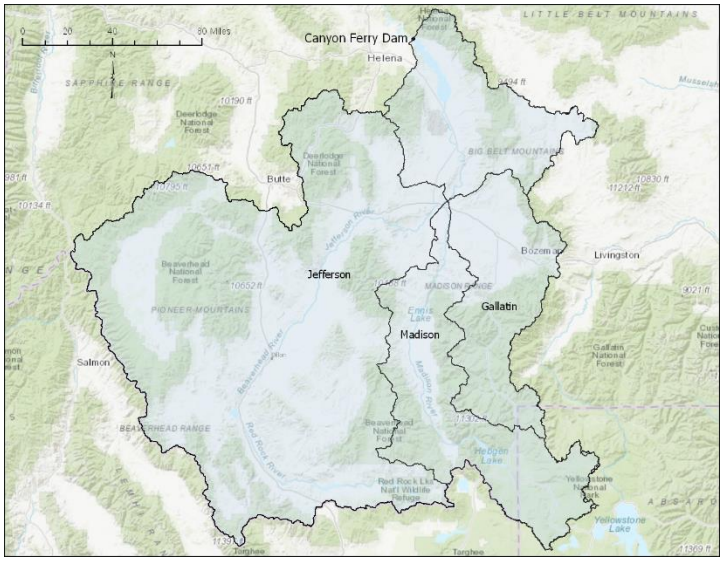
Canyon Ferry Dam
Water Supply and Projected Operations
December 2022

BUREAU OF RECLAMATION



Watershed above Canyon Ferry Dam

Forecast	Minimum	Median	Maximum
Monthly Inflow (kaf)	165	186	225
End of Month Elevation (ft)	3782.3	3783.1	3783.3
Missouri River below Holter Dam Average River Release (cfs)	3,500	3,500	3,500

Canyon Ferry Dam

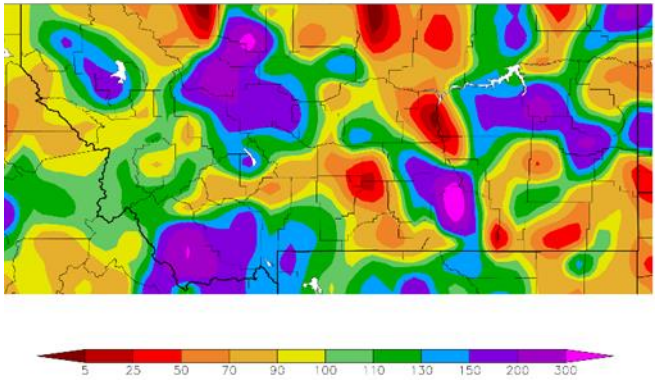
December 2022 Inflow Forecast	
December Volume (kaf)	186.0
Percent of Average (%)	89

Water Year	Historic Inflow (kaf)
2022	164.1
2021	204.0
2020	229.1
2019	230.1
30 Year Average	209.1

Western Regional Climate Center

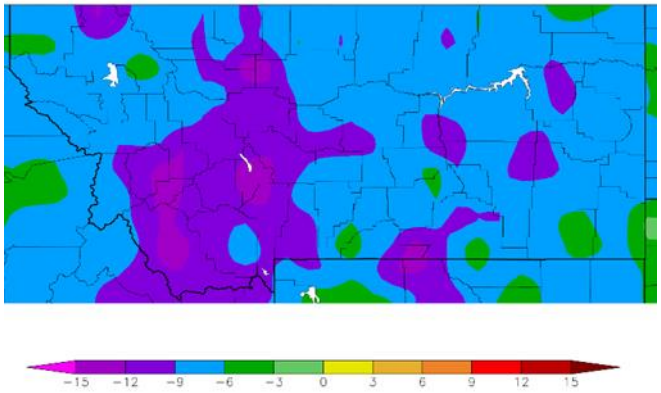
November 1-30 Climate

Percent of Normal Precipitation



Departure from Normal Temperature

(F)



CLIMATE SUMMARY

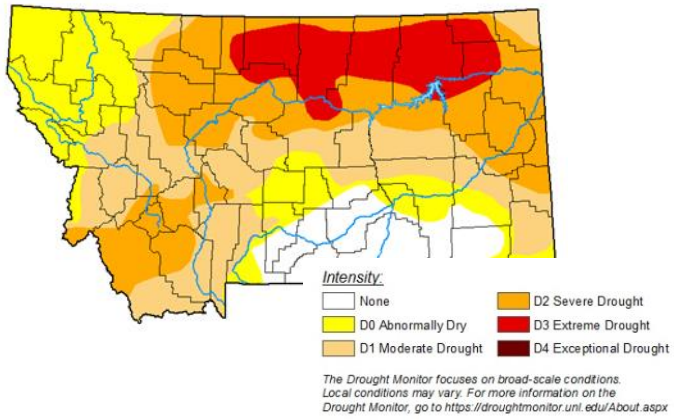
November temperatures were colder than normal while some much-needed moisture fell in the basins above Canyon Ferry Reservoir.

The one-month outlook forecast, dated November 30th, is for as 40-50% chance of above normal precipitation and a 40-50% chance for below normal temperatures during December.

Drought conditions continue to be severe in the basins above Canyon Ferry Reservoir.

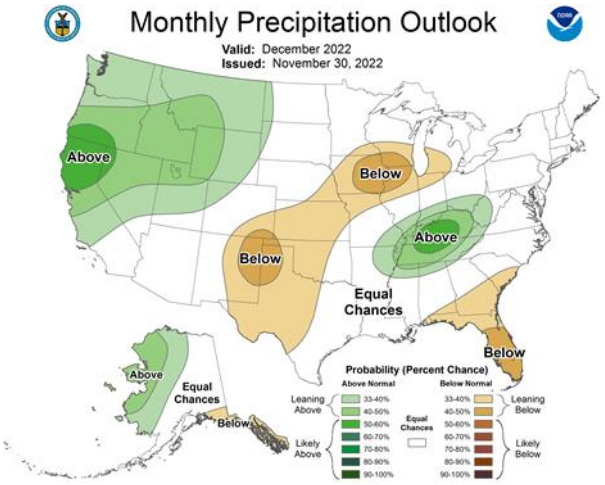
MT Drought Monitor Map

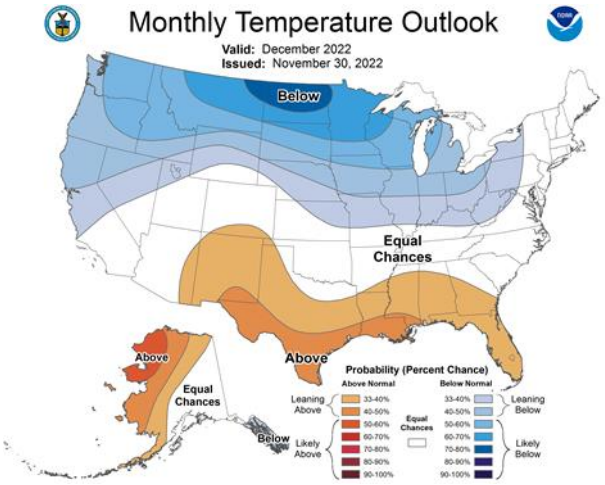
December 1, 2022



National Weather Service

December Weather Outlook

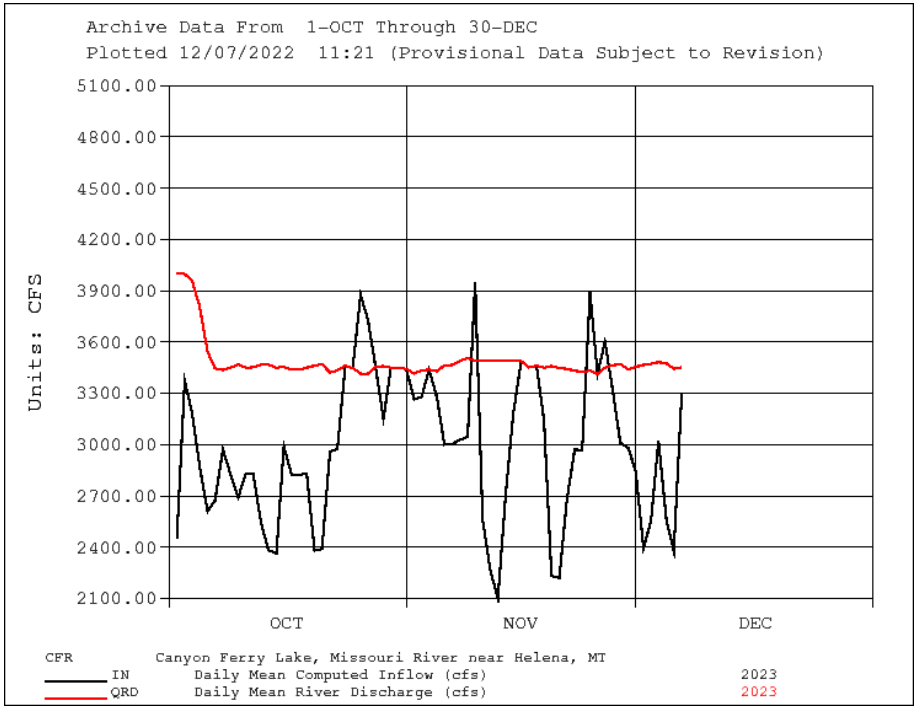




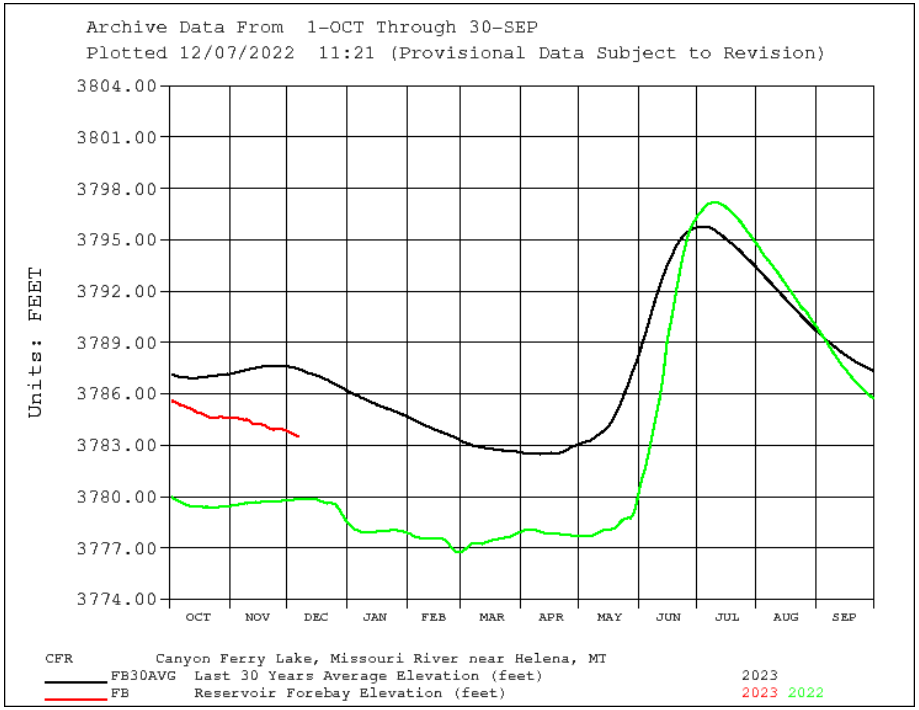
Operations Review

November inflows totaled 182,100 acre-feet or 75 percent of average. Releases were maintained near 3,450 cfs during November, while the reservoir drafted to 3783.85 feet by the end of the month.

Canyon Ferry Dam Inflow & Releases (cfs)

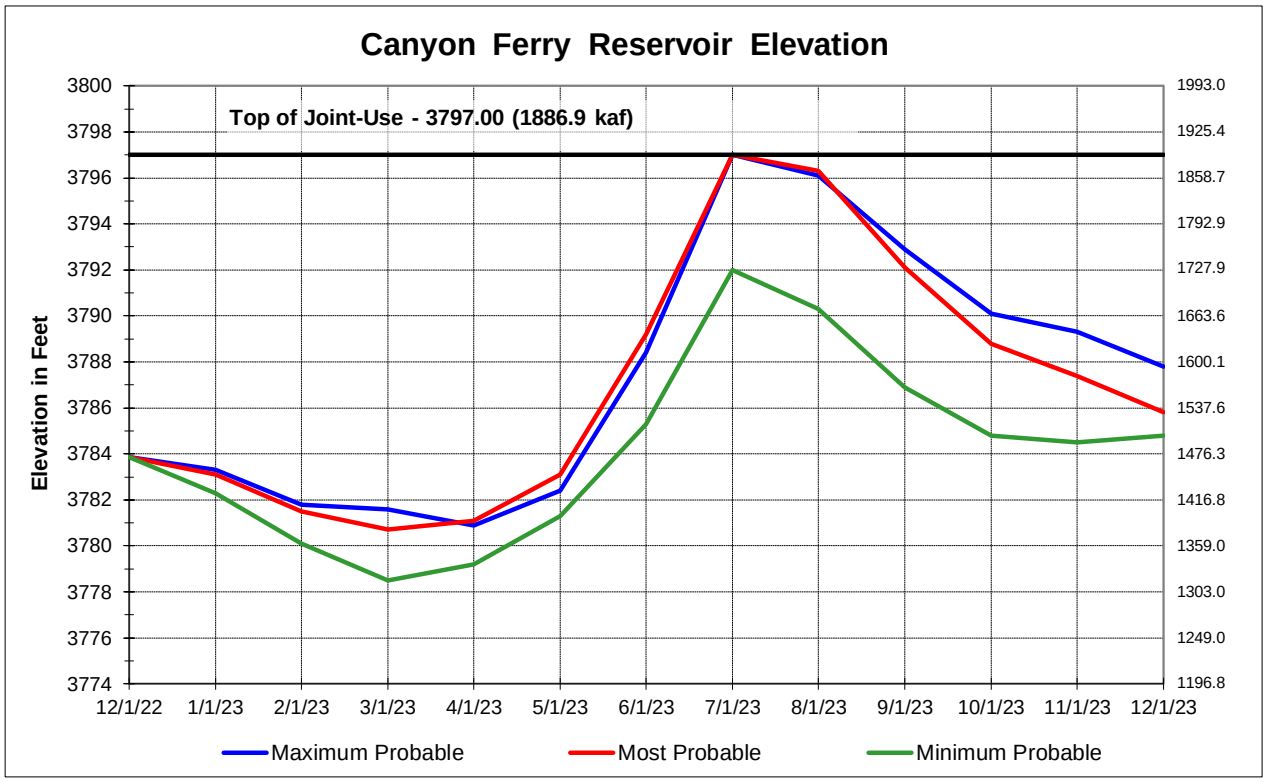


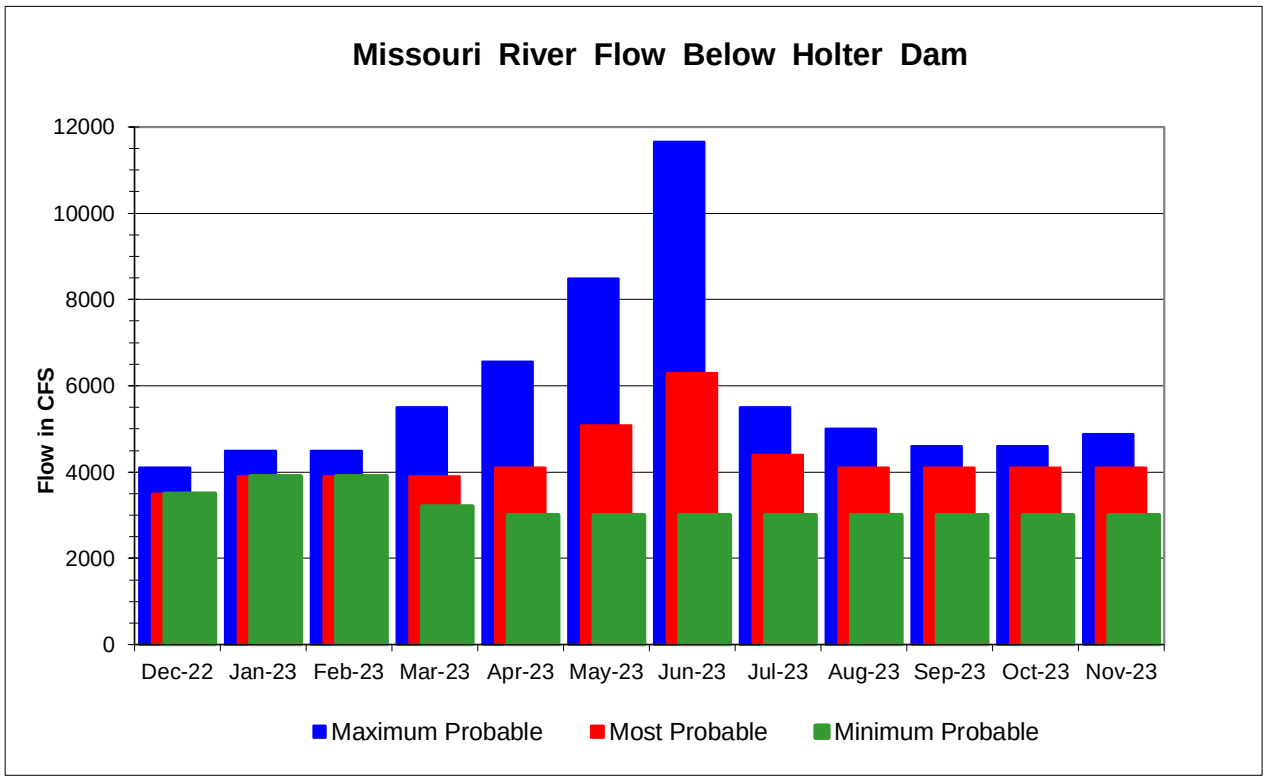
Canyon Ferry Dam Elevation (ft)



Operating Outlook

The graphs below depict a range of possible reservoir elevations and river releases over time. The most probable plan is based on the December through February volume forecast. The maximum and minimum plans are based upon ranges of possible inflow volumes due to basin variabilities and forecast uncertainties.





Most Probable Inflow Conditions

Canyon Ferry Reservoir Initial Elev. 3783.85 ft

2022		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
Reservoir Inflow	kaf	186.0	185.0	185.0	240.0	300.0	510.0	640.0	260.0	120.0	140.0	200.0	190.0	3156.0
HV Canal Diversions	kaf	0.0	0.0	0.0	0.0	8.0	16.0	17.9	18.0	18.0	11.0	0.0	0.0	88.9
HV Pump Turbines	kaf	0.0	0.0	0.0	0.0	10.7	19.6	19.0	18.0	18.8	12.3	0.0	0.0	98.4
Turbine Release	cfs	3386	3776	3770	3716	3731	3828	3619	3533	3585	3687	3761	3810	
Spill	kaf	0.0	0.0	0.0	0.0	0.0	49.3	126.7	31.3	5.9	4.8	13.2	11.3	242.5
Generation	gwh	25.966	28.346	25.334	27.677	27.144	29.537	28.584	29.537	29.537	28.584	29.537	28.584	338.367
River Release	cfs	3386	3776	3770	3716	3911	4949	6067	4334	3986	3975	3976	4000	
End-Month Content	kaf	1438.0	1390.8	1366.4	1377.9	1437.2	1626.9	1888.0	1863.5	1720.4	1612.9	1568.4	1520.4	
End-Month Elevation	ft	3783.1	3781.5	3780.7	3781.1	3783.1	3789.2	3797.0	3796.3	3792.1	3788.8	3787.4	3785.8	
Holter Dam Release	cfs	3500	3900	3900	3900	4101	5090	6294	4399	4100	4101	4100	4101	

Minimum Probable Inflow Conditions

2022		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
Reservoir Inflow	kaf	165.0	170.0	165.0	205.0	237.0	320.0	400.0	140.0	91.0	120.0	170.0	180.0	2363.0
HV Canal Diversions	kaf	0.0	0.0	0.0	0.0	7.0	16.0	17.9	18.0	18.0	11.0	0.0	0.0	87.9
HV Pump Turbines	kaf	0.0	0.0	0.0	0.0	9.8	20.8	20.8	19.9	20.9	13.5	0.0	0.0	105.7
Turbine Release	cfs	3425	3833	3772	3030	2686	2636	2487	2570	2596	2702	2911	2897	
Spill	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Generation	gwh	26.189	28.421	24.931	22.469	19.224	19.865	18.504	20.237	20.162	20.088	22.394	21.600	264.084
River Release	cfs	3425	3833	3772	3030	2850	2975	2837	2893	2936	2929	2911	2897	
End-Month Content	kaf	1414.6	1348.9	1304.4	1323.1	1383.5	1504.6	1717.9	1662.0	1554.5	1489.2	1480.2	1487.8	
End-Month Elevation	ft	3782.3	3780.1	3778.5	3779.2	3781.3	3785.3	3792.0	3790.3	3786.9	3784.8	3784.5	3784.8	
Holter Dam Release	cfs	3500	3900	3900	3201	3000	3001	3000	3001	3001	3000	3001	3000	

Maximum Probable Inflow Conditions

2022		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total
Reservoir Inflow	kaf	225.0	220.0	230.0	300.0	430.0	700.0	950.0	300.0	200.0	180.0	240.0	230.0	4205.0
HV Canal Diversions	kaf	0.0	0.0	0.0	0.0	11.0	18.4	17.0	18.4	18.4	12.0	0.0	0.0	95.2
HV Pump Turbines	kaf	0.0	0.0	0.0	0.0	14.9	22.9	18.2	18.4	19.1	13.2	0.0	0.0	106.7
Turbine Release	cfs	3915	3958	3958	3958	3958	3879	3648	3537	3583	3659	3712	3749	
Generation	gwh	29.462	29.388	26.410	29.090	28.224	29.537	28.584	29.537	29.537	28.584	29.537	28.584	346.474
Spill	kaf	0.0	21.9	15.3	77.9	125.4	236.2	409.7	79.6	50.0	27.0	38.2	56.1	1137.3
River Release	cfs	3915	4315	4233	5225	6316	8093	10840	5131	4707	4334	4333	4692	
End-Month Content	kaf	1444.5	1399.2	1394.1	1372.8	1416.0	1600.0	1888.0	1854.1	1746.3	1656.4	1630.0	1580.8	
End-Month Elevation	ft	3783.3	3781.8	3781.6	3780.9	3782.4	3788.4	3797.0	3796.1	3792.9	3790.1	3789.3	3787.8	
Holter Dam Release	cfs	4100	4500	4500	5500	6566	8481	11656	5500	4999	4596	4604	4882	

Contact Us

Stephanie Micek
smicek@usbr.gov
406-247-7320

Clayton Jordan
cjordan@usbr.gov
406-247-7332

Chris Gomer
cgomer@usbr.gov
406-247-7307

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