

3.7 Master Response on Water Rights Law

3.7.1 Introduction

Overview

This master response responds to comments received on the Draft EIR concerning the water rights that the Project will exercise and related legal matters. The response addresses applicable groundwater law in California, including the Constitutional requirement of beneficial use and overlying and appropriate rights; existing groundwater rights possessed by Cadiz Inc.; the right to develop appropriative groundwater rights; the right to extract temporary surplus groundwater; and comments pertaining to other legal users of the groundwater, “privatization” of groundwater, and federal reserved water rights.

This master response is organized by the following subtopics:

3.7.2 Water Rights

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Summary of Issues Raised by Commenters

- What water rights will the Project exercise to extract groundwater from the aquifer?
- Will the exercise of its rights conflict with the water rights possessed by others?
- Will the Project take more water than Cadiz Inc. is entitled to take from the aquifer?
- Does the proponent need agreements with neighboring properties to undertake the Project?
- On what legal basis is the Project authorized to export groundwater outside of San Bernardino County?
- Will the Project result in an illegal “overdraft” or “mining” of the aquifer?
- Will the Project interfere with federal reserved water rights?
- Does the Project result in a “taking” of private property by others?
- Would the Project interfere with the water rights of the brine miners on the Dry Lakes?
- Would the Project “privatize” a public resource?

Commenters expressed CEQA-related and non-CEQA-related concerns about the Project Proponents’ water rights in the Fenner Basin. This master response addresses both CEQA and non-CEQA concerns in order to address comments as fully as possible even though concerns about water rights pertain to legal issues, not environmental issues governed by CEQA. Some commenters state that the Project Proponents do not have any right to the groundwater, some commenters expressed concern regarding the nature and scope of the water rights and how the rights of other landowners in the area would be affected, others were concerned that the conveyance of water out of San Bernardino may raise legal issues, still others were concerned

that the Project might overdraft the aquifer and that this, in turn, would violate the law. There was also some concern among commenters that the Project could result in the privatization of a public resource. Finally, several commenters expressed concern about the water rights of the salt mining companies that are located on the Bristol and Cadiz Dry Lakes.

This response will first discuss applicable groundwater law, including appropriative and overlying rights and the California constitutional mandate that water be put to beneficial use. Next the response will address Cadiz Inc.'s water rights. Then, in response to commenters' views on overdraft, the response will address relevant legal terms that were used in the Draft EIR, including the concepts of beneficial use and temporary surplus, as they relate to the Project. Finally, the response will address concerns relating to the export of water out of the Watershed area; why the Project will not harm other water users, including the salt miners; how the Project will neither privatize nor interfere with the public's interests in the groundwater; and federal reserved water rights.

Response

Introduction

The Project's proposed extraction and export of water from the Fenner and Orange Blossom Wash Watersheds will be consistent with all applicable California water law. Cadiz Inc. presently possesses and exercises overlying groundwater rights in conjunction with the 34,000 acres of land that it owns and farms in the Fenner Gap area (the Property). As the Project develops, Cadiz Inc. will forbear exercising these overlying groundwater rights and will develop appropriative rights associated with the production and export of groundwater from the Property. The completion of this appropriation is made possible by the concurrent forbearance of Cadiz Inc. The Project's appropriation of groundwater will be consistent with California law, and particularly the California Constitution, which requires that available groundwater supplies be developed in a sustainable manner for maximum beneficial use.

Groundwater Users in the Project Area of Effect

Existing users of groundwater in the Fenner, Bristol, and Cadiz Watershed are limited to private wells serving local residential uses, some hard rock mining activities in the higher elevations, some railroad wells along the BNSF, salt mining activities on the playas, and agriculture by Cadiz Inc. The Draft EIR Vol. 1, Section 4.9 Hydrology and Water Quality, Figure 4.9-5 of the Draft EIR identifies known private wells in the entire Watershed. As noted on page 4.9-24, estimates conducted of the historical uses of groundwater from the Watershed reported a total of an annual average of 265 acre feet of water was pumped from 1910 to 1964. In recent years, Cadiz Inc. has been the largest water user, using between 1,900 and 6,000 acre feet per year between 2002 and 2010. Salt mining operations including Tetra Technologies and National Chloride average an estimated 500 acre-feet per year each as noted on page 4.9-28 of the Draft EIR. No other water user has reported water use in excess of 25 acre feet per year in the Watershed. Residential uses along the BNSF railroad (Cadiz, Goffs, and Essex) as well as private wells in the upper Watershed use less than this amount. The proposed Project—as operated by the FVMWC and

with implementation of the Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) and proposed mitigation measures—would not reduce access to the groundwater resources currently put to beneficial uses. Similarly, as noted in the Draft EIR Vol. 1, Chapter 5 Cumulative Impacts, pp. 5-35 to 5-36, no reasonably foreseeable future uses by overlying users would be denied access to the groundwater resource.

Summary of Applicable Law

The Constitutional Requirement of Fullest Beneficial Use

The overarching principle applicable to water use in California is that all water supplies be put to use to the fullest extent to which they are capable. This policy is set forth in the California Constitution,¹ state statute,² and is routinely affirmed by the courts.³ Beneficial uses include domestic, irrigation, industrial, municipal, recreational and environmental uses.⁴ California Water Code section 106 provides a legislative declaration that domestic use is the highest use of water in the State.

Overlying and Appropriative Rights

California allocates groundwater pursuant to a dual system of water rights in which (a) overlying rights and (b) appropriative rights are both recognized.⁵ An "overlying right," which is analogous to that of a riparian owner in a surface stream, is the right of an owner of land to take water from the ground underneath his or her land for use on that land within the basin or watershed, and the right is based on ownership of land and is appurtenant thereto.⁶ Overlying rights are generally superior in right to appropriative rights.⁷

Appropriative rights are not dependent upon land ownership, but rather arise from the physical extraction and export of groundwater for uses off of the overlying land. Three elements must exist to constitute a valid groundwater appropriation: (1) intent to appropriate groundwater and apply it to beneficial use, (2) due diligence in the development of infrastructure to extract the groundwater, followed by actual extraction of groundwater, and (3) application of the groundwater to beneficial use within a reasonable time.⁸

Although appropriative rights are junior in priority to overlying rights, groundwater may be extracted for off-site appropriative uses so long as there is available groundwater supply that is

¹ Article X, section 2 of the California Constitution requires that:

[T]he water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.

² Wat. Code, § 100.

³ See, e.g., *Tulare Irrigation Dist. v. Lindsay-Strathmore Irrigation Dist.* (1935) 3 Cal.2d 489, 523; *Central and West Basin Water Replenishment Dist. v. Southern California Water Co.* (2003) 109 Cal.App.4th 891, 904-905; *People ex rel. State Water Resources Control Board v. Forni* (1976) 54 Cal.App.3d 743, 749-750.

⁴ Cal. Code Regs., tit. 23, § 659 et seq.

⁵ *City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 1240-1241 (discussing overlying, appropriative, and prescriptive groundwater rights).

⁶ *City of Pasadena v. City of Alhambra* (1949) 33 Cal.2d 908, 925.

⁷ *Id.* at 926; *City of Barstow*, *supra*, 23 Cal.4th at 1253.

⁸ *Turlock Irrigation Dist. v. Zanker* (2006) 140 Cal.App.4th 1047, 1054.

surplus to the present cumulative needs of overlying owners.⁹ Priority between appropriative users is predicated on the rule of first-in-time being first-in-right.¹⁰

Modern appropriations of surface water and certain groundwater supplies (those that extract groundwater flowing in a “subterranean stream”) are subject to the permitting authority of the State Water Resources Control Board (SWRCB).¹¹ By contrast, the SWRCB does not possess permitting jurisdiction over extractions of percolating groundwater,¹² which is the type of groundwater that will be extracted by the Project.

As discussed below, the Cadiz Inc. property possesses overlying rights and is entitled to develop appropriative groundwater rights associated with the Project’s extraction and export of groundwater from the Fenner and Orange Blossom Wash Watersheds.

Existing Groundwater Rights Possessed by Cadiz Inc.

Cadiz Inc. owns 34,000 acres located at the confluence of the Fenner and Orange Blossom Watersheds, as shown on Figure 4.9-1 of the Draft EIR Vol. 1, Section 4.9 Hydrology and Water Quality, and has maintained agricultural operations at this property since the early 1980s. Cadiz Inc. presently irrigates up to 1,600 acres of crops on the property with groundwater extracted from wells located in and southwest of the Fenner Gap. The Property is benefited by an existing permit issued by the County of San Bernardino to extract groundwater from the underlying aquifer for irrigation of up to 9,600 acres (Draft EIR Vol. 1, Chapter 2 Project Background, p. 2-1). If permanent crops (e.g., trees, vines) were further developed and irrigated on these 9,600 acres (e.g., date palms, lemons, vineyard), the irrigation requirement would exceed the 30,000 AFY that is currently permitted.

Cadiz Inc. presently extracts groundwater from the Property for its existing agricultural operation pursuant to the Property’s appurtenant overlying groundwater rights. As the Project develops, Cadiz Inc. will forebear from exercising some of its overlying groundwater rights, commensurately following irrigated acreage. As the Project ramps up, Cadiz Inc. will lessen its water use for agriculture on its property and ultimately forebear from this use until the Project term expires. As explained below, Cadiz Inc. is legally entitled to complete such appropriation of groundwater to support the Project.

⁹ See *City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199, 285-286; *City of Barstow, supra*, 23 Cal.4th at 1241, citing *California Water Service Co. v. Edward Sidebotham & Son* (1964) 224 Cal.App.2d 715, 725-726.

¹⁰ See *City of San Fernando, supra*, 14 Cal.3d at 285.

¹¹ See Wat. Code, § 1200 et seq.

¹² See *Wright v. Goleta Water District* (1985) 174 Cal.App.3d 74.

Right to Develop Appropriative Groundwater Rights and Rights to Extract “Surplus” Groundwater to Maximize the Reasonable Beneficial Use of Groundwater Resources

The California Constitution Requires Maximum Reasonable and Beneficial Use of Available Groundwater. Article X, section 2 of the California Constitution mandates that “the water resources of the State be put to beneficial use to the fullest extent of which they are capable.”¹³ Applied to the management of groundwater, California courts have emphasized the importance of using groundwater supplies responsibly to avoid long-term deleterious impacts to the renewable resource.¹⁴ Therefore, when called to adjudicate competing groundwater rights claims, courts typically limit extractions from a groundwater basin to no more than the safe or perennial yield, which courts define as “the maximum quantity of water which can be withdrawn annually from a ground water supply under a given set of conditions *without causing an undesirable result*.”¹⁵ The phrase “undesirable result” refers to a gradual lowering of groundwater levels which eventually causes some adverse impacts such as salt water intrusion, water quality degradation, or land subsidence.¹⁶ Groundwater overdraft does not commence until and unless the safe yield is exceeded.

Extraction of Temporary Surplus. Consistent with the State policy to foster maximum beneficial use of water, it is appropriate to adopt groundwater management strategies to increase groundwater yield where such strategies do not cause long-term adverse impacts to the aquifer, or otherwise impair other water users or the environment.¹⁷ As discussed in the Draft EIR Vol. 1, Section 4.9 Hydrology and Water Quality, pp. 4.9-62 and 4.9-63, one such management approach condoned by courts is the deliberate extraction of groundwater temporarily in quantities in excess of the amount of average replenishment for the purpose of lowering groundwater levels where doing so will result in an avoidance of water waste.¹⁸ The additional groundwater that may be extracted in order to manage the aquifer to increase its total yield and reduce waste is colloquially referred to as a “temporary surplus.”¹⁹

A temporary surplus exists in the northern Bristol/Cadiz Sub-basin. The Project’s withdrawal of groundwater is intended to temporarily exceed the natural recharge for the intentional and strategic purpose of lowering the water table in the wellfield. This will temporarily reverse the present hydraulic gradient to intercept natural recharge as it migrates towards Cadiz. This will, in turn, retrieve that portion of the groundwater that lies at elevations below the proposed wellfield that would otherwise flow into the Cadiz and Bristol Dry Lakes, where it would be lost to hypersalinity and evaporation (see Draft EIR Vol. 1, Section 4.9 Hydrology and Water Quality, p. 4.9-5). Because of the Project, this water that would otherwise be wasted will be extracted for beneficial use.

¹³ *Central and West Basin*, 109 Cal.App.4th at 904.

¹⁴ *City of Barstow*, *supra*, 23 Cal.4th at 1240-1242.

¹⁵ *City of San Fernando*, *supra*, 14 Cal.3d at 278, emphasis added.

¹⁶ *City of San Fernando*, *supra*, 14 Cal.3d at 278, citing *City of Pasadena v. City of Alhambra* (1949) 33 Cal.2d 908, 929.

¹⁷ See *City of San Fernando*, *supra*, 14 Cal.3d at 280, 290.

¹⁸ *City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199.

¹⁹ *City of San Fernando*, *supra*, 14 Cal.3d at 280 (“[I]f a ground basin’s lack of storage space will cause a limitation of extractions to safe yield to result in a probable waste of water, the amount of water which if withdrawn would create the storage space necessary to avoid the waste and not adversely affect the basin’s safe yield is a temporary surplus available for appropriation to beneficial use.”).

Simply stated, the Project will reduce waste of groundwater by extracting a portion of the water that otherwise would be lost to evaporation. The suppression of evaporative water losses is routinely recognized as an activity consistent with the State policy to foster maximum beneficial use of water and prevention of waste.²⁰ At the end of the 50-year period of Project extraction, the pumping would cease and the groundwater levels would recover from naturally occurring replenishment (natural recharge). As explained in the Draft EIR Vol. 1, Section 4.9 Hydrology and Water Quality, pp. 4.9-61 to 4.9-63 and Volume 4, Appendix H1 Cadiz Groundwater Modeling and Impact Analysis, this temporary lowering of the groundwater table and reversal of the present groundwater gradient is not anticipated to cause any unmitigable significant impact to the groundwater supply available to neighboring landowners, any other groundwater users, or the environment, nor cause any other “undesirable result.” Therefore, the extraction of the “temporary surplus” is not only lawful, but encouraged by California’s policy to foster maximum beneficial use of water and prevention of waste.²¹

The Export of Groundwater from the Fenner and Orange Blossom Watersheds Is Lawful

A few of the comments received concerning the Draft EIR question whether the Project is legally entitled to extract groundwater from the Fenner and Orange Blossom Watersheds for export and use outside of the Watersheds.

Such appropriation and export of groundwater is lawful for several reasons. First, as discussed above, any user of groundwater is entitled to make an appropriative use of groundwater to support uses off of the overlying parcel so long as there is groundwater supply available (including temporary surplus) that is in excess of the present demands of the overlying landowners.²² Therefore, so long as the groundwater supply is not in a state of overdraft, additional groundwater may be appropriated from the aquifer system, and no injunction may be obtained against such appropriation.²³ Moreover, no overdraft will result from the Project; draw down in the basin is not equivalent to overdraft as some commenters mistakenly assume (see Draft EIR, Vol. 1, Section 4.9 Hydrology and Water Quality, pp. 4.9-63 to 4.9-74).

Second, state law does not impose any legal restriction on the location of use for the appropriated water, nor does it afford any priority based upon location of use. Rather, as discussed above, state policy encourages maximum beneficial use of water and favors domestic use as the highest

²⁰ For example, the California State Water Resources Control Board routinely includes the suppression of evaporation as a permit term to avoid waste. (See, e.g., *In the Matter of Application 31212*, State Water Resources Control Board, Order WR 2008-0013-DWR (2008); *In the Matter of License 7354, License 12624, and Permit 21809*, State Water Resources Control Board, Order WR 2008-0037-DWR (2008); *In the Matter of Permit 16762*, State Water Resources Control Board, Order WR 2006-0017 (2006).) Another example is the Agricultural Water Suppliers Efficient Water Management Practices Act, which defines “water conservation” to include the reduction of the amount of water irretrievably lost to evaporation. (Wat. Code, § 10902(c).) Yet another example, is the California-Nevada Interstate Compact, which apportions waters of the Lake Tahoe, Truckee River, Carson River, and Walker River Basins between California and Nevada. Article XI of the compact provides that either state may increase the yield to which it is entitled by undertaking projects that conserve water by suppressing evaporation.

²¹ See *Joslin v. Marin Municipal Water Dist.* (1967) 67 Cal.2d 132, 140 (explaining that the constitutional provision cannot be applied *in vacuo* isolated from statewide considerations of transcendent importance, and that paramount among these considerations is the ever increasing need for the conservation of water in California).

²² See *City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199, 285-286; *City of Barstow, supra*, 23 Cal.4th at 1241, citing *California Water Service Co. v. Edward Sidebotham & Son* (1964) 224 Cal.App.2d 715, 725-726.

²³ See *City of Barstow, supra*, 23 Cal.4th at 1242; *Tulare, supra*, 3 Cal.2d at 524-525.

priority use without regard to the specific location of use.²⁴ The Project Participants will provide water primarily for domestic use, and thus the Project's use of water is entirely consistent with state policy. Further, although the Project does *not* involve a transfer of water, California encourages the free movement of water throughout the state.²⁵ The history of California is replete with examples of water that originates within one watershed being conveyed tens, even hundreds of miles to its ultimate use. San Bernardino County already participates in the vast import/export network through the Mojave Water Agency and the Metropolitan Water District of Southern California.

The Project Will Not Harm Any Other Legal User of Water and Will Not Compromise the “No Injury Rule”

The following analysis provides an assessment of California water law and is not intended to be a CEQA analysis or evaluation of impact significance. It is provided here as context to the Project Description.

Commenters have requested a clarification of water rights as they relate to the proposed Project. The comments do not pertain to the CEQA analysis or to environmental impacts, but this response has been provided for clarification as requested.

The Project will operate under a Groundwater Management, Monitoring, and Mitigation Plan (GMMMP), attached in its revised version (Updated GMMMP) in the Final EIR Vol. 7, Appendix B1 Updated GMMMP, which will ensure that the Project does not result in adverse significant impacts to wells owned by neighboring landowners in the vicinity of the Project area, nor those operated in conjunction with salt mining operations on the Bristol or Cadiz Dry Lakes. Historical and current groundwater use is described in the Draft EIR, Vol. 1 Section 4.9.1 Hydrology and Water Quality, pp. 4.9-24 through 4.9-28 and in detail in **Master Response 3.3** Groundwater Pumping Impacts. Project operations are consistent with the no injury rule – a fundamental tenet of water rights law – which protects legal users of water from injury due to a change in the place of use of a water right.²⁶ The no injury rule only protects “*legal users* of water” (i.e., only the other entities holding legally recognized water rights). Moreover, no violation of the no injury rule occurs, and thus no injunction against a transfer of groundwater may be had, unless the transfer will exceed the safe yield, and thus cause injury to other legal users of water.²⁷ Overlying owners have a limited right to maintenance of the water table at a reasonable level to enable extraction of water without unreasonable expense.²⁸ An overlying owner cannot compel the maintenance of unreasonable or wasteful water levels (e.g., water levels that do not reflect the state's preference that all waters be used beneficially).²⁹

²⁴ Cal. Const., art. X, § 2; Wat. Code, § 106.

²⁵ Wat. Code §§ 109; 475; *see also* Governor's Commission to Review California Water Rights Law, Final (1978), at pp. 62-63.

²⁶ Revised SWRCB WR Order 99-012, p. 8 [Revised in part by SWRCB WR Order No. 2000-01]; *see also* *Ramelli v. Irish* (1892) 96 Cal. 214, 217; *Barton v. Riverside Water Co.* (1909) 155 Cal. 509, 517.

²⁷ *See City of Pasadena, supra*, 33 Cal.2d at 925-926; *Tulare, supra*, 3 Cal.2d at 524-525.

²⁸ *Allen v. California Water & Telephone Co.* (1946) 29 Cal.2d 466.

²⁹ *Hillside Water Co. v. City of Los Angeles* (1938) 10 Cal.2d 677 (an overlying landowner does not have an absolute right to stable and level groundwater supplies).

As explained in the Draft EIR Vol. 1, Section 4.9 Hydrology and Water Quality, pp. 4.9-47, Table 4.9-6 and the Updated GMMMP, to avoid such potential injury to other users of water, the groundwater monitoring network will include monitoring wells located in and around the wellfield, near neighboring landholdings, in other basins, and on and adjacent to the Dry Lakes (see Draft EIR, Table 4.9-6 and Updated GMMMP, Final EIR Vol. 7, Appendix B1 Updated GMMMP, Figures 5-1 and 5-2). Groundwater levels will be monitored on a monthly to semi-annual basis during the pre-operational and operational periods, and water quality will be monitored on a quarterly to annual basis during the pre-operational period and annually thereafter during the operational period of the Project. See Updated GMMMP, Section 6.2.

The Updated GMMMP includes “action criteria,” which are physical observations that are designed to warn of potential adverse impacts well in advance of an actual development of an adverse impact to critical resources (including impacts to other water users) resulting from Project operations. For example, third party well owners can participate in a monitoring program that will trigger corrective action (e.g. provision of replacement water) if static groundwater levels drop twenty feet or more due to Project operations. Third party well owners not participating in the monitoring program can trigger corrective action by providing a written complaint to the Fenner Valley Mutual Water Company (FVMWC). See Updated GMMMP, Section 6.2. The Draft EIR and the Updated GMMMP set forth several corrective actions that will be implemented in the event that water level changes, decreased yields, increased pumping costs, and/or degraded water quality in the third party wells are attributable to Project operations. See Updated GMMMP, Section 6.2. For example, if such adverse impacts did develop, FVMWC would provide for substitute supplies; deepen or improve the efficiency of the impacted well; blend the impacted well water with another source; construct a replacement well; pay the impacted third-party well owner for any increased material pumping costs incurred by the well owner; or enter into a mitigation agreement with the impacted third-party well owner. See Updated GMMMP, Section 6.2. Implementation of these corrective actions will ensure that no injury will occur to any legal water of user within the Project’s impact area.

The Project Will Not “Privatize” the Resource, nor Compromise Any Public “Rights” Concerning the Resource

A few of the comments received concerning the Draft EIR assert that the Project would result in the “privatization” of a public resource. These comments misperceive the law’s treatment and protection of private and public interests with respect to water resources. Section 102 of the California Water Code provides that “[a]ll water within the State is the property of the people of the State, but the right to the use of water may be acquired by appropriation in the manner provided by law.” Courts have construed this statute as indicative of the state’s sovereign control of water resources, but not as inferring that the state has any form of proprietary ownership of naturally occurring water supplies.³⁰ In other words, while water itself is not subject to ownership, private rights to use water (“usufructuary rights”) may be obtained subject to the state’s exercise

³⁰ See *State of California v. Superior Court* (2000) 78 Cal.App.4th 1019,1030-1032.

of its regulatory jurisdiction.³¹ Private rights to extract and use water are a species of real property and are afforded protection under the law.³²

As explained above, the Project will develop and exercise appropriative groundwater rights consistent with all applicable laws. The right to develop appropriative rights and the priority and advantages afforded by an appropriative right are not affected by the private or public nature of the entity undertaking the appropriation. Rather, as discussed above, the essential principle underlying all water rights is the constitutional requirement of reasonable and beneficial use with no prejudice for or against public or private rights holders. The Project's objectives and participants are entirely consistent with this principle.

The Project Will Not Interfere with Federal Reserved Water Rights

A few of the comments received concerning the Draft EIR assert that the Project would interfere with water rights possessed by the federal government in relation to the Joshua Tree National Park, Mojave National Preserve or federal wilderness areas surrounding the Project area. Such allegations are incorrect. The federal reserved water rights doctrine holds that when Congress designates federal lands for a specific purpose – e.g., a military base, Indian reservation or national park – it also reserves sufficient water to serve the primary purpose of that designation.³³ Federal reserved rights are appurtenant to the federal land to which they benefit, and are of higher priority than appropriative rights that postdate the federal reservation.³⁴ However, no conflict with federal reserved rights occurs unless a competing use interferes with the ability to obtain water for the purpose of the federal land designation.

The closest federal reserved land to the Project is the Mojave National Preserve, located approximately 16 miles north of the wellfield, and the next closest is Joshua Tree National Park, located south of State Highway 62, outside the Project watershed, and approximately 80 miles from the Project's wellfield. Groundwater models developed for the Project demonstrate that the Project's groundwater production will result in virtually no effect on groundwater levels underlying the Mojave National Preserve, and have no effect on water levels beneath Joshua Tree National Park, which is outside of the Project's closed basin watershed. Moreover, the Mojave National Preserve is up-gradient from the Project. Water falling as precipitation feeds the

³¹ *Turlock, supra*, 140 Cal.App.4th at 1061.

³² See *United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 101 (“... once rights to use water are acquired, they become vested property rights. As such, they cannot be infringed by others or taken by governmental action without due process and just compensation”); *U.S. v. Gerlach Live Stock Co.* (1950) 339 U.S. 725, 752-754; see also *Federal Land Bank of Spokane v. Union Cent. Life Insurance Co.* (Idaho 1934) 29 P.2d 1009, 1011 (“A water right is real property and may be sold and transferred separately from the land upon which it has been used, the same as any other real property.”); *King v. White* (Wyo. 1972) 499 P.2d 585, 588 (“A water right is a ‘property right of high order,’ with ‘none of the characteristics of personal property,’ and it is real property.”); *Northern Ohio Traction & Light Co. v. Quaker Oats Co.* (1926) 114 Ohio St. 685, 696 (“A water right is a species of property in and of itself...”); Johnson & DuMars, *A Survey of the Evolution of Western Water Law in Response to Changing Economic and Public Interest Demands* (1989) 29 Nat. Resources J. 347, 386 (“An appropriative water right, once vested, became a constitutionally protected property interest. It could be sold, leased, or transferred in other ways. It was a usufructuary right, or a right to use, and was protected as a property right.”); Davenport & Bell, *Governmental Interference with the Use of Water: When do Unconstitutional “Takings” Occur?* (2005) 9 U. Denv. Water L.Rev 1, 3-4 (“there is little doubt that the right to use water, generally, is a legally defensible interest that stands on equal footing with other traditional property rights”).

³³ See *United States v. New Mexico* (1978) 438 U.S. 696, 705.

³⁴ *Id.*; *Arizona v. California* (1963) 373 U.S. 546, 595-596.

Preserve, its streams and wildlife, first before the remaining water ultimately recharges the groundwater below the surface (see **Master Response 3.4** Springs). Overlying land uses on the Preserve will have the first opportunity to pump groundwater before it migrates downward. Minor decline in groundwater levels, if any, will not impair water supplies available to the Mojave National Preserve, nor otherwise cause any significant impact to its ecology. See **Master Response 3.9** Biological Resources. The Joshua Tree National Park likewise is completely outside the boundary of the closed basin and not located anywhere in proximity to where drawdown is expected. Accordingly, the Project will not compromise any federal reserved water rights.