

## **CHAPTER 22**

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## **PUBLIC HEALTH**

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This section provides an overview of the potential impacts to public health and safety associated with the upgrade and expansion of the PWRP. The analysis compares existing operations with the proposed PWRP 2025 Plan and EIR.

### ENVIRONMENTAL SETTING

The PWRP is located in an area of the Antelope Valley that is primarily rural and agricultural. It consists of predominantly open space, farmland, and low-density, single-family residences. The topography is generally flat, with a slight down-slope to the north and west. The PWRP's effluent management system consists primarily of agricultural operations. District No. 20 has adopted an Integrated Emergency Response Plan covering risk of hazard and worker safety.

### REGULATORY BACKGROUND

#### City of Palmdale General Plan

The *City of Palmdale General Plan*, Safety Element, presents a plan for minimizing the hazards to public health and safety. It outlines natural and man-made hazards that affect existing and future development within the city and the surrounding planning area. In addition, it includes guidelines and policies to improve public safety and minimize impacts due to natural or man-made disasters. The following goals are outlined in the Safety Element:<sup>1</sup>

- Minimize danger and damage to public health, safety, and welfare resulting from natural hazards;
- Minimize damage associated with man-made hazards;
- Maintain and enhance city emergency services; and

- Protect public safety through the implementation and enforcement of city ordinances and through public education.

#### Recycled Water Regulatory Background

The RWQCB-LR and the DHS regulate the treatment and use of reclaimed water within the Antelope Valley. Occupational safety is regulated by OSHA and Cal OSHA. The RWQCB-LR issues WRRs for reuse of treated waste water. The WRRs, which are sometimes combined with WDRs, outline conditions of approval to ensure compliance with Title 22 regulations.

The California State Legislature has declared that the state shall undertake all possible steps to encourage the development of water reclamation facilities so that recycled water may be made available to help meet the state's growing water requirements. State requirements for production, discharge, distribution, and use of recycled water are contained in the following:

- CWC, Division 7 – Water Quality, Sections 13000 through 13999.19;
- CCR, Title 22 – Social Security, Division 4 – Environmental Health, Chapter 3 – Reclamation Criteria, Sections 60301 through 60475; and
- CCR, Title 17 – Public Health, Division 1 – State Department of Health, Chapter 5 – Sanitation (Environmental), Subchapter 1 – Engineering (sanitary), Group 4 – Drinking Water Supplies, Sections 7583 through 7630.

The state of California has compiled California laws and guidance related to recycled water into one volume titled “The Purple Book.” The Purple Book was last updated in June 2001 and consists of excerpts from the California Health and Safety Code, Water Code, and CCR Titles 22 and 17.

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<sup>1</sup> *City of Palmdale General Plan, Safety Element, 1993.*

CCR Title 22 defines requirements for sampling and analysis of the effluent produced at treatment plants, requires preparation of an engineering report prior to production or use of recycled water, specifies general design criteria for treatment facilities and reliability requirements, and addresses methods of treatment.

CCR Title 22 establishes three categories of treated water:

- Primary effluent;
- Secondary oxidized effluent; and
- Tertiary oxidized, coagulated, clarified, and filtered effluent.

CCR Title 22, Division 4, further sets out the regulatory framework required for recycled water use. The regulations categorize recycled water into four general reuse classes as follows:

- Disinfected Tertiary Recycled Water;
- Disinfected Secondary-2.2 Recycled Water (seven day median MPN of total coliform bacteria per 100 mL is 2.2);
- Disinfected Secondary-23 Recycled Water (seven day MPN/100 mL of 23); and
- Undisinfected Secondary Recycled Water.

Appendix Q of this report includes a detailed description of the recycled water use limitations imposed by California regulations. Undisinfected secondary treated water may be applied in excess of agronomic rates to irrigate fodder and fiber crops and pasture for animals not producing milk for human consumption. The regulations limit irrigation with tertiary treated recycled water within 50 feet of any domestic water supply, 100 feet when using disinfected secondary treated water, and 150 feet for undisinfected secondary treated water. Impoundments of disinfected

tertiary recycled water are restricted within 100 feet of any domestic water supply well.

Irrigation is further confined to approved areas and runoff is generally restricted. Spray, mist, or runoff is not allowed to enter dwellings, designated outdoor eating areas, or food handling facilities. No spray irrigation of any recycled water, other than disinfected tertiary water, is allowed within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or schoolyard.

Article 7 of CCR Title 22 sets forth specific engineering reports and operational requirements for water reclamation facilities. Article 8 describes general design requirements including piping design, alarm requirements for various unit processes, and an alternative power supply in case of electrical failure. Article 9 addresses the reliability requirements for primary effluent. CCR Title 17 contains additional requirements to protect the public through the use of backflow preventors and the implementation of a cross-connection control program.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Thresholds of Significance

Impacts of a project would be considered significant under CEQA if they were to adversely affect public health or violate health standards developed by overseeing agencies.

### **Impact 22-1: The project could result in a minimal potential increased risk from exposure to recycled water.**

The PWRP is currently regulated under WDRs issued by the RWQCB-LR as specified in Board Order No. 6-00-57A01. Agricultural operations are also regulated under the WDRs. The WDRs are designed to avoid any potentially adverse impacts to public health. The agricultural operations use recycled water only on those crops that are appropriate for the wastewater

treatment level employed in accordance with Title 22 regulations.

The proposed project entails treating wastewater to the tertiary disinfected level, which is the same quality of water that is routinely used for municipal reuse application such as golf course, street medians, parks, and school irrigation throughout the state. Recycled water users are restricted from over-spraying and producing runoff. The FMP identifies sprinkler application methods and equipment to minimize aerosol production, such as the use of large nozzle sizes placed close to the ground hanging from center pivots. DHS has determined that application of tertiary-treated water by sprinkler systems is protective of public health.

**Mitigation Measure**

No mitigation measures are required.

***Significance After Mitigation***

Less than significant.

**Impact 22-2: Construction of storage reservoirs and the recycled water distribution system may cause an increase to airborne insect populations.**

Storage reservoirs could increase insect populations that breed in still water, especially midges and mosquitoes. Hatching midges can emerge in such tremendous numbers that they create nuisance problems. Midges often emerge simultaneously forming vast clouds of flying insects. They are especially attracted to lights. Large clouds of insects could form over local roadways, creating a traffic hazard. This has not occurred to date at the PWRP. Nonetheless, surface water area close to roads could increase the potential. Mitigation measures would minimize this potential impact.

**Mitigation Measure**

**Mitigation Measure 22-1:** District No. 20 shall apply insect control measures as appropriate, such as vegetation removal around the reservoirs.

***Significance After Mitigation***

Less than significant.