TESTIMONY OF DANIEL EASTON

I. QUALIFICATIONS

1. I am a registered civil engineer in the State of California and employed by the firm of MBK Engineers, Inc. ("MBK"). I hold a bachelor of science degree in civil engineering from Loyola Marymount University and a master of science degree in water resources engineering from the University of California, Davis. I have nine years of experience in the field of water resources engineering. The focus of my engineering practice is the development and use of hydrologic models for surface water systems. The development of such models typically requires an understanding of both the physical characteristics and the administration of the stream system being modeled. As a result of my engineering practice, I have become familiar with California's system for the administration of rights to surface water. Moreover, MBK is generally considered a preeminent firm in the field of water rights and I regularly draw on the experience and expertise of my colleagues in connection with such matters. A true and correct copy of my resume has been submitted as Joint Exhibit "JE" 47.

II. SUMMARY OF ANALYSIS AND CONCLUSIONS

2. In the Notice of Public Hearing for this proceeding dated August 24, 2009, the State Water Resources Control Board (State Water Board) identified the following key issues:

> "1. Should the State Water Board revise the Declaration [of Fully Appropriated Stream Systems] to allow the Division of Water Rights to accept and process water right applications to appropriate water from the Kern River?"
>
> "2. Has adequate information been provided to demonstrate that there is a change in circumstances since the Kern River was included in the Declaration?"
>
> "3. Have the petitioners provided sufficient hydrologic data, water usage data, or other relevant information to support a determination that there is unappropriated water in the Kern River system during the season applied for to justify

revising the Declaration for the purpose of accepting and processing water right applications for the Kern River?"

3. To address these key issues, I employed a three-step methodology. First, I determined the baseline hydrologic conditions on the Kern River by reviewing and analyzing the historical records described below. The baseline hydrologic conditions and historical records evaluated are depicted in Table 1. (JE 48, 51, 54, 57, 60 and 63.) Second, utilizing the 1964-2008 period of record following the State Water Board's determination in Decision D1196 that the Kern River is fully appropriated, I analyzed the effects of the forfeiture determination identified in *North Kern Water Storage District v. Kern Delta Water District* (2007) 147 Cal.App. 4th 555 (hereinafter "*North Kern*"). (JE 1-3.) The results of this analysis are depicted in Table 2. (JE 49, 52, 55, 58, 61 and 64.) Third, again utilizing the 1964-2008 period of record, I analyzed the pertinent hydrology and water right administration of the Kern River to answer the following question: How (if at all) will the water "released" to the Kern River system as a result of the *North Kern* judgment be utilized by First Point, Second Point and Lower-River diverters under existing water right entitlements to the system, as demonstrated by using data from the historical period of record? The results of this analysis are depicted in Table 3. (JE 50, 53, 56, 59, 62 and 65.)

4. Based on the three-step methodology described above, it is my opinion that the *North Kern* judgment does not result in water available for appropriation on the Kern River because, as depicted in JE 50, 53, 56, 59, 62 and 65, water released to the Kern River pursuant to the *North Kern* judgment would be distributed to and used by First Point, Second Point and Lower-River diverters under existing water right entitlements; and the state of the Kern River stream system would not change from historical conditions. This conclusion is substantiated by the Kern River Flow and Diversion Records for 2007 and 2008 prepared since the *North Kern* judgment, as they consistently record that all the water released to the Kern River due to the *North Kern* judgment has been fully used by First Point, Second Point and Lower-River diverters under existing water right entitlements. (JE 38 and 39.) In fact, there are only three (3) years (1982, 1983, and 1984) out of the 45 years in the historical analysis (JE 48-65, and 67) where

water released due to the *North Kern* judgment is not fully distributed to First Point, Second Point and Lower-River diverters, and those years were when these releases coincided with flood control operations.

III. DESCRIPTION OF INVESTIGATION

5. As part of my preparation for this proceeding, I toured the Kern River and its major water measurement, diversion and conveyance facilities including but not limited to the First Point of Measurement, Second Point of Measurement, Lower-River points of diversion and the Kern River-California Aqueduct Intertie ("Intertie"). I also reviewed (a) State Water Board Decision D1196 and a large number of the hydrologic records contained in the administrative record for that proceeding (JE 5-21); (b) State Water Board Order No. WR 89-25 declaring the entire Kern River to be fully appropriated throughout the year (JE 22) and subsequent State Water Board Orders (JE 23, 25-26); and (c) State Water Board Order No. WR 94-1, in which the State Water Board denied a request by the Lost Hills Water District to modify the declaration that the Kern River is fully appropriated from January 1 through December 31 of each year. (JE 24.)

6. I also reviewed official records of the hydrology, flow, diversion, and use of the Kern River stream system from 1894 to 2008. Those records included numerous monthly and daily Kern River Flow and Diversion Records (JE 32-39), daily Kern River natural flow records (JE 40), and records prepared by the Kern River Watermaster, and others, contained in Kern River hydrographic annual reports (e.g., JE 41) maintained by the City of Bakersfield on behalf of itself, North Kern Water Storage District, Kern Delta Water District, Buena Vista Water Storage District, and the Kern County Water Agency. All of these records are maintained by the respective public agencies identified above in the ordinary course of their official business. These are all the types of records that a registered civil engineer would normally rely upon for purposes of a hydrologic analysis.

IV. HYDROLOGY OF THE KERN RIVER

7. As described in greater detail in the Testimony of Martin N. Milobar (JE 69), the Kern River system originates high in the Sierra Nevada Mountains. (JE 7, pp. 3-4.) The total drainage area of the Kern River system upstream of Isabella Dam is estimated to be 2,075 square

miles. (JE 7, pp. 3-4.) Isabella Dam and Reservoir is located approximately 1.5 miles below the confluence of the North and South Forks of the Kern River. (JE 7, pp. 3-4.) A map providing a true and correct depiction of the Kern River Basin is shown in JE 27. The eastern portion of the watershed is drained by the South Fork of the Kern River and the western portion by the main stem North Fork of the Kern River. (JE 7, pp. 3-4.) Below Isabella Reservoir, the Kern River continues to flow through a canyon to the floor of the San Joaquin Valley easterly of the City of Bakersfield then beyond to the First and Second Points of Measurement. (JE 7, pp. 3-4.) Photographs showing the First Point of Measurement and Second Point of Measurement located on the Kern River are provided in JE 30 and 31, respectively.

8. In Decision D1196, the record of the annual natural flow of the Kern River at the First Point of Measurement for the period 1894-1963 was presented to the State Water Board in an Engineering Staff Analysis of Record prepared by its staff. (JE 7, p. 4.) In these records, the annual natural flow of the Kern River at the First Point of Measurement for the years 1954-1963 was computed to eliminate the effect of Isabella Reservoir. (JE 7, pp. 3-4.) In Table 2 of the Engineering Staff Analysis (JE 7), the annual natural flow of the Kern River was reported to range from a high of 1,991,600 acre-feet (1916) to a low of 177,600 acre-feet (1961). (JE 7, pp. 3-5, Table 2.) Current Kern River records indicate that the total natural flow in 1916 was 2,520,149 acre-feet; and it is my understanding that this current value is the actual recorded value. (JE 41, p. 2.) The Engineering Staff Analysis further indicates that the average annual natural flow of the Kern River for 1894-1963 was 680,600 acre-feet. (JE 7, pp. 3-4.)

9. The Engineering Staff Analysis refers to a Report of Kern River Watermaster, which indicates that the Kern River is characterized by erratic flows. (JE 20, p. 3, and 8, pp. 39-41.) In the period 1894-1963, the Kern River runoff exceeded the average in only one-third of the years. (JE 20, p. 3, Plate 3, and 8, pp. 39-41.) In two-thirds of the years, the runoff was less than the average annual natural flow. (JE 20, p. 3, Plate 3; and 8, pp. 39-41.) The Kern River Watermaster concluded that water deficiencies are normal for the Kern River system. (JE 20, p. 3, Plate 3; and 8, pp. 39-41.)

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V. WATER RIGHT ENTITLEMENTS TO THE KERN RIVER

10. For many years, the entire natural flow of the Kern River has been apportioned between the First Point, Second Point, and Lower-River diverters by court judgments, decrees and agreements, including, without limitation, *Lux v. Haggin* (1886) 69 Cal. 255, the Miller-Haggin Agreement as amended (JE 13, 14, 16 and 17), the Shaw Decree (JE 15), the Water Rights and Storage Agreement (JE 18) and the Recreation Pool Agreement (JE 19). (JE 8, p. 29-30; 7, p. 6; 20, pp. 1-2; 21, p. 3; 22, pp. 13-14.)

11. The Miller-Haggin Agreement provides that all Kern River natural flow is required to be measured at the First Point of Measurement and all flows up to and including 300 cubic-feet per second (cfs) are allocated to First Point diverters and all flows above 300 cfs are divided 1/3 to the Second Point diverters (without losses) and 2/3 to the First Point diverters except during the period of September through February, when all the flow over 300 cfs is allotted to the First Point diverters. (JE 7, p. 7; 14, pp. 10-11.) The Miller-Haggin Agreement states that all water of the First Point diverters reaching the Second Point of Measurement is available for use by the Second Point diverters. (JE 7, p. 7; 14, p. 11.) The Miller-Haggin Agreement was amended in 1930, 1955 and 1964. (JE 16 and 17.) As amended, the Miller-Haggin Agreement provides, for the six-month period of September through February ("Non Miller-Haggin Season"), that when the flow is over 1,500 cfs the waters of the Kern River shall be apportioned each day between the Second Point diverters being entitled to 1/3 of the flow over 1,500 cfs and the First Point diverters being entitled to 2/3 of the total flow. (JE 17, p. 6.)

12. Since 1894, detailed records of the entire Kern River natural flow and diversions have been maintained as required by the Miller-Haggin Agreement. (JE 8, p. 31; 14, pp. 8-9; 20 p. 2; and 40.) According to the Report of Kern River Watermaster, all Kern River runoff is entirely absorbed for beneficial uses within the San Joaquin Valley in the areas served by the First Point, Second Point and Lower-River diverters. (JE, 20, p. 1.)

13. At the time of Decision D1196, the major entities diverting Kern River water within the First Point area were North Kern Water Storage District, the Kern County Land Company, and various individual canal companies. (JE 20, p. 1; 7, p. 4.) According to Kern

River records, the current First Point diverters are City of Bakersfield, North Kern Water Storage District and Kern Delta Water District. (JE 29, 32, 41.) The current Second Point diverter is Buena Vista Water Storage District. (JE 29, 32, 41.) At the time of Decision D1196, Hacienda Water District and the Tulare Lake Basin Water Storage District were the major entities diverting Lower-River water. (JE 7, p. 6.) In 2001, the Kern County Water Agency purchased the Lower-River rights and today those rights are held and exercised by the Kern County Water Agency.

14. On August 6, 1900, certain individual appropriative rights of the First Point diverters were adjudicated by Judge Lucien Shaw, Kern County Superior Court. (JE 7, p. 7; 8, p. 13; 15.) The Shaw Decree reaffirmed the Miller-Haggin Agreement and established the quantities available for diversion and appropriation among fifteen separate rights. (JE 15, pp. 10-11, 19-20.) The Shaw Decree provides that when there is not sufficient water available to satisfy all of the rights of the First Point diverters, the order of priority stated in the Shaw Decree shall be followed. (JE 15, p. 10.) Since 1900, the individual appropriative rights of the First Point diverters have been administered according to the rights and priorities stated in the Shaw Decree, and the Kern River Flow and Diversion Record lists all First Point rights administered on the Kern River. (JE 15, 32, 33-39 and 41.) The Kern River Flow and Diversion Record lists twenty-six diversion rights and a total instantaneous flow of 3,162.5 cubic-feet per second. (JE 32, and 33.)

15. In 1962, the First Point diverters, Second Point diverters and Lower-River diverters entered into an agreement acknowledging their existing Kern River water rights, and apportioning storage in Isabella Reservoir. (JE 8, p.16-17; 18.) This agreement acknowledges the historical rights of the First Point, Second Point, and Lower-River diverters to the entire water supply of the Kern River at various stages of Kern River natural flow. (JE 7, p. 8, Table 3; 8, pp. 16-17; 18, pp. 2-7.)

16. In Decision D1196, the State Water Board engineering staff prepared an analysis that reviewed and summarized Kern River records including the court judgments, decrees and agreements that apportioned the flow of the Kern River among the First Point, Second Point and Lower-River diverters. (JE 7, p. 6-10.) The Engineering Staff Analysis reviewed the entire

natural flow of the Kern River at the First Point of Measurement for a 70-year period (1894-1963) annually based on records of the Kern River Watermaster. (JE 7, p. 4, Table 2.) The Engineering Staff Analysis also reviewed the record of beneficial use within the First Point, Second Point and Lower-River areas for the 70-year period. (JE 7, pp. 8-11, Table 4.) The Engineering Staff Analysis concluded that "the entire flow of the Kern River has been beneficially used since 1894." (JE 7, p. 10.)

17. Decision D1196 explains that all Kern River natural flow throughout the year has been diverted from the Kern River for irrigation purposes within the First Point, Second Point, and Lower-River areas by ditches and canals since prior to 1894. (JE 7, p. 6; 8, p. 41; 21, p. 4.) Additionally, Kern River water is spread for percolation into the groundwater basin for storage and later use within the service areas, which provides cyclic storage for extended periods of drought. (JE 7, p. 6; 8, p. 42; 21, pp. 4-5.) In the Buena Vista Lake and Tulare Lake areas, water is stored in cells created by levees and later rediverted for irrigation. (JE 7, p. 6.) In the Decision D1196 proceeding, the Staff Engineer concluded that there is a shortage of water within the First Point, Second Point and Lower-River areas based on the fact that groundwater levels within those areas were constantly declining, and that various agencies, which supply water to the area, had entered into or were negotiating agreements to purchase additional water from the Central Valley Project (Friant-Kern Canal) or the State Water Project. (JE 7, pp. 10-11, Table 4; 8, pp. 42-44.)

18. Decision D1196 states: "a comparison of the quantities of water used in the First Point, Second Point, and Lower-River Service Areas for the period 1894-1963, with the quantities of water flowing past the First Point of Measurement, adjusted to eliminate the effect of Isabella Reservoir, shows that there is no water surplus to the established uses of the applicants, protestants, and other users in these areas." (JE 21, p. 5.) The State Water Board denied all pending applications to appropriate water from the Kern River system, including Application No. 9446, filed on November 1, 1938 seeking direct diversion of 3,800 cfs and storage at Isabella Reservoir or other locations for up to 800,000 acre-feet annually. (JE 21, p. 2, Table 1; 24, p. 6.)

19. In the 1989 hearings to determine which stream systems should be declared fully appropriated, the State Water Board concluded that relative to the Kern River, Decision D1196

contains "ample substantial evidence to support the finding that no water remains available for appropriation." (JE 22, p. 14.) The State Water Board's Declaration of Fully Appropriated Streams (FAS Declaration) (Order WR 89-25) listing the Kern River as a fully appropriated stream system has been confirmed by the State Water Board on three (3) subsequent occasions. (JE 23-25.)

20. In 1994, the State Water Board denied a petition requesting modification of the FAS Declaration regarding the Kern River. (JE 24.) In that matter the petitioner, Lost Hills Water District, submitted 35 flow records for the years 1895 through 1983. (JE 24, p. 7.) Only six of the years of data were not previously considered by the State Water Board in Decision D1196. (JE 24, p. 7.) In the new information, the greatest flows were in 1983 – the second highest flood year recorded for the Kern River system. In its 1994 evaluation, the State Water Board noted that flows for the years between 1966 through 1983 were far less than the maximum flows during the period of 1894 through 1963 reported in the Engineering Staff Analysis referenced in Decision D1196. (JE 24, p. 9.) In dismissing the petition, the State Water Board concluded that there had not been a showing that hydrologic conditions in the Kern River have changed or that other circumstances existed which justified the continued processing of the submitted application. (JE 24, pp. 9-10.)

VI. ANALYSIS OF FULLY APPROPRIATED STREAM STATUS OF THE KERN RIVER

21. I have assembled and reviewed the available records of the annual natural flow of the Kern River recorded at the First Point of Measurement for the period 1894 to 2008. (JE 42-45.) These records are presented in both table and graph format in chronological and ascending order of magnitude. (JE 42-45.) The hydrologic data since Decision D1196 has been added to the record and confirms the earlier findings that the Kern River is an erratic stream system with significant variance between the record low and high flows. Significantly, the records of Kern River hydrology indicate that in nearly two-thirds of the years, the total annual natural flow at the First Point of Measurement is below average and there exists an overall water deficiency in meeting existing water rights and water demands on the Kern River stream system. (JE 42-45.)

22. I evaluated whether the *North Kern* judgment provides a basis for concluding that the Kern River is no longer fully appropriated. That judgment held that four (4) of Kern Delta Water District's pre-1914 appropriative rights were partially forfeited because of five years of nonuse during the period of 1972-1976. (JE 1, 2, 3, pp. 563-564, 585.) The Kern Island (1st) right to 300 cfs is the first priority right listed in the Shaw Decree. (JE 15, p. 10.) The Buena Vista (1st) right to 80 cfs is the second priority right listed in the Shaw Decree. (JE 15, p. 10.) The Stine right to 150 cfs is the fifth priority right listed in the Shaw Decree. (JE 15, p. 10.) The Farmers right to 150 cfs is the sixth priority right listed in the Shaw Decree. (JE 15, p. 10.). Each of these rights is administered according to the diversion rights listed on the Kern River Flow and Diversion Record. (JE 32, 33.)

23. According to the *North Kern* judgment, these four (4) appropriative rights are now limited to the Preserved Entitlements set forth for the six (6) months of the year shown in the Table below. (See also, JE 4.)

Kern Delta Water District Monthly Preserved Entitlements				
	Kern Island (1st) (AF)	Buena Vista (1st) (AF)	Stine (AF)	Farmers (AF)
January	8,493	347	--	--
August	--	--	--	610
September	--	--	583	268
October	6,989	--	1,380	--
November	3,375	236	22	--
December	2,050	191	12	207

Note: Months identifying "--" were not limited by forfeiture.

24. The limitations on Kern Delta Water District's water rights, set forth in the *North Kern* judgment, results in water's being released and available to First Point, Second Point and Lower-River diverters under existing water right entitlements. As set forth in more detail below, my analysis examines whether these existing Kern River entitlements will utilize the water released due to Kern Delta Water District's partial forfeiture of water rights in whole or in part. Ultimately, and based on historical practices of diversion and use set forth in the Kern River Flow and Diversion Records, I conclude that all water released due to the *North Kern* judgment would

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have been diverted and used in all years by the First Point, Second Point, and Lower-River diverters, except during flood control operations.

25. For the most part, the terminology utilized in our engineering analysis was adapted from that used in the City of Bakersfield's Kern River Flow and Diversion Records as well as those used in the *North Kern* judgment regarding the historical administration of the Kern River. The following definitions were used for purposes of our analysis:

a. "Actual Use" is the amount of water controlled (diverted, stored, or otherwise used) by a given diversion right, which may be either more or less than its Gross Entitlement. If less than the Gross Entitlement, the unused portion is released to the River (so called "release water") for distribution to other diversion rights. If more than Gross Entitlement, the Actual Use includes natural flow not diverted and used by other diversion rights.

b. "Computed Natural Flow at First Point" is the daily natural flow of the Kern River measured at the First Point of Measurement (computed to eliminate the effect of Isabella Dam & Reservoir) as reported in the Kern River Flow and Diversion Record and Annual Hydrographic Reports prepared in accordance with the formula agreed to in the Miller-Haggin Agreement, as amended.

c. "Deficit" is the state when the First Point, Second Point and Lower-River diverters' cumulative diversion and storage capacity exceeds the computed natural flow of the Kern River and the diverters would divert or store the entire computed natural flow for beneficial use.

d. "Forfeiture Release" is the amount of water initially calculated to be within the Gross Entitlement of the Kern Island (1st), Buena Vista (1st), Stine or Farmers diversion rights but that is prohibited from being diverted and used in excess of the Preserved Entitlement stated in the *North Kern* judgment for the months of January, August, September, October, November and December.

e. "Gross Entitlement" (also referred to as "Theoretical Entitlement" in the *North Kern* judgment) is a term used on the City of Bakersfield's Kern River Flow and Diversion Record which refers to that amount of water initially calculated to be available to a given

diversion right on a given day, based on the schedule of diversion rights and priorities and the natural flow.

f. "Other Rights" is a term to identify all other existing First Point, Second Point and Lower-River diverter water right entitlements not including the Restricted Rights.

g. "Preserved Entitlements" are the monthly entitlements of Kern Island (1st), Buena Vista (1st), Stine, and Farmers established by the *North Kern* judgment.

h. "Restricted Right" is a term used to identify one or more of the Kern Delta Water District's water rights (Kern Island (1st), Buena Vista (1st), Stine and Farmers) subject to partial forfeiture in the *North Kern* judgment.

i. "Undistributed Release" is water that is not diverted and used by any First Point, Second Point, Lower-River diverters. By definition, an "Undistributed Release" is water discharged into the Intertie during flood control operations.

26. Beginning in 1894 until the present, all the natural flow of the Kern River has been measured or computed at the First Point of Measurement on a daily basis. (JE 8, pp. 31-32; 20, p. 2, Plate 2; 40; 41, pp. 1-6.) The State Water Board considered an annual summary of the records of the total Kern River natural flow measured at the First Point of Measurement (exclusive of Isabella Reservoir) for the period 1894-1963 when it issued Decision D1196. (JE 7, p. 4, Table 2; 20, p. 2, Plate 2.) The Computed Natural Flow at First Point is independent of the *North Kern* judgment. Given the natural flow, as calculated, constitutes the entirety of Kern River water available to First Point, Second Point and Lower-River diverters, the *North Kern* judgment cannot create any new supply of water for existing rights holders not previously measured and considered in Decision D1196.

27. According to the City of Bakersfield's Kern River Flow And Diversion Records for the years 2007 and 2008, prepared after issuance of the *North Kern* judgment, the total Kern River natural flow computed at the First Point of Measurement continues to be computed and reported in the same manner as prior to the *North Kern* judgment. (JE 38 and 39.) In particular, the Kern River records indicate that the total Kern River natural flow continues to be computed and divided between First Point, Second Point, and Lower-River diverters in the same manner

and it has not changed as a result of the partial forfeiture of Kern Delta Water District's water rights. (JE 38 and 39.)

28. To determine whether the Kern River remains fully appropriated following the judgment in *North Kern*, I employed a three-step methodology. First, I determined the baseline hydrologic conditions on the Kern River by reviewing and analyzing the historical flow and diversion records described above for the forfeiture months of January and August through December of 1964 through 2008. The 1964-2008 period was selected because it follows the hydrologic period reviewed in Decision D1196 (1894-1963), in which the State Water Board determined the Kern River stream system to be fully appropriated. This analysis identifies the baseline condition from which the effects of the *North Kern* judgment are measured. The results of this baseline analysis are depicted in Table 1. (JE 48, 51, 54, 57, 60, 63.) As identified in these exhibits, the historical state of the Kern River stream system for the analysis period of 1964-2008 is identified as either in "Deficit" or "Undistributed Release" (shown as "U. Release" in Table 1 and Table 3). Based on the results of this analysis, the historical state of the Kern River stream system was in "Deficit" during 262 months out of the 270 months that comprise the 1964-2008 forfeiture months.

29. Second, I analyzed the effects that the North Kern judgment would have had on diversion and use under the Kern Island (1st), Buena Vista (1st), Stine, and Farmers entitlements in the months that the *North Kern* judgment applies. For each Restricted Right, from 1964 to 2008, Actual Use was compared to Preserved Entitlement. If Actual Use was less than Preserved Entitlement, no change in diversion was necessary. The Restricted Right could continue to divert the same quantity of water as was reported in the Kern River Flow and Diversion Records. On the other hand, if Actual Use was greater than the Restricted Right's Preserved Entitlement, the *North Kern* judgment would have prevented the Restricted Right from diverting the increment of water above Preserved Entitlement. In Table 2, this increment of use above Preserved Entitlement is calculated and reported as Decreased Use for each Restricted Right. (JE 49, 52, 55, 58, 61, 64.) As supported by the Kern River Flow and Diversion Records, a decrease in use caused by the *North Kern* judgment is now water available to Other Rights. In other words, the

decrease in use is an increase in release available to Other Rights. The total increase in release available to Other Rights is reported at the end of Table 2. This assessment is also summarized in Columns 2-5 in the table "Summary of the Assessment of Changes in the Kern River Due to The *North Kern* Judgment (1964-2008)." (JE 67.)

a. With regard to my Table 2 analysis, I understand that an increase in release due to the *North Kern* judgment can also be available to a junior Restricted Right provided that the junior Restricted Right has not used its entire Preserved Entitlement. In Table 2, the term "increase in release to Other Rights" is a simplification to further the analysis. If the analysis allowed the quantity of increased release diverted by junior Restricted Rights, it would have only reinforced my ultimate conclusions.

b. Also in regard to my Table 2 analysis, I understand that when a Restricted Right's Actual Use is below Preserved Entitlement, and Gross Entitlement would support increased diversions by the Restricted Right, it is conceivable that the Restricted Right would divert its Gross Entitlement up to but not beyond its Preserved Entitlement. Such an assumption for this analysis would be speculative based on the Kern River Flow and Diversion Records. Therefore, this assumption was not made; and, if it had been made, it would have only reinforced my ultimate conclusions.

30. Third, again utilizing the 1964-2008 period of record, I analyzed the pertinent hydrology and Kern River water rights administration to answer the following question: How (if at all) will the water "released" to the Kern River system as a result of the *North Kern* judgment be utilized by First Point, Second Point and Lower-River diverters under existing water right entitlements to the system, as demonstrated by using data from the historical period of record? The monthly increases in release calculated in Table 2 (JE 49, 52, 55, 58, 61 and 64) were distributed to other existing First Point, Second Point, and Lower-River water right entitlements up to the associated Gross Entitlements, as shown in Table 3. (JE 50, 53, 56, 59, 62, 65.) My analysis confirms that the partial forfeiture of Kern Delta Water District's water rights does result in additional Kern River water's being available for diversion and use by the First Point, Second Point and Lower-River diverters under existing water right entitlements. My analysis further

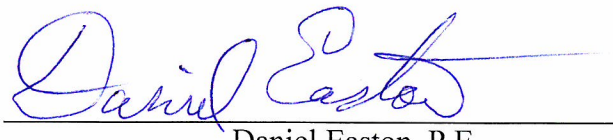
confirms that the water released due to the *North Kern* judgment will, in all but flood control operations, be fully used by the First Point, Second Point and Lower-River diverters under existing water right entitlements. (JE 50, 53, 56, 59, 62, 65.) This assessment is summarized in Columns 6-11 in the table "Summary of the Assessment of Changes in the Kern River Due to The *North Kern* Judgment (1964-2008)." (JE 67.)

31. The City of Bakersfield's Kern River Flow and Diversion Records for 2007 and 2008 substantiate my conclusion that water released to the Kern River due to the *North Kern* judgment will be fully used by First Point, Second Point and Lower-River diverters under existing water right entitlements. (JE 38, 39, 50, 53, 56, 59, 62, 65.) According to the Kern River Flow and Diversion Records, water "released to River" is recorded as distributed to the other existing water rights entitlements listed on the Kern River Flow and Diversion Record. (JE 38 and 39.) For example, based on the 2007 Kern River records, the Restricted Rights in the month of December are limited to the following Preserved Entitlements under the *North Kern* judgment: Kern Island (1st): 2,050 acre-feet; Buena Vista (1st): 191 acre-feet; Stine: 12 acre-feet and Farmers: 207 acre-feet. (JE 4.) The Kern River records report that each of these diversion rights diverted Kern River water on a daily basis until the cumulative amount equaled (but did not exceed) the respective monthly Preserved Entitlement limits provided in the *North Kern* judgment. (JE 38, Tab December, Daily Record.) The Kern River records also report that the entire remaining natural flow identified as "released to River" was distributed to the other First Point diversion rights up to the maximum amount listed on the Kern River Flow and Diversion Record until the total Kern River natural flow was completely diverted for use by the other First Point diversion rights. (JE 38, Tab December, Daily Records.) Similar examples can be found in the daily Kern River Flow and Diversion Records for November 2007, January 2008, October 2008, November 2008, and December 2008. (JE 38 and 39.)

32. Based on the results of this analysis, the projected state of the Kern River stream system remains in a "Deficit" condition during 262 months out of the 270 months that comprise the 1964-2008 forfeiture months. (JE 50, 53, 56, 59, 62, 65.) Therefore, the partial forfeiture of Kern Delta Water District's water rights does not result in a change in the state of the Kern River

stream system from historical conditions. My ultimate conclusion is that the North Kern judgment does not support a finding that there is water available for appropriation from the Kern River.

Respectfully submitted,



Daniel Easton, P.E.

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