

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: Summer 2010 Water Supply Shortage
DATE: April 20, 2010

NEEDS: For the City Council to consider use restrictions from May 1, 2010 through September 30, 2010.

FACTS:

1. Community-wide daily peak water demands will exceed supply by up to 2.5 million gallons each day of summer.
2. In September, 2009, the City Council adopted a Water Shortage Contingency Plan (Ordinance No. 09-962 N.S.) that initiates outdoor water use restrictions to avoid water outages.
3. Water outages must be avoided. Failure to do so will:
 - a. Limit or eliminate firefighting capabilities
 - b. Eliminate emergency water supplies necessary to provide basic health and sanitation.
 - c. Result in low/no water pressure in portions of the water system, exposing customers to harmful waterborne pathogens.
 - d. Potentially exposes City residents (especially the young, elderly, and immune compromised) to a life threatening illness.
4. Due to the public health risks that accompany water outages it is essential to effect community-wide water use reductions this summer.
5. Anyone who repeatedly fails to reduce their use, places their neighbors at risk.
6. Therefore, water use restrictions are necessary and may include monetary penalties. Monetary penalties are issued only after two warnings.
7. In February, 2010, City Council approved categories of exemptions to the 2010 Level 2 supply shortage irrigation restrictions including active play areas, new and renovated landscapes, RV parks etc.

ANALYSIS &

CONCLUSION: The City's summertime demand for water exceeds production capabilities by as much as 2.5 million gallons per day. Without enforceable restrictions, storage levels will most certainly fall below what is necessary to provide adequate emergency/fire protection and result in low system pressure and potentially water outages. When water system pressure falls below 20 psi the water system becomes vulnerable to bacteriological contamination. State health regulations require the City to take extensive actions to alert the public of a potential health threat.

- A "Water Alert" is issued stating that water may not be safe to drink.

- Extensive testing of system water must be conducted.
- If elevated levels of coliform bacteria are found, water is deemed unsafe to drink and a “Boil Water Order” must be issued.
- After system pressure is restored, extensive chlorination, testing and flushing of the system is required. This would likely require 2-4 days, during which time the water is deemed unsafe to drink.

Enforcement of landscape watering restrictions provides the best chance to avoid water shortages. Beginning May 1, 2010 through September 30, 2010, restrictions would limit irrigation to 3 scheduled days per week between the hours of 7 p.m. and 9 a.m. Public outreach activities regarding water use restrictions include:

- Customer notification of the reinstatement of restrictions via a postcard mailer.
- Banner signage informing the public of reinstatement of water use restrictions.

The total cost of implementing Level 2 restrictions has been budgeted at \$26,000 for 2 part-time code enforcement staff (25-hours/week), a postcard mailer, and banner signage. These costs were included in the overall 2010 water conservation program budget approved by Council February 16, 2010.

POLICY

REFERENCE: City Municipal Code 09-962 N.S. (Water Conservation and Water Shortage Contingency Plan).

FISCAL

IMPACT: No fiscal impact. Funds are included in previously approved budget.

OPTIONS:

- Confirm 10/6/09 reinstatement of the Level 2 Watering Restrictions.
- Request re-evaluation of water conditions and mitigation options, and if findings warrant, amendment of the Water Conservation and Water Shortage Contingency Ordinance.
- Amend, modify or reject the options above.

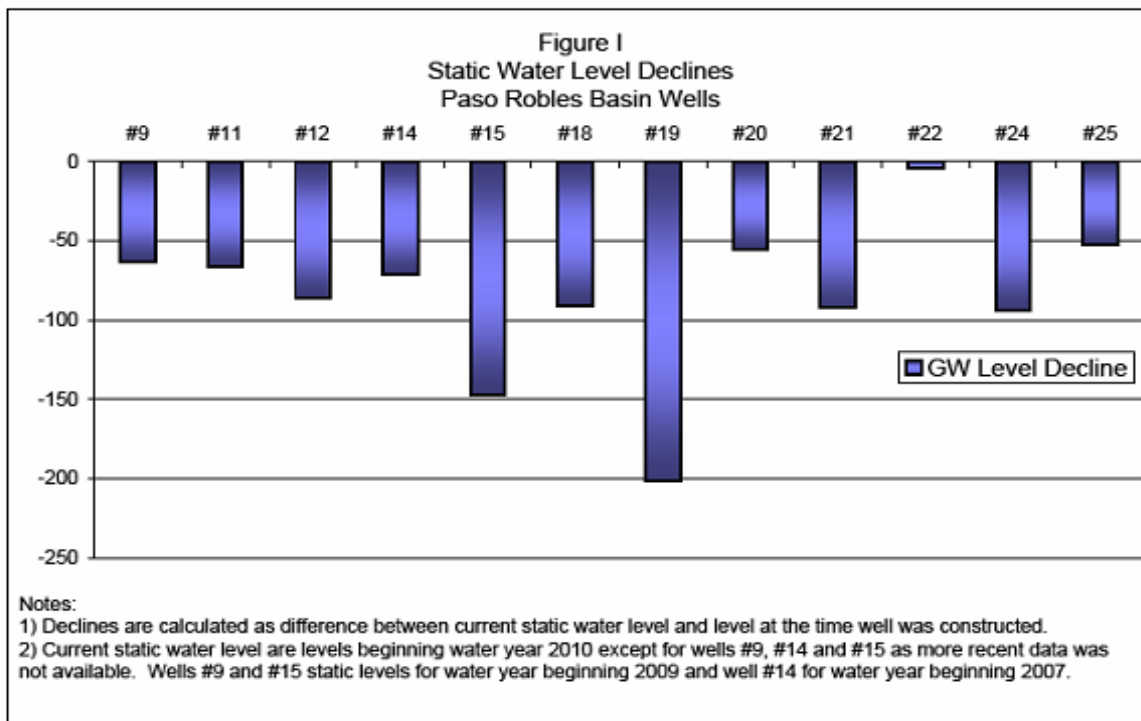
Attachment

Prepared by: Christopher Alakel, Water Manager

Attachment
Staff Report on Reinstatement of Level 2 Water Use Restrictions

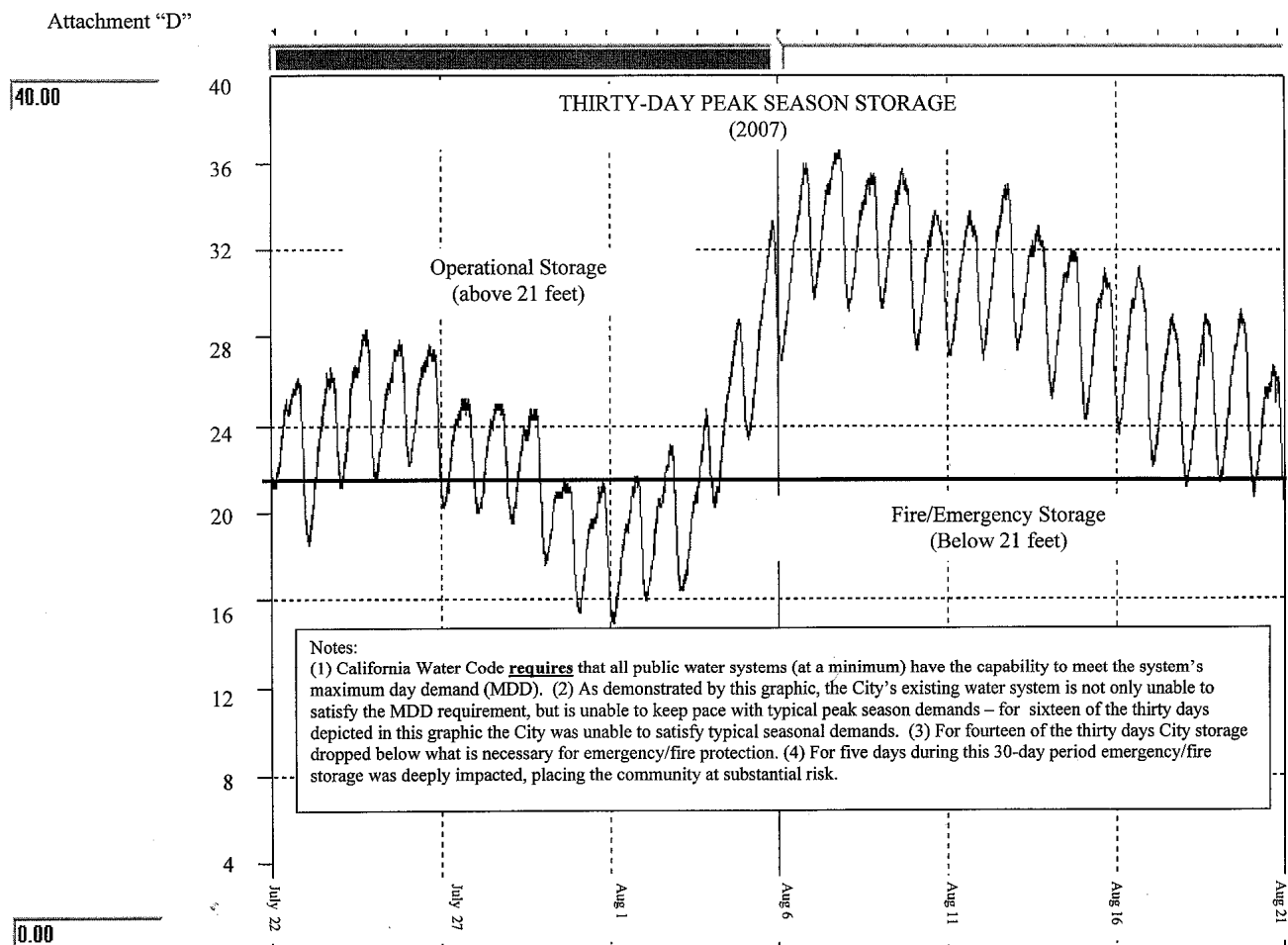
Prior to the initiation of mandatory watering restrictions during 2009, peak summer demands typically reached 12.7 million gallons per day (MGD).

Peak production in 2010 may again drop as low as 10.4 MGD due to declining groundwater levels and intensive regional summertime groundwater pumping. Groundwater levels have declined in City wells. Declines ranging from 75 to over 200 feet (see Figure 1) have reduced production to approximately 60 percent of original capacity.



When daily demand exceeds supply, storage levels in the Golden Hills tanks drop quickly and within just a few days, storage levels can be below what is required for emergency and fire protection (see Figure 2). Additionally, supply deficiencies expose the City to low system pressures, bacteriological contamination, and water outages.

Figure 2 – Golden Hills Tank Storage Levels – Summer 2007



To avoid the situation where demand exceeds supply causing tank levels to drop to levels that put public safety at risk, compulsory outdoor water use restrictions are again needed. The City's Water Conservation and Water Shortage Contingency Plan Ordinance No. 09-962 N.S., calls for several water use restrictions and enforcement actions to manage a water shortage up to 20 percent (detailed below).

Why Continuation of Compulsory Level 2 Water Use Restrictions is Needed

Based on the past experiences in Paso Robles (Summer, 2008), and those of water utilities in California and other western states, voluntary demand reduction programs lacking enforcement can be expected to achieve a 3 to 12 percent reduction in water demand. This is supported by the results of a survey by the Association of California Water Agencies indicating that of 115 California water utilities implementing water shortage conservation programs in 2009:

- Of the utilities that implemented voluntary programs with no enforcement component, 85 percent stated a conservation target of 10 percent or less.
- Of the utilities that stated a conservation target of 20 percent or higher, all had programs that enforced restrictions with penalties for non-compliance.

Summary of Paso Robles Ordinance No. 09-962 N.S.

Minimum Water Conservation Requirements in Effect at All Times – Prohibition Against Water Waste

The following water conservation requirements shall be in effect at all times and are permanent. Violations will be considered waste and an unreasonable use of water and are subject to penalties.

A. No Excessive Water Flow or Runoff: Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter or ditch is prohibited.

B. No Overfilling of Swimming Pools and Spas: Overfilling of a swimming pools and spas such that overflow water is discharged onto an adjoining sidewalk, driveway, street, alley, gutter or ditch is prohibited.

C. No Washing Down Hard or Paved Surfaces: Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except under the following conditions:

1. To alleviate safety or sanitary hazards, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device.

2. When a low-volume-high-pressure cleaning machine or a low-volume-high-pressure water broom is used.

3. All wash-down activities must comply with all state or local regulations pertaining to discharges to the City's storm drain system.

D. Obligation to Fix Leaks, Breaks or Malfunctions: Excessive use, loss or escape of water through breaks, leaks or other malfunctions in the customers' plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected and in no event more than seven days after written notification by the City of El Paso de Robles, is prohibited.

E. Re-circulating Water Required for Water Fountains and Decorative Water Features: Operating a water fountain or other decorative water feature that does not use re-circulated water is prohibited.

F. Limits on Washing Vehicles: Using water to wash or clean a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat or trailer, whether motorized or not is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility.

G. Commercial Lodging Establishments Must Provide Guests Option to Decline Daily Linen Services: Hotels, motels and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each bathroom using clear and easily understood language.

H. No Installation of Single Pass Cooling Systems: Installation of single pass cooling systems is prohibited in buildings requesting new water service.

I. No Installation of Non-Recirculating Systems in Commercial Car Wash and Laundry Systems: Installation of non-recirculating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems.

J. New or Remodeled Restaurants Required to Use Water Conserving Dish Wash Spray Valves: All new or remodeled food preparation establishments, such as restaurants or cafes, are prohibited from using non-water conserving dish wash spray valves.

K. Water Served Only Upon Request: Restaurants and other food establishments will only serve water upon request.

The following is provided as a review of Level 2 Restrictions outlined in Ordinance No. 09-962 N.S.

Level 2 Supply Shortage Water Use Restrictions (shortfall up to 20%)

1. Irrigation of residential and commercial landscapes, parks, school grounds and recreation fields, before 9 a.m. and after 7 p.m. except for renovation or repair of the irrigation system with an operator present.
2. Repair or prevention of all water leaks upon discovery or within five days of notification by the City of El Paso de Robles.
3. All landscape irrigation shall be limited to no more than three assigned days per week and on an every other day schedule established and posted by the City.

Ordinance No. 09-962 N.S. establishes a schedule of monetary penalties for non-compliance with Level 2 restrictions after two warnings are issued. Fewer than 20 monetary penalties were issued in 2009.