

Demonstration of Reduced Delta Reliance

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**City of Napa
Reduced Reliance on the Delta**

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JOINTLY PREPARED BY



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LIST OF ACRONYMS AND ABBREVIATIONS

City	City of Napa
Delta	Sacramento-San Joaquin Delta
DWR	Department of Water Resources
DWR Guidebook	Urban Water Management Plan Guidebook 2020
NapaSan	Napa Sanitation District
NCFCWCD	Napa County Flood Control & Water Conservation District
SWP	State Water Project
UWMP	Urban Water Management Plan
WR P1	Delta Plan Policy WR P1

City of Napa

Reduced Reliance on the Delta

The purpose of this document is to demonstrate compliance with the Sacramento-San Joaquin Delta Reform Act of 2009, which is described below, followed by an analysis of the City of Napa's (City) reduced reliance in accordance with State protocols and expected outcomes for reduced reliance on the Delta.

1.0 SACRAMENTO-SAN JOAQUIN DELTA REFORM ACT OF 2009

Under the Sacramento-San Joaquin Delta Reform Act of 2009, State and local public agencies proposing a "covered action" in the Sacramento-San Joaquin Delta (Delta) must submit a written certification of consistency to the Delta Stewardship Council as to whether the covered action is consistent with applicable Delta Plan policies. Covered actions include a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta. 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 is required to 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 the requirements 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).*



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The analysis and documentation provided below include all of 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 inclusion of this document as an appendix in the 2015 and 2020 UWMPs fulfills the requirements of WR P1 subsection (c)(1) Paragraph A.

Future projects under evaluation as described in Chapter 6 and the Demand Management Measures described in Chapter 9 of the City's 2020 UWMP fulfill the requirements of WR P1 subsection (c)(1) Paragraph B.

2.0 REDUCED RELIANCE ANALYSIS

The methodology used to determine the City's reduced Delta reliance and improved regional self-reliance is consistent with the approach detailed by the California Department of Water Resources (DWR) in Appendix C of their "Urban Water Management Plan Guidebook 2020" (DWR Guidebook), issued in March 2021. The following analysis uses narrative justifications to account for supplies and document specific data sources. All data represent average or normal water year conditions and were obtained from the 2020 UWMP, previously adopted UWMPs, and discussions with the City. The analysis was conducted at the retail level, focusing on the City's demands and available supplies (i.e., local surface water and imported water through the State Water Project (SWP)).

Table 1 through Table 4 present the analysis of the City's reduced Delta reliance using DWR's spreadsheet tool and fulfill the requirements of WR P1 subsection (c)(1) Paragraph C. Descriptions of the various inputs of the analysis are provided below:

- **Baseline (2010) and 2015-2045 Conditions** – The analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in the DWR Guidebook. Data for the City's 2010 baseline are taken from its 2010 UWMP, while actual conditions for 2015 and 2020 are based on data reported in the City's 2015 and 2020 UWMPs, respectively. Normal year projections for 2025 through 2045 are also based on the City's 2020 UWMP. Where historical or projected data were unavailable (e.g., actual supplies used to meet demands), the City provided that information separately.
- **Service Area Water Demands with Water Use Efficiency Accounted For** – These values reflect the City's actual and projected water use, including potable water demands, recycled water demands, and losses. Water the City delivers to other agencies (City of American Canyon, Town of Yountville, City of St. Helena, City of Calistoga, and California Veterans Home) and Interruptible-Surplus Agricultural customers is excluded.
- **Non-Potable Water Demands** – These values consist of recycled water demands.
- **Water Supplies Contributing to Regional Self-Reliance**
 - **Water Use Efficiency** – This amount is calculated by DWR's spreadsheet tool based on the City's baseline demand, actual demands, and expected future demands. For each year, the value shown is the reduction in per capita water demand from the baseline (2010) multiplied by the actual or projected population.



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- **Water Recycling** – Napa Sanitation District (NapSan) provides recycled water to customers within the City’s drinking water service area. Recycled water contributes to regional self-reliance by reducing the demand for potable water.
- **Water Supplies from the Delta Watershed**
 - **CVP/SWP Contract Supplies** – The City sub-contracts with the Napa County Flood Control & Water Conservation District (NCFWCWD) for imported surface water from the SWP. Beginning in 2000, the City increased its SWP entitlement through transfer agreements with the Kern County Water Agency, the City of St. Helena, and the Town of Yountville.

Table 1. Calculation of Water Use Efficiency (DWR Table C-1)

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	13,730	11,694	13,900	14,265	14,925	15,275	15,575	15,800
Non-Potable Water Demands	288	437	568	835	1,095	1,095	1,095	1,095
Potable Service Area Demands with Water Use Efficiency Accounted For	13,442	11,257	13,332	13,430	13,830	14,180	14,480	14,705

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Population	86,743	87,615	86,906	89,181	91,926	95,001	96,436	97,871

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Per Capita Water Use (GPCD)	138	115	137	134	134	133	134	134
Baseline (GPCD)		(24)	(1)	(4)	(4)	(5)	(4)	(4)
Estimated Water Use Efficiency Since Baseline		2,320	135	390	415	542	464	461

Table 2. Calculation of Service Area Water Demands Without Water Use Efficiency (DWR Table C-2)

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	13,730	11,694	13,900	14,265	14,925	15,275	15,575	15,800
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline	-	2,320	135	390	415	542	464	461
Service Area Water Demands without Water Use Efficiency Accounted For	13,730	14,014	14,035	14,655	15,340	15,817	16,039	16,261



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Table 3. Calculation of Supplies Contributing to Regional Self-Reliance (DWR Table C-3)

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Use Efficiency	-	2,320	135	390	415	542	464	461
Water Recycling	288	437	568	835	1,095	1,095	1,095	1,095
Stormwater Capture and Use								
Advanced Water Technologies								
Conjunctive Use Projects								
Local and Regional Water Supply and Storage Projects	4,260	3,983	4,998	5,930	6,830	7,180	7,980	8,705
Other Programs and Projects the Contribute to Regional Self-Reliance								
Water Supplies Contributing to Regional Self-Reliance	4,548	6,740	5,701	7,155	8,340	8,817	9,539	10,261

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	13,730	14,014	14,035	14,655	15,340	15,817	16,039	16,261

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Supplies Contributing to Regional Self-Reliance	4,548	6,740	5,701	7,155	8,340	8,817	9,539	10,261
Change in Water Supplies Contributing to Regional Self-Reliance		2,192	1,153	2,607	3,792	4,269	4,991	5,713

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	33.1%	48.1%	40.6%	48.8%	54.4%	55.7%	59.5%	63.1%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		15.0%	7.5%	15.7%	21.2%	22.6%	26.3%	30.0%



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Table 4. Calculation of Reliance on Water Supplies from the Delta Watershed (DWR Table C-4)

Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
CVP/SWP Contract Supplies	9,182	7,274	8,334	7,500	7,000	7,000	6,500	6,000
Delta/Delta Tributary Diversions								
Transfers and Exchanges								
Other Water Supplies from the Delta Watershed								
Total Water Supplies from the Delta Watershed	9,182	7,274	8,334	7,500	7,000	7,000	6,500	6,000

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	13,730	14,014	14,035	14,655	15,340	15,817	16,039	16,261

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	9,182	7,274	8,334	7,500	7,000	7,000	6,500	6,000
Change in Water Supplies from the Delta Watershed		(1,908)	(848)	(1,682)	(2,182)	(2,182)	(2,682)	(3,182)

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	66.9%	51.9%	59.4%	51.2%	45.6%	44.3%	40.5%	36.9%
Change in Percent of Water Supplies from the Delta Watershed		-15.0%	-7.5%	-15.7%	-21.2%	-22.6%	-26.3%	-30.0%

3.0 EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

As stated in WR P1(c)(1)(C), commencing in 2015, UWMPs are required to include expected outcomes for measurable reduction in Delta reliance and improved regional self-reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount or percentage of water used from the Delta.

The following provides a summary of the near-term (2025) and long-term (2045) expected outcomes for the City's Delta reliance and regional self-reliance based on the assumptions described in the previous section and DWR's analysis tool. The results show that the City is measurably reducing reliance on the Delta and improving regional self-reliance, based on the percentage of the City's water supplies from the Delta watershed.

Expected Outcomes for Regional Self-Reliance (Table 3):

- Near-term (2025) – Normal water year regional self-reliance is expected to increase by approximately 2,600 AFY from the 2010 baseline. Increased use of local and regional water supplies is a major factor, supplemented by recycled water.
- Long-term (2045) – Normal water year regional self-reliance is expected to increase by approximately 5,700 AFY from the 2010 baseline. Increased use of local and regional water supplies is a major factor, supplemented by recycled water.



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Expected Outcomes for Percent of Water Supplies from the Delta Watershed (Table 4):

- Near-term (2025) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 16 percent relative to the 2010 baseline.
- Long-term (2045) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 30 percent relative to the 2010 baseline.

4.0 NEW APPENDIX TO 2015 UWMP

The information contained in this document is also included as a new Appendix L to the City's 2015 UWMP, consistent with WR P1 subsection (c)(1)(C) (California Code of Regulations, Title 23, Section 5003). As described in Chapter 10 of its 2020 UWMP, the City followed the required public notification, public review and hearing, and adoption processes required by the Urban Water Management Planning Act.

Appendix L to the City's 2015 UWMP, the 2020 UWMP (including this Appendix), and the Water Shortage Contingency Plan were adopted by the City Council on December 21, 2021 (see Appendix K of the 2020 UWMP).