

La Mesa Water Coop Water Supply Plan

12-1-2012

By Water Supply Planning Committee

I. ASSUMPTIONS

All wells in service are fully operational

- 60% run time for well pumps
- Add two new users per year
- Peak demand: 380 gal./day/user
- Well flows & life:
 - Well #5 – 105 GPM, 27 years remaining
 - Well #3 – 62 GPM, operational with modification, but out of service
 - Well #2 – 16 GPM, 1+ years remaining (may change)
 - Well #6 – 60 GPM, 30 years remaining

See attached worksheet for details on demand and production capacity.

II. CONCLUSIONS

As the attached worksheet shows, without serious operating problems, our system currently can meet our community's needs - even at peak demand - with additional supply for projected growth. However, the Committee is concerned about the consequences of operating problems like the one confronted this summer. Our system cannot meet one of the key standards most commercial systems face: being able to supply water at peak demand for up to one week, with our largest well out of service.

III. RECOMMENDATIONS

A. La Mesa should base its long-range planning on the precept that it will be able to provide water at peak demand for one week, with its largest well out of service. The following components of such a plan need to be addressed in La Mesa's financial planning.

1. As soon as possible in 2013, La Mesa should arrange for a study on the options and costs of bringing well #3, currently off-line because of arsenic levels, back into service. In addition to the options and costs for water treatment, the study would pin down needed system improvements for water production and distribution at that well site.

2. La Mesa should complete a detailed emergency water supply plan, focused on three issues:

- a. Completing major system capital improvements and repairs to strengthen reliability;
- b. Lining out details for the mutual aid pact La Mesa has with Los Ranchos, and the costs and timeline for implementing it.
- c. Determining what equipment, spare parts and components are needed for a La Mesa “survival kit” that could be used in an emergency similar to one experienced last summer.

Coupled with a plan to bring well #3 back into compliance and on-line, these recommendations would enhance La Mesa’s ability to withstand any reasonably anticipated supply problems.

3. The Committee recommends that La Mesa determine the cause of currently unexplained and unbilled for water loss. While this is not inordinate, its reduction or prevention will add service capability to the La Mesa system. Additionally, the Committee feels we should continue the meter replacement program to ensure system efficiency. There are more than 200 meters that need to be replaced at an estimated cost of \$54,000.

B. Details on the above

2 (a). Projected major system improvements and repairs

1. Painting water tanks: estimated cost, \$126,000; needed by 2016-17.
2. Rehabilitating well #5 (cleaning screens, etc.): estimated cost of \$20,000; needed by 2018.
3. Switching to variable frequency drive at well #5 to increase reliability: estimated cost of \$12,000.
4. New flow meter: estimated cost of \$3,000
5. New data logger: estimated cost of \$5,000
6. Valve pads in roads at an estimated 40 sites, at an estimated cost of \$500 each.
7. Hydrant repairs.

2 (b). The mutual aid pact with Los Ranchos should be written out. And, there are questions about how quickly La Mesa would be able to implement it, and at what cost.

2 (c). Spare parts and components we should consider having to respond quickly to an emergency at well #5 include:

1. Phase converter (we have this)
2. Pump/motor (est. cost of \$6000)
3. Panel for generator (est. cost of \$2,000)

Note: we should know options and est. costs for renting a generator.