Lake Don Pedro Community Services District

Regular Meeting of September 19, 2016

AGENDA SUPPORTING DATA

5. DISCUSSION AND ACTION ITEMS
    b. Review and Discussion Regarding Implementation of a Maintenance Program and Standards for District Infrastructure

Recommended Motion

For discussion, information and Board direction only, no specific approval action is required.

Background

The highest priority of the Board of Directors in its 2016 Strategic Plan is the development and implementation of a formal maintenance program. Like maintenance on a vehicle, a planned program of infrastructure maintenance will maximize the useful life of the District's most expensive asset; its infrastructure.

Due to the hilly topography, the Lake Don Pedro CSD water system is comprised of many pumps to push water to the top of hills, and control valves to relieve increasing water pressure as the water heads down the other side of the hill. The system has hundreds of fire hydrants and many hundreds of large valves buried four feet in the ground on the water mains and every fire hydrant. The water treatment plant has basins, control valves, electrical controls, water pump, chemical pumps, water quality monitoring equipment and much more, all requiring varying levels of daily, weekly, monthly and annual attention, materials and staff effort.

Many small water systems operate on a reactive basis when it comes to maintenance, fixing infrastructure when it malfunctions or breaks. This method of operation is much costlier in the long run, and makes the reliability of the system questionable and breakdowns unpredictable. Every piece of the infrastructure has a recommended maintenance schedule to extend the equipment's life to an industry standard. For example, historically water tanks were thought to have a 50-year lifespan before replacement would be needed. Now, due to much improved maintenance and inspection technologies, improved construction and maintenance standards, and excellent new products such as tank coatings and cathodic protection, tanks can last indefinitely.

Much of our infrastructure is approaching its useful life, as shown by the increased incidence of failure, wear and age or 50 years. In the 1990's a full program of system maintenance was completed by operations staff.   Time was available to perform the maintenance as much of the infrastructure was still in excellent condition, requiring very few emergency responses by staff. Unfortunately, in the past 20 years the level of system troubleshooting, failures and repairs has increased causing a reduction in maintenance time available. Some maintenance is still occurring, but a coordinated system of maintenance is needed for the Board and staff to fully understand the amount of work, number of staff, hours to complete, skills, tools and training required to maintain the system to standards prepared by the American Waterworks Association (AWWA), California Department of Public Health standards, and others.

The attached 2016 Maintenance Plan outlines the maintenance required of the major system components. Individual equipment maintenance specifications are to be kept in the maintenance file, and will be loaded in the new asset management program for reference on the jobsite. The asset management program will also produce schedules, work forms, document maintenance and produce reports detailing the status of the maintenance program in real time.   The purpose of this agenda item is to familiarize the Board with the maintenance program and to answer related questions.

In addition to this Plan, the District will need to develop and adopt standard specifications and details, which are typically prepared by the District Engineer and/or professional engineering consultants, that contain the most current industry standards for n construction. These standards will be used any time a construction or replacement project is planned. The standards help make sure that equipment is state of the art and contains current technology, and that replacement parts and methods are consistent throughout the system.