

# Clark Canyon Reservoir Water Supply and Projected Operation *November 2023*



— BUREAU OF —  
RECLAMATION



Watershed Above Clark Canyon Dam

<b>Forecast</b>	<i>Minimum</i>	<i>Median</i>	<i>Maximum</i>
Monthly Inflow (kaf)	16.9	22.8	27.0
Monthly Average Release (cfs)	175	175	200
End of Month Content (kaf)	134.8	140.7	143.4

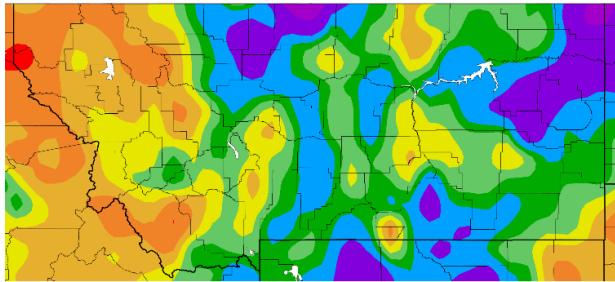


Clark Canyon Reservoir

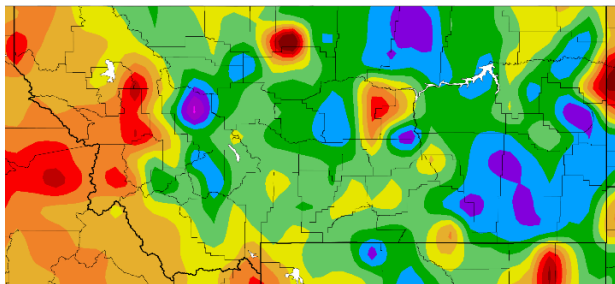
<b>November Inflow Forecast</b>	
November Volume (kaf)	22,800
Percent of Average (%)	134
Water Year	Historic Inflow
2023	11.6
2022	8.8
2021	13.7
2020	15.3
30 Year Average	17.0

**Western Regional Climate Center**  
*October 1-31 Climate*

**Percent of Normal Precipitation**



**Departure from Normal Temperature (F)**



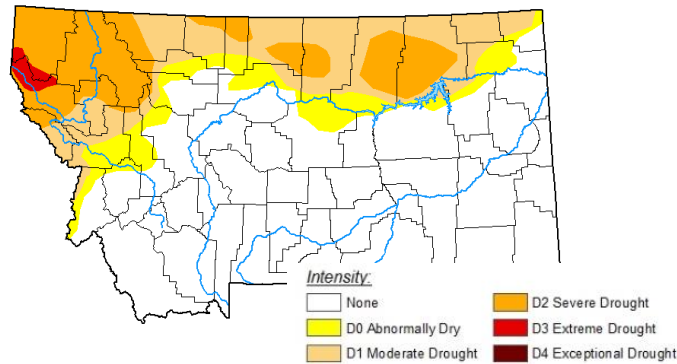
**CLIMATE SUMMARY**

October temperatures were near normal across Southwestern Montana while the basins surrounding Clark Canyon Reservoir was mixed precipitation patterns.

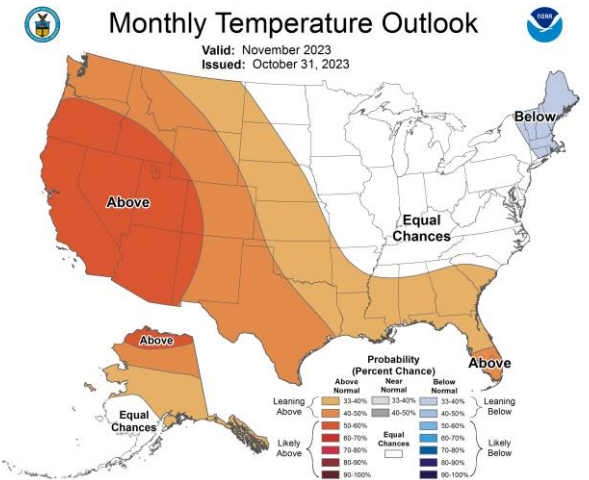
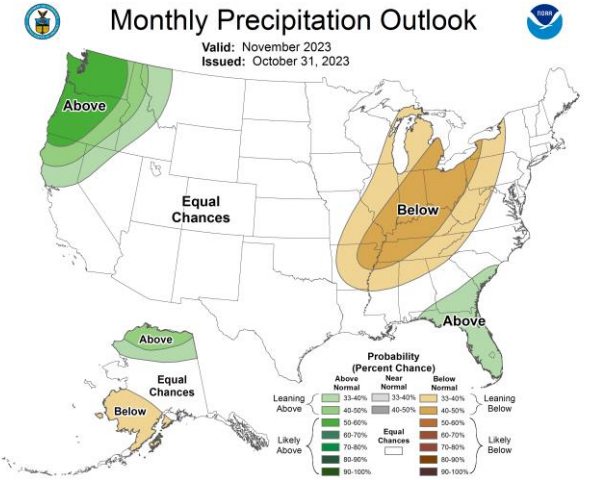
The one-month outlook forecast, dated October 31, is for a 30-40% chance of above normal precipitation and 40-50% chance of warmer temperatures during November.

There are no drought designations in Southwestern Montana.

**MT Drought Monitor Map**  
*October 31, 2023*



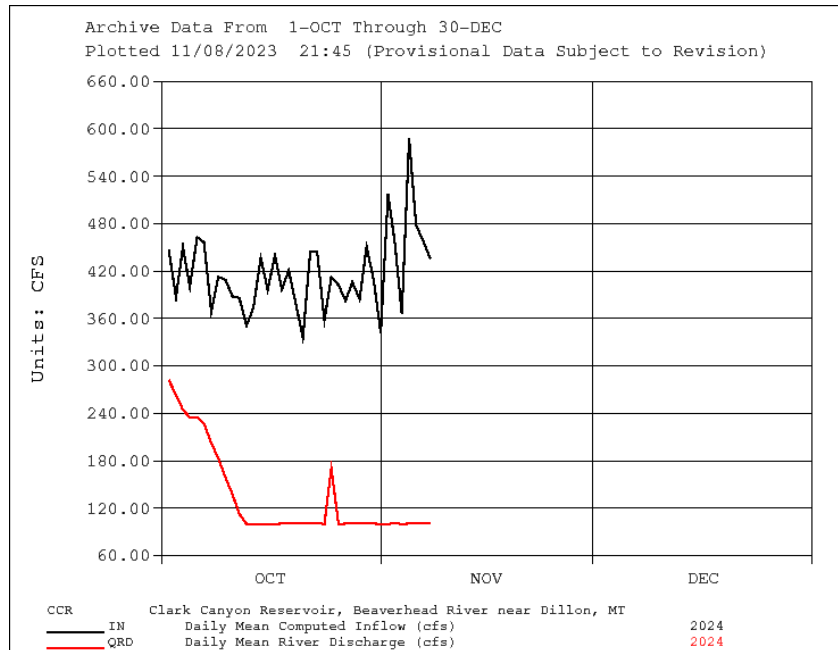
**National Weather Service**  
*November Weather Outlook*



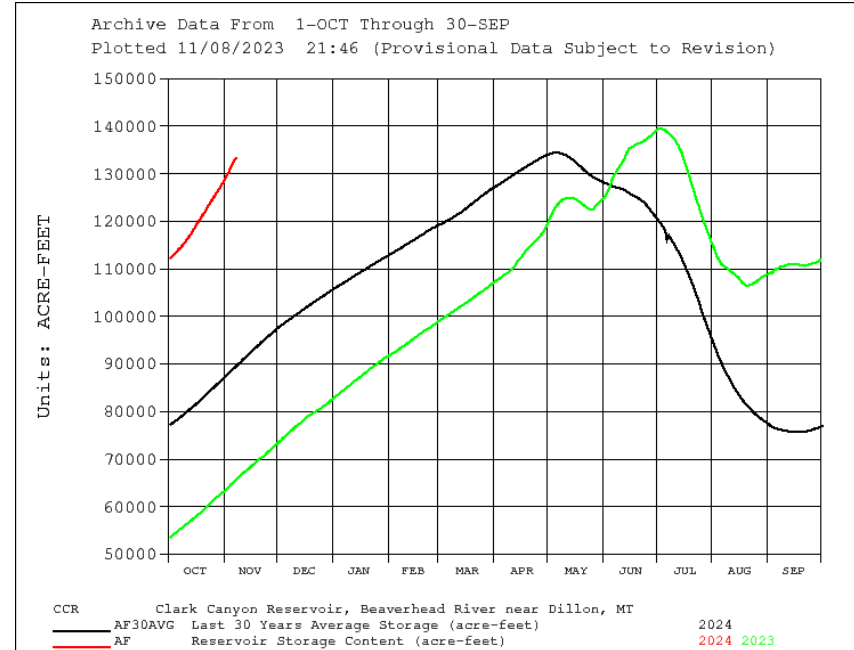
# Operations Review

October inflows totaled 24.8 kaf or 142 percent of the 30-year average while releases averaged near 138 cfs. Elevation on November 1, 2023 was 5536.36 feet or 128.3 kaf. The below graphs summarize the inflows, releases, and storage for water year 2024.

### Clark Canyon Reservoir Inflow & Releases (cfs)

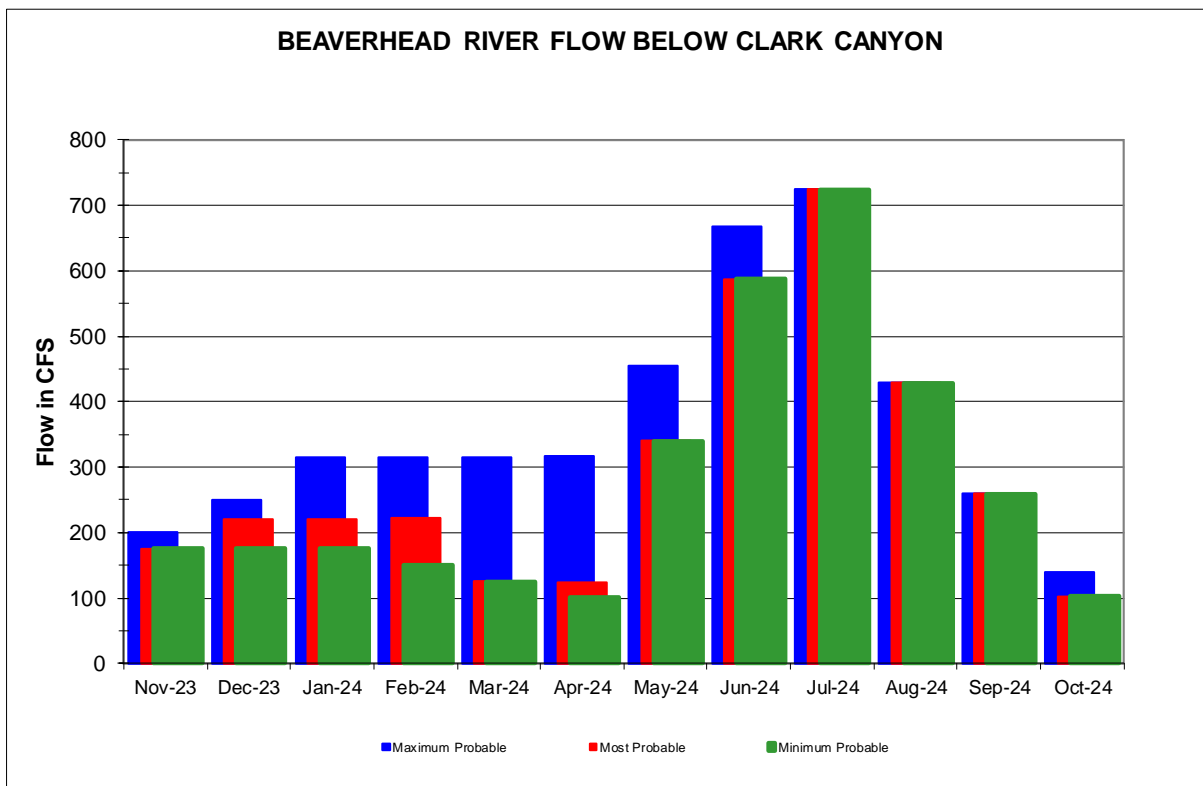
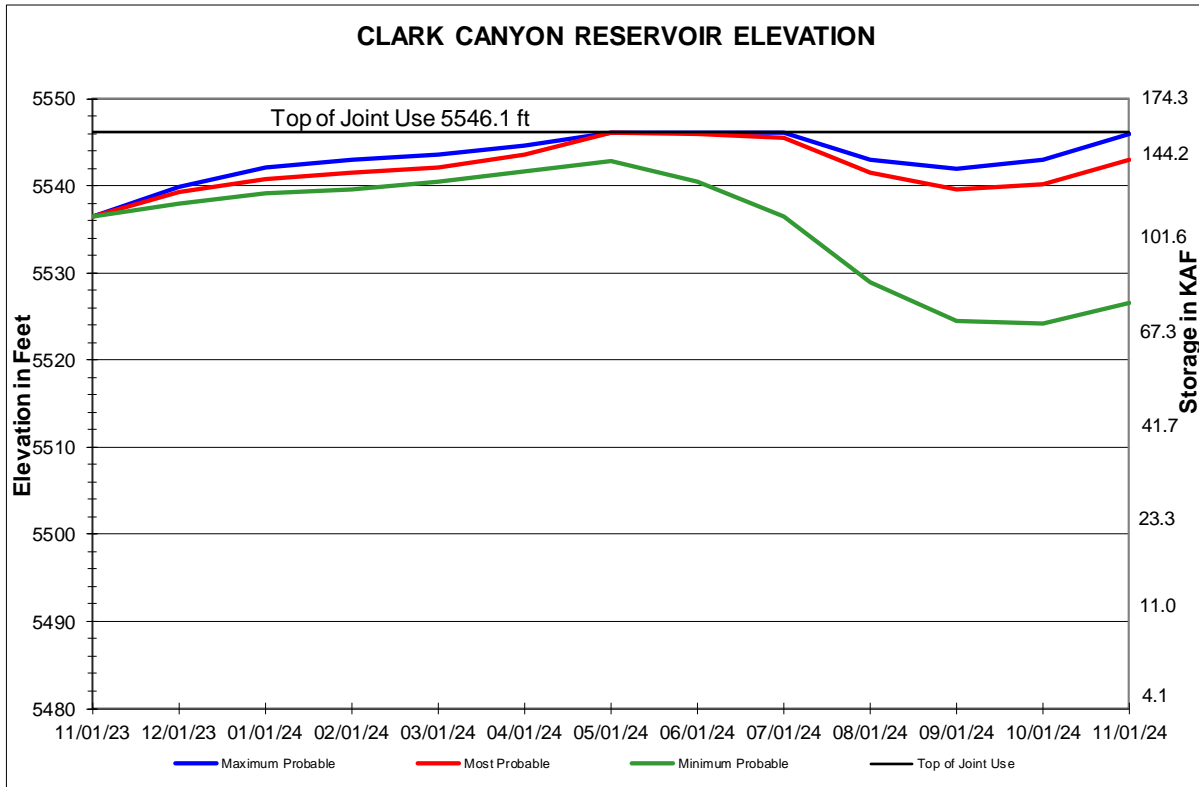


### Clark Canyon Reservoir Storage (af)



# Operating Outlook

The graphs below depict a range of possible reservoir elevations and river releases over time for water year 2024. The most probable, maximum, and minimum plans are ranges of possible inflow volumes due to basin variabilities and forecast uncertainties. Water year 2024 simulate full allotments for the calendar year 2024 irrigation season.



# CLARK CANYON RESERVOIR MONTHLY OPERATIONS

## Based on Most Probable Inflow Forecast

Clark Canyon Reservoir		Initial Cont		128.3 kaf		Maximum Cont		310.1 kaf		Minimum Cont		10.0 kaf		
		Elev		5536.46 ft		Elev		5570.15 ft		Elev		5488.87 ft		
	2023	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Monthly Inflow	kaf	22.8	20.6	16.9	15.8	15.2	20.2	20.4	32.6	23.9	17.8	18.2	19.7	244.1
River Release	kaf	10.4	13.6	13.6	12.8	7.7	7.4	20.9	34.9	44.5	26.4	15.4	6.1	213.7
River Release	cfs	175	221	221	223	125	124	340	587	724	429	259	103	
Spring Gain	kaf	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	17.9
End-Month Elevation	ft	5539.24	5540.75	5541.45	5542.07	5543.59	5546.10	5546.00	5545.55	5541.42	5539.59	5540.19	5543.02	
End-Month Content	kaf	140.7	147.7	151.0	154.0	161.5	174.3	173.8	171.5	150.9	142.3	145.1	158.7	
<b>Diversions</b>														
	2023	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
East Bench Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	5.80	9.40	11.88	7.23	4.37	0.00	38.68
East Bench Req Rels	kaf	0.0	0.0	0.0	0.0	0.0	0.0	10.5	17.1	21.6	13.1	7.9	0.0	70.2
CCWSCOTot Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	15.60	25.27	31.92	19.44	11.75	0.00	103.98
CCWSCODeliv	kaf	0.0	0.0	0.0	0.0	0.0	0.0	9.8	15.9	20.1	12.2	7.4	0.0	65.4
Non-proj Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	3.33	5.39	6.81	4.15	2.51	0.00	22.19

## Based on Minimum Probable Inflow Forecast

	2023	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Monthly Inflow	kaf	16.9	16.1	13.0	12.4	13.3	12.0	9.7	17.0	13.5	10.1	14.5	14.6	163.1
River Release	kaf	10.4	10.8	10.8	8.6	7.7	6.0	20.9	34.9	44.5	26.4	15.4	6.1	202.5
River Release	cfs	175	176	176	150	125	101	340	587	724	429	259	103	
Spring Gain	kaf	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	18.0
End-Month Elevation	ft	5537.93	5539.11	5539.59	5540.41	5541.59	5542.82	5540.49	5536.53	5528.96	5524.40	5524.13	5526.59	
End-Month Content	kaf	134.8	140.1	142.3	146.1	151.7	157.7	146.5	128.6	97.6	81.3	80.4	88.9	
<b>Diversions</b>														
	2023	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
East Bench Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	5.80	9.40	11.88	7.23	4.37	0.00	38.68
East Bench Req Rels	kaf	0.0	0.0	0.0	0.0	0.0	0.0	10.5	17.1	21.6	13.1	7.9	0.0	70.2
CCWSCOTot Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	15.60	25.27	31.92	19.44	11.75	0.00	103.98
CCWSCODeliv	kaf	0.0	0.0	0.0	0.0	0.0	0.0	9.8	15.9	20.1	12.2	7.4	0.0	65.4
Non-proj Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	3.33	5.39	6.81	4.15	2.51	0.00	22.19

## Based on Maximum Probable Inflow Forecast

	2023	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Monthly Inflow	kaf	27.0	26.0	24.0	21.0	24.0	26.8	27.9	39.7	29.0	20.7	21.0	23.2	310.3
River Release	kaf	11.9	15.4	19.3	18.1	19.3	18.8	27.9	39.7	44.5	26.4	15.4	8.6	265.3
River Release	cfs	200	250	314	315	314	316	454	667	724	429	259	140	
Spring Gain	kaf	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	18.0
End-Month Elevation	ft	5539.83	5542.07	5543.02	5543.61	5544.53	5546.10	5546.10	5546.10	5543.04	5541.88	5543.02	5545.91	
End-Month Content	kaf	143.4	154.0	158.7	161.6	166.3	174.3	174.3	174.3	158.8	153.1	158.7	173.3	
<b>Diversions</b>														
	2023	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
East Bench Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	5.80	9.40	11.88	7.23	4.37	0.00	38.68
East Bench Req Rels	kaf	0.0	0.0	0.0	0.0	0.0	0.0	10.5	17.1	21.6	13.1	7.9	0.0	70.2
CCWSCOTot Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	15.60	25.27	31.92	19.44	11.75	0.00	103.98
CCWSCODeliv	kaf	0.0	0.0	0.0	0.0	0.0	0.0	9.8	15.9	20.1	12.2	7.4	0.0	65.4
Non-proj Demand	kaf	0.00	0.00	0.00	0.00	0.00	0.00	3.33	5.39	6.81	4.15	2.51	0.00	22.19

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