Proposed Updates to Supply Demand Analysis

- Land use changes
- M&I Demand
    1. Residential indoor water budget: **Revise indoor use standard from 50 to 42 gpcd.**
    2. Residential outdoor water budget: **No updates.**
    3. Commercial, industrial, institutional water budget: **No updates.**
    4. Water loss budget: ***Review State Water Board standards (SB 555)***
    5. Other allowable uses: **No updates.**
- Agricultural Demand: **No updates.**
- Hydrology: **Add 2040 (DWR)** in addition to 2070 (ARBS).

Residential Indoor Water Budget

Water Budget Categories	Land Use Capacity Water Budget (acre-feet)			
	Historical Hydrology	2070 Climate Change Regime		
		Warm-Wet	Central Tendency	Hot-Dry
2019 Demand Estimates using 50 gpcd for Indoor Residential Demand				
Residential Indoor Water Budget	18,910	18,910	18,910	18,910
2019 Total M&I Demand for West Slope	81,410	83,417	85,499	86,473
Demand Estimates using 42 gpcd for Indoor Residential Demand				
Residential Indoor Water Budget	15,885	15,885	15,885	15,885
% Change in Residential Indoor Water Budge	16%	16%	16%	16%
Revised Total M&I Demand for West Slope	78,384	80,391	82,473	83,447
% Change in Total Water Demand	**3.7%**	**3.6%**	**3.5%**	**3.5%**

Water loss budget assumptions

EID 2017 AWWA Water Audit Data

Urban Retail Water Supplier	Number of Connections[1]	Average Operating Pressure[2] (psi)	Apparent Losses[3] (ac-ft)	Real Losses[4] (ac-ft)	Real and Apparent Loss (ac-ft)	Apparent Loss/ Connection (g/con/day)	Real Loss/ Connection (g/con/day)	Real Loss+ Apparent Loss/ Connection (g/con/day)	Unavoidable Annual Real Loss[5] (ac-ft)	Infrastructure Leakage Index[6]	Validity Score/ Level[7]
2017 Water Audit Data	41,814	108	1,634	4,025	5,659	34.88	85.93	120.81	1474	2.73	72 out of 100/ IV
Theoretical Low Limit	41,814	108	1,634	1,475	3,109	34.88	31.49	66.37	1474	1.00	
Target ILI (1 pt reduction)	41,814	108	1,634	2,550	4,184	34.88	54.44	89.32	1474	1.73	

Source: http://wuedata.water.ca.gov/awwa_plans

Footnotes:

1. Actual number of distinct piping connections, including fire connections, whether active or inactive.
2. Average pressure in the distribution system that is the subject of the water audit.
3. Unauthorized consumption, customer metering inaccuracies and systematic data handling errors
4. Physical water losses from the pressurized system including water mains, service connections, and storage tanks, up to the point of customer consumption.
5. Theoretical reference representing the technical low limit of leakage that could be achieved if all of today's best technology could be successfully applied.
6. The ratio of the Current Annual Real Losses (Real Losses) to the Unavoidable Annual Real Losses (UARL). The ILI is a highly effective performance indicator for comparing (benchmarking) the performance of utilities in operational management of real losses.
7. Measurement of URWS water loss control planning in following focus areas: audit data collection, short-term loss control, long-term loss control, target-setting and benchmarking.

State Water Board Standards - SB 555

Table 1. Standards	UPDATED: 4/9/2024									
System name	**PWSID**	**Baseline Real Loss (gpscd)**	**Baseline Real Loss (gpmd)**	**Real Loss Standard (gpscd)**	**Real Loss Standard (gpmd)**	**Required Real Loss Reduction from Baseline (%)**	**30-yr Benefit-Cost Ratio***	**5-yr Benefit-Cost Ratio***	**Apparent Loss Standard** (gpscd)**	**Deadline to Meet Standard**
El Dorado Irrigation District	**CA0910001**	**92.5**	**-**	**40.9**	**-**	**56**	**19.0**	**9.3**	**34.4**	**January 1, 2028**
Georgetown Divide Public Utility District	CA0910013	-	1,133.4	-	927.2	18	2.3	1.4	36.1	January 1, 2028
South Tahoe Public Utility District	CA0910002	60.2	-	60.2	-	No Reduction	-	-	3.8	January 1, 2028
TAHOE CITY PUD - MAIN	CA3110010	6.3	-	6.3	-	No Reduction	-	-	1.4	January 1, 2028
TAHOE CITY PUD - MCKINNEY-QUAIL	CA3110011	26.6	-	19.6	-	26	4.6	2.7	1.2	January 1, 2028
TAHOE CITY PUD - RUBICON	CA0910012	3.0	-	3.0	-	No Reduction	-	-	0.8	January 1, 2028
TAHOE CITY PUD - TAHOE CEDARS	CA3110013	No Data								January 1, 2028

Other allowable uses

- Other allowable uses are additional categories of water use that go beyond the primary residential, commercial, industrial, and institutional demands. They include Non-Revenue Water :

  1. Firefighting and Emergency Services
  2. System Maintenance and Flushing
  3. Recreational Uses
  4. Public Landscaping and Street Cleaning
  5. Construction Activities

Other authorized uses

	EID	GDPUD	OCA
% of active demand	9%	4.5%	4.5%

EID – General Plan Capacity Water Budget

Land Use and Population Assumptions

	Acres	Dwelling Units	Population	Total Water Demand
EID - EDH	8,378	18,093	49,487	7,005
EID - West	39,913	43,179	118,102	15,069
EID - East	68,022	20,897	57,157	3,201
Total EID	**116,313**	**82,168**	**224,746**	**25,276**

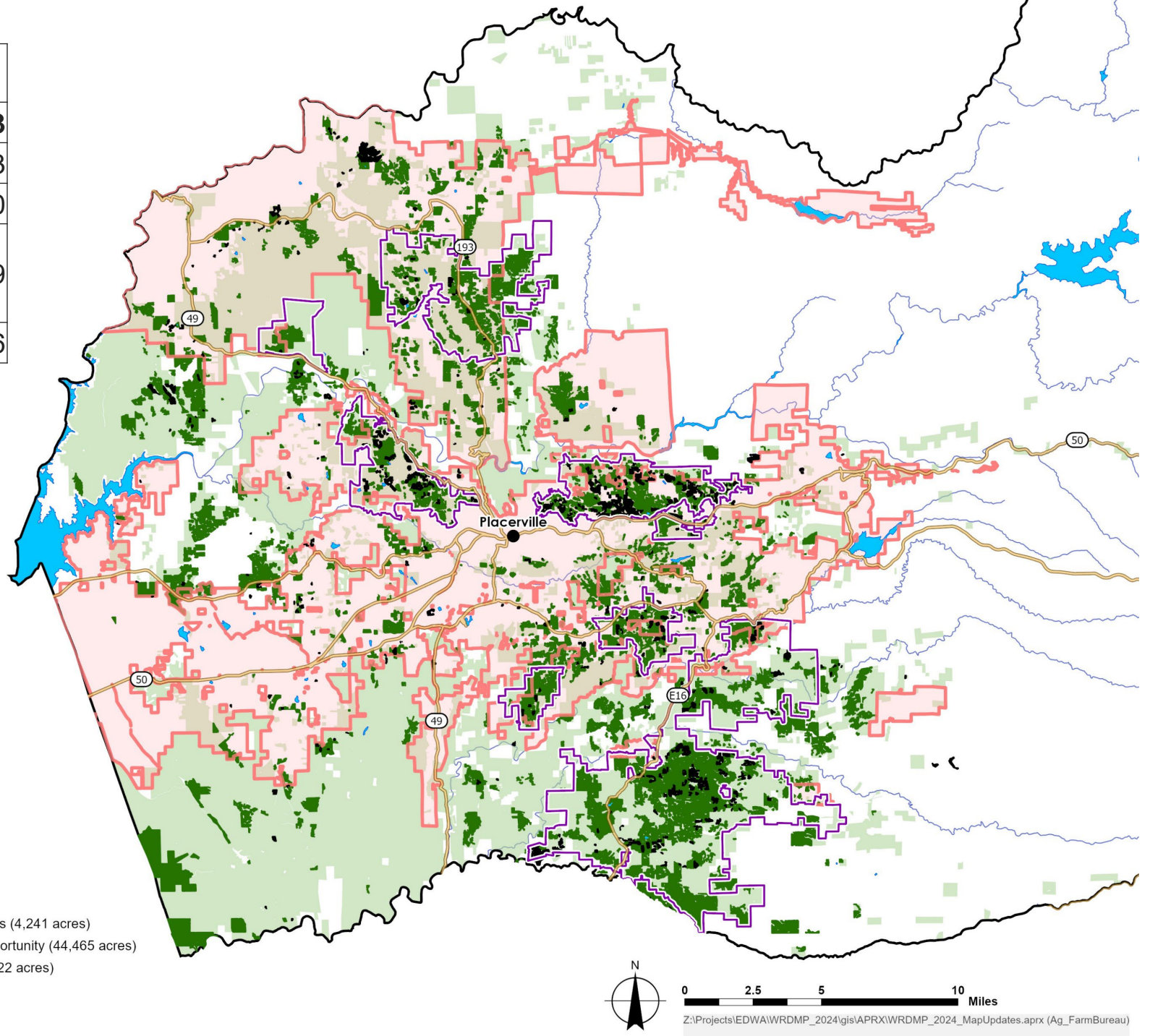
Water Budget under Historical Hydrology Conditions

	Residential indoor	Residential outdoor	Commercial, industrial, institutional	Water loss	Other allowable uses	Special Landscape & Open Space	Total
EID - EDH	2,772	4,234	1,270	1,660	1,006	1,901	12,843
EID - West	6,615	8,454	2,245	3,487	2,115	4,069	26,985
EID - East	3,201	4,940	1,210	1,827	1,108	1,849	14,134
Total EID	**12,588**	**17,627**	**4,725**	**6,974**	**4,229**	**7,819**	**53,961**

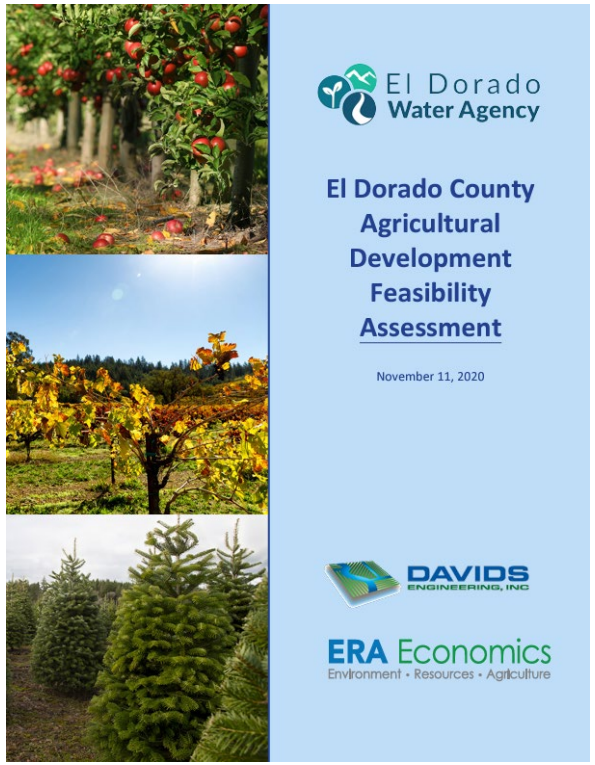
Review of Agricultural Water Demands

- The 2019 WRDMP update developed agricultural demands that reflected:
    1. Agricultural land use designation and land suitability to identify the maximum developable footprint
    2. Economic viability of specialty crops in West Slope for crops placement
    3. Future climate changes effects on crop water demand
- There are minor changes in parcel land use designations from 2019.
- EDWA is currently in the process of conducting field validation of the crop demand factors used in the 2019 WRDMP. However, it is anticipated that these activities will not be completed until the spring of 2025.
- Therefore, for the 2024 WRDMP, we recommend maintaining continuity with the agricultural water demand methodology employed in the 2019 WRMDP.

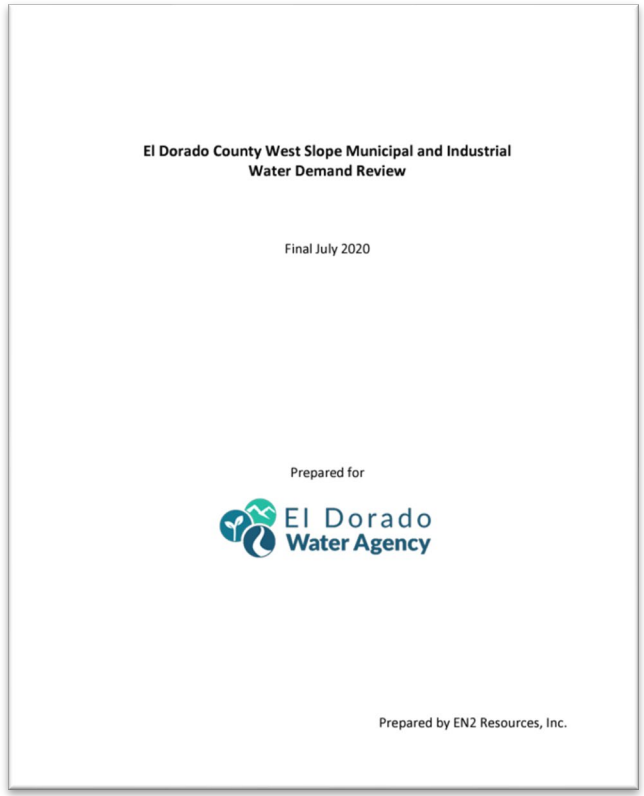
	Rural-Ag	Existing Ag	Potential Ag	Total Ag
EID	**49,836**	**2,132**	**11,882**	**14,013**
GDPUD	39,378	529	6,864	7,393
GFCSD	180	0	0	0
Other County Areas	168,029	1,580	25,719	27,299
Total	257,422	4,241	44,465	48,706



Water Demand Documentation



https://www.edwateragency.org/Shared%20Documents/EDC_AgDemandReport_Final.pdf



https://www.edwateragency.org/Shared%20Documents/2018_Water_Conservation_Legislation_Methodology_July_2020_04-19-2021_Final.pdf