EXHIBIT 3

	II	
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9	CLIDEDIAD COLUDE OF THE	
10	SUPERIOR COURT OF THE	
11	IN AND FOR THE COU	NTY OF RIVERSIDE
12		
13	CITY OF BARSTOW, et al.,	CASE NO. CIV 208568
14	Plaintiff,	DECLARATION OF ROBERT C.
15	vs.	WAGNER, P.E. IN SUPPORT OF MOTION TO ADJUST FREE
16	CITY OF ADELANTO, et al.,	PRODUCTION ALLOWANCE FOR WATER YEAR 2015-2016
17	Defendant,	Assigned for All Purposes to:
18	{	Judge Gloria Connor Trask Dept. 3
19	{	DATE: TIME: 8:30 a.m.
20	\	DEPT:
21	AND RELATED CROSS ACTIONS	
22		
23		
24		
25	I, Robert C. Wagner, declare as follows:	
26	1. I am a licensed Civil Engineer in the	State of California and President of the firm of
27	Wagner and Bonsignore, Consulting Civil Engine	ers in Sacramento, California. A copy of my

DECLARATION OF ROBERT C. WAGNER, P.E. IN SUPPORT OF MOTION TO ADJUST FREE PRODUCTION ALLOWANCE FOR WATER YEAR 2015-2016

professional resume is attached as Exhibit 1 and list of sources used in support of this declaration is attached as Exhibit 2. I serve in the capacity of Engineer for the Mojave Basin Area Watermaster. I am providing the following information in support of Watermaster's recommendations regarding Free Production Allowance (FPA) and to address other matters related to water supply use and disposal within the five Subareas. I incorporate by reference, as though fully set forth herein, my declarations and all attachments thereto that were filed with the court in this action in support of the prior Motions to Adjust FPA.

- 2. In my capacity as Engineer for the Mojave Basin Area Watermaster, I have reviewed the Motion to Adjust FPA for Water Year 2015-16 and the Watermaster's 21st Annual Report. Each of the facts set forth in the Motion to Adjust FPA for Water Year 2015-16 are true and correct to the best of my knowledge and I could competently testify thereto.
- 3. I have reviewed the recommended adjustments to FPA for Water Year 2015-16 set forth in the pending motion and each of the recommendations set forth therein for each of the Subareas are consistent with my opinions and recommendations as conveyed to the Watermaster. A discussion of FPA for each Subarea is included in Chapter 5 commencing on page 34 of the 21st Annual Report.
- 4. The Judgment provides that producers can pump, without replacement water obligations to Watermaster, an amount up to the producers' share of the Subarea FPA. Producers who pump in excess of their FPA are required to buy replacement water from Watermaster or purchase FPA from another party in the Subarea. The transfer provision of the Judgment allows producers who chose to not pump to sell FPA to those parties who over-pump their FPA. The transfer market is a means of allocating the limited water supply within a Subarea. Rampdown of FPA is not intended to directly reduce pumping (although demand reduction may be a consequence). The Physical Solution is intended to balance supply and demand by providing a mechanism (Rampdown of FPA) to allocate the cost of purchasing imported water supply for recharge, to those who exceed their FPA.
- 5. Watermaster recommends that FPA remain unchanged in the Alto, Centro and Este Subareas for 2015-16. For the Oeste Subarea, Watermaster recommends that FPA be set as indicated under the same condition as 2014-15. The condition under which FPA is to remain the same for Oeste

will be subject to review and revision. As dictated by the Judgment, Watermaster recommends FPA in Baja be set at 50% of BAP and Rampdown continue until FPA is within 5% of Production Safe Yield, as required by the Judgment (this is expected to occur in Water Year 2018-19). Further, Watermaster is requesting that the Court consider differential Rampdown as described in paragraphs 34 and 35.

- 6. The conditions in each Subarea are described in more detail below. For Alto, Centro and Este, the pumping and water use is sustainable under the current hydrologic conditions. The conditions in Baja and Oeste are not sustainable. In Oeste, problems associated with over-pumping in the west-southwest portion will become more severe in time. Data indicates a long-term decline in water levels.
- 7. Long-term net natural water supply in Baja (derived from Exhibit 3, also Table 5-2 in 21st Annual Report) is approximately 11,400 acre-feet (total inflow less gaged outflow and phreatophytes). The problem of sustained overdraft is critical and can be summarized as follows:
 - a) There has been a loss of groundwater storage due to overdraft of 1,100,000 acre-feet as of 1999 (USGS, Stamos 2001).
 - b) Since 1996, I estimate the loss of groundwater in storage in Baja to be an additional 328,000 acre-feet (Exhibit 4, also Figure 3-19 of the 21st Annual Report).
 - c) Loss of riparian habitat. According to USGS, as of 1963 riparian habitat accounted for about 8,000 acre-feet of water use (Hardt 1971). According to USGS and California Department of Fish & Wildlife (DFW) riparian habitat consumes about 2,000 acre-feet in Baja (Lines and Bilhorn, 1996). Currently, there may be substantially less than that amount of riparian habitat water use. Water consumption by riparian plants is an indication of the health and extent of the habitat.
 - d) Reports by minimal producers and others indicate loss of well performance and wells going dry. Data and analysis provided to the court in 2008 indicated substantial loss of wells in the future as water levels continued to decline. Current analysis indicates that wells less than 250 deep will experience problems within

- about 20 years. We have estimated there are about 1,113 wells 250 feet and less in depth (Exhibit 5).
- e) Water level decline is documented by hydrographs throughout the Baja Subarea (Figure 3-13 of the 21st Annual Report). Water levels are declining at about 2 feet per year. The loss of an additional 328,000 acre-feet in the last 18 years (Exhibit 4) impairs the operational flexibility needed to sustain water supply during extended dry periods.
- 8. Alto's FPA is within 5% of Production Safe Yield (PSY); water levels within Alto are relatively stable; the Transition Zone water levels are also stable. Conservation, importation of State Water Project water, MWA's R-cubed program, and implementation of the Judgment have resulted in hydrologic balance in Alto. Under the conditions existing at this time Rampdown is unnecessary. The relative balanced condition between supply and demand is indicated by water levels as shown on the water level hydrographs (Figures 3-10, 3-11, and 3-12 of the 21st Annual Report). The water supply conditions in Alto Subarea are sustainable.
- 9. It is recommended that FPA in Centro remain 80% of BAP. Water levels in areas of pumping decline during dry periods and have recovered during wet periods (see Figure 3-14 of the 21st Annual Report). This pattern is expected to continue. Water production in Centro has declined from a high of 38,700 acre-feet in 1995-96 to about 19,600 acre-feet in 2013-14. In the 18 years following the 1995-96 Water Year, water production has averaged 23,400 acre-feet or a reduction of about 40% since entry of Judgment. The reduced demand is the reason the Centro Subarea is in a balanced state. Watermaster will re-evaluate conditions in Centro annually and may recommend Rampdown in the future.
- 10. Water levels have remained relatively stable over the past 15 years in Este (Figure 3-15 of the 21st Annual Report). For purposes of evaluating trends in water levels and water production we have separated Este into two broad areas; Lucerne Valley and Fifteen Mile Valley. Water levels are trending slightly upward in the area of Lucerne Valley, and slightly downward in the area of Fifteen

Mile Valley. Water production in Este last year (5,712 acre-feet) was about 5% less than the average for the past 10 years.

- 11. Water levels in Este indicate that recharge from tributary streams and washes, mountain front recharge, direct precipitation, imports from BBARWA, and return flow from all uses (total inflow) is approximately equal to the average pumping (6,000 acre-feet) plus the subsurface outflow (total outflow). We are continuing the hydrologic investigation to quantify the elements of water supply use and disposal in Este. At this time, it is recommended that FPA in Este remain at 80% of BAP and the Court ordered stay on Rampdown remain in effect.
 - 12. Last year the Court adopted the following for Oeste:

 "FPA shall remain at 80% of BAP for Agricultural Producers" and; 2) "Rampdown shall remain at 60% of BAP for Municipal and Industrial producers for 2014-15 with the reduction held in abeyance (at 80%) and, FPA shall not be reduced until water production exceeds 3,921 acre-feet. Watermaster shall review annually conditions in Oeste and continue to report to the Court and make recommendations as appropriate."
- 13. Water production in Oeste during 2013-14 was 3,421 acre-feet (excluding Well 14) which is less than the amount (3,921 acre-feet) agreed to by PPHCSD and Watermaster as a trigger for not imposing a reduction in FPA to 60% or less as necessary. Well 14, subject to litigation in the Antelope Valley, produced 799 acre-feet in 2013-14. If Well 14 is included in Oeste, the Oeste Subarea production would exceed the 3,921 acre-feet limit to avoid the reduction in FPA for Municipal and Industrial Producers. Well 14, located in Los Angeles County immediately adjacent to the San Bernardino County line, is beyond the Mojave Basin Area Adjudication limits.
- 14. Water levels in two wells (05N08W25H01 and 13R01) which are located about 2 miles north of the PPHCSD's Los Angeles County production show continuous water level decline over the period of record. As of 2012, Well 05N08W25H01 is reported as obstructed and well 13R is dry. The monitoring wells and the location of PPHCSD's Wells 10, 11, 12, and 14 are shown on Exhibit 6. Total amount of water produced by PPHCSD from Wells 10, 11, 12, and 14 in 2013-14 was 1,740 acre-feet. Water level decline in well 10 and the monitoring wells since the 1960's is a result of long

term groundwater extraction exceeding recharge to the area. The water level is falling in the area of concentrated pumping.

- Data for Well 10 reported to Watermaster by PPHCSD or its predecessor in the form of pump efficiency tests reflect standing water level on the various dates that pump efficiency tests are made. Data available to Watermaster from MWA Ordinance 8 indicates water level as of 1992. Exhibit 7 is a graphic display of this data showing the water level in 1992 and the water level at the time of various pump tests since then. The water level as indicated by the pump tests has declined between 1992 and 2010 about 70 feet in 18 years, or 3.9 feet per year. As of September 2014, the water level was about 50 feet below the 1992 level. The information compiled for Well 10 is consistent with the data previously obtained from the two USGS monitoring wells. The rise in water level indicated by Exhibit 7 in 2005 and 2011 may be related to greater than average precipitation during those years (Exhibit 8).
- 16. Continued overdraft will impact water supplies to Oeste. As indicated by water levels, the agreed upon pumping limitation (3,921 acre-feet) to forestall Rampdown in Oeste will not achieve groundwater sustainability. A primary reason for the agreement to forestall Rampdown by Watermaster is the lack of a recharge basin or the facilities necessary to import water to Oeste. Consequently, water levels will continue to fall as water is depleted from groundwater storage. This condition will not be resolved until pumping is reduced or water is imported. However, for the coming water year, imposition of the 60% Rampdown will not produce additional supply or prevent further loss of storage. As noted, the condition is not sustainable. Given the foregoing and the consideration that a recommendation for continued Rampdown might be considered for 2016-17, it is recommended that the Court adopt the same FPA for 2015-16 as the Court approved for 2014-15.
- 17. Pursuant to the Judgment additional Rampdown in Baja is warranted. FPA exceeds the Production Safe Yield (PSY) by more than 5% of BAP and current water production and consumptive use exceeds the average net long-term supply in Baja. Water levels continue to decline as much as two (2) feet or more per year in places (Exhibits 9a through 9h). Baja remains in overdraft and the current conditions are unsustainable.

27

- 18. Water production by parties to the Judgment in Baja during 2013-14 (27,858 acre-feet) decreased from 28,405 acre-feet in 2012-13; a decrease of 1.9%. There are about 180 parties to the Judgment in Baja and about 1,328 minimal producers (MWA, 2007). Total production including minimal producers is about 30,000 acre-feet. The population of Baja is about 4,575 people (MWA, 2013; based on data from CA Department of Finance data for cities and San Bernardino County data for unincorporated areas). Agricultural producers pump 23,155 acre-feet. Private recreational lakes and other lake owners named in Table B-2 of the Judgment, whose water use is primarily evaporation, pump 2,528 acre-feet (excluding re-circulated water of 5,139 acre-feet), of which 1,892 acre-feet is to replace lake evaporation and 636 acre-feet is for domestic and other uses. There is additional evaporation from smaller domestic lakes and ponds of about 273 acre-feet. Minimal Producers are estimated to pump 1,969 acre-feet (MWA, 2007).
- 19. Average water production in Baja over the past 80 years has been in excess of 30,000 acre-feet and as high as nearly 60,000 acre-feet (Exhibit 10). The first indications of overdraft appeared around 1940 (USGS, Stamos 2001). Watermaster has documented loss of riparian habitat, damage due to migrating sand, falling water levels, and has heard reports of well failures. Minimal Producers have expressed their concerns to Watermaster that their wells will go dry if over-pumping continues. The concern is that without additional water supplies to Baja and with continued pumping, the water supply for the domestic users will become impaired. All water producers have contributed to the overdraft in Baja.
- 20. Analysis by MWA Water Resources staff under my supervision indicates that there are 1,384 wells in the Baja Subarea excluding wells that are part of the Mojave Basin Area Adjudication. The data set of 1,384 wells is assumed to be representative of the minimal producer wells. Of the 1,384 wells, 1,113 of these are 250 feet deep or less (Exhibit 5). When water levels fall below the perforated intervals of the well, the wells will go dry. The wells will experience problems prior to the water level reaching the bottom of the perforated screens. Individual water well depths vary throughout the Subarea and some of the wells drilled in the past, particularly for small domestic systems, are relatively shallow (that is, they only extend a limited depth below the water table).

Particularly in the case of older shallow wells, gradual water-level declines may have already impacted them. Based on the projected average water level decline, wells with depths ranging from about 200 to 220 feet may already be experiencing problems. Factors that may affect a well's performance would include:

- a) How far down the water level is in the well (i.e., what is the current condition)
- b) How deep is the well, how much water is left, and how long until it might go dry
- c) How deep is the pump set in the well and can it be lowered
- d) How far does the water level drop when the pump cycles on (could the water level drop below the pump intake)

When a well pump switches on to fill a pressure tank, the water level in the well may drop as much as 20 feet during a pumping cycle (for a small system, 5 HP pump or less). However, in areas with lower yielding formations, or in older wells, the drop might be much higher, perhaps 50 feet or more. If water levels continue to decline any wells with water levels between 150 and 200 feet will begin to experience problems within 20 years. Historic and projected water level decline of 2 feet or greater per year will potentially affect 1,113 of 1384 wells within 20 years.

21. Staff presented four different Rampdown scenarios for discussion purposes at the January 2015 Watermaster meeting and reviewed these scenarios at the February and March meetings (Exhibit 11). The four scenarios discussed with Watermaster were; 1) Immediate Rampdown of 20%; 2) Rampdown of 5% according to the Judgment; 3) Rampdown at a slower 2.5%; 4) Differential Rampdown based on amount of Base Annual Production. Exhibit 11 was prepared under my supervision and shows the approximate date at which FPA will be within 5% or less of PSY and the date at which producers would potentially be required to purchase water from Watermaster. As shown on Exhibit 11, if water production remains unchanged from 2012-13 and FPA is reduced according to the amount corresponding to each scenario, and carryover is used to offset overproduction from year to year, there will no imported purchases until at least the date at which the graph crosses the "zero" line. For example as shown by the "Scenario B" line, FPA is about equal to Production Safe Yield in 2018-19. Pumping can be maintained at the current level after 2018-19 due to the Judgment's allowance for

transfers between parties. Parties to the Judgment are allowed to "carryover" any unused FPA for one year. The unused FPA can be transferred to another party and pumped. Assuming the pumping amount remains at current levels, and there is an "efficient market" for transfers, Exhibit 11 shows that there will be no Subarea obligation to purchase imported water, to help balance Baja until 2021-2022 or 2022-23, when the unused Free Production Allowance has been exhausted.

- 22. Watermaster heard from parties and members of the public during the January workshop, the February Watermaster meeting, and at the March hearing to adopt the FPA recommendation. Comments can be categorized as follows: 1) Rampdown immediately to Production Safe Yield; 2) take into consideration the need for additional time in order that crop changes to less water intensive crops can be made; 3) provide a differential Rampdown so that large producers have their FPA reduced more than smaller producers or more specifically, don't Rampdown smaller producers any further.
- 23. The benefits of an immediate FPA reduction of 20% would be to achieve a balance between FPA and PSY four years sooner than the 5% requirement; however a reduction larger than 5% is not specifically allowed in the Judgment (Judgment, Paragraph 24 o).
- 24. With regard to the desire to provide additional time to adjust to Rampdown, we note that the Court has recognized that PSY must be achieved, but that a 2.5% reduction in FPA allowed the community to adjust over time. For the past 6 years Baja has been on a 2.5% Rampdown schedule as an accommodation by the Court.
- 25. Analysis presented to Watermaster indicates that if water production in Baja remains unchanged a relative balance between supply and demand can be achieved by 2024 with 5% Rampdown and by 2027 with a 2.5% Rampdown.
 - 26. As to differential Rampdown, the Judgment at Paragraph 23 (a) states:
 "Standard of Performance. Watermaster shall, in carrying out its duties, powers and responsibilities herein, act in an impartial manner without favor or prejudice to any Subarea, Producer, Party or Purpose of Use."

The Judgment does not address treating classes of producers differently.

- 27. Agriculture is the largest class of producer in Baja and represents the smallest number of parties. The top 13 producers in Baja (pumping over 500 acre-feet) are agricultural producers and account for 72% of the water pumped in Baja. Agriculture, although the largest producer of water, has reduced its total pumping more than any other group. Still, agricultural pumping alone is more than twice the net natural water supply to Baja. Recreational lakes named in Table B-2 and other smaller lake owners not named in Table B-2 of the Judgment use about 2,165 acre-feet per year for evaporation. This amounts to about 19% of the Subarea natural water supply. Minimal producers use 1,969 acre-feet (MWA 2007) or about 17% of the natural water supply. Minimal producers are not subject to the Judgment, provided they pump less than 10 acre-feet per year. Approximately 71% of the minimal producers pump 1 acre-foot or less per year (Exhibit 12). Based on Exhibit 5, there are approximately 1,113 minimal producer (mostly domestic) wells at risk from a falling water table.
- 28. Differential Rampdown, in the form as presented to Watermaster would achieve a relative balance between supply and demand by Water Year 2022-23. The effect of Differential Rampdown would be to cause one class of producer to Rampdown FPA faster and further than a different class.
- 29. The amount of storage depletion as of 1999 was about 1,100,000 million acre-feet (USGS, Stamos, 2001). Since 1996, 328,000 acre-feet has been depleted from storage (Exhibit 4). The flexibility to rely on storage during periods of little or no recharge has diminished.
- 30. Rampdown of FPA will not cause water levels to stabilize unless water is purchased and recharged in the Baja Subarea. Water levels may already be at a sufficiently low level that sustainability is not possible without imported supply.
- 31. As dictated by the Judgment, I recommend that FPA in Baja be set at 50% of BAP for Water Year 2015-16 and continue reduction in 5% increments as required by the Judgment until FPA is within 5% of PSY. This is expected to occur in Water Year 2018-19. Relative balance between supply and demand is not expected to occur until 2022-23 (or by 2024) when unused FPA is exhausted.

32 follows.

32. The Watermaster adopted the recommendation for FPA for Water Year 2015-16 as

Subarea	2015-16 FPA Recommendation
Alto - Agriculture	80% of BAP
Alto - Municipal & Industrial	60% of BAP
Centro	80% of BAP
Este ¹	80% of BAP
Oeste - Agriculture	80% of BAP
Oeste - Municipal & Industrial ²	60% of BAP
Baja ³	50% of BAP

- FPA to be set at 80% of Base Annual Production for the 2015-16 Water Year. The Este Subarea may be subject to future Rampdown to 65% immediately if water use conditions change.
- 2. FPA to be set at 80% of BAP for Agriculture and 60% of BAP for Municipal and Industrial Producers for 2015-16 with the reduction held in abeyance (at 80%) and, FPA shall not be reduced until water production exceeds 3,921 acre-feet. Watermaster shall review annually conditions in Oeste and continue to report to the Court and make recommendations as appropriate.
- 3. FPA to be set at 50% of BAP for Water Year 2015-16 and continue reduction in 5% increments as required by the Judgment until FPA is within 5% of PSY. This is expected to occur in Water Year 2018-19.
- 34. Watermaster further directed that legal counsel inform the Court of Watermaster's request, (made at the hearing of March 25, 2015, when Watermaster adopted the recommendation above), that the Court give strong consideration to differential Rampdown in Baja as an alternative to the recommendation required by the Judgment. Differential Rampdown as presented to Watermaster in January, February and March 2105, would create three classes of producers in Baja for applying reduction in FPA in differing amounts. Those producers with a BAP (as of the date of any order issued pursuant to this filing) of between 0 and 100 acre-feet would not be subject to further Rampdown. Producers with a BAP of between 101 and 500 acre-feet would be subject to a 2.5% Rampdown until those producers' FPA was equal to 42.5% of their BAP. Producers with a BAP of 501 and greater would be subject to a 5% Rampdown until their FPA was 30% of BAP.

35. Difficulties with implementing a differential Rampdown include transfers of BAP between various classes of producers. We would recommend that if the foregoing was adopted, that producer Rampdown classification (0%, 2.5%, 5%) remain in effect regardless of transfers between producers. For example, if a producer is on a 2.5% schedule, that producer shall remain on that schedule regardless of BAP transfers; if that producer increases or decreases its BAP the resulting FPA would be adjusted down (but never up) to account for the different Rampdown schedule. The foregoing description of differential Rampdown is an example the Court could adopt or the Court could craft its own version.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Dated: April 14, 2015

Robert C. Wagner, P.E.

Declaration of Robert C. Wagner in Support of Motion to Adjust Free Production Allowance for Water Year 2015-16

EXHIBIT 1



Nicholas F. Bonsignore, P.E. Robert C. Wagner, P.E. Paula J. Whealen Henry S. Matsunaga

David H. Peterson, CEG, CHG David Houston, P.E. David P. Lounsbury, P.E. Vincent Maples, P.E. Emily MacDonald Ryan E. Stolfus James C. Hanson
Consulting Civil Engineer
A Corporation

ROBERT C. WAGNER PROFESSIONAL RESUME

REGISTRATION:

Civil Engineer, California (License No. 52903) Civil Engineer, Nevada (License No. 021017)

EDUCATION:

B.S. Civil Engineering - California State University, Sacramento, CA - 1988

EXPERIENCE:

Mr. Wagner is the president of Wagner & Bonsignore Engineers and is a Registered Civil Engineer in California and Nevada, with 25 years' experience in water resources management, water right analysis, surface and groundwater water hydrology and land use evaluations for municipal and agricultural projects. Mr. Wagner has been the court appointed engineer for the Mojave Watermaster for over 19 years and has provided expert witness testimony on various matters related to water resources and water rights in court and before the State Water Resources Control Board. Mr. Wagner has demonstrated expertise in areas of consumptive use analysis, watershed hydrology, facility design for storm water capture and analysis of return flow to support water transfers, administration of court ordered judgments and water supply sustainability.

Mr. Wagner serves a wide variety of private and public clients throughout California, managing projects from concept to implementation. Mr. Wagner's work includes pre-1914 appropriative water right investigation, analysis of riparian and overlying water rights and appropriative rights administered by the State Water Resources Control Board.

Mr. Wagner has demonstrated communication skills to work with a wide range of legal and technical professional and stakeholder groups. He has strong organizational and analytical skills and a recognized ability to provide cost effective solutions to difficult water resource problems.

RECENT EXPERIENCE INCLUDES THE FOLLOWING:

District Engineer for Reclamation District 341 Sherman Island, Sacramento County

District Engineer for Reclamation District 348 New Hope Tract, San Joaquin County

Provide engineering consulting services on behalf of Antelope Valley East Kern Water Agency in connection with quantification of return flow from water used for irrigation and other uses.

Provide engineering consulting services on behalf of Los Angeles World Airports in connection with quantifying water use from various sources for irrigation.

Provide engineering consulting services on behalf of San Joaquin County in connection with water right applications and water resources management within San Joaquin County.

Provide engineering services for Chino Basin Water Conservation District, San Bernardino County in connection with storm water recharge in Chino Basin.

Watermaster Engineer for Orange County Water District; perform analysis of hydrologic and water quality data for the Santa Ana River Watershed for Water Year 2009-10; distinguish storm flow and base flow at Prado Dam and at Riverside Narrows, preparation of portions of the Watermaster's annual report to the Court.

Provide engineering services for Lake Alpine Water Company / Alpine County in connection with the State Water Resources Control Board water right hearing and hydrology of South Fork Stanislaus River for State Filed Application 5648.

Provide Engineering services for Natomas Mutual Water Company, in connection with the water rights. Evaluation of water rights for 51,000 acres of agricultural operation, water right analysis and water transfers.

Provide engineering services on behalf of City of Sacramento in connection with the Water Resources of the American River.

Provide engineering services on behalf of City of Ukiah in connection with water rights and hydrology of the Russian River, Mendocino County.

Provide engineering services on behalf of Sonoma County Water Agency in connection with development of agricultural reuse project for use of treated wastewater for vineyard irrigation.

Provide engineering services in connection with analysis of water production and hydrologic data for development of water use agreements for over 100 growers in the Dry Creek Valley in Sonoma County.



Provide engineering services for City of Santa Maria in connection with the hydrologic resources of the Santa Maria Groundwater Basin.

Engineering expert in the matter of Bonadiman v. Evans in San Bernardino Superior Court on behalf of prevailing party Evans. Research and documentation of water development and water right acquisition dating to 1883.

Provide engineering services for The Wildlands Conservancy in connection with water resource matters for extensive land holdings in San Bernardino and Kern Counties.

Provide engineering services for Wells Fargo Bank in connection with the analysis of water rights and water availability on the Kern River.

Watermaster Engineer for the Mojave Basin Area Watermaster in the matter of the Mojave River Adjudication, City of Barstow, et al, vs. City of Adelanto, et al. Collection and analysis of data for preparation of Annual Watermaster Report, including groundwater production and hydrology studies of the Mojave River System and groundwater basin in connection with storm flow base flow separation determination and the analysis of water transfers and land use changes. Preparation of Annual Watermaster report.

Provide engineering services on behalf of the Mojave Water Agency in connection with Mojave Basin Area Adjudication. Coordinate activities for professional and sub-professional staff for collection, analysis and verification of water production records for approximately 7,000 wells in the Mojave River Basin. Participate in meetings of the Joint Engineer-Attorney Drafting Committee formed to negotiate and draft the Stipulated Judgment. Participation in the drafting and ongoing revisions of the Watermaster Rules and Regulations.

Provide engineering services in connection with for the Warren Valley Basin Watermaster, San Bernardino County. Analysis of groundwater production records and basin hydrology for preparation of Annual Watermaster Report.

Provide engineering services in connection with work for East Valley Water District, San Bernardino County, regarding the analysis of surface and subsurface hydrology of the Santa Ana River and the availability of water for the Seven Oaks Dam Project and fully appropriated listing of the Santa Ana River.

Provide engineering services on behalf of Kirkwood Associates before the State Water Resources Control Board in the matter of South Fork American River Hearings, October 1995. Analysis of the South Fork American River and Caples Creek hydrology in connection with same.

Provide engineering services in connection with work for High Desert Water District, San Bernardino County, regarding the analysis of water quality and ground water elevation data for monitoring the potential impacts of ground water extractions from the Ames Valley Basin.



Provide engineering services in connection with work for Hidden Valley Lake Community Services District, Lake County, regarding the hydrologic analysis of Upper Putah Creek Watershed and the Coyote Valley groundwater basin in support of amendments to fully appropriated stream status and applications to appropriate surface and subsurface water from Putah Creek; continued monitoring of the Coyote Valley groundwater basin in connection with administration of water rights.

CONTINUING EDUCATION

- "California Environmental Quality Act Update", University of California, Davis February 1992
- "California Water Law", University of California, Davis November 1989 to January 1990
- "Understanding Wetlands and 404 Permitting", ASCE July 1997
- "Fundamentals of Water Rights and Colorado River Issues", University of Nevada, Las Vegas January 1998
- "Fundamentals of Groundwater Hydrology", UC Berkeley Extension, July 2002



Declaration of Robert C. Wagner in Support of Motion to Adjust Free Production Allowance for Water Year 2015-16

EXHIBIT 2

Bibliography

- Judgment After Trial with Exhibits, City of Barstow, et al. vs. City of Adelanto, et al., Riverside County Superior Court Case No. 208568, January 1996
- Statement of Amended Decision, City of Barstow, et al. vs. City of Adelanto, et al., Riverside County Superior Court Case No. 208568, January 1996
- Mojave Basin Area Watermaster, Annual Report, Water Years 1993-94 Through 2013-14
- Mojave River Groundwater Basins Investigation, California Department of Water Resources, Bulletin 84, August 1967
- Water Production Verification Program, Edward Fitzgerald Dibble, Consulting Engineer, June 1967; 1973
- Annual Engineer's Report on Water Supply, Mojave Water Agency, Water Years 1994-95
 Through 1998-99
- Annual Groundwater Level Monitoring Program for 1998, 1999 and 2002, Mojave Water Agency
- Consumptive Water Use Study and Update of Production Safe Yield Calculations for the Mojave River Basin, Albert A. Webb Associates, February 2000
- Groundwater and Surface Water Relations Along the Mojave River, Southern California, United States Geological Survey, Water Resources Investigations Report 95-4189 (1996)
- Riparian Vegetation and Its Water Use During 1995 Along the Mojave River, Southern California, United States Geological Survey, Water Resources Investigations Report 96-4241 (1996)
- Data and Water-Table Map of the Mojave River Groundwater Basin, San Bernardino, California, November 1992, United States Geological Survey, Water Resources Investigations Report 95-4148
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Mojave River Discharge Records for the period 1930-31 Through 2013-14

Deep Creek Near Hesperia, CA

West Fork Mojave River Near Hesperia, CA

Mojave River At Lower Narrows Near Victorville, CA

Mojave River At Barstow, CA

Mojave River At Afton, CA

Precipitation Records

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Barstow, 1930-31 Through 2013-14

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EXHIBIT 3 TABLE 5-2

SUBAREA HYDROLOGICAL INVENTORY BASED ON LONG TERM AVERAGE NATURAL WATER SUPPLY AND OUTFLOW AND 2013-14 IMPORTS AND CONSUMPTIVE USE

(ALL AMOUNTS IN ACRE-FEET)

WATER SUPPLY	<u>Este</u>	Oeste	Alto	Centro	<u>B</u> aja	Basin Totals
Surface Water Inflow						
Gaged	0	0	65,500	0	0	65,500
Ungaged	1,700	1,500	3,600	34,700	17,153 ²	
Other Ungaged	0	0	0	0	205 4	205
Subsurface Inflow	0	0	1,000	2,000	1,581 5	
Deep Percolation of Precipitation	0	0	3,500	0	100	3,600
Imports			•			-,
Replacement Water Deliveries	0	0	4,320	0	0	4,320
Water Storage Accounts ⁷	0	0	4,300	0	0	4,300
Lake Arrowhead CSD	0	0	751	0	0	751
Big Bear Area RWA	1,892	0	0	0	0	1,892
TOTA	L 3,592	1,500	82,971	36,700	19,039	88,115
CONSUMPTIVE USE AND OUTFLOW						
Surface Water Outflow						
Gaged	0	0	0	0	5,611 ⁸	5,611
Ungaged	0	0	34,700	16,406 ⁹	0	0
Subsurface Outflow	200	800	2,000	1,581	0	0
Consumptive use			•	,	_	•
Agriculture	3,800	700	400	6,400	14,600	25,900
Urban ¹⁰	1,700	1,200	42,900	5,900	5,000	56,700
Phreatophytes	0	0	11,000	3,000	2,000	16,000 ¹¹
Exports	0	0	0	0	0	0
TOTA	L 5,700	2,700	91,000	33,287	27,211	104,211
Surplus / (Deficit)	(2,108)	(1,200)	(8,029)	3,413	(8,172)	(16,096)
Total Estimated Production (Current Year) 12	6,666	3,659	81,073	21,169	30,086	142,653
PRODUCTION SAFE YIELD (Current Year)		2,459	73,044	24,582	21,914	126,557

Estimated from reported flows at USGS gaging station, Mojave River at Victorville Narrows.

Estimated from reported flows at USGS gaging station, Mojave River at Barstow. Includes 16,406 acre-feet of Mojave River surface flow across the Waterman Fault estimated by "Evaluations of Potential Mojave River Recharge Losses between Barstow and Waterman Fault", Wagner & Bonsignore, 2012 (see Appendix A, Table 6), and 747 acre-feet of local surface inflow from Kane Wash and Boom Creek.

Represents the sum of Este (1,700 ac.ft.), Oeste (1,500 ac.ft.), Alto (3,600 ac.ft.) and Baja (747 ac.ft. from Kane Wash and Boom Creek).

⁴ Estimated contribution from washes (Wagner, 2011).

⁵ USGS Stamos 2001.

⁶ Inter subarea subsurface flows do not accrue to the total basin water supply.

Water that was pre-purchased under the MWA Claim Program.

Based on stormflow at Afton for water years 1931, 1953-78, 1981-1990 (from USGS) 1979-1980 estimated by Hanson Engineering 1992 plus base flow of 137 acre-feet (Watermaster 2010)

Estimated from reported flows at USGS gaging station, Mojave River at Barstow (see note #2 above).

¹⁰ Includes consumptive use of "Minimals Pool".

From USGS Water-Resurces Investigation Report 96-4241 "Riparian Vegetation and Its Water Use During 1995 Along the Mojave River, Southern California" 1996.

¹² Based on Water Production Data for the 2013-14 Water Year.

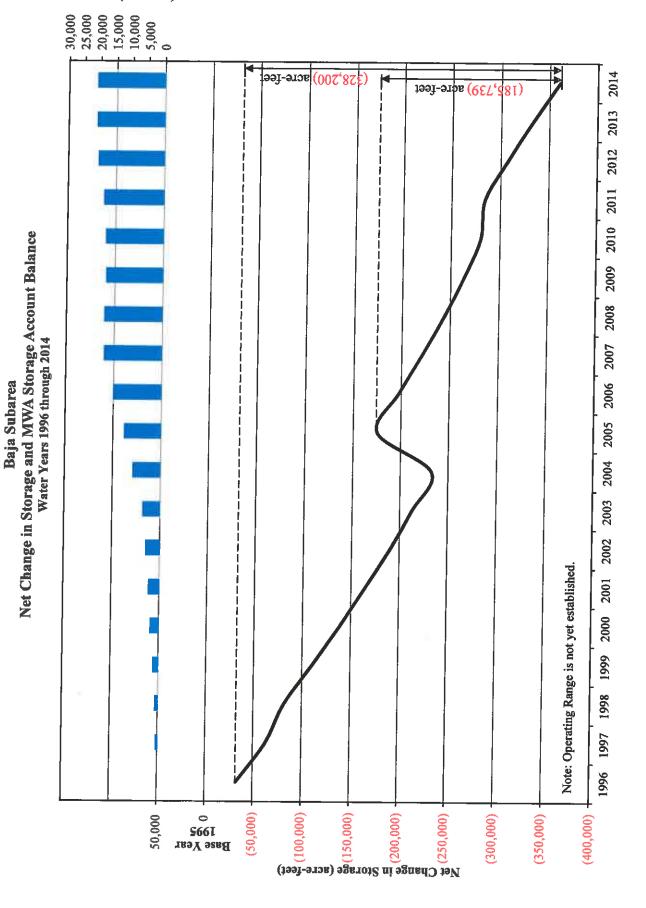
Included in the production values are the estimated minimal producer's water use by Subarea.

For 2013-14 Water Year. Imported State Water Project water purchased by MWA is not reflected in the above table.

Declaration of Robert C. Wagner in Support of Motion to Adjust Free Production Allowance for Water Year 2015-16

MWA Storage Account Balance (acre-feet)

EXHIBIT 4

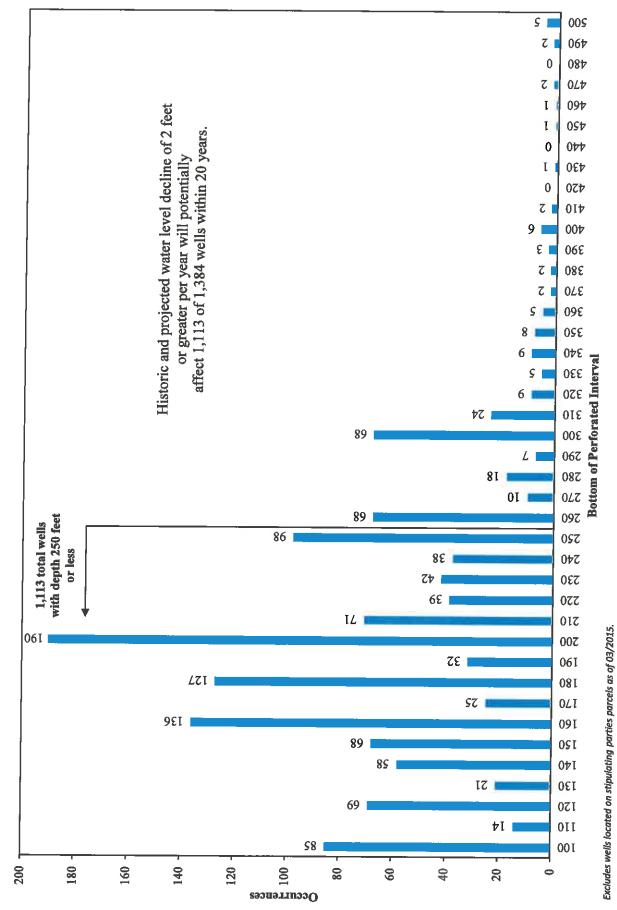


Source: Consumptive Use for 1996-2011 per Robert C. Wagner, Watermaster Engineer. Consumptive Use for 2012-2014 based on analysis of individual producers, Robert C. Wagner, Watermaster Engineer, 2015.

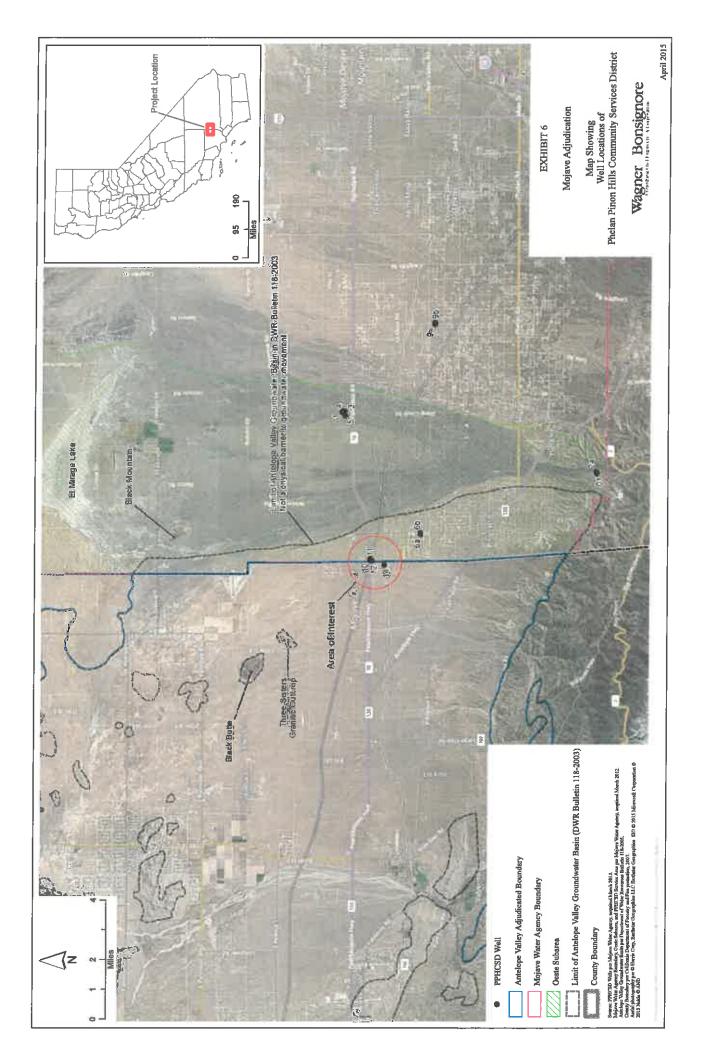
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EXHIBIT 5

Baja Subarea Wells at Risk From Falling Water Levels



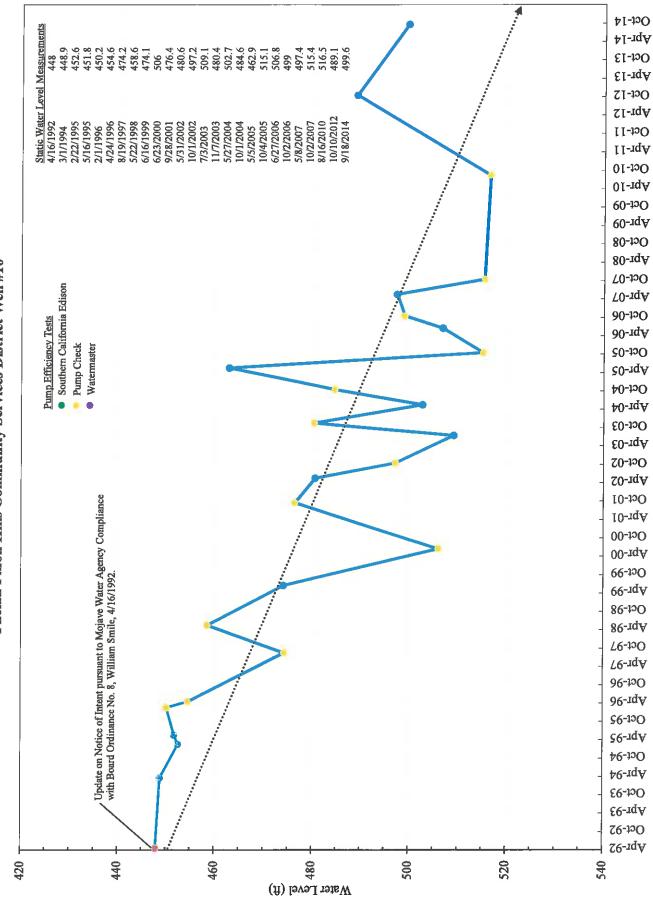
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EXHIBIT 7

Phelan Pinon Hills Community Services District Well #10



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EXHIBIT 8

Precipitation in the Phelan/Pinon Hills Area

Palmdale ⁵	3.91	5,85	2.22	9.03	5.08	20.96	6.74	2.03	4.21	6.03	8.69	Record Not Complete	Record Not Complete	1.47	4.47	6.21
Palmdale Airport	0.8	5.9	1.97	7.42	3.41	16.64	6.33	1.09	3.36	5.22	6.78	4.8	2.73	1.14	5.13	5.09
Palmdale ³	No Record	No Record	No Record	No Record	No Record	Record Not Complete	5.22	4.25	4.12	8.18	12.51	9.21	2.62	1.03	4.43	5.73
Victorville Pump Pt ³	2.3	4.91	1.87	7.52	4.16	Record Not Complete	3.96	Record Not Complete	Record Not Complete	Record Not Complete	8.05	10.81	4.64	1.68	1.87	4.71
Victorville ²	3.31	5.39	2.86	Record Not Complete	6.17	21.1	5.4	1.37	4.52	3.52	10.29	Record Not Complete	5.32	1.97	0.33	5.50
Phelan ¹	No Record	No Record	No Record	No Record	No Record	No Record	No Record	No Record	0.32	3.16	7.12	89.6	5.02	1.39	0	3.81
Water Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average

ources

¹ Weather Underground Station KCAPHELA3 in Phelan (http://www.wunderground.com/personal-weather-station/dashboard?ID=KCAPHELA3)

² CIMIS Station 117, Victorville (http://www.cimis.water.ca.gov). Total precipitation for water year 2003 was recorded as 44.21", with 32.62" occurring in the month of February. Additionally, total precipitation for water year 2011 was recorded to be 20.34", with 7.45" occuring in February. These measurements are believed to be an error as they are

inconsistent with all other available data in the area. Therefore, water years 2003 and 2011 have been omitted from the analysis. ³ Victorville Pump Pt, Western Regional Climate Center (http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9325)

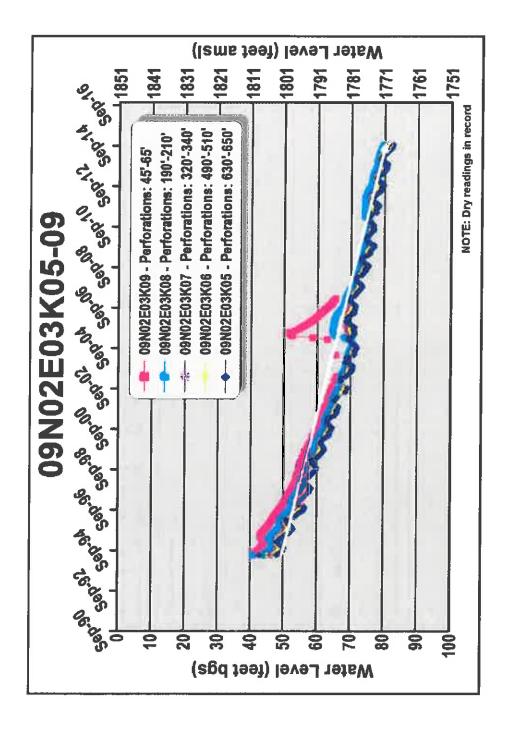
³ CIMIS Station 197, Palmdale (http://www.cimis.water.ca.gov)

⁴ Weather Underground Station KPMD, Palmdale Airport (http://www.wunderground.com/history/airport/KPMD)

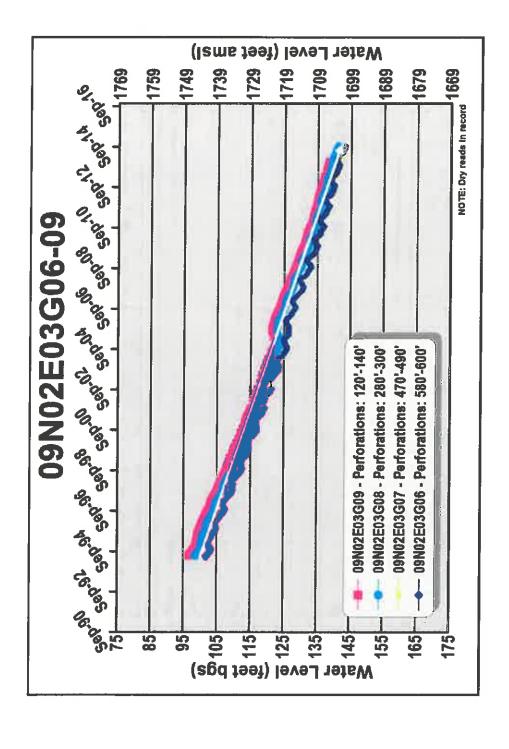
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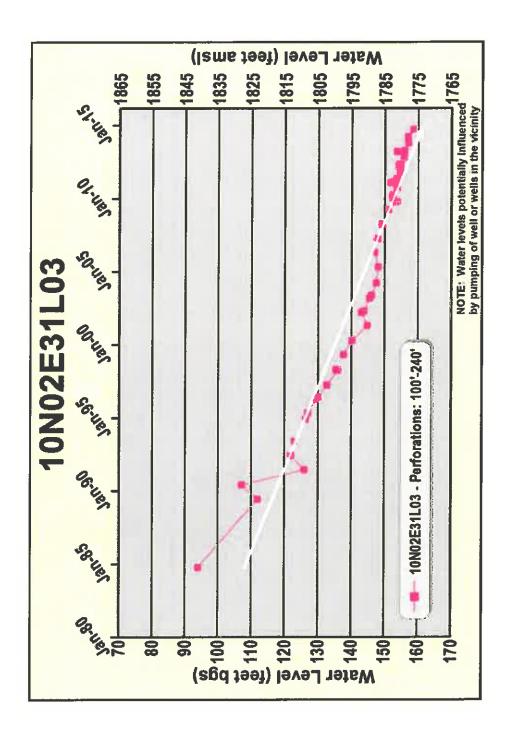
Hydrograph – Baja Subarea



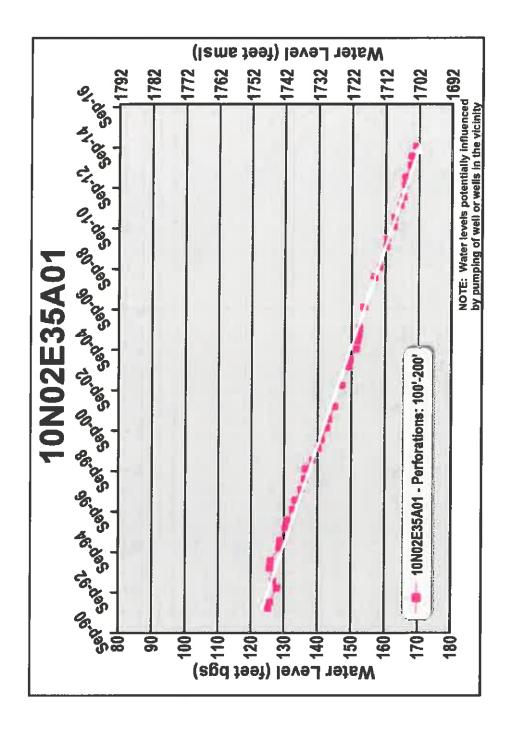
Hydrograph – Baja Subarea



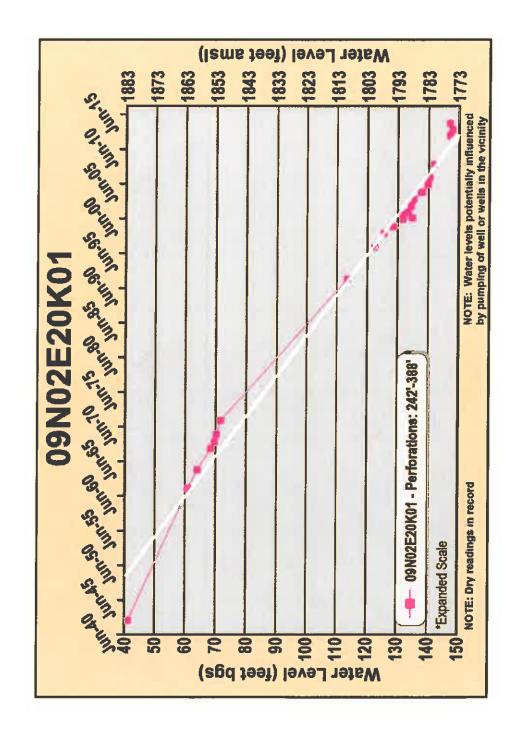
Hydrograph – Baja Subarea



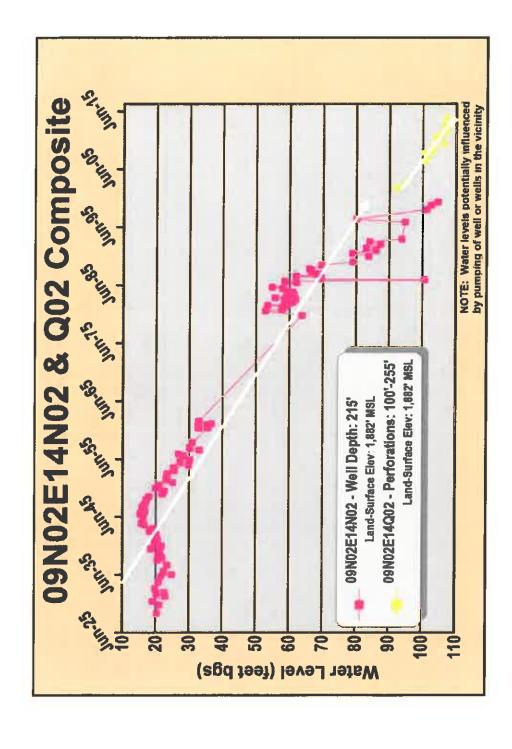
Hydrograph – Baja Subarea



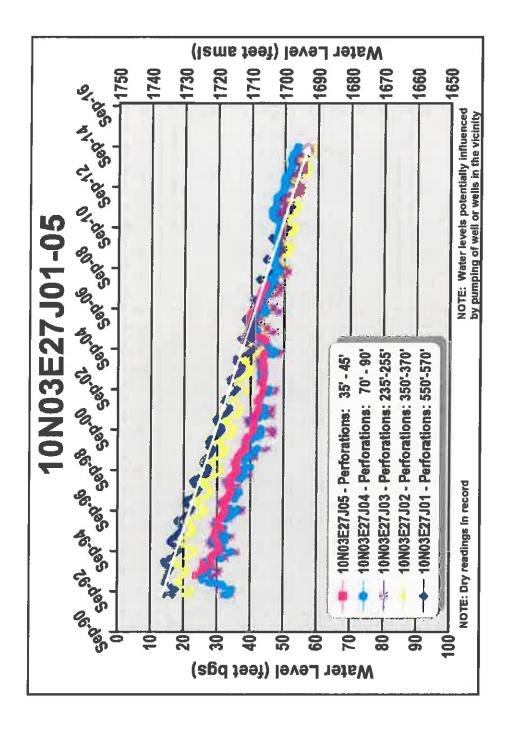
Hydrograph – Baja Subarea



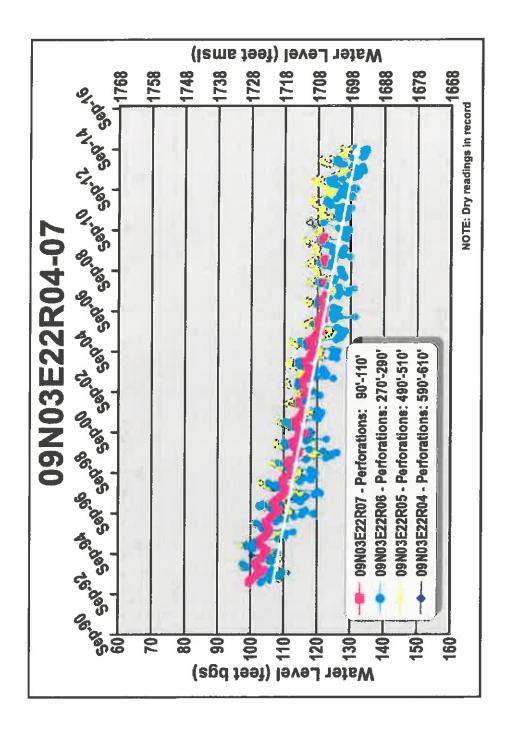
Hydrograph – Baja Subarea



Hydrograph – Baja Subarea

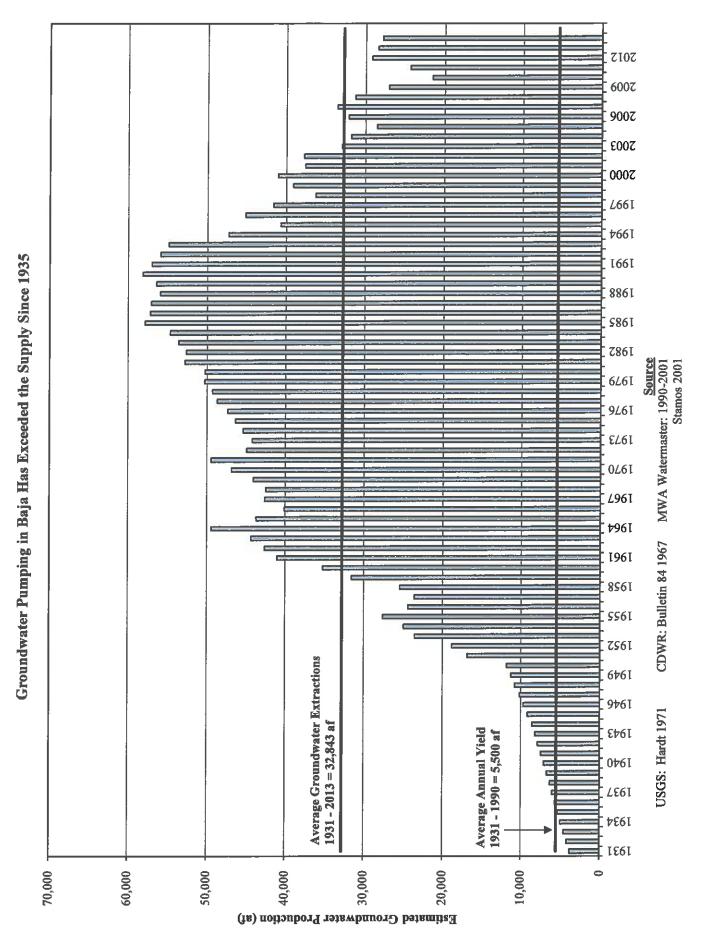


Hydrograph – Baja Subarea



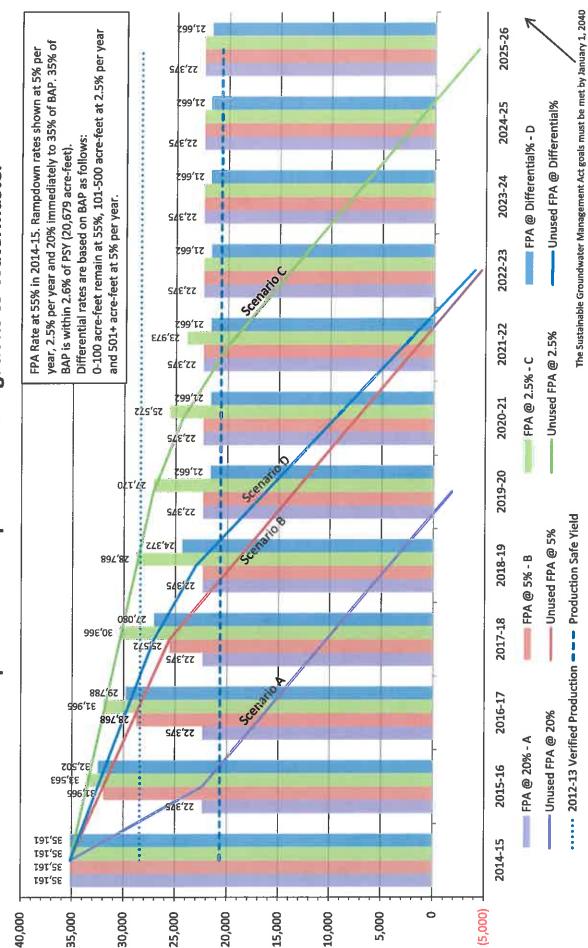
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EXHIBIT 10

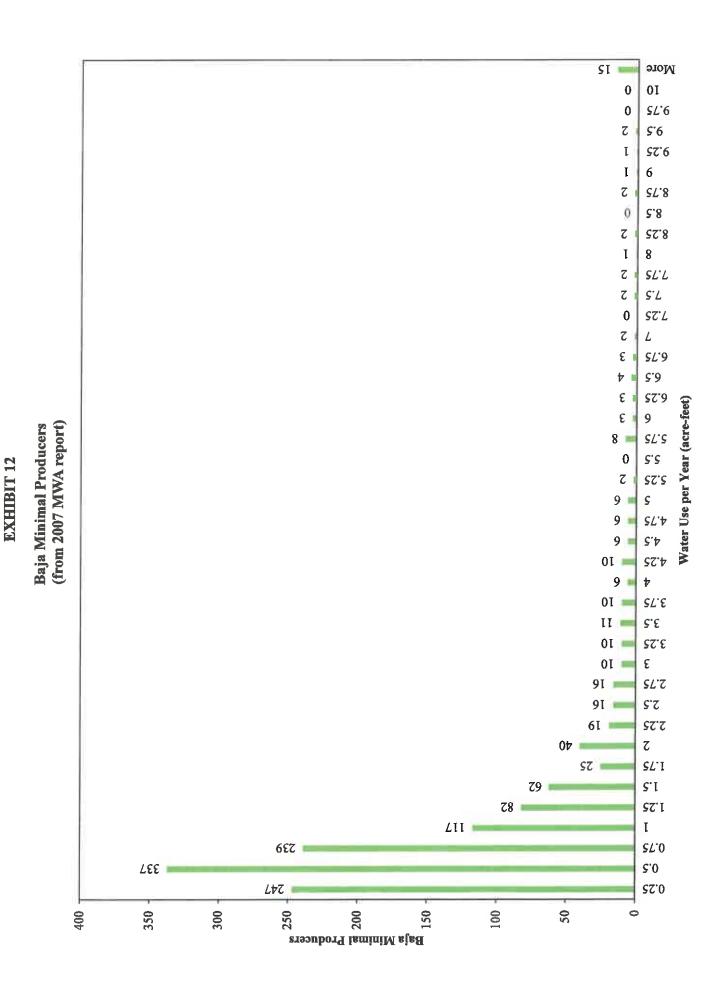


Declaration of Robert C. Wagner in Support of Motion to Adjust Free Production Allowance for Water Year 2015-16

and their Implication on Replacement Obligations to Watermaster **Analysis of Different Rampdown Scenarios** Baja Subarea **EXHIBIT 11**



Declaration of Robert C. Wagner in Support of Motion to Adjust Free Production Allowance for Water Year 2015-16



Motion to Adjust Free Production Allowance for Water Year 2015-16

Due to file size (14 MB), Exhibit C is available as a separate file posted online at: http://www.mojavewater.org/courtservices.html

PROOF OF SERVICE

STATE OF CALIFORNIA } COUNTY OF SAN BERNARDINO}

I am employed in the County of the San Bernardino, State of California. I am over the age of 18 and not a party to the within action; my business address is 13846 Conference Center Drive, Apple Valley, California 92307.

On April 14, 2015, the document(s) described below were served pursuant to the Mojave Basin Area Watermaster's Rules and Regulations paragraph 8.B.2 which provides for service by electronic mail upon election by the Party or paragraph 10.D, which provides that Watermaster shall mail a postcard describing each document being served, to each Party or its designee according to the official service list, a copy of which is attached hereto, and which shall be maintained by the Mojave Basin Area Watermaster pursuant to Paragraph 37 of the Judgment. Served documents will be posted to and maintained on the Mojave Water Agency's internet website for printing and/or download by Parties wishing to do so.

Document(s) filed with the court and served herein are described as follows:

NOTICE OF MOTION AND MOTION TO ADJUST FREE PRODUCTION ALLOWANCE FOR WATER YEAR 2015-16; MEMORANDUM OF POINTS AND AUTHORITIES AND DECLARATION OF ROBERT C. WAGNER IN SUPPORT THEREOF.

X (STATE) I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

Executed on April 14, 2015 at Apple Valley, California.

evetein

Valerie Wieg**er**istein