

## Lahontan Regional Water Quality Control Board

December 12, 2016

ECM: (LAMP) Kern County

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### Lahontan Water Board Comments – Proposed California City Local Agency Management Program

The Lahontan Regional Water Quality Control Board, Lahontan Region (Water Board) staff has reviewed a proposed Local Agency Management Program (LAMP) for the City of California City (City). The City submitted the proposed LAMP on March 7, 2016. Our comments, which are not listed in any particular order, are the following:

1. LAMP in general – The LAMP is the City's program to regulate onsite wastewater treatment systems (OWTS) within the City's jurisdiction. Therefore, the LAMP must include the entire City program, which includes codes, technical guides, and ordinances. The ordinances must include Ordinance No. 89-414, or its equivalent, regarding development in "distinctly defined zone." This ordinance requires halting development when the zone's cumulative density reaches ½ acre per equivalent dwelling unit (edu). Please submit a revised proposed LAMP that includes these items.
2. Memorandum of Understanding (MOU) migration – Water Board staff accepts the City's proposal to migrate the MOU requirements into the LAMP providing the City has an adequate Water Quality Assessment Plan (WQAP). The density criterion in the MOU is unique to the City. Under the criterion, the City, in the "First Community", may issue building permits on lots less than ½ acre per edu as long as the cumulative density remains less than ½ acre per edu within distinctly specified zones, hereafter referred to as "zones". The zones are delineated on Map "A" of the MOU. Map "A" is Figure 2 of the proposed LAMP.

Specific comments on MOU migration to the LAMP are the following:

- a. Derivation of OWTS requirements – In the first sentence on Page 4, please insert the word "former" so that the text reads "... Local Agency Management Program are derived from the ... former Lahontan Basin Plan criteria..." Under OWTS Policy §3.2, the existing Basin Plan OWTS criteria expire on either the LAMP effective date or May 13, 2018, whichever occurs first.

- b. Edu flow per day – On Page 5, the City states that one equivalent dwelling unit (edu) is 2.7 people, and each person contributes 100 gallons of sewage per day (wastewater flow rates, Page 18). Therefore, 1 edu = 270 gallons sewage per day. Yet on Page 8 the City states that two (2) dwelling units equal 500 gallons per day, which converts to 1 edu = 250 gallons sewage per day.

Please provide a single value for gallons of sewage per edu. We suggest 250 gallons per edu. This is because it is consistent with the existing MOU/Basin Plan criterion.

- c. Sewer Assessment Districts – Please provide a revised Figure 2 or another map that shows sewer assessment district locations and boundaries, because these boundaries are not readable on Figure 2.
- d. City OWTS requirements – On Page 8 the City proposes to carryover the 15,000 ft<sup>2</sup> lot size criterion into the LAMP. Water Board staff recommends discontinuing this criterion because it has no effect on the cumulative density criterion.
- e. Exemptions – On Page 8, the City proposes to incorporate MOU exemptions into the LAMP. The exemption was a process by which the Water Board Executive Officer was allowed to exempt either a class of OWTS or a specific OWTS.

The OWTS Policy does not allow exemptions. Instead, the owners of OWTS types that are outside the LAMP scope of coverage must submit a report of waste discharge, pay fees, and obtain waste discharge requirements. Please remove “exemption” criteria from the LAMP.

- f. Second City Criteria – Please define criteria for the “Second City”. We suggest a minimum lot size of ½ acre per edu, by each lot, unless the lot is connected to a public sewer. However, we also request the City justify how this density protects water quality as it is now understood that this density may not be protective of underlying groundwater.

3. Wastewater treatment plant OWTS – On Page 7, the City states that the LAMP scope of coverage excludes regulation of wastewater treatment plants of any kind or size. On Page 8, the City states that they will not issue building permits for wastewater treatment package plants. On Page 10, the City states that Kern County Division of Public Health is responsible for review, approval, and issuing permits for alternative treatment systems. On Page 23, the City states that these systems must be submitted to the Lahontan Water Board for approval.

- a. Please clarify the types of OWTS that are within the LAMP scope of coverage. A breakdown structure showing the names and relationships among conventional and non-conventional OWTS is presented in Enclosure 1.
- b. Please clarify the types of OWTS that are referred to Kern County Environmental Health Division for approval. Please describe Kern County’s review and approval process for alternative systems. Kern County’s review and approval process for

these systems must be included in the Kern County LAMP. Water Board staff understands the Kern County LAMP as currently written would not apply to California City.

- c. OWTS Policy §9.4.6 requires monitoring and inspections for OWTS that include supplemental treatment beyond a conventional OWTS (see Enclosure 1). If the City decides to include supplemental treatment systems within the LAMP scope, please provide criteria, procedures, and implementing ordinances for these systems.
  - d. Regarding Lahontan Water Board siting and design approval, State Water Code §13360 prohibits the Water Board to approve the siting and design of any OWTS. Nevertheless, Water Board staff will, upon local agency request and resources allowing, review the siting and design of OWTS and provide recommendations to California City. Please provide procedures for referring types of OWTS to the Water Board for recommendations.
  - e. The State Water Resources Control Board (State Water Board) conditional waiver of waste discharge requirements applies only to OWTS within the LAMP scope of coverage. For OWTS outside the LAMP scope of coverage, please include text in the LAMP that direct the owner of these systems to submit a report of waste discharge, obtain waste discharge requirements from the Lahontan Water Board, and pay fees for OWTS discharges.
4. Tier 2 Considerations – Please describe how the City will meet each OWTS Policy considerations in the LAMP. The considerations are presented in OWTS Policy §9.1 and §9.2. Some considerations are required and others are optional. For each required consideration, please give a justification for any “no” answer. Please see also separate comment on consideration §9.2.8, salt/nutrient management plans.
  5. Page 26 Salt/Nutrient Management Plan (SNMP) – The City states that they maintain wastewater treatment plant groundwater monitoring data, and indicate that the measured water quality constituents are currently at acceptable level. The City does not, however, list planned/completed SNMPS.

Part of the City overlies the Fremont Valley groundwater basin, and the other part of the City overlies the Antelope Valley groundwater basin. The City is preparing the SNMP for the Fremont Valley groundwater basin, which has yet to be completed. The Antelope Valley SNMP is complete, and it can be accessed at: <http://www.avwaterplan.org>.

Consideration of §9.2.8 requires the City to consider development or implementation of, and coordination with, regional SNMP. Therefore, please describe the City's commitment to meet this consideration.

6. OWTS Building Permits – OWTS Policy §9.3.1 requires, in part, that the City maintain records of the number and location of OWTS issued permits. To track cumulative OWTS density, please consider reporting OWTS permit data by zone using the reporting instructions of Enclosure 2.

OWTS Policy §3.3 requires annual reports on February 1. Please report permit data on February 1 of each year, beginning with February 1, 2019, which is the year following the latest possible LAMP effective date of May 13, 2018.

7. Water Quality Assessment Program (WQAP) – Water Board staff suggests a focused WQAP with collaboration with other agencies.

a. Focused program

The need for assessing the cumulative effect of OWTS nitrate discharges in the Lahontan region was presented at the Lahontan Water Board OWTS workshop on September 15, 2016. OWTS discharges will eventually recharge underlying aquifers, even where the density is limited to a minimum of 2 equivalent dwelling units per acre. Some unsewered zones within the City's jurisdiction are approaching an OWTS density of 2 edu/acre. The program must justify that continued use of 2 edu/acre is protective of water quality.

Recently John A. Izbicki, USGS, published<sup>2</sup> a paper describing the use of an Unsaturated Zone (UZ) computer model to predict the storage and mobilization of OWTS nitrate for Yucca Valley community within the Colorado River Basin Region. One of the findings in this paper is that OWTS nitrate discharges reached groundwater in ½ the time from areas of high density OWTS than in areas with lower density. USGS has offered use of the UZ model for other areas that have similar climate and geology as Yucca Valley. Water Board staff would accept a WQAP proposal to use this model or a similar model in assessing the cumulative impact to aquifers in high OWTS density areas. The first priority might be use of the model for zones that are approaching a cumulative density of ½ acre per edu. Water Board staff suggests that this computer modeling be conducted in conjunction with the 5-Year WQAP report and periodically thereafter when comparing the computer model results to other collected groundwater data as a result of land development and growth patterns. The scope and cost of model use is dependent upon the nature of work proposed. The USGS contact person for use of the model is Claudia Faunt, Program Manager, 619-225-6142 [ccfaunt@usgs.gov](mailto:ccfaunt@usgs.gov).

b. Collaboration

Water Board staff has discussed the use of the UZ model with Kern County. Please consider collaboration with Kern County, Los Angeles County, or other local agencies to provide optimal use of the UZ model, or some other model, that may be used for Kern County cumulative impact assessments for existing subdivided areas. Los Angeles County is identified because they regulate OWTS in the Antelope Valley, and the "second City" is located at the northern end of the Antelope Valley. Proposed collaborative efforts with Kern County and other local agencies must be included in the City's LAMP.

8. LAMP effective date – The LAMP must have an effective date. The Basin Plan MOUs expire on the LAMP effective date, or May 13, 2018, whichever occurs first.

Therefore, the LAMP effective date may range from LAMP approval by the Lahontan Water Board acceptance date to May 13, 2018.

9. Items not allowed in a LAMP – OWTS Policy §9.4.1 to OWT Policy §9.4.12 contain the items not allowed in a LAMP. In the proposed LAMP, the City commits to items §9.4.1 through §9.4.3 on Page 29. Of significance is §9.2.2, in which the City will permit up to a projected flow maximum of 10,000 gal/day. Item §9.4.6 is covered in another comment of this letter. Please provide the City's commitment to implement OWTS Policy §9.4.4, §9.4.5, and §9.4.7 through §9.4.12.
10. Grinder pumps and pressure sewer system – The proposed system is presented on Page 27. Please provide technical guides and ordinance that defines the conditions necessitating their installation and requirements for maintenance. Please indicate whether the City or the property owner is responsible for system maintenance. Please evaluate the need for an individual backup system, such as a conventional OWTS. This might be needed because systems with moving parts are subject to break-down at any time. In addition, please include in the City's Sanitary Sewer System Management Plan (SSMP) to address maintenance of grinder pumps and pressure sewers. The SSMP is a requirement of the statewide order for sanitary sewer systems, State Water Board Order No. 2006-0003-DWQ, as amended. The City is an enrollee under this Order (WDID No. 6SSO11135).
11. Sewer Extension – When the cumulative density reaches ½ acre per edu in any zone, please provide construction drawings showing the extension of the public sewer system to serve the entire zone. Include budgetary information and construction milestones.

## Closing

1. The OWTS Policy milestone for Lahontan Water Board LAMP approval is May 13, 2017. Water Board staff plans to schedule the LAMP for Water Board approval at its July 12-13, 2017 meeting in Bishop. To meet our schedule for processing agenda items, Water Board staff must assemble a complete agenda package on or before **February 15, 2017**. Water Board staff needs a week to assemble the LAMP documents into the agenda package. Therefore, please submit the City council approved LAMP to the Lahontan Water Board on or before February 10, 2017. The LAMP must address the comments in this letter and meet the requirements of OWTS Policy Tier 2.
2. Please send all future correspondence regarding the City's LAMP to the Lahontan Water Board's email address at [Lahontan@waterboards.ca.gov](mailto:Lahontan@waterboards.ca.gov).
3. Because Kern County reviews and approves non-conventional OWTS for the City, Water Board staff is sending a courtesy copy of this letter to Kern County Environmental Health. Because the Central Valley Regional Water Quality Control Board (Central Valley Water Board, or Region 5) is the designated water board under the OWTS as the Kern County LAMP approval authority, Water Board staff is sending a copy of this letter to Central Valley Water Board staff.

If the City has any questions, please call Mike Coony P.E. (760) 241-7353 [Mike.Coony@waterboards.ca.gov](mailto:Mike.Coony@waterboards.ca.gov) or Jehiel Cass, P.E., Senior Engineer (760) 241-2434 [Jehiel.Cass@waterboards.ca.gov](mailto:Jehiel.Cass@waterboards.ca.gov). Water Board staff is also available to hold a meeting to discuss these comments with the City.



Lauri Kemper, P.E.  
Assistant Executive Officer

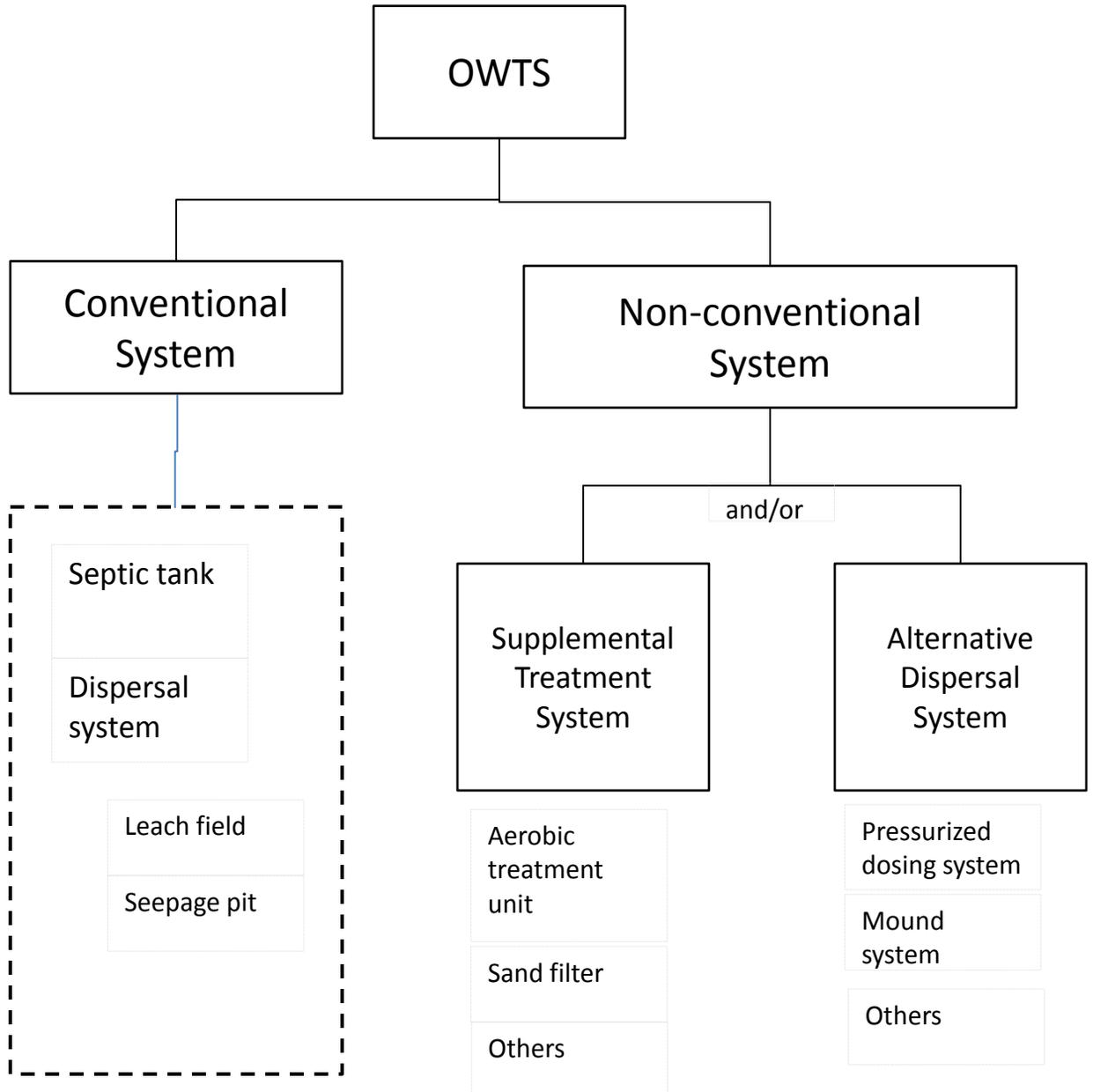
- Enclosure 1: OWTS Type Breakdown Structure
- Enclosure 2: California City OWTS Permit Record Reporting Requirements
- Enclosure 3: California City Watershed Boundaries

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Enclosure 1

# Onsite System Type Hierarchy



## California City Permitted OWTS Reporting Requirements

*Note: For the 1<sup>st</sup> report due on Feb 1, 2019, the annual numbers are the numbers of permits from 7/15/15<sup>1</sup> to 12/31/18.*

### **Table 1: Number of permitted OWTS by zone**

1. Cumulative number of permitted OWTS prior to the previous calendar year for each zone.
2. Annual number of permitted new OWTS during the previous calendar year for each zone.
3. Revision/correction number of permitted OWTS during the previous calendar year for each zone.
4. Cumulative number of permitted OWTS at the end of the previous calendar year for each zone.
5. Cumulative number of permitted OWTS prior to the previous calendar year summed over all zones.
6. Annual number of permitted new OWTS during the previous calendar year summed over all zones.
7. Revision/correction number of permitted OWTS during the previous calendar year summed over all zones.
8. Cumulative number of permitted OWTS at the end of the previous calendar year summed over all zones
9. Annual number of permitted replacement OWTS during the previous calendar year for each zone.
10. Annual number of permitted replacement OWTS during the previous calendar year summed over all zones.

### **Table 2. Cumulative Density Calculations**

*This table has the same format of Figure 3 of the proposed LAMP.*

#### Zone

- a. Zone number.
- b. Tract Id number(s) in each zone.
- c. Number of lots per tract in each zone.
- d. Land area in acres, for each zone.
- e. Number of allowed du at 2 du per acre for each zone.
- f. Cumulative permits issued at end of previous calendar year for each zone.  
(*must equal Table 1 item 4*)
- g. Total number of lots for each zone.
- h. Number of undeveloped lots at end of previous calendar year for each zone.
- i. Current lots used, percent of allowed du, for each zone.
- j. Total capacity at buildout, percent of du, for each zone.

#### Sums

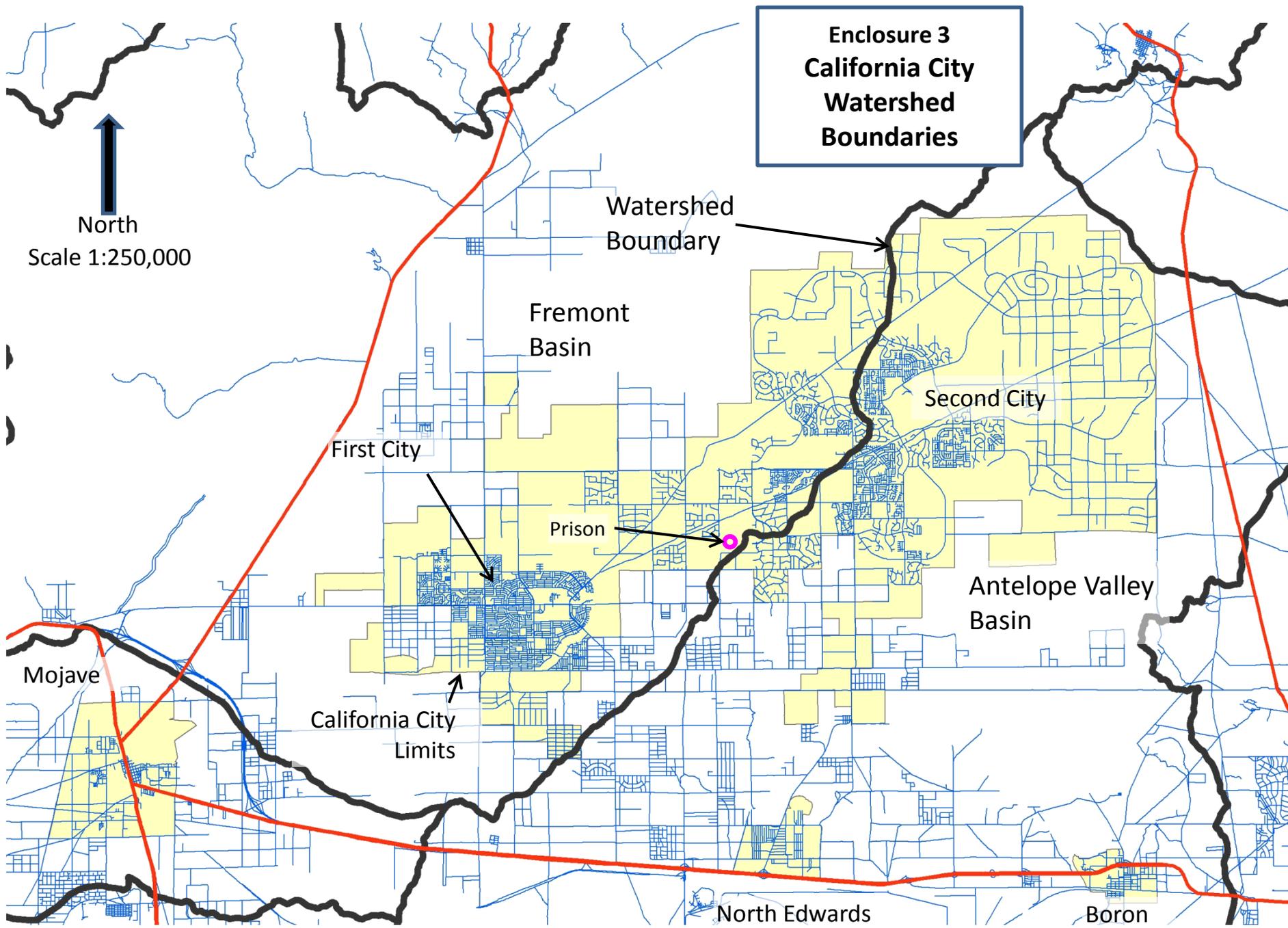
- k. Land area in acres, summed over all zones.
- l. Number of allowed du at 2 du per acre summed over all zones.
- m. Cumulative permits issued at end of previous calendar year summed over all zones.  
(*must equal Table 1, item 8*)
- n. Total number of lots summed over all zones.
- o. Number of undeveloped lots at end of previous calendar year summed over all zones.

#### Averages

- p. Current lots used, percent of allowed du averaged over all zones.
- q. Total capacity at buildout, percent of du average over all zones.

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<sup>1</sup>The cumulative number of permits by zone in Figure 3 of the proposed LAMP is numbers through 7/14/15.



**Enclosure 3  
California City  
Watershed  
Boundaries**

North  
Scale 1:250,000

Watershed  
Boundary

Fremont  
Basin

Second City

First City

Prison

Antelope Valley  
Basin

California City  
Limits

Mojave

North Edwards

Boron