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MEMORANDUM

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Date: October 07, 2021

From: Greg Young, PE

Subject: Revalidation of previously adopted Water Supply Assessments for the Village of Marble Valley, Lime Rock Valley, and Central El Dorado Hills Specific Plans

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On August 26, 2013 El Dorado Irrigation District's (EID or District) Board of Directors approved and adopted Water Supply Assessments (WSA) for three development projects – Village of Marble Valley (VMV), Lime Rock Valley (LRV), and Central El Dorado Hills (CEDH) – hereafter the "Proposed Project(s)" in El Dorado County (County) as a part of each Proposed Project's Specific Plan.[1]

These WSAs assessed the availability and sufficiency of EID's water supplies to meet the Proposed Projects' estimated water demands based on the best available information at that time. The District found sufficient water to meet the demands of each Proposed Project, while also considering the demands of each other Proposed Project as well as all of its other service area demands for at least the next 20 years.

The purpose of this memorandum is to re-evaluate whether changes, if any, to (1) the Proposed Projects' land uses, or (2) updates to EID's water supply and demand analysis, would result in modified conclusions of sufficient water as determined in each WSA in 2013. A key document in this re-evaluation is EID's recently updated 2020 Urban Water Management Plan, which was adopted on June 28, 2021.[2]

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[1] The adopted WSAs can be found on the County website here:
https://www.edcgov.us/Government/planning/specific%20plans/ProposedSpecificPlans/Pages/proposed_specific_plans.aspx
[2] The Final 2020 UWMP can be found on the District website here:
https://www.eid.org/home/showpublisheddocument/5666/637619651261230000

Projected Projects' Land Use Description Updates and Water Demand Forecasts

For the 2013 WSAs, specific land uses were provided for each Proposed Project and used to estimate the water demand of each Proposed Project at build-out. Per communications from El Dorado County through its consultant that is preparing updated CEQA documents for the County's consideration, land uses for VMV and LRV have not changed from representations provided in 2013.[3]

However, CEDH has proposed some minor adjustments. Per the County, the CEDH project has included a variation whereby it may include up to 1,000 residential units if some of the units are age-restricted, but only 737 residential units if no age-restricted units are included.[4] This proposed variation would change the high density land use from 10 to 14 units per acre for non-age-restricted to 22 units per acre for age-restricted, whereby the non-age restricted scenario would include 324 units, and the age-restricted 587 units. Under both scenarios, 37 residential units would have densities less than 1 unit per acre, 156 residential units would be at approximately 5 units per acre, and 220 units would be at approximately 10 units per acre. For comparison, the 2013 CEDH WSA analyzed 1,028 residential units where 65 units were between 0.5 and 1 acre per unit, 123 residential units would be at 5 to 8 units per acre, and 310 residential units would be at 9 to 12 units per acre, and the remaining 530 residential units would be at 15-24 unit per acre. This potential variation does not result in significant difference in forecast water demand for purposes of evaluating overall water demand.[5] And, since the total number of units is consistent with that evaluated for CEDH in the 2013 WSA, the land use assumed in the 2013 WSA is still a valid representation of the Proposed Project.

Overall, the land uses concurrently being considered are equivalent to the land uses evaluated for all three Proposed Projects for the 2013 WSAs, and the total number of proposed dwelling units would be the same as analyzed in the previous drafts of the EIR.

While the land uses are essentially equivalent, a forecast water demand made today using the same land uses may result in an actual lower total build-out demand for each Proposed Project than was calculated in the 2013 WSAs. This would be due to current assumptions about residential and non-residential water use that has been driven by continued statutory, regulatory and common-practice considerations. For instance, since 2013, both the statewide mandatory Green Building Standards Code and the statewide Model Water Efficient Landscape Ordinance

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[3] Email communications from Shahira Ashkar, Managing Director, ICF to Greg Young of Tully & Young on September 15, 2021.

[4] El Dorado County Staff Report at November 14, 2019 Planning Commission Meeting: https://eldorado.legistar.com/View.ashx?M=F&ID=8776221&GUID=F959EE52-F195-4557-AB8B-333C11C66DA1

[5] While both of these designations are considered high-density and thus generally have lower occupancy rates, the 587 units of age-restricted versus 324 units not age-restricted would not result in a substantive quantity of additional water use. For instance, 1.8 people in age-restricted at 55 gallons per person per capita day (gpcd) would equate to 65 acre-feet per year for 587 units. For comparison, assuming 2.3 people in non-age-restricted at 55 gpcd would equate to 46 acre-feet per year for 324 units.

(MWELO) have been modified to require more efficient appliances and fixtures and placed further restrictions on residential and non-residential irrigated landscapes. These factors, as well as a continued conservation ethic among water using customers, has resulted in a lowering of EID's per-capita water demand factors compared to those used for the 2013 WSAs.

Therefore, the land uses for the Proposed Projects represented in the 2013 WSAs are consistent with the current land uses, and the water demand forecasts represented in the 2013 WSAs are likely conservatively high.

2020 Urban Water Management Plan Assumptions and Conclusions

EID recently updated its Urban Water Management Plan (UWMP) to comply with statutory requirements.[6] A primary driver of an UWMP is for an urban water supplier to assess its water service reliability for at least the next 20 years under water supply conditions assumed for hydrologic conditions in normal and single dry years as well as for droughts lasting five years. To make this assessment requires a detailed characterization of an urban suppliers water supply and customer water use conditions well into the future – including recognizing all potential population growth.

Land use and population growth projections in the EID service area were thoroughly analyzed in Chapter 2 of the 2020 UWMP to provide the foundation for estimating customer water demands through the UWMP's planning period of 2045. This demand forecast is the basis for determining water service reliability conclusions.

As detailed in Chapter 2 of the UWMP, expected housing growth was guided by a study commissioned by El Dorado County in 2020 to update housing and job projections to aid with various transportation studies and General Plan refinements. This effort developed growth projections using two categories[7]:

1. Facility Improvement Letters (FILs) – this designation reflects all development projects known to the District at a particular point in time that have formally submitted an initial request for service to EID. A full list of current FILs is available from the District.

2. Future Beyond FILs – this designation reflects additional development beyond the current FILs on existing parcels within Zone 1, 2 and 4 that are greater than 10 acres and are not otherwise designated for any other use.

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[6] California Water Code Section 10610 et seq. require an urban water supplier such as EID to prepare and adopt and UWMP every 5 years. The current cycle required EID to adopt its UWMP and submit it to the California Department of Water Resource by July 1, 2021.

[7] Population and Land Use analysis in the EID service area begins on page 2-10 in the 2020 UWMP.

The analysis projected total Equivalent Dwelling Units (EDUs) expected within the County, where the EDU value represents the number of residential "dwelling units" that each project would reflect regardless of whether the project includes residential or non-residential land uses. This growth was used to determine estimated number of new connections. The connection forecast is used to estimate future water use, as detailed in Chapter 4 of the UWMP.[8]

The VMV, LRV, and CEDH projects were specifically incorporated into the 2020 UWMP using the same EDU representations in the 2013 WSAs.[9] The 2020 UWMP states:

> "*…it is acknowledged by EID that the future water needs of these developments, should they occur within the planning horizon, have been included in the representations of water service reliability detailed in Chapter 5*" of the UWMP.[10]

As required by the California Water Code, EID addressed the reliability of their water supplies to meet demands during average, single dry, and five consecutive dry year conditions, detailing the analysis and results in Chapter 5 of the 2020 UWMP. Importantly, EID concluded it has sufficient water assets to meet its short-term and long-term needs in average, single dry, and five consecutive dry year conditions.[11] As stated in the UWMP Water Supply Reliably Summary on page 5-5:

> *"The District's water supply portfolio is capable of meeting the water uses in its service area in normal, single dry, and five consecutive dry years from 2020 through 2045."*

Considering the Proposed Projects were explicitly included in the 2020 UWMP, and EID determined it has reliable and sufficient water supplies, the determination of sufficiency extends to the consideration of each Proposed Project. This extension is also supported by statute whereby as part of the requirements for a WSA, the California Water Codes states: "*If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*"[12]

In other words, the 2020 UWMP's recent determination provides the equivalent of the findings of the 2013 WSAs that evaluated sufficiency where the Proposed Projects were not previously included in EID's 2010 UWMP.

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[8] Customer water use forecast is on Section 4.4.3 and begins on page 4-15 in the 2020 UWMP.
[9] Table 2-5: Summary of Known Large Development Projects in the 2020 UWMP.
[10] UWMP at p. 2-14.
[11] EID Water system reliability is discussed in Chapter 5 of the 2020 UWMP. Tables 5-2 and 5-3 show supply, demand and surplus water data.
[12] California Water Code Section 10910(c)(2)

Conclusion

As demonstrated in this memorandum and supporting references, the Proposed Projects' land uses have not changed and therefore estimated water use demands would not exceed quantities forecast in the WSAs which were adopted by EID in August of 2013. The 2020 UWMP incorporated these projects specifically into its water supply reliability forecasting and came to the same conclusion as the 2013 WSAs that there is sufficient water service reliability to meet all demands at least 20 years into the future.

Moreover, projected demand could reasonably be determined to be less for the Proposed Projects as calculated in the 2013 WSAs since additional regulations would likely result in a lower demand estimate for the same projects due to more stringent MWELO and residential GPCD estimates.

In summary:

- The original WSAs found water availability and sufficiency for the Proposed Projects through 2035.

- The Proposed Projects are recognized in EID's 2020 UWMP as part of planned future customer demands.

- EID's 2020 UWMP concludes sufficient water supplies for all current and planned future customers through 2045 during normal, single-dry and droughts lasting 5 years.

Therefore, EID's conclusions of water availability and sufficiency to meet the Proposed Projects' estimated water demands as articulated in the 2013 WSAs are still valid, and the 2020 UWMP provides necessary concurrence of these prior conclusions.