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## CITY of CHINO

November 20, 2019

Peter Kavounas, General Manager  
Chino Basin Watermaster  
9641 San Bernardino Road  
Rancho Cucamonga, CA 91730

Dear Mr. Kavounas:

Subject: Comments on Proposed 2020 Draft Storage Management Plan Version 2, dated October 24, 2019

The City of Chino appreciates the opportunity to comment on the Proposed 2020 Draft Storage Management Plan (SMP) Version 2, dated October 24, 2019. Our comments, below, supplement those articulated during the November 6 and 13, 2019 SMP workshops during which the Version 2 draft document was reviewed. We appreciate your consideration of, and responses to, these comments.

1. Section 1.2 (Page 1-5 2nd paragraph) and Section 2.1 (page 2-1 paragraphs 1 and 2).

Section 1.2 indicates the combined use of managed storage and the existing Dry Year Yield (DYY) conjunctive use program is projected to reach a maximum of ~790,000 AF, assuming there is 100,000 AF in the DYY in 2028. Section 2.1 paragraph 1 indicates the First Managed Storage Band (FMSB, upper threshold = 800,000 AF) includes the DYY. Section 2.1 paragraph 2 indicates that extension of the DYY (beyond 2028) will require the DYY to use storage space above the 800,000 AF band threshold. Does this mean that if the DYY is extended (beyond 2028) that the 100,000 AF of space below the 800,000 AF threshold (within FMSB) previously reserved for DYY use prior to 2028 is immediately available for managed storage use in 2029 and no longer available for the DYY? Does this mean that any extension of the DYY program beyond 2028 would likely be required to mitigate impacts in-advance? Do the terms of the existing DYY agreement require that the water in the DYY account be entirely depleted (withdrawn) prior to 2028 agreement expiration?

2. Expanding on Comment No. 1 (above), the possibility of adjusting the FMSB upper threshold up or down, based on the parties' needs, was discussed at the November 6<sup>th</sup> SMP Workshop #3. Please expand on the timing of the modifications to the FMSB and what the process would be to make changes to the FMSB. For example, would changes to the FMSB upper threshold require consent from all three pools and would unanimous consent be required from the Appropriate and Overlying Non-Agricultural Pool members?



3. Section 2.3.2.

Section 2.3.2 indicates that reduction in Safe Yield (SY) due to projected managed storage volume is incorporated into the SY estimate, and that this adverse impact (i.e. reduced Safe Yield) is mitigated by the prospective calculation of SY. Please provide a tabulation or other form of explanation that illustrates the impact/mitigation below the FMBS threshold of 800,000 AF. Presumably, other factors (besides managed storage) may also have the effect of reducing Safe Yield. Can it be determined what portion of estimated SY reduction is due to storage management and what portion of estimated SY reduction is due to other factors? If yes, then how can these factors (i.e. managed storage and other cultural condition factors) be described in separate quantitative terms to allow for a practical means to reconcile the associated impacts on an annual basis?

For example, if SY (net recharge) is reduced as a result of increasing storage volumes (assuming no corresponding implementation of a plan for optimizing production that would be necessary to maintain SY), can this cause & effect be expressed algebraically? If yes, then what is the algebraic formula? If no, then what practical method(s) may be used to quantify the cause & effect on an annual basis as storage volumes fluctuate?

4. Expanding on Comment No. 3 (above), Storage Framework Investigation (SFI) Figure 5-7 depicts a projected inflection point at approximately Year 2040 when the net recharge begins to steadily increase. SFI Figure 6-3 describes managed storage volumes in Year 2040 to be well above 500,000 AF (depending on assumed operating scenario), and then dropping to approximately 340,000 AF in the Year 2056. Please provide an explanation of the circumstances depicted by these two figures, and how/why Safe Yield (net recharge) is projected to increase in the future when there is a significant amount of managed storage.

5. Section 2.4.2 and Section 2.4.3.

Both discussions end with an indication that Watermaster may require changes in Storage and Recovery (S/R) agreements to mitigate impacts. What processes of Watermaster notification and S/R Party response are contemplated to allow S/R parties to modify their behavior to avoid or minimize further mitigation after they have presumably already provided mitigation at the time their S/R agreements were initially approved?

6. White Paper.

The SFI (page 1-5) indicates the *Chino Basin Groundwater Model and Recalculation of Safe Yield Pursuant to the Peace Agreement (Safe Yield report)* assessed the hydrology of the Chino Basin, and concluded that managed storage was projected to increase from 487,000 AF in Year 2016 to approximately 663,000 AF by Year 2030 and then decline thereafter to zero (0.0) AF by Year 2051. This was restated in the White Paper at the bottom of page 5. However, as described in Comment No. 4 (above), the subsequent SFI analysis (Figure 6-3) indicates managed storage is projected to be approximately 340,000 AF in Year 2056. Does the SFI analysis update/replace the conclusion of the Safe Yield report with respect to the projected volume of managed storage in future years? Please explain.

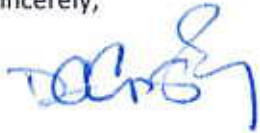
The White Paper (page 3) indicates the Operational Storage Requirement (OSR) is the volume of storage necessary to maintain the Safe Yield (SY), and that during the development of the Optimum Basin Management Program (OBMP ~ Year 2000) the OSR was estimated to be 5.3 MAF. The White Paper also indicates the Safe Storage Capacity (SSC) in addition to the OSR was estimated (~ Year 2000) to be 500,000 AF (the SSC is the amount of storage for which it was believed significant water quality impacts would not be triggered by groundwater level). More recent Storage Framework Investigation (SFI) analyses seem to indicate that the SSC is ~ 800,000 AF. SMP Section 2.6 indicates it is projected that the aggregate amount of managed storage by the Parties is approximately 340,000 AF in Year 2056 and that impacts resulting from an aggregate managed storage volume less than 340,000 AF has not been estimated. However, recent SMP workshop discussions seem to suggest that if the aggregate managed storage volume is less than 340,000 AF, then it is believed that new land subsidence may result. What relationships exist between the originally estimated 5.3 MAF OSR, the originally estimated 500,000 AF SSC, the 800,000 AF SFI FMSB, and the projected 340,000 AF managed storage volume?

7. Comment No. 3 (above), pertaining to Section 2.3.2, describes a circumstance that might generally be regarded as an adverse impact since SY is reduced. Maintenance of the 340,000 AF threshold described in Comment No. 6 (above) would seem to represent a positive impact i.e. prevents triggering the "onset of new land subsidence" that would likely occur when managed storage falls below that critical managed storage volume. If true, then how might this positive impact be quantified?

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Chino appreciates the efforts of Watermaster staff and consultants to provide concepts and associated information in the form of a draft Storage Management Plan to help guide and inform the parties as they work towards the development of rules and procedures for responsible storage management in the Chino Basin. We look forward to continued participation in the Watermaster-established process and further collaboration on future versions of the draft SMP.

Sincerely,



David G. Crosley, P.E.  
Water & Environmental Manager



Amanda Coker  
Principal Engineer

ac/dc

cc: Edgar Tellez Foster (CBWM)  
Mark Wildermuth (CBWM)