

RESOLUTION OF THE UPPER COLORADO RIVER COMMISSION

**June 6, 2017
Jackson Lake Lodge, Wyoming**

2016 Upper Basin Depletion Demand Schedules

WHEREAS, the Upper Colorado River Commission supports water resource development in the Upper Colorado River Basin to enable the Upper Division States to develop their Compact apportionments of Colorado River water while meeting the Compact requirements at Lee Ferry; and

WHEREAS, the Commission resolved in its June 5, 2006 meeting in Jackson, Wyoming, following review of a draft hydrologic determination for the Navajo-Gallup Water Supply Project in New Mexico, that it would not object to a determination by the Secretary of the Interior that at least 5.76 million acre-feet of water is available annually for use by the Upper Basin, exclusive of reservoir evaporation at Lake Powell, Flaming Gorge Reservoir and the Aspinall Unit reservoirs of the Colorado River Storage Project; and

WHEREAS, the Secretary of the Interior issued a hydrologic determination on May 23, 2007 concluding that there is at least 5.76 million acre-feet per year of Colorado River water available for use in the Upper Basin on average, exclusive of reservoir evaporation at Lake Powell, Flaming Gorge Reservoir and the Aspinall Unit reservoirs of the Colorado River Storage Project; and

WHEREAS, the Commission is regularly evaluating the reasonable supply of Colorado River water with respect to Compact apportionments and potential shortages; and

WHEREAS, these depletion schedules are best estimates of potential water use based on positive economic conditions and favorable hydrology and climate. As such, they are not predictions of what future water use will necessarily be, but projections for planning purposes to be used for modeling only; and

WHEREAS, the Commission continues to evaluate and improve existing consumptive use estimation and measurement procedures; and

WHEREAS, the Bureau of Reclamation uses Upper Division States' estimates of depletions in its modeling of Colorado River system operations; and

WHEREAS, the Upper Division States recognize the use of these revised depletion estimates for planning and River operations purposes, but also recognize that these estimates may be changed in the future based upon new assumptions or information; and

WHEREAS, the Upper Division States and the Commission have attempted to make reasonable

estimates of future depletions by not incorporating the highest projections or the lowest projections, but utilizing existing uses, future uses that will occur in systems already built but not yet at capacity and projected additional future uses for which specific plans exist; and

WHEREAS, these revised estimates of depletions do not constitute an interpretation of, nor shall anyone construe them as interpreting or in any manner limiting or constraining, Upper Colorado River Basin Compact apportionments.

NOW THEREFORE, BE IT RESOLVED that the Upper Colorado River Commission requests that the attached December 2016 projected estimates of Upper Basin depletions be used for planning purposes and water supply studies within the Colorado River Basin.

BE IT FURTHER RESOLVED that this resolution shall be transmitted to the Regional Director, Upper Colorado Region of the Bureau of Reclamation in Salt Lake City, Utah and as appropriate to other federal, state and congressional officials who may need to use these depletion estimates.

CERTIFICATE

I, Don A. Ostler, Executive Director and Secretary of the Upper Colorado River Commission, do hereby certify that the above resolution was adopted by the Upper Colorado River Commission at its regular meeting on June 6, 2017 in Jackson Lake Lodge, Wyoming.

WITNESS my hand this 28th day of June, 2017.



Don Ostler, P.E.
Executive Director and Secretary
Upper Colorado River Commission

Upper Colorado River Division States
Current and Future Depletion Demand Schedule^{1,2}
Total Upper Colorado River Division States
December 31, 2016
(Units: 1,000 acre-feet)

ITEM	YEAR						
	Current/Historic	2020	2030	2040	2050	2060	2070
Agriculture-Irrigation & Stock	2,968	3,036	3,051	3,073	3,078	3,080	3,082
Potential Agriculture-Irrigation & Stock		0	5	5	10	10	0
Municipal/Industrial	124	149	168	183	200	209	217
Potential Municipal/Industrial		3	6	14	18	21	16
Self-Served Industrial	12	12	12	12	12	12	12
Potential Self-Served Industrial		0	0	0	0	0	0
Energy	152	157	167	178	193	198	203
Potential Energy		5	10	10	15	10	0
Minerals	53	57	65	73	81	94	103
Potential Minerals		2	8	17	26	31	33
Export	1,019	1,050	1,123	1,179	1,258	1,310	1,423
Potential Export		50	75	100	125	100	0
Ute Indian Settlement³	0	25	65	112	146	146	146
Reservoir Evaporation (in-state)	208	208	208	208	208	208	208
Potential Reservoir Evaporation		0	0	0	0	0	0
TOTAL Forecasted Depletions	4,536	4,753	4,963	5,165	5,368	5,428	5,442
Shared CRSP Evap (0.520maf) ⁴	520	520	520	520	520	520	520
TOTAL	5,056	5,273	5,483	5,685	5,888	5,948	5,962

Note 1: This depletion schedule does not attempt to interpret the Colorado River Compact, the Upper Colorado River Basin Compact, or any other element of the "Law of the River." This schedule should not be construed as an acceptance of any assumption that limits the Upper Colorado River Basin's depletions.

Note 2: This depletion schedule is for planning purposes only. It is not a tabulation or determination of water rights or actual uses.

Note 3: The Ute Indian Settlement is part of Utah's depletion.

Note 4: "Shared CRSP Evap" refers to evaporation from the reservoirs constructed under the Colorado River Storage Project (CRSP) Act that are used to regulate compact deliveries at Lee Ferry and generate CRSP hydroelectric power. These include Lake Powell, Flaming Gorge Reservoir, and the Aspinall Unit. This evaporation amount is the anticipated long-term average. Evaporation will vary annually depending on reservoir storage and climatic conditions.

Upper Colorado River Division States
Current and Future Depletion Demand Schedule^{1,2}
Colorado
December 31, 2016
(Units: 1,000 acre-feet)

ITEM	YEAR						
	Current/Historic	2020	2030	2040	2050	2060	2070
Agriculture-Irrigation & Stock³	1,600	1,600	1,600	1,600	1,600	1,600	1,600
Potential Agriculture-Irrigation & Stock		0	5	5	10	10	0
Municipal/Industrial	60	60	65	65	70	70	75
Potential Municipal/Industrial		0	0	5	5	5	0
Self-Served Industrial	11	11	11	11	11	11	11
Potential Self-Served Industrial		0	0	0	0	0	0
Energy	30	33	40	45	50	55	60
Potential Energy		5	10	10	15	10	0
Minerals	32	35	40	45	50	60	66
Potential Minerals		0	0	3	5	4	0
Export	732	740	775	800	850	900	1,013
Potential Export		50	75	100	125	100	0
Reservoir Evaporation (in-state)	130	130	130	130	130	130	130
Potential Reservoir Evaporation		0	0	0	0	0	0
TOTAL Forecasted Depletions	2,595	2,664	2,751	2,819	2,921	2,955	2,955

Note 1: This depletion schedule does not attempt to interpret the Colorado River Compact, the Upper Colorado River Basin Compact, or any other element of the "Law of the River." This schedule should not be construed as an acceptance of any assumption that limits the Upper Colorado River Basin's depletions.

Note 2: This depletion schedule is for planning purposes only. It is not a tabulation or determination of water rights or actual uses.

Note 3: Increases in current/historic Agriculture depletions represent a change in consumptive use calculation methodology. There has been no documented evidence of increase in actual consumptive use over this time frame. 2016 calculations used the modified Blaney-Criddle method with elevation adjustments. We anticipate an additional increase in calculated consumptive use if the Penman-Monteith method is used in the future.

Upper Colorado River Division States
Current and Future Depletion Demand Schedule^{1,2}
New Mexico
December 31, 2016
(Units: 1,000 acre-feet)

ITEM	YEAR						
	Current/Historic	2020	2030	2040	2050	2060	2070
Agriculture-Irrigation & Stock	323	341	361	381	381	381	381
Potential Agriculture-Irrigation & Stock		0	0	0	0	0	0
Municipal/Industrial	16	23	32	41	47	54	55
Potential Municipal/Industrial		0	0	0	0	0	0
Self-Served Industrial	1	1	1	1	1	1	1
Potential Self-Served Industrial		0	0	0	0	0	0
Energy	54	54	54	54	54	54	54
Potential Energy		0	0	0	0	0	0
Minerals	2	2	2	2	2	2	2
Potential Minerals		0	0	0	0	0	0
Export	105	105	116	120	120	120	120
Potential Export		0	0	0	0	0	0
Reservoir Evaporation (in-state)	29	29	29	29	29	29	29
Potential Reservoir Evaporation		0	0	0	0	0	0
TOTAL Forecasted Depletions	530	555	595	628	634	641	642

Note 1: This depletion schedule does not attempt to interpret the Colorado River Compact, the Upper Colorado River Basin Compact, or any other element of the "Law of the River." This schedule should not be construed as an acceptance of any assumption that limits the Upper Colorado River Basin's depletions.

Note 2: This depletion schedule is for planning purposes only. It is not a tabulation or determination of water rights or actual uses.

**Upper Colorado River Division States
Current and Future Depletion Demand Schedule^{1,2}
Utah
December 31, 2016
(Units: 1,000 acre-feet)**

ITEM	YEAR						
	Current/Historic	2020	2030	2040	2050	2060	2070
Agriculture-Irrigation & Stock	601	650	643	643	645	645	645
Potential Agriculture-Irrigation & Stock		0	0	0	0	0	0
Municipal/Industrial	32	46	49	52	56	56	56
Potential Municipal/Industrial		0	0	0	0	0	0
Self-Served Industrial	0	0	0	0	0	0	0
Potential Self-Served Industrial		0	0	0	0	0	0
Energy³	40	42	45	51	61	61	61
Potential Energy		0	0	0	0	0	0
Minerals	0	0	0	0	0	0	0
Potential Minerals		0	0	0	0	0	0
Export	170	191	216	241	267	267	267
Potential Export		0	0	0	0	0	0
Ute Indian Settlement	0	25	65	112	146	146	146
Reservoir Evaporation (in-state)	23	23	23	23	23	23	23
Potential Reservoir Evaporation		0	0	0	0	0	0
TOTAL Forecasted Depletions	865	975	1,039	1,121	1,197	1,197	1,197

Note 1: This depletion schedule does not attempt to interpret the Colorado River Compact, the Upper Colorado River Basin Compact, or any other element of the "Law of the River." This schedule should not be construed as an acceptance of any assumption that limits the Upper Colorado River Basin's depletions.

Note 2: This depletion schedule is for planning purposes only. It is not a tabulation or determination of water rights or actual uses.

Note 3: Energy and Minerals are combined for this value as Utah does not separate Minerals from Energy.

**Upper Colorado River Division States
Current and Future Depletion Demand Schedule^{1,2}**

Wyoming³

December 31, 2016

(Units: 1,000 acre-feet)

ITEM	YEAR						
	Current/Historic	2020	2030	2040	2050	2060	2070
Agriculture-Irrigation & Stock	444	445	447	449	451	453	455
Potential Agriculture-Irrigation & Stock		0	0	0	0	0	0
Municipal/Industrial	16	20	23	25	27	29	31
Potential Municipal/Industrial		3	6	9	13	16	16
Self-Served Industrial	0	0	0	0	0	0	0
Potential Self-Served Industrial		0	0	0	0	0	0
Energy	28	28	28	28	28	28	28
Potential Energy		0	0	0	0	0	0
Minerals	19	20	23	26	29	32	35
Potential Minerals		2	8	14	21	27	33
Export	13	14	16	19	21	23	23
Potential Export		0	0	0	0	0	0
Reservoir Evaporation (in-state)	27	27	27	27	27	27	27
Potential Reservoir Evaporation		0	0	0	0	0	0
TOTAL Forecasted Depletions	546	558	578	597	616	635	648

Note 1: This depletion schedule does not attempt to interpret the Colorado River Compact, the Upper Colorado River Basin Compact, or any other element of the "Law of the River." This schedule should not be construed as an acceptance of any assumption that limits the Upper Colorado River Basin's depletions.

Note 2: This depletion schedule is for planning purposes only. It is not a tabulation or determination of water rights or actual uses.

Note 3: Wyoming's Current/Historic Agriculture Consumptive Use was calculated using a Penman-Monteith procedure. The 2007 estimates were calculated using a Blaney-Criddle procedure. This change in methodology primarily accounts for the increase in estimated consumptive use from irrigated lands. There has been no documented actual increase in consumptive use over this time frame. We do believe the Penman-Monteith methodology is more accurate than Blaney-Criddle.