2	2	2	17	\$3,055	\$150	\$1,000	\$12,000					\$1,000
1502	Outfall Impacts	2	1	2	2	2	2	2	2	2	2	2	2	2	8	\$1,295	\$70	\$1,000	\$13,750					\$0
1503	Live Stream Discharge	2	1	2	2	2	2	2	2	2	2	2	2	2	8	\$1,295	\$70	\$1,000	\$13,750					\$0
1504	Peak Flow Management	4	1	1	8	8	2	2	2	2	2	2	2	2	22	\$3,385	\$180	\$1,000	\$5,000					\$500
1505	Brine Capacity	2	1	1	2	2	2	2	2	2	2	2	2	2	8	\$1,295	\$70	\$1,000	\$12,750					\$0
1506	Subtotal																							
1600	PROGRAM DEVELOPMENT																							
1601	Framework Workshop	16	6	12	12	12	12	4	4	4	4	4	4	4	76	\$13,750	\$670	\$1,500	\$15,000					\$1,000
1602	Develop and Evaluate Alternatives	96	48	48	72	72	96	60	60	60	60	60	60	60	422	\$31,750	\$3,690	\$5,000	\$50,000					\$5,000
1603	Criteria Screening Workshop	16	6	12	12	12	12	4	4	4	4	4	4	4	76	\$13,750	\$670	\$1,500	\$15,000					\$1,000
1604	Program Development and Implementation Plan	72	24	24	36	36	48	36	36	36	36	36	36	36	242	\$42,290	\$2,120	\$2,000	\$29,000					\$2,000
1605	Final Screening Workshop	16	6	12	12	12	12	4	4	4	4	4	4	4	76	\$13,750	\$670	\$1,500	\$15,000					\$1,000
1606	Subtotal																							
1700	REUSE ALTERNATIVE FINANCIAL MODEL																							
1701	Develop NPV Financial Model	40	20	12	12	12	60	40	40	40	40	40	40	40	346	\$51,950	\$3,030	\$1,000	\$0					\$0
1702	Subtotal																							
1800	REUSE PROGRAM FINAL REPORT																							
1801	Final Reuse Program Report	40	40	20	40	40	60	100	100	100	100	100	100	100	368	\$55,110	\$2,200	\$5,000	\$68,000					\$0
1802	Subtotal																							
1900	ASSET MANAGEMENT PROGRAM SUPPORT																							
1901	Full Time Asset Management Professional Assistance	40	20	12	12	12	60	40	40	40	40	40	40	40	346	\$51,950	\$3,030	\$1,000	\$0					\$0
1902	Subtotal																							
2000	EWTP Reuse Overview Planning/Coordination																							
2001	EWTP Design Coordination for Future Operations	32	32	40	320	320	40	100	100	100	100	100	100	100	560	\$84,000	\$4,200	\$4,000	\$0					\$0
2002	Subtotal																							
TOTAL	TASK ORDER 1 TOTAL	688	448	257	688	488	510	205	2,080	2,080	289	66	160	4	6,186	\$136,860	\$13,250	\$13,250	\$4,840	\$25,000	\$18,000	\$4,840	\$4,840	\$4,840