

**TO:** James L. App, City Manager  
**FROM:** Doug Monn, Public Works Director  
**SUBJECT:** Water Conservation  
**DATE:** July 3, 2007

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**NEEDS:** For the City Council to approve a public campaign requesting a citywide voluntary water conservation goal of 25% from July to September 2007, in accordance with our Water Shortage Contingency Plan.

- FACTS:**
1. The City has 14 production wells that run throughout the year. During peak water use months, these wells cannot always produce enough to keep up with peak water use demands.
  2. Water storage reserves are critical when production cannot keep pace with peak demand. Peak demand varies from day to day, but over extended hot weather periods, storage begins to diminish.
  3. In response to the December 22, 2003 San Simeon earthquake, the City adopted an Emergency Water Contingency Plan to prevent system wide outages. This plan identifies several escalating levels of conservation, both voluntary and mandatory, based on water levels at the City's Golden Hill Road reservoirs. The first level of implementation calls for community wide voluntary conservation.
  4. Last summer's power outages and periods of sustained heat waves strained our water distribution system. Water production was dependent on emergency stand-by generators and other related equipment in order to continue pumping operations.
  5. This winter's lack of rainfall will likely strain our water production abilities this summer. Rainfall was less than half of average and did not extend as late into the season as usual. Warm weather came early, causing the City to produce nearly double the water it usually does in the month of April.
  6. The water level in City wells has decreased in response to the lack of rainfall. As water levels fall, well production (measured in terms of gallons of water pumped per minute) will also decrease.
  7. As illustrated by the attached figure, the City is projected to have a maximum possible production rate only slightly greater than peak demand this summer. During upset events such as power outages or well failure, then production could be decreased by as much as 5 to 10%. Such a condition would put the City into a water deficit.
  8. The City's water production had been decreased by the retrofit of two high producing wells, Sherwood Wells #9 and #11, with well head treatment. The construction of these treatment facilities prevented the wells from being pumped. In early June, the Golden Hill tanks were dropping nearly 1 foot per day of storage

until Sherwood #11 came online June 14, 2007. Reservoir levels have since risen back to normal. Sherwood #9 should be online by July 3, 2007.

9. During the first part of June 2007, the City implemented mandatory irrigation conservation and shut-downs at City parks in order to mitigate the Sherwood Wells production deficit during the hot weather. This mandatory shut-down saved nearly 400,000 gallons per day.
10. A public campaign to inform the community of water conservation methods and goals would include radio ads, newspaper announcements, bill inserts, website content, and other public announcements.

**ANALYSIS  
AND**

**CONCLUSION:** It is imperative that the City proactively educate residents and businesses about the need for water conservation before the summer's most demanding months. If successful, voluntary conservation measures would put the City in a better position to handle upset events such as prolonged heat waves, power outages, or well failures. If the public campaign is not successful at achieving the necessary water conservation, mandatory conservation measures may be implemented in accordance with the Contingency Plan.

**POLICY**

**REFERENCE:** Water Shortage Contingency Plan

**FISCAL**

**IMPACT:** The fiscal impacts are unknown at this time.

- OPTIONS:**
- a. Approve the implementation a public campaign requesting voluntary citywide conservation goal of 25% during the July to September 2007 season in accordance with the Water Shortage Contingency Plan.
  - b. Amend, modify, or reject the above option.

Prepared by: Katie DiSimone, Utilities Manager

Attachments (1): Water Demand and Production

**Water Demand and Production**  
(projected for June-September 2007)

