## WATER DIJTRICT

## Memo

To: Board of Directors
From: Karl B. Drew
Date: June 17, 2016
Subject: Telemetry Upgrade
The District's telemetry system is used for monitoring the water storage tank levels, one of the CLAWA connections and the chlorination/orthophosphate treatment sites. We current do not use the telemetry for operate or control. We have had our existing telemetry system in operation since 2001 and it was purchased and installed for $\$ 32,750$. The radios that the system uses are no longer available and the system needs to be updated to current technologies.

We have received a quote for updated equipment from McCrometer. The quote for the equipment is $\$ 20,150$ plus tax and shipping. Our personnel are very familiar with the equipment setup and will be able to install the equipment.

The main difference with the updated system is that it uses satellite radios to transmit the data to a central location and then we connect to the central system to access the data. This is a pretty reliable system, although there are times when there are interruptions to local internet service. These interruptions would be more critical if we used the system to make adjustments. Since we use telemetry only for monitoring, we can check the tanks and treatment site manually during the periods of interruption.

Another consideration with using satellite communications is that it has ongoing cost. There will be an annual cost operating of about $\$ 3,400$ for satellite communications and data collection.

In the past when we have looked at other telemetry systems, the cost has always been in excess of $\$ 50,000$. Chris has talked with some local districts that have recently installed telemetry and their costs were in the range of $\$ 300,000$.

The system that we use has served our needs well, though it is now reaching its end of life. I would recommend that the Board approve the upgraded system, with the equipment purchase price not to exceed budgeted amount of $\$ 25,000$.

## PRELIMINARY - NOT A VALID QUOTE

Company: CRESTLINE VILLAGE WATER DIST.
Address: PO BOX 3347
City: CRESTLINE
State: CA Postal Code: 92325
Contact: Chris Heryford
Phone \#: (909) 338-1727
E-Mail: cfheryford@cwater.com
Project Name: SS to Satellite Site Upgrades

| Line \#: | Item Number: | Description: | Qty: | UM: | Price: | Ext. Price: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.000 | 630-6030-100D | ASSY,MINI-SAT PREMIUM FIELD | 13 | EA | \$1,550.00 | \$20,150.00 |
|  |  | includes: Nema Chassis, Multi Mini, coax, 12v 5Ah Battery. <br> Programmable Reporting Interval. <br> REQUEST: 90 minute Reporting Interver <br> Analog Ch\#1 Enabled <br> Digital Status Ch\#1 \& Ch\#2 Enabled | mium <br> . <br> Ev | Radi <br> nts. | Satellite an |  |


| 2.000 | $640-6030-P R 12 B A$ | 12 | EA | $\$ 50.00$ | $\$ 600.00$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | ACTIVATION FEE,PREMIUM <br>  <br>  <br> Activation Charge per station. <br> i Spare station will not be Activated. |  |  |  |  |


| 3.100 | 640-6030-PR12B | SATELLITE CHARGE-PREM., 12,000 | 144 EA | \$20.00 |  | \$2,880,00 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Annual Satellite Data Charges for 12 Stations. 1 Spare Station will not be Activated. 12 Kbytes per station per month. Overages will be billed at $\$ 1.25$ for 1 Kbyte block per station per month. |  |  |  |  |
| 3.200 | 640-6030-199NA | WEBSERVER,21-99 SENSORS | 432 EA | \$1.12 |  | \$483.84 |
|  |  | Annual Data hosting charges based on number of sensors. <br> 3 Sensors $\times 12$ station $\times 12$ months $=432$ |  |  |  |  |
|  |  | 36 Sensors per month |  |  |  |  |
|  |  | Pricing: <br> 1-5 Sensors: $\$ 3.36 /$ sensor/month 6-20 Sensors: $\$ 2.24 /$ sensor/month 21-99 Sensors: \$1.12/sensor/month +100 Sensors: $\$ 0.56 /$ sensor/month |  |  |  |  |
|  |  |  |  |  | Subtotal: | \$3,363.84 |
| All Prices are in US Dollars (USD) Total Quoted: |  |  |  |  |  | 24,113.84 |

Sensors and Power are on existing system.

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McCrometer, Inc. 3255 WEST STETSON AVENUE • HEMET, CALIFORNIA 92545 USA
TEL: 951-652-6811 • 800-220-2279 • FAX: 951-652-3078
Printed In The U.S.A. 1 Lit. 30121-17 Rev. 1.0/06-13

| Printed on 11/19/2015 4:22:41 PM |
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| $* 143750^{*} \quad$McCrometer, Inc. Page 1 of 6255 West Stetson Avenue, Hemet, CA 92545, USA |
| Tel (951) 652-6811• Fax (951) 652-3078 • Website: http://www.mccrometer.com |

