

Management Consulting



**Proposal for**

**Water, Wastewater and Solid Waste Rate Studies,  
Community Outreach and  
Proposition 218 Balloting Services**

*for*

**City of Livingston, California**

January 10, 2012

FINANCIAL CONSULTING  
**TUCKFIELD &  
ASSOCIATES**  
MANAGEMENT CONSULTING

**CDM  
Smith**

# Tuckfield & Associates

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January 10, 2012

Mr. Jose Ramirez  
City Manager  
City of Livingston  
1416 C Street  
Livingston, CA 95334

Dear Mr. Ramirez:

Tuckfield & Associates, teaming with CDM Smith, Inc. (CDM), is pleased to submit this proposal to provide consulting services for Water, Wastewater and Solid Waste Rate Studies and Community Outreach and Proposition 218 Balloting Services for the City of Livingston (City). Our team has extensive experience in conducting similar studies in California and nationwide. Our approach to performing rate studies is based on our commitment to produce quality work for our clients, creating working relationships that can span several years, and sometimes decades.

A key element of the services requested is to present the need for any rate adjustments and educate the public on the status of Livingston's financial condition, its infrastructure needs, and CIP plans to meet future growth and replacement needs. Our team will provide the level of experience required to meet these challenges and determine rates in accordance with AWWA and WEF manuals of practice. In addition, a member of our team helped write the AWWA Manual on Water Rates in 1983.

Our response to your Request for Proposals is arranged in principle sections that address each aspect of your request. Our understanding of the project requirements and the goals and needs of the City is presented in the Project Understanding section.

Our team has the qualifications, experience, and capabilities to provide the services desired by the City and we are enthusiastic over the opportunity to serve the Livingston community. We have a proven track record of successful rate studies for agencies both small and large, including the Metropolitan Water District of Southern California and the City of Long Beach.

Our team looks forward to working with the City on this project. Should the City need any additional information, my contact information is provided below.

Mr. G. Clayton Tuckfield  
Tuckfield & Associates  
2549 Eastbluff Drive, #450B  
Newport Beach, CA 92660  
(949) 760-9454 phone  
(949) 760-2725 fax

Very Truly Yours,

TUCKFIELD & ASSOCIATES



G. Clayton Tuckfield  
Principal

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# **CITY OF LIVINGSTON, CALIFORNIA**

## **Proposal for Water, Wastewater and Solid Waste Rate Studies, and Community Outreach and Proposition 218 Balloting Services**

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# QUALIFICATIONS

Our project team is uniquely qualified to provide the professional services requested by the City of Livingston (City). Our team members specialize in rate studies with extensive experience serving cities and special districts in Southern California and within close proximity to the City. Some of the team's current and recent clients in the region include the following.

- City of Modesto
- City of Firebaugh
- City of Orange Cove
- Keyes CSD
- Hilmar County WD
- City of Ventura

In addition, we have served other numerous clients throughout the state of California that consist of the following:

- City of Long Beach
- MWD of So. Cal.
- City of Inglewood
- City of El Cajon
- City of Salinas
- And many others

Our project team offers several advantages to the City that will be instrumental in the success of the implementation of proposed rate structures and rates. These include the following:

**Experience.** Our skills and qualifications will result in the right cost of service evaluation and rate structure analysis based on the needs of the City. The project team has performed hundreds of studies nationwide with a concentration in California. This experience allows us to draw upon knowledge of methods and alternative rate structures that will be of benefit to the City in the study.

**Trust and Reliability.** The City can rely on a high level of comfort with our team, both during and after the study. Our team draws upon consultants who have provided professional services to the satisfaction of numerous clients in California including current City staff members. The City can be assured that quality services will be provided by the project team.

**California Regulatory Requirements.** Our team of experts can navigate the difficult California regulatory environment to provide the City with the best outcome. Recent State legislation includes the enactment of Proposition 218, AB2882, AB3030, and the state's 20x2020 plan. Our team members have made presentations on these regulations to California water associations and have served as chairs of water association committees.

## Tuckfield & Associates Consulting

Tuckfield & Associates provides project management and financial solutions for publicly owned utilities. Since 1985, Tuckfield & Associates has used innovative methods combined with time-tested strategies to assist California municipalities and special districts in achieving their financial goals.

Clients have included public utilities, state and county governments, municipalities, and public districts. Tuckfield & Associates approaches each study with the commitment to exceed our client's expectations. Our strength lies in our proven capability to provide comprehensive, practical, and implementable programs that serve our clients with personalized relationship-driven service.



G. Clayton Tuckfield, founder and principal of Tuckfield & Associates, has managed or been directly involved in publicly owned utility financial services for over 25 years. Tuckfield & Associates provides comprehensive consulting services intended to safeguard the financial viability of the client’s multi-million dollar utility. Key elements include financial plans that anticipate economic contractions and expansions, capital planning for improvement financing options, allocation of costs to appropriate customers based on cost causative principles, and rates that are designed to be fair and equitable.

**Tuckfield Qualifications Summary**

- 25 years of experience
- Over 70 rate studies
- Public Agency Specialization
- Tested Strategies
- Project Management

### CDM Smith Management Consulting Division

CDM’s Management Consulting Division has completed more than 100 rate and financial studies in the past five years for communities in California and the Western U.S. For over 55 years, CDM has provided innovative professional consulting services with high ideals and a commitment to quality and integrity. CDM is committed to providing our clients with sound technical and management services, which guide diverse projects through to their successful completion. CDM’s California office locations include Los Angeles, Irvine, Rancho Cucamonga, San Diego, Walnut Creek, Sacramento and Carlsbad.

With the goal of assisting clients in identifying and implementing comprehensive business performance improvements, CDM offers a diverse portfolio of services under the banner of “management consulting.” CDM specialize in areas such as financial and cost of service planning, organizational development and training, performance measurement, asset management, and strategic planning.

**CDM Smith Qualifications Summary**

- Ranked 8th by ENR
- State and National Experts
- Successful rate adoption by Boards/Councils under the Proposition 218 environment
- Experienced staff

CDM’s financial service specialists in California and the Western US are within the Management Consulting Division. CDM’s approach, versus niche financial service providers, is based on our expertise in not only financial services, but also engineering, water resources, public outreach and utility operations. This gives CDM the ability of seamless collaboration throughout an organization with a diverse set of skills, which assures the success of our client-specific solutions. CDM has served communities in California and the Southwest for

over 30 years and have completed more than 100 rate and financial assignments in the past 5 years for the region’s water and sewer utilities.



# EXPERIENCE

The following project descriptions and references are for studies delivered by our project manager and our team. These recent and successful municipal utility financial plans and rate studies are a sample of the work provided to California communities and select other communities. The California studies have been prepared in conformance with Proposition 218 and all studies use the cost of service and allocation processes prescribed in the AWWA Manual M1 for water and WEF Manual 27 for sewer utilities. Our client references provide testimony to the success of our study methodologies and the reliability of our municipal utility financial planning team. We are available to perform these similar services in a timely and professional manner.

## Water and Wastewater Rate Studies, City of Ventura, California

Tuckfield & Associates completed a water and wastewater rate study update for the City of Ventura in 2010, continuing a 20 year relationship with the City that started in 1990. During that time, the City has managed to construct over \$200 million in water and wastewater capital improvements, all while maintaining reasonable increases in water and wastewater rates. Mr. Tuckfield also developed water conservation rates using inverted rate blocks for residential customers while establishing separate rates by class for non-residential customers, including large industrial users.

The 2010 rate study update also addressed several concerns of City staff. Various rate scenarios were discussed with City staff that evaluated the impact of budget constraints and the delay of capital improvements to future years. The rate study update also included a review of the water rate structure which was compared with industry practice and other local water agency rates to determine the validity of the water rate structure in today's environment. Additionally, several scenarios identified the loss in revenue that would occur if outside City customers were no longer charged a rate differential and if rate increases were delayed from their normal implementation date. Mr. Tuckfield also developed computerized financial planning and rate models for the City to analyze present and future utility financial needs.

Reference: Lisa Kern, Senior Management Analyst, City of Ventura, 805-652-4542  
Email: Lkern@ci.ventura.ca.us

## Water and Wastewater Rate Studies, City of Kansas City, Missouri

CDM has updated the water rate model for the City of Kansas City, Missouri, numerous times in anticipation of their annual water rate adjustment. The model was developed by CDM using the utility basis of analysis since Kansas City serves over a dozen wholesale users as well as retail customers outside the city limits. The adjustment is based on anticipated O&M and capital improvement costs, as well as projected water usage. During the most recent update, CDM also developed an alternative rate structure promoting efficient use of water for consideration by the city. In 2010, CDM recommended changes to the sewer rate structure to implement surcharges based on industry standard strengths instead of measurements. The change resulted in an additional \$2.5 million of annual revenue without a change in the actual rates. Jake Boomhouwer served as Project Manager for these studies.

Reference: Roger Lehr, Finance manager, 816-513-0225  
Email: finance@kcmo.org



## Water and Wastewater Utilities Rate Studies, City of Ingelwood, California

In this 2011 study, CDM conducted a water and wastewater rate study for the City. Both utilities have not had rate adjustments for eight years and both have been operating in the red drawing down reserves. Significant adjustments to rates were proposed as part of a phased in approach. In addition, CDM proposed changing both the water and wastewater rates structures to restore equity between users and user classes. The Proposition 218 hearing for the new rates will be February 7, 2012. CDM prepared the notices for the hearing and the City performed the mailing.

Reference: Boytrese Osias, Principal Engineer, City of Inglewood, 310-562-3687

Email: [Bovias@cityofinglewood.org](mailto:Bovias@cityofinglewood.org)

## Wastewater Rate Study, City of El Cajon, California

Mr. Boomhouwer just completed a cost of service study to determine new wastewater rates for the City of El Cajon. The City had not adjusted rates for 12 years and was experiencing significant negative cash flow relying on reserves. The result was that a large increase was needed to restore the sewer fund to a balanced condition. Meetings were held with the City Council to discuss the plan. A proposition 218 hearing was held on November 8, 2011 where the new rates were approved unanimously.

Reference: Rob Turner, City Manager, City of El Cajon, 619-441-1716

Email: [Rturner@cityofelcajon.us](mailto:Rturner@cityofelcajon.us)

## Wastewater Rate Study, City of Salinas, California

CDM developed a five-year financial plan and revenue program for the City of Salinas. The analysis integrated O&M cost increases for Salinas to support collection system rehabilitation projects and improvements based on a new Master Plan developed by CDM. In addition to development of the new revenue plan, CDM helped the City move from a rate structure based on a percentage of the regional provider's rate to one based on flow for users in the City. The Proposition 218 hearing for implementing the new rates is January 10, 2012. The annual rate revenues are \$3.0 million with 31,500 accounts.

Reference: Matt Pressley, Dir. of Finance, 831-758-7420

Email: [mattp@ci.salinas.ca.us](mailto:mattp@ci.salinas.ca.us)

## Water and Wastewater Rate Study, City of Firebaugh, California

Tuckfield & Associates completed a water and wastewater rate study for the City of Firebaugh in June of 2011. The study was an update to a study performed in 2005 when the City was facing numerous future capital improvements in both their water and wastewater systems. The purpose of the 2005 study was to provide a financing plan to secure low interest loans from the USDA and adjust rates to meet the future obligations of each utility. Tuckfield & Associates developed financial plans and rates for the water and wastewater utilities and provided information to the bond disclosure counsel for use by the bond rating agencies in the debt refinance. A Consultant's Certificate was executed and included in the closing documents.

The 2011 study's intent was to update rates for conditions after the completion of all CIP projects, including the new water and wastewater treatment plants, water and sewer pipe replacements, and new water meters throughout the City. A proposed water rate structure was developed that



accounted for water demand by customers as well as a conservation rate structure for residential customers. Wastewater rates were reduced for residential customers in the 2011 study.

**Reference:** Jose Ramirez, City Manager, City of Livingston, 209-394-8041  
Email: JRamirez@livingstoncity.com

### **Water and Wastewater Rate Study, City of Pismo Beach, California**

Mr. Tuckfield is currently completing a comprehensive water and wastewater rate study for the City of Pismo Beach that began in the summer of 2011. Mr. Tuckfield also conducted a study in 2007 that entailed accounting for all financial aspects of the water and sewer rates, including each water supply source, debt and assessment debt, and various sub-funds of the utilities. The study included financial planning, cost of service, and rate structures for both water and wastewater. The study results presented were adopted by City Council.

The current study addresses the City's 2010 Urban Water Management Plan finding that the City needed to reduce its per capita water consumption by 2.2 percent annually to comply with SB x7-7 as well as plan for significant replacement of infrastructure. A four-block rate structure was developed to promote conservation as well as establish appropriate landscape irrigation pricing.

**Reference:** George Edes, Administrative Services Director, Pismo Beach, 805-773-7010  
(Retired 12-31-2011)  
Dwayne Chisam, City Engineer, Pismo Beach, 805-773-7037  
Email: dchisam@pismobeach.org

### **Water Rate Study, Nipomo Community Services District, California**

Mr. Tuckfield completed a rate study for the District in 2009. This study was updated in 2010 with an additional update study pending in 2012. As a result of recent legal actions to adjudicate the greater Santa Maria groundwater basin, the District entered into an MOU to contract for 3,000 ac-ft of supplemental water from Santa Maria. In the 2010 study, Mr. Tuckfield assisted the District with establishing water rates that partially recover the cost of the supplemental water through the water rate as well as an assessment. He is now assisting the District in incorporating a wholesale water pass through mechanism for rates charged for the supplemental water by the City of Santa Maria, which will be included in the 2012 study.

**Reference:** Michael Lebrun, Interim General Manager, Nipomo CSD, 805-929-1133  
Email: mlebrun@ncsd.org

### **Water, Wastewater, and Solid Waste Rate Study, Town of Florence, Arizona**

Tuckfield & Associates completed a comprehensive water, wastewater, and solid waste rate study for the Town of Florence, Arizona. The Town was experiencing growth in the demand for their utility services and had complaints regarding the fairness of the rate and charges. The comprehensive study reviewed all aspects of the three utility services and identified several key findings. Most notably, the study indicated that the Town was not applying its rates correctly to wastewater received at its treatment plant from a local state prison. The results indicated that the Town had about \$400,000 in lost revenue and could back bill the state for this amount.

**Reference:** Town Manager has since retired.



# PROJECT UNDERSTANDING

## General

The City is a general law City located in north central Merced County within the central valley of California between the cities of Stockton and Fresno along the State Highway 99. The City limits encompass an area of approximately 3.6 square miles with a sphere of influence of about 5.1 square miles while serving a population of approximately 14,051. Annexations to the City and changes to the urban development plan boundaries are reviewed by the Merced County Local Agency Formation Commission. The City provides water, wastewater, and solid waste service to residential, commercial, industrial, and institutional customers within the City limits.

## Water System

### Water System Understanding

In 2007, the City’s water system was supplied through eight active groundwater wells, extracting water from the Merced sub-basin of the San Joaquin Valley Groundwater Basin. The distribution system consisted of a 1.0 MG storage tank with over 36 miles of distribution lines ranging in size from 2 to 16 inches in diameter. The wells have a total supply capacity of about 10.8 mgd providing a maximum-day demand of 11.9 mgd in 2006. Residential customers consume approximately 25 percent of total annual consumption while commercial customers consume 3 percent, other customers consume about 4 percent, and Industrial (Foster Farms) consuming about 68 percent. In August of 2011, the City settled a lawsuit with several defendants regarding contamination of the groundwater supply for TCP 123 (1,2,3-trichloropropane) contamination. The City intends to use the proceeds from the lawsuit to pursue water treatment to address the TCP 123 and other water quality issues. The City currently has an RFP out for a feasibility study for water treatment options.

Water System	
■	8 active groundwater wells
■	1.0 MG storage tank
■	Over 36 miles of distribution lines

The City’s July 2007 Water Distribution System Master Plan (WDSMP) indicated several deficiencies in the water system. The WDSMP noted that a deficiency existed in water supply, and that two new wells would be needed with a capacity of 2.0 mgd each. The existing water system storage capacity of 1.0 MG was found to be deficient by about 8.9MG with a total requirement of 9.9MG needed to meet operation and fire flow requirements. In addition to the supply and storage requirements, deficiencies were also noted in the distribution system, suggesting that about 19,100 ft of new water pipelines needed to be upgraded or replaced.

Review of the City’s Water System 5 Year Capital Improvement Plan (CIP) indicates that numerous improvements are planned for construction that may address the deficiencies noted in the WDSMP. CIP Option 1 includes about \$1.325M spent on supply well #17 and design costs of a new well with storage tank on Olive Avenue in FY 2015-16. Remaining projects included numerous waterline upgrades and replacements, wellhead filtering, and new generators with total water system CIP expenditures of over \$11M in FY 2010-11 through FY 2015-16. CIP Option 2 includes construction of the Olive Avenue well and tank as well as a new well and tank on Peach Avenue. Additional CIP under Option 2 brings the total expenditures to over \$24M for the same period.



### Water Rate Understanding

The City's current water rate structure consists of a minimum monthly fixed charge and a consumption charge, as shown in the figure below. The City also has flat rates that apply to non-metered customers. Consumption rates consist of a three-tier declining rate structure applicable to all customers except Industrial and Hydrant. Industrial customers have a five-tier declining rate structure while Hydrant customers have a uniform volume charge. The current rate structure also shows service to customers outside the City limits. City staff indicates that currently there are only 2 customers that are provided water service outside the City limits.

City of Livingston Water Service Charges				
Code	Description	Inside City	Outside City	
<b>Metered</b>				
WC2B	Commercial 1/2	\$4.95		
WCM	Commercial	\$8.70		
WMI	Industrial	\$8.70		
LLD	Lighting Landscape	\$8.70		
WMU	Other	\$8.70		
WMR	Residential	\$9.90		
WMC	Commercial	\$9.90		
WOUT	Out of City Limits		\$13.05	
<b>Non-Metered Flat Rate</b>				
WC01	Commercial Flat Fee	\$9.90		
WF01	Commercial Flat Fee	\$8.70		
WFR1	Residential Flat	\$7.05		
WFR2	Residential Flat	\$8.15		
WFR3	Residential Flat	\$14.25		
WFR4	Residential Flat	\$16.85		
	Service Charge - 3/4"	\$1.20		
WS01	Service Charge - 1"	\$1.20		
WS12	Service Charge - 1 1/2"	\$2.35		
WS02	Service Charge - 2"	\$3.50		
WS03	Service Charge - 3"	\$5.80		
WS04	Service Charge - 4"	\$11.60		
WS06	Service Charge - 6"	\$19.75		
WS08	Service Charge - 8"	\$29.00		
WR01	Residential 0 - 6,000 lot	\$8.65		
WR02	Residential 0 - 6,001 to 8,000 lot	\$9.55		
WR03	Residential 0 - 8,001 to 10,000 lot	\$10.80		
WR04	Residential 0 - 10,001 to 12,000 lot	\$12.30		
WR05	Residential 0 - 12,001 to 14,000 lot	\$13.60		
WR06	Residential 0 - 14,001 to 16,000 lot	\$15.00		
WR07	Residential 0 - 16,001 to 18,000 lot	\$16.25		
WR08	Residential 0 - 18,001 to 20,000 lot	\$17.65		
WR09	Residential 0 - 20,001 to 24,000 lot	\$18.95		
WR10	Residential 0 - 24,001 to 32,000 lot	\$21.60		
WR11	Residential 0 - 32,001 to 34,000 lot	\$27.00		
WREA	Residential Each Add'l Unit	\$5.45		

City of Livingston Water Consumption Rates				
Code	Classification	Block	Inside City	Outside City
			\$/kgal	\$/kgal
WMR	Residential	First 35 kgal	\$0.00	
		Next 25 kgal	\$0.35	
		Over 60 kgal	\$0.30	
WC2B	Commercial 1/2	First 35 kgal	\$0.00	
		Next 25 kgal	\$0.18	
		Over 60 kgal	\$0.15	
WCM	Commercial	First 35 kgal	\$0.00	
		Next 25 kgal	\$0.35	
		Over 60 kgal	\$0.30	
WMI	Industrial	First 35 kgal	\$0.30	
		Next 1,500 kgal	\$0.37	
		Next 2,500 kgal	\$0.44	
		Next 5,000 kgal	\$0.52	
		Over 9,035 kgal	\$0.60	
LLD	Lighting Landscape District	First 35 kgal	\$0.00	
		Next 25 kgal	\$0.35	
		Over 60 kgal	\$0.30	
IRRC	City Irrigation	First 35 kgal	\$0.00	
		Next 25 kgal	\$0.35	
		Over 60 kgal	\$0.30	
WMU	Other	First 35 kgal	\$0.00	
		Next 25 kgal	\$0.35	
		Over 60 kgal	\$0.30	
WOUT	Out of City Limits	First 35 kgal		\$0.00
		Next 25 kgal		\$0.35
		Over 60 kgal		\$0.30
HYD	Hydrant	All kgal	\$0.10	\$0.10

*Summary of the City of Livingston's Current Water Rates and Structure Showing Fixed and Consumption Components of the Rate Including Tiered Structure for All Customers*

### Water Long Term Financial Plan

The Water Fund had continuous losses from 2007 through 2010. In 2011, the City was able to reduce personnel allocations by about 19 percent to the fund with an overall operating cost reduction totaling 22 percent, as compared with the previous five-year average. Revenues have increased by about 19 percent as compared with the prior five-year average, achieving a balancing of the annual budget. Fund balance as of June 30, 2011 is approximately \$4.8 million.



## Wastewater System

### Wastewater System Understanding

The City provides wastewater collection and treatment service to City residences, commercial customers, and industrial customers. Wastewater is collected through more than 375 miles of trunk sewers, force mains, sewer mains, and ten lift stations. Wastewater flows to the City’s domestic wastewater treatment plant with an approximate capacity of 2.0 mgd.

The City’s first wastewater treatment plant was built in 1963 and consisted of screening, grit removal, primary clarification, anaerobic digestion, sludge drying beds, and six treatment/percolation ponds. The facility was expanded to 2.0 mgd in 2004 to include an oxidation ditch, two new clarifiers, influent pumps, and mechanical bar screening.

Until recently, the City provided wastewater treatment to domestic and industrial customers, with a separate facility for the industrial wastewater treatment. This separate industrial treatment plant was recently sold. The City’s remaining wastewater treatment facility treats domestic wastewater and some light industrial wastewater and is currently operated under contract with Environmental Management Services (EMS).

### Wastewater Rates Understanding

The current wastewater rate structure includes fixed charges for residential and non-residential customers. Some customers also are charged for wastewater volume, levied on the basis of their water consumption.

City of Livingston Wastewater Charges			
Code	Description	Inside City	Outside City
<b>Monthly Fixed Charges</b>			
<b>Residential</b>			
SOUT	Residential Outside City		\$43.52
SRES	Residential Inside City	\$30.00	
SCC8	Multi-Family Residence	\$30.00	
SHA	Housing Authority	\$30.00	
SRTW	Nagi Wash/Inactive	\$64.27	
<b>Non-Residential</b>			
SC01	Barber/Beauty	\$48.85	
SC02	Churches	\$56.25	
SC03	Convenience Store	\$110.00	
SC04	Convenience Store	\$81.40	
SC05	Retail < 1,300 sf	\$24.45	
SC06	Retail > 1,300 sf	\$32.55	
SC08	Government Building	\$36.70	
SC09	Motel 17 Units	\$146.52	
SC11	Professional Office	\$24.45	
SC12	Professional Office > 800 sf	\$40.70	
SC13	Professional Office	\$162.80	
SC14	Public Building	\$147.00	
SC15	Repair Service	\$138.40	
SC16	Schools	\$562.50	

City of Livingston Wastewater Charges			
Code	Description	Inside City	Outside City
<b>Monthly Fixed Charges</b>			
<b>Non-Residential (cont.)</b>			
SC17	Bakery	\$81.40	
SCC1	Car/Truck Wash	\$244.20	
SCC2	Laundromat	\$128.70	
SCC3	Medical/Clinic/Dental	\$162.80	
SCC4	Restaurant < 1,200 sf	\$136.60	
SCC5	Restaurant/Bar	\$195.35	
SC00	Commercial Base	\$32.33	
SCC9	Commercial Base - Flat Only	\$32.33	
<b>Light Industrial</b>			
SLI	Light Industrial	\$225.00	
SLIF	Light Industrial - Flat Only	\$225.00	
<b>Consumption Charges</b>			
		\$/kgal of water	\$/kgal of water
SCC8	Multi-Family Residence	\$0.003644	
SC00	Commercial Base	\$0.003644	
SCC7	Commercial Base - Cons Only	\$0.00	
SLIU	Light Industrial - Cons only	\$0.00	

*The City of Livingston’s Current Wastewater Rates and Structure Showing Differing Structures for Residential and Non-residential Customers*

## Wastewater Long Term Financial Plan

The Wastewater Fund has also seen reductions in personnel allocations. The resulting allocation has reduced personnel cost by 64 percent as compared with the previous five-year average. Contract operator costs have increased by about 26 percent as compared with the prior five-year average and the City has an RFP out for bid to operate and maintain the wastewater treatment facility. Revenues from user fees have been reasonably consistent over the last 6 years. The fund incurred new debt in 2007 with annual obligations totaling over \$520,000. Fund balance as of June 30, 2011 is approximately \$4.7 million.

## Solid Waste System

### Solid Waste System Understanding

The City contracts with Gilton Solid Waste Management (Gilton) to provide garbage, recyclable material, and green waste collection and disposal service. Service is provided weekly to about 2,750 single-family residential customers, 92 commercial dumpsters, one mobile home park, and 41 multi-family residential units. The City provides oversight and administration of the contract with Gilton, as well as the solid waste utility and fund. Gilton is not required to remove any waste from construction such as buildings material or demolition. Gilton is also not required to remove any biological waste that may contain infectious or contagious disease.

### Solid Waste Rates Understanding

The current wastewater rate structure includes fixed charges for all customers. Charges vary by the size of the container and the frequency of the number of service pick-ups provided. In addition to Gilton's rates, the City's solid waste administration expenses are included into the total rates to each customer classification.

### Solid Waste Long Term Financial Plan

The Solid Waste Fund has had operating losses between 2006 and 2009. However, the fund has achieved surpluses in the last two years due to cost reductions of about 57 percent from changes in personnel allocations to the fund. With these changes, the fund ended Fiscal Year (FY) 2010-11 with a fund deficit of -\$35,000.

City of Livingston Solid Waste Charges		
Description	Monthly Charge	Gilton Rate
<b>Residential</b>		
G90 (90 gal. container)	\$18.60	\$14.79
X-can (each add'l can)	\$3.44	\$0.07
GALL (300 gallon container)	\$18.90	\$14.79
<b>Commercial</b>		
<u>1 cubic yard container</u>		
G1X1 (1 time per week)	\$35.85	\$28.52
G1X2 (2 times per week)	\$71.11	\$56.54
<u>2 cubic yard container</u>		
G2X1 (1 time per week)	\$71.42	\$56.85
G2X2 (2 times per week)	\$141.80	\$112.69
<u>3 cubic yard container</u>		
G3X1 (1 time per week)	\$105.81	\$84.22
G3X2 (2 times per week)	\$200.51	\$159.31
G3X3 (3 times per week)	\$307.88	\$240.04
<u>4 cubic yard container</u>		
G4X1 (1 time per week)	\$135.40	\$107.81
G4X2 (2 times per week)	\$264.28	\$210.07
G4X3 (3 times per week)	\$398.90	\$328.56
<u>6 cubic yard container</u>		
G6X1 (1 time per week)	\$190.27	\$151.57
G6X2 (2 times per week)	\$371.50	\$295.30
G6X3 (3 times per week)	\$564.45	\$451.86

*City of Livingston's Current Solid Waste Rates and Structure  
Showing Rates by Type of Service*



## Study Challenges

### Water Rates

- A key aspect of the study includes review and analysis of the water rate structure and pricing. The City's tiered water consumption rate structure that applies to all customers except Industrial could be viewed as a declining block rate structure that does not encourage water conservation. In contrast, the tiered structure that applies to the Industrial customers is an inclining block rate structure. This study will address the challenge of setting appropriate rate structures and/or blocks by a thorough review and analysis of each customer classification's water consumption characteristics, including development of water use patterns and demand profiles.

### Wastewater Rates

- The wastewater utility is undergoing several changes. The City has lost a significant Industrial customer and no longer owns the industrial wastewater treatment plant. Additionally, the City's remaining wastewater treatment facilities are being expanded, incorporating new treatment processes. The new investment is likely to result in changes to cost allocations and the use of the facility by the various customer groups. The study will address this challenge by a review and analysis of the treatment facilities and processes to provide a fair and equitable allocation of costs and design of rates to users of the facility.

### Solid Waste Rates

- Gilton might be considered a wholesale service provider, and therefore it may be possible that any increases in solid waste rates from Gilton may be passed on to the City's customers by a pass-through rate adjustment without an additional Proposition 218 hearing, allowed under AB 3030. This study will review the legislation and discuss the inclusion of this adjustment mechanism in the solid waste rates with City staff.

### Financial Plans

- Long term financial plans are needed that addresses the City's infrastructure replacement needs identified by the master plans and the City's current 5-year CIP. The City's enterprise funds should also incorporate financial policies to maintain appropriate reserves while meeting the CIP expenditure challenges. The long term plans will evaluate alternative financing approaches, incorporate capital financing into the rates, and will assist the City in planning for potential debt issuance in future years, should the CIP expenditure plan remain viable.

### Community Outreach

- Integral to the City's requirements is the public outreach component of the study. The findings of this study are likely to result in changes to the water rate structure and may improve how customers are charged. These results need to be communicated to the public to satisfy their questions and concerns as well as obtain buy-in from all stakeholders. We have found that when stakeholders are involved early in the process, e.g. through a workshop format, changes to the rate structure are better understood and generally accepted. This early involvement often smoothes the way during the Proposition 218 notification and hearings process.



# SCOPE OF WORK

Based on our understanding of the City's needs, the project team proposes to perform the following scope of work.

## Task 1 - Kick-off Meeting and Request for Information

Tuckfield & Associates will meet with City staff to discuss the project work plan, schedule, and the goals and objectives of the project. Prior to the meeting, our team will submit a request for information to be gathered by City staff. The information request will include, but not be limited to, audits, recent and current budgets, water and sewer master plans, design reports, City projection of capital expenditures, electronic database of five (5) years of historical customer billing information, debt service schedules, related ordinances, and others. Information received will be reviewed and organized for use in the rate study.

Meetings: One

Topics: Goals, objectives, policy, discussion on possible rate structures

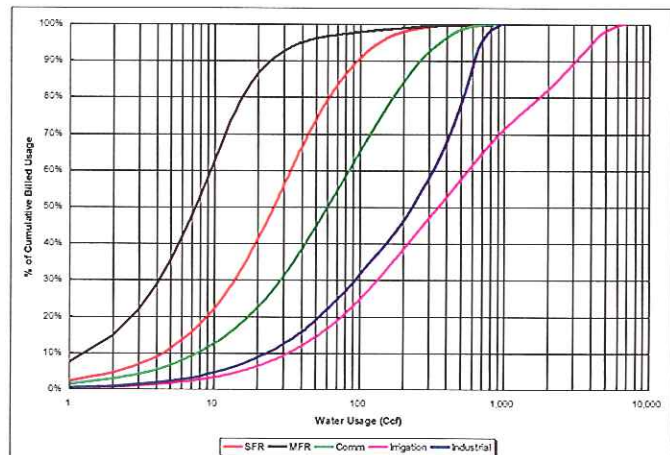
Deliverables: Request for Information

## Task 2 - Financial Planning

The objective of this task is to develop a 10-year financial plan for each utility, projecting the water, wastewater, and solid waste utilities revenue and revenue requirement for the study period. This task requires an assessment of revenues based on the existing rates and fee schedules, the City's ability to meet projected revenue requirements, and the determination of the level of revenue adjustments and additional financing requirements.

### Task 2.1: Perform Bill Frequency Analysis

To assist the City to better understand its consumption trends, we will develop and examine usage patterns of the customer classifications. Bill histograms will be prepared for the water system classifications that will show the distribution of bills by level of consumption. This analysis allows a better understanding of how water is consumed and potential impacts on customer bills. From the analysis, we will project future water consumption.



Example Usage Patterns of Customer Classifications

### Task 2.2: Review Financial Information, Policies, and Practice

Our team will review and evaluate the City's operating and capital reserve, financial, and rate policies and recommend appropriate changes that will enhance the utility's ability to meet its financial goals. The policy recommendations will include developing target reserve levels for each utility's operating and capital programs and infrastructure replacement funding from operations as well as debt service coverage designed to allow the City to enhance revenue sufficiency and rate stability.



### **Task 2.3: Develop Revenue Requirements**

This task includes the identification and projection of the annual revenue requirements of the water, wastewater, and solid waste utilities. The project team will identify and project budget items and any future costs identified as well as prepare a ten-year forecast. Costs typically include operation and maintenance expenses; future capital improvements including annual replacements, additions and improvements, and extensions to the system; outstanding debt; use of reserves, and any transfers to/from the water, wastewater, and solid waste funds. Revenue requirements will be projected over the planning period based on historical results, the City's current budget, capital improvement plan, existing debt service, and current economic trends while accounting for expected operational changes and system growth.

### **Task 2.4: Develop Long Range Financial Plans**

In this task, we will develop a 10-year cash flow to compare revenue under the existing rates to projected revenue requirements over the planning period. Revenues will be projected by developing assumptions regarding customer growth, consumption per account, total consumption, total production, and system losses while using the existing rates and charges. Revenue requirements will be utilized from Task 2.3.

The cash flow will be analyzed to determine if any revenue adjustments are needed to meet the revenue requirements and to explore methods to minimize rate spikes in any one year. Various scenarios will be developed from a Base Case scenario that modifies financial planning variables such as inflation, customer growth, capital spending, reserve levels, and consumption reductions. It is anticipated that up to 10 scenarios will be developed and summarized into a matrix or graphical format.

The plans will also recognize financial planning criteria developed for the City's utility operating funds in Task 2.2. Financing of capital costs from rates, debt, grants, taxes, or loans will also be analyzed. Depending on the outcome of the annual adjustments, an annual inflationary index may be proposed. Possible rate structures used to generate the revenue will also be discussed.

Meetings: One

Topics: Bill frequencies, financial plans, possible rate structures

Deliverables: handout materials

## **Task 3 - Cost of Service Analyses**

The cost of service phase of the study will focus on allocation of costs (revenue requirements) to customer classifications based on cost causative methodologies. The allocations will be based on standards using the AWWA Manual M-1 and the WEF manual for the water and wastewater utilities, respectively. Cost allocations for the water utility will likely follow the commodity-demand methodology based on the size of the City and its financial accounting practices. The wastewater allocations will also comply with SWRCB guidelines to ensure that the City can qualify for low interest loans from this source if needed.

### **Task 3.1: Analyze Customer Class Usage Patterns and Recommend Customer Classifications**

The historical billing summaries will be reviewed and analyzed by customer classification to determine water consumption characteristics, such as patterns of use and average and peak usage. Any anomalies will be reviewed and any changes to customer classifications will be identified.



**Task 3.2: Allocate Costs to Functional Cost Components**

The costs of the water, wastewater, and solid waste systems will be allocated to functional cost components, providing the basis for pricing in the rate structure. Functional cost components for the water system will likely include customer, commodity, and demand costs or fixed and variable. Cost components for the wastewater system will likely include wastewater flow, BOD, and SS.

**Task 3.3: Distribute Functional Costs to Customer Classifications**

Costs that have been allocated to functional cost components are distributed to the various customer classifications on the basis of the relative responsibility of each classification for the service provided. Unit costs are developed for the functional cost components, which are then applied to each customer classification’s respective units of service to determine costs by class.

**Task 4 – Rate Structure Analysis and Rate Design**

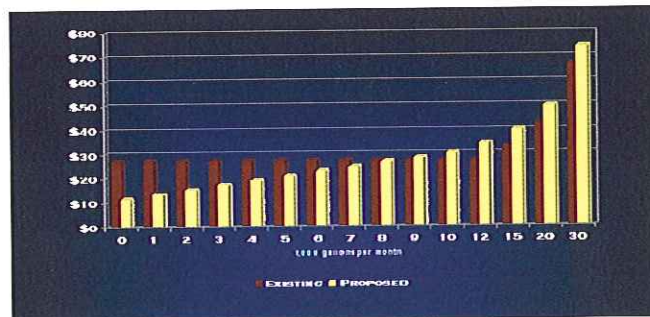
The allocated costs (revenue requirements) will be recovered through water, wastewater, and solid waste rate structures designed to stand alone as separate revenue sources. The rate structures and rates will provide for recovery of revenue requirements, demands for service, and capital funding needs.

**Task 4.1: Evaluate Rate Structures and Calculate Rates**

Rate schedules for at least two of the rate structures that were discussed with City staff in the meeting from Task 2 will be calculated. One of the structures that will be used is the City’s existing rate structure. While it is recognized that rate-making may be considered somewhat of an art, we will work within broad industry guidelines to achieve the goals and objectives desired by the City. The rate structures will be cognizant of the effect of pricing on demand and a recommendation will be made as to which rate structure best meets the City’s situation. All rate structures presented will comply with industry practices for rate setting in California.

**Task 4.2: Determine Bill Impacts**

Tuckfield & Associates will determine the potential financial impacts to customers that may result from the rate structure and rates change. A series of tables and figures will be presented that show projected rate impacts on different types of customers at different levels of usage.



*Graphic Showing Comparison of Bills Calculated Using the Existing Rate Structure Contrasted with the Proposed Rate Structure*

**Task 4.3: Bill Comparison With Other Communities**

Rate schedules will be gathered from other local communities for the purpose of calculating single family residential (SFR) typical bills at various levels of usage. At least 10 communities will be included and will be chosen for analysis as agreed upon between the City and the team’s project manager. The bills will then be compared with typical bills prepared using the City’s proposed rate structure. The bills will be presented in a chart(s) that allows visual inspection of how the bills change with increasing usage.



Meetings: One  
Topics: Discuss rate structure results and impacts to bills with City staff  
Deliverables: handout materials

## Task 5 – Report Preparation

### Task 5.1: Draft Report

The financial plans, cost allocations, and proposed rates will be documented in a preliminary report. The draft report will include an executive summary highlighting the major issues, assumptions, and findings and recommendations. Sections will be included that discuss the financial plans, cost allocation methodologies, and the design of the proposed rate structures and rates.

Meetings: One  
Topics: Present Draft Report  
Deliverables: five (5) copies of Draft Report, one unbound copy

### Task 5.2: Final Report

Comments received from City staff will be incorporated into the final report. The final report will address any appropriate issues or concerns raised by City staff and include any supporting data required.

Deliverables: five (5) copies of Final Report, one unbound copy

## Task 6 – Rate Adoption

### Task 6.1: Proposition 218 Notices

In this task, we will assist the City's legal counsel in the preparation of the Proposition 218 notices, review the notices, and advise the City as necessary. To comply with Proposition 218, the notices must be sent to all property owners/customers at least 45 days prior to the public hearing. Our team has assisted cities and special districts throughout California with rate implementation and Proposition 218 notices.

### Task 6.2: Public Hearing

The goal of this task is to present final recommendations to City Council and the public. We will make a presentation at one (1) public hearing meeting on the adoption of the proposed rates and rate structures. Our team members have assisted numerous agencies in California with adoption of rates.

Meetings: One  
Topics: Proposition 218 Hearing  
Deliverables: presentation materials

## Task 7 – Public Outreach Meetings

The public and the City may have concerns regarding the outcome of any rate adjustments in terms of reasonableness and affordability. In addition, rate studies are technical and complex and it may be important to communicate these aspects to the public and stakeholders in a question and answer forum. Community meetings allow sharing and receiving of information of concern, including the need and purpose for the study, the findings and results, and the new rate structures and rates.

We propose two (2) community meetings to discuss the rate study elements with the public and stakeholders. The meetings will be facilitated by our team members to provide answers to questions, provide technical assistance concerning the study, and make presentations regarding the rates and their impacts to customer bills. Additional meetings can be provided at our regular billing rates, material cost, and direct expense basis.

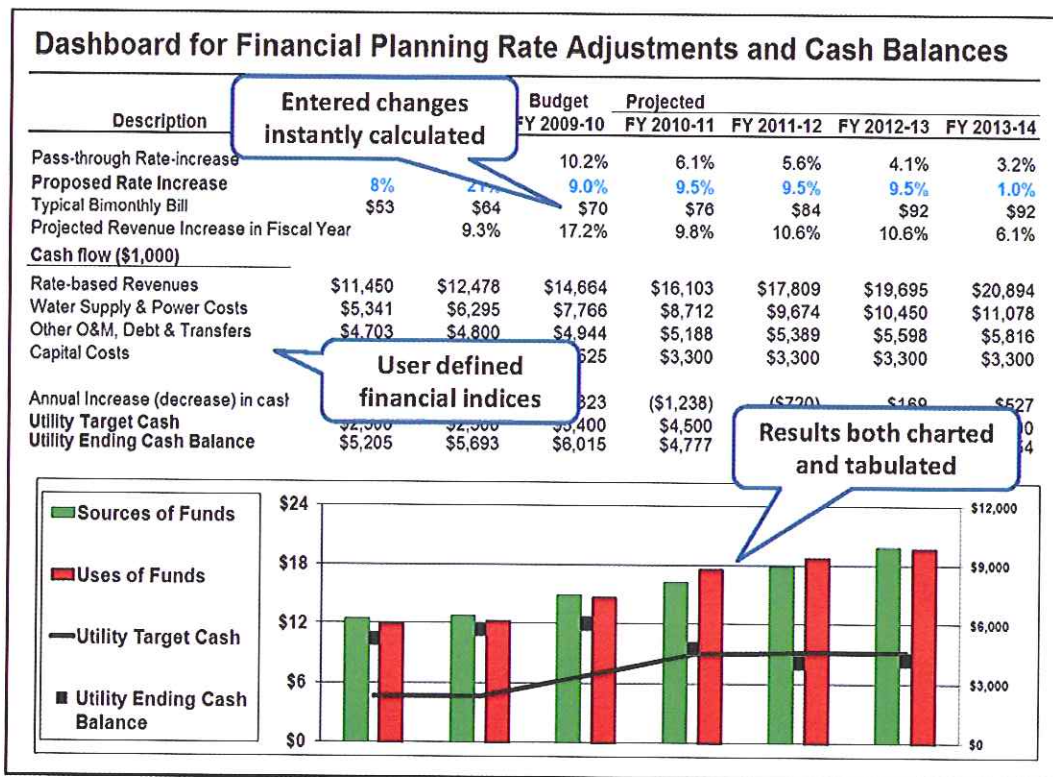
- Meetings: Two
- Topics: All aspects of rate study
- Deliverables: presentation materials as required

### Task 8 - Rate Models

The purpose of this task is to define structure, functions, architecture and use of the rate models to be developed for use by City staff. The objective is to create ownership by City staff of a multiyear financial planning tool that is easy to use and effective in calculating future rates and fees based on rate-based revenue requirements.

The rate models can be complex, with customized tools and a variety of user friendly features, or can be as simple as an Excel spreadsheet without customization. Complex models are driven by control “dashboards” as shown in the figure below. These dashboards are particularly useful in meetings and workshops for conducting “what-if” scenarios.

- Deliverables: Water, wastewater, and solid waste rate models

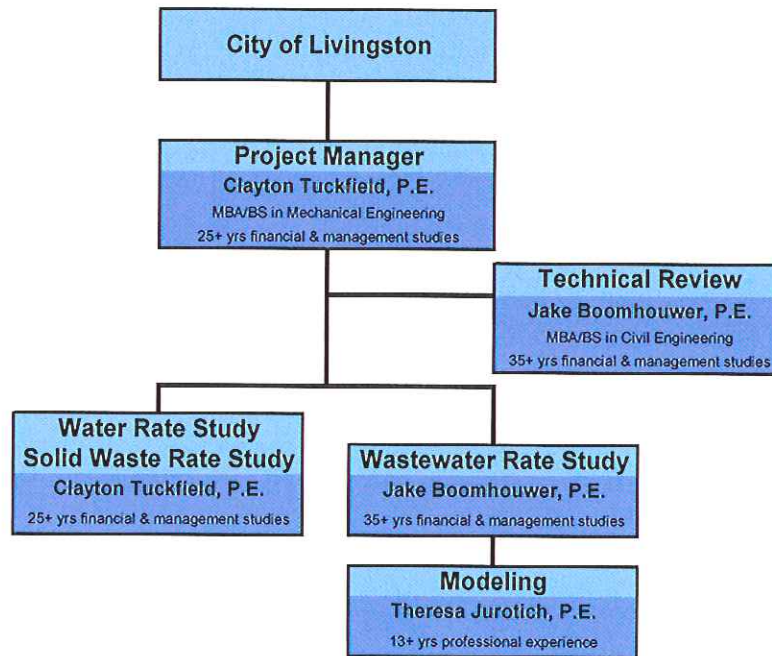




# ORGANIZATION

To meet the City’s objectives, we have assembled a group of team members that have extensive background and experience in areas of importance to the City. Our team consists of experts in utility financial planning, cost of service, rate structures, and utility management. The team members have experience with many methods and strategies with which to accomplish the study with over 80 years of combined experience.

Each member of the project team that will be conducting a rate study is a registered engineer with an advanced degree, who is a skilled professional dedicated to maintaining high engineering and financial standards. Members of the project team have worked together on many engagements very similar to the services requested by the City. Our organizational chart is presented below with detailed resumes presented at the end of the proposal.



*Proposed Organizational Structure*

## Clayton Tuckfield, PE, MBA- Project Manager, Water and Solid Waste Rate Studies

Mr. Tuckfield is Principal of Tuckfield & Associates consulting and will serve as Project Manager for this study. Mr. Tuckfield will be responsible for all deliverables, attend and/or present at all meetings and presentations and will produce key elements of the study. Mr. Tuckfield has 25 years of experience and has performed over 70 utility cost of service and rate studies as well as numerous other financial feasibility studies. Mr. Tuckfield is a registered engineer with a BSME and a master’s degree in business administration. He has prepared presentations and technical papers for trade organizations that include the American Water Works Association and California Special Districts Association. Mr. Tuckfield approaches each study with personalized service, providing easy explanation of study results, with service after the study that creates professional relationships that

span numerous years. Mr. Tuckfield is completing a study for the City of Pismo Beach and will be available for the City of Livingston rate studies on a nearly full time basis to project completion.

### **Jake Boomhouwer, PE, MBA- Technical Review and Wastewater Rate Study**

Mr. Boomhouwer is CDM's national utility rate expert. For this study, he will present and facilitate one City Council meeting, one committee meeting, oversee the study process, and provide a technical review of the deliverables. Mr. Boomhouwer is an engineer with an MBA and has over 35 years of experience in utility financial and management matters. He has prepared numerous rate studies involving determination of revenue requirements, fully allocated cost of service analysis, rate design, and computer model development. Mr. Boomhouwer is a recognized national public speaker on utility rates and financial matters, and has presented hundreds of rate and connection charge study results. Mr. Boomhouwer is expected to provide approximately 10 percent of his time to this project to the estimated completion date.

### **Theresa Jurotich, PE, MS - Rate Modeler**

Ms. Jurotich is a registered mechanical engineer with 13 years of experience in water, wastewater, and energy industries. She will provide rate structure modeling for both studies and cost of service evaluations for the wastewater study. She has served as a financial planner and modeler for CDM on a wide variety of studies, including numerous water and wastewater rate studies, and financial reviews of water capital improvement projects in support of bond financing. She has extensive experience in the utility basis approach for water and wastewater rate development. Ms. Jurotich is available to provide 20 percent of her time to this project to the project completion date.

Each team member listed above is available to work on this project such that the project can be completed in a timely and professional manner within the schedule provided further below.

## **Sub-Consultants**

Contractually CDM will be a sub-consultant to Tuckfield & Associates. However, from the City's perspective, the project team will provide a seamless experience and this proposal has been developed accordingly.

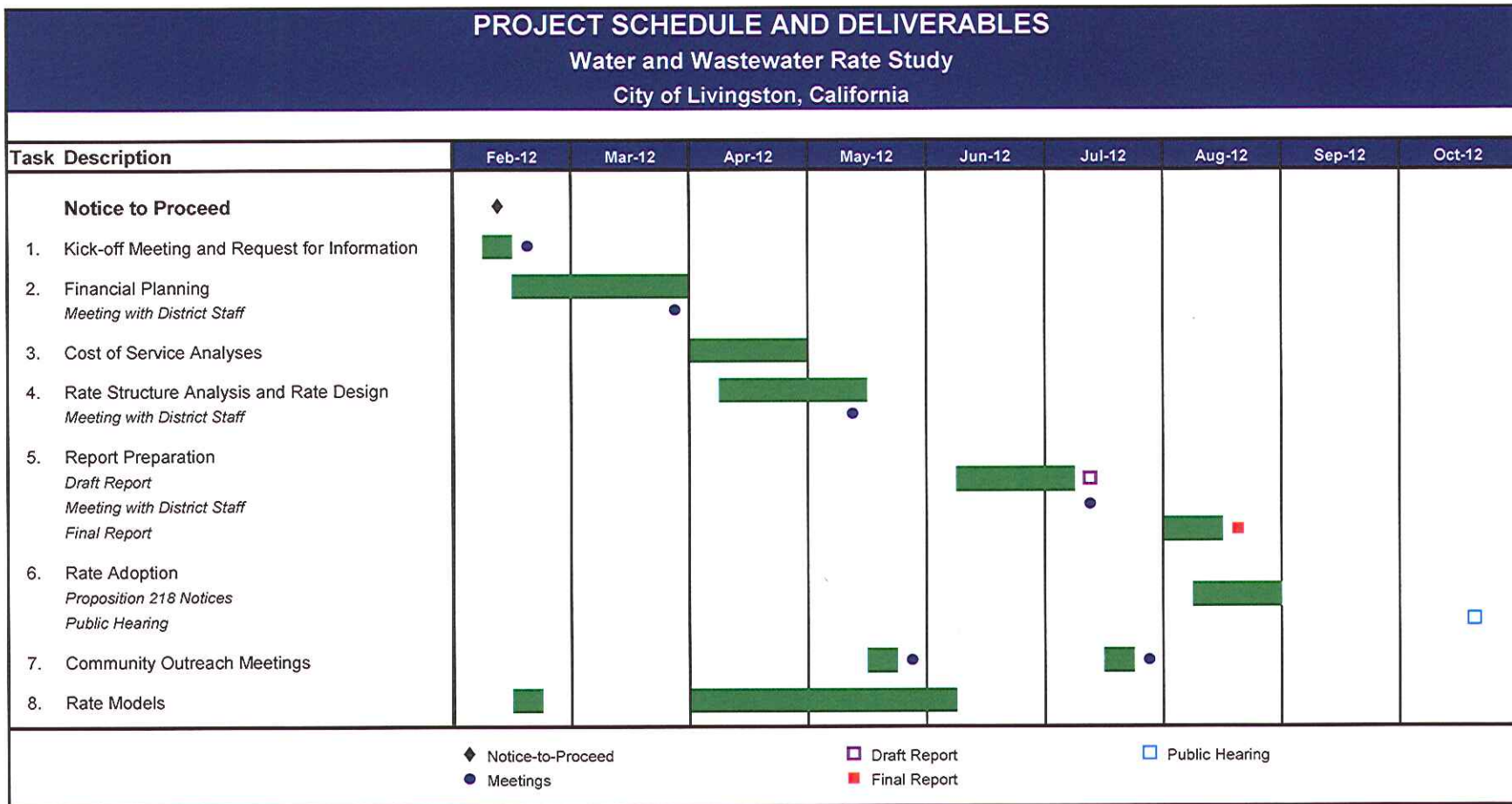
## **Resumes**

Resumes for each team member are provided in the Appendix of this proposal.

# **SCHEDULE**

Tuckfield & Associates has a strong track record of meeting client schedules. Our experience in performing decades of rate studies enables us to meet the City's goals in a timely and efficient manner. A time-line schedule is presented on the following page showing the key milestone and target dates. The core rate studies can be completed in about three months. The actual Public Hearing date may vary depending on public outreach and City Council acceptance.







# OTHER

## Conflict of Interest

Our team currently has no conflicts of interest with the proposed study.

## City Staff Responsibilities

The primary responsibilities for City staff will be to participate in the kick-off meeting and subsequent meetings, and to review and provide comments on the preliminary results from the rate analyses and draft documents. City staff will be involved in making policy decisions with respect to the rate structure. Each of our rate studies is designed to meet the specific needs and objectives of each client, and participation by City staff is essential to defining these needs and objectives.

To meet the project schedule and complete the studies in a timely and efficient manner, the City will need to gather appropriate information for use by the project team. An example of the data requirements necessary to complete the studies is provided below. Prior to the first project kick-off meeting, we will provide a comprehensive request for information to the City.

### Financial Information

- Financial statements for the last five completed fiscal years
- Debt service schedules for outstanding debt for each enterprise (water, wastewater and solid waste)
- Detailed operating budgets for Fiscal Year 2010-11 and the last five fiscal years for each enterprise that also show historical expenses for the same time periods
- Miscellaneous revenue for the past five years for each enterprise
- Current Rate Resolutions for Water, Wastewater, and Solid Waste enterprises
- Any contracts with special or wholesale customers

### Units of Service Information

- Summary of the number of water, wastewater, and solid waste customers by classification and meter size at the end of each of the previous five fiscal years and current year.
- Total billed water consumption and wastewater flows along with corresponding wastewater sales revenue for each of the previous five fiscal years and current year to date.
- Customer Information Database
  - Unique Meter No. or Account No.
  - Meter Size
  - Customer Class (Single Family, Multi Family, Commercial, Industrial, Irrigation etc.)
  - Monthly Billed usage for the previous 60 months read dates or days of services for the corresponding bills



- Lot Size in sq ft
- Building Size or House Foot Print in sq ft (if available)
- Assessor's Parcel Number (if available)
- Measured Landscape Area in sq ft (if available)
- Dwelling Units for each multi-family or mobile home park account

**Engineering Data and Other System Information**

- Capital improvement programs for water, wastewater, and solid waste systems
- Master Plans, Urban Water Management Plan, connection fee reports, new development plans, and other pertinent studies
- Wastewater flow and strength information received at the treatment plant
- Water production information by supply source
- Any Financial Policies of the City including Debt Coverage Ratios, Reserve Policies, etc.
- Any other additional information such as Recycled Water Program, etc.
- Asset data for water, wastewater, and solid waste utilities categorized by function

## **COST PROPOSAL**

A cost proposal is provided under separate envelope.



# Appendix

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## Resumes

## Clayton Tuckfield, P.E.

*Principal, Tuckfield & Associates Consulting*

### Education

M.B.A. – Finance, University of  
Kansas, Lawrence, KS, 1985

B.S. – Mechanical Engineering,  
Kansas State University, 1980

### Registration

Professional Engineer: Kansas

Mr. Tuckfield is the Principal of Tuckfield & Associates consulting. He has over 25 years of experience serving in various capacities on work performed for publicly owned water and wastewater utilities. Mr. Tuckfield has performed a variety of financial feasibility and economic analyses studies including utility cost of service and rate design studies, impact fee studies, development of pro forma statements of revenue and operating expense, cash flow analyses, preparation of engineer's reports for revenue bond official statements, valuations of facilities use plans, preparation of alternative financing plans for capital improvement programs, and development of training material for presentation to international interest groups.

Mr. Tuckfield has conducted or managed over 70 water and wastewater rate studies for various cities and special districts in California and nationwide. Clients have included the cities of Ventura, Long Beach, Santa Barbara, and Fullerton in California and for many other clients. Mr. Tuckfield is familiar with and understands the utility basis approach to setting water rates having completed such studies for the City of Kalamzoo, MI, Battle Creek, MI, and others.

**Water and Wastewater Utility Rate Studies, City of San Buenaventura, Ventura, California.** Mr. Tuckfield has performed rate study updates almost on an annual basis for the City for the past 20 years. He is intimately familiar with City business systems, policies, facilities, and City staff. In the most recent study, Mr. Tuckfield worked with City staff to extend the study period to 10 years, develop various cash flow scenarios for alternative CIP plans, expand water customer classifications to reflect actual operations, developed analyses regarding the City's outside rate differential, and presented draft results to City staff. He has also prepared information for City staff's use for conducting internal meetings on an as needed basis.

**Water and Wastewater Cost of Service and Rate Study, Long Beach Water Department, Long Beach, California.** Mr. Tuckfield was responsible for cost of service and rates for the water and wastewater utilities for the City. The project work included development of utility rates to promote water conservation and to allow easy implementation and acceptance. The work effort also included development of computer models to enable the Department to annually review utility rates. The project included working closely with a departmental task force to develop alternative rate structure for eventual implementation.

**Wastewater Rate Study, City of Santa Barbara, California.** Working as a sub consultant to a large regional consulting firm, Mr. Tuckfield performed a wastewater rate study for the City that involved



developing a revenue plan, allocating costs, and designing several rate structures that included fixed and variable components. The revenue plan review noted a low cash reserve level because the City had included other assets into its beginning fund balance. The study identified necessary rate increases that were adopted by City Council. Justification of the current cost allocations was also performed.

**Water and Wastewater Rate Study, City of Arroyo Grande, California.**

Mr. Tuckfield has had a long standing relationship with the City, spanning over a decade of successfully completed water and wastewater rate studies including studies in 1999, 2003, 2006, and in 2009. In the 2009 rate study, a major objective was to make recommendations to address significant cost increases in surface water supply from Lake Lopez, which is managed by the County. An alternative to the existing accounting was developed that shifted the surface water supply O&M to the volume charge component of the water rate over a five-year period. These costs were previously captured in a separate fund and recovered through bi-monthly fixed charges. This recommendation resulted in lower bi-monthly water bills for low water consumers while maintaining almost no change in the bi-monthly bill to the average water consumer. The City Council adopted the recommendation.

**Water and Wastewater Rate Studies, City of Grover Beach, California.**

Mr. Tuckfield recently completed a comprehensive Water and Wastewater Rate Study for the City of Grover Beach. The objectives of the study were to plan for increased charges for water supply and wastewater treatment services, maintain debt service coverage ratios for future anticipated debt issues. The City also planned to construct significant capital improvement projects for both utilities and rates were established to meet all future obligations for a 5-year study period.

**Water Utility Rate Study, City of Fullerton, California.**

Working with a City organized task force, this study included a detailed analysis of the City's Water Fund. Mr. Tuckfield developed pro forma revenue, revenue requirements, and cash flows including review of the water utility program costs for reasonableness, which resulted in a recommendation to reallocate some of the utility overheads. Costs were compared to other local cities including various operational ratios and franchise fees. The task force accepted the recommendations including cash flow, cost of service allocations and rate design. The proposed utility rates were adopted by the City Council.

**Wastewater Utility Rate Study, Santa Cruz County Wastewater**

**District, Santa Cruz, California.** Completed study of revenue and revenue requirements, cash flow, capital financing plan, cost of service, and rates. Provided a computer model to assist utility staff for annual rate reviews. Reviewed ordinances relating to the wastewater utility.

### *Other Water and Wastewater Rate Studies*

City of Avondale, AZ	City of Georgetown, TX	City of Pismo Beach, CA
City of Battle Creek, MI	City of Homestead, FL	City of Sioux City, IA
City of Brawley, CA	City of Imperial Beach, CA	City of Sioux Falls, SD
City of Charleston, CA	City of Imperial, CA	City of Westmorland, CA
City of Chesapeake, VA	City of Kalamazoo, MI	DuPage County, IL
City of Fayetteville, AR	City of Long Beach, CA	Mission Springs WD, CA
City of Firebaugh, CA	City of Modesto, CA	San Miguel CSD, CA
City of Flagstaff, AZ	City of Orange Cove, CA	Templeton CSD, CA
City of Florence, AZ	City of Peoria, AZ	Town of Cave Creek, AZ
City of Fullerton, CA	City of Phoenix, AZ	

### *Municipal Bond Feasibility Studies*

City of Alexandria, LA	City of Salem, OR	Litchfield Park, AZ
City of Kansas City, MO	City of Tacoma, WA	Memphis Gas, Water, TN
City of Owensboro, KY	Eugene Water & Elec, OR	San Diego WD, CA

### *Other Feasibility Studies*

City of Brownsville, TX	-	Electric Utility Rate Study
City of Detroit, MI	-	Organizational Study
City of Phoenix, AZ	-	Impact Fee Review
County of Maui, HI	-	Pretreatment Program
Imperial Irrigation District, CA	-	Financial Feasibility Study
Imperial Valley Task Force, CA	-	Financial Alternatives Study
MWD of Southern California, CA	-	Review of New Demand Charges
Saudi Consolidated Electric Co.	-	Elec Gen, Econ Dispatch Model
Texas A&M University, TX	-	Power Supply Alternatives Study
United Water Conservation Dist	-	Water Supply Pricing Model

## **PUBLICATIONS/PRESENTATIONS**

"Value of Rate Study in Project Finance", CSDA November/December 2011 Magazine, Sacramento, California

"Role of Rate Study with USDA Financing", CSDA Webinar, September 22, 2011, Sacramento, California

"Committee Involvement Facilitates Rate Implementation", AWWA Annual Conference and Expo, Toronto, Canada

"Arizona Utility Rates", ASCE Arizona Fall Conference, Phoenix, Arizona

"Utility Rate Seminar", Arizona Finance Officers Association, Spring Meeting, Flagstaff, Arizona



## Jacob Boomhouwer, P.E.

*Vice President, CDM Smith*

### Education

M.B.A. – Finance, University of  
Missouri-Kansas City, 1977

B.S. – Civil Engineering,  
Carnegie-Mellon University,  
1968

### Registration

Professional Engineer:  
California, Missouri (1976), and  
Wisconsin

Mr. Boomhouwer is a senior project manager with over 35 years of experience and has served on water, wastewater, stormwater, and solid waste utility management and financial projects including management reviews, cost of service analyses, operations reports, financial feasibility studies, accounting system development, rate studies, and economic evaluations. Mr. Boomhouwer is an expert at performing cost of service studies utilizing the utility basis of analysis to determine rates for wholesale users or outside city users. He helped with the writing of the AWWA M1 Water Rate Manual in 1983. He has made hundreds of presentations to City Councils, Boards and other governmental bodies on the results of studies under his direction. In addition, he has gone before numerous bond rating agencies and insurance companies to present the results of feasibility studies performed under his direction.

### *Cost of Service Studies*

**Project Manager. Wastewater Rate Study, El Cajon, California.** Mr. Boomhouwer just completed a cost of service study to determine new wastewater rates for the City of El Cajon. The City had not adjusted rates for 12 years and was experiencing significant negative cash flow relying on reserves. The result was that a large increase was needed to restore the sewer fund to a balanced condition. Meetings were held with the City Council to discuss the plan. A proposition 218 hearing was held on November 8, 2011 where the new rates were approved unanimously.

**Project Manager. Water Financial Planning Study, City of Glendale, California.** Mr. Boomhouwer completed a financial planning study for the City of Glendale's water utility. The study included evaluating the sale of bonds to finance needed capital improvements as well as establishing an on-going replacement program to address aging infrastructure.

**Project Manager, Water Rate Study, City of Camarillo.** CDM completed a Water Rate Study for the City of Camarillo. Due to significant increases in imported water costs, a large capital improvement project, and need to reduce water usage the ability of the water system to remain financially self-sufficient became a concern. Mr. Boomhouwer undertook a thorough analysis to ensure recovery of actual costs associated with the services the water utility provided. As a result of the above determinations and requirements, a recommended schedule of water rates that would help encourage conservation yet also meet revenue requirements was prepared.

**Project Manager. Water Rate Restructuring Study, Louisville Water Company, Louisville, Kentucky** Mr. Boomhouwer recently completed a water rate restructuring study for the Louisville Water Company. New rates were implemented January 1, 2011 and represented the first change in over 25 years. The new rates simplify the rate structure as well as implement rates



to encourage efficient use of water. In addition, rates for wholesale users were developed utilizing the utility basis of analysis.

**Project Manager. Water and Wastewater Cost of Service Studies, Kansas City, Missouri.** Mr. Boomhouwer completed water and wastewater rate studies for Kansas City from 2007 to 2010. The rates were developed using the utility basis of analysis in order to derive wholesale rates for over a dozen regional cities and districts that are served by Kansas City. Annually, after development of the new rates, meetings were led by Mr. Boomhouwer with all the wholesale purveyors to explain the analyses and basis for any adjustments.

**Project Director. Water and Wastewater Rate Study, San Francisco, California.** Mr. Boomhouwer served as project director for a comprehensive financing and rate study for the City of San Francisco's water and wastewater utilities. Mr. Boomhouwer was responsible for presentation of results to the San Francisco Public Utilities Commission.

**Project Director. Water and Wastewater Rate Study, City of San Diego, California.** Mr. Boomhouwer served as project director for comprehensive cost of service and rate studies for the City of San Diego's water and wastewater utilities. The study also included development of revised capacity charges.

**Project Manager. Water Rate Restructuring Study, Indianapolis Waterworks Department, Indianapolis, Indiana** Mr. Boomhouwer is currently working on a water rate restructuring study for Indianapolis Water. The goal is to implement water conservation oriented rates. The cost analyses utilized the utility basis as required by the Indiana Utility Regulatory Commission.

**Project Manager. Water Rate Restructuring Study, New York City DEP, New York, New York** Mr. Boomhouwer served on a team of consultants studying alternative water rate structures for New York City.

**Project Manager, Review of Cost Allocation Methodology, United Water Conservation District, California.** Mr. Boomhouwer assisted in the review of the District's existing Water Supply Agreement with users of the Oxnard Hueneme (OH) Pipeline. He also developed a cost allocation model used to determine rates for use of the OH Pipeline. The objective of the model was to ensure continued compliance with the Agreement along with improvement in the rate setting process which will lead to rate stabilization over the long run.

***Other Water or Wastewater Rate Studies -- Project Manager***

Wastewater Rate Study, City of Salinas, California.

Water Rate Study, Fullerton, California

Wastewater and Water Rate Study, City of Inglewood, California

Wastewater Rate Study, City of Redondo Beach, California



Water and Sewer Rate Study, Coalinga, California  
Water and Sewer Rate Study, Loma Linda, CA  
Water Rate Study, Coastside Water District, Half Moon Bay, California  
Water and Sewer Rate Studies, City of Glendale, Arizona.  
Water and Wastewater Rate Study, City of Yuma, Arizona  
Water and Wastewater Rate Study, City of Scottsdale, Arizona.  
Water Rate Study, Columbus, Ohio

### ***Bond Studies -- Project Manager***

San Diego Water Department, San Diego, California  
Louisville Water Company, Louisville, Kentucky  
Sacramento Regional County Sanitation District, Sacramento, California  
Sacramento Area Sewer District, Sacramento, California  
Tampa Bay Water Authority, Tampa, Florida  
City of Phoenix Water Department, Arizona  
City of Atlanta, Bond Feasibility Study, Atlanta, Georgia  
Western Carolina Regional Sewer Authority, Greenville, South Carolina

### ***Management Studies -- Project Manager***

Management Audit of the Solid Waste Division, Tacoma, Washington.  
Management Audit of the Solid Waste Utility, Spokane, Washington  
Management Review of the Water Department, San Diego, California  
Water Capital Improvement Program Evaluation, Seattle Water Department  
Customer Service Division Reengineering Study, Phoenix, Arizona

### **Professional Activities**

Member, American Water Works Association, Water Environment Federation  
Past Treasurer, AWWA California-Nevada Section

### **Publications/Presentations**

"California Changes Water Rates in Response to Drought," co-authored with Karyn L. Johnson, presented during the December 1993 Conserve93 Conference in Las Vegas, Nevada.

Utility Rates Seminar, Arizona Finance Officers Association, Flagstaff, Arizona, August 1997.

"California Water and Wastewater Rate Surveys" for 1991, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, and 2003.

"How to Successfully Set Rates for Multi-Community Regional Facilities," AWWA National Conference, San Francisco, CA, June 2005.

"Water Conservation Rates and Revenue Protection," Illinois Section AWWA, Springfield, IL, March 2010.

## Theresa M. Jurotich, P.E.

*Senior Financial Analyst, CDM Smith*

### Education

M.S. – Science & Technology  
Studies, Virginia Polytechnic  
Institute and State University,  
2003

B.S. - Mechanical Engineering,  
University of Missouri, 1996

B.A. – English, University of  
Missouri, 1996

### Registration

Professional Engineer: Kansas  
(2001) and Washington

### Certification

Certified Energy Manager

Ms. Jurotich has 13 years of experience in the water and wastewater industries and in the energy industry, split between traditional and alternative technologies. She is skilled in leading feasibility studies and economic analyses (including development of pro forma model inputs) for water and wastewater system capital improvement projects, as well as a variety of traditional and renewable energy technologies. Ms. Jurotich routinely performs water, wastewater, and stormwater rate studies, including investigating alternative rate structures, conducting utility basis evaluations of outside city rates, and bond financing feasibility studies.

**Financial Analyst, Wastewater Rate Study, El Cajon, California.** Ms. Jurotich developed a financial plan and performed a cost of service study to determine new wastewater rates for the City of El Cajon. The City had not adjusted rates for 12 years and was experiencing significant negative cash flow relying on reserves. The result was that a large increase was needed to restore the sewer fund to a balanced condition. Meetings were held with the City Council to discuss the plan. A proposition 218 hearing was held on November 8, 2011 where the new rates were approved unanimously.

**Project Manager, System Development Fee and Miscellaneous Service Fee Update, City of Coachella.** Ms. Jurotich is managing and conducting the study to update the system development fees for the water and sewer enterprises, as well as the miscellaneous service fees for both enterprises. Some of these fees have not been reviewed for 15 years.

**Project Manager, Water and Sewer Financial Plan and Rate Study, City of Inglewood.** Ms. Jurotich is managing this study as well as developing the 10-year financial plans for both the water and sewer enterprises. She is also developing a rate increase schedule to help pay for necessary capital improvements and as suggested improved rate structures that are easy to administer and easier for customers to understand. She is managing the sub-consultant performing the system development fee update.

**Financial Analyst, Water Wholesale Rate Study, Billings, Montana.** Ms. Jurotich is performing a wholesale water rate study for the City of Billings in conjunction with the City's efforts to update their retail water rates. The wholesale rate analysis is being done on a utility-basis.

**Financial Analyst, Water Rate Study, Kansas City, Missouri.** Ms. Jurotich updated the water rate model for the City of Kansas City, Missouri, in anticipation of their annual water rate adjustment. The adjustment is based on anticipated O&M and capital improvement costs, as well as projected water usage. During the most recent update, Ms. Jurotich also developed an alternative rate structure promoting efficient use of water for consideration by the city. The rate analyses were performed on a utility-basis.



**Financial Analyst, Rate Restructuring Study, Louisville, Kentucky.** Ms. Jurotich worked closely with Louisville Water Company in an iterative process to evaluate their current water rate structure and various different structures to help the Company better allocate costs and revenues among customers. New rates were implemented January 1, 2011; representing the first structural change in over 25 years. The new rate simplify the structure as well as implement rates to encourage efficient use of water. Wholesale rates were developed using the utility basis method.

**Financial Analyst, Rate Restructuring Study, Indianapolis, Indiana.** Ms. Jurotich worked with the City of Indianapolis, Department of Waterworks and key stakeholders to develop alternative water rate structures and the pros and cons associated with each structure relative to DOW's goals and objectives regarding water conservation during peak periods.

**Financial Analyst, Rate Restructuring, New York City Water Board, New York City, New York.** Ms. Jurotich participated in a benchmarking survey of large water and wastewater providers along with other project team members. She evaluated possible conservation water rate structures for the city.

**Financial Analyst, Water Rate Study, Santa Clarita, California.** Ms. Jurotich developed a water rate model for the Santa Clarita Water Division (SCWD) that incorporated user account information and usage history, revenue requirements, and anticipated capital improvement projects. This work was part of a larger effort to examine alternative rate structures for SCWD.

**Financial Analyst, Water Rate Study, Goleta, California.** Ms. Jurotich is performing a water rate study for the City of Goleta that is in compliance with Proposition 218 requirements.

**Financial Analyst, Water Rate Structure Study, Glendale, California.** As part of the development of a long range utility financial plan, Ms. Jurotich evaluated current water rates, historical and future revenues, and the need for rate increases to support needed capital improvement projects.

**Financial Analyst, Bond Feasibility Study, San Diego, California.** Ms. Jurotich performed a bond feasibility study on behalf of the City of San Diego to support their capital improvement program. This work entailed reviewing the city's rate and debt models, independently verifying cash flows, and accessing the city's ability to meet reserve requirements and minimum debt service coverage ratios.

## **Papers/Presentations**

"Developing Water Tariffs for a Sustainable Future." Published and presented at Arab Water Week 2010, Arab Countries Water Utilities Association, Amman, Jordan, 2010.