

Del Oro Sampling and Recovery Phase II¹

Submitted to the Division of Drinking Water (DDW) on May 15, 2019

Primary Goals of Phase II Sampling and Recovery Plan:

Goal #1: Evaluate the safety of the water currently being used at occupied homes located in the Paradise Pines District, the Magalia District and the Lime Saddle District

Goal #2: Remove any remaining Benzene contamination from the distribution systems serving the three districts through system flushing

Goal #3: Develop and implement positive messaging to inform the public about the merits of the plan and ask the public for assistance

Action Plan to Achieve Goal #1: Evaluate the safety of the water currently being used at occupied homes within the burn area located in the Paradise Pines, Magalia and Lime Saddle Districts.

- A. Publish the plan to collect representative water samples at occupied homes within the burn area of the three Districts. Clearly state the objectives of the sampling plan with emphasis on the criteria for selection of homes targeted for representative sampling. Criteria for selection include:
 1. Homes selected for sampling must be occupied and using water for normal indoor domestic use and outdoor landscape irrigation. Frequent use / short duration use of water for outdoor irrigation will be encouraged to help clear the system of any contaminants.
 2. Homes selected for sampling must be located within the burn area.
 3. Encourage the use of water for outdoor irrigation at frequent intervals as a positive action to help clear the water system of contamination

- B. Collect representative samples at the kitchen sinks of 10% of the occupied homes in the burn area meeting the criteria for selection detailed above and further described below. If the sample does not produce a random enough representation of the sampling area, reshuffle the eligible occupied homes again. Do not manually designate a sample home(s) which will invalidate the sampling statistical method.
 1. The Paradise Pines District currently has 421 occupied homes in the burn area within the service area. **Collect 43 representative samples** randomly located across the burn area. (10% sample)
 2. The Magalia District currently has 29 occupied homes in the burn area within the service area. **Collect 3 representative samples** randomly located across the burn area. (10% sample)
 3. The Lime Saddle District currently has 108 occupied homes in the burn area within the service area. **Collect 11 representative samples** randomly located across the burn area. (10% sample)
 4. Ask the customer if they can avoid overnight water use until the sample is collected. If this is not possible, select another random standing home in the burn area of the district. If upon sample collection the home admits that water use was necessary, reschedule the sample collection.
 5. Document on the Chain of Custody the approximate length of time the water has been standing.
 6. Purge approximately 1 quart of water from the sink faucet before sample collection.

¹ Del Oro recognizes the tireless efforts of John Wendele, Federal Programs Manager, California Rural Water Association as well as those of Dan Demoss, Executive Director, California Rural Water Association; the staff of the Division of Drinking Water, Redding CA; and the Del Oro State Senior Field Crew's input to this document.

Notes regarding possible scenarios of laboratory results for samples collected at the homes selected for representative sampling:

1. If results are 100% Non-Detections or Detections less than the State Maximum Contaminant Level (MCL) – No further sampling of occupied homes will be conducted.
2. If any of the samples collected contain Benzene greater than the State MCL, a resample will be collected. If the average of the 2 samples is greater than the MCL, then:
 - a. Issue advisory to owners / tenants of occupied homes in all districts to increase frequency of outdoor irrigation using existing landscape irrigation controller. (Set a single area to irrigate 3 times per 24 hours for a duration of 5 minutes per irrigation event.)
 - b. Issue advisory to owners / tenants of occupied homes that do not have a functioning irrigation system to purchase a hose-bib sprinkler controller and program the controller to irrigate for a duration of 5 minutes, at a frequency of three times per 24 hours.
 - c. Any advisory issued as a result of detections greater than the State MCL will include language asking for the public's assistance in clearing the system of contaminants. Frequent but short duration landscape irrigation will be requested and encouraged.
 - d. Follow-up sampling in the home and elsewhere in the system will be conducted in consultation and approval with the Division of Drinking Water.

Action Plan to Achieve Goal #2: Remove any remaining Benzene contamination from the distribution systems serving the three districts.

The stagnant polyethylene service lines associated with the burned-out lots may be a reservoir of benzene contamination. Therefore, these service lines will need to be flushed multiple times to facilitate the removal of any remaining contamination.

- A. Manual Flushing Method Description: Continue flushing all 2,200 service lines associated with burned-out lots using existing staff over a long period of time, which to date has been accomplished four (4) times.
- B. Do not reconnect any service to vacant parcels in the burn area until that service line has been tested following the existing Tuesday Flush / Thursday Sample protocol with sample results being the determining factor for re-occupation of burn-out lots.

Action Plan to Achieve Goal #3: Develop and implement positive messaging to inform the public about the merits of the plan and ask the public for assistance

- A. Publish the representative sampling plan for a 10% sample of occupied homes located within the burn areas of the three Districts.
- B. Publish the results of the 10% sampling plan and any advisories resulting from the results of sampling events.
- C. Ask for the public's assistance with the "clean-up" of the Districts' distribution systems by encouraging outdoor water use in the manner most effective to achieve the goal of frequent turnover of water in the service lines associated with occupied homes.