



Plateau Water Planning Group

April 20, 2023



Plateau Water Planning Group

April 20, 2023

Item IV. C

Political Entity Report

Since Last Meeting

- Submitted payment reimbursement report/payment request #3
- TWDB approved budget amendment (reategorize expenses)
- Executed ILA with Kerr County for \$23,865 (salary and admin expenses)
- Developed proposal for sound an audio improvements (Item X)

WSP Technical Consultant Presentation

PLATEAU RWPG Meeting

April 20, 2023

**Update on
Regional Water
Planning
Schedule**

Anticipated timeline of upcoming work in 2023 & 2024

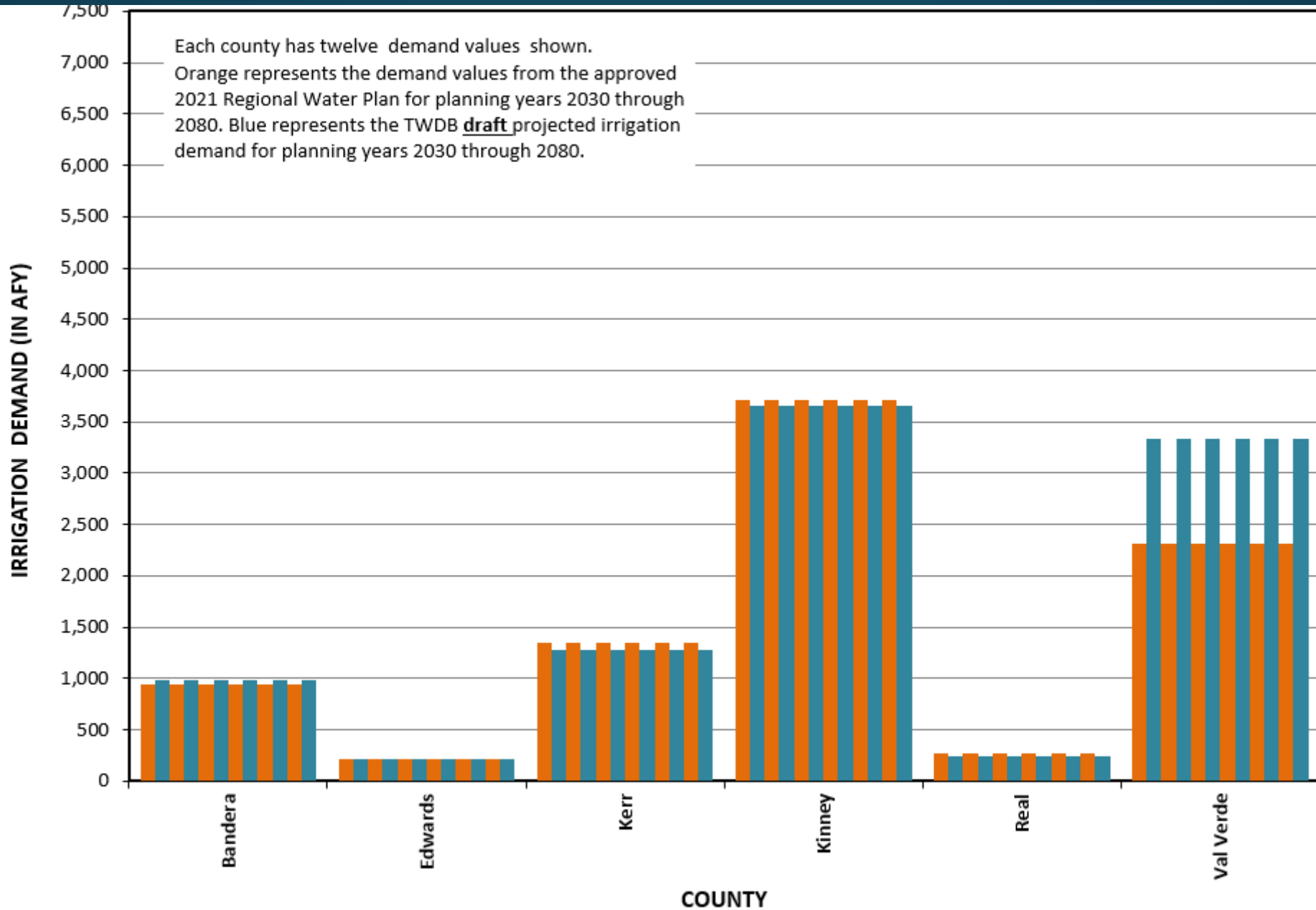
- Jul. 14, 2023 – All non-municipal projection revisions are due back to the TWDB.
- Aug. 11, 2023 – All population & municipal projection revisions are due back to the TWDB.
- Mar. 4, 2024 – Identification of infeasible WMSs in the 2021 RWP analysis must be completed.
- Mar. 4, 2024 – Technical Memorandum Due to TWDB

Review of Draft Non-Municipal Water Demand Projections

Irrigation Water Demand Projection Methodology

- No key changes from the previous planning cycle
- Baseline methodology is the five-year average annual water use estimates (2015-2019).
- Held constant between 2030 and 2080 or
- Counties where the total groundwater availability over the planning period is projected to be < than the groundwater portion of the baseline water demand projection, are held constant for ten years (2030 – 2040), then begin to decline depending on the groundwater availability.

Irrigation Water Demand Projections



**Max. Annual
Historical Water
Use Estimates
(2011 – 2020)
Handout #1
Irrigation**

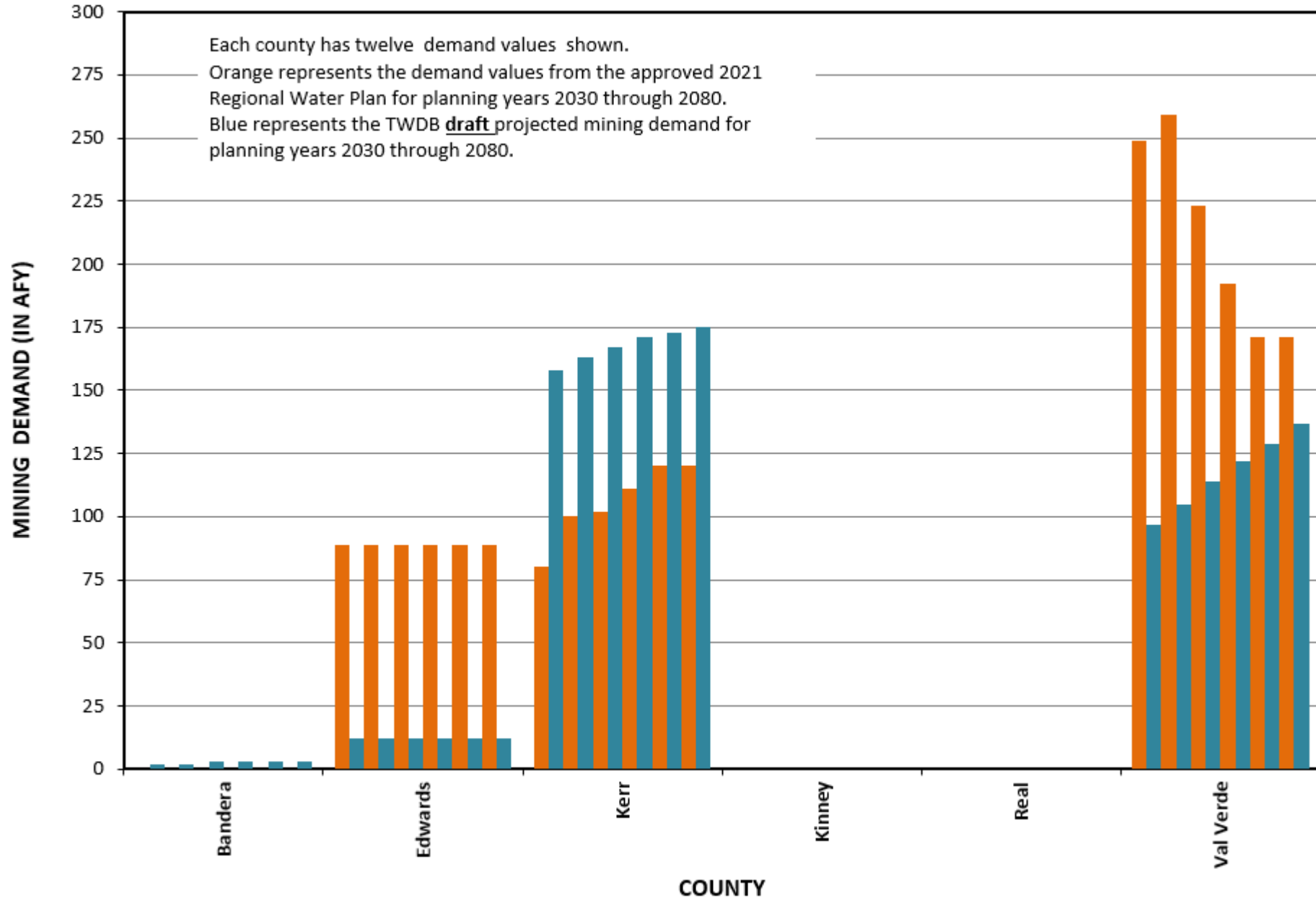
Table 1. Maximum Annual Historical Water Use vs 2026 Draft Irrigation Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Irrigation</i> Water Demand Projections (acre-feet per year)								Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)
		2030	2040	2050	2060	2070	2080	
2021	Bandera	946	946	946	946	946	946	
2026		983	983	983	983	983	983	
Max. Annual Use		1,626	1,626	1,626	1,626	1,626	1,626	1,626
Volume Difference		643	643	643	643	643	643	
2021	Edwards	215	215	215	215	215	215	
2026		211	211	211	211	211	211	
Max. Annual Use		318	318	318	318	318	318	318
Volume Difference		107	107	107	107	107	107	
2021	Kerr	1,342	1,342	1,342	1,342	1,342	1,342	
2026		1,271	1,271	1,271	1,271	1,271	1,271	
Max. Annual Use		2,028	2,028	2,028	2,028	2,028	2,028	2,028
Volume Difference		757	757	757	757	757	757	
2021	Kinney	3,713	3,713	3,713	3,713	3,713	3,713	
2026		3,661	3,661	3,661	3,661	3,661	3,661	
Max. Annual Use		6,734	6,734	6,734	6,734	6,734	6,734	6,734
Volume Difference		3,073	3,073	3,073	3,073	3,073	3,073	
2021	Real	270	270	270	270	270	270	
2026		245	245	245	245	245	245	
Max. Annual Use		325	325	325	325	325	325	325
Volume Difference		80	80	80	80	80	80	
2021	Val Verde	2,319	2,319	2,319	2,319	2,319	2,319	
2026		3,330	3,330	3,330	3,330	3,330	3,330	
Max. Annual Use		4,207	4,207	4,207	4,207	4,207	4,207	4,207
Volume Difference		877	877	877	877	877	877	
Positive Value < 100								
Positive Value > 100								

Mining Water Demand Projection Methodology

- **2022 Mining Water Use Study – USGS granted funding to the TWDB for a study on mining water use and projections through the Water Use and Research Data Program. Through a contract between TWDB and University of Texas Bureau of Economic Geology, the 2011-2012 study has been updated.**
- **Comprehensive and quantitative assessment of mining water use across Texas. This information will be utilized in the 2026 Regional Water Plans and the 2027 State Water Plan.**
- **<https://www.twdb.texas.gov/waterplanning/data/projections/MiningStudy/index.asp>**

Mining Water Demand Projections



**Max. Annual
Historical Water
Use Estimates
(2011 – 2020)
Handout #2
Mining**

Table 2. Maximum Annual Historical Water Use vs 2026 Draft Mining Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Mining</i> Water Demand Projections (acre-feet per year)								Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)
		2030	2040	2050	2060	2070	2080	
2021	Bandera	0	0	0	0	0	0	
2026		2	2	3	3	3	3	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		-2	-2	-3	-3	-3	-3	
2021	Edwards	89	89	89	89	89	89	
2026		12	12	12	12	12	12	
Max. Annual Use		1	1	1	1	1	1	1
Volume Difference		-11	-11	-11	-11	-11	-11	
2021	Kerr	80	100	102	111	120	120	
2026		158	163	167	171	173	175	
Max. Annual Use		201	201	201	201	201	201	201
Volume Difference		43	38	34	30	28	26	
2021	Kinney	0	0	0	0	0	0	
2026		0	0	0	0	0	0	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		0	0	0	0	0	0	
2021	Real	0	0	0	0	0	0	
2026		0	0	0	0	0	0	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		0	0	0	0	0	0	
2021	Val Verde	249	259	223	192	171	171	
2026		97	105	114	122	129	137	
Max. Annual Use		89	89	89	89	89	89	89
Volume Difference		-8	-16	-25	-33	-40	-48	

Positive Value < 100

Positive Value > 100

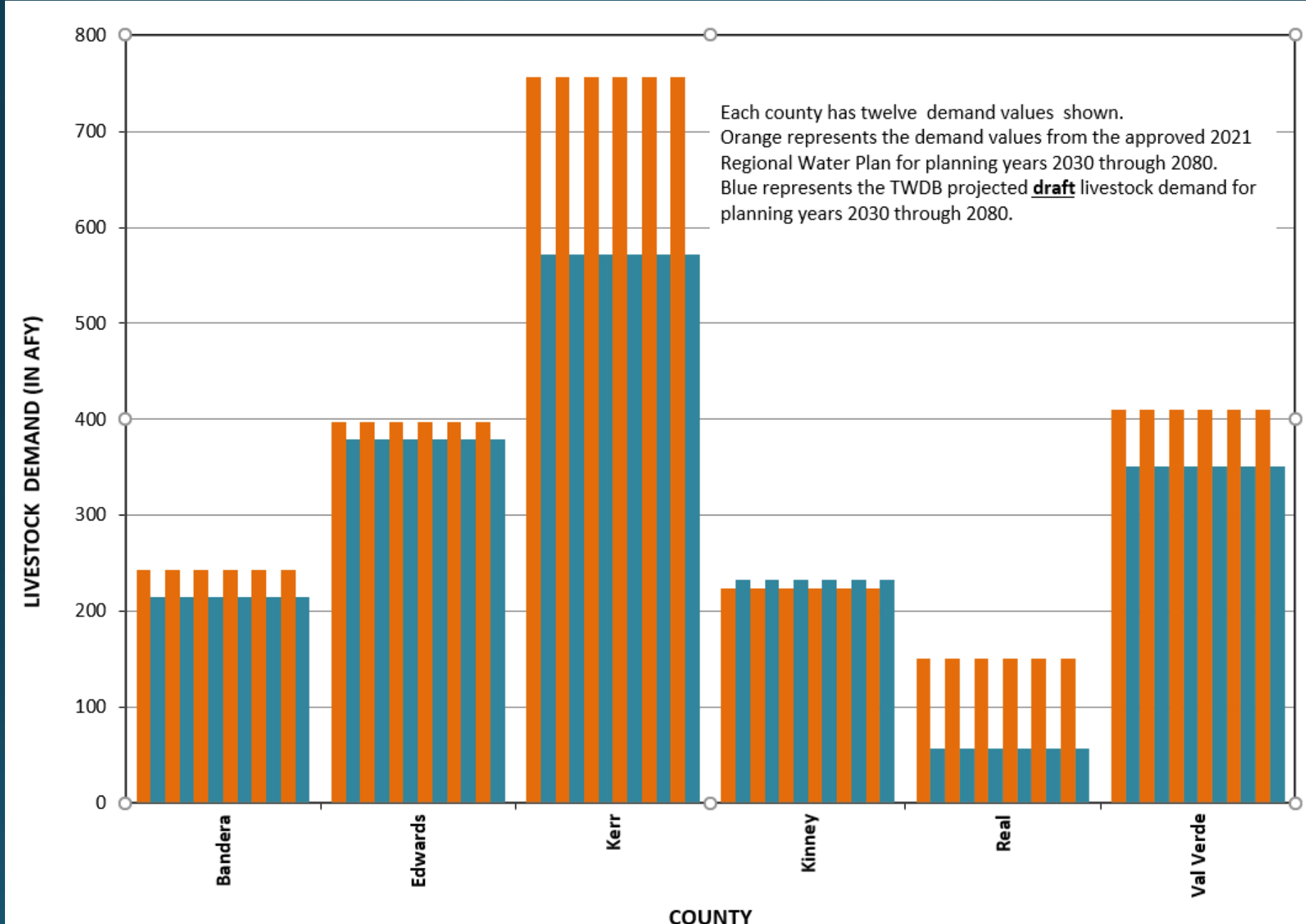
Neg. Value (-)

Recommend NOT using this value

Livestock Water Demand Projection Methodology

- No key changes from the previous planning cycle
- Baseline methodology is the five-year average annual water use estimates (2015-2019).
- Decade specific water use trends from the previous water planning cycle were applied to the five-year estimate average baseline.
- Year 2070 projections were held constant through the draft year 2080 projections.

Livestock Water Demand Projections



**Max. Annual
Historical Water
Use Estimates
(2011 – 2020)
Handout #3
Livestock**

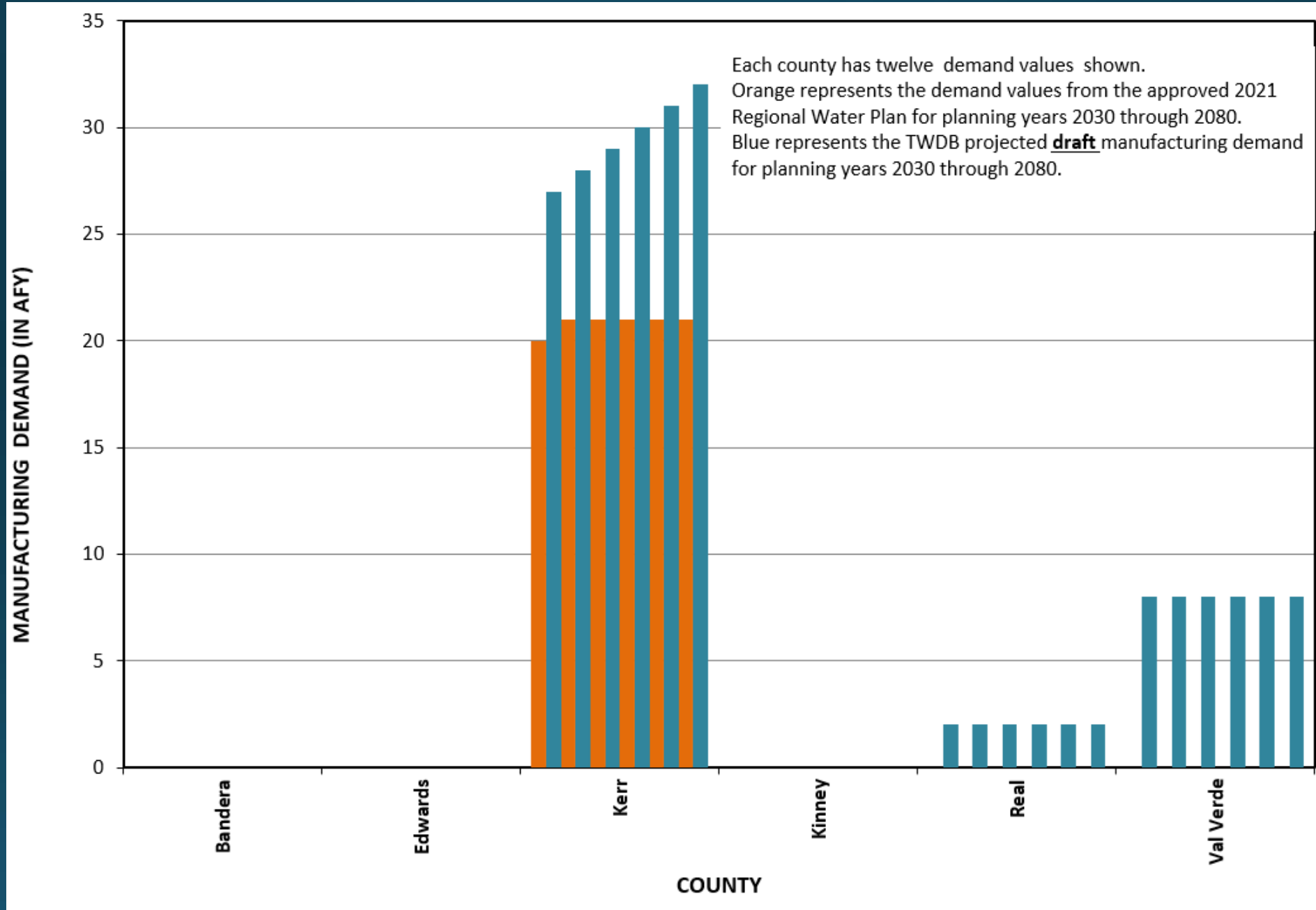
Table 3. Maximum Annual Historical Water Use vs 2026 Draft Livestock Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Livestock</i> Water Demand Projections (acre-feet per year)							Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)	
		2030	2040	2050	2060	2070	2080	
2021	Bandera	243	243	243	243	243	243	
2026		214	214	214	214	214	214	
Max. Annual Use		297	297	297	297	297	297	297
Volume Difference		83	83	83	83	83	83	
2021	Edwards	397	397	397	397	397	397	
2026		379	379	379	379	379	379	
Max. Annual Use		474	474	474	474	474	474	474
Volume Difference		95	95	95	95	95	95	
2021	Kerr	757	757	757	757	757	757	
2026		572	572	572	572	572	572	
Max. Annual Use		889	889	889	889	889	889	889
Volume Difference		317	317	317	317	317	317	
2021	Kinney	224	224	224	224	224	224	
2026		232	232	232	232	232	232	
Max. Annual Use		242	242	242	242	242	242	242
Volume Difference		10	10	10	10	10	10	
2021	Real	151	151	151	151	151	151	
2026		57	57	57	57	57	57	
Max. Annual Use		261	261	261	261	261	261	261
Volume Difference		204	204	204	204	204	204	
2021	Val Verde	410	410	410	410	410	410	
2026		351	351	351	351	351	351	
Max. Annual Use		492	492	492	492	492	492	492
Volume Difference		141	141	141	141	141	141	
Positive Value < 100								
Positive Value > 100								

Manufacturing Water Demand Projection Methodology

- Key changes from the previous planning cycle – demands were projected linearly using County Business Patterns historical number of manufacturing establishments, rather than holding projected demands constant
- Based upon the highest region-county manufacturing water use in the most recent five-years of aggregated data (2015-2019) from the annual water use survey (WUS)
- WUS used in the max year calculation consist of gross intake minus any sales to other entities
- Like the 2021 Plan, fresh surface water and groundwater were included. Additionally, volumes of reuse water, such as treated effluent and brackish groundwater were included in the historical water use estimates & demand projections
 - Saline surface water was not included in draft projections

Manufacturing Water Demand Projections



**Max. Annual
Historical Water
Use Estimates
(2011 – 2020)
Handout #4
Manufacturing**

Table 4. Maximum Annual Historical Water Use vs 2026 Draft Manufacturing Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Manufacturing</i> Water Demand Projections (acre-feet per year)							Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)	
		2030	2040	2050	2060	2070	2080	
2021	Kerr	20	21	21	21	21	21	
2026		27	28	29	30	31	32	
Max. Annual Use		23	23	23	23	23	23	23
Volume Difference		-4	-5	-6	-7	-8	-9	
2021	Real	0	0	0	0	0	0	
2026		2	2	2	2	2	2	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		-2	-2	-2	-2	-2	-2	
2021	Val Verde	0	0	0	0	0	0	
2026		8	8	8	8	8	8	
Max. Annual Use		7	7	7	7	7	7	7
Volume Difference		-1	-1	-1	-1	-1	-1	

* No water demand reported for the remaining counties

Positive Value < 100

Positive Value > 100

Neg. Value (-)

WSP recommends NOT using this value

Steam-Electric Power Water Demand Projection Methodology

- No SEP demands within the Plateau Region
- No key changes from the previous planning cycle
- Based on the highest single-year county water use from within the most recent five-years (2015-2019) data from the WUS
- Near-term additions and retirements of generating facilities
- Holding the projected water demand volumes constant through 2080

Review of Draft Pop & Municipal Water Demand Projections

Population Projection Methodology

Key Changes from Previous Plan

- For the 2026 RWPs – the draft county population projections followed the trends projected by the Texas Demographic Center (TDC), including declines.
- In the past – the TWDB had altered the resulting regional plan population projections in certain counties, by holding them flat in future periods, to avoid projecting declining populations.

Population Projection Methodology

2-Step Process

- **Step 1: County-Level Projections**
 - **Based on TDC's County-Level Projections**
 - **Used the Cohort Component Method**
 - **Age/sex/race/ethnicity**
 - **Birth rates/death rates/migration rates**
 - **Two Migration Scenarios**
 - **Full-Migration**
 - **Half-Migration**
 - **2030-2060**
 - **TDC performs a 30-year projection**
 - **TWDB extends to 50-years**
- **<https://demographics.Texas.gov/Data/TPEPP/Projections>**

Population Projection Methodology

2-Step Process

- Step 2: WUG-Level Projections
 - Sub-Allocate to WUGs
 - Applying the WUGs historical (2010 to 2020) share of the region-county's growth to future growth
 - Applying the WUGs 2020 share of the region-county's 2020 pop. to the region-county's projected pop each decade
 - Constant Population: military bases, universities, primarily group quarter population
 - Buildout: WUGs with buildout in the 2021 RWPs were held constant at or near their buildout population from the previous planning cycle

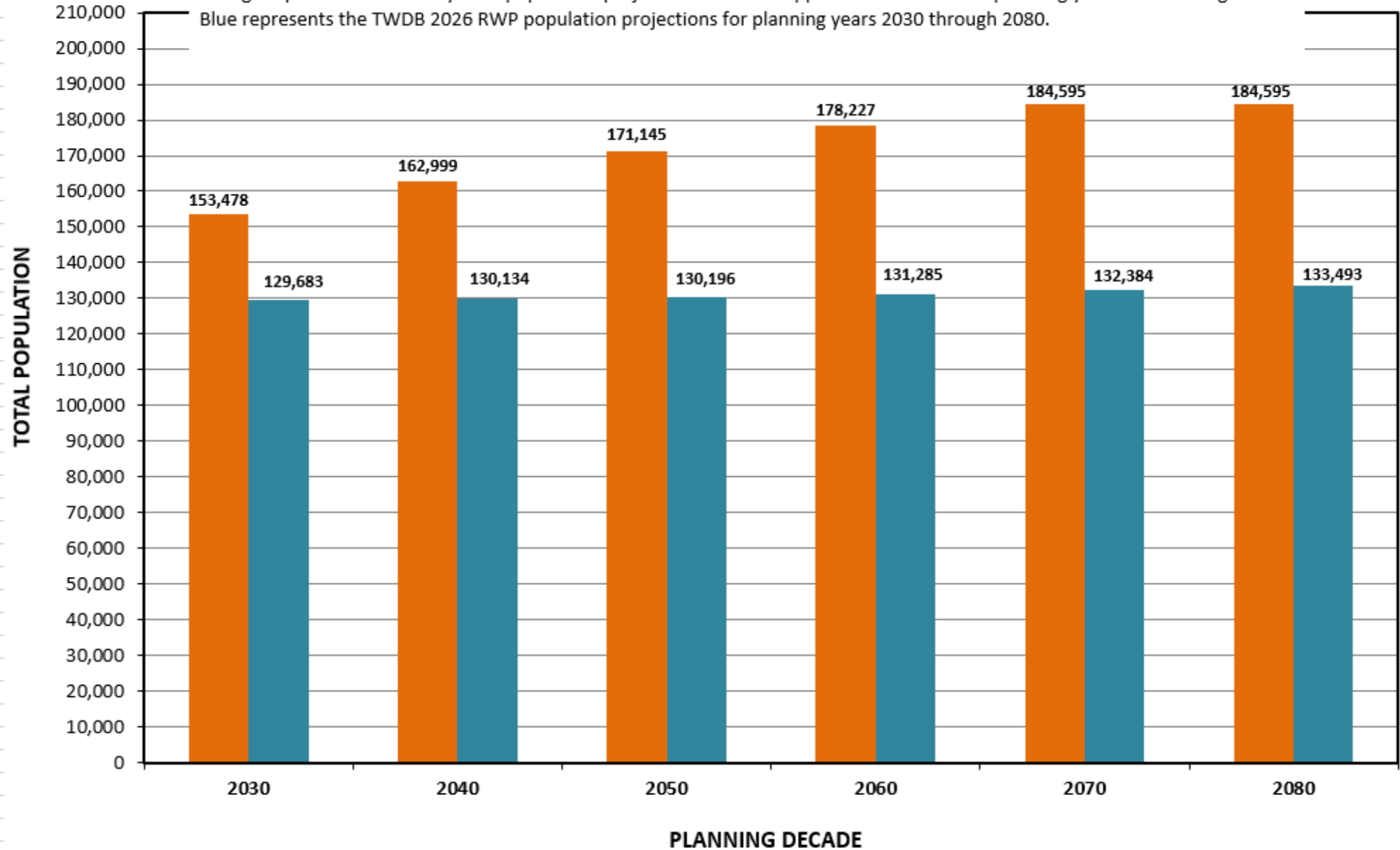
Population Projection Methodology Summary

- **TWDB projections newly released**
 - **Region-County projections 2030-2080: two migration scenarios**
 - **WUG projections 2030-2080: only full-migration scenario**
- **RWPG has the option to revise to use half-migration scenario**
- **Ongoing coordination with RWGP, Consultants and TWDB**

RWP 2021 vs. RWP 2026 - REGION TOTALS

POPULATION PROJECTIONS BY PLANNING DECADE

Orange represents the county total population projections from the approved 2021 RWP for planning years 2030 through 2080.
Blue represents the TWDB 2026 RWP population projections for planning years 2030 through 2080.



Population projection by the TWDB using the full-migration scenario

Handout #6 – 2026 Draft Plateau Region Water Plan
Table 2-1. Plateau Region Population Projections

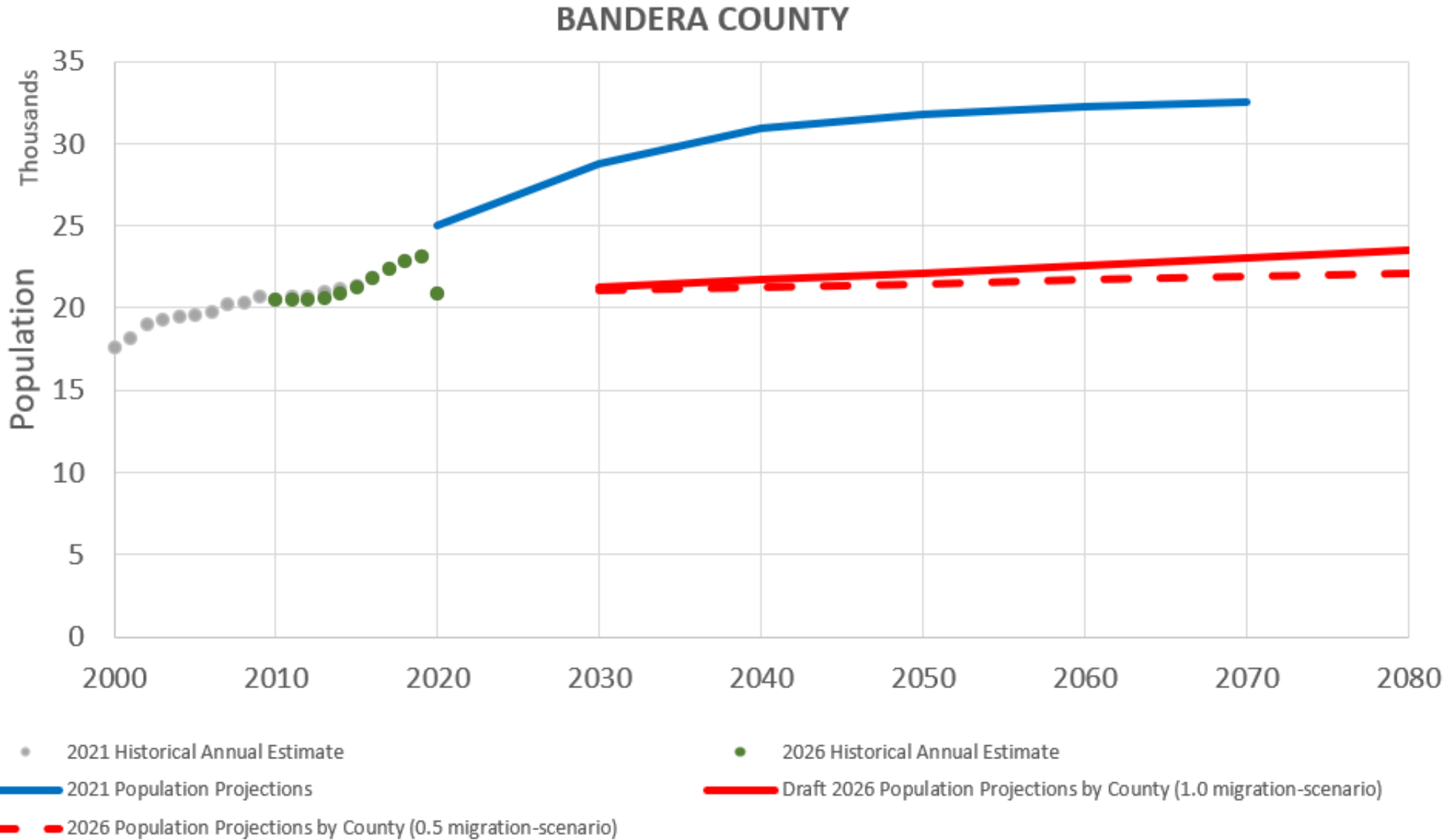
	2020	2030	2040	2050	2060	2070
Bandera County - Guadalupe Basin						
County-Other	115	116	116	116	115	113
Guadalupe Basin Total Population	115	116	116	116	115	113
Bandera County - Nueces Basin						
County-Other	1,079	1,087	1,089	1,088	1,081	1,064
Nueces Basin Total Population	1,079	1,087	1,089	1,088	1,081	1,064
Bandera County - San Antonio Basin						
Bandera	1,591	1,729	1,914	2,097	2,312	2,570
Bandera County FWSD #1	515	669	889	1,162	1,529	2,030
County-Other	17,972	18,100	18,131	18,123	18,000	17,715
San Antonio Basin Total Population	20,078	20,498	20,934	21,382	21,841	22,315
Bandera County Total Population	21,272	21,701	22,139	22,586	23,037	23,492
Edwards County - Colorado Basin						
Rocksprings	350	232	163	109	54	54
County-Other	108	71	49	33	16	16
Colorado Basin Total Population	458	303	212	142	70	70
Edwards County - Nueces Basin						
Rocksprings	210	139	98	65	33	32
County-Other	267	176	121	81	41	40
Nueces Basin Total Population	477	315	219	146	74	72
Edwards County - Rio Grande Basin						
County-Other	52	34	24	16	8	8
Rio Grande Basin Total Population	52	34	24	16	8	8
Edwards County Total Population	987	652	455	304	152	150
Kerr County - Colorado Basin						
County-Other	758	730	669	623	561	478
Colorado Basin Total Population	758	730	669	623	561	478
Kerr County - Guadalupe Basin						
Kerrville	26,350	29,764	33,621	37,978	42,899	48,458
Kerrville South Water	3,630	3,759	3,849	3,987	4,126	4,259
County-Other	25,244	24,315	22,270	20,744	18,699	15,925
Guadalupe Basin Total Population	55,224	57,838	59,740	62,709	65,724	68,642
Kerr County - Nueces Basin						
County-Other	11	10	9	9	8	7
Nueces Basin Total Population	11	10	9	9	8	7
Kerr County - San Antonio Basin						
County-Other	302	292	267	248	224	191
San Antonio Basin Total Population	302	292	267	248	224	191
Kerr County Total Population	56,295	58,870	60,685	63,589	66,517	69,318
Kinney County - Nueces Basin						
County-Other	23	20	18	15	12	10
Nueces Basin Total Population	23	20	18	15	12	10

	2020	2030	2040	2050	2060	2070
Kinney County - Rio Grande Basin						
Brackettville	1,055	936	846	763	681	600
Fort Clark Springs MUD	1,129	1,055	1,007	991	971	948
County-Other	529	454	395	335	277	219
Rio Grande Basin Total Population	2,713	2,445	2,248	2,089	1,929	1,767
Kinney County Total Population	2,736	2,465	2,266	2,104	1,941	1,777

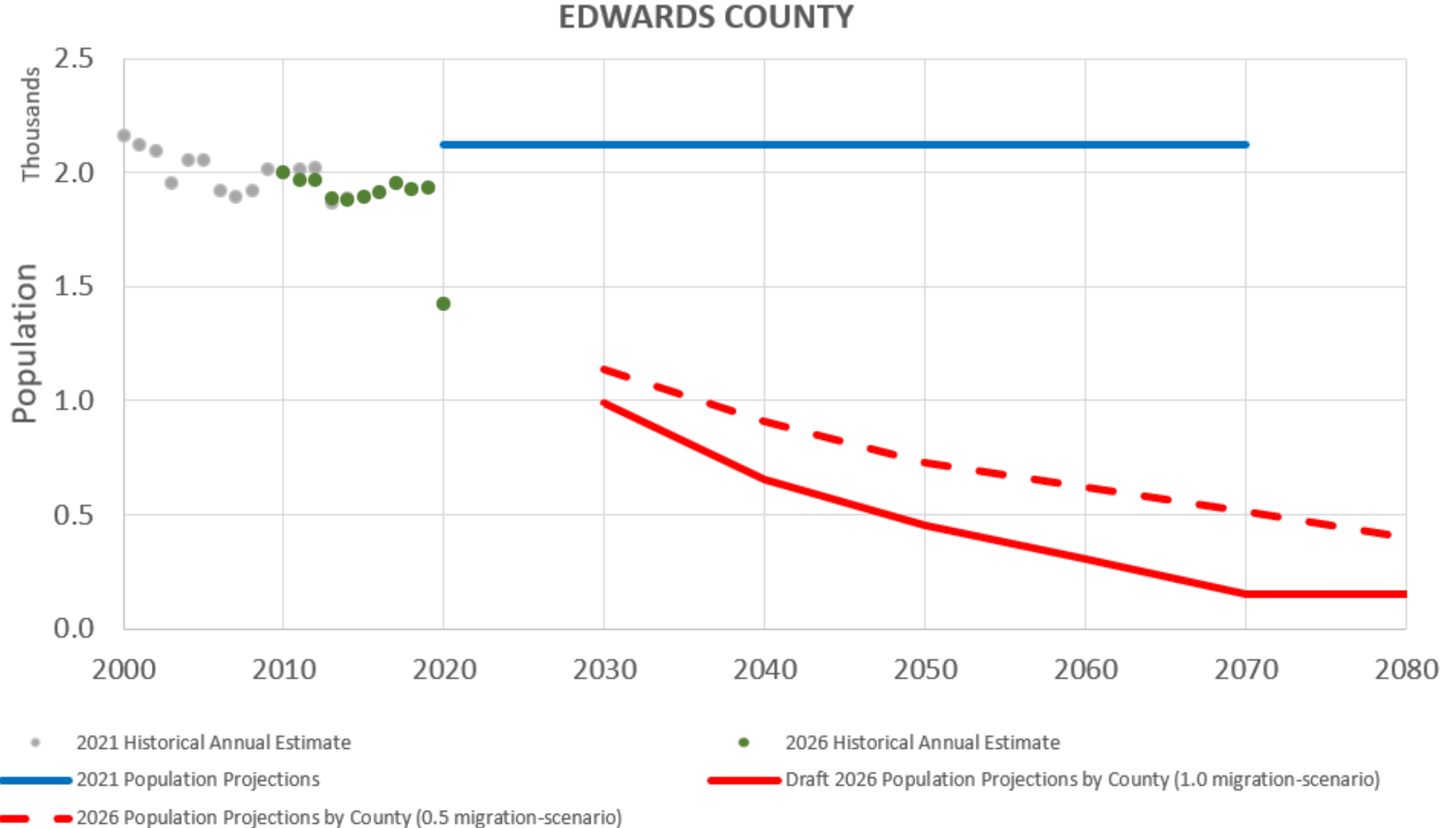
Handout #6 – 2026 Draft Plateau Region Water Plan
Table 2-1. (continued) Plateau Region Population Projections

	2020	2030	2040	2050	2060	2070
Real County - Colorado Basin						
County-Other	28	24	19	15	11	7
Colorado Basin Total Population	28	24	19	15	11	7
Real County - Nueces Basin						
Camp Wood	343	259	195	147	111	84
Leakey	218	163	122	91	68	51
County-Other	1,757	1,469	1,168	934	677	402
Nueces Basin Total Population	2,318	1,891	1,485	1,172	856	537
Real County Total Population	2,346	1,915	1,504	1,187	867	544
Val Verde County - Rio Grande Basin						
Del Rio Utilities Commission	24,025	23,189	22,417	21,493	20,556	19,605
Laughlin AFB	1,574	1,574	1,574	1,574	1,574	1,574
County-Other	20,448	19,768	19,156	18,448	17,740	17,033
Rio Grande Basin Total Population	46,047	44,531	43,147	41,515	39,870	38,212
Val Verde County Total Population	46,047	44,531	43,147	41,515	39,870	38,212
Region J Total Population	129,683	130,134	130,196	131,285	132,384	133,493

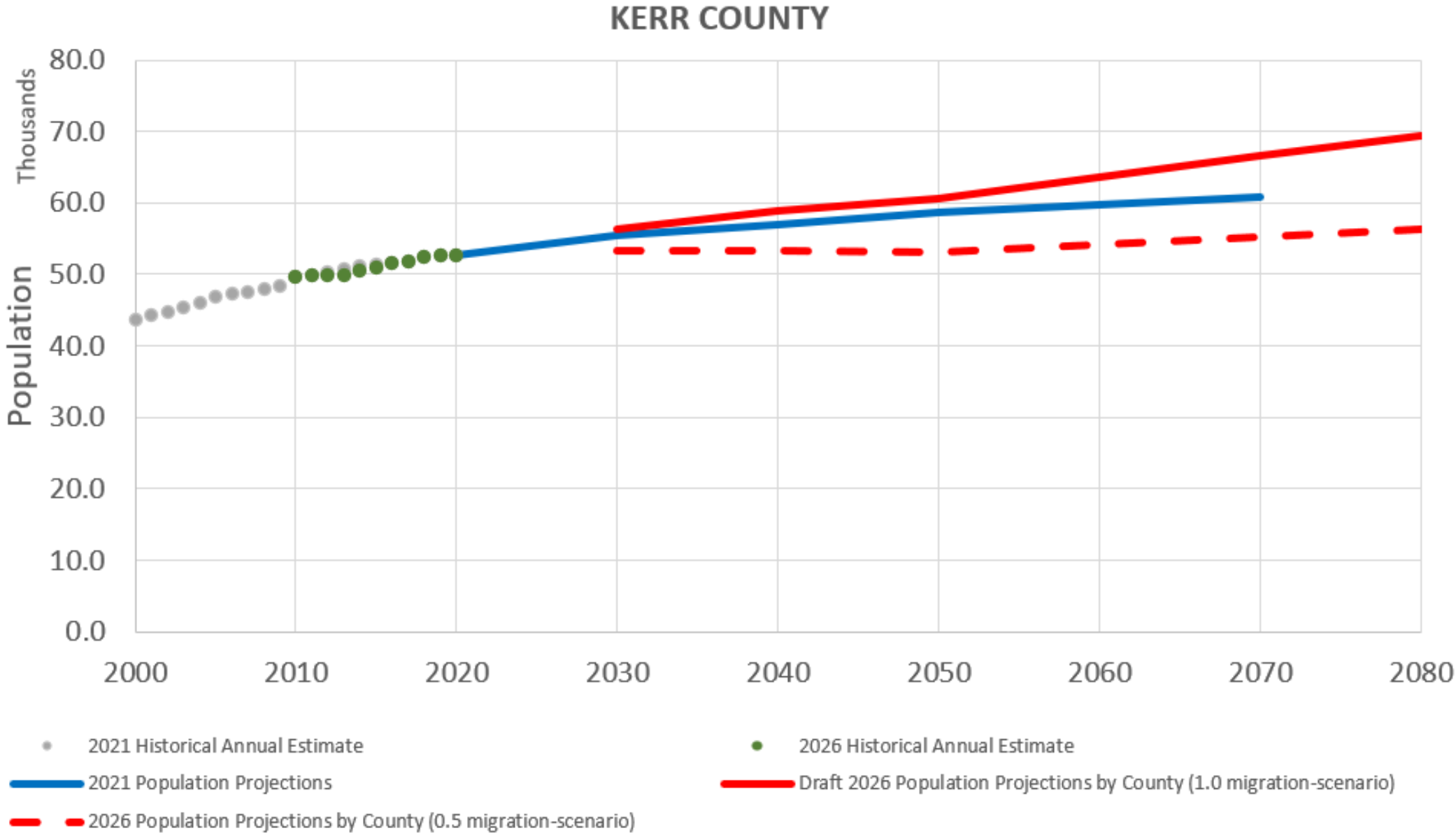
Bandera – Draft Population Projections



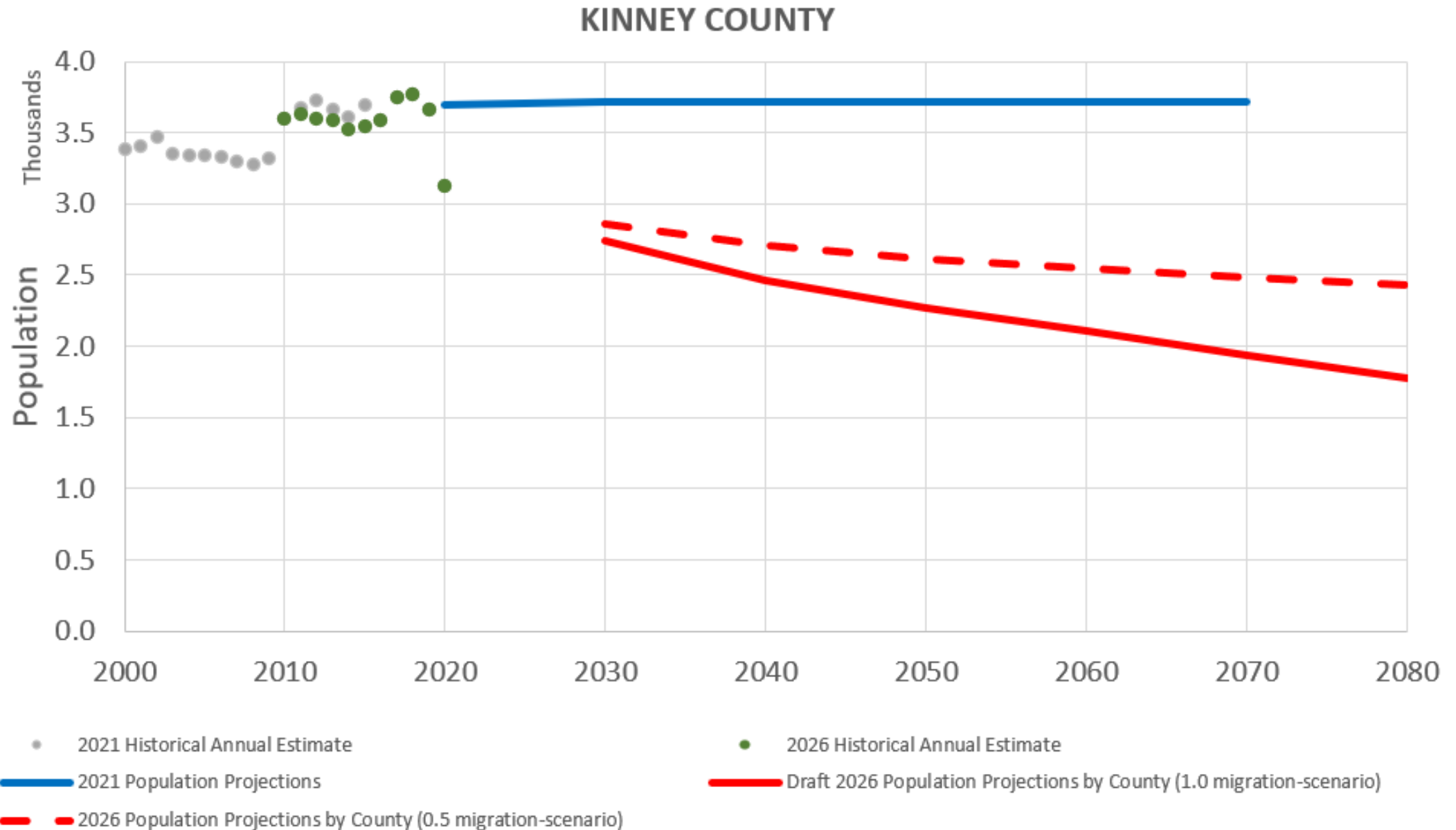
Edwards – Draft Population Projections



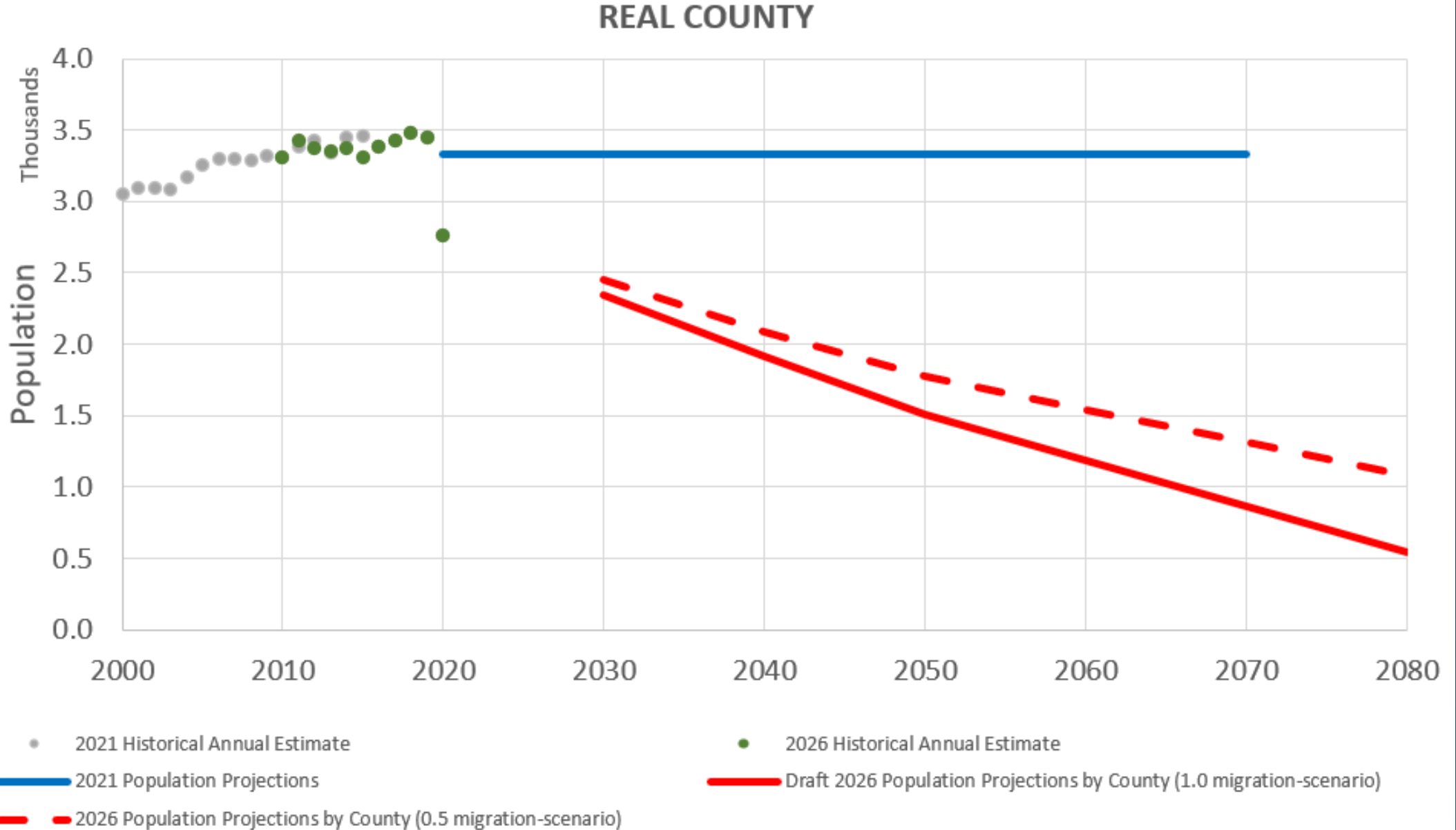
Kerr – Draft Population Projections



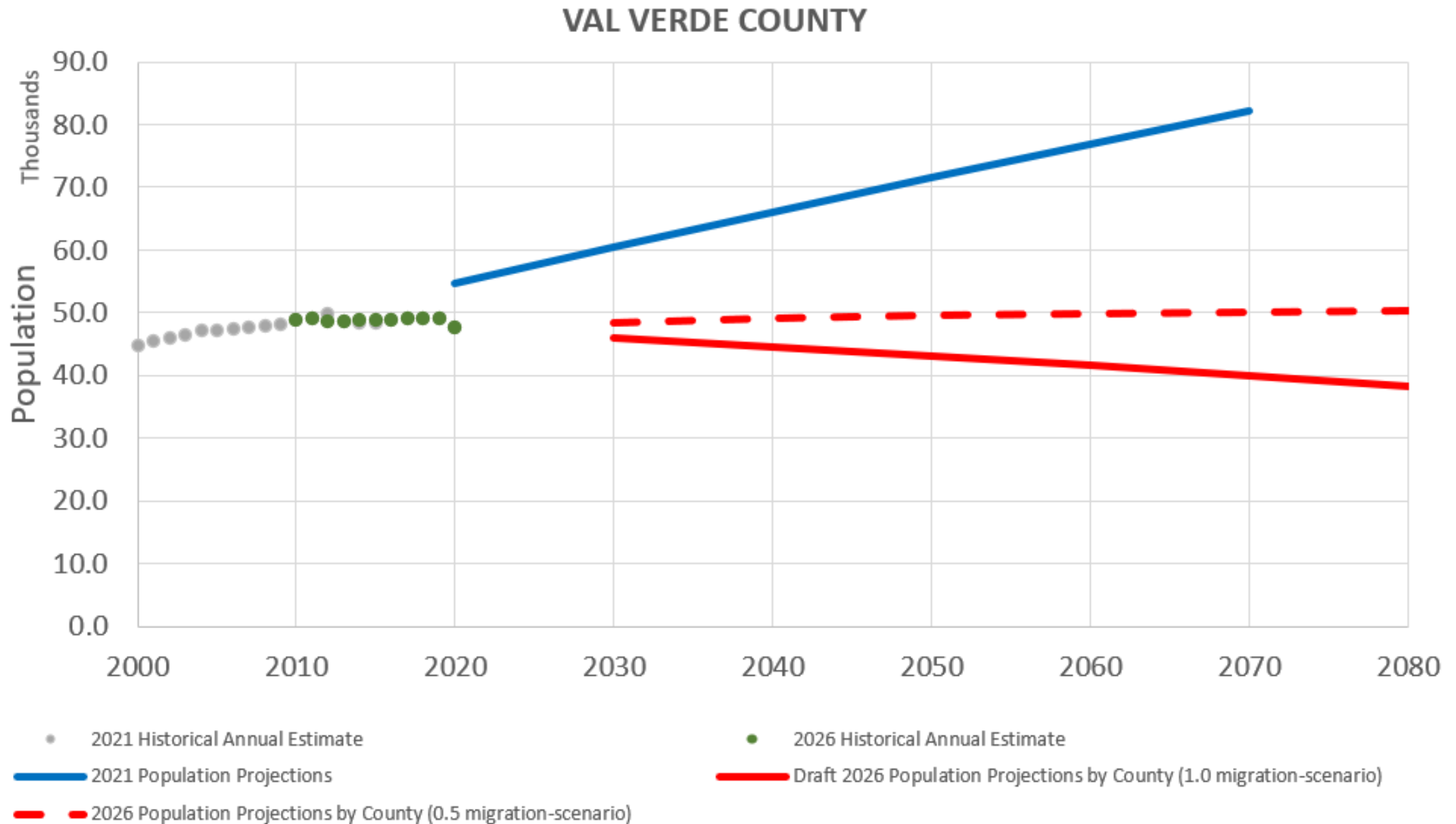
Kinney – Draft Population Projections



Real – Draft Population Projections



Val Verde – Draft Population Projections



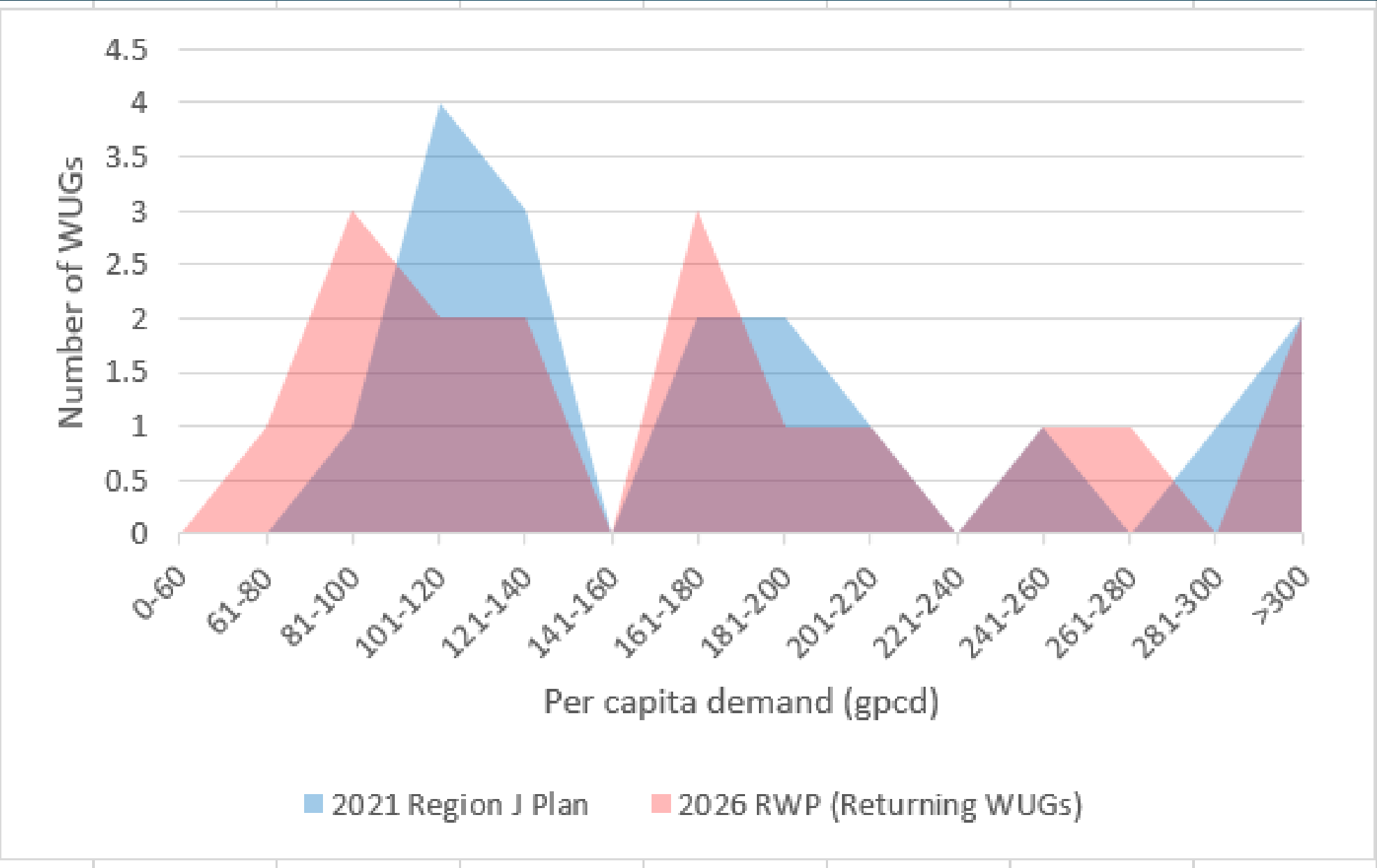
Municipal Demand Projections: GPCD

- Gallons per Capita Daily
- Baseline GPCD = Dry-Year
- Municipal Water Use/Entire Utility's Water Use
 - Residential
 - Commercial
 - Institutional
 - Restaurants, Hotels, Camps, Transient Pop = included along with permanent residents
- * Exempt Use Difficult to Estimate

Municipal Demand Projections: Baseline GPCD

- **Draft Baseline GPCD**
 - **Based on 2021 RWP WUG GPCD**
 - **Then reduced to account for passive plumbing code savings between historical and projected (2030)**
- **Water Sources: Groundwater + Surface Water**
 - **Water Use Survey**

TWDB Estimated Baseline Per-Capita WUG Demands



Plateau Region Gallons Per Capita Daily (GPCD)

Suggested Values Highlighted “Yellow”

Handout #7 – 2026 Draft Plateau Water Plan
Plateau Region Gallons Per Capita Daily (GPCD)

	2026 Draft GPCD	2021 Regional Water Plan GPCD	Historical Maximum GPCD
Bandera County			
Bandera	164	174	154
Bandera County FWSD 1	186	196	289
County-Other, Bandera	94	102	26
Edwards County			
Rocksprings	211	220	239
County-Other, Edwards	99	108	23
Kerr County			
Kerrville	178	186	217
Kerrville South Water	111	117	118
County-Other, Kerr	76	84	60
Kinney County			
Brackettville	278	287	442
Fort Clark MUD	439	447	478
County-Other, Kinney	121	127	20
Real County			
Camp Wood	172	180	391
Leakey	122	131	611
County-Other, Real	96	103	39
Val Verde County			
Del Rio Utilities Commission	250	259	327
Laughlin Air Force Base	516	526	533
County-Other, Val Verde	117	126	10

Note: WSP recommended GPCD value

Summary

- **Approve the non-municipal water demand projections**
 - Utilizing the max. annual historical water use estimates
 - Revision requests due July 14, 2023
- **Consideration of additional conservatism in estimates**
 - Utilization of 1.0 vs. 0.5 migration scenario
 - Remove passive savings assumptions from proposed 2026 baseline GPCD
 - Utilize the max. 'dry-year' GPCD (2010-2020)
- **Engagement**
 - Continue working with the TWDB

*** Revision requests for pop. & municipal water demands due August 11, 2023**

Next Meeting

JULY 2023 ??

Table 1. Maximum Annual Historical Water Use vs 2026 Draft Irrigation Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Irrigation</i> Water Demand Projections (acre-feet per year)								Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)
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2021	Bandera	946	946	946	946	946	946	
2026		983	983	983	983	983	983	
Max. Annual Use		1,626	1,626	1,626	1,626	1,626	1,626	1,626
Volume Difference		643	643	643	643	643	643	
2021	Edwards	215	215	215	215	215	215	
2026		211	211	211	211	211	211	
Max. Annual Use		318	318	318	318	318	318	318
Volume Difference		107	107	107	107	107	107	
2021	Kerr	1,342	1,342	1,342	1,342	1,342	1,342	
2026		1,271	1,271	1,271	1,271	1,271	1,271	
Max. Annual Use		2,028	2,028	2,028	2,028	2,028	2,028	2,028
Volume Difference		757	757	757	757	757	757	
2021	Kinney	3,713	3,713	3,713	3,713	3,713	3,713	
2026		3,661	3,661	3,661	3,661	3,661	3,661	
Max. Annual Use		6,734	6,734	6,734	6,734	6,734	6,734	6,734
Volume Difference		3,073	3,073	3,073	3,073	3,073	3,073	
2021	Real	270	270	270	270	270	270	
2026		245	245	245	245	245	245	
Max. Annual Use		325	325	325	325	325	325	325
Volume Difference		80	80	80	80	80	80	
2021	Val Verde	2,319	2,319	2,319	2,319	2,319	2,319	
2026		3,330	3,330	3,330	3,330	3,330	3,330	
Max. Annual Use		4,207	4,207	4,207	4,207	4,207	4,207	4,207
Volume Difference		877	877	877	877	877	877	
Positive Value < 100								
Positive Value > 100								

Table 1a. Maximum Annual Historical Water Use for Irrigation (2011-2020)

Plateau Water Planning Group Non-Municipal Water Demand Projections for Irrigation Max/Annual Historical Water Use Estimates by County (2011-2020) (acre-feet per year)										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bandera	1,397	824	793	831	594	663	800	1,626	1,230	1,077
Edwards	318	160	190	242	119	262	221	248	204	195
Kerr	655	1,314	1,701	2,028	1,048	690	1,970	1,270	1,375	1,107
Kinney	6,734	3,269	3,692	3,611	3,169	3,195	3,789	3,883	4,269	4,768
Real	325	229	268	284	203	217	246	265	294	300
Val Verde	3,143	1,067	2,440	2,483	2,798	2,945	3,530	3,372	4,005	4,207

Table 2. Maximum Annual Historical Water Use vs 2026 Draft Mining Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Mining</i> Water Demand Projections (acre-feet per year)							Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)	
		2030	2040	2050	2060	2070	2080	
2021	Bandera	0	0	0	0	0	0	
2026		2	2	3	3	3	3	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		-2	-2	-3	-3	-3	-3	
2021	Edwards	89	89	89	89	89	89	
2026		12	12	12	12	12	12	
Max. Annual Use		1	1	1	1	1	1	1
Volume Difference		-11	-11	-11	-11	-11	-11	
2021	Kerr	80	100	102	111	120	120	
2026		158	163	167	171	173	175	
Max. Annual Use		201	201	201	201	201	201	201
Volume Difference		43	38	34	30	28	26	
2021	Kinney	0	0	0	0	0	0	
2026		0	0	0	0	0	0	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		0	0	0	0	0	0	
2021	Real	0	0	0	0	0	0	
2026		0	0	0	0	0	0	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		0	0	0	0	0	0	
2021	Val Verde	249	259	223	192	171	171	
2026		97	105	114	122	129	137	
Max. Annual Use		89	89	89	89	89	89	89
Volume Difference		-8	-16	-25	-33	-40	-48	

Positive Value < 100

Positive Value > 100

Neg. Value (-)

Recommend NOT using this value

Table 3. Maximum Annual Historical Water Use vs 2026 Draft Livestock Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Livestock</i> Water Demand Projections (acre-feet per year)							Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)	
		2030	2040	2050	2060	2070	2080	
2021	Bandera	243	243	243	243	243	243	
2026		214	214	214	214	214	214	
Max. Annual Use		297	297	297	297	297	297	297
Volume Difference		83	83	83	83	83	83	
2021	Edwards	397	397	397	397	397	397	
2026		379	379	379	379	379	379	
Max. Annual Use		474	474	474	474	474	474	474
Volume Difference		95	95	95	95	95	95	
2021	Kerr	757	757	757	757	757	757	
2026		572	572	572	572	572	572	
Max. Annual Use		889	889	889	889	889	889	889
Volume Difference		317	317	317	317	317	317	
2021	Kinney	224	224	224	224	224	224	
2026		232	232	232	232	232	232	
Max. Annual Use		242	242	242	242	242	242	242
Volume Difference		10	10	10	10	10	10	
2021	Real	151	151	151	151	151	151	
2026		57	57	57	57	57	57	
Max. Annual Use		261	261	261	261	261	261	261
Volume Difference		204	204	204	204	204	204	
2021	Val Verde	410	410	410	410	410	410	
2026		351	351	351	351	351	351	
Max. Annual Use		492	492	492	492	492	492	492
Volume Difference		141	141	141	141	141	141	
Positive Value < 100								
Positive Value > 100								

Table 3a. Maximum Annual Historical Water Use for Livestock (2011-2020)

Plateau Water Planning Group Non-Municipal Water Demand Projections for Livestock Max/Annual Historical Water Use Estimates by County (2011-2020) (acre-feet per year)										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bandera	297	205	199	216	231	235	195	204	204	202
Edwards	474	413	320	297	382	382	367	382	383	374
Kerr	889	701	656	651	540	542	584	581	613	584
Kinney	231	211	208	242	226	227	227	241	240	235
Real	261	106	77	60	60	63	53	55	55	55
Val Verde	492	436	352	282	338	336	354	362	364	358

Table 4. Maximum Annual Historical Water Use vs 2026 Draft Manufacturing Water Demand Projections

Comparison between Max. Annual Historical Water Use & 2026 Plan <i>Draft Manufacturing</i> Water Demand Projections (acre-feet per year)							Max. Annual Historical Water Use Estimate 2011-2020 (acre-feet per year)	
		2030	2040	2050	2060	2070	2080	
2021	Kerr	20	21	21	21	21	21	
2026		27	28	29	30	31	32	
Max. Annual Use		23	23	23	23	23	23	23
Volume Difference		-4	-5	-6	-7	-8	-9	
2021	Real	0	0	0	0	0	0	
2026		2	2	2	2	2	2	
Max. Annual Use		0	0	0	0	0	0	0
Volume Difference		-2	-2	-2	-2	-2	-2	
2021	Val Verde	0	0	0	0	0	0	
2026		8	8	8	8	8	8	
Max. Annual Use		7	7	7	7	7	7	7
Volume Difference		-1	-1	-1	-1	-1	-1	

* No water demand reported for the remaining counties

Positive Value < 100

Positive Value > 100

Neg. Value (-)

WSP recommends NOT using this value

Table 4a. Maximum Annual Historical Water Use for Manufacturing (2011-2020)

Plateau Water Planning Group Non-Municipal Water Demand Projections for Manufacturing Max/Annual Historical Water Use Estimates by County (2011-2020) (acre-feet per year)										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bandera	0	0	0	0	0	0	0	0	0	0
Edwards	0	0	0	0	0	0	0	0	0	0
Kerr	8	20	0	0	0	11	8	23	22	11
Kinney	0	0	0	0	0	0	0	0	0	0
Real	0	0	0	0	0	0	0	0	0	0
Val Verde	0	0	0	0	0	0	1	1	7	7

Handout #5 – 2021 Plateau Region Water Plan
Table 2-1. Plateau Region Population Projections

	2020	2030	2040	2050	2060	2070
Bandera County - Guadalupe Basin						
County-Other	122	140	150	155	157	158
Guadalupe Basin Total Population	122	140	150	155	157	158
Bandera County - Nueces Basin						
County-Other	1,114	1,282	1,376	1,414	1,438	1,450
Nueces Basin Total Population	1,114	1,282	1,376	1,414	1,438	1,450
Bandera County - San Antonio Basin						
Bandera	1,875	2,160	2,316	2,380	2,420	2,442
Bandera County FWSD #1	679	781	838	862	876	883
County-Other	16,962	19,535	20,961	21,546	21,901	22,085
County-Other (Bandera River Ranch 1)	929	1,070	1,148	1,180	1,199	1,209
County-Other (Lake Medina Shores)	2,415	2,781	2,985	3,068	3,118	3,144
County-Other (Medina WSC)	895	1,031	1,107	1,137	1,156	1,166
San Antonio Basin Total Population	23,755	27,358	29,355	30,173	30,670	30,929
Bandera County Total Population	24,991	28,780	30,881	31,742	32,265	32,537
Edwards County - Colorado Basin						
Rocksprings	844	844	844	844	844	844
County-Other	136	136	136	136	136	136
Colorado Basin Total Population	980	980	980	980	980	980
Edwards County - Nueces Basin						
Rocksprings	415	415	415	415	415	415
County-Other	391	391	391	391	391	391
County-Other (Barksdale WSC)	264	264	264	264	264	264
Nueces Basin Total Population	1,070	1,070	1,070	1,070	1,070	1,070
Edwards County - Rio Grande Basin						
County-Other	73	73	73	73	73	73
Rio Grande Basin Total Population	73	73	73	73	73	73
Edwards County Total Population	2,123	2,123	2,123	2,123	2,123	2,123
Kerr County - Colorado Basin						
County-Other	507	541	562	582	596	607
Colorado Basin Total Population	507	541	562	582	596	607
Kerr County - Guadalupe Basin						
Kerrville	25,658	26,638	27,217	27,792	28,203	28,522
Kerrville South Water	2,821	2,969	3,057	3,143	3,206	3,254
County-Other	20,583	21,982	22,813	23,636	24,226	24,679
County-Other (Center Point North Water System)	255	272	282	291	298	304
County-Other (Center Point Taylor System)	530	564	585	605	619	631
County-Other (Center Point)	161	172	178	184	189	192
County-Other (Hills and Dales Estates)	202	216	223	231	237	241
County-Other (Nickerson Farm Water System)	200	213	221	229	234	238
County-Other (Oak Forest South Water)	669	712	738	763	782	796
County-Other (Park Place Subdivision)	129	138	143	148	151	154
County-Other (Pecan Valley)	123	131	135	140	144	146
County-Other (Rustic Hills Water)	80	85	88	91	93	95
County-Other (Verde Park Estates)	178	189	196	203	208	211
County-Other (Westwood Water System)	269	287	297	307	315	320
Guadalupe Basin Total Population	51,858	54,568	56,173	57,763	58,905	59,783
Kerr County - Nueces Basin						
County-Other	6	7	7	7	8	8
Nueces Basin Total Population	6	7	7	7	8	8

Handout #5 – 2021 Plateau Region Water Plan
Table 2-1. (continued) Plateau Region Population Projections

	2020	2030	2040	2050	2060	2070
Kerr County - San Antonio Basin						
County-Other	273	291	302	313	321	327
San Antonio Basin Total Population	273	291	302	313	321	327
Kerr County Total Population	52,644	55,407	57,044	58,665	59,830	60,725
Kinney County - Nueces Basin						
County-Other	81	82	82	82	82	82
Nueces Basin Total Population	81	82	82	82	82	82
Kinney County - Rio Grande Basin						
Brackettville	1,958	1,971	1,971	1,971	1,971	1,971
Fort Clark Springs MUD	1,259	1,267	1,267	1,267	1,267	1,267
County-Other	397	400	400	400	400	400
Rio Grande Basin Total Population	3,614	3,638	3,638	3,638	3,638	3,638
Kinney County Total Population	3,695	3,720	3,720	3,720	3,720	3,720
Real County - Colorado Basin						
County-Other	35	35	35	35	35	35
Colorado Basin Total Population	35	35	35	35	35	35
Real County - Nueces Basin						
Camp Wood	747	747	747	747	747	747
Leakey	1,415	1,415	1,415	1,415	1,415	1,415
County-Other	1,132	1,132	1,132	1,132	1,132	1,132
Nueces Basin Total Population	3,294	3,294	3,294	3,294	3,294	3,294
Real County Total Population	3,329	3,329	3,329	3,329	3,329	3,329
Val Verde County - Rio Grande Basin						
Del Rio Utilities Commission	37,775	40,196	42,540	44,948	47,242	49,453
Laughlin AFB	1,767	1,951	2,129	2,239	2,239	2,239
County-Other	15,152	18,242	21,233	24,379	27,479	30,469
Rio Grande Basin Total Population	54,694	60,389	65,902	71,566	76,960	82,161
Val Verde County Total Population	54,694	60,389	65,902	71,566	76,960	82,161
Region J Total Population	141,476	153,748	162,999	171,145	178,227	184,595

**Handout #6 – 2026 Draft Plateau Region Water Plan
Table 2-1. Plateau Region Population Projections**

	2020	2030	2040	2050	2060	2070
Bandera County - Guadalupe Basin						
County-Other	115	116	116	116	115	113
Guadalupe Basin Total Population	115	116	116	116	115	113
Bandera County - Nueces Basin						
County-Other	1,079	1,087	1,089	1,088	1,081	1,064
Nueces Basin Total Population	1,079	1,087	1,089	1,088	1,081	1,064
Bandera County - San Antonio Basin						
Bandera	1,591	1,729	1,914	2,097	2,312	2,570
Bandera County FWSD #1	515	669	889	1,162	1,529	2,030
County-Other	17,972	18,100	18,131	18,123	18,000	17,715
San Antonio Basin Total Population	20,078	20,498	20,934	21,382	21,841	22,315
Bandera County Total Population	21,272	21,701	22,139	22,586	23,037	23,492
Edwards County - Colorado Basin						
Rocksprings	350	232	163	109	54	54
County-Other	108	71	49	33	16	16
Colorado Basin Total Population	458	303	212	142	70	70
Edwards County - Nueces Basin						
Rocksprings	210	139	98	65	33	32
County-Other	267	176	121	81	41	40
Nueces Basin Total Population	477	315	219	146	74	72
Edwards County - Rio Grande Basin						
County-Other	52	34	24	16	8	8
Rio Grande Basin Total Population	52	34	24	16	8	8
Edwards County Total Population	987	652	455	304	152	150
Kerr County - Colorado Basin						
County-Other	758	730	669	623	561	478
Colorado Basin Total Population	758	730	669	623	561	478
Kerr County - Guadalupe Basin						
Kerrville	26,350	29,764	33,621	37,978	42,899	48,458
Kerrville South Water	3,630	3,759	3,849	3,987	4,126	4,259
County-Other	25,244	24,315	22,270	20,744	18,699	15,925
Guadalupe Basin Total Population	55,224	57,838	59,740	62,709	65,724	68,642
Kerr County - Nueces Basin						
County-Other	11	10	9	9	8	7
Nueces Basin Total Population	11	10	9	9	8	7
Kerr County - San Antonio Basin						
County-Other	302	292	267	248	224	191
San Antonio Basin Total Population	302	292	267	248	224	191
Kerr County Total Population	56,295	58,870	60,685	63,589	66,517	69,318
Kinney County - Nueces Basin						
County-Other	23	20	18	15	12	10
Nueces Basin Total Population	23	20	18	15	12	10
Kinney County - Rio Grande Basin						
Brackettville	1,055	936	846	763	681	600
Fort Clark Springs MUD	1,129	1,055	1,007	991	971	948
County-Other	529	454	395	335	277	219
Rio Grande Basin Total Population	2,713	2,445	2,248	2,089	1,929	1,767
Kinney County Total Population	2,736	2,465	2,266	2,104	1,941	1,777

Handout #6 – 2026 Draft Plateau Region Water Plan
Table 2-1. (continued) Plateau Region Population Projections

	2020	2030	2040	2050	2060	2070
Real County - Colorado Basin						
County-Other	28	24	19	15	11	7
Colorado Basin Total Population	28	24	19	15	11	7
Real County - Nueces Basin						
Camp Wood	343	259	195	147	111	84
Leakey	218	163	122	91	68	51
County-Other	1,757	1,469	1,168	934	677	402
Nueces Basin Total Population	2,318	1,891	1,485	1,172	856	537
Real County Total Population	2,346	1,915	1,504	1,187	867	544
Val Verde County - Rio Grande Basin						
Del Rio Utilities Commission	24,025	23,189	22,417	21,493	20,556	19,605
Laughlin AFB	1,574	1,574	1,574	1,574	1,574	1,574
County-Other	20,448	19,768	19,156	18,448	17,740	17,033
Rio Grande Basin Total Population	46,047	44,531	43,147	41,515	39,870	38,212
Val Verde County Total Population	46,047	44,531	43,147	41,515	39,870	38,212
Region J Total Population	129,683	130,134	130,196	131,285	132,384	133,493

**Handout #7 – 2026 Draft Plateau Water Plan
Plateau Region Gallons Per Capita Daily (GPCD)**

	2026 Draft GPCD	2021 Regional Water Plan GPCD	Historical Maximum GPCD
Bandera County			
Bandera	164	174	154
Bandera County FWSD 1	186	196	289
County-Other, Bandera	94	102	26
Edwards County			
Rocksprings	211	220	239
County-Other, Edwards	99	108	23
Kerr County			
Kerrville	178	186	217
Kerrville South Water	111	117	118
County-Other, Kerr	76	84	60
Kinney County			
Brackettville	278	287	442
Fort Clark MUD	439	447	478
County-Other, Kinney	121	127	20
Real County			
Camp Wood	172	180	391
Leakey	122	131	611
County-Other, Real	96	103	39
Val Verde County			
Del Rio Utilities Commission	250	259	327
Laughlin Air Force Base	516	526	533
County-Other, Val Verde	117	126	10

Note: WSP recommended GPCD value



Plateau Water Planning Group

April 20, 2023

Item IX.

Reappoint Officers

Item IX.

- Consider discuss and take appropriate action to reappoint officers for an additional 2-year term
 - Chair: Jonathan Letz
 - Vice Chair: Genell Hobbs
 - Secretary: Gene Williams



Plateau Water Planning Group

April 20, 2023

Item X.

Audio Visual Equipment

Item X.

- Consider discuss and take appropriate action to purchase audio visual equipment in order to meet Open Meetings Act requirements for video conferences.
 - Improve consistency of audio for Zoom participants
 - Establish video and audio of members present in auditorium
 - Dedicated equipment for PWPG
 - Not reimbursable expenses through current TWDB contract
 - Purchase through SSBT PWPG account managed by Kerr County

Proposed Sound and Audio Improvements

To Achieve Open Meetings Act Requirements for Video Conferences

- **Sound equipment for audience audio in Zoom call**
 - Alesis MultiMix 4 USB FX 4 Channel Compact Studio Mixer – **\$149.00**
 - innopow 200-Channel Wireless Microphones System – **\$142.99**
 - Short XLR Cables (X2) – **\$11.87**
- **Audio/Video for Chair, podium, and audience**
 - TONGVEO 20X zoom USB PTZ Camera (for clear video of audience) – **\$360.00**
 - Tripod for PTZ Camera – **\$49.99**
 - Logitech Brio 4k webcam bundle (for Chair audio and video) – **\$129.99**
 - Powered USB hub (for centralized location of USB devices) – **\$16.99**
 - 25 ft HDMI Cable (from secondary computer to projector) – **\$22.99**
 - 15 ft USB Extender (from USB hub to PTZ) – **\$10.99**
 - 15 ft USB Extender (from control computer to USB hub) – **\$10.99**
 - Tote for equipment storage – **\$29.99**
- **Contingency for minor price changes: \$115.00**
- **Total Not to Exceed: \$1,050.00**