INYO/LOS ANGELES
Technical Group

REPORT TO THE STANDING COMMITTEE

DATE: April 15, 2014

SUBJECT: AREAS OF AGREEMENT AND DISAGREEMENT OF THE TECHNICAL GROUP WITH REGARD TO THE ISSUES OF ATTRIBUTABILITY AND SIGNIFICANCE IN THE BLACKROCK 94 DISPUTE

On February 3, 2011, the County presented a report to the Technical Group which alleged that "*available factual and scientific data indicate that a measurable vegetation change since baseline has occurred in Blackrock 94, both in terms of vegetation cover and species composition. These changes occurred between baseline and 1991 and have persisted in time… Vegetation degradation is primarily attributable to changes in water availability resulting from groundwater pumping and reduced surface water diversions into the vicinity of Blackrock 94. The factors prescribed in the LTWA and Green Book for assessing the significance of an impact were evaluated and indicate that a significant change is occurring in Blackrock 94*" (ICWD 2011, page 66, paragraph 2). For the Technical Group to find that an impact is significant, the Water Agreement and the Green Book require that the Technical Group make three determinations: (1) that an alleged change in vegetation cover or composition is measurable, (2) if so, that the change is attributable to groundwater pumping or changes in surface water practices, and (3) if so, that the measurable change is significant.

During the following year, the Technical Group was unable to resolve the issue. As provided in the Water Agreement, on May 1, 2012, the County formally commenced the dispute resolution process by requesting the Technical Group to resolve issues involving vegetation parcel Blackrock 94. The Technical Group was unable to resolve the issues and written reports were submitted to the Standing Committee explaining the issues raised by the County and LADWP. At its September 26, 2012, meeting, the Standing Committee was unable to resolve the issues regarding Blackrock 94.

In the months following the Standing Committee meeting, further attempts to resolve the issues in dispute were unsuccessful. The Water Agreement provides that if the Standing Committee is unable to resolve a dispute, a party may submit the dispute to a panel for Mediation/Temporary Arbitration. On April 26, 2013, the County notified the LADWP of its intent to seek mediation/temporary arbitration. The Water Agreement

provides for a three member Mediation/Temporary Arbitration Panel ("Arbitration Panel") with one member appointed by the County, one by LADWP and a third member appointed the members appointed by the parties.

Pursuant to a stipulation by the parties, the requests for resolution submitted to Mediation/Temporary Arbitration were:

The County's Request:

> The County requests a determination by the mediators/temporary arbitrators that LADWP's groundwater pumping and reductions in surface water diversions in the Blackrock 94 area have caused a measurable and significant change in the vegetation conditions in violation of the provisions of the LTWA. The County further requests the Panel to order that, as required by section IV.A of the Water Agreement, reasonable and feasible mitigation of this significant impact be commenced within twelve (12) months of the determination by the mediators/temporary arbitrators that a significant effect on the environment has occurred at Blackrock 94.

The Requests by LADWP:

> a. With regard to the County's determination that there has been a measurable change in the environment at Blackrock 94, LADWP requests that the mediators/temporary arbitrators find that the County did not follow and conform to all the required rules, procedures and protocols in the Water Agreement, Green Book and 1991 EIR when it performed the vegetation monitoring, vegetation data collection, vegetation analysis (including the selection of analytical methods, assumptions made, and inputs used when conducting an analysis) and, therefore, the mediators/temporary arbitrators are unable to find that there has been a measurable change in the environment at Blackrock 94.
> and/or
> b. With regard to the County's determinations that a measurable, attributable, and significant effect has occurred at Blackrock 94, LADWP requests that the mediators/temporary arbitrators find that County did not follow and conform to required rules, procedures and protocols of the Water Agreement, Green Book, and 1991 EIR and, therefore, the mediators/temporary arbitrators are unable to find that a measurable, attributable and significant effect has occurred at Blackrock 94.

In support of their positions, opening, response and reply briefs were submitted to the Arbitration Panel. The Panel conducted a hearing on the dispute on October 9 and 10, 2013. On October 26, 2013, the Panel issued an "Interim Order and Award"

which found that the parties had previously found that a measureable change in vegetation has occurred in Blackrock 94, but that the Technical Group had not adequately addressed the issues of "attributability" and "significance." Therefore, the Interim Order and Award remanded the matter to the Technical Group so that it may "carry out its dispute resolution functions" and required both the City and the County to provide reports to the Technical Group addressing if the measurable change was attributable to LADWP's pumping operations and/or changes in LADWP's past surface water management practices or if the measurable change was attributable to another factor or factors. The Interim Order and Award also required the Technical Group to consider the significance of the measurable change upon the vegetation of Blackrock 94 pursuant to the provisions of Water Agreement Section IV.B and Green Book Section I.C.

The required reports were submitted to the Technical Group. At its meeting on April 11, 2014, the Technical Group was unable to resolve the "attributability" and "significance" issues. In accordance with the Water Agreement, the Technical Group is submitting this report to the Standing Committee which describes the Technical Group's areas of agreement and disagreement on the two issues.

The Arbitration Panel has directed that the Standing Committee meet promptly after receiving this report and is to provide its decision and conclusions in writing to the parties and the Arbitration Panel no later than May 1, 2014. If the dispute is not resolved by the Standing Committee, the Arbitration Panel will convene a hearing in Los Angeles on May 15, 2014 to consider the evidence, the reports of the Technical Group and the Standing Committee, the arguments of the of the parties, and to render its Final Award in this dispute.

I. GENERAL

A. Areas of Agreement

1. Measurability (agree): The parties agree that a measurable change in vegetation has occurred in vegetation parcel Blackrock 94.

II. ATTRIBUTABILITY

Overview:

1. **ICWD has concluded the primary reason for measureable vegetation change is groundwater pumping and reductions in surface water diversions.**

2. **LADWP has concluded that the primary reason for measurable vegetation change is variations in wet/dry climactic cycles (including variations in precipitation, runoff, and water spreading in high runoff years).**

A. Areas of Agreement

1. Attributability procedures (agree): The parties agree that "*…it must be determined whether the impact is attributable to groundwater pumping or to changes in surface water management practices*" (Green Book, Sec. I.C.1.b; Water Agreement, Sec. VI.B).

2. Water Agreement criteria for attributability (agree): The parties agree that Section IV.B of the Water Agreement (and Section I.C of the Green Book) further provides a standard for the Technical Group to use in determining whether a change is attributable to LADWP's water gathering operations:

> *"Decreases or changes in vegetation and other environmental effects shall be considered "attributable to groundwater pumping, or to a change in surface water management practices," if the decrease, change, or effect would not have occurred but for groundwater pumping and/or a change in past surface water management practices. This shall be determined by an analysis of all relevant factors…"*

3. Runoff conditions affecting Blackrock 94 (agree): The parties agree that high runoff conditions resulted in relatively high water tables beneath Blackrock 94 during the mid-1980's:

> "The increased precipitation and runoff between 1978 and 1986, and resultant increases in water spreading, caused groundwater levels in the area of Blackrock 94 to increase" (LADWP 2013 report, page 13, paragraph 1).
>
> "These results indicate that high runoff and recharge conditions during the mid-1980's baseline period resulted in relatively high water tables at that time, consistent with the high surface water uses and losses in the mid-1980's…" (ICWD 2011 report, page 52, paragraph 2).

4. Constraints on groundwater modeling (agree): The parties agree that currently available groundwater models have limited ability to accurately simulate drawdown at Blackrock 94:

> "It should also be noted that that none of the currently-available computer models, including the regional USGS model of Owens Valley, were developed for the specific purpose of simulating the groundwater beneath Blackrock 94 or at the Hatchery." (LADWP 2013 report, page 41, paragraph 2).

"We agree with LADWP's comments regarding the limitation of either groundwater model to accurately simulate drawdown at Blackrock 94 (LADWP, 2013, p. 41)…" (ICWD 2014 report, page 14, paragraph 2).

5. Value of groundwater modeling (agree): The parties agree that groundwater models are useful tools for simulating water table changes on a regional scale:

   "A regional groundwater model for the area covering Taboose-Aberdeen and Thibaut-Sawmill wellfields was also utilized to evaluate the relative effect of pumping and recharge-driven runoff on groundwater levels…" (LADWP, 2013, page 41).

   "In order to determine the relative effects on Blackrock 94 of recharge, pumping from wells at the Blackrock Hatchery, and pumping from other LADWP wells, four scenarios were modeled using the USGS regional groundwater flow model for Owens Valley…" (ICWD, 2011, page 51).

6. Measurable changes in vegetation cover (agree): The parties agree that a decrease in grass in the Blackrock 94 parcel is the primary cause of measureable changes in perennial vegetation cover and composition in the parcel (LADWP 2013 report, page 216; ICWD February 2013, page 1).

7. Trends in water table changes (agree): While the parties are not always in agreement regarding depth to water beneath Blackrock 94, there is general agreement regarding the relative trends in water table changes.

8. Additional factors affecting vegetation cover (agree): The parties agree that grazing, fire and the expansion of Highway 395 have affected vegetation cover in the Blackrock 94 parcel; however, grazing, fire, and Highway 395 expansion are not the primary reasons for measurable changes in vegetation cover in the parcel.

A. Areas of Disagreement

1. Attributability of wet/dry cycles on vegetation change (disagree): The ICWD disagrees with LADWP's conclusion that "changes in vegetation cover and composition from that measured in LADWP's 1986 initial vegetation inventory are attributable to fluctuations in wet/dry climatic cycles (including runoff, water spreading and precipitation) and not attributable to LADWP's groundwater pumping or to changes in past surface water management practices" (LADWP 2013 report, page 233).

2. Attributability of groundwater pumping on vegetation change (disagree): LADWP agrees with the ICWD's conclusion that wet/dry climatic cycles are a contributing

factor to variations in vegetation conditions; however, LADWP disagrees with the ICWD's conclusion that "vegetation degradation is primarily attributable to changes in water availability resulting from groundwater pumping…" (ICWD 2011 report, page 66).

3. Modeling of Blackrock Fish Hatchery pumping (disagree): The parties disagree about how to properly represent Blackrock Fish Hatchery pumping in the groundwater model simulations of Blackrock 94 (LADWP 2013 report, Section 5.1.5, page 25; ICWD 2014 report, page 17).

4. LADWP's control parcels (disagree): The ICWD disagrees with LADWP's selection of control parcels PLC106, LNP018, and UNW029.

5. ICWD's control parcels (disagree): LADWP disagrees with the ICWD's selection of control parcel BLK099 (Blackrock 99).

6. Applicability of Spectral Mixture Analysis (disagree): LADWP disagrees with the ICWD's application of Spectral Mixture Analysis (SMA) to determine attributability (ICWD 2014 report, page 40; LADWP's 2014 report, sections 3.2.9 and 5.1).

7. Applicability of groundwater modeling (disagree): LADWP does not agree with the ICWD assertion that "groundwater modeling is the most applicable tool available to determine how groundwater pumping has affected the water table" (ICWD 2014 report, page 83, paragraph 2).

A. SIGNIFICANCE

Overview:

1. **LADWP has found the measurable vegetation changes in Blackrock 94 to not be significant.**

2. **ICWD has found the measurable vegetation changes in Blackrock 94 to be significant.**

A. Areas of Agreement

1. Significance procedures (agree): The parties agree that Water Agreement Section IV.B provides:

> *If the decrease, change, or effect is determined to be attributable to groundwater pumping or to changes in past surface water*

management practices, the Technical Group shall then determine whether the decrease, change, or effect is significant (Water Agreement, page 19, paragraph 2).

2. Line-point vegetation transects (agree): The parties agree that vegetation data from line-point transects shall be used in cases of suspected vegetation changes. The Green Book provides:

   "Vegetation transects shall also be used in cases of suspected vegetation changes due to groundwater pumping…(and) …plant cover shall be measured by the line-point technique…" (Green Book Box I.C.1.a.ii (2), page 22). Both the ICWD, 2011 and LADWP, 2013 reports analyze vegetation data collected using the line-point method.

3. Effects on rare plants (agree): Neither party found any effect on rare or endangered species or other vegetation of concern at Blackrock 94.

4. Effects on Human health (agree): Neither party found any effect on human health at Blackrock 94.

5. Effects on Air quality (agree): Neither party found that any air quality standard has been violated at the Blackrock 94 parcel.

B. Areas of Disagreement

1. Significance determination (disagree): The ICWD disagrees with LADWP's conclusion that "changes in vegetation cover and composition from that measured in LADWP's 1986 initial vegetation inventory are attributable to fluctuations in wet/dry climatic cycles and not attributable to groundwater pumping or to changes in past surface water management practices. Therefore, pursuant to the terms of the Water Agreement, a determination of significance cannot be made" (LADWP 2013 report, pages 233 and 234).

2. Significance determination (disagree): The ICWD disagrees with LADWP's conclusion that "LADWP evaluated the significance of vegetation change in Blackrock 94 and, following the provisions of Green Book Section I.C.1.c, found the factors requiring a determination of significant to not have been met." (LADWP 2013 report page 234).

3. Significance determination (disagree): LADWP disagrees with the ICWD's conclusion "the factors prescribed in the Water Agreement and Green Book for assessing the significance of an impact were evaluated and

indicate that a significant change is occurring in Blackrock 94." (ICWD 2011 report, page 66).

4. Significance (disagree): LADWP disagrees with the ICWD request that the arbitration panel "Determine that a measureable and significant change and decrease in vegetation has occurred or is occurring at Blackrock 94 that is attributable to LADWP's groundwater pumping and to its changes in surface water management practices" (ICWD 2014 report, page 85).

5. Significance (disagree): The ICWD disagrees with LADWP's conclusion "Based upon the available data, current decreases in vegetation cover in Blackrock 94 are due to the current low runoff and precipitation conditions. Vegetation cover is fully anticipated to increase following a period of higher precipitation and runoff. If previous wet hydrologic conditions (i.e. 1978-1986 or 1995-1998) repeat themselves, then vegetation cover is fully expected to meet or exceed that measured during LADWP's initial inventory. Therefore, the current changes are not permanent and not significant in the context of the Water Agreement" (LADWP 2013 report, page 220).

6. Persistency of change (disagree): LADWP disagrees with the ICWD's conclusion "that the decrease in vegetation cover is persistent" (ICWD 2011 report, page 57).

7. Area of measurable change (disagree): The ICWD disagrees with LADWP's conclusion that any variations in vegetation cover and composition in Blackrock 94 are not significant because the size of the area of Blackrock 94 where there have been variations in vegetation cover and composition does not encompass the entire parcel and because the size of the affected area is small in relation to the Blackrock Vegetation and Wellfield Management Area.

8. Existing mitigation (disagree): LADWP disagrees with the County's conclusion that existing E/M projects addressing the environmental consequences of similar impacts do not mitigate or offset the significance of the decreases and/or changes in vegetation cover and composition within the Blackrock 94 parcel.

9. Cumulative effects (disagree): The ICWD disagrees with the LADWP's conclusion that "there are no significant effects to vegetation due to groundwater pumping or changes in surface water management practices to evaluate as part of an analysis of the cumulative effect of the measureable vegetation changes at Blackrock 94 "to all such areas of the Owens Valley." The accumulation of measurable, attributable, and significant adverse effects is therefore zero" (LADWP 2013 report, page 221).

10. Existing mitigation (disagree): LADWP disagrees with the ICWD's conclusion that "mitigation for the vegetation impacts at Blackrock 94 should be implemented consistent with the Water Agreement because such impacts are not offset by other valuable mitigation measures and projects that do not mitigate the vegetation decreases and changes in Blackrock 94" (ICWD 2014 report, page 81).