



CITY OF BEVERLY HILLS
PUBLIC WORKS SERVICES DEPARTMENT
MEMORANDUM

TO: Public Works Commission
FROM: Trish Rhay
DATE: February 27, 2014
SUBJECT: Triton Water Customer Web Interface Software

On October 10, 2013, the Public Works Commission received a presentation of Triton, a new web based customer interface software, that Public Work Service and Information Technology Divisions were evaluating. The site will allow individual account holders to view their water usage and manage user settings in a user profile. The site will be user friendly, intuitive, and accessible by water customers. At this meeting, the commission supported the implementation of this new software.

Since October, City staff have been working with the vendor to finalize the scope of work for the implementation of this system. Attached is the proposed Scope of Work, implementation schedule and cost for your review and comment. Following the commission review and comment, the contract will be forwarded to City Council for award authorization.

Triton Water Tracker Overview

The site will allow individual account holders to view their water usage and manage user settings in a user profile. The site will be user friendly, intuitive, and accessible by water customers.

The site will display a graph of the account holder's daily water usage. Included will be an easy to use navigation tool and will be available on all pages on the site.

Graphical view options include Annual Consumption, Monthly Consumption, Weekly Consumption, Daily Consumption, and Every-Six Hour Consumption.

All graphs will include the ability for drill-down navigation. For example, the account holder can click on a particular month's consumption to display the daily consumption values for that month. The City will include links to water conservation sites on the homepage.

If a continuous flow is identified, the site will display an alert and any notifications the user has requested will be sent out. An estimated calculation for the rate of flow and cost caused by the continuous flow is available to using stacked bar charts. This will help the customer assess the urgency of the situation and assist in determining an appropriate fix. An additional link to a page that explains continuous flow severity will be included next to the alert.

Customer Settings will be accessible from the navigation tool. This page will provide a location to update the customer's email address and phone numbers. Automatic messages will be sent to all account holders every six months to remind them to update their account information.

Account holders will also be able to set notifications if usage exceeds a customer defined limit. The user will be able to select a period length (daily, weekly, and/or monthly) and a measurement (gallons, cubic feet or cost). This limit level will appear as a bar on the chart on the daily, weekly, or monthly consumption screens. The settings page will allow the user to set the continuous flow and customer defined notification frequency: daily, weekly, or monthly (daily will be the default), including setting a maximum level to allow for a continuous use that will not generate a notification.

EXHIBIT A
SCOPE OF WORK

1.0 OVERVIEW

Contractor shall provide the City of Beverly Hills (City) with a comprehensive Water Tracking and Reporting System (the "System"), which shall include both a publically accessible website (the "User Site"), and a City Administrator website (the "Administrator Site"). The System shall include a database of all water meter readings collected by the City.

2.0 USER SITE

Contractor shall ensure that the User Site enables water users to access their water usage information with an intuitive and interactive user interface. The System will provide monthly, weekly and daily feeds for the purpose of connecting the users to the City's interactive voice response system for customer notifications. Individual account holders will be able to view their water usage and manage their user settings from the account holder's user profile. Settings will include setup of alerts for continuous flow notifications, self-defined limits for monthly, weekly and/or daily notifications, and the ability to setup reports for consumption history for viewing or download.

2.1 Login and Authentication

(a) Triton shall provide a user login page that requires the user to create a username and password for access to the System. Each user will be required to enter a valid water utility billing account number for verification purposes. The login page will also provide the user with the ability to reset forgotten passwords.

(b) Triton's login page will authenticate the user by connecting to the City's internal authentication processing system, which shall be a mutually agreed upon industry authentication standard. As part of this authentication process, the City will provide Triton with specific user account information to ensure that each user only has access to view or download the appropriate account information.

2.2 Default & Customized Landing Pages

(a) Contractor shall provide a default landing page that displays a graph of the account holder's daily water usage with an easy to use navigation tool. The navigation tool will be displayed on all pages accessible by the users.

(b) The landing page will provide multiple view options for users to customize their landing pages, including Consumption, Monthly Consumption, Weekly Consumption, Daily Consumption and Every-Six Hours Consumption graphs. For each of these graphs, the x-axis will show time and the y-axis will show volume in cubic feet, gallons, billing units and dollars. All graphs will include drill-down navigation. For example, the account holder will be able to click on a particular month's consumption to display the daily consumption values for that month.

(c) The City will have the ability to include links to water conservation sites on the landing page. To post any links, the City will provide Triton support the links, and Triton support will post the links within 24 hours of receipt.

(d) If a continuous flow has been identified, the account holder's landing page will display an alert and one or more notices will automatically be sent to the user. Contractor shall ensure that an estimated calculation of the rate of flow and cost incurred from the continuous flow is included for the user to view in gallons/cost per month, gallons/cost per week and gallons/cost per day, using stacked bar charts or a similar representation.

(e) Contractor will include a link to a page that explains continuous flow severity and include this link in each alert. City will provide Triton support the content of this page and Triton support shall post the link within 24 hours of receipt.

2.3 Continuous Flow Calculation & Severity

For a user, continuous flow is defined using the following calculations:

(a) First: Identify accounts with a "2" continuous flow alarm sent by Star's daily meter data file.

(b) Second: Define the continuous flow time period. Continuous flow time period is the shorter of the two: last seven days or the number of days since alarm '2' start day.

(c) Third: Identify the largest common volumetric flow rate (continuous flow amount) among the readings for the duration of the continuous flow time period.

(d) Fourth: Extrapolate continuous flow usage over daily, weekly, and monthly timeframes. For example, to find daily, multiply the continuous flow amount (6-hour usage) by 4 to get volume of continuous flow for the day.

(e) Fifth: Identify account type (single family, multi-family, commercial, etc.)

(f) Sixth: Determine severity of continuous flow based on City defined parameters for low, medium, high and extreme continuous flows based on account type.

2.4 Annual Consumption

This screen will present a yearly history of water usage defaulting to the current year. This graph will have water usage in billing units, cubic feet, gallons or dollars options on the vertical y-axis and 10 years on the x-axis. This data shall also be available in a tabular format with the option to download a Microsoft Excel file or generic comma separated value spreadsheet to the account holder's desktop.

2.5 Monthly Consumption Screen

Monthly consumption screen will present the previous 12 months of data and allow customers to search any past monthly period (up to 10 years). The monthly charts and tables shall have water usage in billing units, cubic feet, gallons or dollar options for the y-axis and the previous 12 months on the x-axis. If the account holder has a predefined usage limit, which is defined by the user in the settings page, a bar at that level will appear on the monthly chart. For months in

the current billing cycle, either a tabulated monthly total (completed months) or an estimated total (current months) will be shown.

2.6 Weekly Consumption Screen

The account holder shall have the option to view weekly charts. After selecting the weekly chart option, the account holder is presented with the last 4 weeks of consumption in a chart and tabular format. If the account holder has a predefined usage limit, a bar at that level will appear on the weekly chart. The weekly data shown will be a weekly total of all consumption recorded by the advanced metering infrastructure (AMI) system.

2.7 Daily Consumption Screen

The account holder shall have the option to view daily charts. After selecting the daily chart option, the account holder is presented with the days of the current month. If the account holder has a predefined usage limit, a bar at that level will appear on the daily chart. The daily data shown will be a total of all consumption recorded by the AMI during the 24-hour period.

2.8 Every Six-Hourly Consumption Screen

The account holder shall have the option to view every-six hours of data in charts. After selecting the hourly chart, the account holder shall be presented with the hours of the day of consumption in six-hour blocks.

2.9 Customer Settings

(a) Customer Settings shall be accessible from the navigation tool. The settings page shall provide a location to update the customer's email address and phone numbers. Automatic messages shall be sent to all account holders every six months to remind them to update their account information. The message content shall be provided by the City. Account holders shall also be able to set notifications if usage exceeds a certain limit. The user shall be able to select a period (daily, weekly and/or monthly) and a measurement (gallons, cubic feet or cost). The user may choose how they want to be notified: via email, text and/or phone call (email will be the default setting). Text and phone call notifications are optional and at the discretion of the City. Triton shall supply the data feeds to the City. The user defined limit will appear as a bar on the chart on the daily, weekly or monthly consumption screens. In addition, notifications will be sent out to notify users of possible continuous flow. The settings page shall allow the user to set the continuous flow notification frequency: daily, weekly or monthly (daily will be the default), including setting a maximum level to allow for a continuous use that will not generate a notification. Continuous flow detection and notification is described further in the Administrator Site.

2.10 Continuous Flow Chart Presentation

(a) Continuous flow chart presentment shall occur in daily, weekly, and monthly views.

(b) The continuous flow shall be presented in a stacked chart view with the bottom portion of the stacked bar in a different color.

(c) The calculation of the quantity of the continuous flow presented in the stacked bar chart for daily, weekly, and monthly view shall be the volumetric flow rate determined in Paragraph 2.3 - the Continuous Flow Calculation & Severity.

3.0 ADMINISTRATOR SITE

Contractor shall ensure that the Administrator Site enables the City to retrieve all of the data over the internet and provides reporting tools, including individual water usage graphs and tables. The Administrator Site shall allow City staff to be able to view account holder information, water use summaries, run custom reports, update water rates or adjust billing periods. The Administrator's Site shall allow an administrator to create or modify staff or team member's access. This page shall include an option to add administrators or users and update their passwords and email addresses.

3.1 Customer / Account Search

The Administrator Site will provide each Administrator with the ability to search for a particular customer or water utility account by entering an account number, name, address or transmitter / meter number and will display the account as the user sees it in the User Site. The account holder's default landing page will display and the administrator shall be able to view and have access to all of the account holder's settings, charts and tables.

3.2 Water Usage Report Screen

The Water Usage Report will show the total water usage from all customers and be customizable based on timeframe (6-hour, daily, weekly, monthly, and yearly) and measurement (gallons and cubic feet). The administrator shall be able to generate reports that identify specific accounts based on a set of criteria (i.e. greater than or less than a certain usage, changes in usage over time, etc.). All reports will also be downloadable in either Microsoft Excel or a standard comma delineated spreadsheet format.

3.3 Continuous Flow Detection Report Screen

(d) A daily report of customer accounts with suspected continuous flows will be generated and presented on the Continuous Flow Detection Report. This report will include account number, number of days the continuous flow has been active, continuous flow category/severity, whether the customer has opted out of notifications, size of average usage and size of continuous flow. City staff will define the parameters that identify an account that has a continuous flow (in addition to the calculations in section 2.3) and will define categories of continuous flows (small, medium, large, emergency). Parameters will include such things as past usage and type of location (residential or commercial). Customers will be notified based on their preferences. An audit log of customers who have opted not to receive notifications of continuous flows will also be available. If a new account is identified as having an emergency continuous flow, City staff will be notified based on settings the Master Administrator sets.

(e) The leak shall be represented graphically in a daily, weekly, and monthly views. If a continuous flow is detected, each user will be linked to an additional page that defines continuous flow severity and potential causes of those continuous flows. The content for this continuous flow severity page shall be provided by City.

3.4 Continuous Flow Threshold

The Administrator shall be able to change and set the default threshold of continuous flow based on account type (single family, multi-family, commercial) defined by City. A user's threshold preference shall take precedence over admin settings. Therefore, if users set their thresholds, then the Administrator will not be able to change the default threshold without going into the users' settings.

3.5 Update Water Rates

The City would like an easy to use user interface that allows the City to enter, save and change water rates as well as the effective date of any rate changes. The City uses a four-tier water rate structure and there are two separate rate structures for customers inside the City and outside the City. The rates entered into this page shall be used in any calculations for the account holder's reports on the Customer Site. When the administrator changes the rates, the customers' graphs will only be adjusted based on the effective date of the new rates.

3.6 Water System Statistics Report

The Administrator Site shall include a specialty report that calculates total monthly consumption summaries for each predefined customer type. Types of customers include commercial, government, industrial, landscape irrigation, agricultural irrigation, single family residential and multi-family residential.

3.7 System Messages

The Administrator shall be allowed to broadcast a message system-wide to all users. Only one message can be displayed at a time. The message shall be able to hold at least 100 characters. At any time, the Administrator shall be able to cancel or change the message through the Administrator Site.

3.8 Billing Period

The capability must exist to allow the City to change the billing period from 60 days to monthly or 30 days.

4.0 ADDITIONAL ITEMS

- (a) Contractor shall provide the City with unrestricted database access.
- (b) Contractor shall provide sufficient storage and backup for at least 15 years of hourly data for each water meter.
- (c) Contractor shall ensure that compound meters have a chart for the high side register, the low side register and a summary chart of the combined registers. Default views will be of the combined registers.
- (d) Contractor shall ensure that the System has the ability to overlay an additional comparative consumption chart in the User Site, (e.g., hourly chart below the daily chart).

(e) Both the User Site and Administrator Site shall operate properly in Firefox 13 and later, Chrome 16 and later, Safari 5 and later and Internet Explorer 8 and later.

EXHIBIT B

SCHEDULE AND RATES OF PAYMENT

City shall compensate Contractor an amount not-to-exceed One Hundred Thirteen Thousand, Five Dollars (\$113,500.00) for all of the Services to be provided under this Agreement, including contingency funds in an amount not to exceed Ten Thousand Four Hundred, Seventy Dollars (\$10,470.00).

MILESTONE	DESCRIPTION	%	PAYMENT
Execution	Contract execution by all parties and issuance of a purchase order by the City	20%	\$20,606.00
User Site	City's acceptance of the User Site	35%	\$36,060.50
Administrator Site	City's acceptance of the Administrator Site	35%	\$36,060.50
Training	2 day training session will be administered to explain the site and its usability, functions and features at 10% of the total contract price Day 1: Overview of Site Usability Day 2: Customer Service Training	10%	\$10,303.00
Subtotal:		100%	\$103,030.00
Contingency	Upon Completion of Contract (to be billed separately upon completion of authorized services)		\$10,470.00
Grand Total Not to Exceed:			\$113,500.00

Contingency funds authorized by City for additional hardware, software, equipment or services shall be payable in full upon contract completion.

Contractor shall submit an itemized statement to City for its services performed as milestones for the project are completed. Invoices shall include documentation setting forth, in detail, a description of the services rendered and the equipment provided. City shall pay Contractor all undisputed amounts of such billing within thirty (30) days of receipt of the same.