1.4 MASTER RESPONSES

Numerous comments on the Draft EIR addressed similar issues. For efficiency, the following Master Responses have been prepared for these issues:

- Groundwater Protection;
- Eastern Agricultural Area;
- Public Health;
- Public Notification;
- Storage Reservoir Study Area 3;
- Farm Management Plan;
- Property Acquisition.

MASTER RESPONSE
GROUNDWATER PROTECTION

Comments expressed concern that the existing and proposed storage facilities, land application, and agricultural activities could adversely affect groundwater quality. The Final EIR addresses impacts to groundwater from implementation of the LWRP 2020 Plan in Section 4.3. Impacts 4.3-4, 4.3-5, and 4.3-7 identify potential impacts to the groundwater from specific components of the project including storage reservoirs and oxidation ponds, agricultural operations, land application operations, and existing wells. Mitigation measures 4.3-2, 4.3-3, 4.3-4a, 4.3-4b, 4.3-5, 4.3-6a, 4.3-6b, 4.3-8, and 4.3-9 commit District No. 14 to implementing groundwater protection measures. The Final EIR concludes that with implementation of the identified mitigation measures, implementation of the LWRP 2020 Plan would not result in significant adverse impacts to groundwater quality.

Furthermore, the recommended project has been changed to Alternative 2, providing full tertiary treatment capabilities. The following discussions provide more information.

Existing Storage Reservoirs and Oxidation Ponds

The existing storage reservoirs and oxidation ponds are permitted under the LWRP's existing Waste Discharge Requirements (WDRs), which are issued by the Regional Water Quality Control Board, Lahontan Region (RWQCB-LR). Since the existing storage reservoirs and oxidation ponds are unlined, several comments asked if stored effluent could infiltrate through the floor of the ponds and affect groundwater quality. Alternatives 1 and 3 would continue the use of the oxidation ponds. Alternatives 2 and 4 would convert the existing oxidation ponds to storage reservoirs. No evidence has been collected suggesting that the existing storage reservoirs and oxidation ponds have impaired groundwater. District No. 14 installed a network of monitoring wells around the LWRP in 1988 to evaluate the potential impact. Since that time, the monitoring results submitted regularly to the RWQCB-LR have not indicated significant groundwater degradation (i.e., in excess of the maximum contaminant levels) beneath the oxidation ponds. Therefore, the Final EIR concludes that future use of the existing facilities is not likely to significantly impact groundwater quality. Furthermore, District No. 14 is installing an array of monitoring wells around LWRP to collect additional data. Copies of the monitoring reports can be requested directly from the RWQCB-LR. Groundwater samples collected from the wells are analyzed for numerous constituents of concern including nitrates, total dissolved solids (TDS), and chloride. TDS levels in groundwater samples collected from the monitoring wells near the LWRP have been stable over the monitoring period and are consistent with other groundwater in the area. This issue is discussed in the Final EIR on page 4-66.

TDS levels in groundwater near the Rosamond Dry Lake are generally relatively high compared to other areas of the California due to the concentrating effect of evaporation and the relatively low mobility of groundwater in the alluvial closed basin. The impacts of the oxidation ponds on underlying groundwater before 1988 can not be determined since no background water quality data are available. However, data from the well near the storage reservoirs (constructed in 1988) do not show that the storage reservoirs have impacted groundwater quality. These conclusions are summarized in the monitoring reports submitted annually to the RWQCB-LR.

Furthermore, implementation of the LWRP 2020 Plan recommended project (Alternative 2) would increase the level of treatment currently provided for water stored in the storage reservoirs. The increased treatment would include nitrogen removal, which would reduce the potential for groundwater degradation compared with existing conditions. In addition, the most recent WDRs require installation of additional monitoring wells around Piute Ponds and the LWRP. These new wells will enhance the available information on the groundwater beneath the LWRP.

Biosolids Storage Area

The 2002 annual groundwater monitoring report for the LWRP submitted to the RWQCB-LR indicated that TDS and nitrate levels have declined since 2001 at one well (MW-5) near the biosolids storage area. As a preventative measure, biosolids handling procedures at the LWRP have been modified, removing biolsolids more frequently to prevent affecting groundwater in the future.

Proposed Storage Reservoirs

The local groundwater hydrology of the recommended storage reservoir study area north of the LWRP consists of the principal aquifer and the deep aquifer. The principal aquifer, located approximately 100 feet below ground surface near the LWRP, is vulnerable to effects from surface land uses. The deep aquifer lies under several hundred feet of impermeable clays and is generally considered not to be vulnerable to impacts from surface activities. Local groundwater exhibits elevated TDS levels due to the proximity to Rosamond Dry Lake as noted previously. The effluent for each alternative would be similar with respect to TDS concentrations. Alternatives 2 and 4 would include providing nitrification/denitrification for all influent wastewater which would substantially reduce nitrogen concentrations.

Since no data has been collected that show that groundwater underlying the existing oxidation ponds and storage reservoirs has been degraded as a result of the existing storage reservoirs, the Final EIR concludes that similar facilities could be constructed with compacted native soil that would be equally protective. To minimize the potential impact to groundwater quality, the proposed storage reservoirs will be constructed with compacted native soils with a permeability at least as low as the existing facilities. This construction will also be approved by the RWQCB-LR and supported by an Anti-Degradation Analysis. In addition, the recommended project would store water of a higher quality (i.e., tertiary effluent with enhanced nitrogen removal) than is currently stored in the existing reservoirs.

Prior to constructing the reservoirs, District No. 14 will submit an application for new WDRs from the RWQCB-LR for the use of new treatment and effluent management facilities. District No. 14 will be required to show in the revised WDR application that the proposed design of the storage reservoirs will adequately protect groundwater quality, while considering beneficial uses of the local groundwater and the overall costs. District No. 14 will submit groundwater modeling results and an Anti-Degradation Analysis to the RWQCB-LR using specific characteristics of local soils obtained from geotechnical surveys of the storage reservoir area. The Final EIR commits District No. 14 to conducting geotechnical surveys to assist in the design of the reservoirs.

Providing a site-specific permeability analysis is a RWQCB-LR permitting requirement. Reservoirs of this nature are permitted throughout the State in areas with soils exhibiting significantly higher permeability. Other permitted reservoirs exist approximately six miles north of the LWRP near the town of Rosamond. The Final EIR concludes that a reclaimed water storage reservoir would not pose a significant impact to groundwater unless improperly constructed. At this stage in the planning process, the final design of the reservoirs has not been determined, since the final storage reservoir location has not yet been approved. Based on the analysis conducted for the Final EIR, storage reservoir Study Area 2 north of the LWRP is the recommended location. As such, District No. 14 is in the initial phases of conducting geotechnical studies specific to the area to determine appropriate reservoir design and construction methods and to support approval from the RWQCB-LR. In addition, the Final EIR (on page 4-66) commits District No. 14 to installing monitoring wells in the vicinity of the proposed storage reservoirs to verify that its operations are not significantly affecting groundwater quality (mitigation measure 4.3-4).

The Final EIR concludes that based on the performance of the existing reservoirs, the low permeability of native soils, the commitment to perform geotechnical investigations to determine the permeability of compacted native soils, the increased level of treatment to be provided, the requirement to obtain WDRs from RWQCB-LR to ensure protection of beneficial uses of groundwater, and the expansion of the groundwater monitoring network, the new reservoirs would not significantly impact groundwater quality.

Seepage Study

District No. 14 recently contracted with Cascade Earth Sciences to study the seepage potential of the soils found in the storage reservoir Study Area 2 (recommended location north of the LWRP). The study evaluated soil conditions from a limited amount of available data and modeled water transport times from the surface to the groundwater under various clay liner permeability assumptions. The study report is included as Appendix P in Volume 3 of the Final EIR, Appendices. The report concludes that seepage of water applied to unimproved soils in the area would reach the groundwater table 100 feet below ground surface within 70 to 220 days. The report also assumes that a two-foot compacted clay layer could be constructed with native soils to reduce permeability to 10^{-7}. At this permeability, the report estimates that water stored in reservoirs could reach the groundwater table in 20 years assuming that there were no breaches in the integrity of the compacted clay liner.[1]

The report assumes that the quality of water reaching the groundwater table would likely be similar to the water placed in the reservoirs. That is to say, the intervening vadose zone would not alter the chemistry of the water substantially.

Agricultural Reuse

Infiltration of recycled water from agricultural reuse may impact underlying groundwater resources if not properly managed. To mitigate this potential, agricultural reuse will be conducted in conformance with regulations in Title 22 of the California Code of Regulations, Water Recycling Requirements (WRRs) issued by the RWQCB-LR, and a Farm Management Plan. These controls will ensure that groundwater impacts from reuse are not significant. The Farm Management Plan will be included in the application for WRRs. The Farm Management Plan will establish a system of standard operating procedures to monitor and modify recycled water application rates, nutrient levels, and soil amendment requirements using best management practices (BMPs). BMPs identified in the FMP will include utilizing recycled water and site specific crop and soil data to evaluate appropriate application rates.

Application of nitrogen to agricultural lands will be carefully monitored to ensure that the concentrations do not exceed crop requirements that could result in excess nitrogen infiltrating to the groundwater. Recycled water quality monitoring data will be routinely collected to evaluate nitrogen concentrations. Using this data, recycled water application rates will be modified based on total nitrogen loading and crop nitrogen uptake requirements following procedures outlined in BMPs developed for the Farm Management Plan. Nitrogen demand may vary during the life cycle of the crop. Once the conventional activated sludge (CAS) facilities are constructed, nitrogen application rates and the potential for groundwater degradation will be substantially reduced. Furthermore, the recommended project would construct additional nitrification/denitrification treatment facilities that would provide even greater control of nitrogen levels in the effluent.

[1] Cascade Earth Sciences, *Seepage Study for Proposed Storage Reservoirs, Lancaster Water Reclamation Plant 2020 Facilities Plan EIR*. March 2004

TDS accumulation in the crop root zone and groundwater is a concern wherever irrigated agriculture is practiced in arid regions. The Farm Management Plan will include irrigation scheduling BMPs to reduce the potential for TDS accumulation in the crop root zone or transport to the groundwater. This will involve carefully controlled irrigation rates to carry TDS out of the root zone but not to the groundwater table. This method of irrigation is practiced in other arid regions and has been proven to be effective. A network of monitoring wells both up and down gradient of the agricultural reuse areas will also be installed to verify that management practices are effective at maintaining groundwater quality. This issue is addressed in the Final EIR on page 4-67.

The Final EIR concludes that based on the commitment to apply treated effluent at agronomic rates, the commitment to prepare a Farm Management Plan outlining best management practices to be followed to ensure that agronomic application rates are maintained, the increased level of treatment to be provided, the commitment to locate and properly abandon existing wells, the history of agriculture in the region, the requirement to obtain WRRs from RWQCB-LR to ensure protection of beneficial uses of groundwater, and the installation of a groundwater monitoring network, the agricultural operations would not significantly impact groundwater quality.

Land Application

Land application involves applying treated effluent to the ground in excess of crop requirements. Over-application can create a consistent pressure, pushing the water through the vadose zone and eventually to the shallow groundwater table. The Final EIR concludes that Alternatives 3 and 4 could not be implemented without eventually, over a period of time, impacting groundwater quality.

The Final EIR describes on page 3-16, that Alternatives 1 and 2 would likely need to apply water in excess of agronomic rates for an interim period until the storage reservoirs are constructed. The Final EIR concludes that land application over this interim period would most likely not affect groundwater since the water table is fairly deep (80 to 150 feet below ground), and since low-permeability layers and lenses that are present in the vadose zone in this area, as confirmed by logs of many monitoring wells, will impede the vertical migration of infiltrating water.

However, as a result of comments received from the RWQCB-LR that this interim land application operation would not be permitted, District No. 14 has removed the land application component from Alternatives 1 and 2. District No. 14 is working with the RWQCB-LR and EAFB to ensure that continuation of controlled effluent overflows during this interim period does not create a threatened nuisance condition.

Improperly Abandoned Wells

Improperly abandoned wells may act as conduits to groundwater, including both the shallow and deep aquifers. District No. 14 will perform comprehensive well surveys of all areas where facilities will be constructed or where effluent will be applied to land. Informational surveys will be conducted including county records, State records, old aerial photos, and interviews with land owners. These will be followed by field surveys to identify the actual location and physical condition of the wells. The locations of known wells not immediately visible at the surface will be investigated using geophysical surveys and potholing. Abandoned wells of no use to District No. 14 and improperly abandoned wells will be properly destroyed under the direction of the Los Angeles County Department of Health Services. Existing wells which are still serviceable and may be considered for some future use will be thoroughly inspected to verify construction method, casing integrity, and proximity to effluent application areas. If any existing well is found to not meet conditions consistent with groundwater protection, it will also be destroyed. Any new wells that may be installed on District No. 14 property in the future will be constructed consistent with modern design standards, Title 22 buffer zone requirements, and will be

inspected by the County Department of Health Services. This issue is addressed in the Final EIR on pages 4-72 and 4-75.

Anti-Degradation Policy

State Water Resources Control Board Resolution 68-16 states that the high quality waters of the state must be protected. This policy is known as the anti-degradation policy. It requires that water quality must generally be maintained at background conditions or any degradation must "be consistent with the maximum benefit of the people of the State," while not unreasonably affecting beneficial uses. Through implementation of a Farm Management Plan, adherence with California Department of Health Services (DHS) regulations for recycled water use, compliance with permitting discharge requirements, and implementation of groundwater monitoring and reporting programs, the LWRP 2020 Plan provides the best and most reasonable means of ensuring that both the wastewater treatment needs of the District No. 14 service area and the protection of groundwater beneficial uses are met.

Nebeker Ranch Groundwater and Soil Analysis

Nebeker Ranch receives an annual average of 3.4 million gallons per day (mgd) of secondary treated effluent from the LWRP to irrigate alfalfa. Groundwater monitoring is routinely conducted at Nebeker Ranch pursuant to the WRRs for the ranch. Monitoring reports are available for public review from District No. 14 and the RWQCB-LR. The monitoring data for wells on the western side of the property (MW1 and MW2) show relatively stable levels of nitrates and TDS, exhibiting a slight increasing trend over the 10-year monitoring period. TDS and nitrate levels in these wells are below the Maximum Contaminant Level (MCL) for nitrates (10 milligrams per liter (mg/L) as nitrogen) and secondary MCL for TDS (1,000 mg/L). The two wells on the eastern edge of the Nebeker Ranch (MW3 and MW4) have shown sharp increases in nitrates and TDS since 1998, with levels approaching or slightly exceeding the MCLs for both constituents. The 2002 annual monitoring report submitted to the RWQCB-LR associates these recent sharp increases to well failure. As a result, monitoring wells MW1, MW2, MW3, and MW4, were destroyed in 2002 and replaced with four new polyvinyl chloride-cased (PVC-cased) monitoring wells MW10, MW11, MW12, and MW13. The older wells were destroyed because of suspected and identified corrosion of their stainless steel casing materials. Initial monitoring results for MW13 reported levels of nitrates above the MCL. This cause of the elevated levels has not been determined but may be due to upgradient conditions or a failed well casing acting as a conduit for nitrates to the groundwater table. District No. 14 is currently investigating the elevated levels in MW13 and will continue to monitor and submit annual sampling reports for these new wells to the RWQCB-LR.

Soil samples were collected at Nebeker Ranch in 2002 and analyzed for constituents of concern including chloride and nitrate. The sample results showed elevated nitrates in surface soils, but below the root zone nitrates levels were similar to background samples. The sampling analysis reports are included as Appendix M of the Final EIR.

MASTER RESPONSE
EASTERN AGRICULTURAL AREA

Comments on the Final EIR requested additional information on why the Eastern Agricultural Area was chosen as the recommended location for the agricultural recycled water reuse operations of the LWRP 2020 Plan.

Regional Agricultural Viability Screening

Section 5.5 of the Final EIR, and pages 7-11 to 7-14 of the LWRP 2020 Plan, discuss the agricultural study area screening process that District No. 14 conducted to identify suitable locations for its proposed agricultural recycled water reuse activities. In 2001, District No. 14 contracted with Dellavalle Laboratories Inc., which prepared a report titled *Reconnaissance Agricultural Site Study* that assessed four distinct agricultural study areas near the LWRP, as shown on Figure 5-1 of the Final EIR. The report evaluated several factors including soil quality (permeability, fertility, saline-sodic risk), topography, flood zone, existing land use, pumping costs, and public acceptance. The report concluded that farming was possible at Study Areas 1, 3, and 4 (see Figure 5-12 of Final EIR), with Study Area 4 being the first choice, Study Area 1 a close second, and Study Area 3 a distant third. The report cautioned strongly against Study Area 2, stating that agriculture may not be feasible in this location.

District No. 14 then had the report reviewed by three agricultural experts:

1. Blake Sanden, M.S. UC Cooperative Extension Irrigation and Agronomy Farm Advisor, Kern County;

2. Daniel Putnam, Ph.D., UC Cooperative Extension Specialist and Agronomist, UC Davis; and

3. Steve Orloff, M.S., UC Cooperative Extension Farm Advisor, Siskiyou County.

Each reviewer in their reports agreed that Study Area 2 was inappropriate and that Study Areas 1 and 4 were superior to Study Area 3. Daniel Putnam noted that it made sense to avoid converting undisturbed Joshua tree woodland areas in Study Area 3 when good farm land was fallow due to the cost of water in Study Area 4.

Soil fertility was identified as moderate in Study Areas 1 and 4 and low in Study Areas 2 and 3. The saline-sodic risk was identified as moderate to low for Study Areas 1 and 4 and moderate to high in Study Areas 2 and 3.[2] These results indicated that the risk of crop failure in Study Areas 2 and 3 is significantly greater than for Study Areas 1 and 4. Since the agricultural activities would be providing a critical effluent management function, crop failure would be considered a fatal flaw of the project and Study Areas 2 and 3 were eliminated from further consideration. The two remaining areas (Study Area 4 [Eastern Agricultural Area] and Study Area 1 [Western Agricultural Area]) were included as potential locations for agricultural recycled water reuse in the LWRP 2020 Plan and further evaluated in terms of qualitative criteria such as environmental, engineering, and operational considerations.

The Eastern Agricultural Area has a long history of agricultural use. Figure 4.1-14 in the Final EIR identifies historic agricultural areas. As shown in the figure, agricultural activities have never taken hold in the areas closer to the LWRP. The Eastern Agricultural Area has supported agriculture since the late 1800s. In addition, the County Department of Regional Planning indicates that agriculture is considered a compatible use within the proposed Significant Environmental Area (SEA). The Los Angeles County

[2] Draft Reconnaissance Agriculture Site Study, DellaValle Laboratory, Inc., 2001

General Plan designates the Eastern Agricultural Area as an Agricultural Opportunity Area (as noted on page 4-21 of the Final EIR) within this SEA. Unlike the eastern agricultural area, the western agricultural area is not as developed with active agricultural activities, requiring a greater number of acres to be converted from open space to agriculture. Use of the Western Agricultural Area would increase the impacts of the LWRP 2020 Plan to open space and undisturbed habitats in the region. These environmental considerations contributed to the recommendation by District No. 14 to use the Eastern Agricultural Area.

In addition to environmental considerations, District No. 14 evaluated the Eastern and Western Agricultural Study Areas in terms of operational considerations, public impact, cost effectiveness, and interest in reuse of recycled water. This evaluation and screening process is described in detail starting on page 7-11 of the LWRP 2020 Plan. Tables 7-5 and 7-6 of the LWRP 2020 Plan summarize the results of the screening and ranking of the two potential agricultural areas. Based on the results of this analysis, Study Area 4 (Eastern Agricultural Area) was identified as the recommended location for District No. 14's agricultural recycled water reuse operations.

District No. 14 also evaluated proposals to pump effluent to users located in remote areas. District No. 14 received a proposal from an interested user of recycled water located approximately 17 miles west of the LWRP. After careful consideration, District No. 14 determined that the substantial pumping costs required to deliver effluent 17 miles and approximately 400 feet higher in elevation made this proposal infeasible.

In order to implement the agricultural reuse component of the LWRP 2020 Plan, District No. 14 will acquire property rather than lease the property in order to ensure the control and reliability of the project. The reliability of the effluent management components of the LWRP 2020 Plan is a principal part of the project objective to provide wastewater services in a "cost-effective and environmentally sound manner" through the year 2020. District No. 14 must provide a reliable, long-term project for effluent management and proposes to do this through seasonal storage and beneficial reuse of the treated effluent. Farming operations subject to lease restrictions or lease termination that could impede consistent effluent management would not be acceptable to District No. 14 because this could seriously affect the reliability of the project.

District No. 14 anticipates developing agricultural reuse operations on land it acquires by entering into agreements with qualified entities such as independent farmers, farming cooperatives, and/or farming corporations. District No. 14 may retain a farm manager to oversee the agricultural operations conducted by the farming entities. Depending on the negotiated terms of the agreements, District No. 14 or the contracted farming entities will be responsible for preparing the land, installing distribution lines and irrigation systems, boosting the water pressure, etc. The farming entities will cultivate crops that are permitted by Title 22 based on the quality of recycled water provided for irrigation. The method of irrigation used will be one that is permitted under Title 22 and is protective of the groundwater. The contracted farming entities will also be required to implement Best Management Practices pertaining to agricultural operations. District No. 14 will prepare a recycled water reuse engineering report for the California Department of Health Services (DHS) and obtain a recycled water reuse permit (WRRs) for the agricultural operations from the RWQCB-LR. District No. 14 may also have to conduct site-specific studies in order to establish the most appropriate irrigation rates to effectively manage the agricultural operations and obtain the necessary permits and/or approvals.

MASTER RESPONSE
PROTECTION OF PUBLIC HEALTH

Comments on the Draft EIR expressed concern over the potential public health impacts associated with using treated wastewater effluent (recycled water) for agricultural irrigation as proposed in the LWRP 2020 Plan. The comments covered the following concerns:

- Airborne pathogens from sprinkler-applied effluent;
- Domestic well contamination;
- Permitting recycled water reuse operations; and
- Tertiary treatment.

Airborne Pathogens

The Final EIR (page 4-172) discusses the potential for the sprinkler-applied effluent to emit pathogens into the air that could be blown onto neighboring areas, potentially posing health risks to affected individuals. The health concern is associated with bacteria and viruses contained in aerosols that may drift off site. The Antelope Valley frequently experiences high winds that could increase the potential for off-site drift. However, disinfection of the effluent essentially eliminates the health risk. The LWRP 2020 Plan provides for disinfection of the recycled water that will be used for irrigation. As such, the Final EIR concludes that the project would not adversely affect public health.

The California Department of Health Services (DHS) is the regulatory agency responsible for ensuring that reuse of recycled water does not adversely affect public health. The DHS has promulgated water recycling regulations in the California Water Code (California Code of Regulations, Title 22). The Final EIR contains a summary of the DHS regulations in Appendix G. The DHS regulations allow sprinkler-application of disinfected secondary treated water no closer than 100 feet from a residence or domestic drinking water supply well. The DHS regulations set strict treatment requirements and establish daily effluent monitoring requirements to ensure that pathogens are adequately eliminated. The LWRP 2020 Plan proposes to conduct farming operations in complete compliance with the Title 22 regulations.

The California Water Code states that recycled water is a valuable resource and promotes recycling. In fact, disinfected tertiary effluent is safely sprinkler-applied in numerous locations throughout the State of California. District No. 14 is unaware of any documented health impacts associated with routine application of disinfected effluent. Table 1-2 provides a list of other wastewater treatment agencies in California that reuse secondary-treated effluent for agricultural operations. Tertiary treated water is used even more frequently throughout the state for sprinkler-applied irrigation of golf courses, parks, public rights-of-way, and school yards.

In response to comments received on the Draft EIR, the recommended project has been changed from Alternative 1 to Alternative 2. The recommended project now entails producing tertiary disinfected effluent, which is the same quality of water that is routinely applied to golf courses and municipal medians by sprinkler systems throughout the state. The County Sanitation Districts of Los Angeles County (Districts) routinely provides tertiary treated effluent to approximately 500 users in the southern portion of the County for various municipal reuse projects. Routine monitoring for pathogens at the Districts' various tertiary application sites have found no evidence of pathogens including viruses in the recycled water.

The Final EIR concludes that producing disinfected effluent and complying with DHS regulations as promulgated in Title 22 for sprinkler-applying recycled water avoids potential health risks. In addition, the Final EIR requires that the Farm Management Plan provide measures to prevent over-spraying of effluent as required by Title 22. Mitigation measure 4.11-1 requires District No. 14 to provide measures to reduce potential off-site drift for secondary-treated effluent. This could include installing spray nozzles close to the ground and developing best management practices to avoid spraying in certain areas during high wind periods. Implementation of these protections goes beyond what is required to meet the health-based standards of DHS. The mitigation measure suggests that providing wind breaks of planted trees between the irrigated areas and adjacent residences could also be implemented. However, installing wind breaks would not be required for the recommended project, since the effluent would receive tertiary treatment and be disinfected.

Domestic Well Contamination

As discussed above, the Title 22 regulations require that disinfected, secondary-treated or tertiary-treated effluent be applied at distances greater than 100 feet from domestic supply wells. This requirement is a conservative health-based standard applicable throughout the State of California. The depth to groundwater in the agricultural areas is relatively deep (greater than 100 feet), which greatly reduces the potential for recycled water applied to the surface to infiltrate into the groundwater. The Lancaster sub-basin upper aquifer consists of interbedded layers and lenses of sand, silt, and clay underlain by a thick (potentially over 300-foot) layer of fine-grained and low permeable clays that separate the upper aquifer from the middle and lower water production aquifers (USGS, 2003). Most drinking water production wells draw from this lower aquifer. The significant thickness and low permeability of the clays separating the upper aquifer from the middle and lower aquifers substantially reduces the potential for applied recycled water to impact water production aquifers beneath the shallow aquifer.

In addition, the LWRP 2020 Plan will provide a substantial monitoring well network around the agricultural areas to continually assess groundwater quality. District No. 14 will report monitoring data to the Regional Water Quality Control Board, Lahontan Region, (RWQCB-LR) and will be responsible for ensuring that the water quality does not decline. (see Groundwater Protection Master Response). This monitoring data will be available for review by the public. This monitoring will provide local well operators with important data on the quality of their water supply that is currently not available.

Permitting Recycled Water Use

As explained in the Final EIR on page 4-70, prior to implementing the irrigation operations, District No. 14 will apply for Water Recycling Requirements (WRRs) from the RWQCB-LR. WRRs are required for every recycled water reuse project. The WRRs will include water quality standards and monitoring requirements applicable to the agricultural operations. The water quality standards and application method restrictions contained in the WRRs are designed to meet public health standards as well as protect natural resources. The agricultural reuse operations will require approval of the WRRs from the RWQCB-LR prior to implementation.

Tertiary Treatment

The Final EIR evaluates two alternatives (Alternatives 2 and 4) that would provide tertiary treatment for 26 mgd. The recommended project (Alternative 2) would provide tertiary treatment for the full 26 mgd. The last page of Appendix G in the Final EIR compiles recycled water uses allowed by Title 22 for each level of treatment. Disinfected tertiary treated effluent is required for uses that will likely result in human contact including irrigation for golf courses, play grounds, school yards, and food crops. DHS has determined that providing tertiary treatment for fodder crop irrigation is not necessary to protect public health or natural resources. Nonetheless, the LWRP 2020 Plan recommended project would provide full tertiary treatment.

TABLE 1-2
JURISDICTIONS AND/OR UTILITIES THAT USE RECYCLED WATER FOR IRRIGATION OF FODDER CROPS

JURISDICTION AND/OR UTILITY	LOCATION	LEVEL OF TREATMENT	TREATMENT METHODS	CAPACITY	TYPE OF IRRIGATION	TYPES OF CROPS IRRIGATED	TIME OF PROJECT OPERATION
Kern Sanitation Authority (KSA)	One plant (KSA Plant) located in Bakersfield, CA	Secondary	Primary and secondary sedimentation, trickling filter, screening and digestion	5 mgd	Flood irrigation	seed fodder fiber, cotton, alfalfa, hay, feed, silage, corn, wheat, barley, cotton, other animal food crops	1952-present
City of Tulare	Two plants (industrial plant and domestic plant) located in Tulare, CA	Secondary	Activated sludge, clarifiers, activated biofilters, gravity belt, drawing beds, anaerobic digester system (bulk volume fermenter – digests and clarifies), aeration trains	6 mgd (domestic) 7 mgd (industrial)	Flood irrigation Row irrigation	corn, cotton, alfalfa, other animal food crops	1998-present (domestic) 2001-present (industrial)
North of the River Municipal Water District	Kern County, CA	Secondary	Primary settling, trickling filter, bar screen, secondary settling	5 mgd	Row irrigation	animal food crops (feed, fodder, and fiber)	1952-2000 (former plant) 2000-present (new plant)
City of Bakersfield	Two plants (Plant 2 and Plant 3) located in Bakersfield, CA	Secondary	Trickling filters, secondary clarifiers	25 mgd (Plant 2) 16 mgd (Plant 3)	Flood irrigation	mostly alfalfa, sudan grass, some triplemix, wheat, and oates	1951-present (Plant 2), 1972-present (Plant 3)
Big Bear Area Regional Wastewater Agency	Big Bear City, CA	Secondary	Bar screening, grit removal, oxidation ditches, secondary clarifiers (solids settle out)	2 mgd	Wheel line (sprinkler) irrigation	alfalfa, feed, fodder, oates	1980-present
Fresno-Clovis Wastewater Management Division, Fresno-Clovis Regional Water Reclamation Facility	Fresno, CA	Secondary	Activated sludge, clarifiers, aeration basins	70 mgd	Flood irrigation	alfalfa, cotton, wine grapes, corn, other animal food crops	1891-present
Lake Arrowhead Community Services District	Lake Arrowhead, CA	Secondary (in the past)	Activated sludge, trickling filter, disinfection	~0.8-1.6 mgd	Spray irrigation	alfalfa (in the past)	1975-1992 1996-2002

TABLE 1-2
JURISDICTIONS AND/OR UTILITIES THAT USE RECYCLED WATER FOR IRRIGATION OF FODDER CROPS (cont.)

JURISDICTION AND/OR UTILITY	LOCATION	LEVEL OF TREATMENT	TREATMENT METHODS	CAPACITY	TYPE OF IRRIGATION	TYPES OF CROPS IRRIGATED	TIME OF PROJECT OPERATION
Monterey Regional Water Pollution Control Agency	Salinas Valley, CA	Secondary and tertiary	Activated sludge, trickling filter, bioflocculation, flocculation after secondary treatment, disinfection	30 mgd	Spray irrigation Drip irrigation Flood irrigation	all food crops (artichokes, lettuce, green onions, broccoli, cauliflower, strawberries)	1997-present
Santa Rosa Subregional Reclamation System	Santa Rosa, CA	Secondary (in the past), now tertiary	Standard primary process, activated sludge, coal filtration, ultraviolet light disinfection	10 mgd	Sprinkler irrigation (drip, big gun, etc.)	animal food crops, silage, other secondary crops, grapes, and vegetables	~1975-1989 (secondary) 1989-present (tertiary)
City of Bishop Public Works	Bishop, CA	Secondary	Screening, grit removal, primary sedimentation with digesters, aeration	1.8 mgd	Flood irrigation	pasture and animal food crops	~1965-present

n.a.=not available.

MASTER RESPONSE
PUBLIC NOTIFICATION OF DRAFT EIR REVIEW PERIOD

Comments on the Draft EIR indicate that the public review period and public notification were not conducted according to the requirements of CEQA.

District No. 14 is committed to both full implementation of, and compliance with, CEQA and thorough public outreach. As discussed below, District No. 14 has fully complied with CEQA process requirements to date and will continue to do so throughout completion of the process. In addition, District No. 14 has provided additional public notice and public meeting opportunities above and beyond CEQA requirements to provide ample opportunity for public input. Following is a summary of activities to date and a review of the relevant CEQA requirements regarding public notice and EIR document circulation.

Section 15105 of the CEQA Guidelines requires that a public review period on an EIR be no shorter than 45 days. The Draft EIR was received at the State Clearinghouse on September 30, 2003 (see comment letter 11). This marks the official start of the review period. The State Clearinghouse considered the review period closed after 45 days on November 13, 2003. As noted in the Notice of Availability (NOA), District No. 14 allowed an additional five days such that the official review period closed on November 18, 2003. This satisfies the CEQA review period requirements for an EIR.

Section 15087 of the CEQA Guidelines describes the notification requirements of the availability of an EIR. CEQA requires that the lead agency (i.e., District No. 14) provide an NOA of a draft EIR at the same time as it sends copies of the EIR to the State Clearinghouse. The NOA needs to be mailed to all persons who previously requested such notices in writing. In addition, CEQA (Section 15087) requires that <u>one</u> of the following procedures be conducted.

1) Publication at least one time by the public agency in a newspaper of general circulation in the area affected by the proposed project. If more than one area is affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas; OR

2) Posting of notice by the public agency on and off the site in the area where the project is to be located; OR

3) Direct mailing to the owners and occupants of property contiguous to the parcel or parcels on which the project is located. Owners of such property shall be identified as shown on the latest equalized assessment roll.

The NOA was mailed on September 29, 2003 to all persons who previously commented on the project. District No. 14 also published the NOA in the Los Angeles Times on October 1, 2003, the Daily News on October 1, 2003, and the Antelope Valley Press on October 2, 2003. Publication of the notice in the newspaper met the CEQA requirement for notification. However, District No. 14 also conducted a mailing of over 4,000 NOAs to the latest address on the Los Angeles County equalized assessment roll for properties within the proposed agricultural area and proposed storage reservoir area. Due to the number of letters that had to be mailed, all were not mailed on September 29th. The last of the NOAs were mailed to adjacent property owners by October 10th, over two weeks prior to the public hearing date of October 29, 2003. This mailing provided ample notification of the public hearing and availability of the Draft EIR for review and comment.

Section 15087 (d) of the CEQA Guidelines requires that the County Clerk post the NOA for a period of 30 days. The NOA was posted by the County Clerk on October 15, 2003, providing a posting period of 30 days as required prior to the closing of the review period on November 18, 2003. In addition, the Draft EIR was made available to the public in three libraries in the Antelope Valley (Lancaster, Palmdale and Rosamond) and online at District No. 14's website.

A public comment meeting on the Draft EIR was held on October 29, 2003 in Lancaster City Hall. This meeting was noticed as part of the NOA for the Draft EIR and was advertised in a display ad in the Antelope Valley Press on October 26, 2003. District No. 14 hosted an additional meeting with concerned property owners within the proposed Eastern Agricultural Area on November 20, 2003. Furthermore, additional review time was granted to parties requesting an extension.

MASTER RESPONSE
STORAGE RESERVOIR STUDY AREA 3

Comments on the Draft EIR requested that District No. 14 eliminate from further consideration Storage Reservoir Study Area 3, an alternative location for storage reservoirs south of the LWRP. The recommended project of the LWRP 2020 Plan identified Study Area 2, north of the LWRP, as the preferred location of storage reservoirs. According to CEQA, District No. 14 is obligated to evaluate all reasonable alternatives to its recommended project that could reduce or avoid any identified significant impacts. Due to its proximity to the LWRP, Study Area 3 is a reasonable alternative location for storage reservoirs. Following an extensive evaluation process of a total of five alternative storage reservoir locations around the LWRP, District No. 14 eliminated Study Areas 1, 3, 4, and 5 from consideration and recommended that storage reservoirs be constructed in Study Area 2, which is north of the LWRP. The principal reason for rejecting Study Area 3 was the proximity of the Leisure Lake community near the intersection of Avenue E and State Route-14 (SR-14).

MASTER RESPONSE
FARM MANAGEMENT PLAN

Comments were received requesting more details on the proposed Farm Management Plan (FMP). However, until the land acquisition is completed, District No, 14 will not be able produce a site specific FMP. Once the Final EIR for the LWRP 2020 Plan has been certified and the agricultural land acquisition is sufficiently completed, District No. 14 will retain a certified agronomist to develop an FMP for the proposed agricultural operations. The objectives of the FMP will be to protect soil quality, groundwater quality, and public health, while sustaining agricultural production.

The FMP will contain an irrigation schedule that minimizes the infiltration of recycled water into the underlying aquifer, while allowing for standard agricultural practices (i.e., leaching of salts). The FMP will propose irrigation methods based on site-specific soil conditions. Additionally, the FMP will recommend methods to prevent the drift of recycled water and will recommend soil moisture monitoring. The soil moisture monitoring scheme will monitor whether the select crops are being irrigated in an agronomically acceptable manner. Below is the proposed outline for the FMP, which tentatively scheduled to be completed by November 2004:

Farm Management Plan Draft Outline

Introduction
- Background Information
- Purpose and Objectives
- LWRP 2020 Plan Project Description
- FMP Approval Process
- Implementation Process

Farm Operations Management Structure
- District's Management Oversight
- Farming Entity Selection Process
- Economic Evaluations
- Contractual Agreements/Leases
- Crop selection process
- Crop operating budget
- Irrigation system selection process

Water Budget

Site/Soil Preparation

Farm Operations Capital Improvements
- Water conveyance systems
- Application systems
- Retention basin designs and siting
- Storage
- Site access control
- Other structures

Monitoring/Reporting
- Effluent Water Quality
- Groundwater Quality

- Evapotranspiration Assessment System
- Soil quality
- Incidental runoff monitoring
- Wind monitoring / effluent drift monitoring
- Reporting procedures

Best Management Practices
- Farming procedures
  - Daily Standard Operating Procedures
    - Planting season
    - Growing season
    - Harvesting season
  - Soil management
  - Fertilizer usage
  - Pest control
  - Equipment usage/storage/maintenance
  - Chemical/pesticide usage/storage
  - Runoff/Storm water management
- Water Application Management Procedures
  - Evapotranspiration feedback
  - Nitrogen loading feedback
- Monthly reporting
- Site control/security
- Good Neighbor practices

Site Control
- Security
- Signage
- Aerosol drift control

MASTER RESPONSE
PROPERTY ACQUISITION

Comments on the Draft EIR requested that District No. 14 discuss its land acquisition process. District No. 14 is attempting to acquire the parcels within the proposed agricultural and storage reservoir areas through voluntary sales. The voluntary land acquisition will be conducted in two ways: (1) either through local brokers who have approached District No. 14 with property that their clients would like to sell or (2) through Paragon Partners, a land acquisition firm retained by District No. 14 to solicit and make offers to property owners within the proposed project area. The offers made by Paragon Partners on District No. 14's behalf will be based on the appraised valued for each respective parcel. The agricultural study areas assessed in the Final EIR are larger than the area needed to implement the agricultural operations and the storage reservoirs so that, to the extent feasible, the District can acquire the needed land thorough voluntary sales, and thus, minimize the need to conduct eminent domain proceedings.

It is District No. 14's policy that any persons displaced by the proposed LWRP 2020 Plan 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. As required by the Relocation Assistance Act, where individuals are living in sub-standard housing, District No. 14 will provide relocation assistance so they can relocate to housing that it is decent, safe, and sanitary.

In order to efficiently operate the proposed farming operations District No. 14 is attempting to acquire blocks of land that are at least 160 acre in size. To assemble these blocks of land, District No. 14 has directed Paragon Partners 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 160-acre blocks of land. District No. 14 will attempt to the maximum extent possible to avoid displacing residents that do not want to move. District No. 14 may acquire noncontiguous property in order to avoid displacing residents. The ultimate agriculture operations footprint will be determined in part by the willingness of owners to sell vacant land.