

# **DWR Update Critically Overdrafted Basins 2015 Draft List**



**August 25, 2015 - Clovis  
August 26, 2015 - Webcast**

# Presentation Outline

- **Background of Critically Overdrafted Basins (Mary Scruggs)**
- **Process for Determining Critical Overdraft (Tim Ross)**
- **Draft Results and Next Steps (Dane Mathis)**
- **Questions and Comments**

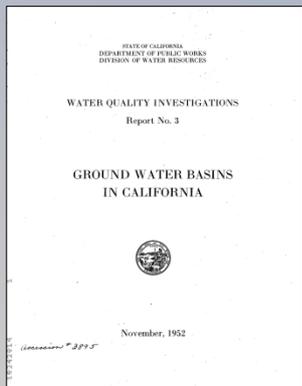


# Background of Critically Overdrafted Basins

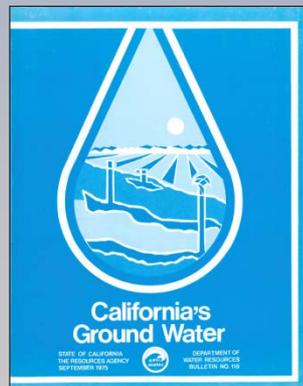


# CA Groundwater Basins

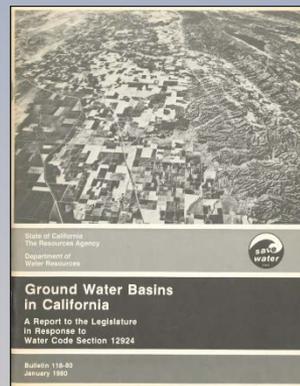
- Groundwater Basins and Subbasins - Defined in DWR Bulletin 118 using best available data
- Prior B118 defined critical overdraft and identified basins with critical overdraft status
- DWR required to update under SGMA



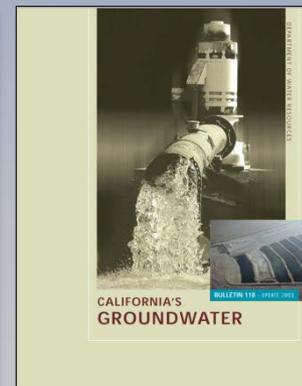
1952



Bulletin 118  
1975



Bulletin 118  
1980



Bulletin 118  
2003



# Critical Overdraft Timeline

## 1978

- DWR tasked by Legislature to develop a definition of critical overdraft
- Identify basins currently in overdraft

## B118-80

- Defined critical overdraft
- Identified 11 basins in critical condition of overdraft in conjunction with local agencies

## B118-03

- Used same definition and list of basins as B118-80

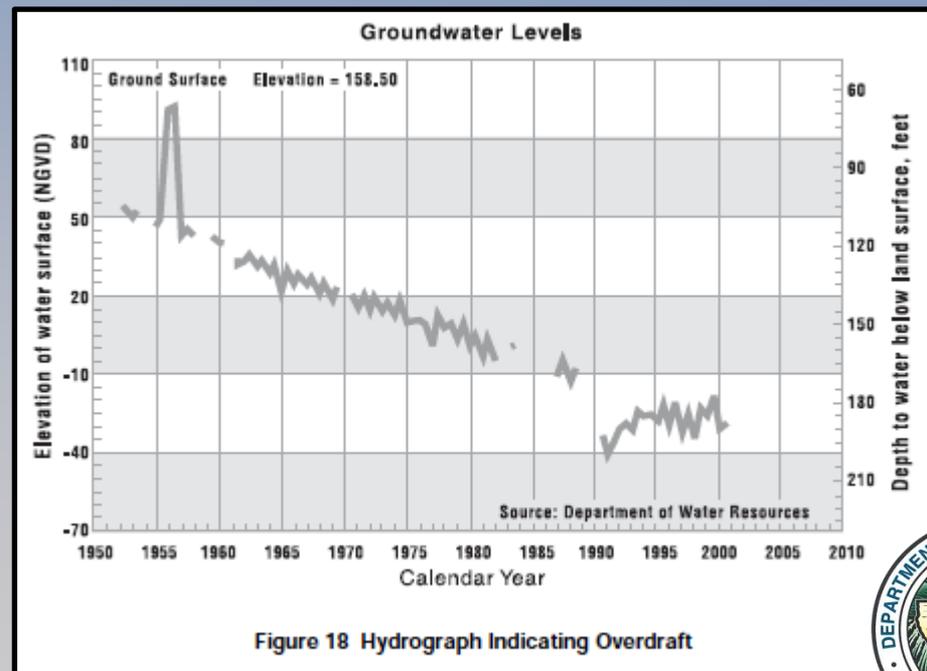
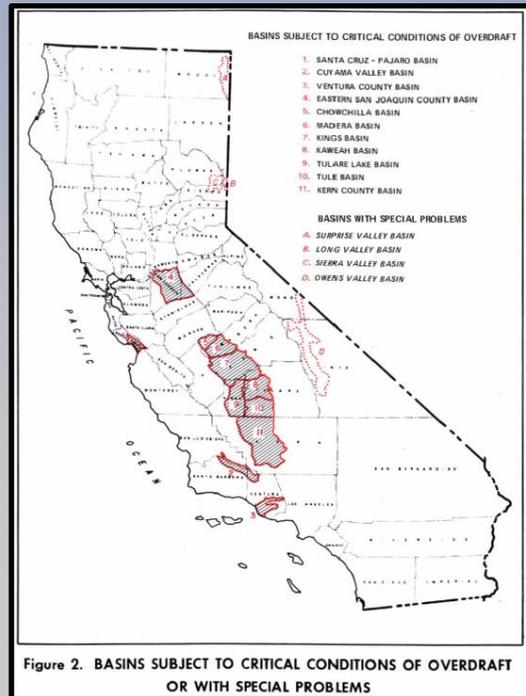
## B118-Interim Update 2017

- Update list of critically overdrafted basins by January 1, 2017
- Same list as developed in 2015



# Bulletin 118-80 Critical Conditions of Overdraft

*“A basin is subject to critical conditions of overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts.”*



# Bulletin 118 – 1980 and 2003 Critically Overdrafted Basins

Pajaro Valley	Cuyama Valley
Ventura Central Basin*	Eastern San Joaquin
Chowchilla	Madera
Kings	Kaweah
Tulare Lake	Tule
Kern County	

\*Bulletin 118 Update 2003 used same list as 1980 basins, but basin boundaries were modified and Update 2003 reflected new basins and subbasins, but no new area identified. (Ventura Central Basin)



# Update of Critically Overdrafted Basins

Per Sustainable Groundwater Management Act (SGMA) and Water Code Section 10720.7. Planning Deadlines:

***“(a) (1) By January 31, 2020, all basins designated as high- or medium-priority basins by the department that have been designated in Bulletin 118, as may be updated or revised on or before January 1, 2017, as basins that are subject to critical conditions of overdraft shall be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans pursuant to this part.”***

-Basins in Critical Overdraft must develop GSP by 2020



# Update Critically Overdrafted Basins

Per Water Code Section 12924:

*“ (a) The department, in conjunction with other public agencies, shall conduct an investigation of the state’s groundwater basins. The department shall identify the state’s groundwater basins on the basis of geological and hydrological conditions and consideration of political boundary lines whenever practical. The department shall also investigate existing general patterns of groundwater extraction and groundwater recharge within those basins to the extent necessary to identify basins that are subject to critical conditions of overdraft.”*

-Results are published in Bulletin 118



# Background of Critically Overdrafted Basins

Questions?



# Process for Determining Critical Overdraft



# Evaluation Process

- **Determine Hydrologic Base Period**
- **Evaluate Basins**
- **Notify Basin Managers and Counties in Basins on Preliminary List**
- **Release Draft List to Public**
- **Obtain and Evaluate Additional Information**
- **Produce Final List**



# Hydrologic Base Period

1. Attempt to obtain longest period that:
  - Includes wet and dry years
  - Base period has same mean precipitation as long-term mean
  - Base period state-wide
2. Outside of Recent Drought Period:
  - Applied Water Code Section 10721 (w)(1) ....” Overdraft during period of drought is not sufficient to establish a chronic lowering of groundwater levels...”
3. Consulted with State Climatologist
4. Determined Base Period to be 1989-2009
5. CASGEM data not included in base period



# California Precipitation



# Process

**DWR completed initial evaluation of all groundwater basins using groundwater elevation data available to DWR.**

- Very limited data in over 400 groundwater basins/subbasins.**
- More recent data from CASGEM program could not be used; outside the base period and falls within drought period**
- Water levels evaluated for basins with data available at DWR**



# Process

**Due to limited data in over 400 basins, DWR reevaluated process for identifying critically overdrafted basins:**

- **Include all Bulletin 118-80 and Update 2003 critically overdrafted basins onto the 2015 preliminary list.**
- **Conducted review of DWR reports, investigations, published reports, USGS reports, and local agency reports such as GWMPs and EIRs to identify basins with obvious evidence of adverse impacts.**
- **Invited local agencies to provide data and information to DWR to reevaluate and assist identification of additional basins or removal of basins.**



# Undesirable Impacts

Lowering of  
Groundwater  
Levels

Reduction of  
Groundwater  
Storage

Seawater  
Intrusion

Water Quality  
Degradation

Land  
Subsidence

Depletion of  
Surface  
Water



# Process

- In July 2015, DWR staff contacted major basin managers and respective counties of all basins/subbasins identified on preliminary list.
- Local agencies were provided opportunity to present additional data for reevaluation of critically overdrafted status.
- Some basins/subbasins were removed from preliminary list based on information provided to DWR.
- On August 19, 2015, DWR provided draft list of critically overdrafted basins and summary of process to the California Water Commission.
- DWR still anticipating meeting with local agencies for a few areas.



# Process for Determining Critical Overdraft

Questions?

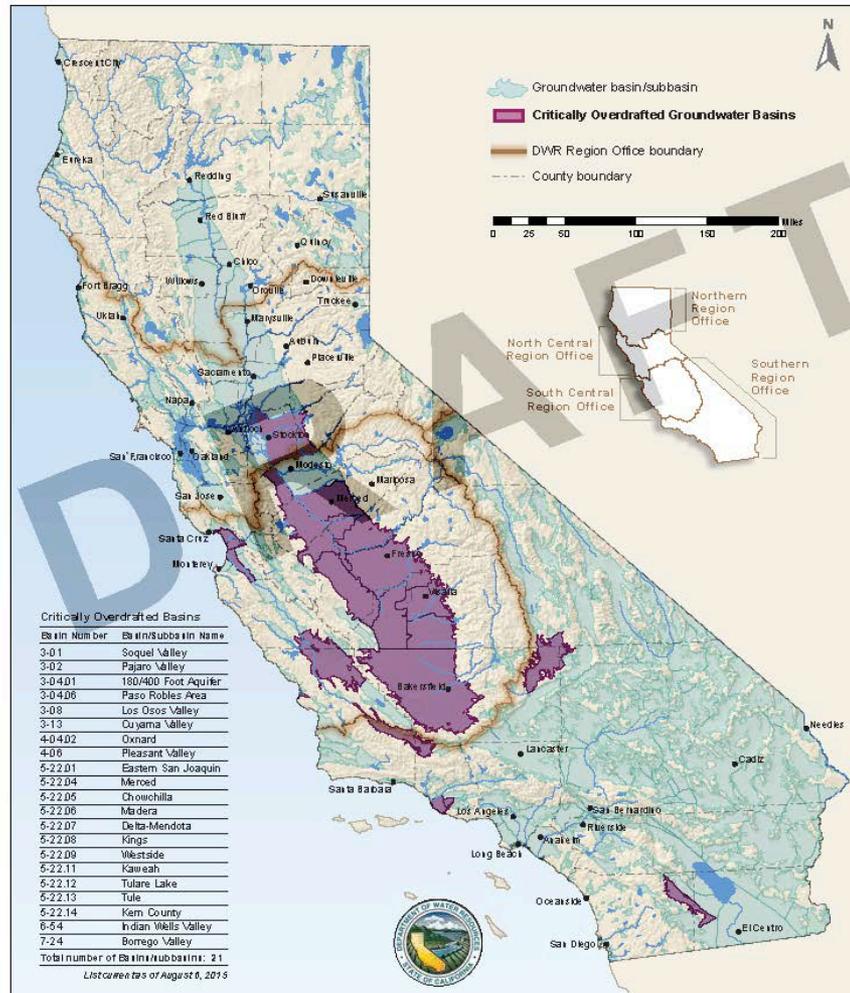


# Draft Results and Next Steps



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Critically Overdrafted Groundwater Basins – August 6, 2015 Draft



# Draft Results – 2015 Additions

Basin Number	Basin/Subbasin Name	Reason for identification over hydrologic base period of 1989-2009
3-01	Soquel Valley	Seawater intrusion, local designation of critical overdraft.
3-04.01	180/400 Foot Aquifer	Seawater intrusion into the 180 foot aquifer, 5 miles inland by 1995. 2 miles inland for the 400 foot aquifer due to over-pumping by same timeframe.
3-04.06	Paso Robles Area	Groundwater depletion. From 1997-2013 the groundwater table in parts of the basin declined more than 70 feet.
3-08	Los Osos Valley	Seawater intrusion rates of 60 feet/year 1985-2005 accelerating to 200 feet/year 2005-2014.



# Draft Results – 2015 Additions

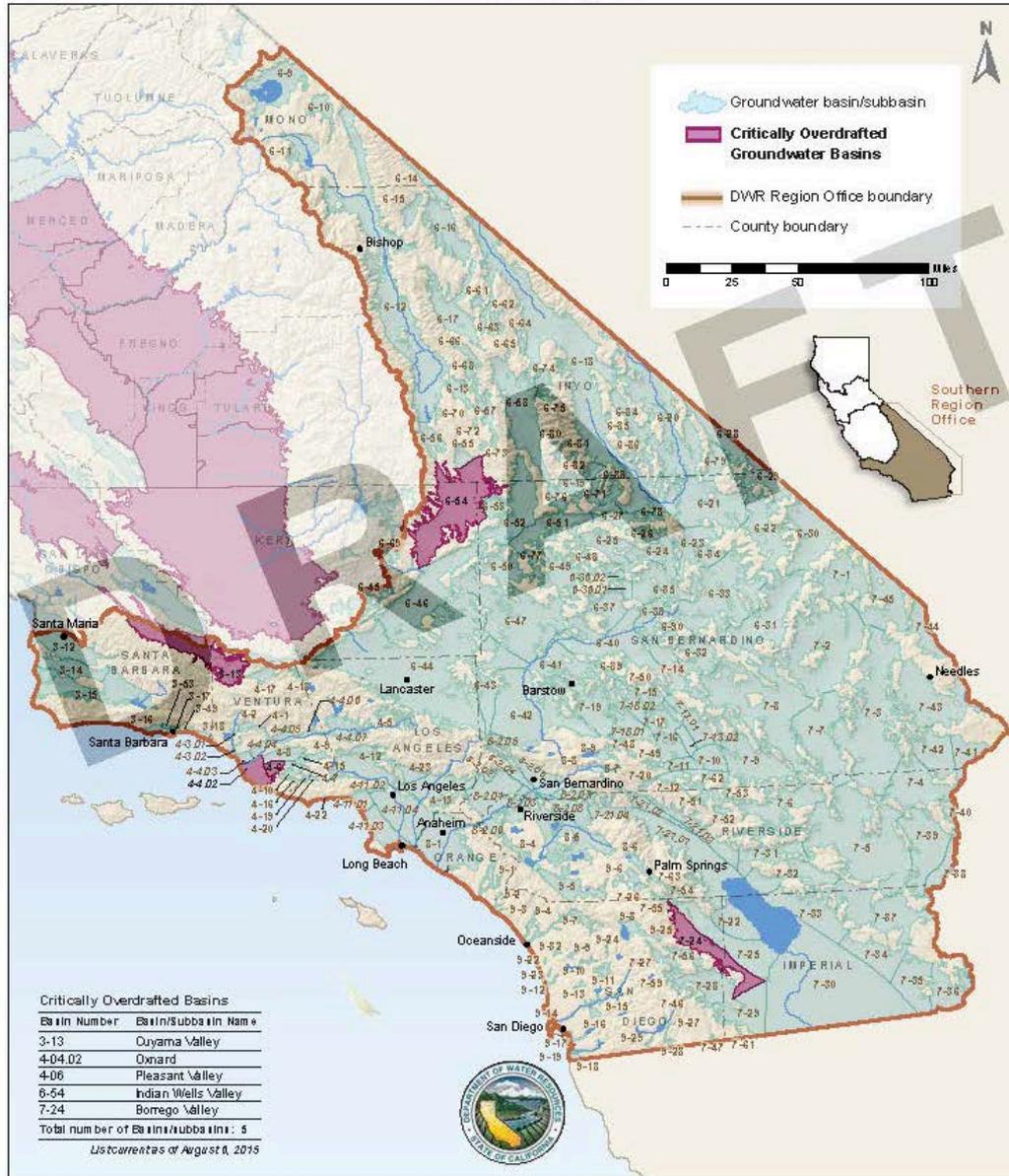
Basin Number	Basin/Subbasin Name	Reason for identification over hydrologic base period of 1989-2009
5-22.04	Merced	Subsidence in El Nido area 0.6 to 1.0 ft/year (USGS).
5-22.07	Delta-Mendota	Significant, on-going and irreversible subsidence; about 0.8 feet/year 2008-2010.
5-22.09	Westside	Significant, on-going and irreversible subsidence; about 0.4 feet/year 2007-2011.
6-54	Indian Wells Valley	Steady groundwater elevation decline and loss of stored groundwater. Water quality degradation.
7-24	Borrego Valley	Steady groundwater elevation decline. Approximately 2-3 feet per year for previous 50+ years.



## Critically Overdrafted Groundwater Basins – August 6, 2015 Draft – North Central and South Central Regions



# Critically Overdrafted Groundwater Basins – August 6, 2015 Draft — Southern Region



# Draft Results - Critically Overdrafted Basins 2015

- Maps and associated table represent draft identification of critically overdrafted basins as of August 6, 2015.
- 21 basins/subbasins total:
  - 12 out of 18 previously identified in 1980/2003
  - 9 newly added basins for 2015
- All 21 basins are also High or Medium Priority basins.
- The 21 basins are ~40 percent of the total area of the 127 High and Medium Priority basins.
- Geographic breakdown by DWR Region Office:
  - Northern Region – 0
  - North Central Region – 1
  - South Central Region – 15
  - Southern Region – 5



# Draft Results - Critically Overdrafted Basins 2015

## SUMMARY:

- Included previously identified basins from Bulletin 118-1980 and Update 2003.
- Established non-drought hydrologic base period for analysis.
- Consulted readily available information (DWR reports, published reports, USGS, GWMP)
- Identified new critically overdrafted basins that showed obvious evidence of adverse impacts within the hydrologic base period.
- Notified and worked with local agencies on evaluation and designation of critical overdraft status.
- Pursuant to SGMA, an entire basin/subbasin is determined in critical overdraft even though the presence of undesirable impacts may be localized.



# Additional Comments from DWR

- Basins not identified as critically overdrafted could be overdrafted, especially due to current drought conditions, but the process identified only the obviously impacted basins during the base period.
- DWR did not identify overdrafted basins, only critically overdrafted basins.
- DWR welcomes comments and information for basins on the draft list as well as basins/subbasins that are not on the list.
- Data from the base period that indicates the basin should or should not be listed as critically overdrafted is required for DWR to reevaluate the basin/subbasin status with respect to critical overdraft.



# Next Steps

- **Public Meeting on August 25 in Clovis.**
- **Webcast on August 26.**
- **Post draft list, maps, and information on DWR website.**
- **Public comment period runs through September 25, 2015.**
  - **DWR will accept data and information from local agencies.**
  - **DWR will accept public comments.**
  - **DWR will review data and comments and revise draft list as needed.**
  - **DWR evaluation will address adding and removing basins from list based on data submitted**
- **Finalize list and post on DWR website in October 2015.**
- **Publish same list and information in Bulletin 118 Update 2017.**



# Where to Submit Comments

At the August 25 Public Meeting

During the August 26 Webcast

Email: [sgmps@water.ca.gov](mailto:sgmps@water.ca.gov) Subject: COD Basins

Mail: Send a hardcopy via postal mail, to the following address, postmarked by September 25, 2015:

California Department of Water Resources

Attn: Sustainable Groundwater Management Section

RE: COD Basins

P.O. Box 942836

Sacramento, CA 94236

**\*Public comment period is from August 25 through September 25, 2015.**



# Groundwater Contacts

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**North Central Region: Bill Brewster**

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**South Central Region: Dane Mathis**

[Dane.Mathis@water.ca.gov](mailto:Dane.Mathis@water.ca.gov) (559) 230-3354

**Southern Region: Timothy Ross**

[Timothy.Ross@water.ca.gov](mailto:Timothy.Ross@water.ca.gov) (818) 549-2345

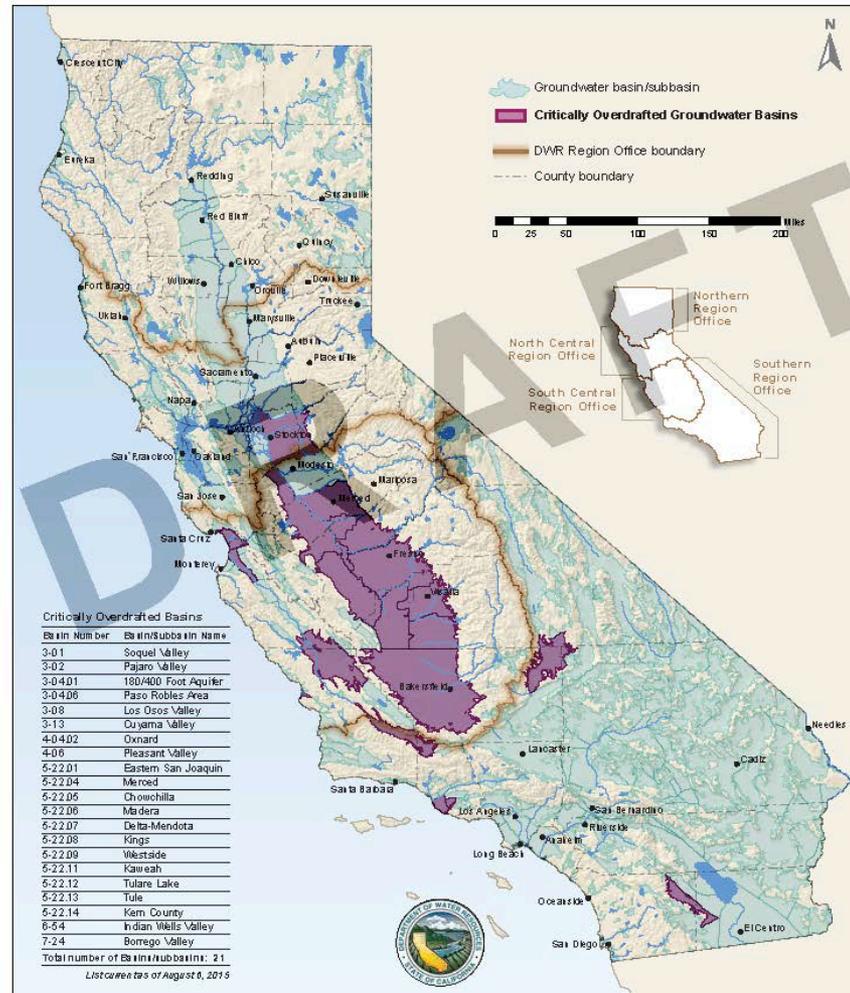
**DWR HQ: Mary Scruggs**

[Mary.Scruggs@water.ca.gov](mailto:Mary.Scruggs@water.ca.gov) (916) 654-1324



# Questions or Comments?

Critically Overdrafted Groundwater Basins – August 6, 2015 Draft



# Other Upcoming SGMA Events

- **Groundwater Sustainability Plan (GSP) Information Meeting & Webinars**
- <http://www.water.ca.gov/groundwater/sgm/gsp.cfm>
- [http://www.water.ca.gov/groundwater/sgm/pdfs/GSP\\_Webcast\\_Announcement\\_B2andB3\\_Final.pdf](http://www.water.ca.gov/groundwater/sgm/pdfs/GSP_Webcast_Announcement_B2andB3_Final.pdf)
- Batch 2 Topics -- Sacramento, August 27, 2015
- Batch 3 Topics -- Sacramento, September 21, 2015
  
- **Basin Boundary Draft Regulation Public Meetings**
- [http://www.water.ca.gov/groundwater/sgm/basin\\_boundaries.cfm](http://www.water.ca.gov/groundwater/sgm/basin_boundaries.cfm)
- [http://www.water.ca.gov/groundwater/sgm/pdfs/Basin\\_Boundary\\_Public\\_Meetings\\_How\\_to\\_Comment.pdf](http://www.water.ca.gov/groundwater/sgm/pdfs/Basin_Boundary_Public_Meetings_How_to_Comment.pdf)
- Sacramento, August 31 (also webcast)
- Bakersfield, September 2, 2015
- Santa Ana, September 3, 2015



# Draft List of Critically Overdrafted Basins –August 6, 2015

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3-02	Pajaro Valley	Previously Identified in 1980
3-04.01	180/400 Foot Aquifer	Seawater intrusion into the 180 foot aquifer, 5 miles inland by 1995. 2 miles inland for the 400 foot aquifer due to over-pumping by same timeframe
3-04.06	Paso Robles Area	Groundwater depletion. From 1997-2013 the groundwater table in parts of the basin declined more than 70 feet, due to changes in farming/irrigation practices that steered away from growing alfalfa and use of the land for open range livestock to mainly vineyards and wineries.
3-08	Los Osos Valley	Seawater intrusion rates of 60 feet/year 1985-2005 accelerating to 200 feet/year 2005-2014
3-13	Cuyama Valley	Previously Identified in 1980
4-04.02	Oxnard	Previously Identified in 1980
4-06	Pleasant Valley	Previously Identified in 1980
5-22.01	Eastern San Joaquin	Previously Identified in 1980
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5-22.11	Kaweah	Previously Identified in 1980
5-22.12	Tulare Lake	Previously Identified in 1980
5-22.13	Tule	Previously Identified in 1980
5-22.14	Kern County	Previously Identified in 1980
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Total number of Basins/subbasins – 21		