

CHAPTER 25

GENERAL RESPONSES TO COMMENTS

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INTRODUCTION

Numerous comments received during the public review period for the Draft PWRP 2025 Plan and EIR addressed similar issues. For efficiency, the following General Responses have been prepared for the following topics:

- Airport Compatibility;
- Alternatives Analysis; and
- Property Value and Acquisition.

AIRPORT COMPATIBILITY

A number of comments were received expressing concerns that the proposed project in the Draft PWRP 2025 Plan and EIR would not be compatible with (1) existing military and commercial flight operations currently-conducted from USAF Plant 42/PMD airfield or (2) plans to expand the commercial airport operations on LAWA property in the future. This General Response summarizes the PWRP 2025 Plan and EIR's conclusions regarding compatibility with existing and future airport operations.

Project Background

USAF Plant 42 is a government-owned, contractor-operated facility located north of the PWRP treatment facilities and west of the PWRP EMS, as shown in Figure 8-1. The facility consists of eight separate production sites sharing a common runway complex on 5,800 acres of property¹. The airfield is equipped with two 12,000-foot runways, one aligned east-west and the other aligned southwest-northeast. The runways also serve the existing PMD located on USAF Plant 42. In 2004, there were 31,108 flights at the USAF Plant 42/PMD airfield. Of this total, 22,258 were military

flights and 8,850 were general aviation flights. The daily average was 86 flights.²

USAF Plant 42 was first activated as an emergency air landing strip in 1940 prior to the entry of the United States in World War II. The installation was declared a surplus facility in 1946 and was purchased by Los Angeles County for use as a municipal airport. The installation was reactivated by the Air Force in 1950 for use in final assembly and flight-testing of jet aircraft and was later repurchased from Los Angeles County.

LAWA leases 61.75 acres of land from the USAF for the PMD, which operates under a 1989 Joint Use Agreement that allows civilian operations on USAF Plant 42. PMD's existing passenger terminal originally opened on June 29, 1971, with several airlines operating at PMD intermittently. However, attracting commercial carriers to the PMD terminal has proven difficult. Commuter airlines United Express, America West, and Sky West operated out of Palmdale in the 1990s. United Express, the last commercial carrier at the site, pulled out of Palmdale in February 1998. On December 29, 2004, Scenic Airlines began daily nonstop service between PMD and the North Las Vegas Airport. This was the first time since 1998 that PMD offered scheduled air service.

In the 1970s, the City of Los Angeles purchased over 17,000 acres east of USAF Plant 42, including the land surrounding the PWRP and oxidation ponds, with the intention of constructing and operating the proposed Palmdale International Airport (PIA). A 1978 EIS and a 1982 EIS were prepared for a proposed Airport Layout Plan for the PIA that envisioned two major runways traversing the property from approximately 50th Street East to 80th Street East and between Avenues N and Q; however, the airport was never built.

¹ USAF Factsheet No. ASC PAM 2002-192

² North American Traffic Report, 2004, Airports Council International – North America (ACI-NA), 2005

LAWA recently initiated the development of a new Master Plan for PMD (Master Plan), which is scheduled for completion later in 2005. In January 2005, LAWA released a Notice of Preparation (NOP) of a Draft Environmental Assessment/Environmental Impact Report (EA/EIR) for future development recommended by the proposed Master Plan. The City of Los Angeles proposes to develop PMD in accordance with the new Master Plan that will guide development at the airport through the year 2030. LAWA has forecasted the demand for passenger air service at PMD to be 1.14 million air passengers (MAP) in 2030.

The proposed Master Plan and EA/EIR, which are based on the facilities necessary to accommodate this forecasted demand, concluded that the existing USAF Plant 42 airfield has adequate capacity to accommodate forecast aircraft operations and will continue to be utilized for all aircraft operations³. Therefore, construction of new runways, as described in the 1978 and 1982 environmental documents for the originally proposed PIA, is not included as part of any of the proposed alternatives developed in the Master Plan.

Based upon these facts, the Draft PWRP 2025 Plan and EIR identified Agricultural Study Area No. 6 as a location potentially available for agricultural reuse operations, recognizing (on page 7-11) that use of Agricultural Study Area No. 6 would be contingent on LAWA's approval of a land sale, transfer, or lease based on their assessment of the requirements of the future demand for aviation services. However, attempted negotiations with LAWA on acquiring this land have been unsuccessful. Therefore, the Final PWRP 2025 Plan and EIR proposes Agricultural Study Area No. 5 and Storage Reservoir Study Area No. 3 for siting future agricultural operations and storage reservoirs. Chapter 9 of the PWRP 2025 Plan and EIR evaluates the compatibility of the proposed PWRP 2025

Plan and EIR with the existing USAF Plant 42/PMD as well as the Proposed Action identified in the PMD Master Plan.

Bird Air Strike Hazards

Birds pose potential safety risks at all airports. Planning and managing land uses on airport property as well as in surrounding areas to minimize bird attractants near critical airspace is an important part of airport safety management. The following sections discuss FAA's bird strike hazard guidance, potential hazards near USAF Plant 42/PMD, and the PWRP 2025 Plan and EIR's impact conclusions.

FAA Advisories

The FAA's Advisory Circular (AC) No. 150/5200-33A provides guidance on land use practices that have potential to attract hazardous wildlife on or near airports. The AC recommends the following separation criteria:

- *Section 1-2: For airports serving piston-powered aircraft, hazardous wildlife attractants must be 5,000 feet from the nearest air operations area (AOA).*
- *Section 1-3: For airports serving turbine-powered aircraft, hazardous wildlife attractants must be 10,000 feet from the nearest AOA.*
- *Section 1-4: For all airports, a 5-mile range to protect approach, departure and circling airspace.*

The AC notes that wastewater treatment facilities and associated retention ponds (storage reservoirs) as well as agriculture are land use practices that have the potential to attract hazardous wildlife and threaten aviation safety.

Concerning existing wastewater treatment facilities, AC 150/5200-33A states the following:

"The FAA strongly recommends that airport operators immediately correct any wildlife

³ *Notice of Preparation of the Draft Environmental Assessment/Environmental Impact Report for Palmdale Regional Airport; Section 4.1. Airfield Requirements; January 13, 2005.*

hazards arising from existing wastewater treatment facilities located on or near the airport. Where required, a WHMP developed in accordance with Part 139⁴ will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should encourage wastewater treatment facility operators to incorporate measures, developed in consultation with a wildlife damage management biologist, to minimize hazardous wildlife attractants. Airport operators should also encourage those wastewater treatment facility operators to incorporate these mitigation techniques into their standard operating practices. In addition, airport operators should consider the existence of wastewater treatment facilities when evaluating proposed sites for new airport development projects and avoid such sites when practicable.”

Concerning new wastewater treatment facilities, AC 150/5200-33A states the following:

“The FAA strongly recommends against the construction of new wastewater treatment facilities or associated settling ponds within the separations identified in Sections 1-2 through 1-4. Appendix 1 [of AC 150/5200-33A] defines wastewater treatment facility as “any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes.” The definition includes any pretreatment

involving the reduction of the amount of pollutants or the elimination of pollutants prior to introducing such pollutants into a publicly owned treatment works (wastewater treatment facility). During the site-location analysis for wastewater treatment facilities, developers should consider the potential to attract hazardous wildlife if an airport is in the vicinity of the proposed site, and airport operators should voice their opposition to such facilities if they are in proximity to the airport.”

Concerning agricultural activities, AC 150/5200-33A states the following:

“Because most, if not all, agricultural crops can attract hazardous wildlife during some phase of production, the FAA recommends against the use of airport property for agricultural production, including hay crops, within the separations identified in Sections 1-2 through 1-4. If the airport has no financial alternative to agricultural crops to produce income necessary to maintain the viability of the airport, then the airport shall follow the crop distance guidelines listed in the table titled “Minimum Distances between Certain Airport Features and Any On-Airport Agricultural Crops” found in AC 150/5300-13, Airport Design, Appendix 19. The cost of wildlife control and potential accidents should be weighed against the income produced by the on-airport crops when deciding whether to allow crops on the airport.”

⁴ *Wildlife Hazard Management Assessments, Title 14, Code of Federal Regulations, Part 139. Part 139.337(b) requires airport operators to conduct a Wildlife Hazard Assessment (WHA) when the following events occur on or near an airport: (1) An air carrier aircraft experiences multiple wildlife strikes; (2) An air carrier aircraft experiences substantial damage from striking wildlife; (3) An air carrier aircraft experiences an engine ingestion of wildlife; or (4) Wildlife of a size, or in numbers, capable of causing an event described in paragraphs (b)(1), (b)(2), or (b)(3) of this section is observed to have access to any airport flight pattern or aircraft movement area. The FAA will use the WHA conducted in accordance with Part 139 to determine if the airport needs a Wildlife Hazard Management Plan (WHMP).*

Because not every existing land use practice, such as the PWRP and current EMS, on or near an airport that potentially attracts hazardous wildlife, actually does, the FAA has outlined procedures by which an actual hazard can be identified. An investigation is first triggered by the occurrence of specific triggering events on or near an airport. If the triggering events meet the criteria as outlined in Part 139 of 14 CFR (see Footnote 3), a Wildlife Hazard Assessment (WHA) is required. The FAA will then “consider the results of the WHA, along

with the aeronautical activity at the airport and the views of the airport operator and airport users, in determining whether a formal WHMP is needed. If the FAA determines that a WHMP is needed, the airport operator must formulate and implement a WHMP, using the WHA as a basis for the plan.”

To minimize potential hazards, Section 4-1 of AC No. 150/5200-33A discourages the development of new water treatment facilities and agricultural operations within the 5,000/10,000-foot criteria specified in Sections 1-2 through 1-4. However, in reference to projects that are located outside the 5,000/10,000-foot criteria but within 5 miles of the airport’s AOA, the AC states that the FAA may review proposed land use changes “to determine if such changes present potential wildlife hazards to aircraft operations.” Section 4-3 of the AC encourages the submittal of FAA Form 7460-1 to notify the FAA of proposed land use practice changes that may attract hazardous wildlife within 5 miles of public use airports. In certain cases, the FAA may recommend that airports conduct a Wildlife Hazard Assessment (WHA) to determine if further hazard analysis or mitigation is required. However, the FAA does not have authority to restrict land use development on lands not owned by an airport. Local land use planning jurisdictions must consider the FAA’s input when determining the compatibility of land uses.

Identification of Hazards Near USAF Plant 42

Land use practices having the potential to attract birds within five miles of the existing USAF Plant 42/PMD include agriculture, undeveloped open space, and District No. 20’s water treatment (oxidation) ponds. District No. 20 is not aware of any specific triggering events, as defined by Part 139, resulting from the operation of the existing District No. 20 treatment and effluent management facilities. Information obtained from the FAA Wildlife Strike Database indicates six bird strikes have been reported since 1990 at the USAF Plant 42/PMD airfield. Each strike was identified as a small bird, with one identified as a horned lark. None of the strikes caused damage or affected the flight of the

aircraft involved. Since reporting wildlife strikes is not mandatory, the FAA estimates that only 20 percent of strikes are reported.⁵

The USAF Plant 42/PMD is located on the eastern edge of the City of Palmdale adjacent to agricultural lands. Private agricultural enterprises operate farms within one mile north and west of the existing runways (see Figures 9-3 and 14-4). These farms grow various crops including turf grass, alfalfa, pistachios, and carrots. District No. 20’s existing forage crop (including alfalfa) and land application areas are located between one and three miles east of the runway.

The Los Angeles County Antelope Valley Areawide Plan designates a large area one mile north of the LAWA property under the flight approach to one runway at the USAF Plant 42 as an Agricultural Opportunity Area (see Figure 9-3 of the PWRP 2025 Plan and EIR). This land use designation was considered by the county to be compatible with existing airport operations.

Generally speaking, different types and stages of agriculture attract different types and quantities of birds. Of significant concern to airports are high-flying birds, larger birds, and flocking birds. In general, forage crops pose a minimal bird attractant hazard when compared to the native habitats they replace, since increases in food source provided by the alfalfa to some species are balanced by a decline in nesting habitat. Studies have shown, for example, that conversion from native habitat to hayfields results in a substantial decline of all species of nesting birds, primarily due to mowing (Dale et al. 1997, Horn and Koford 2000, and Gregory and Baillie 1998). Some raptors, especially Swainson’s hawks, are attracted to alfalfa fields for hunting (Smallwood, 1995), but their window of use is generally limited to the period before crops mature (and hide prey) and immediately after harvest (Bechard, 1982; Canavelli et al., 2003). Geese are less attracted to

⁵ Data from e-mail correspondence from Sandy Wright, Manager, FAA Wildlife Strike Database, to David Full, Vice President Environmental Science Associates, May 26, 2005

alfalfa than mowed or managed lawns, because they need open areas for taking off or landing, or need a large body of water nearby.

Storage reservoirs may provide temporary resting for some birds. Since there is no food in wastewater treatment ponds, birds do not tend to stay for long periods as they do in natural or “naturalized” wetland habitats like Piute Ponds near Rosamond Dry Lake. However, if associated with a nearby food source, these ponds could potentially be used by migrating birds within the Pacific Flyway. This has not been the case at the existing oxidation ponds and is not anticipated in the future.

Impact and Compatibility Conclusions

The PWRP 2025 Plan and EIR concludes that since the proposed project would not change the land use practice of the oxidation pond site, would not develop land for new storage reservoirs within 5 miles of the USAF Plant 42/PMD’s AOA, and would relocate existing agricultural activities more than 10,000 feet from the airport’s AOA, it would in effect reduce any existing bird air strike potential hazards. Each of the storage reservoir alternative sites is located over 5 miles from the existing runways. Although Storage Reservoir Area No. 3 would also use the existing oxidation pond site, this is not a change of land use practice. The PWRP 2025 Plan and EIR concludes that construction of the new reservoirs would not affect airport operations significantly. Furthermore, the PWRP 2025 Plan and EIR concludes that the greater than 10,000-foot buffer between the airport’s AOA and the proposed forage crop fields in Agricultural Study Areas Nos. 5 and 6 would be adequate to minimize any wildlife strike hazard associated with alfalfa fields.

This conclusion is based on the fact that (1) the proposed agriculture is consistent with existing farming operations located within one mile of the AOA, (2) existing farming operations are closer to the airport’s AOA than Agricultural Study Areas Nos. 5 and 6, (3) the District is not aware of the occurrence of any

specific triggering events requiring a WHA associated with existing farming operations and water treatment ponds that are closer to the airfield than either agricultural study area, and (4) as noted above, studies⁶ indicate that alfalfa farming, while attractive to some species, does not in itself equate to an increase in bird use.

Proposed Conservation Area

The 1978 EIS and 1982 EIS prepared for the PIA identifies 4,800 total acres at the eastern end of the proposed airport site to be preserved as mitigation for habitat impacted by construction of the PIA. LAWA has commented that this proposed conservation area is within Agricultural Study Area No. 6, east of Little Rock Wash. LAWA proposed preparing a Natural Resources Management Plan (NRMP) to protect and enhance this area. District No. 20 is not aware of any NRMP that has been prepared by LAWA. However, discussions with LAWA indicated that the scale of the proposed airport development may be reduced in future airport plans, and as a result, the conservation area may not be needed to the extent originally conceived. The Draft PWRP 2025 Plan and EIR assumes that LAWA may be interested in selling, transferring, or leasing the land east of Little Rock Wash for purposes other than habitat conservation if the impacts associated with development of the PMD are less than originally envisioned. Furthermore, since no development restrictions, NRMP, or recorded conservation easements were identified for the property, any necessary habitat compensation land could be located off site.

If, however, LAWA has legally committed to use this area for on-site habitat impact compensation, they would not be able to sell the property to District No. 20. District No. 20 would not buy or enter into a leasing agreement with LAWA for land that is legally designated as a conservation area designed to mitigate impacts to neighboring habitat.

⁶ See attached list of literature cited.

Literature Cited

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ALTERNATIVES ANALYSIS

Several comments were received on the Draft PWRP 2025 Plan and EIR supporting treatment and effluent management alternatives other than those described as the recommended project. Alternatives addressed in both oral and written comments include groundwater recharge, discharge to Little Rock Wash, municipal

reuse, wetlands creation, and advanced treatment MF/RO. This General Response summarizes the alternative screening process conducted by District No. 20 and discusses the constraints associated with each suggested alternative.

Summary of the Alternatives Screening Process

The CEQA Guidelines require that an EIR describe a range of reasonable alternatives to a project, or to the location of a project, which would feasibly attain most of the project objectives but would avoid or substantially lessen any of the significant effects of the project [Section 15126.6(a)]. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR include (1) failure to meet most of the basic project objectives, (2) infeasibility, and (3) inability to avoid significant environmental impacts [Section 15126.6(c)]. Factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the Lead Agency can reasonably control or otherwise have access to the alternative site [Section 15126.6(f)(1)].

Chapter 6 of the PWRP 2025 Plan and EIR describes the alternatives screening process conducted by District No. 20 to develop the preferred project alternative. Six treatment alternatives and eight effluent management alternatives were evaluated for their ability to meet project objectives. Chapter 23 of the PWRP 2025 Plan and EIR also provides a comparison of how each effluent management alternative would avoid or substantially lessen the significant impacts identified for the preferred project. Of the six treatment alternatives only tertiary treatment and advanced treatment met all the project objectives. Only one effluent management alternative (agriculture with storage reservoirs) met all the project objectives, while a second alternative (municipal reuse) was identified that could utilize some, but not all, of the recycled water. The PWRP 2025 Plan and EIR evaluates two agricultural location alternatives

and three storage reservoir location alternatives at an equal level of detail.

Groundwater Recharge

The groundwater recharge alternative presented in the Draft PWRP 2025 Plan and EIR was identified as the environmentally superior effluent management alternative but was rejected because it did not meet all of the project objectives and the costs were significantly higher than the proposed project.

Background

Cease and Desist Order No. R6V-2004-039 (CDO) issued by the RWQCB-LR requires District No. 20 to cease the discharge of nitrogen to groundwater that creates a condition of pollution by October 15, 2008; stopping land application and agricultural irrigation above agronomic rates of treated effluent is one of several measures identified by the RWQCB-LR that collectively would demonstrate compliance. The CDO schedule has been established by the RWQCB-LR to protect groundwater quality and ensure that infrastructure is constructed to prevent future degradation. In order to meet this schedule, a reliable long-term effluent management system must be conceived, approved, designed, permitted, constructed, and placed into operation by October 15, 2008. Based on technical and administrative uncertainties, the PWRP 2025 Plan and EIR estimates that it could take ten years to implement a groundwater recharge project. Although the actual time to implement a program could be more or less than ten years, the uncertainty associated with unresolved issues reduces the reliability of the alternative. These issues are discussed in more detail below.

As noted in Appendix E, only four groundwater recharge projects using recycled water are currently permitted in California. The County Sanitation Districts of Los Angeles County provides recycled water for two of these projects, the Montebello Forebay and the Dominguez Gap. All were implemented prior to 1977. Three new recycled water projects are scheduled for implementation in 2005 and 2007, one in the Chino

Basin, one in Orange County, and one in Los Angeles County. These three projects will be the first groundwater recharge projects successfully implemented in the state of California since 1976. The Chino Basin project is located where groundwater recharge was performed in the past. The Orange County project is an expansion of an existing program, and the Los Angeles County project is an existing seawater barrier program that plans to include recycled water as a water source.

Although District No. 20 is actively pursuing partnerships to work toward future municipal reuse in the Antelope Valley that could include groundwater recharge, at this time a groundwater recharge project does not provide the degree of reliability needed to ensure compliance with schedule targets driven by groundwater quality protection objectives. Additionally, necessary partnering with water districts in the Antelope Valley would be difficult without adjudication of water rights, which based on recent adjudication efforts in the state of California, is about a 10-year legal process. Water districts would be hesitant to make a significant financial investment in groundwater recharge without legal rights to that water.

Implementation Constraints

Appendix E contains a summary report explaining the constraints and hurdles associated with implementing groundwater recharge with recycled water in the Antelope Valley. In summary, the primary hurdles include the following:

Negotiating a Cost-Sharing Partnership With an Overlying Water District

District No. 20's mandate is to provide environmentally sound, cost-effective wastewater treatment and effluent management. District No. 20 is not responsible for supplying potable water or managing groundwater basins. As a recycled water producer, District No. 20 cannot supply recycled water directly to a customer unless the retail water supplier in the customer's service area chooses to delegate its statutory authority to supply recycled water (Water Code §13580.5(2)). Therefore, District No. 20 must negotiate a cost-sharing

partnership with a water district or purveyor before groundwater recharge can be initiated.

Adjudicated Rights to Recharged Water

The Antelope Valley groundwater basin is not adjudicated, meaning land owners have unrestricted rights to groundwater produced and used on overlying properties. As a result, there is no incentive to invest in groundwater replenishment when there is no legal protection to guarantee recovering the recharged water. Without adjudication the water could be withdrawn by any overlying land owner. Overlying water districts have so far been unwilling to aggressively pursue groundwater recharge due to this situation. The Antelope Valley groundwater basin adjudication process has only recently started with the Orange County Superior Court agreeing to grant a motion to Los Angeles County to coordinate a half-dozen lawsuits that have been filed on behalf of two Kern County farming companies and Los Angeles County Waterworks District No. 40 for water rights. As noted above, this adjudication process can be lengthy.

Public Acceptance

Several recycled water recharge projects have been abandoned in recent years mid-way through planning, or even when recharge facilities were nearly completed, due to public opposition. As noted in Appendix E, public outreach and education remain critical elements to the successful implementation of a groundwater recharge project. Without substantial public support, a recharge project would not be possible in the Antelope Valley. Developing a public outreach program to garner the necessary public support could further impact the project schedule.

Technical Challenges

Several technical challenges need to be solved prior to implementing a recharge program in the Antelope Valley, including water quality objectives, identifying and securing rights to adequate sources of dilution water, contingency provisions in case water quality standards are exceeded, and the identification of

suitable recharge sites. These technical challenges would have to be solved prior to applying for a permit for the project from the RWQCB-LR and DHS. An engineering report would need to be prepared evaluating the suitability of the subsurface to accommodate the water. This report would require substantial resources and RWQCB-LR approval.

Based on these constraints, it is unlikely that a groundwater recharge alternative can be achieved by 2008. Nevertheless, District No. 20 will support groundwater recharge in the Antelope Valley with other interested partnering agencies. The proposed project does not eliminate groundwater recharge from future consideration. Tertiary treatment facilities are a first step in providing the water quality necessary for a future groundwater recharge project. Because the proposed project will be implemented in phases, agricultural operations can be reduced in favor of other beneficial uses, including groundwater recharge, as they develop. A detailed constraints analysis of the Groundwater Recharge Reuse Project (GRRP) alternative, *Analysis of Developing and Implementing a Groundwater Recharge Reuse Project in the Antelope Valley*, is included in Appendix E of the PWRP 2025 Plan and EIR.

Discharge to Little Rock Wash

An effluent management alternative that would discharge recycled water to Little Rock Wash was evaluated in the Draft PWRP 2025 Plan and EIR and rejected as infeasible since it would not meet the project objectives. Discharge to the Little Rock Wash is at a location that would percolate entirely into the ground, which is a planned groundwater recharge project similar to the alternative discussed above. It is therefore unlikely that such an alternative can be achieved by 2008 due to the uncertainties associated with the unresolved issues discussed in the following sections.

Description of Little Rock Wash

Little Rock Wash extends across the Antelope Valley from Little Rock Creek in the San Gabriel Mountains to

Rosamond Dry Lake. Some segments of the wash exhibit a well-defined channel with banks, while other segments are poorly defined flood plains traversing open space and agricultural lands. Figure 14-2 identifies the 100-year flood plain. Generally, where the floodplain is narrow (between Avenues M and J) a well-defined channel has been established. The wide floodplain indicates areas where the wash is generally poorly defined. In some areas, the wash traverses roadways, while in other areas culverts have been constructed. The wash is dry for most of the year, conveying storm water only during heavy rains in the winter.

Implementation Constraints

Chapter 6 (pages 6-20 through 6-22) of the PWRP 2025 Plan and EIR provides an explanation for why the alternative of discharging to a water body in the Antelope Valley, such as Little Rock Wash, is considered infeasible at this time. The following sections summarize the conclusions:

Land Uses Within the Existing Floodplain

The existing floodplain of the Little Rock Wash is owned by numerous entities, including LAWA. Landowners would likely oppose use of their property for perennial discharges since it would limit the uses of the property and could reduce property value. To avoid these land use conflicts or incompatibilities, and to ensure reliability, District No. 20 would need to purchase segments of the wash to be used for discharge. District No. 20 would need to modify the channel within a defined area long enough to accommodate the full PWRP flow in 2025. The size and extent of the segment needed to accommodate the full flow throughout the year has not been determined. Opposition to land acquisition could be strongest from residential development interests south of Avenue P, mining interests south of Avenue O, LAWA, and residential development and farming interests north of Avenue M.

Water Quality

Discharging recycled water to the wash may conflict with designated water quality objectives and beneficial uses established for the creek in the Basin Plan. District No. 20 is concerned that since the soils within the wash would promote rapid infiltration, groundwater quality could be affected by the perennial discharges to the wash. The CDO issued by the RWQCB-LR expressly requires District No. 20 to cease the discharge of nitrogen to groundwater that creates a condition of pollution, such as land application. As such, even with the increased level of treatment, applying tertiary-treated effluent to the wash could be seen as conflicting with the CDO. District No. 20 is concerned that the RWQCB-LR may not approve WDRs for such a project. Without assurances from the RWQCB-LR that such a project is likely to be permitted, which have not been received, meeting the 2008 CDO schedule remains uncertain.

Furthermore, since this effluent management solution would in essence be a groundwater recharge reuse project (GRRP), DHS would review potential impacts to drinking water quality in addition to the RWQCB-LR. DHS would then determine whether the project would be considered a GRRP. District No. 20 is concerned that the project would be considered a GRRP and DHS would impose numerous conditions and requirements as described above in the groundwater recharge alternative discussion. Successfully resolving these issues and implementing a project by 2008 is highly unlikely.

Wetland Habitats

Creating a year-round discharge to Little Rock Wash would establish wetland habitats. Once established, these habitats could provide foraging and nesting habitat for sensitive species. This would commit District No. 20 to maintaining the water flow and managing the wash as a wetland preserve. This would limit future water reuse opportunities.

Creating wetland habitats would present numerous technical challenges including the following: preventing water ponding that would increase insect production, preventing proliferation of other vectors such as rodents, maintaining water quality in pooled water, establishing maintenance and vegetation removal requirements, and establishing summer and winter habitats depending on flow. These technical issues would need to be resolved prior to implementing a full-scale project.

Floodplain Encroachment

Since the project would be developed within the floodplain, District No. 20 would be required to construct infrastructure to ensure that perennial flows did not flood roadways or other properties. During storm flows, discharges to the wash would likely not be allowed by the RWQCB-LR. As such, storage reservoirs would likely be required to operate in conjunction with the wash. Technical issues to resolve include preventing vegetation from impeding flood flows or modifying the downstream floodplain over time, and maintaining infiltration rates over the long term to avoid flooding areas beyond the established infiltration areas.

Habitat Conversion

The habitat within the Little Rock Wash is called Mojave wash scrub and described in the Draft PWRP 2025 Plan and EIR on pages 12-3 and 12-4. Characteristic species found in this area include catclaw acacia (*Acacia greggi*), allscale, desert willow (*Chilopsis linearis*), brittlebush (*encelia faranosa*), cheesebush (*Hymenoclea salsola*), creosote bush, and boxthorn. As described in the PWRP 2025 Plan and EIR, Mojave wash scrub occurs in approximately two percent of the Initial Study Area and is considered a threatened community by the CNDDDB.

The Mojave wash scrub habitat within the Initial Study Area would be converted to wetlands if discharge to Little Rock Wash were to be implemented. The impact caused by this action would have a significant adverse

effect on Mojave wash scrub habitat that would have to be mitigated, if possible, or a Statement of Overriding Considerations would have to be adopted by District No. 20.

Constructed Wetlands

An effluent management alternative that would discharge to constructed wetlands was evaluated in the Draft PWRP 2025 Plan and EIR and rejected as infeasible due to the potential for salt build up in the wetlands water and due to the long-term commitment of water resources that would limit future reuse opportunities. The Draft PWRP 2025 Plan and EIR discusses a wetland alternative on page 6-21.

Similar to the alternative to discharge to Little Rock Wash, established wetland habitats could be considered a sensitive habitat providing foraging and nesting habitat for sensitive species. This could commit District No. 20 to maintaining the water flow and managing the effluent management system as a wetland preserve. This could limit future water reuse opportunities. Unlike farming operations that could be discontinued as reuse opportunities such as groundwater recharge are developed in the future, wetlands would require minimal maintenance flows similar to Piute Ponds, currently dependent on effluent discharged from the LWRP.

Furthermore, creating wetland habitats would present numerous technical challenges, including preventing water ponding that would increase insect production, preventing proliferation of other vectors such as rodents, maintaining water quality in pooled water, establishing maintenance and vegetation removal requirements, and establishing summer and winter habitats depending on flow.

Wetland systems require flow-through to maintain water quality. With no flushing capabilities, wetlands would function as a terminal water body with no flow-through. Water would either evaporate or infiltrate into the ground. Without pond liners, infiltrating water with a steady downward pressure from the overlying water

could degrade groundwater quality. With pond liners, salt concentrations could increase in the wetlands as water evaporated, creating uninhabitable environments for plants and wildlife. These technical issues would need to be resolved before a full scale project could be planned and implemented.

Municipal Reuse

Municipal reuse is a component of the preferred project. As described on page 6-19 of the PWRP 2025 Plan and EIR, municipal reuse would not be able to accommodate the full flow nor provide contingency discharge provisions. District No. 20 is coordinating with the Cities of Palmdale and Lancaster, Waterworks District No. 40, Palmdale Water District, and other members of the Antelope Valley Water Reuse Group to develop municipal reuse. As local reuse demand increases and infrastructure is constructed, District No. 20 will supply recycled water to meet the demand.

Advanced Treatment (MF/RO)

The PWRP 2025 Plan and EIR found that the proposed project, which consisted of tertiary treatment and agricultural and municipal reuse, was more cost effective than MF/RO and groundwater recharge and attainable within the required timeframe. The costs associated with blending water and its availability year-round, management of the brine effluent from the MF/RO process, and the need for adjudication of water rights in the Antelope Valley were other factors that made MF/RO less desirable than the treatment alternative selected.

MF/RO Treatment Process

Microfiltration (MF) and reverse osmosis (RO) are both membrane processes and are often combined to achieve advanced treatment. MF is used as pretreatment for RO because it removes suspended solids to below detection limits (<1 mg/L). RO is a pressure-driven membrane separation process in which dissolved solutes are separated from the solution by forcing water through a semipermeable membrane under a pressure higher than

the osmotic pressure of the solution. The concentrated reject waste stream from the RO process is known as brine. The brine waste contains all the constituents in the water that are rejected by the RO membranes. The brine may contain high concentrations of total dissolved solids, pathogens, and heavy metals, and therefore may be classified as a hazardous waste. Brine management and disposal are a major cost element of implementing the RO process since it is typically 15 to 25 percent of the influent flow to the RO process. For the PWRP, approximately 3.4 mgd of brine would be generated based on the projected flow of 22.4 mgd and the brine stream constituting about 15 percent of the RO inflow.

Infrastructure Requirements

In addition to MF/RO feed and product pump stations, storage reservoirs are required to store the MF/RO product prior to mixing with blending water. Based on West Basin Municipal Water District's recently permitted MF/RO facility for seawater intrusion barrier water, DHS requires a 1:1 dilution of MF/RO product with other water. Given the uncertainty of blending water sources year round, particularly in the peak water demand (summer) months, storage reservoirs are also necessary for about 19 mgd of blending water since 100 percent MF/RO product cannot be used for groundwater recharge in the initial stages of implementation. A force main pipeline would also need to be constructed to pump diluted MF/RO product to either recharge spreading basins or deep injection wells. An additional pipeline would be required to supply blending water for dilution. The capital cost for deep injection wells or recharge spreading basins must also be considered. Furthermore, as indicated above, about 3.4 mgd of brine solution would need to be managed. Lined evaporation ponds would likely be required to properly manage this brine flow, and the final concentrated salts would require proper disposal.

Overall, when considering all of the capital and energy costs associated with constructing and operating an MF/RO treatment plant, the infrastructure and pumping stations necessary to effectively manage the MF/RO

product, blending water requirements, and brine stream management disposal issues, the equivalent annual cost for advanced treatment with groundwater recharge was found to be at least twice the cost of the proposed project.

PROPERTY VALUE AND ACQUISITION

Several comments were received on the Draft PWRP 2025 Plan and EIR that asked for clarification on the land acquisition process. Other comments received expressed concern on the effect of the proposed project on current land values. The following general response provides additional information on the property acquisition process.

Once District No. 20's Board of Directors approves and certifies the Final PWRP 2025 Plan and EIR, District staff will be authorized to acquire the necessary land to construct and operate the future facilities. District No. 20 will attempt to acquire the needed land through voluntary sales. The first step in property acquisition is hiring an appraiser to determine the "fair market value" for each parcel that needs to be acquired. After the appraisals are completed, the District will retain a land acquisition specialist to make offers to property owners based on the appraised values. It is anticipated that these offers will be made within six months of District No. 20's approval and certification of the Final PWRP 2025 Plan and EIR.

In order to efficiently operate the proposed farming operations, District No. 20 will attempt to acquire blocks of land that are at least 160 acres in size (i.e., one quarter square mile or section). To assemble these blocks of land, District No. 20 will direct the land acquisition firm to make offers to owners of large parcels first and then attempt to negotiate agreements

with owners of small parcels of land that are needed to complete the 160-acre blocks of land. District No. 20 will avoid displacing residents that do not want to move to the maximum extent feasible.

It is District No. 20's policy that any persons displaced by the proposed project shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole. Consequently, displaced individuals and families will be eligible for relocation assistance in accordance with well-established guidelines. This relocation assistance will consist of providing displaced individuals with moving expenses and rent/or mortgage differential to ensure that they have adequate replacement housing. In accordance with the Relocation Assistance Act, District No. 20 will provide relocation assistance to individuals living in substandard housing so that they are relocated to housing that is decent, safe, and sanitary.

If the District cannot acquire sufficient land through voluntary sales, the District's Board of Directors will consider the use of eminent domain to acquire the needed land. Under eminent domain proceedings, a property owner is entitled to the fair market value and relocation assistance. Eminent domain provides a property owner an opportunity to argue the fair market value of their property before an impartial judge or jury. It is important that the property owner provide the courts information, such as appraisals, that supports a proposed fair market value.

Based on a similar property acquisition effort that is currently underway in District No. 14 near the City of Lancaster, is not anticipated that the proposed project will adversely effect current property values in the vicinity of the project site.