TO: BOARD OF DIRECTORS

FROM: BRUCE BUEL

DATE: JUNE 5, 2009

AGENDA ITEM F

JUNE 10, 2009

MANAGER'S REPORT

ITEM

Standing report to your Honorable Board --*Period covered by this report May 7, 2009 through May 20, 2009.*

DISTRICT BUSINESS

Administrative

Maria Vista Estates has set a total of ten water meters.

The Board of Supervisors has extended the existing moratorium on in-county bio-solids disposal for another three years and directed County Staff to cooperate with waste generators to develop a funding proposal to pay for an Environmental Impact Report on alternative sludge and composting regulations. Thus far, no one has contacted NCSD to follow up on this matter.

Jonathan Edwards has filled the open maintenance worker position and a prospective applicant has accepted the open Inspector/Preventive Maintenance Supervisor positions.

The County Planning Department has published it Public Hearing Draft of the Conservation and Open Space Element. The Planning Commission is scheduled to review the draft on June 14, 2009; July 9, 2009 and July 23, 2009.

As of the May 31, 2009 cutoff date, 121 Blacklake Customers opted to prepay their water surcharge ($54,625) leaving the balance to pay off the surcharge over ten years in installments.

Golden State Water Company, Rural Water Company and the Woodlands have agreed to pay for the at risk cost of forming an assessment district to pay for the capital portion of the Waterline Intertie Project. Staff is awaiting a follow up meeting with the County's Debt Issuance Council regarding the formation of a JPA to facilitate formation of the proposed assessment district.

Staff is monitoring the progress of our federal appropriations request through the respective House and Senate Appropriations Committees.

A Notice of Preparation for the Southland WWTF Upgrade Project Draft EIR was mailed on May 10, 2009; a Scoping Hearing is scheduled for June 10, 2009; and comments are due by June 30, 2009.

The State Department of Public Health has issued the attached guidelines for implementation of the new Ground Water Rule.

The State Department of Water Resources has issued the attached Drought Summary for May 2009.

The NMMA TG is planning a Public Meeting to present and explain the 2008 NMMA Annual Report. The TG has tentatively selected the evening of Wednesday July 29th as the date.

Both the NCMA TG and the SMVMA TG have published draft 2008 Annual Reports. The Twitchell Management Authority will hold a hearing at 6:30pm on Wednesday June 10, 2009 to receive input on the 2008 SMVMA Annual Report.

Safety Program - No new accidents and/or injuries.

Conservation Program Activities - 54 NCSD customers used the high efficiency clothes washer rebate program before it was placed on hold.

RECOMMENDATION

Staff seeks direction and input from your Honorable Board.

ATTACHMENTS

- DPH Notice re Ground Water Rule Implementation
- DWR May 2009 Drought Summary

T:\BOARD MATTERS\BOARD MEETINGS\BOARD LETTER\BOARD LETTER 2009\MANAGERS REPORT090610.DOC

Bruce Buel

From: Souza, Kurt (CDPH-DDWEM-DWFO) [Kurt.Souza@cdph.ca.gov]

Sent: Tuesday, June 02, 2009 4:31 PM

To: Ali, Mike (CDPH-DDWEM); Ali, Mir (CDPH-DDWEM); Densmore, Jeff (DHS-DDWEM); Ellen Mendoza (DHS-DDWEM) (E-mail); Maday, Amy (CDPH-DDWEM); Walker, Steve (DHS-DDWEM)

Subject: Groundwater Rule letter for water systems - Action Needed

Attachments: State Implementation of the Federal Groundwater Rule letter 06 01 09.pdf; Groundwater Rule Amendment to Coliform Sampling Siting Plan.doc

TO: ALL PUBLIC WATER SYSTEMS

Attached is a water system guidance document pertaining to the federal Groundwater Rule and a form for triggered source water monitoring

.

As you know, the GW Rule impacts **all public water systems serving GW**, including:

- Wholesale systems supplying groundwater,
- Consecutive systems buying groundwater, and
- Systems using a mix of groundwater and surface water.

Compliance with the federal GW Rule begins December 1, 2009. However, there are a number of issues that may need to be addressed by water systems *before* December 1st. The GW Rule also includes a number of requirements left to the discretion of the states. As a result, the letter contains three sections covering the following:

1) A summary of the federal GW Rule.
2) Information/submittals that will be needed by water systems *before* the compliance date of December 1, 2009.
3) Information regarding CDPH's position on a number of key state-discretionary issues.

In Section 2 of the letter, starting on page 7, each water system will need to decide if they are going to conduct triggered source water monitoring **OR** 4-log virus inactivation monitoring by **October 1, 2009**. Each system is required to submit the attached "Groundwater Rule Amendment to Coliform Sampling Siting Plan" to this office by October 1, 2009. If your system decides to conduct the 4-log monitoring, you will need to contact our office and discuss your plans with one of our engineers. The engineer will provide additional guidance and forms for your submittal.

Also note in Section 3 of the letter, starting on page 9, please be aware the fecal indicator California has chosen is E.coli. At this time, additional assessment monitoring is not required for any system in the Santa Barbara District. Please be aware that operational bacteriological monitoring of raw water sources is still required and having this operational monitoring data is the reason that additional monitoring per the Groundwater Rule is not required.

This letter and attachment will also be mailed to your water system.

Thanks,

Kurt Souza, P.E.
Regional Engineer
Southern California Section
Drinking Water Program
California Department of Public Health
1180 Eugenia Place, Suite 200
Carpinteria, CA 93013
(805) 566-1326, (805) 745-8196 fax

Please note I have a new email address:

Kurt.Souza@cdph.ca.gov

State of California—Health and Human Services Agency
California Department of Public Health

MARK B HORTON, MD, MSPH
Director

ARNOLD SCHWARZENEGGER
Governor

June 1, 2009

To: All Public Water Systems Receiving or Providing Groundwater

STATE IMPLEMENTATION OF THE FEDERAL GROUNDWATER RULE

On November 8, 2006, the U.S. Environmental Protection Agency (EPA) published the federal Groundwater Rule (GW Rule), which was subsequently revised on November 21, 2006, for corrections to the analytical methods for source water monitoring. Please visit EPA's Web site at http://www.epa.gov/ogwdw/disinfection/gwr/regulation.html to review the final rules. It should be noted that the federal GW Rule contains many requirements left to the discretion of the states. Although the effective date was January 8, 2007, **compliance with the GW Rule begins December 1, 2009.**

As you know, California public water systems are required to meet all federal drinking water regulations, regardless of whether the California Department of Public Health (CDPH) has adopted parallel regulations. The purpose of this memorandum is three-fold:

- Provide a summary of the federal GW Rule and CDPH's intentions regarding adoption of the federal GW Rule requirements (Section 1, beginning on page 2 of this letter).
- Inform water systems of submittals to CDPH that may be needed *before* the compliance date of December 1, 2009 (Section 2, beginning on page 7).
- Provide information regarding a number of key state-discretionary issues (Section 3, beginning on page 9).

If you have any questions regarding the content of this memo, please contact CDPH's District Office overseeing your water system.

Sincerely,

Gary H. Yamamoto

Gary H. Yamamoto, P.E., Chief
Division of Drinking Water
and Environmental Management

Division of Drinking Water & Environmental Management
1616 Capitol Avenue, MS 7400, P.O. Box 997377, Sacramento, CA 95899-7377
Phone: (916) 449-5577; Fax: (916) 449-5575; TTD: (916) 449-5592
http://www.cdph.ca.gov/programs/Pages/DDWEM.aspx/

SECTION 1
FEDERAL GW RULE OVERVIEW AND CDPH STATEMENT REGARDING ADOPTION OF A STATE RULE

The following summary is not intended to be an exhaustive summary of all of the federal GW Rule requirements, nor should it be used as a substitute for the regulations. For your convenience, reference to the federal section specifying a requirement has been included.

State adoption of GW Rule:
Currently, CDPH is planning to adopt the federal GW Rule, in its entirety, by reference. Although no accurate estimate of when the GW Rule would be adopted can be provided at this time, adopting the GW Rule by reference is expected to shorten the regulatory process.

Effective and Compliance Dates: [40 Code of Federal Regulations, §141.400(d)]
Although the effective date was January 8, 2007, compliance with the federal GW Rule begins December 1, 2009.

Purpose of the GW Rule:
The purpose of the GW Rule is to provide increased protection against microbial pathogens via four major regulatory components:
- Periodic sanitary surveys that include eight elements [§141.401(c)]
- Source monitoring triggered by a routine Total Coliform (TC) Rule positive
- Corrective action if there is:
  - A significant deficiency, or
  - Groundwater source fecal contamination.
- Monitoring to ensure treatment achieves 4–log inactivation/removal of viruses, if treatment is required or applied in lieu of performing triggered monitoring.

Applicability: [§141.400(b)]
The GW Rule applies to all public water systems serving GW, including:
- Wholesale systems supplying groundwater
- Consecutive systems buying groundwater
- Systems using a mix of groundwater and surface water

For the most part, the GW Rule does not apply if the groundwater receives treatment to comply with Surface Water Treatment Rule (SWTR). However, the treatment monitoring requirements specified in the GW Rule also apply to existing groundwater sources that treat to comply with the SWTR.

Triggered Source Monitoring:
For *each* distribution system *routine* TC Rule TC-positive, fecal monitoring is required from *all* groundwater sources* not receiving 4-log virus inactivation/removal, within 24 hours of being notified of the TC positive [§141.402(a)(2)]

- If the source sample is fecal positive, Tier 1 public notification is required **and** either 5 additional fecal samples (within 24 hrs) from the same source **or** corrective action is required [§141.402(a)(3); §141.402(g)]
  - If any of the 5 follow-up samples are fecal positive, continued Tier 1 public notification and corrective action is required [§141.402(g); §141.403(a)(1)]
- The fecal indicator used must be *E. coli*, enterococci, or coliphage, as determined by the State.

*All groundwater sources may not need to be sampled if representative monitoring has been approved. See Section 2 for more details.

Consecutive and Wholesale Systems: [§141.402(a)(4)(A)&(B); §141.402(g)]
- A consecutive system purchasing groundwater must notify its wholesaler within 24 hours of being notified of a routine TC Rule positive
- A notified groundwater wholesaler must perform triggered source monitoring within 24 hours of being notified by a consecutive system. If the fecal indicator is positive, the wholesaler must notify *all* their consecutive systems being served the groundwater within 24 hours and both the wholesaler and the consecutive system(s) must provide Tier 1 public notification.

Corrective actions (Treatment Techniques): [§141.403; §141.404]
- Corrective action must include at least one of the following:
  - eliminating the source of contamination
  - correcting the significant deficiency or deficiencies
  - providing an alternate source of water
  - providing 4-log virus inactivation/removal treatment
- The water system must consult with CDPH within 30 days of:
  - notice from CDPH of a significant deficiency
  - notice from CDPH as a result of the original fecal sample being positive
  - notice from lab that any one of the five sample-set was positive
- If corrective action is needed, within 120 days (or earlier if required by the State), the water system must:
  - complete the corrective action **or**
  - be compliant with a State-approved corrective action plan such that modifications to the plan are approved and interim measures, to protect public, are implemented
- It is a Tier 2 violation, if corrective action timeframes are not met

Significant Deficiencies: [broad examples included in §141.403(a)(4)]
- A significant deficiency does **not** have to be microbiologically related. A significant deficiency is a deficiency that CDPH determines to be causing, or have the potential for causing, the introduction of contamination into the water delivered to consumers.
- A community water system (CWS) must inform the public via their consumer confidence report (CCR) if a significant deficiency is not corrected by the end of the CCR reporting period [§141.403(a)(7)(i) via §141.153(h)(6)].

- A non-community water system (NCWS) has 12 months (or less if directed by the State) to correct a significant deficiency. If not met, the water system must inform the public of the significant deficiency, the plans to correct, and include information in appropriate language to non-English speaking customers (similar to Tier 3 PN). [§141.403(a)(7)(ii)]
- CWS and NCWS, if directed by the State, must include notice to public of corrections.

Assessment monitoring: [§141.402(b) and (f)]
- The State *may* require assessment monitoring. Typically, assessment monitoring would consist of on-going monthly monitoring of a source (i.e., not necessarily triggered by a positive TC distribution sample).
- While conducting assessment monitoring, any result that is fecal positive requires Tier 1 public notification.
- In addition, the State may require a system to implement a hydrogeologic sensitivity assessment. A hydrogeologic sensitivity assessment is a methodology used to identify whether systems are obtaining ground water from hydrogeologic settings that are sensitive to fecal contamination.

Treatment Monitoring: [§141.403(b)(3)(i)(A) & (B)]
A water system providing treatment to meet 4-log virus inactivation/removal, must comply with the following:

- If a water system serves > 3300 people, the water system must:
  - continuously monitor the residual and if the continuous analyzer is down, the system must:
    - take grab samples every 4 hours
    - resume continuous analyzing within 14 days
  - record the lowest daily residual value
  - meet the State-specified minimum residual
- If a water system serves ≤ 3300 people, the water system must:
  - monitor daily via grab samples at peak flow (or other time specified by the State)
  - meet the State-specified minimum residual and take grab samples every 4 hours if the water system fails to meet the minimum
- Failing to monitor as required leads to Tier 3 public notification [§141.403(d)]

A water system serving ≤ 3300 people may also continuously monitor and meet the requirements applicable to continuous monitoring. In addition, the GW Rule requires the water system to perform verifications and reporting pursuant to the SWTR [§141.74(a)(2)]

A water system choosing to use membrane filtration to meet the 4-log virus removal requirement must:
- have a parameter (e.g., molecular weight cut-off) that indicates 4-log virus removal
- be operated per State-specified requirements
- have a means for ensuring the membrane integrity is intact

A water system choosing an alternate treatment process must monitor and operate per CDPH requirements. UV may be used, but only in combination with other treatment.

Reporting: [§141.405(a)(1) - (3); §141.405(b)]
Water systems must:

- notify the State by the next business day if the water system fails to meet treatment operation criteria (e.g., if operation not restored within 4 hrs)
- notify the State within 30 days of corrective action completion
- notify the State and provide documentation, within 30 days, if the water system does not collect triggered samples because the routine TC Rule positive was taken from a location known to have conditions causing TC Rule positive results pursuant to §141.402(a)(5)(ii)
- maintain records of:
  - corrective actions (10 yrs)
  - public notice (3 yrs)
  - invalidations (5 yrs)
  - documentation of notification to wholesalers (5 yrs)
  - compliance monitoring performance, records of:
  - State-specified minimum disinfectant residual (10 yrs)
  - lowest daily residual, along with date and duration of failure to meet minimum for more than 4 hours (5 yrs)
  - State-specified requirements for membranes/alternatives treatments and failure to meet for more than 4 hours (5 yrs)

Public Notification:

- Tier 1 public notification is required when a GW Rule-required source water fecal indicator is positive [§141.402(g)]
- Tier 2 public notification is required when a treatment technique violation occurs, such as a failure to take corrective action(s) for a significant deficiency [§141.404(d)]
- Tier 3 public notification is required for failures to perform required source monitoring or treatment monitoring [§141.402(h); §141.404(d)]
- The State may require notice in CCRs when a significant deficiency is corrected

Periodic Sanitary Surveys:
The GW Rule requires CDPH to conduct sanitary surveys of water systems at specified frequencies. Furthermore, the sanitary surveys must include an evaluation of 8 elements [§141.401(b) and (c)] and must include an onsite review [§142.16(o)(2)].

- The 8 elements are:

  (1) Source,
  (2) Treatment,
  (3) Distribution system,
  (4) Finished water storage,
  (5) Pumps, pump facilities, and controls,
  (6) Monitoring, reporting, and data verification,

(7) System management and operation, and
(8) Operator compliance with State requirements.

- CWS groundwater systems must have sanitary survey conducted every 3 years, with the first survey being conducted by 12/31/2012, unless the water system:
  - provides 4-log inactivation/removal of viruses or
  - has an outstanding performance record and no TC Rule MCL or monitoring violations, in which case the first sanitary survey may be performed as late as 12/31/2014 and a frequency of every 5 years is acceptable [§142.16(o)(2)(iii)]
- NCWS groundwater systems must have sanitary survey at least every 5 years [§142.16(o)(2)(i)]

Miscellaneous:

The GW Rule also includes criteria for the following:

- Exceptions to triggered monitoring [§141.402(a)(5)], when triggered monitoring would not be required. The criteria include:
  - The routine TC Rule positive was collected from a location in the distribution system that causes TC positive results and
  - The State documents in writing that the routine TC Rule positive was due to a distribution system deficiency

Historically, CDPH has required or recommended "operational monitoring" for many groundwater sources, which typically includes on-going monthly/quarterly raw water coliform monitoring of wells. The data obtained from such operational monitoring will be a valuable tool in CDPH's determination whether a TC Rule positive was due to a distribution system deficiency.

- Fecal sample invalidation. [§141.402(d)(1) and (2)]
- Treatment discontinuation. [§141.403(c)]
- Sampling Locations [§141.402(e)]: Samples must be collected before treatment unless the State designates a location after treatment. If sampling at a well is not possible, the State may approve an alternate location that is representative of the well.

SECTION 2
SUBMITTALS TO THE DEPARTMENT NEEDED BEFORE DECEMBER 1, 2009

There are three subjects related to the GW Rule that may necessitate a submittal of information to CDPH prior to the GW Rule compliance implementation date of December 1, 2009:

- When a water system would like to perform representative monitoring.
- When a water system seeks to have a source exempt from triggered monitoring by virtue of the source having 4-log inactivation/removal of viruses.
- When a water system is unable to sample at the well itself, resulting in the water system needing State approval to sample at an alternative location that is representative of the well.

These subjects are discussed in more detail below.

Representative Monitoring:
If permitted by the State, the GW Rule allows two types of representative monitoring:

• **Type 1:** When one groundwater source (or fewer than the total number of wells) represents a portion of the distribution system.

For example, assume Well A serves only Zone A and Well B serves only Zone B. In the event of a routine TC Rule positive in Zone A, with approval from CDPH, the water system would only be required to perform triggered source monitoring from Well A.

CDPH intends to permit this form of representative monitoring. To allow ample time for review and comment, if you would like to be allowed to perform this type of representative monitoring **you will need to submit a request** to CDPH's District Office overseeing your water system **by October 1, 2009.** The submittal should be in the form of a supplement to your TC Rule bacteriological monitoring plan; such as a table indicating the groundwater source (or sources) to be subject to triggered monitoring in the event of a TC positive from each distribution system sample site. The level of detail needed in the submittal to justify the requested representative monitoring will vary, depending on the water system. **Without an approved request, beginning December 1, 2009, you will need to monitor *every* groundwater source not being provided 4-log virus inactivation/removal for every routine TC Rule distribution system positive.**

• **Type 2:** When one well represents one or more other wells in the same aquifer.

Under this scenario, a routine TC rule positive may lead to monitoring only one well in a cluster of wells, rather than each well in the cluster. **CDPH does NOT intend on permitting this form of representative monitoring.**

Exemption of a source from triggered monitoring by virtue of proper treatment:
Under the GW Rule, groundwater sources receiving 4-log virus removal/inactivation are not subject to triggered monitoring in the event of a routine TC Rule distribution system positive. However, to be exempt from the triggered monitoring, the water system must

notify CDPH and "*include engineering, operational, or other information that the State requests to evaluate the submission*" [§141.403(b)(1)]. To qualify, a water system will need to submit information to CDPH as follows:

- If you have a groundwater source that has been issued a permit to meet 4-log virus removal/inactivation, you will not need to submit any information to CDPH before December 1, 2009. Such a well will not be triggered to be monitored for fecal indicators if there is a routine TC Rule positive; however, the treatment monitoring and reporting requirements in the GW Rule apply.
- If you have a groundwater source that either - 1) receives disinfection for which you would like to get credit for 4-log virus removal/inactivation or 2) does not receive disinfection, but you would like to add treatment to get credit for 4-log virus removal/inactivation - then you'll need to apply for a permit amendment and submit requisite information by September 1, 2009. Please contact the CDPH's local District Office for more details.

Sampling Locations: Section 141.402(e) requires samples to be collected before treatment, unless the State designates a location after treatment. Alternate locations may be approved by the State on a case-by-case basis. **If you cannot sample from the well, prior to treatment, you will need to submit a request for an alternative sampling location by October 1, 2009.** At a minimum, the request must include the reasons why sampling at the well is not possible and how sampling representative of the well will be performed.

SECTION 3
CDPH'S POSITION ON KEY STATE-DISCRETIONARY ISSUES

- **Fecal Indicator:** *E. coli* is the fecal indicator that has been chosen by CDPH. However, CDPH may require coliphage monitoring of some wells (especially hard-rock wells) near those found to have *E. coli*, as an early warning indicator. It should be noted that by choosing *E. coli* as the fecal indicator, systems serving < 1000 persons will be able to use a GW Rule triggered source sample as one of the four TC Rule-required distribution system repeat samples.

- **Assessment Monitoring:** CDPH will require assessment monitoring on a case-by-case basis, using the following risk factors:

  - Sources in densely populated communities without centralized sewage treatment
  - Sources in shallow unconfined aquifers or thin soil cover
  - Sources with historical fecal contamination
  - Sources for which there are no recent, routinely collected, coliform monitoring data available
  - Sources with improper or unknown well construction
  - Source water assessment indicates potential contamination
  - Sources in aquifers in which viruses may travel faster/farther than bacteria (e.g., coastal plain sand aquifers)
  - Sources in sensitive aquifers (e.g., karst, fractured rock)

The assessment monitoring will include a minimum of 12 months of monthly raw water monitoring. Based on the risk factors above and the results of assessment monitoring, a hydrogeologic sensitivity assessment may be required to further assess sensitive aquifers.

- **Representative Monitoring:** As discussed in detail in Section 2, if permitted by CDPH, the GW Rule allows two types of representative sampling:

  - Type 1: A groundwater source (or sources) representing a portion of the distribution system.
  - Type 2: A groundwater source representing several groundwater sources in an aquifer.

CDPH does not intend on permitting Type 2 representative monitoring. Type 1 will be permitted. Requests to pursue Type 1 representative monitoring should be submitted to CDPH by October 1, 2009.

- **Five Fecal Samples vs Corrective Action:** Section 141.402(a)(3) of the GW Rule requires analyses of an additional five fecal samples from a source with a triggered monitoring fecal positive result, if the State does not require immediate corrective action. CDPH will require corrective action following any triggered monitoring fecal positive result. Please note that CDPH will not permit *on-going* use of a source that is known to be fecal-contaminated if the only barrier provided consists solely of 4-log

virus inactivation through disinfection. With 4-log treatment, a contaminated well may be used on an *interim* basis if:

- not using the source presents a greater potential health hazard (i.e. the well is the sole source),
- the water system submits a plan to address the issue, and
- the source undergoes frequent effluent TC and *E. coli* monitoring

- **Sampling Location:** Section 141.402(e) requires samples to be collected before treatment, unless the State designates a location after treatment. Alternate locations will need to be approved by CDPH on a case-by-case basis. See Section 2 for more details.

- **Significant Deficiency Correction Notification:** If directed by the State, a water system with significant deficiencies that have been corrected, it must inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction. CDPH believes it is in the best interest of the water system to inform its customers of corrections for significant deficiencies, especially in those cases where the public was notified of significant deficiencies.

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY

DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DRINKING WATER AND ENVIRONMENTAL MANAGEMENT
Santa Barbara District Office, 1180 Eugenia Place, Suite 200, Carpinteria, CA 93013, (805) 566-1326

GROUNDWATER RULE MONITORING FORM

A. System Information:

Name of Facility:_____ System Number:_____
Street Address:_____ Ph. No.:_____
Consecutive, Wholesaler or Neither:_____ Fax:_____
Provide Continuous 4-log treatment of Viruses ☐ YES ☐ NO (if yes, only complete part F and submit a Monthly CT Calculation Report to CDPH)
Service Connections:____ Population Served:_____ Coliform Samples/Month:_____

B. Sample Collection:

All water samples will be collected by: _____
Name of Laboratory:_____
Mailing Address:_____
State Lab Code:_____ Phone #:_____ Fax #:_____
The Laboratory was sent a copy of this plan on:_____

C. Map of System:

A map of the distribution system showing the distribution sites and which sources can influence them, pressure zones and storage facilities.
Have you enclosed this map?☐ YES ☐ NO Explain_____

D. Consecutive Systems:

Does your system purchase groundwater? ☐ YES ☐ NO
If yes, contact the wholesaler within 24 hours of notification of a TC+ Distribution Sample.
Wholesaler_____ Contact_____ Phone No._____
Wholesaler_____ Contact_____ Phone No._____

E. Wholesaler Systems:

Does your system sell groundwater? ☐ YES ☐ NO
If yes, collect source(s) samples within 24 hours.
If source sample is fecal indicator positive, contact all consecutive systems within 24 hours*:
System_____ Contact_____ Phone No._____
System_____ Contact_____ Phone No._____
System_____ Contact_____ Phone No._____
*A Tier 1 notice is required for all fecal indicator positive source samples.

F. Report Prepared by:_____

Signature and Title:_____ **Date:**_____

G. Sample Locations:

The following describes each routine sample location and the sources which may influence it. If the routine sample location is positive, the source(s) affecting it will be sampled within 24 hours. Only sources in use during the time of initial sampling will be required to be sampled (production log required):

Routine Sample Location:
1. _____

Combined Source Water Sampling? ☐ YES ☐ NO

Sources Influencing Location:
_____
_____
_____
_____

Routine Sample Location:
2. _____

Combined Source Water Sampling? ☐ YES ☐ NO

Sources Influencing Location:
_____
_____
_____
_____

Routine Sample Location:
3. _____

Combined Source Water Sampling? ☐ YES ☐ NO

Sources Influencing Location:
_____
_____
_____
_____

Routine Sample Location:
4. _____

Combined Source Water Sampling? ☐ YES ☐ NO

Sources Influencing Location:
_____
_____
_____
_____

Routine Sample Location:
5. _____

Combined Source Water Sampling? ☐ YES ☐ NO

Sources Influencing Location:
_____
_____
_____
_____

Routine Sample Location:
6. _____

Combined Source Water Sampling? ☐ YES ☐ NO

Sources Influencing Location:
_____
_____
_____
_____

Report Approved by: _____ **Date:** _____

California's Drought Update

May 29, 2009

For more information:

Contact:
Drought Operations Center

Phone:
(888) 5-DROUGHT
(888 537-6844)

E-mail:
drought@water.ca.gov

Drought website:
http://www.water.ca.gov/drought/

Introduction

This Drought Bulletin provides a monthly update to California's water conditions. Statewide reservoir storage, precipitation, and water supply conditions have improved somewhat in May; however, allocation estimates to state and federal water contractors are expected to be near record lows for 2009, and reliance on local groundwater has and will continue to be above average. Runoff for this water year is expected to be much lower than average for the third year in a row, and drought conditions remain serious across the state.

This report provides updated information on reservoir storage and water supply allocations. Information in this report is based on data compiled through the end of April. In early May there was a series of heavy rain storms. While these storms brought much needed rainfall, storage in Oroville and Shasta remain well below their historical averages for this time of year. The resulting data from these storms will be included in the June 2009 drought status report.

Hydrologic and Water Supply Conditions

Precipitation

Water year 2009 followed two consecutive dry years. After an average October, precipitation during November and December fell short of average in the north part of the state, raising the threat of a third dry year. Concern increased markedly in January 2009 as an unusually strong high pressure system limited precipitation to only one-third of the statewide average for the month. February and March saw above-average precipitation during a wet weather pattern. The month of April ended below average for precipitation statewide, due to a very dry start to the month, and only a brief wet pattern the final two days. Figure 1 shows precipitation as a percent of average for each of the state's hydrologic regions, through April 30.

What's New

California's drought information website, http://www.water.ca.gov/drought includes the latest information on supply conditions, local impacts of the drought, assistance programs, conservation efforts, and the 2009 Drought Water Bank. Recent additions to the site include a Groundwater map and information page, the statewide Save Our Water campaign, Emergency Declarations proclaimed by Fresno and Mendocino Counties, and linkage to numerous federal and state drought assistance programs.

State of California
Governor
Arnold Schwarzenegger

The Natural Resources Agency
Secretary for Resources
Mike Chrisman

Department of Water Resources
Director
Lester A. Snow

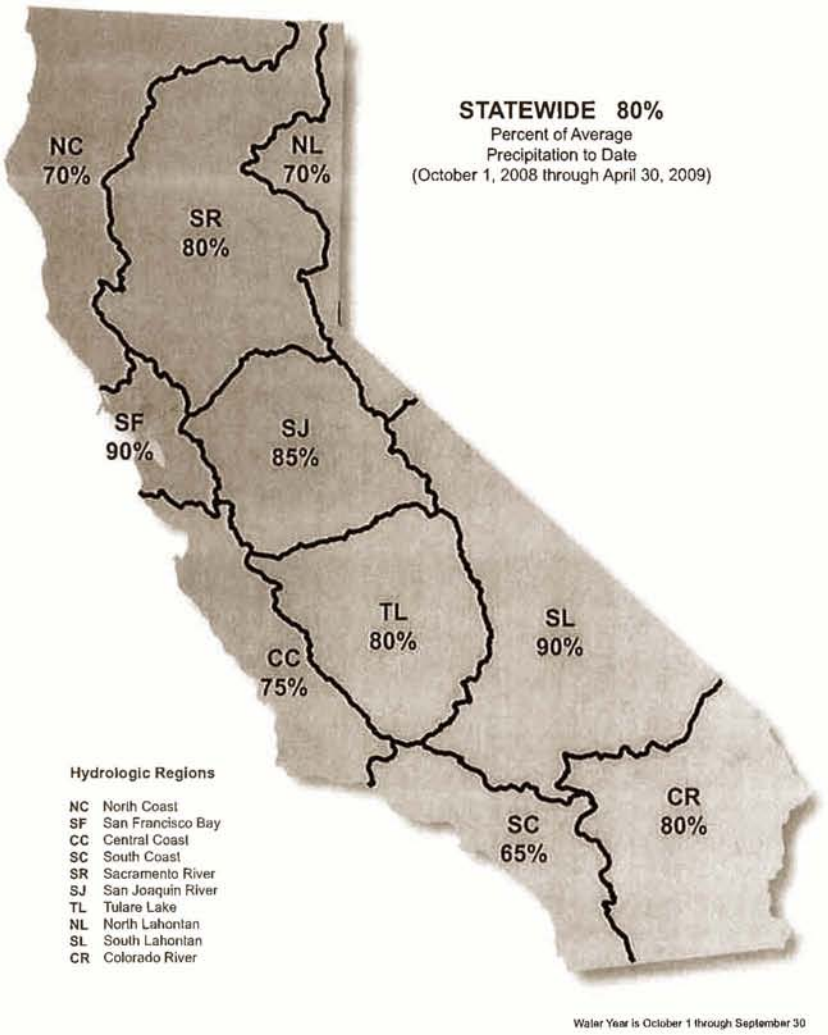

Figure 1. This season's precipitation through April 30, 2009 (percent of average)

Snowpack

Sierra snowpack represents one-third of California's water supply. April 1 is historically considered the peak of the snowpack development and the beginning of the snowmelt period. On April 1, 2009, statewide snowpack was 85 percent of average. Although stormy weather occurred for a one-week period in late April to early May, the storms were too warm to contribute significantly to statewide snowpack. The final snow survey of the season was conducted on May 1, with the statewide snowpack water content measured at 60 percent of average. As of May 27, 2009, the state's snowpack water content stands at 20 percent of average.

CURRENT RESERVOIR CONDITIONS

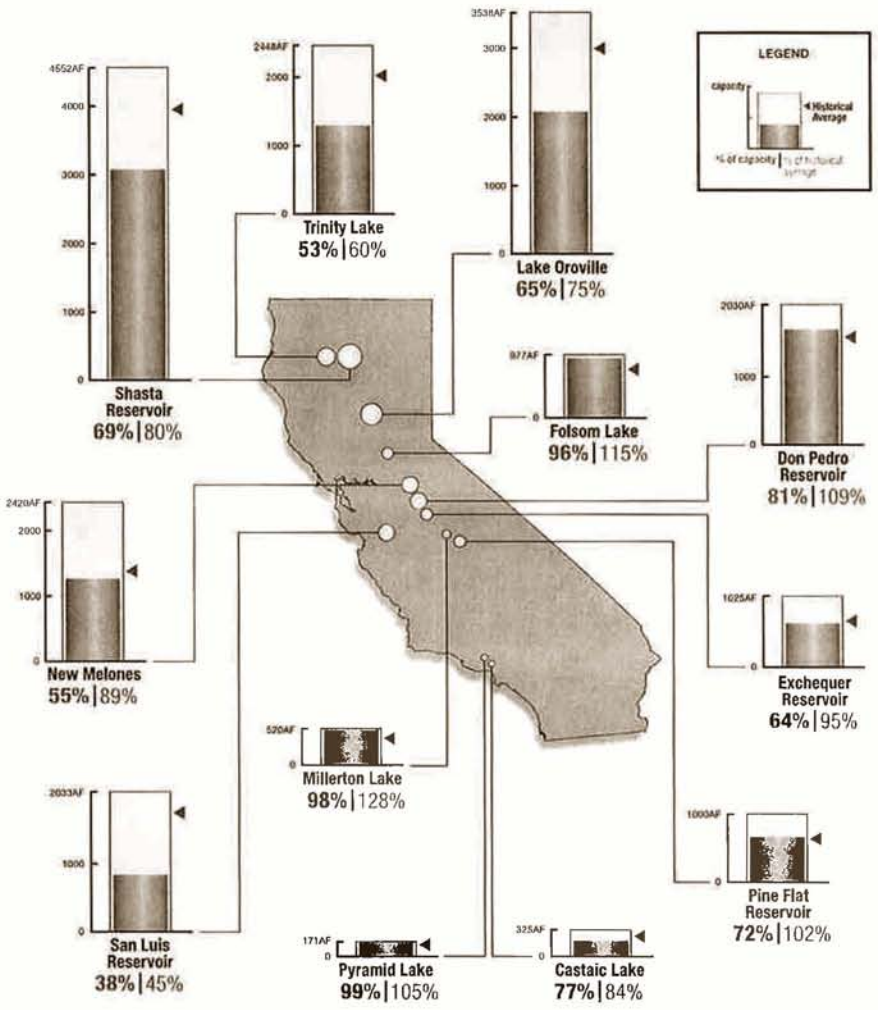

Figure 2. Selected reservoir storage for May 26, 2009.

Reservoir Storage

Reservoir storage conditions at the end of May vary across the state. The condition of the state's larger reservoirs as of May 26th is shown in Figure 2. Smaller reservoirs, such as Folsom and Friant, have refilled and are currently at or above average conditions for this time of year. Although the storms of 2009 increased storage in larger reservoirs like Shasta and Oroville, they still remain well below their average for this time of year. These reservoirs will require above normal conditions throughout an entire wet season to make up the existing storage deficits. Another reservoir lagging far behind its average storage is San Luis Reservoir which as of May 26th sits at 45% of average to date. This

reservoir, which stores water that has been transferred through the Delta for the State and federal water projects, did not benefit from this past winter's rains due to limits on water transfers through the Delta. As a result, its storage remains well below normal and is falling as water project deliveries increase. The increasing demands for water will begin to outpace reservoir inflows across California which will cause reservoirs to begin losing storage this summer.

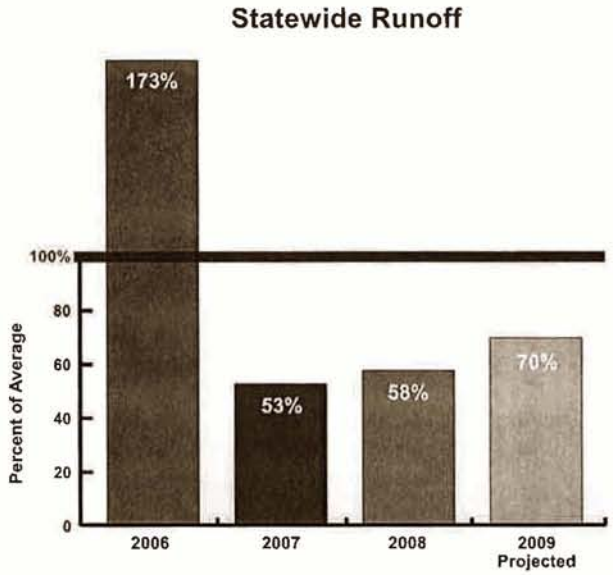

Figure 3. Statewide runoff for water years 2006, 2007, 2008, and projection as of May 1, 2009

Runoff Forecasts

Figure 3 shows a comparison of statewide runoff from 2006-09. Water year 2005-06 was the most recent wet year, with 173 percent of average statewide runoff. Water year 2006-07 was the first of three dry years, ending with 53 percent of average statewide runoff. Water year 2007-08 ended with 58 percent of average statewide runoff, and both the Sacramento and San Joaquin River regions were classified "Critical." Water year 2008-09 is expected to yield more runoff than 2007-08 with a forecast for 70 percent of average. The May 1 projection is that both river regions will end the water year "Dry." "Critical" is the lowest classification of five, with "Dry" being the second-lowest.

Table 1. State Water Project and Central Valley Project allocations

Year	Type	CVP Allocation*	SWP Allocation
2006	Wet	100% ag/100% M&I	100%
2007	Dry	50% ag/75% M&I	60%
2008	Critical	40% ag/75% M&I	35%
2009	Dry	10% ag/60% M&I	40%

Ag: Agriculture
M&I: Municipal and Industrial
*South of Delta

State Water Project and Central Valley Project Allocations

Despite the wetter conditions that occurred in early May, south-of-Delta water allocations for the State Water Project (SWP) and Central Valley Project (CVP) remain near record lows. Due to the dry conditions in January and early February, the water projects slowly filled San Luis Reservoir located south of the Delta. Despite improved Delta inflow, the newly imposed regulations to protect endangered species have limited exports. Since mid-February, the SWP has not been able to export about 200,000 acre-feet of water from the Delta due to flow restrictions. These issues will continue to limit the water supply for users south of the Delta.

Using the current water supply conditions and conservative projections of runoff for the remainder of the water year, the SWP estimates a delivery of 40 percent of the current Table A requests of the long-term water supply contracts. Increases to the allocation are possible should the hydrology become wetter. The U.S. Bureau of Reclamation CVP water deliveries officially remain at 10 percent and 60 percent for the agricultural, and municipal and industrial water users, respectively, south of the Delta (Table 1).

Groundwater Basin Conditions

Groundwater is an important water source for municipal drinking water, agriculture, and individual water users. Groundwater provides about 30 percent of the state's water supply in an average year. In some regions, groundwater provides 60 percent or more of the supply during dry years. Up to half of all Californians rely on groundwater for part of their water supply.

Figure 4 shows a map that compares the fall 2008 groundwater elevations with two recent drought water periods; 1977-1978 and 1991-1992. The map depicts a snapshot of how groundwater levels have changed over time and reflects how our reliance on this supply has increased during times of drought from historical levels.

The map is an overview of selected wells for the period of record and does not represent all groundwater basins or groundwater conditions in California. For more information concerning a detailed map explanation, groundwater levels shown in this map, and

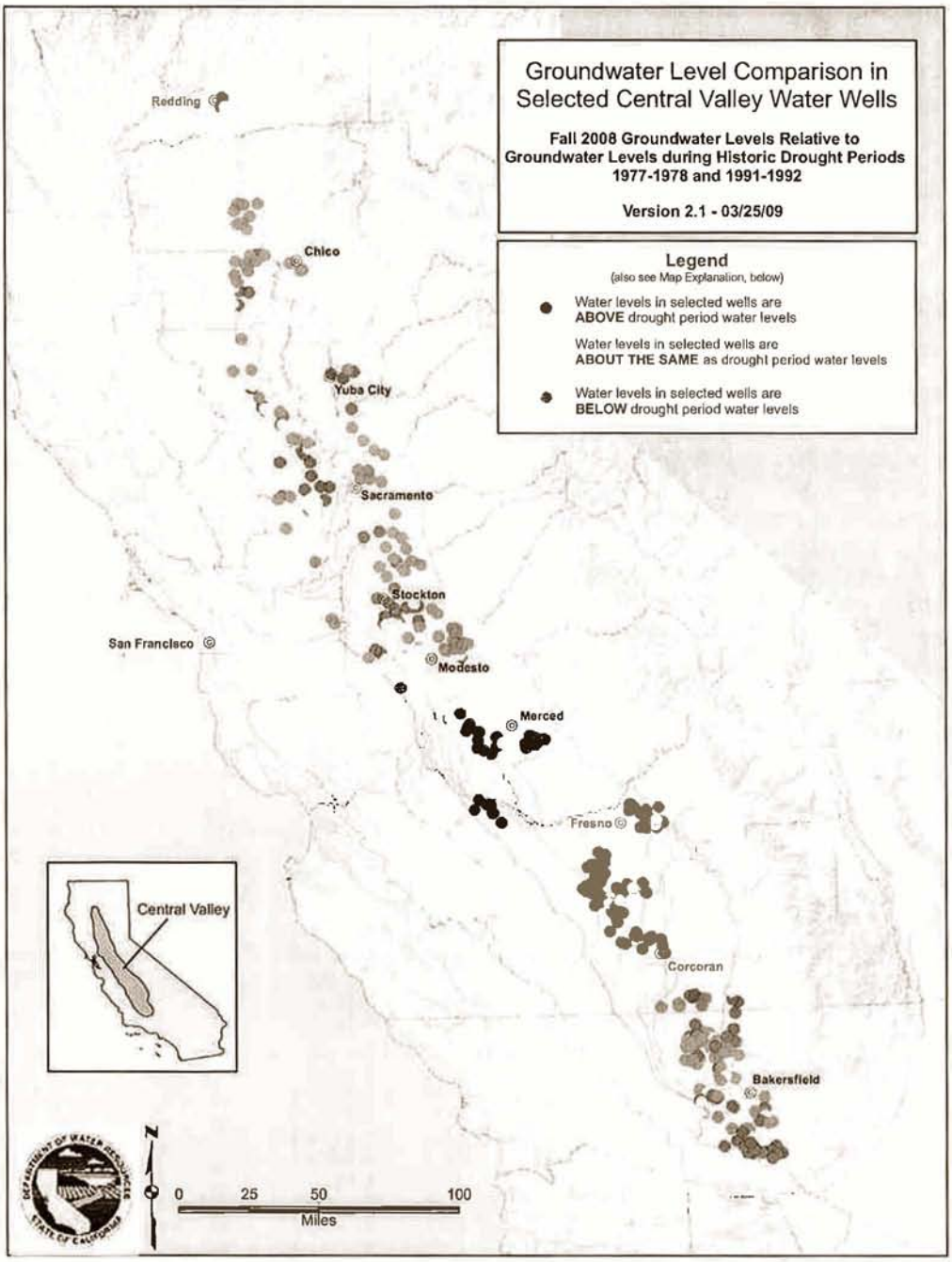

Figure 4. Groundwater Level Comparison in Selected Central Valley Water Wells

frequently asked questions, please see the Department of Water Resources (DWR) drought website at http://water.ca.gov/drought/conditions/.

Local Impacts and Responses to the Drought

It is estimated between 31,200 and 35,300 jobs will be lost in the San Joaquin Valley in 2009, with income loss to crop production and related business estimated between $848 and $959 million. These impacts include both direct, on-farm impacts and indirect, off-farm multiplied economic impacts. Also, groundwater pumping costs are estimated to increase between $139 and $147 million as farmers substitute groundwater for unavailable surface water supplies. The impact estimates were made using mid-April SWP and CVP delivery allocation forecasts. When compared to estimates released in the April 30, 2009 drought bulletin, the May estimates better reflect the limited availability of groundwater in some areas of the San Joaquin Valley due to additional data that allowed an improvement in the impact model. As with the April drought bulletin, these estimates exclude losses associated with drought-affected dryland range and pasture, unirrigated crops, livestock operations, and dairies.

A survey of Integrated Regional Water Management (IRWM) groups and local water agencies conducted by DWR, during the months of March and April, indicate expectations of a continued water shortage in many hydrologic regions of the state including the San Joaquin River, Tulare Lake, South Coast, and the Bay Area, which are significantly dependent on water supplied from the CVP and SWP. In other areas such as the Sacramento River Hydrologic Region and southern portion of the North Coast Hydrologic Region, the drought has also impacted communities that are dependent on local surface supplies as a major source of water supply.

DWR is working with local water agencies to improve the collection groundwater monitoring data. As drought conditions continue to reduce the availability of surface water supplies, reliance on groundwater supplies is expected to increase as more water is pumped from existing wells and new wells are constructed to meet water demands. In some areas, a temporary increase in groundwater pumping during dry periods is part of a long-term groundwater management strategy to help reduce water shortages. In other areas, where groundwater is the only source of supply, communities or individual well owners may need assistance in improving existing wells, drilling new wells, or securing temporary supplies.

San Joaquin River Hydrologic Region--- In the Madera area, groundwater level trends are downward and falling at a rate of approximately five feet per year. Many of the county water districts are experiencing water level declines earlier in the year compared to previous years. Other areas in the basin are reported to be stable. Well drilling activity has increased significantly in the Madera area and has increased slightly in the western portion of Stanislaus & Tuolumne Groundwater Basin. In the Madera Ranchos area, one well had to be disconnected from the water system due to degraded water quality.

Tulare Lake Hydrologic Region---In most areas the groundwater level trend is downward. Significant groundwater level drops were noted in parts of Kern County due to aggressive pumping from water banks. Increased well drilling activity was reported and there are reports of delays in getting drillers to complete additional well installations.

South Coast Hydrologic Region--- In response to the reduced SWP allocations, Metropolitan Water District (MWD) will reduce deliveries to the region by 10 percent on July 1st. As a result of cutbacks in SWP water, forty-nine percent of agencies surveyed in the hydrologic region expect a water shortage this year. Drought impacts are most evident in San Diego County where 69 percent of agencies expect a water shortage this year. Most agencies indicated they are preparing drought contingency plans and cutbacks will be accomplished through a combination of voluntary reductions, increased rates, tiered rate structures, conservation incentives, landscape irrigation schedules, and mandatory conservation.

Groundwater production in the region will likely increase because of reduced imported water supplies. Fifty percent of agencies indicated that groundwater is part of their supply. The effects of the drought have also become evident in regional agriculture; members of the Interim Agriculture Water Program, a MWD program which allows end users to receive surplus water at a discounted rate, were subject to a 30 percent reduction since January, 2008. Combined with penalties for exceeding allocations, this may make participation in the program infeasible and MWD is allowing participants to opt out of the program. The Agriculture Commissioners of Ventura, Riverside, and San Diego counties reported that of the 50,306 acres of productive avocado orchards in the South Coast Region, 7,100 acres have been taken out of production due to the drought. In San Diego County, 26,064 acres of avocados were reduced by as much as 5,000 acres.

Bay Area Hydrologic Region---In the San Francisco Bay hydrological region, as of April 14, 2009, eight agencies (retail and wholesale) are under mandatory rationing, with most of the remaining agencies under voluntary conservation. Agencies that rely on the SWP for a major portion of their water supply are relying on additional groundwater pumping to offset reductions in imported supplies.

Sacramento River Hydrologic Region---In the northern Sacramento Valley, groundwater level declines that exceeded previous drought levels as shown by Figure 4, Groundwater Level Comparison Map (orange dots) are a result of a combination of increased groundwater use since the previous drought period and decline associated with the current drought period. Groundwater level data for Tehama, Glenn, Butte, and Colusa counties indicates that groundwater levels have declined an average of about 7 feet from Fall 2006 to Fall 2008 as a result of current drought conditions. The large number of wells in the northern Sacramento Valley that show groundwater level declines the same as previous drought periods indicates that current groundwater conditions are very similar to conditions experienced during significant previous drought periods, and that if precipitation patterns don't improve the result will be widespread, historically low groundwater levels in the northern Sacramento Valley.

The Yolo County Flood Control and Water Conservation District will limit deliveries this year because of extremely low reservoir storage. Yolo County will only be allowed to draw approximately 21,000 acre feet from Clear Lake, as compared to 150,000 acre feet when the lake is considered full. The lake level at Indian Valley Reservoir is currently more than 100 feet below capacity. By the end of the summer Clear Lake is expected to be at one of the low points in its history.

Water Conservation Actions by Local Water Agencies

As of May 29, 2009, there are 35 local water agencies in California that have mandated water rationing and 61 water agencies urging voluntary conservation measures. A current update of the number of agencies mandating rationing and urging voluntary conservation measures can be found at the Association of California Water Agencies (ACWA) website, http://www.acwa.com/issues/cadrought/map.asp.

Fresno County Drought Emergency Proclamation

The April 30, 2009 Drought Update reported on the Fresno County Board of Supervisors' declaration of a local emergency on April 14 due to drought conditions. The proclamation requests the Governor proclaim a State of Emergency at the State level and requests a presidential declaration. In May, the Fresno County Office of Emergency Services continues to collect data from food banks and online surveys in order to document drought impacts. Areas surveyed include Firebaugh, Mendota, Huron, and San Joaquin City. Surveys are conducted on people receiving food assistance and preliminary numbers indicate that 80% are impacted by the drought. All food banks are currently showing food supplies sufficient for weeks to months. Online surveys were also conducted on more than 300 agricultural businesses and 94% reported that they are affected by the drought and 73% have reduced their work force. There is an average unemployment rate of 36.5% for the west side farming communities compared to 17% for the County as a whole. City of Mendota is currently highest at 41.6%. About 453,400 acres, or 24% of the entire farmland in Fresno County is projected to be fallowed or farmed in dry crops this year. Results from this survey and others will be refined as more data become available.

Mendocino County Drought Emergency Declaration

Mendocino County supervisors passed a resolution on March 14, 2009 declaring a local emergency due to drought conditions. They passed a resolution on April 7, 2009 amending and extending the original resolution and requesting technical and financial assistance, equipment, and regulatory relief from the State to mitigate drought impacts. The resolution also requested a federal declaration of emergency and federal assistance. The county supervisors and water agency managers from the Ukiah area met with DWR, California Emergency Management Agency (CalEMA), and other state agency executives on April 8, 2009 to request assistance with water shortages expected later this year. Mendocino County continues to work on a County Action Plan to submit to CalEMA. The California Department of Public Health is working with the county regarding the

availability of Proposition 84 funds for emergency actions under Public Resources Code Section 75021.

Sonoma County Water Agency (SCWA) submitted a petition to the State Water Resources Control Board (SWRCB) on April 6, 2009 to reduce the required in-stream flows in the Russian River below Lake Mendocino. The petition included a projection showing the potential dewatering of Lake Mendocino this September. The SWRCB approved the petition, held a workshop on May 6, 2009 to receive comments, and is considering amendments to the provisions in the order. These include a 25% reduction in SCWA diversions, prohibition of commercial turf irrigation, and a plan to reach a 50% water conservation goal for Russian River water users in Mendocino County.

The reduced releases from Lake Mendocino and rains in early May allowed storage to increase to 56,000 acre feet. Storage is now slightly above the level it was at during the drought of 1977. SCWA reported to the SWRCB that they project the storage to drop to about 30,000 acre feet in October. This is close to the level of Redwood Valley County Water District's intake. The Redwood Valley County Water District shut off all agricultural deliveries on May 15, 2009 and the Mendocino County Russian River Flood Control and Water Conservation Improvement District has reduced their allocation to all contractors to 50%. The county is considering further actions.

Water Conservation Awareness Campaign

Since it launched more than a month ago on April 21, 2009 the Save Our Water statewide water conservation program has continued to expand its outreach activities and build on its partnership between the DWR and ACWA. Consumer materials, such as bumper stickers, water-proof decals, brochures and fact sheets, are available on the Save Our Water website, which has been expanded to include interactive educational tools and games for kids. Save Our Water has also created Twitter and Facebook accounts. To date, the program has been featured in 28 newspaper articles, seven television news clips and four radio news clips. More than 60 web banners have been placed on partnering sites of organizations throughout the state, including 22 on ACWA member agency websites. The Save Our Water program is designed to educate Californians on the state's water challenges and encourage them to reduce the amount of water they use everyday. The statewide program offers consumer-oriented information and tools for understanding of the long-term issues facing the state's water system and practical tips for reducing water use indoors and outside. For more information, visit http://www.saveourh2o.org/

Summary

Reservoir storage conditions at the end of May vary across the state. Although the storms of 2009 increased storage in larger reservoirs like Shasta and Oroville, they still remain well below their average for this time of year. Limits on transfers through the Delta have impacted San Luis reservoir, which is also well below average. The increasing demands for water will begin to outpace reservoir inflows across California which will cause reservoirs to begin losing storage this summer.

In anticipation of the drought conditions continuing in 2010, activities are underway to expedite funding for water management projects, implement a comprehensive plan to reduce per capita water use 20 percent by 2020, finalizing standards for dual plumbing systems, completing upgrades to the California Irrigation Management Information System, conducting drought assistance workshops, and preparing a five year drought contingency plan.

TO: BOARD OF DIRECTORS

FROM: BRUCE BUEL

DATE: JUNE 5, 2009

AGENDA ITEM G

JUNE 10, 2009

COMMITTEE REPORTS

ITEM

Review Committee Matters.

BACKGROUND

The Water Conservation Committee is scheduled to meet at 2:30pm on Friday June 5, 2009.

The Infrastructure Committee is scheduled to meet at 2:00pm on Monday June 20, 2009.

The Parks Committee is scheduled to meet at 10am on Monday June 20, 2009.

RECOMMENDATION

It is recommended that your Honorable Board discuss the meetings as appropriate.

ATTACHMENT – NONE

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