ATTACHMENTS

Revised Report of Investigation Nestlé Waters North America Arrowhead Facility, San Bernardino National Forest

FIGURES		
Figure 1	Spring Production	1
Figure 2	Spring Production v. Streamflow	2
Figure 3	Strawberry Creek Spring PODs	3
Figure 4	Strawberry Creek Field Points	4
Figure 5	Location Overview	5
Figure 6	Arrowhead Springs Hotel Area	6
Figure 7	Strawberry Creek Geology	7
Figure 8	Diagram of Del Rosa Judgment Result	8
TABLES		
Table 1	Water Rights Complaints	See Report
Table 2	Groundwater Recordations	9
Table 3	Well Completion Report Summary	10
Table 4	Historical Timeline Information	11
Table 5	Basis of Right and Amounts Diverted	See Report
APPENDICES		
Appendix A	Photo Log	A-1
Appendix B	Memorandum: Nestlé Waters North America	
	Report of Investigation (2017, 2020)	B-1
Appendix C	Spring 7 Complex Developed Water Calculation	C-1
Appendix D	Evidence for Channels	D-1

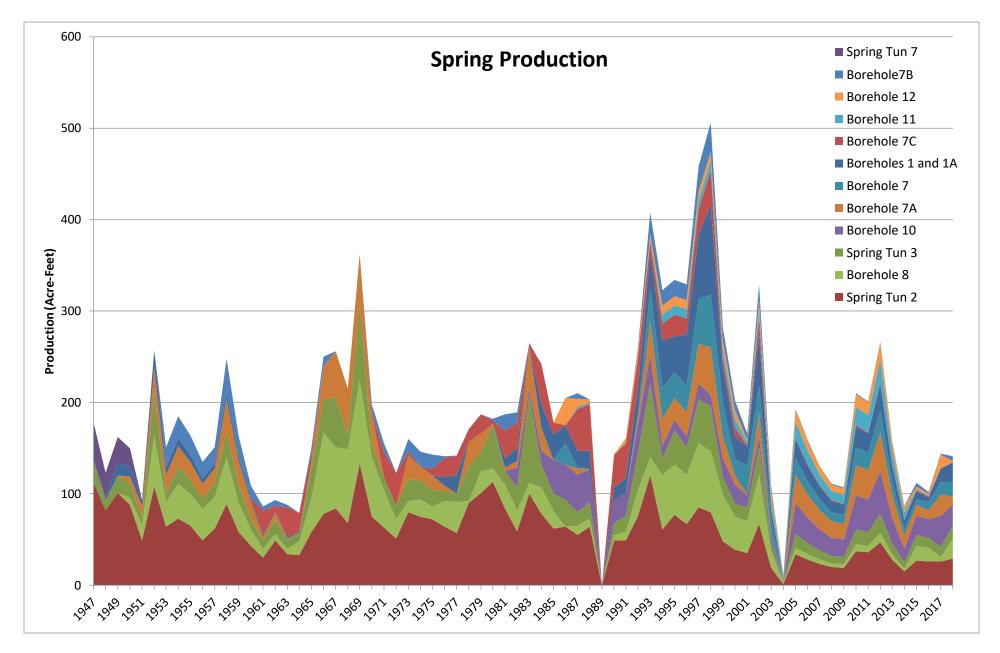


Figure 1 – Spring Production from 1947 to 2018. PODs are ordered from the greatest production for the period (bottom) to the least productive (top). Production increases as more spring borings are completed.

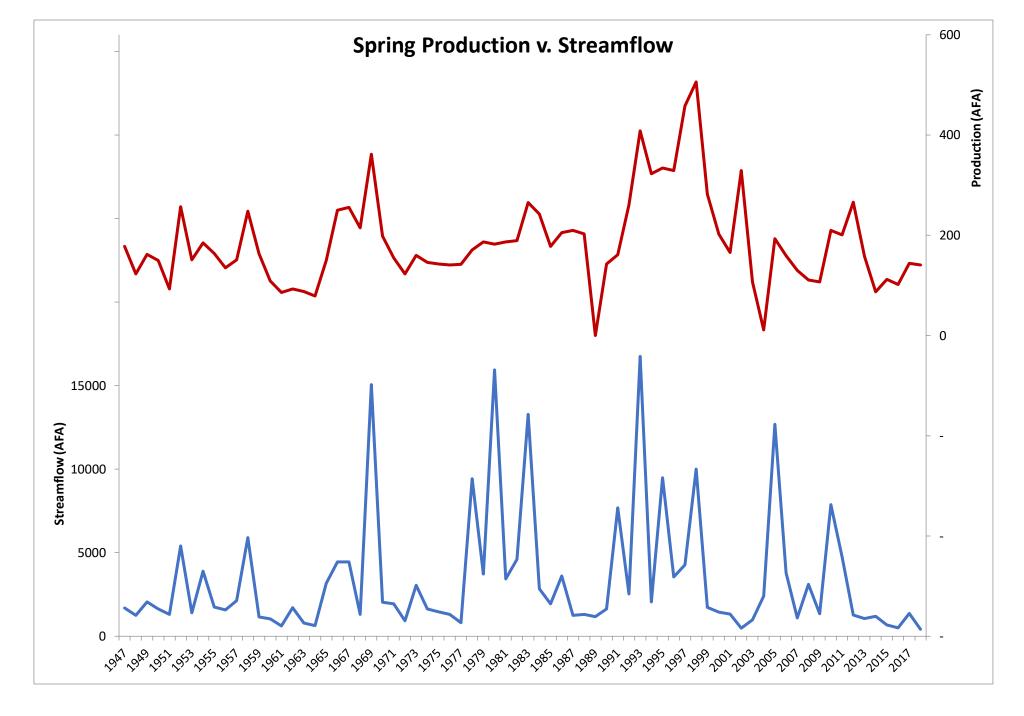


Figure 2 – Spring production (red line) compared with streamflow (blue line) from 1947 to 2018. Production values include all springs. Streamflow values represent annual totals calculated from daily averages measured at the US Geological Survey gauge 1105850 on East Twin Creek downstream of the old Arrowhead Springs Hotel.

Figure 3. Strawberry Creek Spring PODs

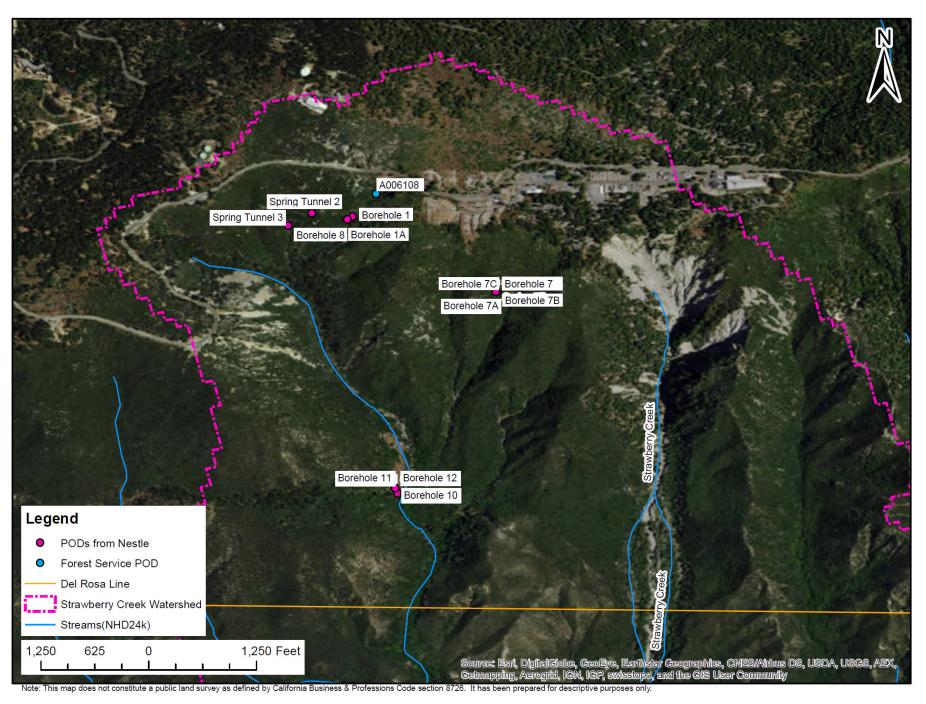


Figure 4. Strawberry Creek Field Points

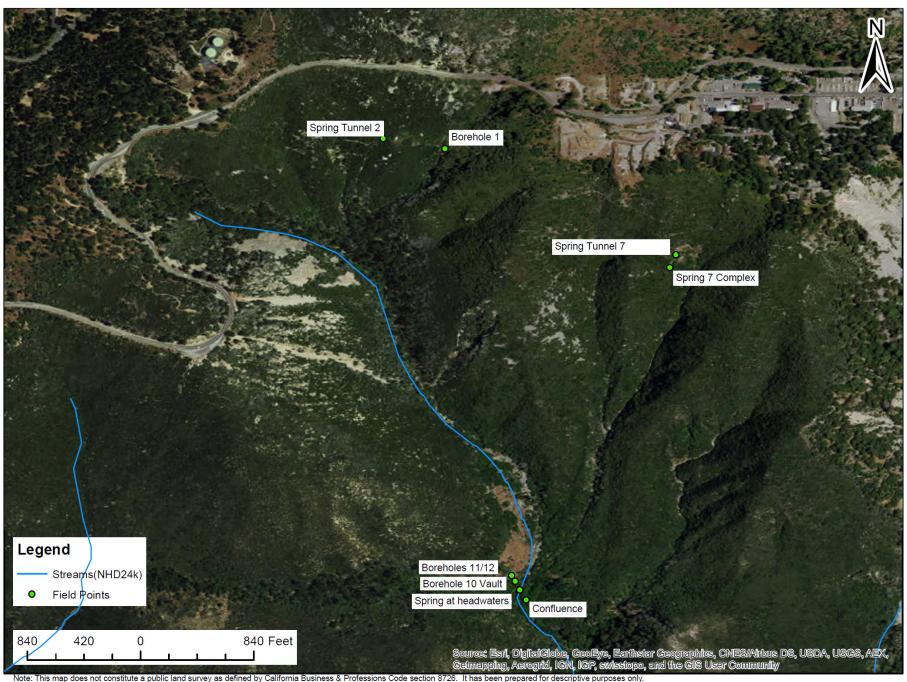
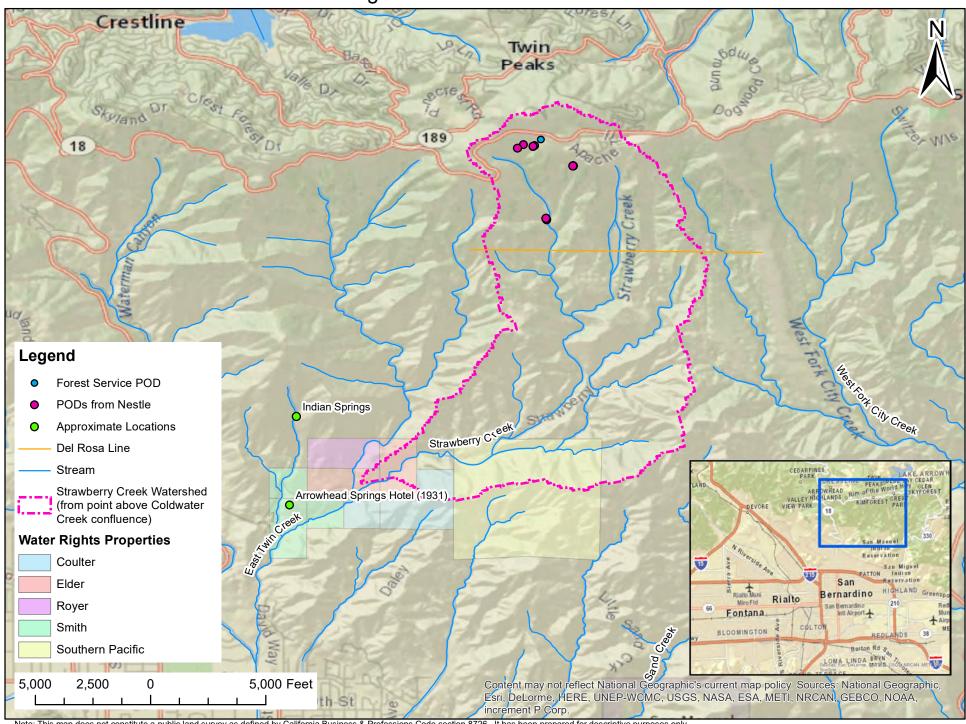


Figure 5. Location Overview



Note: This map does not constitute a public land survey as defined by California Business & Professions Code section 8726. It has been prepared for descriptive purposes only.

Figure 6. Arrowhead Springs Hotel Area

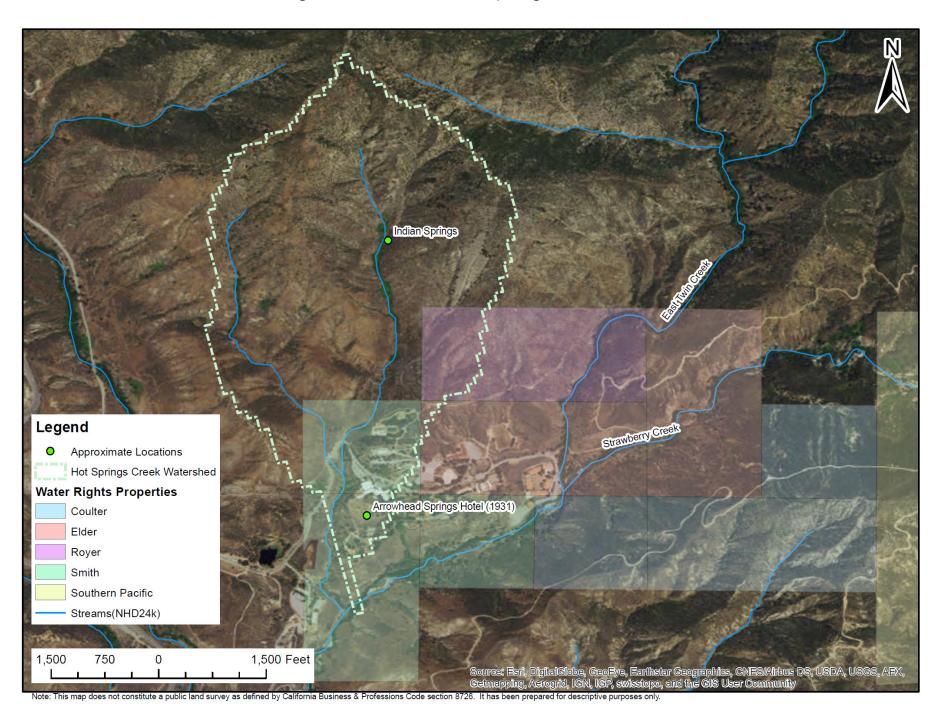
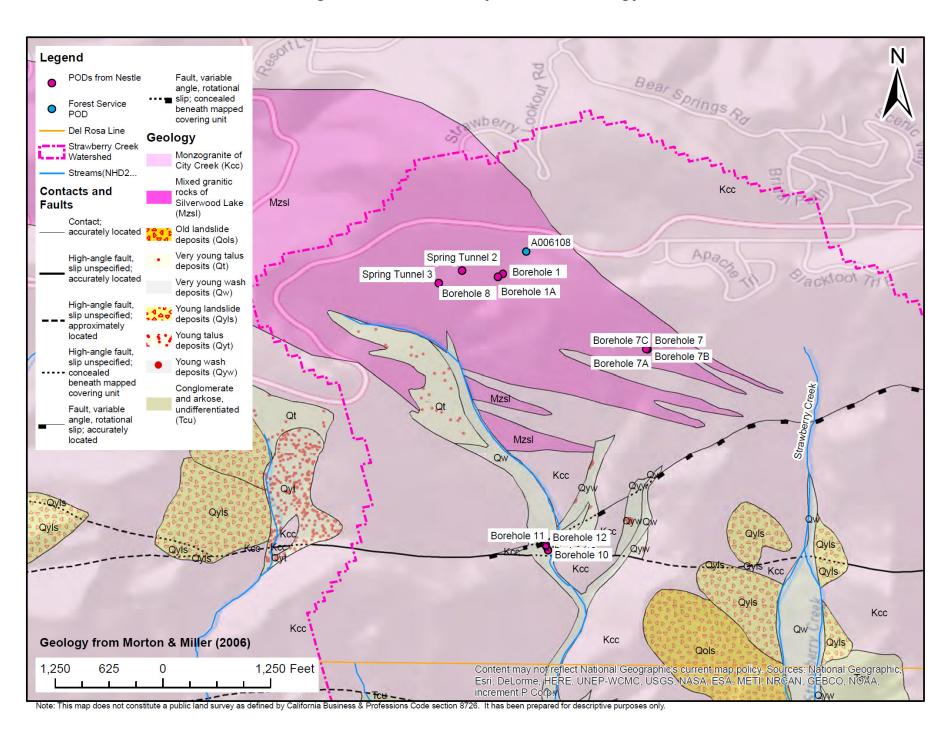


Figure 7. Strawberry Creek Geology



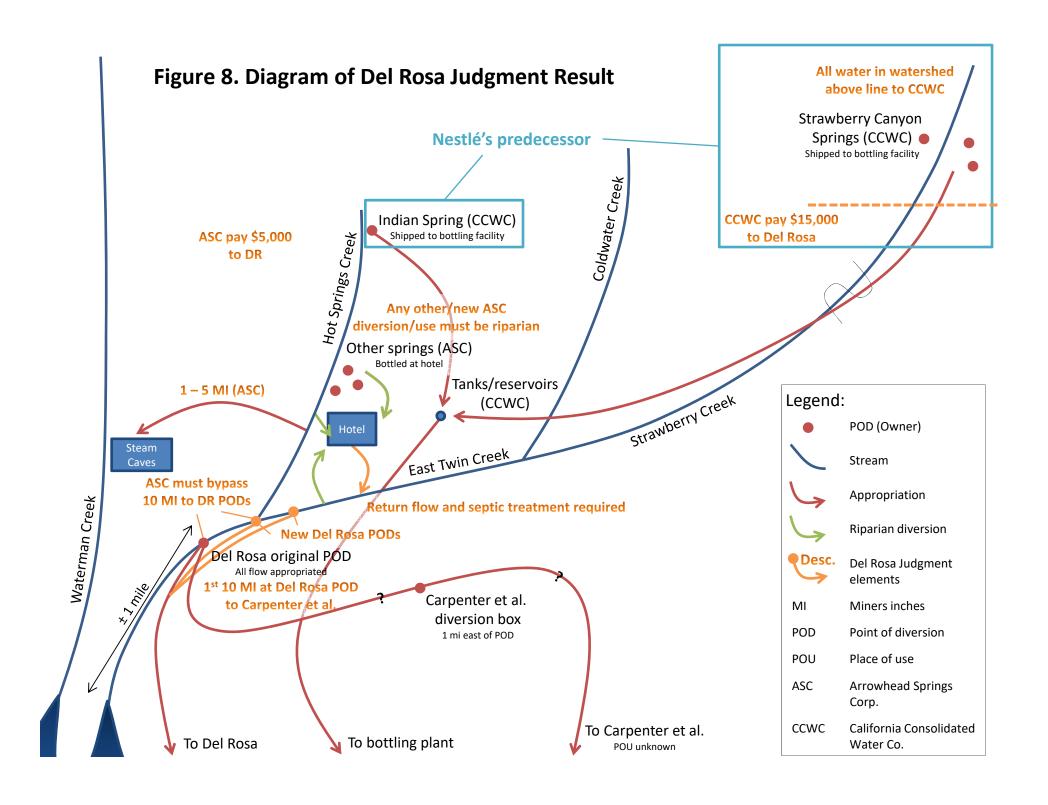


Table 2
Groundwater Recordations

Groundwater		Initial			
Recordation	POD	filing	Owner's Designation	Date "Dug"	Notes
G360476	Borehole 1	1957	Spring No. 1	Sep 1948	
	Borehole 1A	no record			
G360477	Spring Tunnel 2	1957	Spring No. 2	Apr-Jun 1930	
G360478	Spring Tunnel 3	1957	Spring No. 3	1932	
G360479	Spring Tunnel 7	no record	Spring 7		Last extractions 1950
G362857	Borehole 7	1987	Spring No. 7		Microfiche missing
G360480	Borehole 7A	1957	Spring No. 7A	Jun-Jul 1950	
G360481	Borehole 7B	1957	Spring No. 7B	Jun-Jul 1950	
G361986	Borehole 7C	no record	7-C		No first notice in file
G360482	Borehole 8	1957	Spring No. 8	July 1, 1950	
G362800	Borehole 10	1983	10		Microfiche says old file lost
G362894	Borehole 11	1988	11 (12A on boring log)		
G362856	Borehole 12	1987	12		

Table 3
Well Completion Report Summary

		From Well Completion Reports					
Groundwater Recordation	POD Name	Well Completion Report	Owners No.	Date Completed	Perforated or Screened Interval (ft bgs)	Total Depth (ft)	Estimated yield (gpm)
		106555	1	5/24/1976	126 to 290	290	40
		485783 ^a	Old 1	8/27/1993	NA	NA	NA
G360476	Spring 1 Borehole	485780 ^b	New #1	8/9/1993	66 to 130	130	75
		485782 a	Old 1A	8/27/1993	NA	NA	NA
	Spring 1A Borehole	485780 ^b	New #1A	8/9/1993	66 to 130	130	75
G362857	Spring 7 Borehole	485775	New 7	8/29/1992	123.5 to 290	290	45
G360480	Spring 7A Borehole	485773	New 7A	9/6/1992	93.5 to 230	230	100
G360481	Spring 7B Borehole	458774	New 7B	7/21/1992	252.75 to 397	397	45
G361986	Spring 7C Borehole	485779	7C	7/18/1993	167.5 to 300	300	60
		485781 ^a	Old 8	8/27/1993	NA	NA	NA
G360482	Spring 8 Borehole	485800	New #8	8/20/1993	100 to 120	120	80
G362800	Spring 10 Borehole	4278	10	12/21/1978	160 to 300	305	50
		4279	11	1/19/1979	(blank)	495	20
G362894	Spring 11 Borehole	485788	12A	6/10/1994	142 to 310	310	12
		485789 ^a	12	6/9/1994	NA	NA	NA
G362856	Spring 12 Borehole	485787	New 12	6/9/1994	152 to 320	320	8

Notes:

These two wells logs are identical, except for "1" v. "1A". It appears the well log was sent to the Department of Water Resources as "New #1" and the "A" was added later. The "1A" version was submitted to the Division by Nestle staff.

ft feet

ft bgs feet below ground surface (horizontally into hillside)

gpm gallons per minute NA not applicable

Well completion report for destruction of well. "Date completed" is date destroyed.

Table 4
Historical Timeline Information: Newspapers Articles and Advertisements, Contracts, and Court Documents

Document Date	Document Type	Source	Title or Subject	Notes
1/22/1909	Contract	Exhibit A of Complaint; Arrowhead Springs Water Company vs. Arrowhead Hot Springs Company et al., No. 11399 (ASWC vs. AHSC et al, No, 11399)*	1909 CONTRACT	 Contract for AHSC (Seth Marshall) to supply water to Mumford and Temple (later Arrowhead Springs Water Company, ASWC) 1909 Contract constitutes a pre-1914 plan for development of an appropriation of water from Cold Creek for use in Los Angeles
5/7/1909	Newspaper Article	Los Angeles Herald	NEW INCORPORATIONS	Arrowhead Spring Water Company incorporated by directors Mumford, Temple, and others with \$50,000 capital
5/8/1909	Newspaper Article	Los Angeles Herald*	ARROWHEAD HOT SPRINGS WATER TO BE MARKETED	Plan to construct pipeline to existing rail line
8/15/1909	Newspaper Advertise- ment	Los Angeles Times, p.24	"DRINK ARROWHEAD SPRING WATER" ADVERTISEMENT	 ASWC claims to be swamped with order They also claim that they have been "compelled to give up [their] present warehouse for lack of space"
1/4/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	COMPLAINT	Complaint filing for AHSC discontinuing water deliveries 1) Water was appropriated from AHSC property for use in Los Angeles (1515 East Seventh Street) 2) Source of appropriated water was "Cold Creek" 3) AHSC discontinued water delivery in 1909
1/4/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	ORDER TO SHOW CAUSE AND INJUNCTION	Temporary restraining order to maintain status quo (continued water deliveries) during lawsuit
2/19/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	ANSWER	AHSC answer to complaint stating AHSC's justification for terminating 1909 Contract

Document Date	Document Type	Source	Title or Subject	Notes
6/20/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	JUDGMENT/OPINIO N OF THE COURT	 Opinion and judgement that ASWC was perpetrating a fraud on the public and that AHSC was within its rights to terminate the contract. States that the temporary restraining order "is dissolved".
6/30/1910	Newspaper Article	Los Angeles Times	INCORPORATIONS	Arrowhead Cold Springs Company (ACSC) incorporated by McDonald, Potter, and others with \$10,000 capital
6/30/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	FINDINGS OF FACT AND CONCLUSIONS OF LAW	 Findings of 1910 case A restatement of AHSC Answer to ASWC Complaint combined with some of the points in the judgment/opinion of the court
7/1/1910	Court Document	ASWC vs. AHSC et al., No. 11399	DECREE	Decree stating that ASWC to take nothing from this action, temporary restraining order dissolved, and AHSC awarded costs
7/1/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	ORDER CONTINUING TEMPORARY RESTRAINING ORDER IN FORCE PENDING APPEAL	Court grants ASWC an extension of the temporary restraining order, thereby requiring that AHSC continue to provide water to ASWC, but prohibiting ASWC from selling or advertising water as water of Arrowhead Springs
7/7/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	NOTICE OF INTENTION TO MOVE FOR A NEW TRIAL	 Bernard Potter appeals the ASWC v. AHSC verdict to CA supreme court Appeal filed on July 13, 1910
11/16/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	NOTICE OF MOTION FOR NEW TRIAL	Bernard Potter and ASWC notify AHSC they will motion the court for a new trial

Document Date	Document Type	Source	Title or Subject	Notes
11/17/1910	Court Document	ASWC vs. AHSC et al., No. 11399*	STATEMENT ON MOTION FOR NEW TRIAL	 Statement on Motion for New Trial contains trial transcripts and accounts of testimony of Frank McDonald, Secretary and Treasurer of ASWC, S.F. Lee, ASWC employee, Seth Marshall, President of AHSC, and others from the original, May 19, 1910 trial proceedings. Witness describes size, value of ASWC buildings, equipment, water vessels, etc. States the company used four 6500-gallon car loads of water per month (page 19 of PDF), and that the water comes from "Arrowhead Springs at Arrowhead. The springs are located along the bank of what is known as Cold Water Canyon, that supply the water of Cold Water Canyon."
1/13/1911	Court Document	ASWC vs. AHSC et al., No. 11399*	ORDER	Motion for new trial denied
3/6/1911	Court Document	ASWC vs. AHSC et al., No. 11399*	SUBSTITUTION OF WELLBORN & WELLBORN FOR BERNARD POTTER	 A.B. McDonald signed as President of Arrowhead Springs Water Company New attorneys take over from Bernard Potter
3/7/1911	Court Document	ASWC vs. AHSC et al., No. 11399*	NOTICE OF APPEAL	ASWC to appeal Superior Court's denial of motion for new trial to CA Supreme Court
1/17/1912	Newspaper Article	Los Angeles Times	RESTRAINING ORDER: BANKRUPT TRUSTEE SUES	"[Arrowhead Cold Springs Company] has been adjudged an involuntary bankrupt."
6/2/1912	Newspaper Article	Los Angeles Times	THE MOUNTAIN RESORTS OF SOUTHERN CALIFORNIA	"Electric cars from San Bernardino depot to hotel." "Good fishing in Cold Water Canyon,"

Document Date	Document Type	Source	Title or Subject	Notes
6/17/1912	Court Document	Arrowhead Hot Springs Company vs. Arrowhead Cold Springs Company, No, 12532 [†] (AHSC vs. ACSC, No. 12532)	COMPLAINT	 AHSC files suit alleging that ACSC is continuing to sell water with fraudulent, misleading advertising and claims in a manner that injures AHSC and its water's reputation. The existence of the filing, if not its explicit terms, suggest that ACSC has continued to sell water appropriated from the locality of Arrowhead.
7/18/1912	Newspaper Article	San Bernardino Sun	THE WATER OF ARROWHEAD BOTTLED	Bottling works to be constructed near hotel. "Plans for the structure are now ready to be submitted to contractors"
10/11/1912	Newspaper Article	Los Angeles Times	IMPROVEMENTS TO BE COMMENCED AT THE ARROWHEAD HOT SPRINGS HOTEL	"A gas plant is now being built"; "A bottling plant, to bottle the Arrowhead water, is also designed"
11/14/1912	Court Document	AHSC vs. ACSC, No. 12532 [†]	ANSWER	 ACSC's Answer to AHSC Complaint ACSC alleges that AHSC does not make use of any of the hot or cold spring water in excess of five inches measured under 4 inches of pressure, and alleges that upward of 45 inches of spring water flows over and beyond the lands claimed by AHSC ACSC claims that locality known as "Arrowhead" extends to a great territory adjacent to and surrounding lands of AHSC. This indicates that ACSC continued to appropriate water from the area, while calling it "Arrowhead" water and that AHSC sued them to prevent them from continuing to call this other local water "arrowhead water".

Document Date	Document Type	Source	Title or Subject	Notes
4/18/1913	Court Document	AHSC vs. ACSC, No. 12532 [†]	FINDING OF FACT AND CONCLUSIONS OF LAW, SAN BERNARDINO COUNTY SUPERIOR COURT	 False representation of bottled water and illegal use of trademarked name Decision permanently enjoins ACSC (capitalized by ASWC investors) from marketing or selling water as Arrowhead water or as being derived from Arrowhead Springs "the court finds that none of the water offered for sale by the [ACSC] was water obtained from any springs known as Arrowhead springs but was water known as East Twin Creek water."
4/25/1913	Court Document	AHSC vs. ACSC, No. 12532 [†]	NOTICE OF INTENTION TO MOVE FOR A NEW TRIAL	ACSC notices of intention to appeal
6/12/1913	Newspaper Article	San Bernardino Daily Sun	ARROWHEAD WATER IS BEING BOTTLED*	First shipment of water bottled at "Old Arrowhead" facility to LA for sale; transported via rail line
6/25/1913	Newspaper Article	Los Angeles Times	HYDRANT WATER	Such is the allegation in connection with litigation over use of Arrowhead Water label. "The Arrowhead Hot Springs Company claims that the only real Arrowhead Water is bottled at its own bottling plant at the springs."
7/24/1914	Court Document	AHSC vs. ACSC, No. 12532 ^t	NOTICE OF AHSC MOTION TO DISMISS APPEAL	A Notice that AHSC will motion court to dismiss ACSC appeal of 1913 verdict
11/25/1916	Newspaper Article	Los Angeles Evening Herald*	BIG BOTTLING PLANT IS PLANNED FOR LA	"After months of investigation [AHSC] officials decided to erect the bottling plant in Los Angeles instead of at the springs"; full operation by May of the following year
1/17/1917	Newspaper Article	San Bernardino News	DISTRIBUTION ARRANGED FOR HEALTH DRINK	Three sources of Arrowhead water: Indian spring (soft, nonmineralized), Granite spring (mineralized), Pen-Yugal spring (202° F, contains disodium arsenate)
2/28/1917	Newspaper Article	Los Angeles Evening Herald [‡]	L.A. BUILDING PERMITS	Bottling works

Document Date	Document Type	Source	Title or Subject	Notes
9/22/1917	Newspaper Article	Los Angeles Evening Herald [‡]	ARROWHEAD SPRINGS PLANT COMPLETED	Glass-lined 10,000-gallon tank cars; "culmination of many years of preparation"
4/9/1919	Newspaper Article	Los Angeles Evening Herald [‡]	ARROWHEAD SPRING WATER (AD)	Indian Spring, glass tank cars
9/19/1919	Newspaper Article	Los Angeles Evening Herald [‡]	PROMPT DELIVERIES ARROWHEAD SPRINGS WATER AGAIN RESUMED (AD)	20,000 gpd available
10/2/1926	Newspaper Article	San Bernardino Daily Sun [‡]	BOTTLING WILL BE DONE HERE	Plan to install bottling facility at Arrowhead Springs; Indian Spring
3/5/1929	Newspaper Article	San Bernardino Daily Sun [‡]	BIG EXPANSION AT ARROWHEAD CONTEMPLATED	Merger of three bottled water corporations; ASC bottling plant "with branches at Pasadena, Venice, Pomona, and elsewhere water is produced from Arrowhead Springs Outside of Los Angeles there are approximately 25 separate distributing units serving Puritas water, and 30 Arrowhead distributing units"
10/21/1931	Newspaper Article	San Bernardino Daily Sun [‡]	DEL ROSA HAS WATER RIGHTS ESTABLISHED P.1	ASC 10 inches Nov 1 - May 1; CCWC all waters of Indian Springs and Strawberry Creek
10/21/1931	Newspaper Article	San Bernardino Daily Sun [‡]	DEL ROSA HAS WATER RIGHTS ESTABLISHED P.2	See above
11/29/1935	Newspaper Article	San Bernardino Daily Sun [‡]	TWENTY YEARS AGO (REFLECTIVE ARTICLE)	"Extensive development in the marketing of the waters of Arrowhead springs will begin early next year The present plan is to extend sale of Arrowhead water over a large territory."
10/10/1938	Newspaper Article	San Bernardino Daily Sun [‡]	SCHNEK WILL PUT \$800,000 IN BIG RESORT	This corporation has operated the hotel since that time, except between 1918 and 1925 when it was used by the Government as a war hospital."

Document Date	Document Type	Source	Title or Subject	Notes
11/24/1938	Newspaper Article	San Bernardino Daily Sun [‡]	MOUNTAIN FIRE RAZES FAMED HOTEL, ROARS INTO VALLEY	Fire destroys main hotel building while property in escrow
11/25/1938	Newspaper Article	San Bernardino Daily Sun [‡]	AFTER-FIRE PHOTOS OF ARROWHEAD SPRINGS	Photos
12/17/1939	Newspaper Article	San Bernardino Daily Sun [‡]	NEW ARROWHEAD SPRINGS HOTEL LIKE SUPER- SCREEN SPECTACLE	Description of new hotel
4/3/1948	Newspaper Advertise- ment	San Bernardino Daily Sun [‡]	(AD)	"underground streams"
12/13/1948	Newspaper Article	San Bernardino Sun-Telegram [‡]	FIRM'S WATER DISTILLER IS LARGEST IN WORLD	"The water company distributes two types of water, Arrowhead spring water from deep rocks springs in the San Bernardino mountains and Puritas distilled water."

Notes:

^{*}Submitted as Exhibit A-30 in comments of Amanda Frye

[†]Submitted as Exhibit F in comments of Amanda Frye

[‡]Accessed through cdnc.ucr.edu.on 12/29/2016

Appendix A Photo Log

STATE WATER RESOURCES CONTROL BOARD DIVISION OF WATER RIGHTS

Revised Report of Investigation

Nestlé Waters North America Arrowhead Facility, San Bernardino National Forest

Site Visit: June 15, 2016

Photos by: Natalie Stork and Victor Vasquez



Photo 1

Spring 7 Complex and solar power panel. All of the flow meters are powered by solar panels. No pumps on site so no other power needed.



Photo 2Pipeline downhill from Spring 7 Complex.



Photo 3

Pipeline downhill from Spring 7
Complex. View from helicopter



Borings 11 and 12 buried. Locations pointed out by Mr. Lawrence. No evidence of borings other than nearby solar panel (not pictured). Buried pipe to Spring 10 vault not visible.



Photo 5

"Old boring 11" pipe. Nestle staff said that this pipe likely comes from historical spring boring 11, which has been out of use for an indefinitie period of time.



Photo 6

Seep on Strawberry Creek. Photo taken looking down. This was the most upstream seep and acted as the headwaters of the creek. Water was trickling out of the toe of the colluvial/alluvial meadow deposit. Arrows show seep flow direction.



Photo 7

At the confluence of the two upper most branches of Strawberry Creek. Flow approx. 5-10 gpm.



Photo 8

Looking from meadow up watershed towards
Borehole 1/1A/2/3. Small channel cut across meadow (arrows).



Photo 9

Looking downstream in mapped Strawberry Creek channel along east side of meadow. Streambed dry. Located upstream of seep in photo 11. Arrow pointing downstream.



Photo 10

10+ foot diameter boulder representative of bedrock along Strawberry Creek channel in meadow. Bedrock is mapped as quartz monzonite. Pegmatitic texture with potassium feldspar phenocrysts occasionally visible in bedrock outcrops (none visible this photo).



Photo 11

Spring Tunnel 2. Weir in foreground. Ultrasonic water level measurement in midground. Back of tunnel (bedrock) in background. Small side tunnel entrance visible on left immediately behind water level measurement mount.



Photo 12

Inlet to pipeline downhill (arrow). Capped pipe is used to drain the tunnel for cleaning and maintenance.



Photo 13

Borehole 1 vault. Boring installation is buried.



Photo 14

View down the watershed from Borehole 1 site.



Photo 15

Spring Tunnel 3 vault (arrow) and pipeline. Mr. Lawrence and Mr. Nichols said that the construction is nearly identical to Spring Tunnel 2, except that the tunnel is longer and takes a turn, likely because the diggers were "chasing a fracture". Spring Tunnel 3 vault not visited on foot due to health and safety issues (rattlesnake on trail).



Photo 16

Approximate location of the USGS gauging station (arrow). Location verified using USGS 11058500 location map available at http://waterdata.usgs.gov/.



Photo 17

Spreading basin. All water remaining in East Twin Creek is conveyed to the spreading basin, to recharge the groundwater basin.

Appendix B

Memorandum: Nestlé Waters North America Report of Investigation (2017)

Memorandum: Nestlé Waters North America Report of Investigation (2020)

STATE WATER RESOURCES CONTROL BOARD DIVISION OF WATER RIGHTS

Revised Report of Investigation

Nestlé Waters North America Arrowhead Facility, San Bernardino National Forest

MEMORANDUM

TO: Victor Vasquez, Natalie Stork, Katherine Mrowka, John O'Hagan

FROM: Kenneth Petruzzelli

Senior Staff Counsel

Office of Enforcement

DATE: September 22, 2017

SUBJECT: Nestlé Waters North America Report of Investigation

I. INTRODUCTION

The purpose of this memorandum is to provide a summary of law for the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) Report of Investigation (ROI) for Nestlé Waters North America (Nestlé).

The Office of Enforcement has prepared two previous legal memorandums for assistance in the investigation. These memorandums are privileged attorney-client communications and attorney work product exempt from discovery and requests for public records. (*Roberts v. City of Palm Dale* (1993) 5 Cal.4th 363; *County of Los Angeles v. Superior Court* (2000) 82 Cal.App.4th 819.) This memorandum also discusses the Food and Drug Administration (FDA) regulations defining "spring water" to assist in determining whether meeting the FDA requirements for "spring water" is relevant to determining the nature of Nestlé's water rights.

II. Nestlé's Bases of Right and Perfection of Right

A. Pre-1914 Methods of Appropriation

The appropriation of water includes any taking of water other than for riparian or overlying uses. (*City of Pasadena v. City of Alhambra* (1949) 33 Cal.2d 908, 925.) Prior to the effective date of the Water Commission Act in December 1914, there were two ways to establish a right to appropriate water from a California watercourse. (*Millview County Water District v. State Water Resources Control Board* (2014) 229 Cal.App.4th 879, 890, as modified on denial of reh'g (Oct. 14, 2014), review denied (Dec. 17, 2014).)

The first method to obtain a right to appropriate water, to begin diverting water and applying it to a beneficial use, dated to statehood. (*Millview County Water Dist.*, *supra*, 229

Cal.App.4th at 890.) Once a would-be diverter took some act manifesting intent to appropriate water, the diverter established a claim to the volume of water reasonably necessary to serve the purpose for which the diversion was sought. (*Id.*) So long as the diverter acted with due diligence to achieve the intended diversion, did in fact divert within a reasonable time, and used the diverted water for a beneficial purpose, the claim was perfected and had priority over any later established claim. (*Id.*)

The second method became available with the 1872 passage of Civil Code sections 1415 through 1421. (*Id.*) A person intending to establish a claim of appropriation was required to post a notice at the intended point of diversion and to record a copy of the notice with the county. (*Id.* at 890-891; *see also* Civ. Code, § 1415.) The claim became entitled to priority upon commencement of the diversion. (Civ. Code §§ 1416–1418.)

B. Establishing a Preliminary Right to Appropriate Water

Before any actual diversion or use of the water, a claimant may acquire an incipient, incomplete, and conditional right to the future use of the water by beginning the construction of the works necessary for such diversion and use, and, in good faith, diligently prosecuting the same toward completion. (*Inyo Consol. Water Co. v. Jess* (1911) 161 Cal. 516, 519.)

Prior to 1872 legislation adopted Civil Code sections 1415 through 1421, no person could acquire a priority of right to divert and use water before an initial, definite step to diverting water for beneficial use. (*Madera Irr. Dist. v. All Persons* (1957) 47 Cal.2d 681, 689.) When the claimant completed the project and applied water to beneficial use, a right became vested in and to the use of that water. (*Id.*) Until the claimant completed the work and the right vested, anyone else with the ability to divert and use the water could do so. (*Nevada Co. & Sacramento Canal Co. v. Kidd* (1869) 37 Cal. 282, 313.) However, the priority of the right related back to when the person claimed the right, selected the locations, and commenced working toward diverting and using a definite amount of water from a definite source. (*Madera Irr. Dist., supra,* 47 Cal.2d at 689; *Haight v. Costanich* (1920) 184 Cal. 426, 431–332.) Nonetheless, even the preliminary right to acquire a water right in the future could be lost by want of diligence in pursuing the work and perfecting the right. (*Nevada Co., supra,* 37 Cal. at 313–314.) The Civil Code provisions enacted in 1872 did not substantially change the law, instead codifying previous court decisions.

¹ The method of appropriation under the Civil Code is often referred to as the "statutory method" of appropriation.

(*Madera Irr. Dist., supra*, 47 Cal.2d at 689.) As a result, the Civil Code procedure was not exclusive and that appropriative rights could still be initiated by taking water from the source and applying it to beneficial use. (*Lower Tule Ditch Co. v. Angiola Water Co.* (1906) 149 Cal. 496, 499.)

Physical construction of diversion works, physical appropriation, and actual diversion and use are the clearest examples of definite steps toward diverting water to beneficial use. (*De Necochea v. Curtis* (1889) 80 Cal. 397, 406; *Town of Antioch v. Williams Irr. Dist.* (1922) 188 Cal. 451, 456.) However, courts have held that surveying and mapping a proposed ditch from a proposed dam to a proposed place of use has been sufficient. (*Merritt v. City of Los Angeles* (1912) 162 Cal. 47, 51.)

The Pacific Electric Railway started surveying for the Arrowhead Line in 1912. Specially designed rail cars were filled with spring water at the terminus of the rail lines near the hotel "to maintain the purity and fresh taste of the spring water" during transit to the Los Angeles bottling plant. The Arrowhead bottling plant in downtown Los Angeles opened in 1917. According to Nestlé's legal counsel, a long-time Arrowhead employee who has thoroughly researched the topic claims that bottling started in Los Angeles between 1912 and 1915, but no documentary evidence provided by Nestlé addresses this claim. Nonetheless, surveying for a railroad line is strongly analogous to surveying and mapping a proposed ditch.

C. Perfection of Right

An appropriator only acquires a right to the beneficial use of waters of a stream and only to the extent the appropriator employs the waters for that purpose. (*Hufford v. Dye* (1912) 162 Cal. 147, 153.) The appropriator's right is measured by the extent to which the appropriator applies water for useful and beneficial purposes, not by the amount stated on a notice or even by actual diversion. (*Id.*) An appropriative right may even be measured by the season and time of day or when the appropriator actually applied water for useful and beneficial purposes. (*Bazet v. Nugget Bar Placers, Inc.* (1931) 211 Cal. 607, 616.)

The 1872 Civil Code provisions did not eliminate the need for actual perfection of a claim through beneficial use. (*Millview Co. Water Dist.*, *supra*, 229 Cal.App.4th at 897.) Under both pre and post-1872 Civil Code claims, an appropriative right is limited to the amount of water actually put to a beneficial use by the diverter, which has been interpreted to mean the

amount actually used and reasonably necessary for a useful purpose to which the water has been applied. (*Haight, supra,* 184 Cal. at 431.)

D. Progressive Use and Development

Pre-1914 water rights can be developed progressively up to the amount of the intended appropriation. (State Water Board Water Right Order 2006-0001, p. 8, available at https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/2006/wro2006_0001.pdf.) Under the doctrine of "progressive use and development," pre-1914 appropriations may be enlarged beyond the original appropriation. (State Water Board Water Right Order 95-10, p. 15, available at https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/1995/wro95-10.pdf; see Haight, supra, 84 Cal. at 431.) However, the right to take an additional amount of water reasonably necessary to meet increasing needs is limited. (Haight, supra, 184 Cal. at 431.)

The quantity of water to which an appropriator is entitled under the progressive use doctrine is a fact-specific inquiry. (Water Right Order 95-10, p. 16.) The new use must be within the scope of the original intent and additional water must be taken and put to a beneficial use consistent with the original intent and within a reasonable time by the use of reasonable diligence. (*Id.*) Thus, an appropriator may increase the amount of water diverted under a pre-1914 right, provided: (a) the increased diversion is in accordance with a plan of development and (b) the plan is carried out within a reasonable time by the use of reasonable diligence. (Water Right Order 95-10, p. 16.) If the new use is not pursued consistent with the doctrine of progressive use and development, the right to the additional water is subject to intervening claims. (*Haight*, *supra*, 184 Cal. at 432.)

Sufficient evidence of an expression of initial intent does not require single document describing a "plan of development" in its entirety, but rather that there is substantial evidence of the initial intent with respect to the use of the water appropriated. (Water Right Order 2006-0001, p. 9.)

E. Appropriations from Springs

A spring that feeds a watercourse is part of the watercourse, whether the water from the spring percolates into the stream through the soil or reaches the stream in one or more running streams. (Gutierrez v. Wege (1905) 145 Cal. 730, 734.) "Where percolating waters collect or are gathered in a stream running in a defined channel, no distinction exists between waters so running under the surface or upon the surface of land." (Cross v. Kitts (1886) 69 Cal. 217, 222.) Such waters, including waters coming from a spring by percolation, may be acquired by prior appropriation. (Id.) "The fact that the flow of the stream from the spring is caused by water percolating through the soil does not deprive it of the character which makes it subject to appropriation." (Wolfskill v. Smith (1907) 5 Cal.App. 175, 181.) A spring is "[w]ater rising to the surface of the earth from below, and either flowing away in the form of a small stream or standing as a pool or small lake." (Id.) The stream in either case may result from the gathering of water at some point, whether near or distant, which produces the stream. (Id.) The "stream" remains subject to appropriation regardless of whether the water flows to the surface naturally or by artificial means, such as by boring a hole in the ground. (Id.)

Springs whose waters do not flow off an owner's land are not subject to appropriation. (*State v. Hansen* (1961) 189 Cal.App.2d 604, 610) Similar to a riparian or overlying groundwater right, the diverter's right is based on owning the land and appurtenant to the land. (*Id.*) A spring that does not flow off of the property on which it is located and from which the diverter's aggregate diversions do not exceed 25 acre-feet in any year is also exempt from the requirement to file a statement of diversion and use. (Water Code § 5101, subd. (a).)

Springs are often "developed" to improve flow from the spring. In common law, "developed water" is the addition of "new" water to a stream or other source by means of artificial work.³ (Hutchins, *The California Law of Water Rights* (1956) p. 383.) A diverter who develops water by capturing or channeling previously uncaptured water has a right to the increased flow. (*Churchill v. Rose* (1902) 136 Cal. 576, 578-579; *Pomona Land & Water Co. v.*

_

² In discussing case law, this memorandum uses the term "stream" where consistent with the language of the case. Under Water Code section 1200, "Whenever the terms stream, lake or other body of water, or water occurs in relation to applications to appropriate water or permits or licenses issued pursuant to such applications, such term refers only to surface water, and to subterranean streams flowing through known and definite channels."

³ "Salvaged water," by comparison, is parts of a stream or water supply saved from loss by reason of artificial work and thereby retained in the supply and made available. The general rules governing developed water, however, are the same.

San Antonio Water Co. (1908) 152 Cal. 618, 623.) However, since the portion of water that would have contributed to the natural flow of stream is considered part of the stream, the diverter is not entitled to appropriate water if the appropriation would injure prior rights attached to the stream. (Roberts v. Crafts (1903) 141 Cal. 20, 27; L. Mini Estate Co. v. Walsh (1935) 4 Cal.2d 249, 254; Vineland Irrigation Dist. v. Azusa Irrigation Co. (1899) 126 Cal. 486, 495; Cohen v. La Canada Land & Water Co. (1904) 142 Cal. 437, 439-440.) There is no different or better right to cut off water in or above a spring than to cut it off or divert it from a stream. (Gutierrez v. Wege (1905) 145 Cal. 730, 734.) Any interference with the supply of a stream interferes with the owner of a prior right to have the water continue to run in the stream for use. (Id.) A diverter appropriating developed water from a spring that forms or is tributary to a watercourse therefore has the burden to prove the appropriation will not deplete stream flow to the detriment prior rights. (Pomona Land & Water Co., supra, 152 Cal. at 630.)

F. Rights for Water Bottling and Bulk Hauling

A riparian owner may use water from land upon which a spring is located to bottle water and sell it off property so long as it does not unreasonably interfere with other riparian owners. A riparian owner has no right to divert the water beyond the watershed of a stream. (*Mt. Shasta Power Corp. v. McArthur* (1930)109 Cal.App. 171, 191.) To be used under a riparian right, the water must be used on riparian lands. (*Homes v. Nay* (1921) 186 Calif. 231 233.) For example, courts have held that electric energy generated with water diverted under a riparian right may be conveyed for use on non-riparian lands. (*Mentone Irr. Co. v. Redlands Electric Light and Power Co.* (1909) 155 Cal. 323, 327-328.) Courts have also held that a riparian owner on a non-navigable water course may cut and remove ice in any quantity, and to any extent, for the riparian owners own use, or for storage or sale, as it does not unreasonably interfere with other riparian owners. (*Gehlen Brothers et al. v. J. F. Knorr et al.* (1897) 101 Iowa 700, 760.)

Bottling water on riparian land and then exporting that water for consumption on non-riparian land is similar to hydropower generation on riparian land and then conveying the electricity for use on non-riparian land. It is also similar to cutting ice on riparian land and then shipping that ice to non-riparian land for sale and other use. When a riparian owner bottles water on riparian land, the use occurs on riparian land and falls within the riparian right, even if sale and consumption of that water occurs on non-riparian land. When water is diverted into a truck or rail car on riparian land and then bottled on non-riparian land, the use occurs on non-riparian

land. Due to their size and volume, bulk water trucks and rail cars are much more analogous to a pipeline than to individual water bottles. As a result, bulk water transportation by truck or by rail is an appropriation inconsistent with a riparian use.

III. The State Water Board Regulatory Authority of Sources of Water

A. Authority to Prevent Waste and Unreasonable Use of Water and Protect Public Trust Beneficial Uses

The State Water Board's authority to prevent the waste and unreasonable use of water under Article X, section 2 of the Constitution extends to all water use in the state, regardless of the basis of right, as does its authority to protect the public trust.

B. State Water Board Permitting Authority

1. General Permitting Authority

Since 1914, a statutory scheme has provided the exclusive method of acquiring water rights by appropriation. (*U.S. v. St. Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 102.) Thus, an application for appropriative rights must now be made to the State Water Board for a permit authorizing construction of necessary water works and the taking and use of a specified quantity of water. (*Id.*; *see also* Water Code § 1225.) Water Code sections 1200 and 1201 define the water subject to appropriation and thus subject to the State Water Board's permitting authority:

All water flowing in any natural channel, excepting so far as it has been or is being applied to useful and beneficial purposes upon, or in so far as it is or may be reasonably needed for useful and beneficial purposes upon lands riparian thereto, or otherwise appropriated, is hereby declared to be public water of the State and subject to appropriation in accordance with the provisions of this code.

(Water Code § 1201.)

Water Code section 1201 excludes appropriations initiated before 1914 and riparian rights from the State Water Board's permitting authority. However, such rights remain subject to the prohibition on waste and unreasonable use.

For the purposes of applications to appropriate water or permits or licenses issued pursuant to such applications, the terms stream, lake or other body of water refers only to surface water and to subterranean streams flowing through known and definite channels. (Water Code § 1200.)

2. State Water Board Permitting Authority for Groundwater

Subterranean streams flowing through known and definite channels are governed by the same rules that apply to surface water. (*City of Los Angeles v. Pomeroy* (1899) 124 Cal. 597, 632.) Appropriations from subterranean streams after 1914 therefore require a permit issued by the State Water Board. However, percolating groundwater, "[w]ater filtrating or percolating in the soil belongs to the owner of the freehold—like the rocks and minerals found there," is not water flowing in a known and definite channel and therefore exempt from the State Water Board's permitting authority. (D-1639, p. 3; *North Gualala Water Co. v. State Water Resources Control Bd.* (2006) 139 Cal.App.4th 1577, 1593, *as modified on denial of reh'g (June 16, 2006)*.) Thus, the State Water Board has permitting authority over subterranean streams flowing in known and definite channels, but lacks permitting authority over percolating groundwater.⁴

Absent evidence to the contrary, groundwater is presumed to be percolating groundwater rather than subterranean water flowing in a known and definite channel. (*North Gualala Water Co., supra,* 139 Cal.App.4th at 1594-1596.) The burden of proof is on the person asserting that groundwater is a subterranean stream flowing through a known and definite channel. (*Id.* at 1593.) Proof of the existence of a subterranean stream is shown by evidence that the water flows through a known and definite channel. (*Id.*)

To determine whether groundwater falls under the State Water Board's permitting authority, the State Water Board relies on a four-part test that evaluates site-specific factors. (*Id.* at 1606; D-1639, p. 4; *see also* State Water Board Water Right Order 2003-0004, *In the Matter of Permit 14853 (Application) 21883 of North Gualala Water Company, and Request for Determination of Legal Classification of Groundwater Appropriated Under this Water Right (Feb. 19, 2003) (WRO 2003-0004), p. 13, <i>available at* http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/2003/wro2003-04.pdf.) For groundwater to be classified as a subterranean stream flowing through a known and definite channel, the following physical conditions must exist: (1) a subsurface channel must be present; (2) the channel must have relatively impermeable bed and banks; (3) the course of the channel must be

8

⁴ Courts have acknowledged that the legal distinctions between surface water and groundwater "quickly take on an Alice-in-Wonderland quality," as they are based on "antiquated case law" with little or no resemblance to hydrological realities. (*North Gualala Water Co., supra,* 139 Cal.App.4th at 1591-1592.)

known or capable of being determined by reasonable inference; and (4) groundwater must be flowing in a known and definite channel. (D-1639, p. 3.)

The Water Recordation Act does not change the legal status of any water right. The Water Recordation Act applies only to Los, Angeles, Riverside, San Bernardino, and Ventura Counties. It requires persons with wells with aggregate extractions of more than 25 acre-feet to file a report of their extraction for any well with extraction of 10 acre-feet or greater per annum. The Water Recordation Act further provides that, for purposes of reporting water extractions, "[g]round water means water beneath the surface of the ground whether or not flowing through known and definite channels" (Cal. Water Code § 5000(a).) Its definition of "groundwater" was intended to make clear that for purposes of the Water Recordation Act certain water sources needed to be included in the reporting process. The Water Recordation Act, therefore, does not characterize any particular water right as a "groundwater right." Rather, it merely identifies certain water sources as being subject to the Water Recordation Act's reporting requirements.

A person who files a notice, pursuant to Part 5 (commencing with Section 4999) of the Water Code is exempt from requirements to file statements of diversion and use. (Cal. Water Code §5101, subd. (c).)

3. State Water Board Permitting Authority for Springs and Developed Water

Water from a spring that flows off an owners land and forms a watercourse is subject to appropriation regardless of whether water from the spring is diverted at the surface or by artificial means, such as by boring a hole into the ground or using a horizontal or vertical pipe, tunnel, or boring. (*see* II.E above.) A permit from the State Water Board is therefore required for appropriations from springs initiated after 1914.

The published cases addressing developed water pre-date the Water Commission Act. However, since 1950 the State Water Board has issued a dozen permits to appropriate water from a spring using artificial methods.⁵ In each decision, the determinative finding was that water was available for appropriation. In three decisions since 1950 in which the State Water Board denied an application to appropriate water form a spring using artificial methods, the determinative

9

⁵ See State Water Board Decisions 681, 1022, 1149, 1209, 1263, 1325, 1352, 1363, 1451, D-1494, and D-1595 and Water Right Order 77-10.

finding was that there was no water available for appropriation and was already being put to beneficial use. ⁶ In a fourth decision denying a permit application, the State Water Board based its decision on a finding that, despite the diversion there was no surface water movement, leading for a conclusion that the applicant was not appropriating any flow from a stream, but was only appropriating percolating groundwater outside the State Water Board's permitting authority. (*See* State Water Board Decision D-915.) Thus, the determinative factors reflect the case law. Since the portion of water that would have contributed to the natural flow of stream is considered part of the stream, a diverter who seeks to appropriate developed water using a tunnel, boring, or other artificial method to capture flow below the surface seeks to appropriate water subject to the permitting authority of the State Water Board. Insofar as the person diverts the natural flow of a stream, the diverter has the burden to demonstrate that the appropriation will not injure prior rights.

From a hydrologic perspective, a person who appropriates developed water from an existing spring will always divert some natural flow. (Pers. Communication, Natalie Stork.) It is therefore highly unlikely, if not impossible, that a person would appropriate *only* developed water. In a fully appropriated stream system, appropriators of developed water would still impact prior rights. Even if water remains available for appropriation, since an appropriator of developed water would still divert natural flow that is subject to prior rights, in times of shortage the appropriator must still cease diverting based on priority of right in order to avoid harming prior rights. A diverter of developed water from a spring that forms or is tributary to a stream therefore must apply for a permit in order to assure the appropriation will not deplete the natural flow of the stream to the detriment of prior rights.

IV. Equitable Estoppel in the *Del Rosa* Judgment

The *Del Rosa* Judgment determined that, as a result of the investment by California Consolidated Water Company (CCWC) in developing the springs at the headwaters of Strawberry Creek and in conveying that water, "it would be inequitable" to enjoin CCWC from using "all of the water now flowing and hereinafter developed and flowing from said springs tributary to said Strawberry Creek." (*Del Rosa Mutual Water Company v. D.J. Carpenter, et al.*, No. 31798, San Bernardino County Superior Court, October 31, 1931 (*Del Rosa* Judgement), p.

10

-

⁶ See State Water Board Decisions 802, 986, and 1246

8.) Equity is a body of principles focusing on "natural law," fairness, impartiality, and fair dealing. Equitable remedies apply when there is no legal remedy (legal remedies are usually monetary compensation). Equitable remedies include orders from courts such as injunctions and restraining orders. Equitable estoppel, a common equitable doctrine, provides that a person may not deny the existence of a state of facts if that person intentionally led another to believe a particular circumstance to be true and that person reasonably relied on that circumstance to his or her detriment. (Cal. Evid. Code § 623; see City of Goleta v. Superior Court (2006) 40 Cal.4th 270, 279.) In matters involving title to property, the culpability of the party seeking to deny the existence of the state of facts must be of sufficient dimension that supporting that party's denial of such state of facts would result in an actual or constructive fraud. (City of Long Beach v. Mansell (1970) 3 Cal.3d 462, 491.) Equitable estoppel has been recognized as a basis for recognizing a claim of title in a right to property. Equitable estoppel has been recognized where a person, in good faith and reasonable reliance on the representation of another, expended significant money and labor developing a spring or constructing diversion works. (Neasham v. Yonkin (1919) 39 Cal.App. 464, 465-566; Stepp v. Williams (1921) 52 Cal.App. 237, 254-255.)

V. The Definition of "Spring Water" as Relevant to Nestlé

Arrowhead Spring Water meets the definition of "spring water" in FDA regulations. Nestlé has recently been sued in the United States District Court in Connecticut for allegedly mislabeling Poland Spring Water, another of its products. The lawsuit alleges that Poland Spring Water does not meet the FDA's definition of "spring water" and is instead "ground water." Due to the significant public controversy of this litigation, a discussion of the FDA regulations defining "spring water" is appropriate for guidance in determining whether the FDA's definition of "spring water" is relevant for water right purposes; in particular, whether classifying water drawn from the Arrowhead springs as "spring water" has any relevance to determining whether that water is "percolating groundwater" as relevant to California water rights law.

"Spring water," as defined in the FDA regulations, is a class of "bottled water," distinct from "mineral water," "artesian water," "distilled water," "purified water," and "well water." (60 Fed. Reg. 57076 (Nov. 13, 1995).) Specifically, "spring water" is:

11

⁷ http://fortune.com/2017/08/17/nestle-poland-spring-water-lawsuit/

The name of water derived from an underground formation from which water flows naturally to the surface of the earth may be "spring water." Spring water shall be collected only at the spring or through a bore hole tapping the underground formation feeding the spring. There shall be a natural force causing the water to flow to the surface through a natural orifice. The location of the spring shall be identified. Spring water collected with the use of an external force shall be from the same underground stratum as the spring, as shown by a measurable hydraulic connection using a hydrogeologically valid method between the bore hole and the natural spring, and shall have all the physical properties, before treatment, and be of the same composition and quality, as the water that flows naturally to the surface of the earth. If spring water is collected with the use of an external force, water must continue to flow naturally to the surface of the earth through the spring's natural orifice. Plants shall demonstrate, on request, to appropriate regulatory officials, using a hydrogeologically valid method, that an appropriate hydraulic connection exists between the natural orifice of the spring and the bore hole.

(21 CFR § 165.110, subd. (a)(vi) (1995).)

To qualify as "spring water" under the regulations, water collected must flow naturally from an "underground formation" to the surface. Spring water may be collected at the surface or below the surface using a bore hole. If a bore hole is used there must be a measurable hydraulic connection, demonstrated by using a "hydrogeologically valid method," between a bore hole and a natural spring. (60 Fed. Reg. 57093 (Nov. 13, 1995).) Collection by "external force" generally refers to extraction through pumping. (*Id.* at 57094.) Though considered an issue associated with extraction with external forces, "Water that has not traveled the same course as the water feeding the spring, and, thus, that does not have the same characteristics as water from the spring, cannot be labeled as 'spring water." (*Id.*)

MEMORANDUM

TO: Victor Vasquez, Tomas Eggers, Roberto Cervantes, Julé Rizzardo,

Mayumi Okamoto, Yvonne West

FROM: Kenneth Petruzzelli

Attorney IV

Office of Enforcement

DATE: November 20, 2020

SUBJECT: Nestlé Waters North America Report of Investigation

I. INTRODUCTION

Enforcement staff for the Division of Water Rights (Division) have requested legal guidance from the Office of Enforcement on the following issues:

- 1. Can a riparian owner appropriate water for riparian uses?
- 2. What rights, if any did the stipulated judgment in *Del Rosa Mutual Water Company v. D.J. Carpenter, et al.*, No. 31798, San Bernardino County Superior Court, October 31, 1931, recognize among the parties?
- 3. What is the legal standard for evaluating waste or unreasonable use or unreasonable method of use or unreasonable method of diversion?
- 4. What are the State Water Board's duties under the public trust doctrine with respect to water diverted and used under existing rights that do not require a permit or license issued by the Board?
- 5. What is the State Water Board's water right permitting authority for developed water from springs?

This memorandum supplements a prior memorandum from the Office of Enforcement, dated September 22, 2017. (see Office of Enforcement, Nestlé Waters North America Report of Investigation (September 22, 2017).)

II. A RIPARIAN OWNER CANNOT APPROPRIATE WATER FOR RIPARIAN USES

California operates under the so-called dual system of water rights which recognizes both the appropriation and the riparian doctrines. (*People v. Shirokow* (1980) 26 Cal.3d 301, 307.) The riparian doctrine confers upon the owner of land contiguous to a watercourse the right to the reasonable and beneficial use of water on the riparian owner's land. (*Ibid.*) A riparian right extends to the natural and usual flow of all the water, except where the quantity has been diminished by other riparian owners' reasonable use. (*Lux v. Haggin* (1884) 69 Cal. 255, 390.) A riparian 'owns' a usufructory

right — a right of reasonable use of water on that owner's riparian land when the water is needed. (*Rancho Santa Margarita v. Vail* (1938) 11 Cal.2d 501, 555.) A riparian right is limited to natural flow and thus does not extend to the seasonal storage of water for later beneficial use. (*Moore v. California Oregon Power Co.* (1943) 22 Cal.2d 725, 731; *City of Lodi v. East Bay Municipal Utility Dist.* (1936) 7 Cal.2d 316, 335; *Seneca Consol. Gold Mines Co. v. Great Western Power Co.* (1930) 209 Cal. 206, 215-17.) The extent of lands having riparian status is determined by three criteria: (1) the land is contiguous to or abuts the stream; (2) the parcel is the smallest parcel held under one title in the chain of title leading from issuance of a patent by the United States to the current owner; and (3) the parcel is within the watershed of the stream. (*Id.* at 528–529.) A patent from the United States government transferred title from the date of patent and, relating back, became operative as of the date of the inception of the right to such land, including the riparian right, cutting off all subsequent claims of others, whether to lands or to any of the incidents thereof. (*Pabst v. Finmand* (1922) 190 Cal. 124, 131; *see also* Hutchins, The California Law of Water Rights (1956), p. 56.)

An "appropriation," by comparison, is "any taking of water for other than riparian or overlying uses." (City of Pasadena v. City of Alhambra (1949) 33 Cal.2d 908, 925.) Prior to the December 1914 effective date of the Water Commission Act (Stats. 1913, ch. 586, p. 1012), there were two ways to establish a right to appropriate water from a California watercourse. (Millview County Water Dist. v. State Water Resources Control Bd. (2014) 229 Cal. App. 4th 879, 891, as modified on denial of reh'g (Oct. 14, 2014)) The first method, dating to statehood, required diverting water and applying it to a beneficial use. (Id. [citing N.C. & S.C. Co. v. Kidd (1869) 37 Cal. 282, 311-312].) Once a would-be diverter took some act manifesting intent to appropriate water, the diverter established a claim to the volume of water reasonably necessary to serve the purpose for which the diversion was sought. (Id.) If the diverter acted with due diligence to achieve the intended diversion, in a reasonable time, and used the diverted water for a beneficial purpose, the diverter perfected and had priority over any later established claim. (Id. [citing Haight v. Costanich (1920) 184 Cal. 426, 431–433].) The second method became available with the passage of Civil Code sections 1415–1421 in 1872. (Id.) A person intending to establish a claim of appropriation was required to post a notice at the intended point of diversion and to record a copy of the notice with the county. (Id. at 890-891 [citing Cal. Civ. Code, § 1415].) The claim became entitled to priority upon commencement of the diversion. (Id. at 891 [citing Cal. Civ. Code, §§ 1416–1418].) Under both types of claims, the right to appropriate was limited to the amount of water the diverter put to beneficial use; not the amount claimed or diverted.

(*Id.* [citing Hufford v. Dye (1912) 162 Cal. 147, 153; Duckworth v. Watsonville W. etc. Co. (1910) 158 Cal. 206, 210–211].) Thus, a riparian owner seeking to acquire a right to appropriate water before 1914, was required to establish the diversion of water for non-riparian beneficial use, as well as the quantity of water so used. (*Crane v. Stevinson* (1936) 5 Cal.2d 387, 398.) A riparian owner therefore may not "appropriate" water for riparian use, because the taking of water, by definition, would not constitute an appropriation.

According to Nestlé, David Noble Smith, in 1865, filed a possessory claim to the lands where the Arrowhead Hotel was later located and subsequently recorded a patent from the United States in 1882. (Maguire, Pearce & Storey, PLLC. (2016b). NWNA Response to Arrowhead Water Rights Inquiry [Memorandum to Natalie Stork, Division staff]. July 11, 2016, p. 2; Pioneer Title Insurance and Trust Company. (1930). [Letter and attachments addressed to O'Melveny, Tuller & Meyers, Attorneys], p. 21.) In 1887, Smith's successor in interest filed a notice of appropriation for waters flowing in Strawberry Creek. (Maguire, Pearce & Storey, PLLC. (2016b). NWNA Response to Arrowhead Water Rights Inquiry [Memorandum to Natalie Stork, Division staff]. July 11, 2016, p. 2.) The amended notice, filed November 13, 1887, claims to appropriate up to "Seventy two [sic] inches measured under a four inch pressure" for "domestic and irrigating purposes" on "lands belonging to said Arrowhead Hot Springs Hotel Company..." (Pioneer Title Insurance and Trust Company. (1930). [Letter and attachments addressed to O'Melveny, Tuller & Meyers, Attorneys], pp. 25-26.) However, Enforcement staff have indicated that the notice only expresses intent to apply water to riparian beneficial use, as lands the Arrowhead Hot Springs Hotel Company owned were riparian to East Twin Creek and Strawberry Creek. Regardless, an appropriative right is based on applying water to beneficial use, not on a claim, and the earliest nonriparian beneficial use of water Enforcement staff have identified not occur until 1909. Furthermore, an 1894 California Supreme Court case, involving allegations that the Arrowhead Hot Springs Hotel Company's exercise of a riparian right created a nuisance for a downstream appropriator, described the Arrowhead Hot Springs Hotel Company's lands as riparian to East Twin Creek "from time immemorial." (Conrad v. Arrowhead Hot Springs Hotel Company (1894) 103 Cal. 399, 400.) It recognized the Arrowhead Hot Springs Hotel Company's riparian right, and described the exercise of that right in detail, but mentioned no appropriative right. (*Id.* at 400-401.) Furthermore, the court's holding, that the plaintiff could not enjoin the Arrowhead Hot Springs Hotel Company from discharging its tailwater, sewage, "filth," and refuse, was based on the plaintiff's junior priority as an appropriator. (Id. at pp. 402-403.) Had the Arrowhead Hot Springs Hotel

Company simultaneously appropriated water the facts of the case, and subsequent reasoning and holding, would have been different.

III. THE DEL ROSA JUDGEMENT RECOGNIZED, BUT DID NOT CONFER WATER RIGHTS

A. Summary of the *Del Rosa* Judgment.

Nestlé Waters North America (Nestlé) has cited the judgment in *Del Rosa Mutual Water Company v. D.J. Carpenter, et al.*, No. 31798, San Bernardino County Superior Court, October 31, 1931, approving a settlement between defendants Arrowhead Springs Corporation Ltd. (ASC), California Consolidated Water Company (CCWC), and the plaintiff Del Rosa Mutual Water Company (Del Rosa) as a basis for its rights. (*See* Attachment 1 - *Del Rosa Mutual Water Company v. D.J. Carpenter, et al.*, No. 31798, San Bernardino County Superior Court, October 31, 1931¹.) The issue was whether ASC and CCWC were diverting water from Strawberry Creek, a portion of East Twin Creek, which Del Rosa Mutual Water Company (Del Rosa) had a right to divert. Nestlé is a corporate successor in interest to CCWC. According to the judgment, Del Rosa fully appropriated the flow of East Twin Creek and its tributaries remaining after ASC applied water on lands it owned.² (*Id.*, pp. 2-3.)

ASC traced its water right claims to David Noble Smith, who as described in the judgment, in 1865 filed a possessory claim to the lands where the Arrowhead Hotel was

¹ The *Del Rosa* Judgment has been included with multiple submissions, by Nestlé and others, but for convenience is attached to this memorandum separately. (Maguire, Pearce & Storey, PLLC. (2016a). Chain of Title for Arrowhead Water Rights and SUP [Transmittal to Natalie Stork, Division staff]. April 21, 2016, pp. 9-23.) ² Enforcement staff have indicated these lands were likely riparian. The *Del Rosa* Judgment says little else about Del Rosa's water rights. According to Nestlé, however, Del Rosa's water rights date from 1876 and perhaps earlier. (Maguire, Pearce & Storey, PLLC. (2016b). NWNA Response to Arrowhead Water Rights Inquiry [Memorandum to Natalie Stork, Division staff. July 11, 2016, p. 5.) The first diversion ditch used by Del Rosa's predecessor had an estimated capacity of 60-70 miners' inches. (Id.) Del Rosa's predecessor built two more diversion ditches farther up the canyon in the 1880's. (Id.) The Kansas City Real Estate Investment Corp. built the second diversion ditch after purchasing the prior water rights and then, in 1890-1891, acquired a tract of land south of the Arrowhead Hotel that it later subdivided into 10-acre lots. (Id.) The deed for each lot included water rights for East Twin Creek and the pipelines diverting water from East Twin Creek. (Id.) The water right owners formed the Del Rosa Water Company in 1901 and conveyed all their rights in water, water distribution, and easements to the Del Rosa Water Company. In 1922, the Del Rosa Water Company became the Del Rosa Mutual Water Company. (Id.) Today, the East San Bernardino County Water District and the City of San Bernardino own most of Del Rosa's stock. (Id.)

located and recorded a subsequent patent from the United States in 1882. (*Id.*, pp. 4-5.) The judgment indicates the lands were riparian to East Twin Creek, which includes "Strawberry Creek and Canyon." (*Id.*, p. 10.) By 1931, ASC had operated a resort and hotel "for at least 50 years." ASC diverted water, adversely to Del Rosa, from East Twin Creek and its tributaries above Del Rosa's point of diversion "for use in said hotel, cottages, bungalows, and outbuildings for domestic purposes and for baths, swimming pools and other purposes in connection therewith and for irrigation of said Arrowhead Springs property." (*Id.*, p. 6.) For "more than five years" before Del Rosa filed its complaint, ASC had taken and diverted water from East Twin Creek and its tributaries, also above Del Rosa's point of diversion, for use in steam baths in Waterman Canyon.⁴ (*Id.*) It also diverted and used water for bottling and shipped that water to sell outside the watershed (*Id.*, p. 7.)

The judgment then recognizes that ASC had rights as "such riparian owner and as appropriator and by prescription." (*Ibid.*) Importantly, the judgment recognizes that ASC's rights are limited by subdivision (i) of the judgment's order, which provides "anywise affect, amend, or otherwise impair any contracts now in existence, or which may be executed as of the date of this judgment, by and between defendant ASC and defendant CCWC, relating to the water of East Twin Creek or any of its tributaries." (*Id* at pp. 7, 13-14.) The judgment's order provided ASC could not take or use the waters of East Twin Creek or its tributaries on lands not riparian to East Twin Creek except as provided in the judgment. The judgment further provided ASC owned the rights for the following:

- 1. To take water from East Twin Creek and its tributaries and use that water on its property riparian to East Twin Creek, to the extent the water is or may be required for any beneficial or riparian use upon said property.
- 2. To use water from East Twin Creek and its tributaries, up to five (5) miner's inches, measured under a four-inch pressure, in its steam cave baths and for domestic purposes in Waterman Canyon during the period

³ "...all of the lands in this paragraph are contiguous, and except such portions thereof as lie outside of the watershed of East Twin Creek, are bordering on and have access to, and are riparian to, said East Twin Creek, and all of said lands are now the property of defendant, Arrowhead Springs Corporation, Ltd., and all that portion of said lands which lie within the watershed of said East Twin Creek, and all of the said lands are now the property of defendant, Arrowhead Springs Corporation…" (*Id.*, pp. 4-5.)

- from November 1 to May 1, each year, although it could not reduce flows at Del Rosa's intake below 10 miners inches.
- 3. Subject to subdivision (i) of the judgment's order, to bottle and ship, out of the East Twin Creek watershed, waters of Penyugal Spring, Granite Spring, and other hot springs tributary to Hot Springs Creek, provided that ASC did not use the water for shipment, irrigation, or otherwise, so as to reduce the flow of the waters of Hot Springs Creek at the point of its confluence with East Twin Creek, below 10 miner's inches, measured under a four-inch pressure.

(*Id.*, pp. 9-10.)

For CCWC, the *Del Rosa* Judgement states that CCWC had developed water at springs tributary to Strawberry Creek that would not have naturally flowed to Del Rosa's point of diversion, diverted the developed spring water, piped the spring water to its transfer station, and then shipped the water to Los Angeles. (Id., p. 7.) The judgment indicates CCWC and its predecessors had engaged in this activity for "more than five years" prior to the commencement of the action resulting in the *Del Rosa* Judgment. (Id., p. 2.) The judgment then states that, as a result of CCWC's investment in developing the springs at the headwaters of Strawberry Creek and in conveying that water, "it would be inequitable" to enjoin CCWC from using "all of the water now flowing and hereinafter developed and flowing from said springs tributary to said Strawberry Creek." (Id. at p. 8.) In addition to the water from the springs developed at the headwaters of Strawberry Creek, CCWC would require "all the water now flowing and hereafter developed and flowing from said springs tributary to said Strawberry Creek." (Id., p. 8.) On that basis, the judgment found that CCWC owed Del Rosa \$20,000 compensation for damages.⁵ (*Id.*) Unlike ASC, it does not recognize any basis of right for CCWC's diversion and use of water, such as a riparian, prescriptive, or appropriative right. The judgment also does not quantify CCWC's rights, although it recognizes that CCWC's diversions would not impair any other right of any other party if it complied with subdivision (i) of the of order. *Id.*) The judgement's order further provides that CCWC, subject to subdivision (i) of the order, was the owner of the right for the following:

1. To "take, impound, divert, transport, and carry away" water from "Indian Spring" and "any and all of the water of all springs situated or obtainable in... 'Strawberry Creek and Canyon'" and canyons lateral thereto north of

⁵ Of the \$20,000 in damages Del Rosa sustained due to CCWC's diversions, the *Del Rosa* Judgment ordered CCWC to pay \$15,000 and ASC to pay \$5,000. (*Id.*)

- "a line drawn east and west through Sections 31 and 32, Township 2 North. Range 3 West. S.B.B. & M. coincident with the northerly line or the south half of Section 31 and the south half of Section 32, Township 2 North. Range 3 West, S.B.B. & M."
- To develop, using tunnels or otherwise, all springs or water "situated or obtainable" north of an east-west line through Sections 31 and 32, Township 2 North, Range 3 West, S.B.B.&M.
- 3. To divert all of said water flowing and to flow in and from said springs and/or obtainable in said area into a pipeline and divert and carry away the same, by and through such pipeline, to tanks and reservoirs upon ASC's property.
- 4. To take and transport the same beyond and out of said watershed for bottling or other purposes or uses.

(*Id.*, p. 10.)

B. Contracts Transferring Water Rights from Arrowhead Springs Corporation to California Consolidated Water Company.

According to Nestlé, ASC sold water rights to CCWC through a series of agreements from 1929 through 1931. Nestlé attributes CCWC's rapid expansion and ASC's continued water use to the dispute with Del Rosa that eventually resulted in the *Del Rosa Judgement*. (Maguire, Pearce & Storey, PLLC. (2016b). NWNA Response to Arrowhead Water Rights Inquiry [Memorandum to Natalie Stork, Division staff]. July 11, 2016, p. 2.) Nestlé provided copies of three deeds, dated February 27, 1929, August 6, 1930, and September 26, 1931. These deeds reference other agreements that other parties provided to Enforcement staff.

In December 1928, the California Consumers Corporation, a predecessor of CCWC, agreed to buy ASC's "water department and water business." (Letter Amanda Frye to Victor Vasquez re. Nestle's Report of Investigation INV 8217, Exhibit A-20 (January 12, 2018), p. 2.) The initial contract, known as the "principal agreement" was signed December 4, 1928. An amended contract was signed December 19, 1928. (*Id.*)

CCWC later, in the February 27, 1929 deed, acquired the right to "All subterranean waters in Waterman Canyon (also known as West Twin Creek) and in Strawberry and Cold Water Canyons (also known as East Twin Creek), *belonging to the grantor*, including all waters now being developed and produced by said grantor in said Canyons, together with such additional subterranean waters now belonging to the grantor as the grantee, its successors or assigns, may hereinafter desire to develop,

together with necessary rights of way for pipe lines to convey such water to the reservoirs of the grantee, its successors or assigns, and the right to go upon the premises of the grantor and erect necessary tunnels and collecting basins for the development of such water; excluding, however, all water of the grantor from surface streams and hot springs... Also whatever rights and interest Arrowhead Springs Corporation owns and possesses in water flowing from Indian Springs and in said tunnel located at and adjoining said Springs." (Maguire, Pearce & Storey, PLLC. (2016b). NWNA Response to Arrowhead Water Rights Inquiry [Memorandum to Natalie Stork, Division staff]. July 11, 2016, p. 9 (*emphasis added*).) The deed further states that "The grantor hereby covenants with the grantee, its successors or assigns, that the grantor will warrant to the grantee, its successors or assigns, all the property against every person lawfully claiming the same." (*Id.*) The deed, however, does not indicate what rights ASC claimed. CCWC paid \$10. (*Id.*, p. 8.)

A dispute subsequently arose between ASC and CCWC concerning the water rights ASC sold CCWC in the 1929 deed:

"WHEREAS, since the execution and delivery of said instruments and warranty deed a controversy has arisen between the parties hereto as to the character and amount of water to which Consolidated is entitled under the terms of said contracts and said deed, and as to the character and amount of water which Arrowhead has retained under said contracts and deed, and during such controversy, each of the parties hereto has made such examination of the said premises of Arrowhead and contiguous properties with reference to the amount of flow of water, both surface and subsurface, thereon and thereunder, as to satisfy it in the execution of this agreement" (*Id.* at p. 13.)

To resolve this dispute, ASC and CCWC entered into a second agreement, dated August 6, 1930. (*Id.* at p. 13.) CCWC agreed to build a pipeline to the springs in "upper Strawberry Canyon, twelve thousand three hundred (12,300) feet" (*Id.* at p. 13.) Once complete, CCWC would be entitled to "one-half of all water developed from any and all sources whatever in Strawberry Canyon." ASC reserved the other half for itself. (*Id.*) ASC further granted to CCWC "the sole and exclusive right to develop water from any and all sources whatever, whether surface, subterranean, seepage or otherwise, in Strawberry Canyon, and whether within or without the real properties now owned by [ASC], and hereby grants to [CCWC]... one half of all water developed from any and all sources whatever in Strawberry Canyon, reserving to itself one-half of all water." (*Id.* at p. 14.) This latter grant was without warranty, except that ASC had not transferred or conveyed the same right to any other party. (*Id.*) CCWC would no longer be entitled to any water from Indian Springs, or from tunnels adjoining Indian Springs, or both. (*Id.* at

p. 15.) In consideration of the promises in the August 6, 1930 deed, CCWC released, surrendered and quitclaimed to ASC any right it may have obtained by virtue of prior contracts, warranty deeds, or otherwise, to any surface or subsurface water existing in Cold Water Canyon within or outside the boundaries of the real proper ASC owned. (Letter Amanda Frye to Victor Vasquez re. Nestle's Report of Investigation INV 8217, Exhibit A-21⁶ (January 12, 2018), p. 3.)

Another dispute arose between ASC and CCWC. The parties resolved this dispute through the September 26, 1931 deed.⁷ According to the deed,

[CCWC] has stated to [ASC] that certain false and fraudulent representations were made by [ASC] and/or by certain of its officers, agents, or employes [sic] prior to and at the time of the purchase by [CCWC] of the properties and business as set forth and described in that certain agreement of the 4th of December, 1928, the Amendatory Contract of that same date, the Second Amendatory Contract of the 19th day of December 1928, and the agreement of February 28, 1929, which agreements are recited in the principal agreement of August 6, 1930, and that Consolidated and California Consumers Company, its predecessor, relied upon such false and fraudulent representations in the making of all such agreements and in the purchase of said properties. (*Id.* at p. 20.)

ASC therefore granted to CCWC "any and all right, title, or interest which [ASC] now has to develop water from any and all sources whatever, whether surface, subterranean, seepage, or otherwise, in Strawberry Canyon and the lateral canyons northerly of the said northerly line of the said South half of said Section 31 and 32 above described." (Id. at p. 19 [emphasis added].) ASC further granted to CCWC "all right, title, or interest which it now has or heretofore had in, of the title to, or ownership of, and all water that [CCWC] has heretofore or may hereafter develop from any and all sources whatsoever in Strawberry Canyon and lateral canyons northerly of said northerly line of the south half of said Sections 31 and 32; subject, however, to the right of Arrowhead to have delivered to it by [CCWC] at the point of delivery aforesaid, twenty per cent (20%) of all such water developed and saved by [CCWC]." (Id.) ASC's grants were without warranty except the warranty that ASC had not conveyed or transferred to any other person the same right, or any right, title, or interest in the grants. (Id.)

The September 26, 1931 deed reaffirmed portions of the August 6, 1930 deed, referred to as the "principal agreement." (*Id.* at p. 18.) Importantly, it reaffirmed portions of the August 6, 1930 deed, including those eliminating any entitlement to water from

⁶ This a more legible copy of the same August 6, 1930 deed Nestlé provided.

⁷ To put the September 26, 1931 deed in context, the *Del Rosa* Judgement was issued in October 1931.

Indian Springs, or from tunnels adjoining Indian Springs and foreclosing any right to surface or subsurface water in Cold Water Canyon. (Id. at p. 20.) CCWC would develop, to the fullest reasonable extent, all springs, seepages, and, if reasonably available, other sources of water in Strawberry Canyon north of the northerly line of the south half of Section 31 and Section 32, Township 2 North, Range 3 West, S.B.B. & M. (Id. at p. 19.) CCWC would convey all water it developed and saved through the pipeline. (*Id.*)

Nestlé has stated that it continues to bypass the twenty percent of developed water the September 1931 deed requires for the old Arrowhead Springs Hotel.8 CCWC merged with ASC and Puritas Waters Inc. in 1938 and eventually became what is today Nestlé.9

C. Nestlé's Rights Under the Del Rosa Judgment

Although Nestlé has repeatedly cited the Del Rosa Judgement as its basis of right, holders of adjudicated rights, technically speaking, do not divert under the court adjudication, but divert under rights which the court has determined exist. (State Water Board, Decision 1274 (1967), p. 5.) A court only has jurisdiction to adjudicate rights that are before it. (Central and West Basin Water Replenishment District v. Southern California Water Co. (2003) 109 Cal.App.4th 891, 904, as modified on denial of reh'g (July 9, 2003); Orange County Water Dist. v. City of Colton (1964) 226 Cal.App.2d 642, 649.) A court cannot act on rights that do not exist at the time of adjudication or on rights that may, potentially, exist in the future. A party must satisfy the common law elements that are essential prerequisites to the successful assertion of a water right, whether that right is appropriative, riparian, overlying, or prescriptive. No court can declare such a right when the underlying facts to establish the right do not exist. Thus, the *Del Rosa* Judgement could only adjudicate rights existing among the parties at that time. It could not, for example, create a pre-1914 appropriative right if none previously existed. Since all appropriative rights, whether in groundwater or surface water, are based on the amount put to beneficial use, no rights adjudicated under the Del Rosa

BERNARDINO: San Manuel tribe buys Arrowhead Springs Hotel," The Press-Enterprise (May 20, 2016).)

⁸ The Campus Crusade for Christ purchased the Arrowhead Springs Hotel in 1962. In 2014, the San Manuel Band of Mission Indians purchased the hotel. ("SAN

⁹ "Arrowhead and Puritas Waters Inc." appears to have been established in anticipation of the merger with CCWC and the "Arrowhead" water rights CCWC held. The "Arrowhead" in "Arrowhead and Puritas" does not refer to the Arrowhead Springs Corporation in the *Del Rosa Judgement*, but instead to the Arrowhead water rights. The Arrowhead Springs Corporation eventually became what is today the Arrowhead Springs Hotel.

Judgement could have exceeded the amount put to beneficial use as of that time. (*see supra; see also Katz v. Wakinshaw* (1902) 141 Cal. 116, 135.) Furthermore, since the State Water Board has had exclusive jurisdiction to authorize appropriations subject to its permitting authority since 1914, the court similarly could not authorize any appropriative right. (*People v. Shirokow* (1980) 26 Cal.3d 301, 312 n. 15.) The judgment states that enjoining CCWC's diversions would have been inequitable, but equitable doctrines such as laches or estoppel cannot create a water right. (*People v. Shirokow* (1980) 26 Cal.3d 301, 311-312, fn. 14; *see also* State Water Board, Order WR 2006-0001, p. 16.) CCWC paid damages to Del Rosa. (Attachment 1, p. 8.) However, nothing indicates the payment of those damages operated as a transfer of any right. ¹⁰

The *Del Rosa* Judgment allows CCWC to take water, but does not "anywise affect, amend, or otherwise impair any contracts now in existence, or which may be executed as of the date of this judgment, by and between defendant ASC and defendant CCWC, relating to the water of East Twin Creek or any of its tributaries." (*Id.*, pp. 13-14.) Since the *Del Rosa* Judgement does not recognize any independent basis of right, and could not create a right, whatever rights the judgment attributed to CCWC were based solely on its contracts with ASC. In the September 26, 1931 deed, ASC granted to CCWC "all right, title, or interest *which it now has* or heretofore had." (Maguire, Pearce & Storey, PLLC. (2016b). NWNA Response to Arrowhead Water Rights Inquiry [Memorandum to Natalie Stork, Division staff]. July 11, 2016, p. 19 [*emphasis added*].) As ASC had no known appropriative right authorized by the State Water Board, the only rights it could have granted to CCWC were pre-1914 appropriative rights for water flowing in natural channels that it already had and rights for surplus percolating waters it had already appropriated. Of the rights the *Del Rosa* Judgment recognizes, the right "to bottle and ship, out of the East Twin Creek

Although stating enjoining CCWC from diverting and using water would be inequitable, the *Del Rosa* Judgment does not specifically consider the elements of equitable estoppel — (1) actual reliance on the defendant's representations by the plaintiff in delaying the institution of legal proceedings; (2) some representation or statement of the defendant, inducing delay, in addition to a mere promise to pay or to settle; (3) the presence of fraud, concealment, or deception on the part of the defendant or the plaintiff's failure to take some appropriate action in reliance on the defendant's promises; (4) the plaintiff's exercise of due diligence in the protection of its rights; and (5) communication of the defendant's representations to the plaintiff who was justified in relying on them. (Williston on Contracts § 79:48 (4th ed.).) However, the judgment, as a stipulated settlement, could have achieved results that would not have otherwise occurred through the technical application of water right law and without fully adjudicating all facts and issues.

watershed, waters of Penyugal Spring, Granite Spring, and other hot springs tributary to Hot Springs Creek" most directly corresponds to the water bottling business CCWC purchased.

IV. NESTLÉ CANNOT HAVE POST-1914 APPROPRIATIVE SURFACE WATER RIGHTS BASED ON PRESCRIPTION,

A. The Law of Prescription.

Prescriptive rights have been described as the "parasites of water rights," because the only way to obtain such rights is to take water rights away from someone else. (*People v. Shirokow* (1980) 26 Cal.3d 301, 307.) Prescriptive rights are not acquired by the taking of surplus or excess water. (*City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 1241.) Instead, an appropriative taking of water which is not surplus may ripen into a prescriptive right where the use is actual, open and notorious, hostile and adverse to the original owner, continuous and uninterrupted for five years, and under claim of right. (*Id.* at 1241; see also Brewer v. Murphy (2008) 161 Cal.App.4th 928, 938.) Perfecting a prescriptive right has generally occurred through adjudication in response to a complaint seeking injunctive relief and a judgment to quiet title. (*Brewer v. Murphy, supra* 161 Cal.App.4th at 933-934.)

A prescriptive right extends only to the quantity put to beneficial use. (*Moore v. California Oregon Power Co.* (1943) 22 Cal.2d 725, 737.) To gain a right to the water the diverter must beneficially use that water. (*Id.*) The quantity beneficially used measures the extent of the right. (*Id.*) Prescriptive rights also extend no further than the actual use. (*Id.* at 736.) Since the prescriptive right is limited by the extent of the use which conferred the title, the place of use cannot be changed if doing so would interfere with the rights of others. (*Id.*)

The seminal case on the modern law of prescription, *People v. Shirokow*, recognized that since the adoption of the Water Commission Act in 1913, the Water Code's comprehensive scheme for granting appropriative rights by the State Water Board precludes acquiring prescriptive rights against the State, as would occur when a person seeks to appropriate surplus water. (*Shirokow*, *supra* 26 Cal.3d at 304; *see also* Water Code¹¹ § 1225.) The Water Code therefore lacks a provision for establishing a water right by prescription and further provides that the procedure established by statute is the exclusive means of acquiring a right to use water by appropriation. (*Shirokow*, *supra* 26 Cal.3d at 309-310; Water Code § 1225.) Today, a non-riparian diverter

12

¹¹ All references in this memorandum to the "Water Code" refer to the California Water Code.

asserting rights to previously unappropriated water based on prescription without first obtaining a permit from the State Water Board would commit a trespass against the State within meaning of Water Code § 1052, with the result that the State Water Board could order the diverter to cease and desist from diverting and using water and impose administrative civil liability. (*Shirokow, supra* 26 Cal.3d at 309-310; Water Code §§ 1052, 1831.)

Shirokow did not reach the issue of whether and under what circumstances prescriptive rights to water may be perfected as between private parties. (Shirokow, supra 26 Cal.3d at 312 n15.) No court since Shirokow has directly addressed the issue, although at least one court decision has acknowledged that a common law rule allowing a lower riparian owner to acquire a prescriptive right against an upper riparian under certain circumstances still applies between riparian owners. (Brewer, supra 161 Cal.App.4th at 937 n. 5.) Courts have also recognized prescriptive rights perfected before 1914. (Brewer, supra 161 Cal.App.4th at 937 n5.) Finally, the California Supreme Court has indicated that a prescriptive right may ripen from a wrongful taking of groundwater. (Id.)

The State Water Board has acknowledged that *Shirokow* "left open the possibility that the use of water that does not violate division 2 of the Water Code may ripen into a prescriptive right in accordance with the common law." (State Water Board, Water Right Order 99-01 (1999), p. 16.) In Water Right Order 99-01, the Board acknowledged that *Shirokow* had not reached the issue of prescription occurring between private parties. The Board further explained that a party attempting to perfect a water right by prescription would still need to apply for a permit. (*Id.*, p. 10.) The date of priority would be the date the party asserting the prescriptive right files an application. (*Id.*)

B. Prescription in the *Del Rosa* Judgment

While the *Del Rosa* Judgment recognizes that ASC could collectively exercise its rights as "riparian owner and as appropriator and by prescription." The judgment does not indicate when prescription occurred, or which portions of its rights are based on prescription. Neither does it quantify the portion of ASC's rights based on prescription. Still, it recognizes that ASC met each element of prescription. ¹² According to the judgement, ASC and the cross-complainants took and diverted water from East Twin Creek and its tributaries, above the Del Rosa's point of appropriation and diversion, for

13

_

¹² The *Del Judgment* does not explicitly address prescription's elements, potentially because the judgment was a stipulated settlement. Regardless, the lack of detail makes understanding the exact nature of ASC's prescriptive right challenging.

use in its steam cave baths in Waterman Canyon. (Attachment 1, p. 6.) The judgment further states that ASC and parties in the litigation, not including CCWC, took and diverted water from Penyugal Spring, Granite Spring, and other hot springs, all located in Hot Springs Canyon on the Arrowhead Springs property and tributary to Hot Springs Creek, for bottling and shipping outside the East Twin Creek watershed. (Attachment 1, pp. 6-7.) The judgment describes these diversions as adverse to Del Rosa and occurring for at least five years before the litigation. (*Id.*) The *Del Rosa* Judgment does not specifically say that ASC's adverse diversions were open and notorious, but it describes ASC's hotel and pleasure resort, steam caves, and spring water bottling, and acknowledges that ASC was famous for these things. (*Id.* at pp. 6-7.)

The *Del Rosa* Judgment, in stark contrast, does not recognize that CCWC has rights by prescription. The judgment states that CCWC and its predecessors in interest had, "for more than five years prior to the commencement of [the action resulting in the *Del Rosa* Judgment], diverted into reservoirs and tanks and have diverted and taken and transported to Los Angeles and other places for bottling and other commercial uses, water from said watershed adversely to [Del Rosa Mutual Water Company], and to other defendants, except [ASC]." However, CCWC only started diverting water following the February 27, 1929 deed. The reference to predecessors in interest likely refers to ASC. Since prescription was not available after 1914, any prescriptive right that ASC had would have been no more than the amount of water it put to beneficial use, in excess of its other rights, and for the required five-year period, before 1914. Regardless, the judgment does not otherwise indicate that CCWC met the elements of prescription.

The contrast between the extensive discussion of ASC's rights, and recognition of those rights, and absence of any recognition of CCWC's basis or right is especially notable considering the *Del Rosa* Judgment was a stipulated judgment negotiated by

_

¹³ The judgment states that ASC had operated the Arrowhead Springs hotel for at least "fifty years last past" and "adversely" took and diverted water from East Twin Creek and its tributaries, above Del Rosa's point of appropriation and diversion, for use in the hotel, cottages, bungalows, and outbuildings for domestic purposes and for baths, swimming pools, and other related purposes, and for irrigating the Arrowhead Springs property. (Attachment 1, p. 6.) Enforcement staff have indicated these uses were likely riparian. It is unclear how ASC's riparian diversions for these uses could have met the adverse use element of prescription by invading Del Rosa's right, since ASC was merely exercising its superior riparian right. To the extent these and other facts related to prescription are unclear, it is important to understand that the *Del Rosa* Judgment is a stipulated judgment and records related to the judgment are not available.

the parties. The parties were clearly aware of prescription. They recognized it as a basis for ASC's rights and discussed it extensively. Yet the parties did not recognize that CCWC had a basis of right. Had the parties stipulated that CCWC had a basis of right, they would have said so.

V. THE STATE WATER BOARD HAS A SEVEN-FACTOR TEST FOR DETERMINING WHETHER WASTE OR UNREASONABLE USE IS OCCURRING

Article X, section 2 of the California Constitution and section 100 of the California Water Code, both provide that the right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and that such right does not and shall not extend to the waste or unreasonable use or unreasonable method of diversion of water.¹⁴

The State Water Board has the authority to prevent the misuse of water, regardless of the basis under which the right is held. (*Cal. Farm Bureau Federation v. St. Water Res. Control Bd.* (2011) 51 Cal.4th 421, 429, *as modified* (Apr. 20, 2011).) Under Water Code section 275, the State Water Board shall take all appropriate proceedings or actions to prevent the misuse of water. There is no property right in the unreasonable use of water and no taking when the State Water Board applies the prohibition on waste and unreasonable use to a water right holder. (*In re Waters of Long Valley Stream System* (1979) 25 Cal.3d 339, 354; *Joslin v. Marin Mun. Water Dist.* (1967) 67 Cal.2d 132, 145.)

A reasonable use inquiry must consider "statewide considerations of transcendent importance." (*Id.* at 140.) "Since what occurs is development of a standard of reasonableness on the facts of the case it should be described as a making of law for the particular case," such as in the case-by-case determination of the standard of reasonable care in tort law. (*Cal. Trout, Inc. v. St. Water Res. Control Bd.* (1989) 207 Cal.App.3d 585, 624.) What constitutes unreasonable water use in an individual case depends upon the circumstances presented and varies as the current situation changes. (*Imperial Irrigation Dist. v. St. Water Res. Control Bd.* (1986) 186 Cal.App.3d 1160, 1166.) Methods of use once considered reasonable can become unreasonable

15

¹⁴ Under regulations implementing Article X, section 2 of the California Constitution and Water Code section 100, any waste, unreasonable use, unreasonable method of use, or unreasonable method of diverting of water is collectively referred to as a "misuse of water" or "misuse." (23 Cal. Code Regs. §855, subd. (b).)

due to their deleterious effects. (*U.S. v. St. Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 130.)

The State Water Board has previously applied a series of factors as guidance in determining whether a misuse of water is occurring. The factors are: 1) other potential beneficial uses for conserved water; 2) whether the excess water serves a reasonable and beneficial purpose; 3) the amount of water reasonably required for current use; 4) the availability of a physical plan or solution; 5) the amount and reasonableness of the cost of saving water; 6) whether the required methods of saving water are conventional and reasonable rather than extraordinary; and 7) the probable benefits of water savings. (State Water Board, Decision 1600 (June 21, 1984), pp. 24-29; State Water Board, Order WR 2012-0004 (February 7, 2012), p. 6.) Not all factors apply or apply equally in every case. (State Water Board, Order WR 2012-0004 (February 7, 2012), p. 6.)

VI. THE PUBLIC TRUST DOCTRINE APPLIES TO ALL APPROPRIATIONS BEFORE AND AFTER 1914

The State Water Board has continuing authority to supervise the exercise of pre1914 water rights under the public trust doctrine and under Water Code section 275,
which implements California Constitution Article X, section 2. (See in re Water of Hallett
Creek Stream System (1988) 44 Cal.3d 448, 472 note 16; see also State Water Board,
Order WR 95-04 (1995), p. 21.) Under the public trust doctrine, the State retains
supervisory control over navigable waters and the lands beneath those waters, as well
as non-navigable waters that support a fishery. (National Audubon Society v. Superior
Court (1983) 33 Cal.3d 419, 447.) The purpose of the public trust is to protect
navigation, fishing, recreation, fish and wildlife habitat and aesthetics. (Id. at 436.) No
person may acquire a vested right to appropriate water in a manner harmful to interests
protected by the public trust unless if the public interest in the diversion outweighs the
harm to public trust values. (Id. at 445-447.) The State Water Board may reconsider
past water allocations, whether made before or after 1914, when fulfilling its duty of
continuing supervision over the taking and use of appropriated water under the public
trust doctrine. (Id. at 447.)

VII. THE STATE WATER BOARD IS NOT BOUND BY THE DEL ROSA JUDGEMENT

Nestlé has asserted, in its response to the Report of Investigation, that the *Del Rosa* Judgement should be considered binding on the State Water Board. Although not binding, the judgment should nonetheless receive appropriate weight.

Under the doctrine of res judicata parties to an action are precluded from relitigating a cause of action litigated by them or their privies if that cause of action has been finally determined by a court of competent jurisdiction, or from litigating any issue necessarily decided in such litigation as to the parties or their privies if it is involved in a subsequent lawsuit on a different cause of action. (*Teitelbaum Furs, Inc. v. Dominion Ins. Co.* (1962) 58 Cal.2d 601, 604.) Collateral estoppel bars re-litigating an issue if three requirements are met. First, the issue must have been necessarily decided in the previous proceeding and identical to the subsequent proceeding. (*City and County of San Francisco v. Padilla* (1972) 23 Cal.App.3d 388, 397 [citations omitted]. Second, there must exist a final judgment on the merits. (*Ibid.*) Third, the party to be estopped must have been a party or person in privity in the prior proceeding. (*Ibid.*)

Making private litigation binding on the State Water Board would undermine the statutory procedures for appropriation of water in California. Since 1914, the exclusive means to appropriate water in California is by obtaining a permit through the State Water Board. (*People v. Shirokow* (1980) 26 Cal.3d 301, 308; *Environmental Defense Fund, Inc. v. East Bay Mun. Utility Dist.* (1980) 26 Cal.3d 183, 195; see Water Code § 1225.) The Legislature enacted a comprehensive statutory scheme for the appropriation of water and delegated to the State Water Board broad authority to control and condition water use in the public interest. (*Imperial Irrigation Dist. v. State Water Resources Control Bd.* (1986) 186 Cal.App.3d 1160, 1168 [citations omitted]) The Board must have authority of its own to determine the status of a water body for the purpose of finding whether diversions require a permit or not. Thus, the State Water Board retains jurisdiction to make its own findings in carrying out its duties under the Water Code, particularly when addressing the scope of the Board's regulatory control over water diversions.

The establishment of an appropriative right for diversion and use of surface water or water from a subterranean stream, where not authorized under a pre-1914 right, is not subject to a courts' original concurrent jurisdiction. Rather, the Board has exclusive jurisdiction to authorize the appropriation. (*People v. Shirokow* (1980) 26 Cal.3d 301, 312 n. 15.) Furthermore, the Legislature expressly vests authority in the Board to determine if any person is unlawfully diverting water. (*Young v. State Water Resources Control Bd.* (2013) 219 Cal.App.4th 397, 406, *as modified (Sept. 20, 2013)*.) To determine whether a diversion or use of water is unauthorized, the Board necessarily must determine whether the diversion or use that the diverter claims is authorized by riparian or pre–1914 appropriative rights. (*Id.*) Thus, even where a right has been previously adjudicated in court, the Board must have jurisdiction to resolve allegations

of unauthorized diversion or use by complainants who were not parties to the prior litigation and who, like the Board, are not bound by res judicata.

The State Water Board and the courts have original concurrent jurisdiction over many water-resource issues, including disputes involving the use of water under permitted water rights. (*Environmental Defense Fund, Inc. v. East Bay Mun. Utility Dist.* (1980) 26 Cal.3d 183, 201-200.) Regardless, even when the courts and the State Water Board have concurrent jurisdiction, judicial action does not deprive the Board of jurisdiction or bind the Board to judgments to which it was not a party. In water right cases, a party need not exhaust administrative remedies before going to court. (*Elmore v. Imperial Irrigation Dist.* (1984) 159 Cal.App.3d 185, 192 [citing *National Audubon Society v. Superior Court,* (1983) 33 Cal.3d 419, 449]). The court's judgment is not res judicata in a later administrative proceeding. (See *In re Waters of Long Valley Creek System* (1979) 25 Cal.3d 339, 359-60.) Similarly, a Board decision does not bind the court, although the court should consider and give weight to the Board's findings. (*Elmore v. Imperial Irrigation Dist., supra,* 159 Cal.App.3d 185, 199.)

Concurrent jurisdiction does require the State Water Board to exercise its independent authority as applied to matters that have already been addressed by the courts. To the extent the State Water Board has discretion in setting priorities or deciding which cases to prosecute, it may choose to avoid dealing with circumstances the courts appear to have resolved in a workable fashion, even if the Board might have reached a different result. And where the State Water Board addresses an issue that has already been addressed by the courts, it will give the appropriate weight to a court's findings. As noted above, judgments and adjudications merely adjudicate existing rights among adverse parties. They do not create rights.

VIII. STATE WATER BOARD PERMITTING AUTHORITY FOR DEVELOPED WATER

Additional guidance has been requested regarding the State Water Board's permitting authority for developed water. The September 22, 2017 memorandum states that, "A diverter who develops water by capturing or channeling previously uncaptured water has a right to the increased flow." (OE Memorandum (September 22, 2017), p. 17.) The memorandum's legal analysis and was based on case law pre-dating the Water Commission Act. However, the Board has issued numerous permits for applications to appropriate water from developed springs, including springs using tunnels and boreholes for diversion. (*See generally,* State Water Board Decisions 681, 932, 1022, 1149, 1209, 1263, 1325, 1352, 1363, 1451, 1482, 1494, and 1595, and

Water Right Order 77-10.) It has denied permit applications when the proposed place of use would have been within the same parcel as the spring (Decision 802) or if the spring flows were already fully appropriated. (Decision 1157.) It has also denied applications to appropriate water when the applicant only would have diverted percolating groundwater. (Decisions 915, 986.) Finally, it has recognized its permitting authority for springs, including developed springs, in enforcement orders as recently as 2019. (State Water Board, Order WR 2019-0149.) Board decisions and orders issued since 1950 are each discussed below.¹⁵

The State Water Board permitting decisions discussed below are consistent with the common law. A spring is "[w]ater rising to the surface of the earth from below, and either flowing away in the form of a small stream or standing as a pool or small lake." (Wolfskill v. Smith (1907) 5 Cal.App. 175, 181.) A spring that flows off an owner's land is subject to appropriation regardless of whether the water flows to the surface naturally or by artificial means, such as by boring a hole in the ground. (*Ibid.*; *State v. Hansen* (1961) 189 Cal.App.2d 604, 610.) A person who augments the natural flow of a stream may appropriate the augmented flow only if the appropriation would not injure prior rights attached to the stream. (Roberts v. Crafts (1903) 141 Cal. 20, 27; L. Mini Estate Co. v. Walsh (1935) 4 Cal.2d 249, 254; Vineland Irrigation Dist. v. Azusa Irrigation Co. (1899) 126 Cal. 486, 495; Cohen v. La Canada Land & Water Co. (1904) 142 Cal. 437, 439-440; In the Matter of the Declaration of Fully Appropriated Stream Systems in California (1998) Order WR 98-08, p. 16.) However, California law presumes that a spring tributary to a stream is part of the stream and is therefore subject to the dual doctrines of riparian rights and prior appropriation. (Gutierrez v. Wege (1905) 145 Cal. 730, 734.) Even if the effect of diversion from a surface water body, subterranean stream, or spring is to increase the amount of hydrologically interconnected groundwater flowing into the surface water body, subterranean stream, or spring, the diversion is still subject to the Board's water right permitting and licensing authority and subject to the prohibition against unauthorized diversion or use of water under section 1052 of the Water Code. (In the Matter of Draft Cease and Desist Order and Civil Liability Complaint against G. Scott Fahey and Sugar Pine Spring Water, L.P. (2019) Order 2019-0149, pp. 75-76; see Decisions 681, 932, 1022, 1149, 1209, 1263, 1325, 1352, 1363, 1451, 1482, 1494, and 1595.) If evidence shows a well near a stream is

¹⁵ Administrative agencies may designate agency decisions as precedent. (Cal. Gov. Code, § 11425.60, subd. (b).) The State Water Board has determined that only its decisions or orders adopted at public meetings are precedential. (State Water Board, Order WR 96-01 (1996), p. 17, fn. 11.)

directly connected to the stream, the diverter has the burden of proving that the well's development did not interfere with the stream's flow. (*Larsen v. Apollonio* (1936) 5 Cal.2d 440, 444.)

A. Water Right Decision 681

In Water Right Decision 681 (D-681), the State Water Board approved an application to appropriate developed water from a spring tributary to Dart Canyon Creek by means of a shored tunnel "extending 20 to 50 feet into a water bearing spring area." (State Water Board, Water Right Decision 681 (1950).) D-681 discusses at length whether any of the water may have reached Dart Canyon Creek, because much of the water infiltrated back into the ground at the applicant's point of diversion. (Id. at p. 4.) This was a significant factor in determining that water was available for appropriation and that the protestants would not be harmed by the appropriation. There is no discussion of whether the spring drew percolating groundwater or subterranean stream flow. However, since the spring was tributary to Dart Canyon Creek, water from the spring would have flowed in a known and definite channel.

B. Water Right Decision 802

In Water Right Decision 802 (D-802), the State Water Board denied an application to appropriate water from a spring, although the "spring" was actually water developed using a tunnel. (State Water Board, Decision 802 (1954).) The decision describes the point of diversion as both a spring and a tunnel.

The State Water Board denied the application, because in California a riparian right attaches to a valid mining claim prior to patent from the United States. (Id. at 7.) Since a riparian right attached to the spring, the right was already being fully exercised, and the full yield of the spring was already being put to beneficial use, there was no water available for appropriation. (Id. at p. 11.) The decision states that flow issuing from the spring or tunnel was lost by evapotranspiration in the immediate vicinity and therefore could not materially contribute to the Colorado River. (Id. at 9.)

C. Water Right Decision 915

In Water Right Decision 915 (D-915), the State Water Board concluded it lacked permitting authority and therefore declined to issue a permit for an application to appropriate water from a spring. (State Water Board, Decision 915 (1958), p. 6.) The diversion works consisted of spring boxes and conveyed the water by gravity using pipelines. (*Id.* at 2.) The decision also states that the springs were already developed using "short tunnels" into a hillside. (*Id.* at 4.) The applicants sought to increase the

production of the spring and appropriate the increased production. (*Id.*) The Staff field investigation obtained little information regarding the production of the springs. (*Id.*) Staff observed no "movement" of surface water in a ditch in the immediate vicinity of the springs. (*Id.*)

The State Water Board denied the application on the basis that the water the applicants sought to appropriate, the portion to be developed, was percolating groundwater.

D. Water Right Decision 932

In Water Right Decision 932, the State Water Board approved an application to appropriate water from a former mining tunnel. (State Water Board, Decision 932 (1959).) The tunnel intercepted water "along a fault" in a mountain. (*Id.* at p. 3.)

E. Water Right Decision 986

In Water Right Decision 986 (D-986), the State Water Board denied an application of Santa Barbara County Water Agency to appropriate water from the Cachuma Project's Tecolote Tunnel. (State Water Board, Decision 986 (1960).) The Cachuma Project, whose principal features are the Cachuma Dam and Cachuma Reservoir, is located in the Santa Ynez River Basin and operated by the U.S. Bureau of Reclamation (Reclamation) under Permit 11308 and 11310. Another feature of the project, the Tecolote Tunnel, conveys water from the Cachuma Reservoir to the coastal area to supply the City of Santa Barbara and nearby suburbs and agriculture lands. (*Id.* at p. 2.) Substantial inflows of subterranean water substantially complicated and hampered construction of the tunnel in the 1950's. (*Id.* at pp. 2-3.) D-986 is the only water right decision to discuss *Wolfskill v. Smith* (1907) 5 Cal.App. 175.

The project applicant, Santa Barbara County Water Agency, sought to appropriate water developed in the tunnel that was surplus to the Cachuma Project water. (*Id.* at p. 1.) Santa Barbara County Water Agency asserted that the water developed in the tunnel fell within the State Water Board's permitting authority, because the water outside the tunnel was surface water within the meaning of Water Code section 1200. (*Id.* at p. 4.) If not otherwise diverted, intercepted, or put to beneficial use would, the water outside the tunnel, due to the gradient, would have normally flowed to Glen Anne Creek and eventually the Pacific Ocean. (*Id.*) Absent evidence to the contrary, the State Water Board presumed the water intercepted by the tunnel was percolating groundwater. (*Id.*) In addressing whether the water flowing from the tunnel, outside, was subject to its permitting authority, the State Water Board stated:

When a tunnel develops percolating water that emerges from the tunnel as a stream, the status of the water and its possible availability as unappropriated surface water are dependent to a large extent on actions of the operator of the tunnel. If the stream of developed percolating water emerging from the tunnel is permanently or temporarily abandoned, then and thereby it becomes unappropriated and subject to the jurisdiction of the Board to the same extent as other surface water similarly situated. See De Wolfskill v. Smith, 5 Cal. App. 175, 89 Pac. 1001 (1907), which related to the appropriation of water under the Civil Code, prior to enactment of the Water Commission Act. But where the percolating water developed in a tunnel is not abandoned, but is directly taken and applied to beneficial use by the person who developed it, the tunnel water is no more subject to the jurisdiction of the Board than is any other percolating water.

Percolating water developed by and flowing from a tunnel is comparable to percolating groundwater pumped to the surface of the ground from a well and awaiting beneficial use, since the only distinction between such a well and the tunnel in question is that the gradient of the tunnel permits the percolating water developed therein to reach the surface outside the tunnel by gravity without the necessity of being pumped. A person installing a well and bringing in percolating water may find that at times some of the water pumped to the surface is not used by him but flows into other water in a surface stream. For as long as this condition continues, the pumped groundwater would be as much subject to the jurisdiction of the Board as the other surface water with which such water had commingled; But once the operator of the pump eliminated seepage and wastage of the pumped groundwater, it would remain pumped percolating water while being used by him and would no longer become surface water subject to the Board's jurisdiction.

Evidence showed that water seeping from the Tecolote Tunnel was diverted and put to beneficial use through contracts with the Bureau of Reclamation. (*Id.* at p. 6.) In addition, "subterranean water" seeping into the Tecolote Tunnel completely commingled with water from Cachuma Reservoir. (*Id.*) Reclamation, at all times, had controlled and never abandoned the water. The State Water Board therefore determined there was no water subject to appropriation within its "jurisdiction" and denied the applications. (*Id.*) Had some of the "subterranean water" seeping into the Tecolote Tunnel flowed by gravity towards Glen Anne Creek and the Pacific Ocean, the water would have been available for appropriation and subject to the State Water Board's permitting authority. Importantly, the Board noted that "[i]if the water developed by Tecolote Tunnel came from a subterranean stream 'flowing through known and definite channels' within the meaning of Section 1200 of the Water Code, the water would be unappropriated and subject to the Board's jurisdiction since no permit has been issued with respect thereto.

The applicants, however, never contended or offered evidence that the water the Tecolote Tunnel developed came from a subterranean stream. D-986 also differs from Board decisions on spring diversions, because the Tecolote Tunnel diverted water, upstream, from Cachuma Reservoir, rather than potentially diminishing flows in a downstream channel.

F. Water Right Decision 1022

In Water Right Decision 1022 (D-1022), the State Water Board approved an application to appropriate developed water from a spring, despite a lack of evidence of surface flow prior to development of the spring. (State Water Board, Decision 1022 (1961).) The applicants had developed most of the water in the sources by excavating a shallow hole and driving pipes into the side of a hill to collect water from what was probably seepage through fractured granite. D-1022 describes the spring as ultimately tributary to West Branch Vicente Creek. Before the applicants developed the spring, all spring water had been consumed by vegetation within roughly 100 feet from the spring. The nearest watercourse was an intermittent stream about a quarter mile down a hillside. The State Water Board concluded that water was available for appropriation.

G. Water Right Decision 1149

In Water Right Decision 1149, the State Water Board approved an application to appropriate water from an unnamed spring tributary to Slick Rock Creek in Kern County using a "redwood box" enclosing the spring and then a pipe to the place of use. (State Water Board, Decision 1149 (1963).) If the pipe were not installed, overflow from the spring box would have flowed to Slick Rock Creek. The State determined water was available for appropriation.

H. Water Right Decision 1157

The State Water Board denied an application to appropriate water from a stream emerging from the Saratoga Mining Tunnel. (State Water Board, Decision 1157 (1963).) The Board denied the application, because, based on protests, all water from the stream was already put to beneficial use and therefore unavailable for appropriation.

I. Water Right Decision 1246

In Decision 1246 (D-1246), the State Water Board denied an application to divert water from a spring using a spring box and a then a pipeline to deliver that water to its place of use. (State Water Board, Decision 1246 (1966).) The applicant already held a license and the spring box produced no water surplus to that necessary to satisfy that license. As a result, there was no unappropriated water for the application.

J. Water Right Decision 1263

In Water Right Decision 1263 (D-1263), the State Water Board approved an application to appropriate water from a spring located in an abandoned mining tunnel and conveyed using a pipe "from the mouth" of the tunnel. (State Water Board, Decision 1263 (1966).) The decision does not address whether the spring is tributary to any stream or whether the spring draws percolating groundwater or water flowing in a subterranean stream.

K. Water Right Decision 1325

In Water Right Decision 1325 (D-1325), the State Water Board approved an application to appropriate water from a mine tunnel tributary to Sweetland Creek thence the Yuba River. (State Water Board, Decision 1325 (1969).) The point of diversion was in a "cut" leading to the mine entrance.

The State Water Board only partially approved the application, because water was only available for appropriation part of the year. Since the decision describes the flow from the tunnel as tributary to Sweetland Creek, the decision indicates water flowed to Sweetland Creek. D-1325 does not address whether the water diverted from the tunnel was percolating groundwater or water flowing in a subterranean stream.

L. Water Right Decision 1352

In Water Right Decision 1352 (D-1352), the State Water Board approved an application to appropriate water from an unnamed spring in Trinity County using a spring box and a hose to deliver water to a regulatory tank. (State Water Board, Decision 1352 (1970).) A person protested, claiming he diverted water from a stream supplied by the spring. However, evidence showed that possibly except during periods of heavy rain, there was no hydraulic continuity between the applicants' source of supply and the unnamed stream from which the protester diverted. The State Water Board therefore determined water was available for appropriation.

M. Water Right Decision 1363

In Water Right Decision 1363 (D-1363), approved an application to appropriate water emerging from a mining tunnel tributary to St. Helena Creek in Napa County year-round. (State Water Board, Decision 1363 (1970).) A Staff field investigation indicated that flow from the mine tunnel would not reach Lake Berryessa during the summer months, but continuity would possibly exist in winter months. (Id. at p. 2.) D-1363 does not address whether the water diverted from the tunnel was percolating groundwater or water flowing in a subterranean stream.

N. Water Right Order 77-10

In Water Right Order 77-10, the State Water Board approved a temporary urgency permit to appropriate water from a spring the applicant planned to develop. (State Water Board, Water Right Order 77-10 (1977).) The State Water Board issued the temporary urgency permit on the basis that the applicant's total authorized diversion, 1,300 acre-feet, left adequate water available for wildlife. The State Water Board noted that the applicant might be able to divert the water without a spring box.

O. Water Right Decision 1451

In Water Right Decision 1451, the State Water Board issued a permit to appropriate water from a spring. (State Water Board, Decision 1451 (1975).) The applicant planned on pumping seepage from a spring box up into one of the reservoirs. Water was available for appropriation.

P. Water Right Decision 1482

In Water Right Decision 1482 (D-1482), the State Water Board approved an application to appropriate water from improved springs. (State Water Board, Water Right Decision 1482 (1978).) Evidence at the hearing established that water flowed out of the springs into unnamed streams and at times maintained surface continuity with Jamison Creek or Boulder Creek and that this surface flow may have been largely attributed to the installation of a lateral pipe system in the springs. (*Id.* at p. 12.) If the springs had not been improved, much of the water diverted would have continued as this subsurface seepage to Boulder Creek and then the ocean. (*Id.* at pp. 12-13.) Subsurface waters not diverted from the springs would have percolated would through the debris deposits and the upper zones of the underlying rock to emerge in the perennial seepage faces in the Bracken Brae reach of Boulder Creek. (*Id.* at p. 12.)

Q. Water Right Decision 1494

In Water Right Decision 1494 (D-1494), the State Water Board approved an application to appropriate water from a spring. (State Water Board, Decision 1494 (1979).) The applicants developed the spring into a pond and then pumped that water into a pipe for delivery to the place of use. The State Water Board issued the permit based on evidence that water was available for appropriation.

R. Water Right Decision 1595

In Water Right Decision 1595, the State Water Board issued a permit to appropriate water from a spring using a gravity-fed pipeline. (State Water Board, Decision 1595 (1983).) Protestants alleged that the State Water Board lacked

"jurisdiction" over the spring, because it did not contribute to other streams by surface or subsurface means. (Id. at p. 8.) The State Water Board concluded it nonetheless had "jurisdiction," because, even though the spring's channel was poorly pronounced, the flow nonetheless left one parcel for another and, even during low flow periods, would reach a ditch but for extremely porous soils. (Id. at 9.) Testimony also indicated the spring contributed either surface or subterranean flow to the Klamath River. (Id.) Determining it had "jurisdiction" and that water was available for appropriation, the State Water Board approved the permit application.

S. Water Right Order 2019-0149

The State Water Board recently considered the issue of appropriation from an improved spring in Water Right Order 2019-149. (State Water Board, Water Right Order 2019-0149 (2019).) The diverter, citing *City of Los Angeles v. Pomeroy* (hereinafter *Pomeroy*) (1899) 124 Cal. 597, asserted his diversions were not subject to enforcement under Water Code section 1052, because they were developed water and, therefore, presumptively percolating groundwater not subject to the Board's permitting authority. (*Id.* at p. 6.) The Board overruled this argument. First, it recognized that *Pomeroy* did not address diversions from developed spring.

Lastly, Fahey argues that the case *City of Los Angeles v. Pomeroy* (hereinafter *Pomeroy*) (1899) 124 Cal. 597, establishes a presumption under California law that water diverted from a spring is developed water. *Pomeroy* does not address diversions of developed water from springs. Instead, *Pomeroy* describes the concept of an underground stream flowing in known and definite channels, an exception to the general rule concerning percolating groundwater. Fahey cites no case or precedent in support of his argument that water diverted from a spring is developed water, and the State Water Board is unable to identify legal support for this alleged presumption. Accordingly, this order finds that Fahey's argument that a "developed water presumption" should apply to his diversions lacks merit.

(*Id.*, at pp. 6.)

The, later in the order, the Board further explained its permitting authority for diversions from springs.

California law presumes that a spring tributary to a stream is part of the stream and is therefore subject to the dual doctrines of riparian rights and prior appropriation. (E.g., *Gutierrez v. Wege* (*hereinafter Gutierrez*) (1905) 145 Cal. 730, 734.) The Board's permitting and licensing authority over water in a stream is not abrogated or limited by the fact that, in many cases, some of the flow in a stream or from a spring is supported by hydrologically interconnected groundwater. Instead, "[a]II water flowing in any natural channel, excepting so far

as it has been or is applied to useful and beneficial purposes upon, or in so far as it is or may be reasonably needed for useful and beneficial purposes upon lands riparian thereto, or otherwise appropriated, is hereby declared to be public water of the State and subject to appropriation in accordance with the provisions of this code." (Wat. Code, § 1201.) Even if the effect of diversion from a surface water body, subterranean stream, or spring is to increase the amount of hydrologically interconnected groundwater flowing into the surface water body, subterranean stream, or spring, the diversion is still subject to the Board's water right permitting and licensing authority and subject to the prohibition against unauthorized diversion or use of water under section 1052 of the Water Code. (See id., §§ 1052, 1201.)

(*Id.*, at pp. 6, 75-76.) The State Water Board then reiterated that the *Pomeroy* presumption does not apply to springs. (*Id.* at p. 78.) Thus, the party asserting a right has the burden to demonstrate the right's existence and extent. (*Tulare Irr. Dist. v. Lindsay-Strathmore Irr. Dist.* (1935) 3 Cal.2d 489, 535, 547–548; *Crane v. Stevinson* (1936) 5 Cal.2d 387, 398.) Consistent with that burden, if the law presumes that diversions from a spring tributary to a stream are diversions from a stream, then a diverter claiming developed water would have the burden to overcome that presumption.

Even though the respondent claimed the diversions were developed water or percolating groundwater, and were therefore lawful, the State Water Board decided it did not need to rule on the issue, because the respondent had failed to present enough evidence that the diversions were developed water. (*Id.* at p. 77.) The respondent's expert conceded the diversions would diminish surface flows and conceded that no definitive studies had been made to determine reduction ratio of surface water to groundwater. (*Id.*) According to the Prosecution Team's testimony, such studies would require detailed examination of the springs before they were developed, which was impossible with the existing diversion works. (*Id.*) This is an important distinction from the State Water Board's permitting decisions, which included evidence of the hydrology before development.

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA,

IN AND FOR THE COUNTY OF SAN BERNARDING.

DEL ROSA MUTUAL WATER COMPANY.

a corporation.

1 2

B

Plaintiff.

No.31798

JUDGMENT

VS.

D. J. CARPENTER, ISABEL C. TURNER,
J. B. JEFFERS, GEORGE S. MASON,
NATIONAL THRIFT CORPORATION OF
AMERICA, a corporation, JOHN DOE
MCKASON, MARY GLEASON, C. M. CHRIST,
GREAT VIEW WATER COMPANY, NETTIE
D. PHILLIPS, PACIFIC-SOUTHWEST TRUST
& SAVINGS BANK, a corporation,
ARTHUR R. PECK, CARRIE A. PECK,
ELLEN A. MCLAUGHLIN, ARROWHEAD
SPRINGS CORPORATION, a corporation,
ARROWHEAD SPRINGS COMPANY, a corporation, J. N. BAYLIS, CALIFORNIA
CONSOLIDATED WATER COMPANY, a
corporation, CALIFORNIA CONSUMERS
CORPORATION, a corporation, et al.,

Defendants.

heard before the Court without a jury, a trial by jury having been waived by the respective parties, Messrs. Swing & Wilson and Ralph S. Swing appearing as attorneys for the plaintiff, Messrs. Lawler & Degnan appearing for and as attorneys for defendants, California Consolidated Water Company and California Consumers Company (sued herein as "California Consumers Corporation"), respectively, and Messrs. Gibson, Dunn & Crutcher appearing for and as attorneys for defendants Arrowhead Springs Company and Arrowhead Springs Corporation, Ltd. (sued herein as "Arrowhead Springs Corporation, Ltd. (sued herein as "Arrowhead Springs Corporation, Ltd. (sued herein as "Arrowhead Springs Corporation, and the defendants above mentioned, and this cause being at issue and the parties having entered into a stipulation in writing for the entry of this judgment, and findings of fact and conclusions of law, except as set out and contained in this judgment, having been duly except as set out and contained in this judgment, having been duly

-1-

4 5

F

7

9 10

12

1.5

. .

18

21

22

23

26 27

25

28 29

30 31

32

maived by the respective parties, and the Court being fully advised in the premises, and good and sufficient cause appearing therefor;

NOW, THEREFORE, in accordance with said stipulation,
IT IS HEREBY ADJUDGED:

- 1. That plaintiff is, and defendants California Consolidated Water Company, Arrowhead Springs Corporation, Ltd. (sued herein as "Arrowhead Springs Corporation"), Arrowhead Springs Company and California Consumers Company (sued herein as "California Consumers Corporations duly organized and existing and duly qualified and authorized to do and transact business within the State of California.
- 2. That neither the California Consumers Company nor the Arrowhead Springs Company have at this time any right, title or interest in or to any of the water or in or to the right to take, divert, use or transport any of the water referred to in the complaint in said action or in this judgment.
- That East Twin Creek is a natural stream of water situated in the County of San Bernardino, State of California, and has its source in the San Bernardino Mountains lying and being to the north of the City of San Bernardino. That all of the waters of what is known as East Twin Creek watershed, except as diminished by use by defendant arrowhead Springs Corporation, Ltd., and its predeoessors in interest and by use by defendant California Consolidated Water Company and its predecessors in interest, and except as the waters thereof are lost by evaporation, transpiration, seepage and other natural causes, drain into and become a part of said East Twin Creek above the point of plaintiff's diversion hereinafter referred to. That the principal tributaries of said East Twin Creek are Strawberry Creek, Coldwater Creek, Hot Springs Creek, and other named and unnamed tributaries and springs, all of which flow and percolate into and, except as diminished as aforesaid, become a part of said East Twin Creek; also waters seep and percolate into said

East Twin Creek and its tributaries from the adjacent hills and lands draining into seid East Twin Creek and its various tributaries and the canyons draining into said stream. That Strawberry Creek and its tributaries are the easterly branch of East Twin Creek above the junction of Strawberry Creek and Coldwater Creek; Coldwater Creek and its tributaries are the westerly branch of East Twin Creek above the junction of Strawberry Creek and Coldwater Creek; Hot Springs Creek and its tributaries are the lowest branch of East Twin Creek. That at the time of the appropriation, as hereinafter set forth, of the waters of said East Twin Creek by plaintiff's predecessors in interest all of the waters of said Mast Twin Creek and of its tributaries, except that part thereof then being used by defendant Arrowhead Springs Corporation, Ltd. and its predecessors on lands in Section 7, Township 1 North, Range 3 West, S.B.B.& M., and on lands in Jections 11 and 12, Township 1 North, Range 4 West, S.B.B.& M., above the point of plaintiff's intake, and that part lost by evaporation, transpiration, seepage and other natural causes, flowed in a southerly direction in a natural stream to and into the San Bernardino Valley, and at the time of the appropriation of the right to use such water by plaintiff's predecessors in interest none of said water had been appropriated, diverted, or used except by said Arrowhead Springs Corporation, Ltd. and its said predecessors for use upon said lands above plaintiff's point of appropriation.

That subsequent to the time when defendant, Arrowhead Springs Corporation, Ltd., or its predecessors in interest, acquired title to all the lands described in paragraph 4 below, except the north half of the northwest quarter (Mg of NWg) of Section 12, Township 1 North, Range 4 West, S.B.B.& M., plaintiff or its predecessors in interest entered into and upon said East Twin Creek at about one mile north of the mouth of said East Twin Creek and appropriated and diverted all of the water of said stream flowing at said point and thereafter, except as hereunder provided, diverted all of the

-3-

31 32

1

2

3

4

5

7

0

:0

.0

13

. 4

: 1

6

-e

19

35

91

22

23

24

85

36

27

28

29

30

water of said stream flowing at said point into a ditch and conduit and conveyed the same away to nonriparian lands for beneficial uses thereon.

1

1

3

4

5

0

:0

. .

13

. 4

16

. €

. "

15

20

21

22

: 3

-4

: 5

26

27

28

29

30

31

32

That the point on said stream where said appropriation and diversion was so made by plaintiff, or its predecessors in interest, was below the confluence of all of said branches of said East Twin Creek and below where all of the waters of said East Twin Creek watershed converge, except as diminished as aforesaid. That ever since said appropriation and diversion of said stream all of the waters of said stream flowing at said point have been and now are taken and used for irrigation and other beneficial uses and purposes by plaintiff and its predecessors in interest, and by defendants and cross complainants named in paragraph 6 hereof, except as diminished from time to time by the use by defendant arrowhead Springs Corporation, Ltd. and its predecessors in interest an. by natural causes as aforesaid, and except that said California Consolidated Water Company and its predecessors in interest have for more than five years prior to the commencement of this action diverted into reservoirs and tanks and have diverted, taken and transported to Los angeles and other places for bottling purposes and other commercial uses, water from said watershed adversely to said plaintiff, and to all other defendants, except Arrowhead Springs Corporation, Ltd.

4. That in the year 1865 David Noble Smith, predecessor in interest of defendant Arrowhead Springs Corporation, Ltd., settled on the East half of the Southeast quarter and the Southeast quarter of the Northeast quarter of Section Eleven (11) and the Morthwest quarter of the Southwest quarter of Section Twelve (12), Township 1 North, Range 4 West, S.B.B. & M., which lands were then and until 1878 unsurveyed, and thereafter, on the 1st day of February, 1882, patent was issued therefor; that on the 3rd day of April, 1871, pursuant to the Acts of Congress approved July 27, 1866, and March 5, 1871, there was granted to Southern Pacific Railroad Company

of California, predecessor in interest of defendant Arrowhead Springs Corporation, Ltd., all of Section Seven (7), Township 1 North, Range 3 West, S.B.B.& M., and thereafter, on the 1st day of November, 1897, patent was issued therefor (which patent contained no reservation of water rights whatsoever); that on the 3rd day of April, 1871, pursuant to the Acts of Congress approved July 27, 1666, and March 3, 1871, there was granted to Southern Pacific Railroad Company of California, predecessor in interest of defendant Arrowhead Springs Corporation, Ltd., the west half of the southeast quarter (Wig of SEI) and the southwest quarter of the northeast quarter (SW1 of NE1) of Section 11, Township 1 North, Range 4 West, S.B.B.& M., and thereafter, on the ith day of January, 1885, patent was issued therefor (which patent contained no reservation of water rights whatsoever); that on the 3rd day of May, 1877, A.B.Chapman and others, predecessors in interest of the defendant Arrowhead Springs Corporation, Ltd., made application to the United States Land Office to purchase the following described land as timberland:

1

2

4

5

**

3

10

. .

12

13

4

F

6

AH

10

: 0

91

22

: 3

174

...

..6

27

28

29

30

31

32

The northeast quarter of the southwest quarter (NE; of SW1),
the north half of the southeast quarter (Ng of SE1) and
the southeast quarter of the northeast quarter (SE2 of NE1)
of Section 12, Township 1 North, Range 4 West, S.B.B.& W.;
that thereafter, on the 15th day of August, 1889, patent was issued

therefor; that in the year 1880 Thomas B. Elder, predecessor in interest of defendant arrowhead Springs Corporation, Ltd., entered into possession of the south half of the northwest quarter (St of NEt) and the west half of the northeast quarter (Wt of NEt) of Section 12, Township 1 North, Range 4 West, S.B.B.& M., and that thereafter, on the 6th day of October, 1888, patent was issued therefor; that on the 29th day of October, 1891, Herbert J. Royer, predecessor in interest of the defendant, Arrowhead Springs Corporation, Ltd., entered upon the north half of the northwest quarter (Nt of NEt) of Section 12, Township 1 North, Range 4 West, S.B.B. & M., and that thereafter, on the 12th day of November, 1897, patent was issued therefor; that all

of the lands described in this paragraph are contiguous and, except such portions thereof as lie outside of the watershed of East Twin Creek, are bordering on and have access to, and are riparian to, said East Twin Creek, and all of said lands are now the property of defendant, Arrowhead Springs Corporation, Ltd., and all that portion of said lands which lie within the watershed of said East Twin Creek are hereinafter referred to as the Arrowhead Springs property. That the whole of said land is located above plaintiff's point of appropriation and intake.

That said defendant, Arrowhead Springs Corporation, Ltd., is now and it and its predecessors in interest have, for more than fifty (50) years last past, been conducting and operating on said Arrowhead Springs property a health and pleasure resort, consisting of a hotel building, cottages, bungalows and all usual and customary outbuildings, swimming pools, baths and other accessories, which establishment is now, and for many years last past has been, known as "Arrowhead Springs Hotel", and, adversely to the said plaintiff and said defendants and cross-complainants, has taken and diverted water from said East Twin Creek and its tributaries above plaintiff's point of diversion for use in said hotel, cottages, bungalows and outbuildings for domestic purposes and for baths, swimming pools and other purposes in connection therewith and for irrigation of said Arrowhead Springs property, and has also, for more than five (5) years prior to the commencement of this action, taken and diverted water from said East Twin Creek and its tributaries, above plaintiff's point of appropriation and diversion, for use in its steam cave baths situated in Waterman Canyon adversely to the said plaintiff and defendants and cross-complainants named in paragraph 6 hereof, and her also, for more than five (5) years prior to the commencement of this action, used adversely to the said plaintiff and said defendants and cross-complainants, the waters of Penyugal Spring, Granite Spring and other hot springs, all of which are located in Hot Springs Canyon on

-6-

Arrest.

1

2

3

4

5

7

8

9

10

1:

38

13

14

15

.6

: 77

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

said Arrowhead Springs property and are tributary to Bot Springs Creek, which Creek is the lowest branch of East Twin Creek, for the purpose of bottling the same and shipping the same outside of the watershed of East Twin Creek and selling the same in bottles and other containers for human consumption as mineral water, and has the right, except as limited by the provisions of paragraph (i) hereof, as such riperian owner and as appropriator and by prescription to continue so to take and use water from said East Twin Creek and its tributaries and to take and use said water on said Arrowhead Springs property for all beneficial and riparian uses and to whatever extent may be required for such uses and to take and use water from said source for use in its steam cave baths in Waterman Canyon and to take and use water from said Penyugal Spring, Granite Spring and other hot springs and to bottle and ship the same outside of the watershed in East Twin Creek, and to sell the same in bottles and other containers' for human consumption as mineral water.

1

2

3

4

5

F

7

K

9

10

4

12

13

24

15

.6

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

That the defendant, California Consolidated Water Company, now is and it and its predecessors in interest have been engaged in the business of diverting water from East Twin Creek and/or its tributaries into reservoirs and tanks and from thence transporting the same by means of cars and other conveyances to the City of Los Angeles, where said water is bottled for domestic use and used for the manufacture of beverages and other purposes; that said defendant, California Consolidated Water Company, has entered in and upon the springs at the headwaters of said Strawberry Creek and developed the water at said Springs that would not naturally flow to plaintiff's maid point of diversion, and diverted the water of said springs including the water so developed into a pipe line and by means thereof conveyed a part thereof to its said tanks and reservoirs and transported said part thereof from such tanks and reservoirs to Los Angeles where such water has been and is now being used by said defendant in its said business. That said defendant has ex-

pended large sums of money in so developing said springs and conveying said water, and has developed an extensive business dependent entirely upon such supply of water, and it would be inequitable to enjoin said defendant from continuing to so take and use said water; that said defendant requires the use of all the water now flowing and hereafter developed and flowing from said springs tributary to said Strawberry Creek lying north of the north line of the south half of Section 31 and north of the north line of the south half of Section 32, both in Township 2 North, Range 3 West, S.B.B.& M., and, except as limited by the provisions of paragraph (i) hereof, is entitled to take and use said water; that the taking of such water will be injurious to plaintiff's right, but such injury can be compensated in damages and such damage is hereby determined to be and is the sum of twenty thousand dollars (\$20,000.00). That such diversion by defendant, California Consolidated Water Company, will not, subject to the terms of paragraph (i) hereof, impair any right of any other party hereto.

1

2

3

4

5

12

7

8

5

10

12

13

14

15

:€

27

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

Carpenter, Isabel C. Turner, J. B. Jeffers, George S. Mason, L. R.
McKesson and National Thrift Company of America, were at the time of
the commencement of this action and they and their successors in
interest now are the owners of the right to take and use the first
ten (10) inches of the flow of the water of East Twin Creek reaching plaintiff's point of diversion; that said ten inch right is part
of the right appropriated by plaintiff's predecessors in interest;
that all of said ten inches, or fraction thereof, when reaching
plaintiff's point of diversion, has been diverted by plaintiff and
its predecessors in interest into its pipe line and delivered to said
defendants at a diversion box at a point about one mile easterly from
plaintiff's said point of diversion, and said defendants and crosscomplainants are hereby determined to be the owners of said first
ten (10) inches of the flow of said creek reaching plaintiff's point

of diversion and entitled to have said ten (10) inches of water reaching plaintiff's point of diversion delivered to them by plaintiff at the said diversion box, and said plaintiff shall continue to take and divert and deliver the same.

graph 5 above may be injurious to the rights of defendants and cross-complainants, D. J. Carpenter, Isabel C. Turner, J. B. E.C. George S. Mason, L. R. McKesson and National Thrift Company of America, unless said water from said Hot Springs Creek and said East Twin Creek be diverted at a point at or adjacent to the point of confluence of said Hot Springs Creek and East Twin Creek and from thence conveyed into plaintiff's present pipe line, the mortherly terminus of which is plaintiff's diversion box located about one mile northerly from the mouth of said Eas: Twin Creek Canyon, and that said defendants and cross-complainants are entitled to have said ten (10) inches thereof belonging to them so diverted and conveyed and delivered to them by plaintiff at the present diversion box located about one mile easterly from plaintiff's said present point of diversion.

.

5

. 9

. ..

-!

. 6

2

20

-- --

23

24

25

26

27

28

29

30

31

32

IT IS FURTHER ORDERED, ADJUDGED AND DECRESO:

(a) That defendant, Arrowhead Springs Corporation, Ltd., is, subject to the provisions of subdivision (1) hereof, the owner of the right to take water from said East Twin Greek and its tributaries and to use said water upon its said Arrowhead Springs property riperian to East Twin Greek, to the extent that such water is or may be required for any beneficial or riperian use upon said property, and to use said water to the extent of five (5) miner's inches, measured under a four inch pressure, in its steam care baths and for domestic purposes in Waterman Canyon during the period from the first day of November to the 15th day of May of

each year at all times during said period when the taking thereof will not reduce the water flowing at plaintiff's intake below ten (10) inches, and to use said water to the extent of one (1) miner's inch, measured under a four inch pressure, in its steam cave baths and for domestic purposes in Waterman Canyon at all other times, and is also, subject to the provisions of subdivision (1) hereof, the owner of the right to bottle and ship, out of the said East Twin Creek watershed, waters of Penyugal Spring, Granite Spring and other hot aprings tributary to Hot Springs Creek, provided, however, that said defendant, Arrowhead Springs Corporation, Ltd., shall not so use the waters of Hot Springs Creek, for shipment, irrigation or otherwise, as to reduce the flow of the waters of Hot Springs Creek at the point of its confluence with East Twin Creek below ten (10) miner's inches, measured under a four inch pressure, provided further, however, that no part or portion of any of the water of East Twin Creek, or any of its tributaries, except as otherwise herein provided, shall ever be taken to or used upon lands not riparian to maid East Twin Creek.

÷.

15

.0

30

7.

22

23

24

25

26

27

28

29

30

31

pany, is, subject to the provisions of subdivision (i) hereof, the owner of the right to take, impound, divert, transport and carry away mater of that certain spring known as "Indian Spring" and any and all of the water of all springs situated or obtainable in that part of East Twin Creek known as "Strawberry Creek and Canyon" and eanyons lateral therete lying north of a line drawn east and west through Sections 31 and 32, Township 2 North, Hange 3 West, S.B.B. & M., coincident with the northerly line of the south half of Section 51 and the south half of Section 52, Township 2 North, Hange 5 West, S.B.B. & M., and it may enter in and upon that portion of

said Strawberry Creek and Canyon and lateral canyons thereto lying north of said line and develop, by means of tunnels or otherwise, any and all springs or water situated or obtainable from said area north of said line, and may take and divert all of said water flowing and to flow in and from said springs and/or obtainable in said area into a pipe line and divert and carry the same, by and through such pipe line, to tanks and reservoirs upon said Arrowhead Springs property, and may take and transport the same beyond and out of said watershed for bottling or other purposes or uses.

. .

€

.

shell at all times maintain suitable and proper septic and treating tanks upon its lands and shell cause all sewage to pass through such septic and treating tanks and be properly treated before returning the same to or permitting the same to return to or flow into said dast Twin Creek, and said tanks shall be so constructed and located that all water flowing from said septic tanks, not used on the premises, shall return and flow into said East Twin Creek above plaintiff's point of diversion.

Defendant, Arrowhead Springs Corporation, Ltd., shall also cause all water that may be diverted for use by said Arrowhead Springs Corporation, Ltd., not actually consumed in the exercise of the rights hereinbefore decreed to Arrowhead Springs Corporation, Ltd., to return and flow into said East Twin Creek above plaintiff's point of diversion.

- (d) That plaintiff have and recover of and from the defendant, California Consolidated Water Company, the sum of fifteen thousand dollars (\$15,000.00), and from defendant, Arrowhead Springs Corporation, Ltd., the sum of five thousand dollars (\$5,000.00).
- (e) That plaintiff is the owner of the right to have all the water of East Twin Creek and its tributaries which flows to its said intake, subject only to the rights of defendants Arrowhead Springs Corporation, Ltd., California Consolidated Water Company,

and defendants and cross-complainants designated in paragraph 6, as herein set forth.

(f) Plaintiff shall have the right to enter in and upon the lands of the defendant, Arrowhead Springs Corporation, Ltd. and construct a diversion weir and box and submerged dam upon said East Twin Creek at a point three hundred (300) feet northerly of the confluence of Hot Springs Creek and East Twin Creek, and also at the confluence of said streams, and may construct a pipe line or conduit from such point to plaintiff's present diversion box and may take and divert all of the water ordinarily flowing in said East Twin Creek at such diversion point subject only to the rights of defendants arrowhead Springs Corporation, Ltd. and California Consolidated Water Company, and defendants and cross-complainants designated in paragraph 6, as herein set forth. The right of ingress and egress for construction and maintenance of said diversion weir and box, dam and pipe line or conduit shall be exercised in such a manner as to do the least possible damage to land, improvements, plantings and natural trees and shrubbery upon mid arrowhead Springs property, and said pipe line, if constructed, shall be maintained as free from leaks as possible and shall at all times have a depth of cover of at least two feet over the top of the pipe.

(g) Cross-complainants, D. J. Carpenter, Isabel C. Turner, J. E. Mariers, George S. Mason L. R. Makesson and National Thrift Company of America, and their successors in interest, are the owners of the right to take and use the first ten (10) inches of mater, or fraction thereof, reaching the point of diversion referred to in paragraph 5 hereof, and diverted by plaintiff into its pipe line from East Twin Creek and may take and divert said first ten (10) inches of water, or fraction thereof, reaching said point of diversion, from plaintiff's said pipe line at the diversion box now in place and used for such purpose.

-

.

0

- -

. ?

. .

. .

- -

9

20

...

22

23

24

25

26

27

28

29

30

31

32

That plaintiff shall immediately hereafter, at its own expense and cost, undertake and thereafter diligently prosecute the construction of such pipe line and such diversion dams, weirs, and boxes as may be necessary to divert and convey the water to which p_aintiff and/or cross-complainants are entitled hereunder, from Hot Springs Creek and East Twin Creek from a point at or adjacent to the point of confluence of said Hot Springs Creek and East Twin Creek to and into paintiff's present diversion box and pipe line, and said plaintiff shall complete said construction work on or before the lat day of May, 1932, and shall thereafter maintain the same at its own expense, and small thereafter convey through said pipe line and structure at least ten (10) miner's inches of said water of Hot springs Creek and East Twin Creek if that amount be flowing therein from said point at or adjacent to the confluence of Hot Springs Creek and East Twin Creek to and into its present diversion box and pipe line, and convey such ten (10) inches thereof from thence to the point of the present diversion box of plaintiff from which diversion box defendant and crosscomplainants are now taking their said ten (10) inches of said water, it being the intent and purpose hereof that said plaintiff shall deliver the first ten (10) inches of the flow of East Twin Creek at plaintiff's present point of diversion or the first ten (10) inches of water flowing in Hot Springs Creek and East Twin Greek at their point of confluence to defendants and crosscomplainants at the present diversion bor located at a point on plaintiff's pipe line about one mile easterly from plaintiff's present point of diversion.

ċ

7

ċ

-

10

- -

- 2

. 3

.4

.r

. 6

. 5

20

21

22

23

24

25

26

27

28

29

30

31

32

- (h) Each of the parties hereto is perpetually enjoined from taking, using or interfering with the use of the waters of East Twin Creek and its tributaries except as herein decreed.
- (i) This judgment shall not in anywise affect, amend, or otherwise impair any contracts now in existence, or which may be

executed as of the date of this judgment, by and between defendant Arrowhead Springs Corporation, Ltd. and defendant California Consolidated Water Company, relating to the water of East Twin Creek or any of its tributaries.

- (j) That pursuant to said stipulation, this judgment shall be final upon the entry thereof, and not subject to appeal or review in any manner by any of the parties to said excess.
 - (k) Each of the parties hereto shall pay its own costs.

Done in open court this 19th day of October,

J. a. Lacuar

Appendix CSpring 7 Complex Developed Water Calculation

STATE WATER RESOURCES CONTROL BOARD DIVISION OF WATER RIGHTS

Revised Report of Investigation

Nestlé Waters North America Arrowhead Facility, San Bernardino National Forest

SPRING 7 COMPLEX DEVELOPED WATER CALCULATION

In order to estimate the developed portion of water diverted from the Spring 7 Complex, I evaluated data available for diversions from the original infiltration gallery and from the wells installed at the site. I evaluated data from two sources: (1) Groundwater Recordation data transmitted from Doug Headrick of San Bernardino Valley Mutual Water District (SBVMWD), and (2) Table 3 from *FDA Compliance Report: Arrowhead Spring Complex No. 7, San Bernardino National Forest* (information possibly confidential) (The Hydrodynamics Group, 1997) sent by Rita Maguire. The groundwater recordations provide data from 1947 to 2015, but do not distinguish diversions at the "Original" 7A, 7B, and 7C wells installed 1950-1961 from diversions at "7" and the "New" 7A, 7B, and 7C wells installed 1992-1993. I wanted to evaluate these two generations of wells separately to evaluate if more water is diverted from the newer wells. The Hydrodynamics Group (2007) reports diversions from these two generations of wells separately in Table 3. Since Table 3 diversions are only reported from 1947 to 1996 (the report was finalized in 1997), and the Division does not know of any wells installed after this date, groundwater recordation data is used to evaluate diversions from 1997 to 2015.

EVALUATION OF SPRING 7 COMPLEX PRODUCTION DATA

To evaluate the portion of developed water for diversions from the Spring 7 Complex, I determined average annual outflows from the original infiltration gallery and from the two subsequent generations of wells. I also evaluated whether diversions correlate with precipitation. I completed the following steps:

- 1. I assembled a table of annual production volumes from available data. I used Table 3 (The Hydrodynamics Group, 1997) for 1947 to 1996 diversion amounts¹. I used Groundwater Recordations for 1997 to 2015 diversion amounts. These data are displayed in Table 2.
- 2. I added a column and summed all diversions for each year.
- 3. I separated the data into three periods:
 - a. 1947 to 1949 before any wells were installed
 - b. 1950 to 1991 first generation of wells
 - c. 1993 to 2015 second generation of wells
- 4. I used Excel to calculate the average diversions and standard deviation for diversions from each period.
- 5. I screened annual diversion amounts for abnormally low diversions that may be due to operations or facilities changes or maintenance, rather than due to precipitation or other natural factors. I wanted to use unhindered flow through the wells to evaluate developed flow.
 - a. I plotted annual precipitation calculated by the PRISM model for upper Strawberry Canyon² (PRISM Climate Group, Oregon State University, 2004) against the annual diversion total for the Spring 7 Complex (Figure 1). Qualitatively, four points plotted much lower for precipitation v. production than the others. I identified these points as 1972, 1980, 1989, and 2004. There was no clear relationship between precipitation and diversions.

There are discrepancies between Table 3 and groundwater recordations for years 1950-1952, 1972, 1976-1979, 1985-1986, and 1989. The discrepancies total 89 acre-feet over 50 years, or 4% of total reported diversions for those 50 years. This error is acceptable for the purposes of this analysis. Table 3 values were used for 1947-1996 since the table contains breakdowns per point of diversion (POD) and since it is unknown which data source is actually correct.

Data downloaded for 4 kilometer cell including point at latitude 34.2252, longitude -117.2324, also including the Nestlé PODs.

- b. I evaluated the production data using R, a programming environment used primarily for statistical analysis (R Core Team, 2016), and generated a quantile comparison plot to determine which annual production totals (reported under groundwater recordations) were outside of the normal distribution (Figure 2). I did not worry about high production volumes since these likely occurred due to new well installation in 1992-1993 or due to anomalously high precipitation. Two data points fell on the low side of the normal distribution: 1980 and 2004. I repeated the test with the natural log of the production total and 1980, 1989, and 2004 data points fell outside of the normal distribution.
- c. I reviewed the data set and removed the following production data from my analysis:
 - i. 1972 no diversions reported in Table 3 (The Hydrodynamics Group, 1997)³
 - ii. 1980 selected by both qualitative (a) and quantitative (b) tests
 - iii. 1989 selected by both qualitative (a) and quantitative (b) tests
 - iv. 2003 fire occurred; diversions only represent partial year
 - v. 2004 selected by both qualitative (a) and quantitative (b) tests, operations may have resumed midyear
- d. Removing these data before calculating average annual diversions results in higher average diversions that more accurately reflect flow through the wells when diversions are not slowed or stopped due to maintenance or natural events such as fires. This shift in calculated annual average diversions increases the estimated percentage of water that is likely developed.
- 6. The following table summarizes Spring 7 Complex production by period:

Period	Average Annual Production	Standard Deviation	No. of Years	Description
1947-1949	32.50	7.815	3	Infiltration gallery only
1950-1991	41.94	11.93	39	1st generation wells
1993-2014	68	42	21	2nd gen borings only

Table C-1: Spring 7 Complex Production

DISCUSSION

I used original Spring 7 infiltration gallery diversions as a baseline for water subject to the permitting authority of the State Water Board. Since the original spring orifice was destroyed during construction of the infiltration gallery, the amount of natural flow cannot be determined, so flows from this original installation are used as the baseline. The Division only has infiltration gallery diversion data for three years, 1947-1949, before the installation of and diversion from the wells began in 1950. Three years is a very limited data set, but this is the only data available to the Division at this time. Diversions are reported from the infiltration gallery in 1950 and 1985-1987, but diversions were also reported from the wells these years, indicating that the amounts reported for the infiltration gallery do not represent a year's worth of natural flow. I tried to predict possible flow ranges at the infiltration gallery based on precipitation, but I did not have enough data, and there is no clear correlation between precipitation and production (see Figure 1).

Table 1 shows that the newest wells, drilled in 1992 to 1993, are the most productive. The Division does not have any information indicating that any improvements have been made to the wells since

³ 36 AF reported under Well 7C groundwater recordation.

their installation in 1992-1993 other than cleaning after the 2003 fire and regular maintenance. The least productive years were 1947-1949 when all reported diversions occurred at the infiltration gallery.

To estimate the portion of diversions that may be developed water, I compared diversions from the infiltration gallery to diversions from the latest generation of wells. Nestlé staff and representatives said during the inspection that that the infiltration gallery flows when the wells are valved off. Some portion of the water that flowed from the infiltration gallery was likely developed water. However, since the tunnel to the infiltration gallery was constructed at the original spring site, and since the Division does not have any historical measurements of pre-development spring flow, the portion of water that is developed water cannot be determined.

The portion of developed water is generally expressed as a percentage in historical court decisions, likely because surface water and interconnected groundwater flows are driven largely by precipitation and will generally increase or decrease together.

$$\frac{(68-32.5)}{68} = 0.52$$
 \Rightarrow 52% of the annual flow is likely developed water based on the data available

Using a percentage to estimate developed water does not match hydrogeological reality, but it is the most reasonable method of estimation at this time. In reality, the portion of water that is developed will change throughout the year. This is because diverting flow though wells will deplete the fractured rock aquifer more quickly after recharge events than if flow was only diverted through natural springs. If storage is limited, this could result in low flows occurring earlier in the season and could result in shifting flow regimes in Strawberry Creek. Without extensive data collection and analysis, it is not possible to determine how much of the flow is natural or developed at any given time. Therefore, a straight percentage based on annual data is the most reasonable estimate at this time.

REFERENCES

PRISM Climate Group, Oregon State University. (2004). Data Explorer: Time Series Values for Individual Locations. Retrieved from http://prism.oregonstate.edu April 17, 2017.

R Core Team. (2016). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing. URL https://www.R-project.org/.

The Hydrodynamics Group. (1997). FDA Compliance Report: Arrowhead Spring Complex No. 7, San Bernardino National Forest.

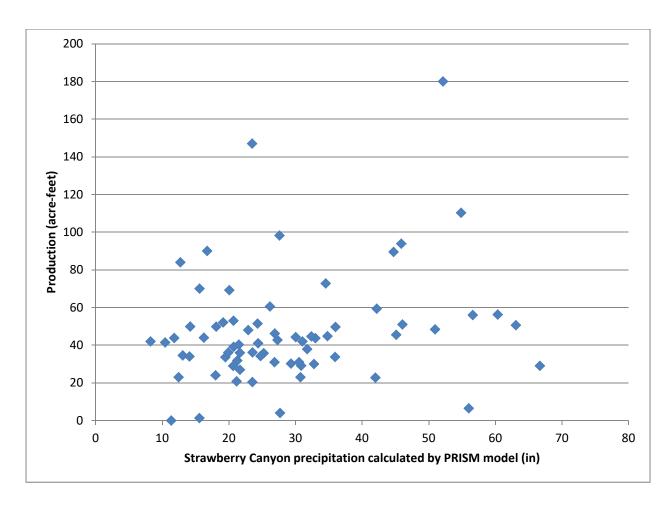


Figure C-1: Precipitation v. Production 1947-2015. Each point represents the precipitation and production data for one calendar year. Production is the amount of water diverted from all springs and wells at the Spring 7 Complex. This graph was used to screen for production values that are abnormally low when precipitation is taken into account. While there is no clear linear relationship between precipitation and production, four points appear lower than most. These four points are located below the 20 AF line.

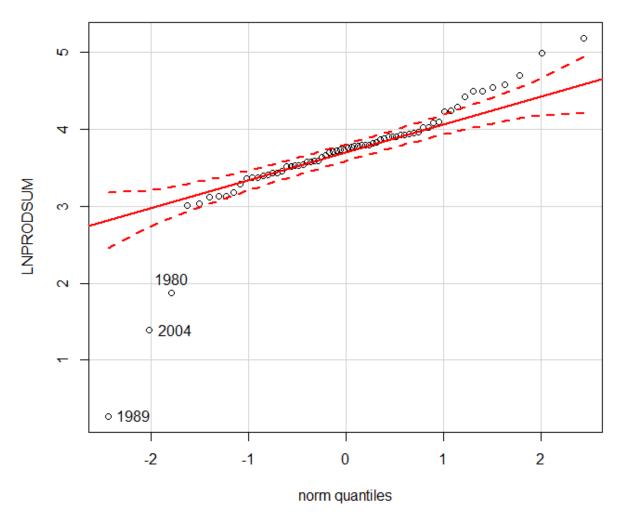


Figure C-2: Quantile Comparison Plot. Each point represents the natural log of the production for one calendar year. Production is the amount of water diverted from all springs and wells at the Spring 7 Complex. This plot, produced in R, graphically represents a normal distribution for the data set (dashed red line) and shows that several points plot outside of the normal distribution. Points above the normal distribution were included in further analysis since these generally represent diversions after the latest well installations and diversions resulting from anomalously high water years. Points below the normal distribution were disregarded from further analysis.

Table C-2: Annual Diversion Data

YEAR	Precip (PRISM)	SPRING NO.7	7	Original 7A	Original 7B	Original 7C	New 7A New 7B New 7C	SUM	Data Source
1947	10.44	41.44						41	(1)
1948	21.67	26.95						27	(1)
1949	30.85	29.12						29	(1)
1950	16.25	18.86		7.51	9.39	8.23		44	(1)
1951	29.33	0.00		13.44	16.80	0.00		30	(1)
1952	42.20	0.00		26.88	32.48	0.00		59	(1)
1953	11.80	0.00		21.34	22.46	0.00		44	(1)
1954	34.81	0.00		21.28	23.52	0.00		45	(1)
1955	21.50	0.00		19.04	21.25	0.00		40	(1)
1956	19.49	0.00		15.68	17.92	0.00		34	(1)
1957	35.95	0.00		15.90	17.83	0.00		34	(1)
1958	34.54	0.00		36.25	36.53	0.00		73	(1)
1959	18.10	0.00		27.31	22.52	0.00		50	(1)
1960	21.27	0.00		19.24	12.61	0.00		32	(1)
1961	13.08	0.00		3.74	3.82	27.00		35	(1)
1962	23.53	0.00		7.21	6.38	6.81		20	(1)
1963	25.24	0.00		0.88	2.67	32.21		36	(1)
1964	21.17	0.00		0.00	0.00	20.81		21	(1)
1965	42.00	0.00		8.03	7.14	7.56		23	(1)
1966	26.89	0.00		35.76	10.45	0.00		46	(1)
1967	36.01	0.00		49.67	0.00	0.00		50	(1)
1968	14.20	0.00		49.88	0.00	0.00		50	(1)
1969	60.36	0.00		56.27	0.00	0.00		56	(1)
1970	27.30	0.00		33.04	9.70	0.00		43	(1)
1971	23.56	0.00		0.00	0.00	36.16		36	(1)
1972*	11.36	ND		ND	ND	ND		0	(1)
1973	32.99	0.00		26.24	13.75	3.72		44	(1)
1974	26.86	0.00		15.40	15.60	0.00		31	(1)
1975	20.72	0.00		15.80	15.90	7.42		39	(1)
1976	24.75	0.00		5.75	1 .72	28.47		34	(1)
1977	30.54	0.00		15.40	15.60	0.00		31	(1)
1978	66.69	0.00		27.04	0.00	2.00		29	(1)
1979	30.04	0.00		19.81	0.00	24.48		44	(1)
1980*	56.01	0.00		1.20	2.00	3.30		7	(1)
1981	19.15	0.00		4.06	18.00	30.04		52	(1)
1982	45.12	0.00		6.60	10.70	28.20		46	(1)
1983	63.09	0.00		44.90	1.30	4.40		51	(1)
1984	20.07	0.00		24.60	0.40	44.20		69	(1)
1985	21.66	7.27		9.90	5.32	13.48		36	(1)
1986	32.39	22.56		9.90	8.29	3.91		45	(1)
1987	26.17	1.24		6.87	6.27	46.16		61	(1)
1988	24.31	0.00		0.00	0.00	51.46		51	(1)
1989*	15.58	0.00		0.00	0.00	1.30		1	(1)
									<u> </u>

YEAR	Precip (PRISM)	SPRING NO.7	7	Original 7A	Original 7B	Original 7C	New 7A	New 7B	New 7C	SUM	Data Source
1990	19.92	0.00		0.00	0.00	36.08				36	(1)
1991	31.76	0.00		0.00	0.00	37.89				38	(1)
1992	50.96	0.00	6.60			32.90	6.10	2.80		48	(1)
1993	54.86	0.00	36.80				36.00	24.10	13.40	110	(1)
1994	27.60	0.00	33.60				29.10	17.20	18.30	98	(1)
1995	45.88	0.00	28.10				24.00	17.90	23.90	94	(1)
1996	44.73	0.00	28.80				26.30	16.80	17.60	90	(1)
1997	23.50	0	49				43	27	28	147	(2)
1998	52.14	0	58				52	32	38	180	(2)
1999	12.72	0	38				23	14	9	84	(2)
2000	22.91	0	18				10	10	10	48	(2)
2001	24.39	0	32				1	7	1	41	(2)
2002	16.75	0	29				26	17	18	90	(2)
2003*	30.75	0	17				1	4	1	23	(2)
2004*	27.69	0	1				1	1	1	4	(2)
2005	46.06	0	18				31	1	1	51	(2)
2006	31.05	0	15				25	1	1	42	(2)
2007	14.09	0	12				21	0	1	34	(2)
2008	32.78	0	10				18	1	1	30	(2)
2009	20.65	0	10				17	1	1	29	(2)
2010	56.61	0	20				33	1	2	56	(2)
2011	20.70	0	19				32	1	1	53	(2)
2012	15.60	0	25				42	1	2	70	(2)
2013	8.24	0	15				25	1	1	42	(2)
2014	18.01	0	8				14	1	1	24	(2)
2015	12.46	0	6				12	4	1	23	(2)

^{*} Data from this year not used for analysis

Sources:

- (1) Table 3 from FDA Compliance Report: Arrowhead Spring Complex No. 7, San Bernardino National Forest for diversions 1947 to 1996 (The Hydrodynamics Group, 1997)
- (2) Groundwater Recordation diversion data submitted to State Water Board and/or SBVMWD for diversions from 1997 to 2015

Appendix D Evidence for Channels

STATE WATER RESOURCES CONTROL BOARD DIVISION OF WATER RIGHTS

Revised Report of Investigation

Nestlé Waters North America Arrowhead Facility, San Bernardino National Forest

Site Visit: June 15, 2016 Photos by: Victor Vasquez

Evidence for Channels

All photos taken by Victor Vasquez June 15, 2016

Spring 7 Complex

Photo 0347 (iPhone 3)

View of Spring 7 Complex from helicopter with channel clearly leading downgradient from site



Spring 1/1A/8

Photo 0363 (iPhone 3)

View from Borehole 1, looking downgradient along channel



Spring 3

Photo 0348 (iPhone 3)

Spring Tunnel 3



Springs 1/1A/2/3/8

Photo 0372 (iPhone 3)

Borehole1 at yellow arrow (top) and Wells 1A/8 immediately below

Spring Tunnel 2 at red arrow (middle)

Spring Tunnel 3 in drainage below purple arrow (bottom)



Springs 1/1A/2/3/8

Photo 0373 (iPhone 3)

Spring Tunnel 2 at red arrow (left)

Spring Tunnel 3 at green arrow (right)

