



State Water Resources Control Board Division of Drinking Water

May 14, 2026

Marc Mattox
Assistant Town Manager
Public Works Director/Town Engineer
Town of Paradise

(via email: mmattox@townofparadise.com)

DIVISION OF DRINKING WATER'S UPDATED RESPONSE COMMENTS, PIPELINE SEPARATION REQUIREMENTS, TOWN OF PARADISE

Dear Mr. Mattox,

This letter transmits the State Water Resources Control Board, Division of Drinking Water's (DDW) response to the questions Town of Paradise has on the regulatory requirements governing the separation between domestic water pipelines, recycled water and wastewater collection pipelines and the alternative to the pipeline separation standards.

The California Waterworks Standards (CA WW Standards), California Code of Regulations Title 22 (CCR T22), Chapter 16, Section 64572 governs the criteria for the separation of water mains from non-potable pipelines (wastewater collection and recycled water distribution pipelines). DDW via its District Offices in coordination with the Recycled Water Unit reviews compliance with the pipeline separation requirements that are regulated by DDW's Domestic Water Supply Permit Amendment and by the Regional Water Quality Control Board (RWQCB). DDW's Title 22 Engineering Report's conditional acceptance recommendations are included in RWQCB's Waste Discharge and Water Reclamation Requirements Permit conditions.

The separation criteria pursuant to the CA WW Standards, CCR T22, Section 64572 requires domestic water pipeline installation shall not be installed in the same trench and shall be at least 10 feet horizontally from a parallel pipeline conveying the following non potable water:

- Untreated sewage (sewer collection pipeline),
- Primary or secondary treated sewage,
- Disinfected secondary 2.2 and Disinfected secondary 23 recycled water.

Domestic water pipeline installation shall be at least 4 feet horizontally from and, one foot vertically above, any parallel pipeline conveying the following non potable water:

- Disinfected tertiary recycled water
- Storm drainage

E. JOAQUIN ESQUIVEL, CHAIR | ERIC OPPENHEIMER, EXECUTIVE DIRECTOR

Alternative to the CA WW Standards, Chapter 16 pipeline separation requirements can be considered subject to demonstrating the proposed use of the alternative would provide at least the same level of protection to public health. The circumstances under which the deviations from the separation requirements are typically evaluated are when new water mains, new sanitary sewer mains or other non-potable fluid carrying pipelines are installed in existing areas and the local conditions are restricting (e.g., available space, limited slope, existing structures) the installation of pipelines as per the CA WW standards separation criteria. Excessive costs in meeting the pipeline separation requirements may be considered as part of the rationale for seeking an alternative to the regulatory requirements, however, DDW will prioritize public health protection above the construction costs in determining an acceptable alternative.

DDW's position is for the potable water pipelines and non-potable pipelines conveying sewage or similar fluids shall not be installed within the same trench. Potable water pipelines are vulnerable to contamination that can pose a risk of waterborne disease outbreaks. Non potable pipelines such as sewer pipelines frequently leak and saturate the surrounding soil with sewage due to structural failure and when this happens at a nearby water main that is depressurized or if it is broken during installation, it will be a cause for public health hazard. Further, failure of domestic water pipeline in close proximity to other pipelines may disturb their bedding and cause them to fail. Also, earthquakes, landslides and other major soil disturbances can cause simultaneous failure of multiple adjacent pipelines.

DDW's interpretation regarding the separation requirements is consistent with the CA WW standards separation requirements, i.e., installation of septic tank effluent or domestic wastewater infrastructure (gravity or force main) and domestic water pipelines shall not be in the same trench, and the horizontal separation of 10-feet shall be maintained between the pipelines. This type of installation mitigates public health hazards including that associated with gravity or pressurized flow of the domestic wastewater or septic tank effluent. For deviation proposed from the separation requirements, DDW will evaluate the changes based on the hazard posed by the deviation. The alternative construction will be assessed for its reliability in mitigating the identified hazards and failures and whether it is providing the same level of public health protection.

For pipeline separation in crossing and parallel installation the following shall be noted. Domestic water pipeline crossing installation with respect to the following fluids pipeline shall be constructed no less than 45 degrees to and at least one foot above that pipeline. No connection joints shall be made in the domestic water pipeline within eight horizontal feet of the fluid pipeline.

- Untreated sewage (sewer collection pipeline),
- Primary or secondary treated sewage,
- Disinfected secondary 2.2, disinfected secondary 23).
- Type of recycled water (disinfected tertiary)
- Storm drainage

Domestic water pipeline parallel installation requires 1-foot vertical separation above the pipeline conveying disinfected tertiary recycled water and storm drainage water as the minimum horizontal separation requirement is less than 10 feet.

The level of recycled water treatment affects the separation requirements from the domestic water pipeline. The domestic water pipeline is required to be installed at least 4 feet horizontally and one foot vertically above the disinfected tertiary recycled water pipeline. All other lower

levels of treated recycled water (disinfected 2.2, disinfected 23) pipelines are required to be installed in a separate trench, at a minimum horizontal distance of 10 feet from the domestic water pipeline.

The installation wastewater pipeline above the domestic potable water pipeline can be considered by submitting a request to DDW for review and approval of an alternative to the CA WW Standards. The proposed alternative shall provide the same level of protection for public health as the requirements set forth in Section 64572, CCR T22. The alternative proposal shall include adequate information for DDW to evaluate the proposed alternative. The information shall entail the following information and not be limited to: intended use of pipelines, fluid conveyed, pipe sizes, operating pressure or gravity flow, pipe material and AWWA material designation code, pressure class, thickness, coating, pipe joint type, pipe length, depth of cover, number of crossings, angle of crossing and description of crossing pipelines, and separation between pipelines (for parallel installation above water main) and description of additional protective measures.

For instances of separation of recycled water lines and sewer lines, DDW applies pipeline separation requirements similar to those for potable water lines and pipelines conveying sewage. For horizontal separation between recycled water lines and sewer lines, a minimum separation of 6 feet should be maintained, though a 10-foot separation is preferred. In addition, a minimum vertical separation of 1 foot should be maintained between recycled water lines and sewer lines; with the exception for gravity sewers where a 6-inch vertical separation may be maintained - though the 1-foot vertical distance is preferred.

If you have any questions regarding this letter, please contact Ginachi Amah at (818) 551-2046 or via email at ginachi.amah@waterboards.ca.gov.

Sincerely,

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Cc: Via Email

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