ATTACHMENTS

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

FIGURES

TABLES

APPENDICES

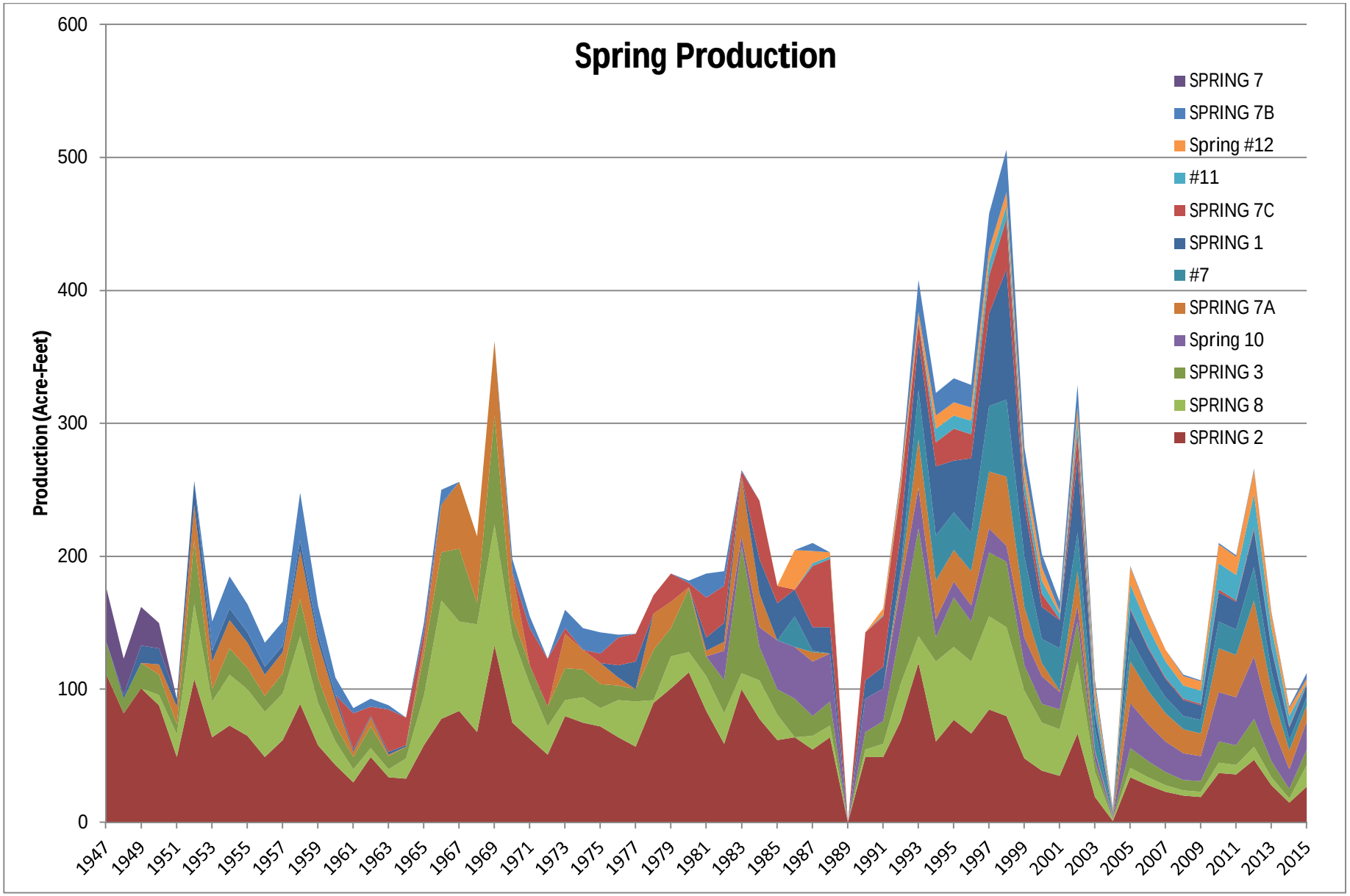


Figure 1 – Spring Production from 1947 to 2014. Springs are ordered from the greatest production for the period (bottom) to the least production (top). Production increases as more spring borings are completed.

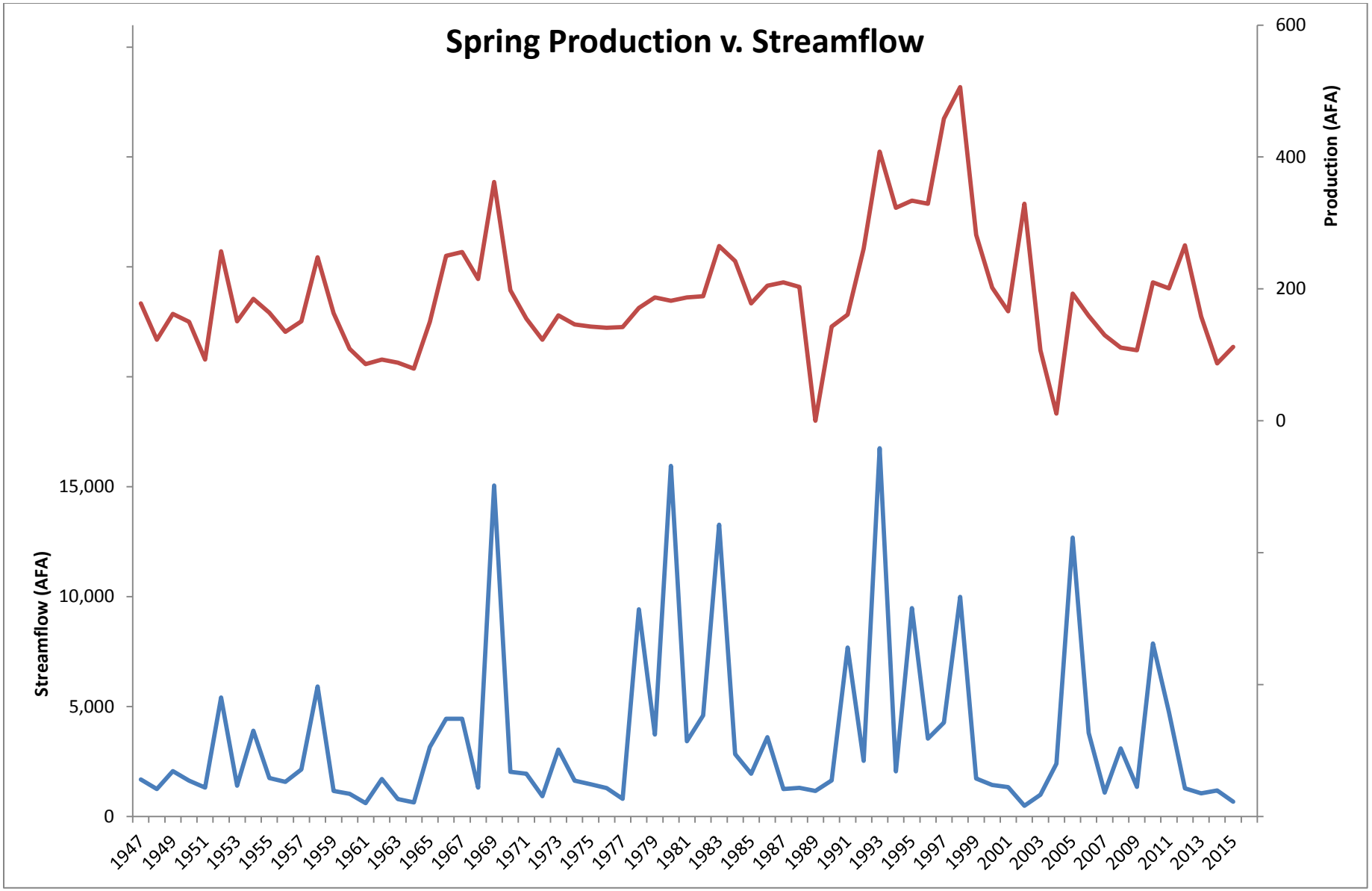
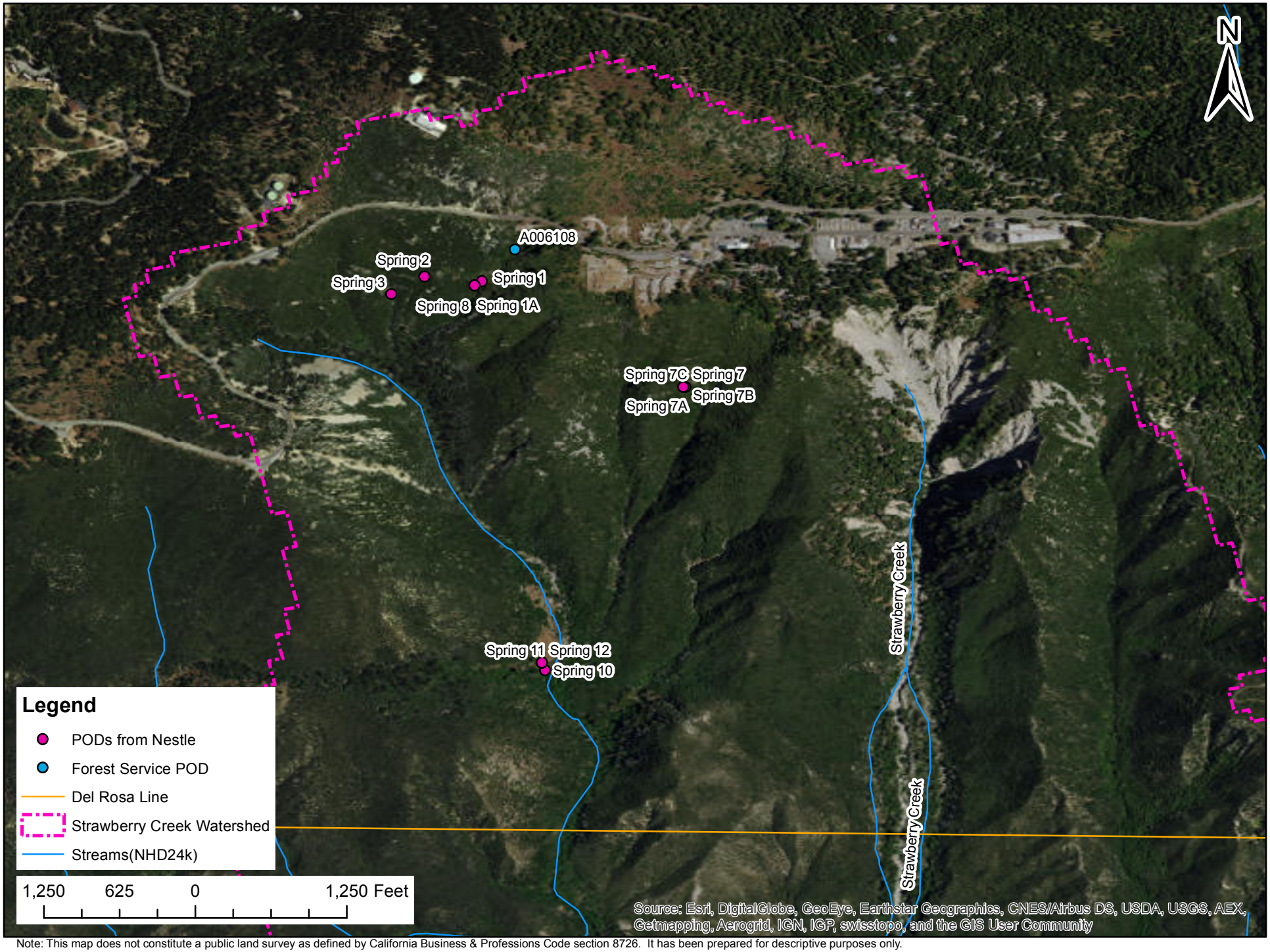


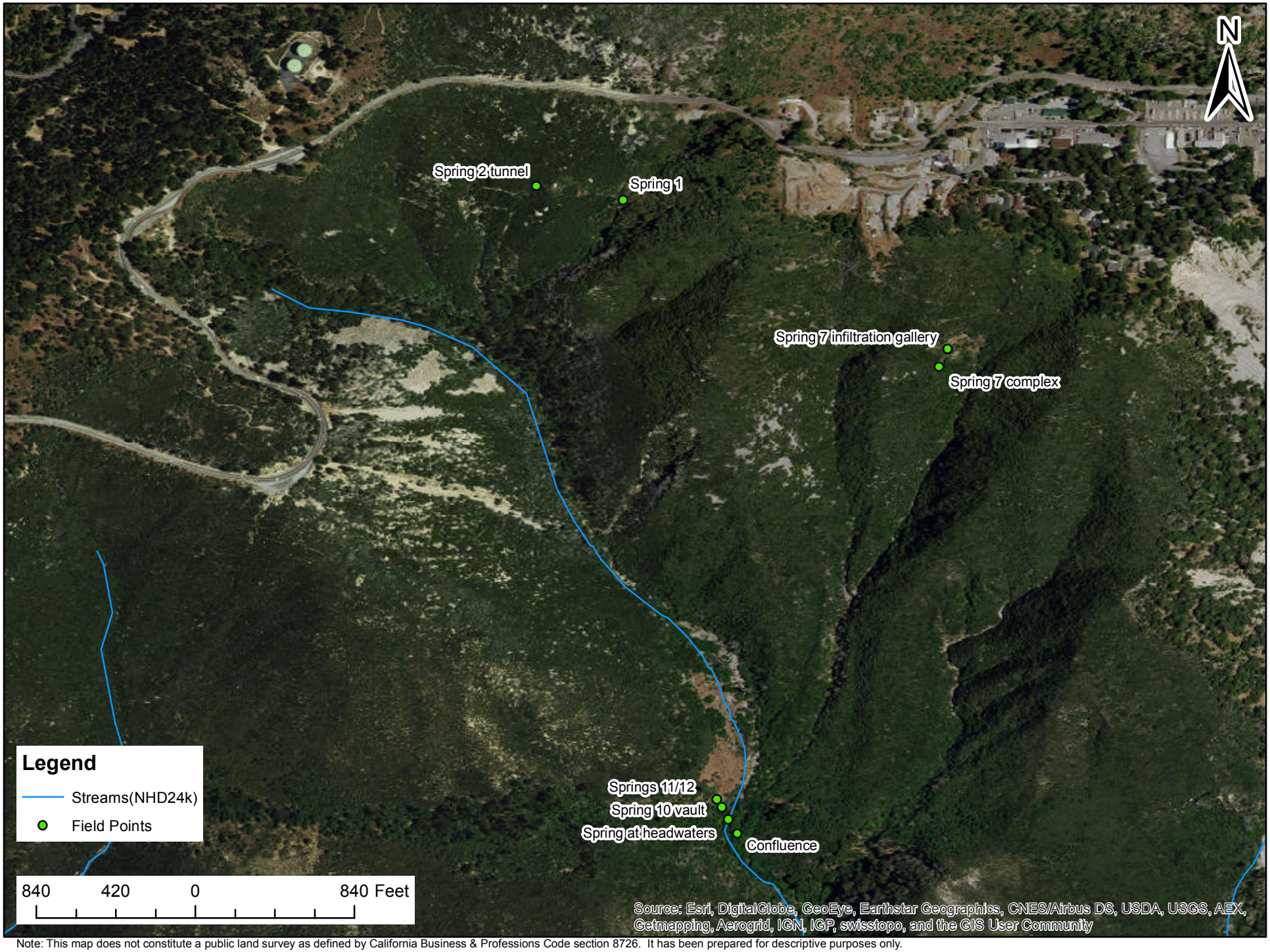
Figure 2 – Spring production (red line) compared with streamflow (blue line) from 1947 to 2015. Production values include all springs. Streamflow values represent annual totals calculated from daily averages measured at the US Geological Survey gauge 1105850 on East Twin Creek downstream of the old Arrowhead Springs Hotel.

Figure 3. Strawberry Creek Spring PODs



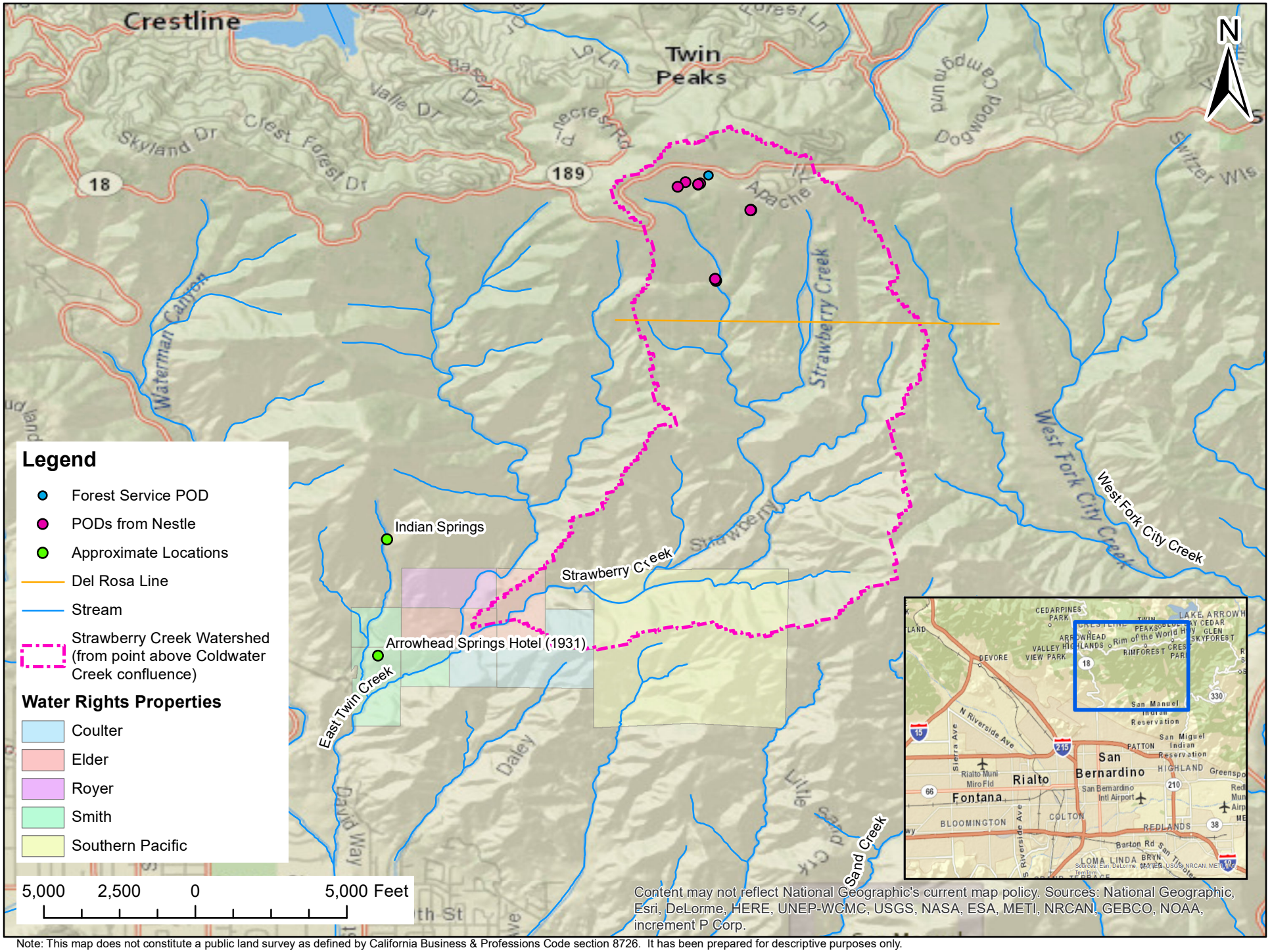
Note: This map does not constitute a public land survey as defined by California Business & Professions Code section 8726. It has been prepared for descriptive purposes only.

Figure 4. Strawberry Creek Field Points



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 5. Location Overview



Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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

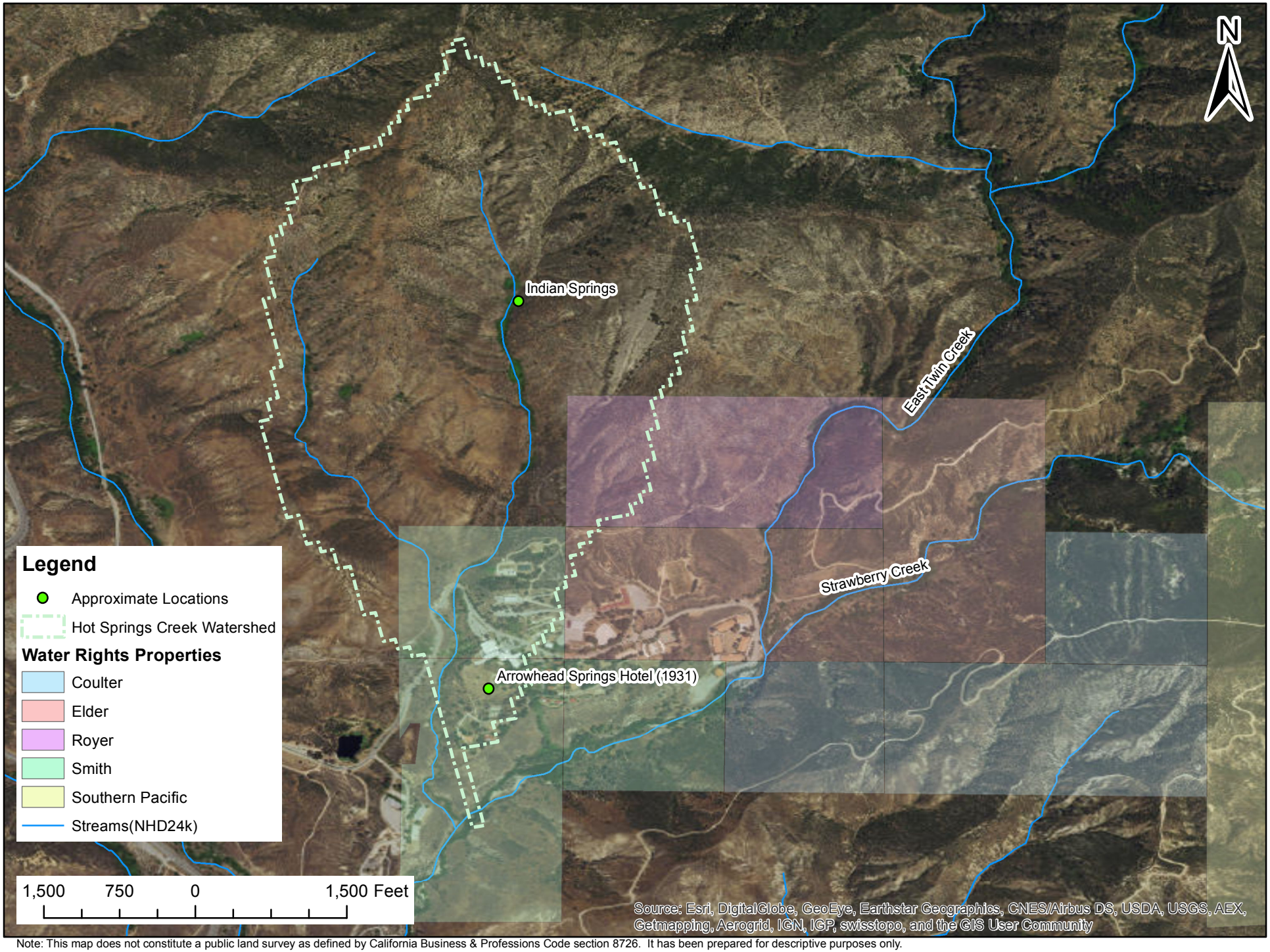


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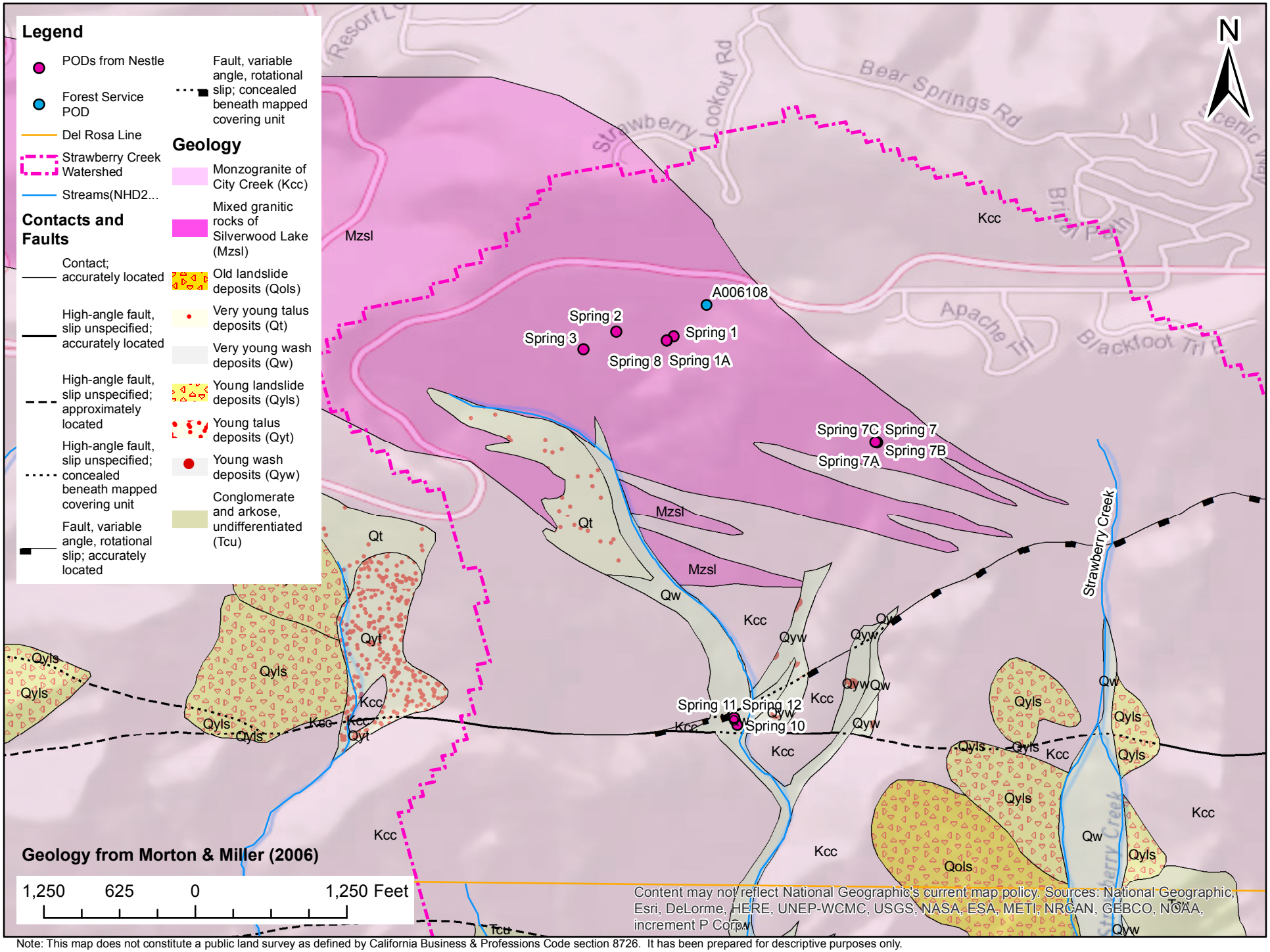
Figure 7. Strawberry Creek Geology



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 8. Diagram of Del Rosa Judgment Result

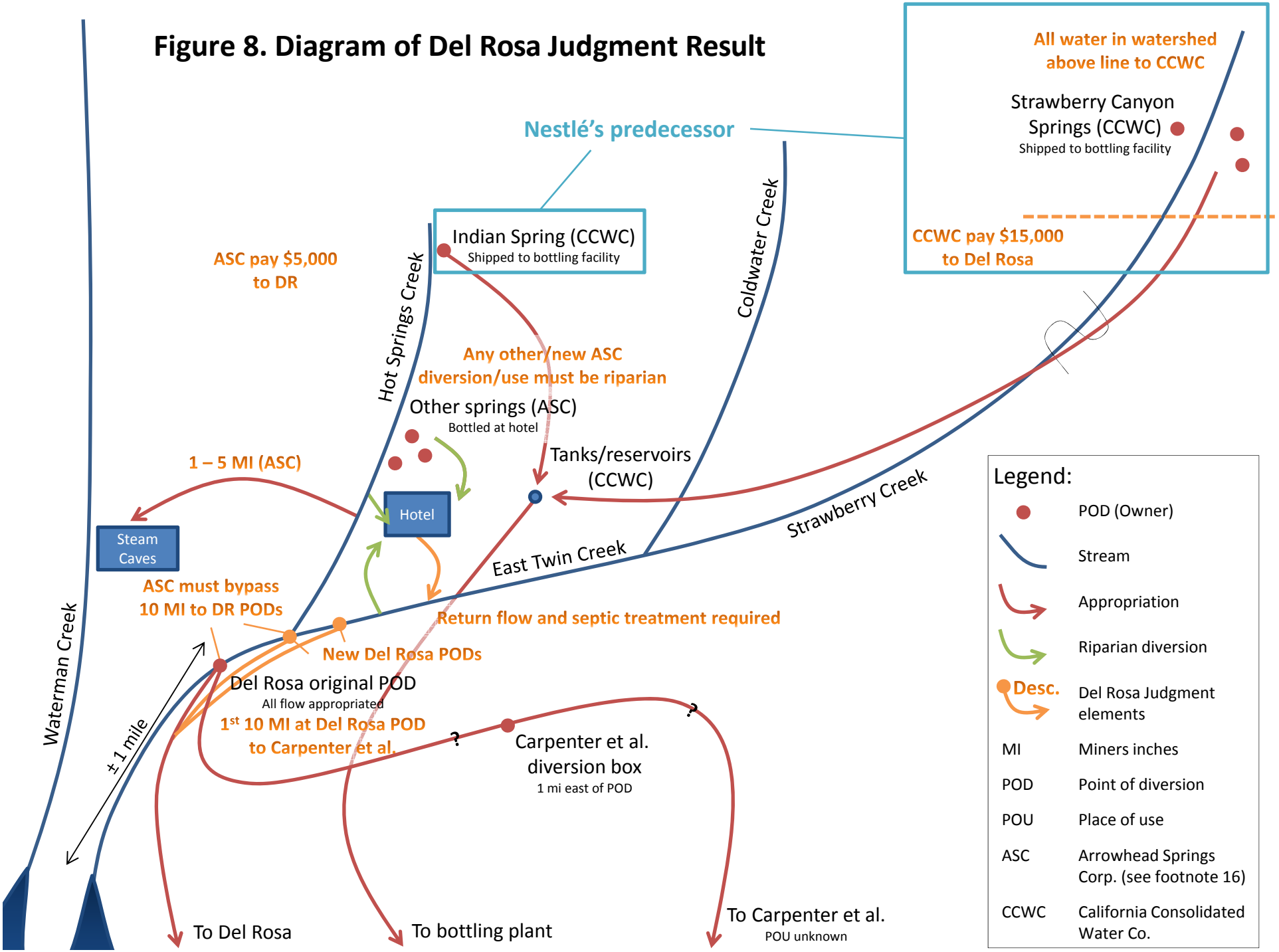


Table 2
Groundwater Recordations

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

Table 3
Well Completion Report Summary

Groundwater Recordation	POD Name	From Well Completion Reports					
		Well Completion Report	Owners No.	Date Completed	Perforated or Screened Interval (ft bgs)	Total Depth (ft)	Estimated yield (gpm)
G360476	Spring 1 Borehole	106555	1	5/24/1976	126 to 290	290	40
		485783 [a]	Old 1	8/27/1993	NA	NA	NA
		485780 [b]	New #1	8/9/1993	66 to 130	130	75
	Spring 1A Borehole	485782 [a]	Old 1A	8/27/1993	NA	NA	NA
		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:

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

[b] 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

Table 4
Historical Information from Newspapers

Date	Source	Title	Notes
5/8/1909	Los Angeles Herald	ARROWHEAD HOT SPRINGS WATER TO BE MARKETED	plan to construct pipeline to rail line
6/12/1913	San Bernardino Daily Sun	ARROWHEAD WATER IS BEING BOTTLED	First shipment of water bottled at spring to LA for sale; transported via rail line
11/25/1916	Los Angeles Evening Herald	BIG BOTTLING PLANT IS PLANNED FOR LA	land for bottling facility purchased; full operation by May 1st
2/28/1917	Los Angeles Evening Herald	L.A. BUILDING PERMITS	bottling works
9/22/1917	Los Angeles Evening Herald	ARROWHEAD SPRINGS PLANT COMPLETED	glass-lined 10,000 gallon tank cars; "culmination of many years of preparation"
4/9/1919	Los Angeles Evening Herald	ARROWHEAD SPRING WATER (AD)	Indian Spring, glass tank cars
9/19/1919	Los Angeles Evening Herald	PROMPT DELIVERIES ARROWHEAD SPRINGS WATER AGAIN RESUMED (AD)	20,000 gpd availabe **(22 AFA)**
10/2/1926	San Bernardino Daily Sun	BOTTLING WILL BE DONE HERE	plan to install bottling facilility at Arrowhead Springs; Indian Spring **(26 AFA)**
3/5/1929	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 producted 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	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	San Bernardino Daily Sun	DEL ROSA HAS WATER RIGHTS ESTABLISHED P.2	see above
11/29/1935	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."

Date	Source	Title	Notes
10/10/1938	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."
11/24/1938	San Bernardino Daily Sun	MOUNTAIN FIRE RAZES FAMED HOTEL, ROARS INTO VALLEY	Fire destroys main hotel building while property in escrow
11/25/1938	San Bernardino Daily Sun	AFTER-FIRE PHOTOS OF ARROWHEAD SPRINGS	photos
12/17/1939	San Bernardino Daily Sun	NEW ARROWHEAD SPRINGS HOTEL LIKE SUPER-SCREEN SPECTACLE	description of new hotel
4/3/1948	San Bernardino Daily Sun	(AD)	"underground streams"
12/13/1948	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:
AFA = Acre-feet per annum

Source:
cdnc.ucr.edu, accessed 12/29/2016

Appendix A
Photo Log

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

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

Nestlé Waters North America
Arrowhead Facility 6/15/2016

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 2

Pipeline downhill from Spring 7 complex.

Photo 3

Pipeline downhill from Spring 7 Complex. View from helicopter

Photo 4

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 Springs 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 2 water tunnel. 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

Spring 1 vault. Boring installation is buried.

Photo 14

View down the watershed from Spring 1 site.

Photo 15

Spring 3 vault (arrow) and pipeline. Mr. Lawrence and Mr. Nichols said that the construction is nearly identical to Spring 2, except that the tunnel is longer and takes a turn, likely because the diggers were "chasing a fracture". Spring 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

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

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.[1] (*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."[2] (*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, *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

[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

[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.

[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.[7] 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:

[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.*)

Appendix C
Spring 7 Complex
Developed Water Calculation

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS

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 amounts[1]. 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 Canyon[2] (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.

[1] 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.

[2] 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.

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

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.*

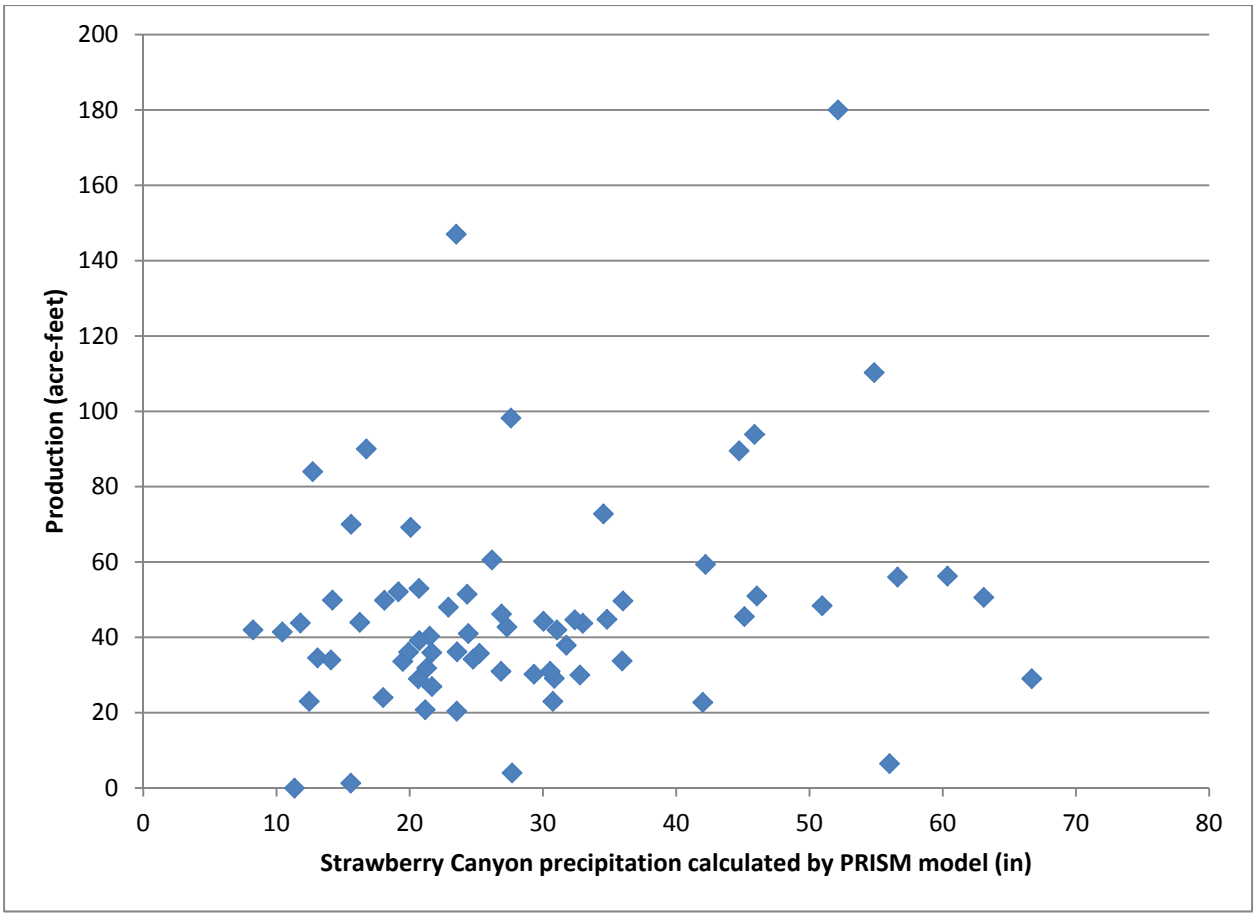


Figure C-1: Precipitation v. Production 1947-2015. Each point represents the precipitation and production data for one calendar year. Production is the amount of water diverted from all springs and wells at the Spring 7 Complex. This graph was used to screen for production values that are abnormally 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.

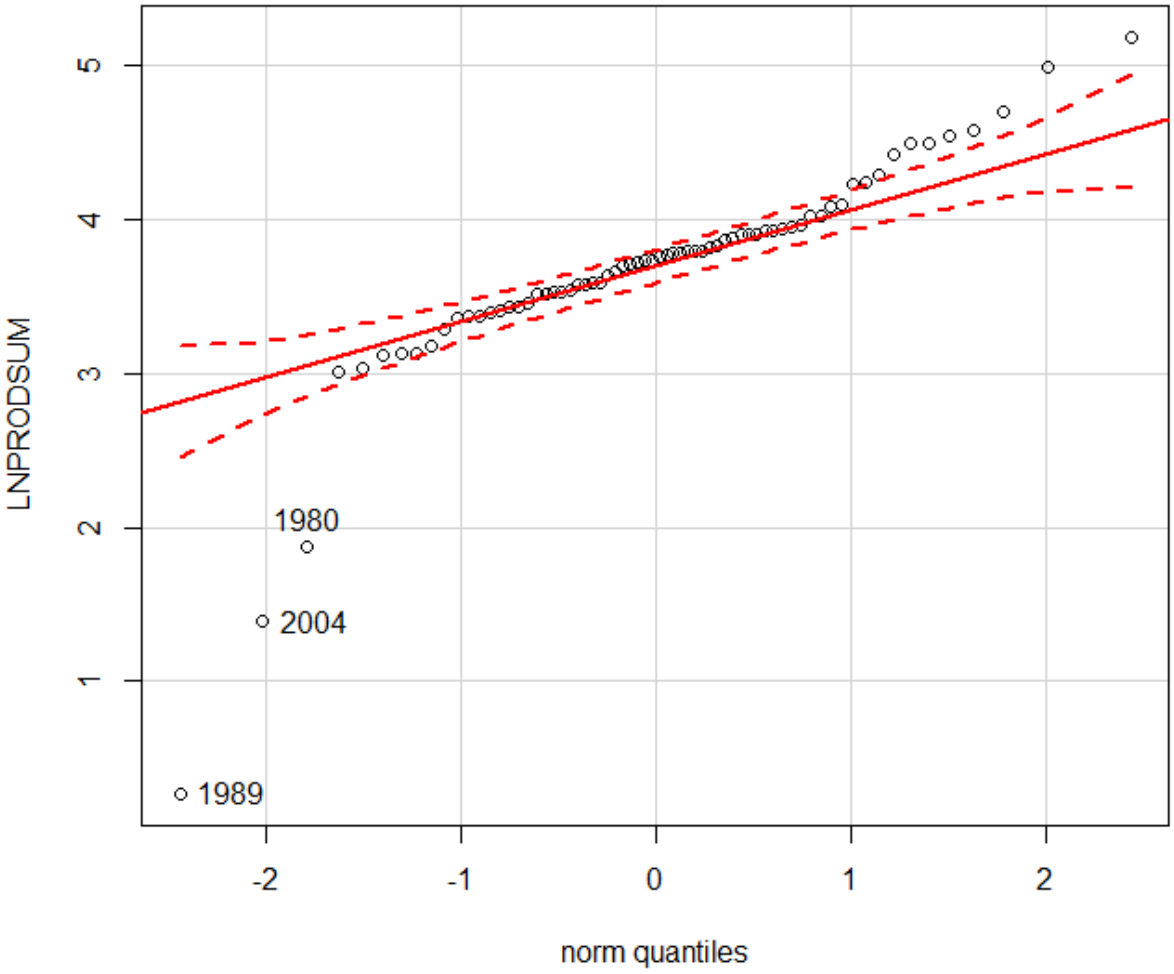


Figure C-2: Quantile Comparison Plot. Each point represents the natural log of the production for one calendar year. Production is the amount of water diverted from all springs and wells at the Spring 7 Complex. This plot, produced in R, graphically represents a normal distribution for the data set (dashed 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)

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

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 Spring 1, looking downgradient along channel	

Spring 3	
Photo 0348 (iPhone 3) Spring 3 tunnel	

Springs 1/1A/2/3/8	
Photo 0372 (iPhone 3) Well 1 at yellow arrow and Wells 1A/8 immediately below Spring 2 tunnel at red arrow Spring 3 tunnel in drainage below purple arrow	

Springs 1/1A/2/3/8	
Photo 0373 (iPhone 3) Spring 2 tunnel at red arrow Spring 3 tunnel at green arrow