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Appendix C: Demonstration of Reduced Delta Reliance

(Appendix L to 2015 UWMP)

Coachella Valley Regional Urban Water Management Plan

Quantifying Regional Self-Reliance and Reduced Reliance on Water Supplies from the Delta Watershed

June 2021

1 Background

Under the Sacramento-San Joaquin Delta Reform Act of 2009, state and local public agencies proposing a covered action in the Delta, prior to initiating the implementation of that action, must prepare a written certification of consistency with detailed findings as to whether the covered action is consistent with applicable Delta Plan policies and submit that certification to the Delta Stewardship Council. Anyone may appeal a certification of consistency, and if the Delta Stewardship Council grants the appeal, the covered action may not be implemented until the agency proposing the covered action submits a revised certification of consistency, and either no appeal is filed, or the Delta Stewardship Council denies the subsequent appeal.

An urban water supplier that anticipates participating in or receiving water from a proposed covered action such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta should provide information in their 2015 and 2020 Urban Water Management Plans (UWMPs) that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1).

WR P1 details what is needed for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that:

(a) Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:

(1) One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c);

(2) That failure has significantly caused the need for the export, transfer, or use; and

(3) The export, transfer, or use would have a significant adverse environmental impact in the Delta.

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a)(1) above.

(c)(1) Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:

(A) Completed a current Urban or Agricultural Water Management Plan (Plan) which has been reviewed by the California Department of Water Resources for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8;

(B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and

(C) Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).

The analysis and documentation provided below include all the elements described in WR P1(c)(1) that need to be included in a water supplier's UWMP to support a certification of consistency for a future covered action.

The analysis presented here was developed on behalf of the six agencies participating in the 2020 Coachella Valley Regional Urban Water Management Plan (RUWMP). These six agencies include:

- Coachella Valley Water District
- Coachella Water Authority
- Desert Water Agency
- Indio Water Authority
- Mission Springs Water District
- Myoma Dunes Mutual Water Company

This analysis is based on the water used to meet demands throughout the Coachella Valley.

2 Methodology

As stated in WR P1(c)(1)(C), the policy requires that, commencing in 2015, UWMPs include expected outcomes for improved regional self-reliance and measurable reduction in Delta reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount of water used, or in the percentage of water used, from the Delta. The expected outcomes for regional self-reliance and reduced Delta reliance were developed using the approach and guidance described in Appendix C of DWR's Urban Water Management Plan Guidebook 2020 issued in March 2020 (Guidebook Appendix C).

The methodology used to determine improved regional self-reliance and reduced Delta reliance is consistent with the approach detailed in DWR's UWMP Guidebook Appendix C, including the use of

narrative justifications for the accounting of supplies and the documentation of specific data sources. Some of the key assumptions include:

- All data were obtained from the current 2020 RUWMP, UWMPs from previous years, the Integrated Regional Water Management Plan, the Draft Indio Subbasin Alternative Plan Update, or the Draft Mission Creek Subbasin Alternative Plan Update. Demands represent average or normal water year conditions.
- All analyses were conducted at the service area level, and all data reflect the total contributions of the agencies as well as their customers.

To calculate the expected outcomes for improved regional self-reliance and reduced Delta reliance, a baseline is needed to compare against. This analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in the Guidebook Appendix C.

3 Demonstration of Regional Self-Reliance

Demands without Water Use Efficiency

In alignment with the Guidebook Appendix C, this analysis uses normal water year demands, rather than normal water year supplies to calculate expected outcomes in terms of the percentage of water used. Using normal water year demands serves as a proxy for the amount of supplies that would be used in a normal water year, which helps alleviate issues associated with how supply capability is presented to fulfill requirements of the UWMP Act versus how supplies might be accounted for to demonstrate consistency with WR P1.

Because WR P1 considers water use efficiency savings a source of water supply, water suppliers that do not explicitly quantify water use efficiency savings in their UWMPs can calculate their embedded water use efficiency savings based on changes in forecasted per capita water use since the baseline. As explained in the Guidebook Appendix C, water use efficiency savings must be added back to the normal year demands to represent demands without water use efficiency savings; otherwise the effect of water use efficiency savings on regional self-reliance would be overestimated. Table C-1 shows the results of this estimation. Supporting narrative and documentation for the data shown in Table C-1 are provided below.

Demands with Water Use Efficiency

The demands shown in Table C-1 represent the water demands for the region, compiled from the previous documents mentioned above and current projections. .

Population

Population was estimated using the previous UWMPs and the regional growth forecast prepared by the Southern California Association of Governments (SCAG).

Estimated Water Use Efficiency Since Baseline

This line item was calculated using “Potable Demands with Water Use Efficiency” divided by “Population” and then calculating Estimated Water Use Efficiency Since Baseline by comparing with 2010 Per Capita Water Use.

Water Demands without Water Use Efficiency

This line item was calculated by adding “Demands with Water Use Efficiency” to “Estimated Water Use Efficiency Since Baseline.”

Supplies Contributing to Regional Self-Reliance

For a covered action to demonstrate consistency with the Delta Plan, WR P1 subsection (c)(1)(C) states that water suppliers must report the expected outcomes for measurable improvement in regional self-reliance. Table C-3 shows expected outcomes for supplies contributing to regional self-reliance both in amount and as a percentage. The numbers shown in Table C-3 represent efforts to improve regional self-reliance for all agencies and include the total contributions of the agencies and their customers. Supporting narratives and documentation for the data shown in Table C-3 are provided below.

Water Use Efficiency

The water use efficiency information shown in Table C-3 is taken directly from Table C-1.

Water Recycling

Estimates of water recycling volumes are based on previous UWMPs and current projections.

Local and Regional Water Supply and Storage Programs

The local and regional water supply and storage programs data shown in Table C-3 represent estimates by the participating agencies.

Conclusions

The results shown in Table C-3 demonstrate that the agencies are measurably improving regional self-reliance. In the long-term (through 2045), the expected outcome for normal water year regional self-reliance is an increase of approximately 17 percentage points from the 2010 baseline. The results show that as a region, the agencies and their customers are measurably reducing reliance on the Delta and improving regional self-reliance.

4 Demonstration of Reduced Reliance on the Delta

The agencies reduce reliance on the Delta through investments in non-Delta water supplies, local water supplies, and regional and local demand management measures. For reduced reliance on supplies from the Delta Watershed, the data used in this analysis represent the total regional efforts of the agencies and their customers.

Calculation of Reliance on Water Supplies from the Delta Watershed

The calculation of reliance on water supplies from the Delta watershed, shown in Table C-4, is based on the following assumptions. The agencies' supplies from the Delta watershed include:

- Central Valley Project (CVP) / State Water Project (SWP) Contract Supplies
- Other Water Supplies from the Delta Watershed.

CVP/SWP Contract Supplies

The supply data shown in Table C-4 is for SWP Table A allocations to CVWD and DWA. These values are based on the combined Table A amount for CVWD and DWA (194,100 AFY) and the historical average reliability as published in the SWP Delivery Capability Report.

Other Water Supplies from the Delta Watershed

Because this document demonstrates reduced reliance on the Delta and could be used to help support the approval of a future project, these supplies do not include any potential future projects that could be covered actions.

Change in Supplies from the Delta Watershed

This line item was calculated by adding "CVP/SWP Contract Supplies" and "Other Water Supplies from the Delta Watershed" to get total Water Supplies from the Delta Watershed and then calculating changes from the 2010 baseline.

Percent Change in Supplies from the Delta Watershed

In this line item the "Water Supplies from the Delta Watershed" is divided by "Demands without Water Use Efficiency" for each timeframe to show changes from the 2010 baseline.

Conclusions

The results shown in Table C-4 demonstrate that the agencies are measurably reducing reliance on supplies from the Delta watershed. In the long term (through 2045), the results show that as a region, the agencies and their customers are measurably reducing reliance on the Delta and improving regional self-reliance.

5 UWMP Implementation

In addition to the analysis and documentation described above, WR P1 subsection (c)(1)(B) requires that all programs and projects included in the UWMP that are locally cost-effective and technically feasible, which reduce reliance on the Delta, are identified, evaluated, and implemented consistent with the implementation schedule. WR P1 (c)(1)(B) states that water supplies must have:

(B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta[.]

In accordance with Water Code Section 10631(f), water suppliers must include in their UWMP a detailed description of expected future projects and programs that they may implement to increase the amount of water supply available to them in normal and single-dry water years and for a period of drought lasting five consecutive years. The UWMP description must also identify specific projects, include a description of the increase in water supply that is expected to be available from each project, and include an estimate regarding the implementation timeline for each project or program.

The 2020 RUWMP summarizes the implementation plan and continued progress in developing a diversified water portfolio to meet the region's water needs.

6 2015 UWMP Appendix L

The information contained in this appendix is also intended to be a new Appendix L attached to each agency's 2015 UWMP consistent with WR P1 subsection (c)(1)(C) (Cal. Code Regs. tit. 23, § 5003). The agencies provided notice of the availability of the draft 2020 RUWMP, 2021 WSCPs, and a new Appendix L to the 2015 UWMP and of a public hearing to consider adoption of the documents in accordance with CWC Sections 10621(b) and 10642, and Government Code Section 6066, and Chapter 17.5 (starting with Section 7290) of Division 7 of Title 1 of the Government Code. The public review drafts of the 2020 RUWMP, Appendix L to the 2015 UWMP, and the 2021 WSCPs were posted on each agency's website before the public hearings in June 2021. The notice of availability of the documents was published in local newspapers and was sent to cities and counties in each agency's service area. Copies of the notification letter sent to cities and counties are included in the 2020 RUWMP Appendix B. Thus, this Appendix C to the 2020 RUWMP, which was adopted with the 2020 RUWMP, will also be recognized and treated as Appendix L to each agency's 2015 UWMP.

Each agency held a public hearing for the draft 2020 RUWMP, draft Appendix L to the 2015 UWMP, and draft 2021 WSCP in June of 2021, at a regular Board of Directors meeting. Each agency's Board of Directors determined that the 2020 RUWMP and the 2021 WSCP accurately represent the water resources plan for the service area. In addition, each agency's Board of Directors determined that Appendix L to the 2015 UWMP (and Appendix C to the 2020 RUWMP) includes all of the elements described in Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (Cal. Code Regs. tit. 23, § 5003), which need to be included in a water supplier's UWMP to support a certification of consistency for a future covered action. Each agency's Board of Directors adopted the 2020 RUWMP, Appendix L to the 2015 UWMP, and the 2021 WSCP and authorized their submittal to the State of California. Copies of the resolutions are included in the 2020 RUWMP Appendix H.

Reduced Reliance Calculation - Data Template

Table C-1: Optional Calculation of Water Use Efficiency -To be completed if Water Supplier does not specifically estimate Water Use Efficiency as a supply

Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Demands with Water Use Efficiency Accounted For	670,396	577,233	591,136	622,594	633,243	643,736	651,535	658,561
Non-Potable Water Demands	473,083	419,852	418,469	418,722	416,275	413,828	410,616	407,405
Potable Demands with Water Use Efficiency Accounted For	197,313	157,381	172,667	203,872	216,968	229,908	240,919	251,156

Total Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Population	481,800	496,853	507,951	592,237	639,654	687,782	734,493	781,710

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Per Capita Water Use (GPCD)	366	283	303	307	303	298	293	287
Change in Per Capita Water Use from Baseline (GPCD)		(83)	(62)	(58)	(63)	(67)	(73)	(79)
Estimated Water Use Efficiency Since Baseline (AF)		46,097	35,356	38,669	44,992	51,762	59,880	68,980

Table C-2: Calculation of Water Demands Without Water Use Efficiency

Total Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Demands with Water Use Efficiency Accounted For	670,396	577,233	591,136	622,594	633,243	643,736	651,535	658,561
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline		46,097	35,356	38,669	44,992	51,762	59,880	68,980
Water Demands without Water Use Efficiency Accounted For	670,396	623,330	626,492	661,263	678,235	695,498	711,415	727,541

Table C-3: Calculation of Supplies Contributing to Regional Self-Reliance

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Use Efficiency	-	46,097	35,356	38,669	44,992	51,762	59,880	68,980
Water Recycling	14,268	13,349	13,398	17,013	23,933	25,713	27,913	30,213
Stormwater Capture and Use								
Advanced Water Technologies								
Conjunctive Use Projects								
Local and Regional Water Supply and Storage Projects	412,587	437,587	462,387	488,890	498,390	498,390	498,390	498,390
Other Programs and Projects the Contribute to Regional Self-Reliance	11,600	11,600	11,187	11,187	11,187	11,187		
Water Supplies Contributing to Regional Self-Reliance	438,455	508,633	522,035	555,759	578,502	587,052	586,183	597,583

Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Demands without Water Use Efficiency Accounted For	670,396	623,330	626,492	661,263	678,235	695,498	711,415	727,541

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Supplies Contributing to Regional Self-Reliance	438,455	508,633	522,035	555,759	578,502	587,052	586,183	597,583
Change in Water Supplies Contributing to Regional Self-Reliance		70,178	83,580	117,304	140,047	148,597	147,728	159,128

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Percent of Water Supplies Contributing to Regional Self-Reliance	65.4%	81.6%	83.3%	84.0%	85.3%	84.4%	82.4%	82.1%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		16.2%	17.9%	18.6%	19.9%	19.0%	17.0%	16.7%

Table C-4: Calculation of Reliance on Water Supplies from the Delta Watershed

Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
CVP/SWP Contract Supplies	124,224	95,109	112,578	112,578	112,578	112,578	100,932	100,932
Delta/Delta Tributary Diversions								
Transfers and Exchanges								
Other Water Supplies from the Delta Watershed		651	651	651	651	651	651	651
Total Water Supplies from the Delta Watershed	124,224	95,760	113,229	113,229	113,229	113,229	101,583	101,583

Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Demands without Water Use Efficiency Accounted For	670,396	623,330	626,492	661,263	678,235	695,498	711,415	727,541

Change in Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Supplies from the Delta Watershed	124,224	95,760	113,229	113,229	113,229	113,229	101,583	101,583
Change in Water Supplies from the Delta Watershed		(28,464)	(10,995)	(10,995)	(10,995)	(10,995)	(22,641)	(22,641)

Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Percent of Water Supplies from the Delta Watershed	18.5%	15.4%	18.1%	17.1%	16.7%	16.3%	14.3%	14.0%
Change in Percent of Water Supplies from the Delta Watershed		-3.2%	-0.5%	-1.4%	-1.8%	-2.2%	-4.3%	-4.6%