

The Official Water Supply Forecasts for January through July are computed on the 3rd work day of the month. Flood Risk Management (FRM) is computed at standard intervals and posted at: www.nwd.usace.army.mil/Missions/Water/Columbia/FloodControl

The **JULY** Water Supply Forecast sets BiOp actions as highlighted in the table below.

Forecast Point	Forecast period	Forecast	BiOp Actions to be Determined
Hungry Horse	April – August Provided by Reclamation	January, February, March	Sets min. flows at Hungry Horse and Columbia Falls
	May – September Provided by Reclamation	January, February, March	Sets VARQ FRM targets
		April	Sets VARQ FRM targets and VARQ refill flows
		May,	Sets VARQ refill flows Sets end of September draft target
		June	Sets VARQ refill flows
The Dalles	April – September Provided by NWRFC	March	Sets CRWMP adjustments at Grand Coulee
	April – August Provided by NWRFC	April	Sets spring flow objective at McNary Dam
		July	Sets end of August draft limit at Grand Coulee
Lower Granite	April – July Provided by NWRFC	April	Sets spring flow objective at Lower Granite
		June	Sets summer flow objective at Lower Granite
Libby	April – August Provided by Corps Seattle District	December	Sets end of December variable draft target
		January, February, March	Sets VARQ FRM targets
		April	Sets VARQ FRM targets and VARQ refill flows
		May	Sets Libby min. sturgeon flow volume and min. bull trout flows for after sturgeon pulse through Sept. Sets VARQ FRM targets and VARQ refill flows Sets end of September draft limit.
		June	VARQ refill flows
Dworshak	April – July Provided by Corps Walla Walla District	January to March	Manage for reservoir FRM, VDL, and Flood Control Refill Curve (FCRC)
		April to June	Manage for reservoir FRM and FCRC

Source: 2022 Water Management Plan, page 15:
<http://pweb.crohms.org/tmt/documents/wmp/2022/>



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SF FLATHEAD - HUNGRY HORSE DAM (HHWM8)
Forecasts for Water Year 2022

Official Water Supply
ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	2481	2490	119	2529	2088
APR-JUL	2359	2361	119	2371	1981
APR-AUG	2437	2442	120	2461	2043
JAN-SEP	2851	2860	122	2898	2343
JAN-JUL	2728	2731	122	2741	2236
OCT-SEP	3134	3143	122	3181	2567

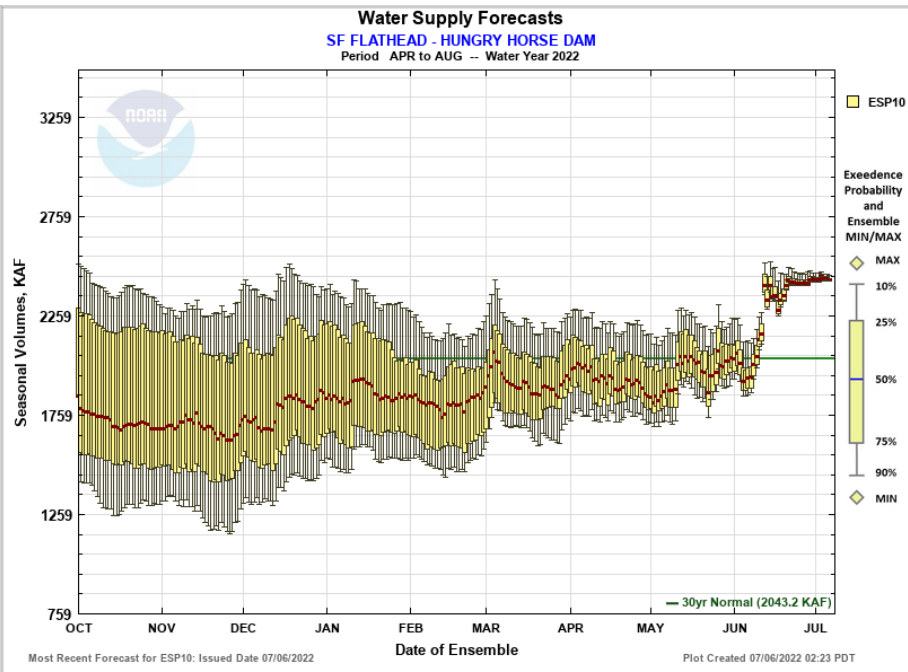
Experimental Water Supply
HEFS with 15 days EQPF Ensemble: 2022-07-06 Issued: 2022-07-06

APR-SEP	2481	2502	120	2560	2088
APR-JUL	2358	2368	120	2405	1981
APR-AUG	2437	2451	120	2497	2043
JAN-SEP	2851	2871	123	2930	2343
JAN-JUL	2727	2738	122	2775	2236
OCT-SEP	3133	3154	123	3213	2567

Reference
ESP with 0 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

APR-SEP	2473	2492	119	2581	2088
APR-JUL	2349	2362	119	2411	1981
APR-AUG	2428	2443	120	2502	2043
JAN-SEP	2842	2861	122	2951	2343
JAN-JUL	2718	2731	122	2781	2236
OCT-SEP	3125	3144	122	3234	2567

Move the mouse over the desired "Forecast Period" to display a graph.



Max Scale Scale To Data Scale To Last 45 Days Show Min/Max Ensemble Volume Show Tooltips Help

Overlay

ESP10 HEFS ESP0

Data Files

CSV (ESP10 / APR-AUG)

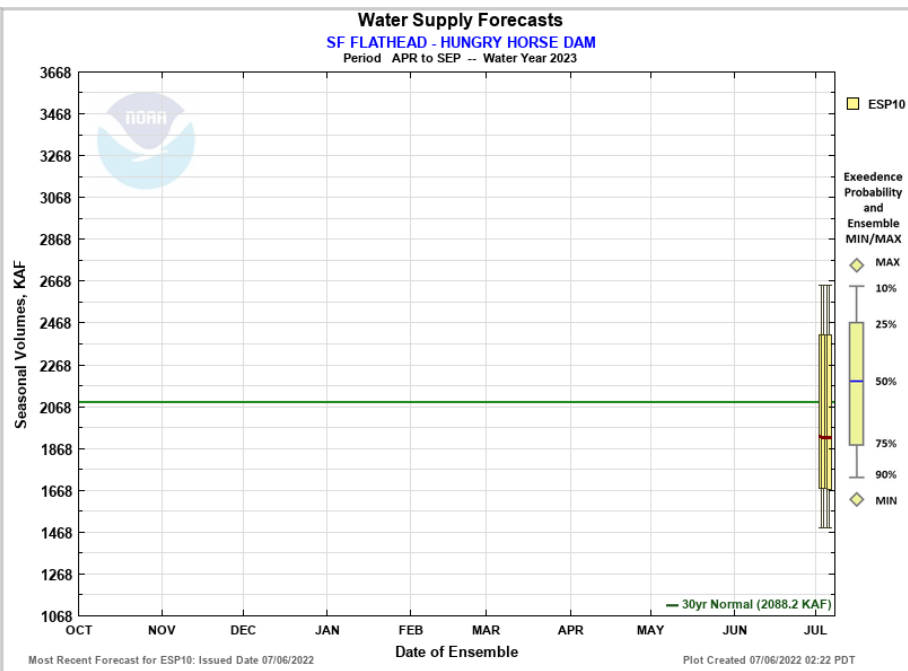
Forecast Ensemble

SF FLATHEAD - HUNGRY HORSE DAM (HHWM8)
Forecasts for Water Year 2023

Official Water Supply
ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	1487	1922	92	2647	2088
APR-JUL	1405	1789	90	2506	1981
APR-AUG	1449	1856	91	2601	2043
JAN-SEP	1736	2194	94	2845	2343
JAN-JUL	1657	2080	93	2703	2236
OCT-SEP	1955	2451	95	3245	2567

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COLUMBIA - THE DALLES DAM (TDAO3) Forecasts for Water Year 2022

Official Water Supply
ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	102264	103520	110	105240	94166
APR-JUL	87039	87540	107	87847	81933
APR-AUG	96143	97241	109	98342	89196
JAN-SEP	120676	121932	105	123652	115946
JAN-JUL	105451	105952	102	106260	103714
OCT-SEP	138741	139997	106	141717	132314

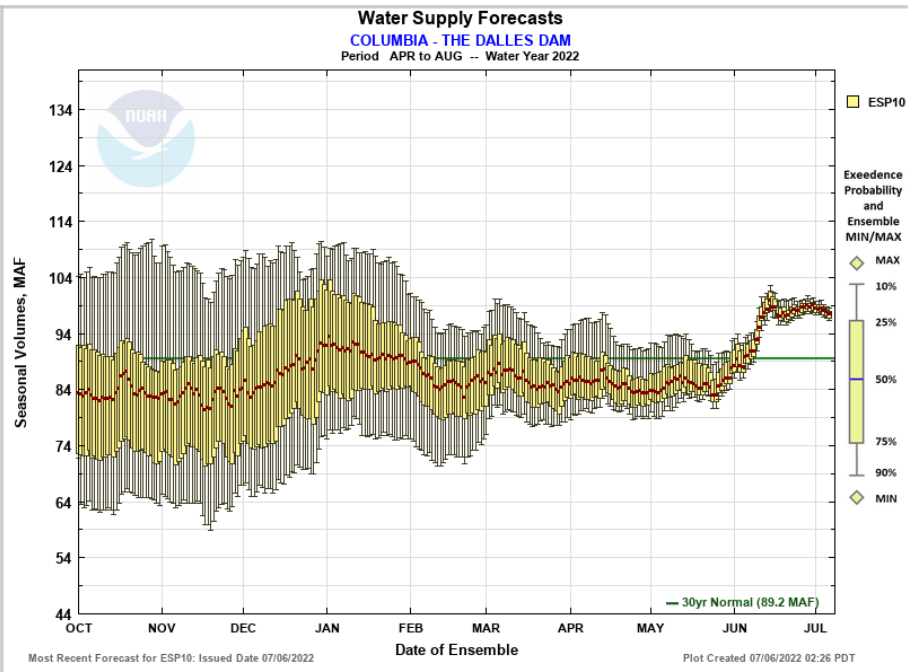
Experimental Water Supply
HEFS with 15 days EQPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	102715	104034	110	106377	94166
APR-JUL	87163	88153	108	88981	81933
APR-AUG	96649	97608	109	99239	89196
JAN-SEP	121127	122447	106	124789	115946
JAN-JUL	105575	106565	103	107394	103714
OCT-SEP	139192	140512	106	142854	132314

Reference
ESP with 0 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	102552	104215	111	107174	94166
APR-JUL	87060	87939	107	89161	81933
APR-AUG	96524	97891	110	99694	89196
JAN-SEP	120965	122627	106	125586	115946
JAN-JUL	105472	106351	103	107573	103714
OCT-SEP	139030	140692	106	143652	132314

Move the mouse over the desired "Forecast Period" to display a graph.



Most Recent Forecast for ESP10: Issued Date 07/06/2022

Overlay | **Data Files**

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CSV (ESP10 / APR-AUG)

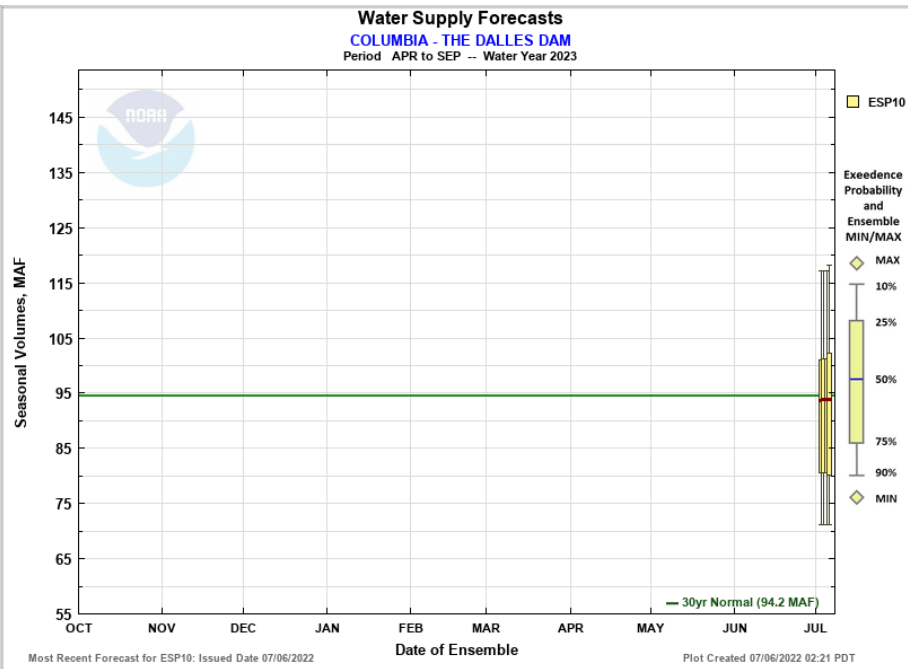
Forecast Ensemble

COLUMBIA - THE DALLES DAM (TDAO3) Forecasts for Water Year 2023

Official Water Supply
ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	70746	93365	99	117807	94166
APR-JUL	60826	80074	98	101420	81933
APR-AUG	66805	87720	98	111772	89196
JAN-SEP	85608	113185	98	140517	115946
JAN-JUL	75688	99313	96	123092	103714
OCT-SEP	102609	131318	99	161315	132314

Move the mouse over the desired "Forecast Period" to display a graph.



Most Recent Forecast for ESP10: Issued Date 07/06/2022

Overlay | **Data Files**

ESP10

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SNAKE - LOWER GRANITE DAM (LGDW1) Forecasts for Water Year 2022

Official Water Supply
ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	22060	22166	100	22419	22232
APR-JUL	19599	19609	98	19663	19946
APR-AUG	20874	20939	99	21047	21121
JAN-SEP	27546	27653	93	27905	29736
JAN-JUL	25086	25096	91	25149	27450
OCT-SEP	31451	31558	92	31810	34287

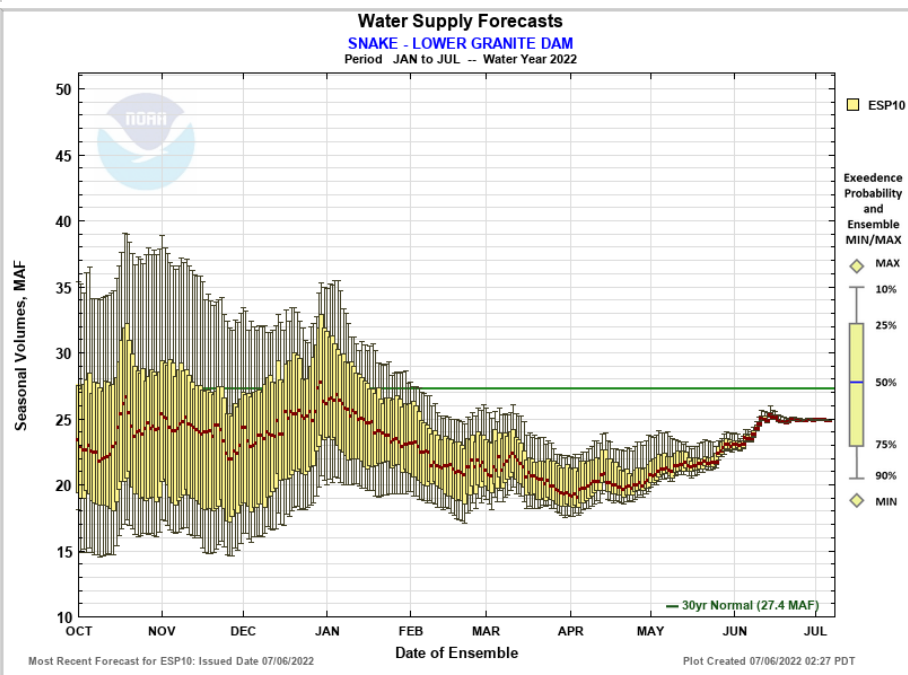
Experimental Water Supply
HEFS with 15 days EQPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	22063	22168	100	22419	22232
APR-JUL	19591	19606	98	19682	19946
APR-AUG	20876	20934	99	21064	21121
JAN-SEP	27550	27655	93	27906	29736
JAN-JUL	25077	25092	91	25169	27450
OCT-SEP	31455	31560	92	31811	34287

Reference
ESP with 0 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	22092	22209	100	22542	22232
APR-JUL	19605	19629	98	19793	19946
APR-AUG	20891	20960	99	21144	21121
JAN-SEP	27579	27695	93	28029	29736
JAN-JUL	25091	25116	91	25279	27450
OCT-SEP	31484	31600	92	31934	34287

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Most Recent Forecast for ESP10: Issued Date 07/06/2022

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ESP10 HEFS ESPO

Data Files

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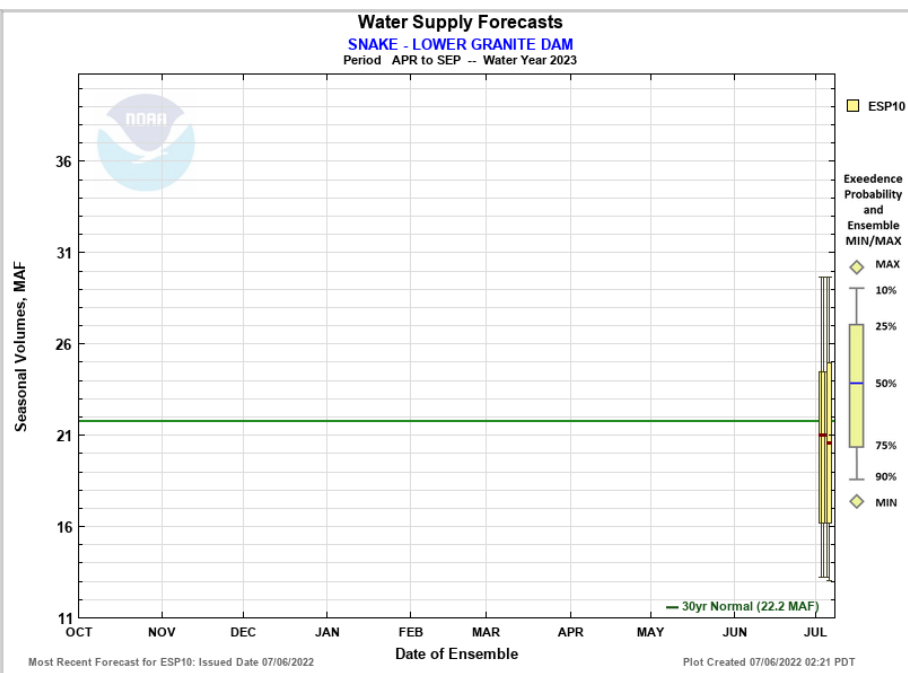
Forecast Ensemble

SNAKE - LOWER GRANITE DAM (LGDW1) Forecasts for Water Year 2023

Official Water Supply
ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	13496	21094	95	30124	22232
APR-JUL	11511	18419	92	26960	19946
APR-AUG	12470	19597	93	28646	21121
JAN-SEP	19524	27663	93	39244	29736
JAN-JUL	17573	25399	93	36081	27450
OCT-SEP	24180	32320	94	44425	34287

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KOOTENAI - LIBBY DAM (LYDM8) Forecasts for Water Year 2022

Official Water Supply

ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	7272	7399	115	7574	6429
APR-JUL	6260	6274	113	6335	5570
APR-AUG	6924	6960	114	7120	6080
JAN-SEP	8072	8199	116	8374	7086
JAN-JUL	7059	7074	114	7134	6227
OCT-SEP	9358	9485	119	9660	7981

Experimental Water Supply

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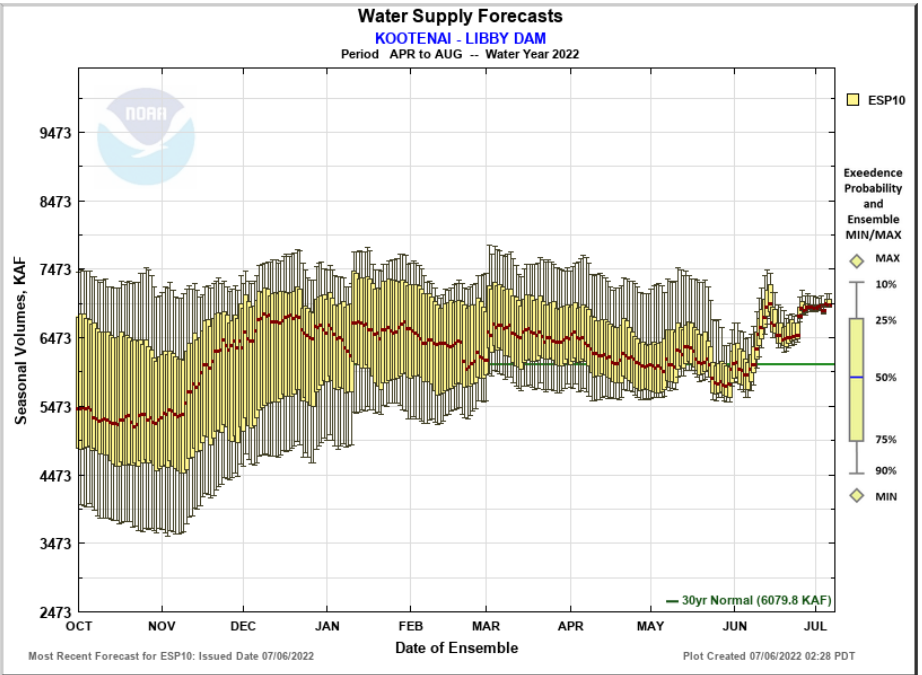
APR-SEP	7308	7444	116	7731	6429
APR-JUL	6264	6331	114	6413	5570
APR-AUG	6949	7034	116	7248	6080
JAN-SEP	8107	8243	116	8531	7086
JAN-JUL	7064	7131	115	7213	6227
OCT-SEP	9394	9530	119	9818	7981

Reference

ESP with 0 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

APR-SEP	7328	7497	117	7991	6429
APR-JUL	6268	6357	114	6577	5570
APR-AUG	6950	7083	117	7422	6080
JAN-SEP	8128	8296	117	8790	7086
JAN-JUL	7068	7157	115	7377	6227
OCT-SEP	9415	9583	120	10077	7981

Move the mouse over the desired "Forecast Period" to display a graph.



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Forecast Ensemble

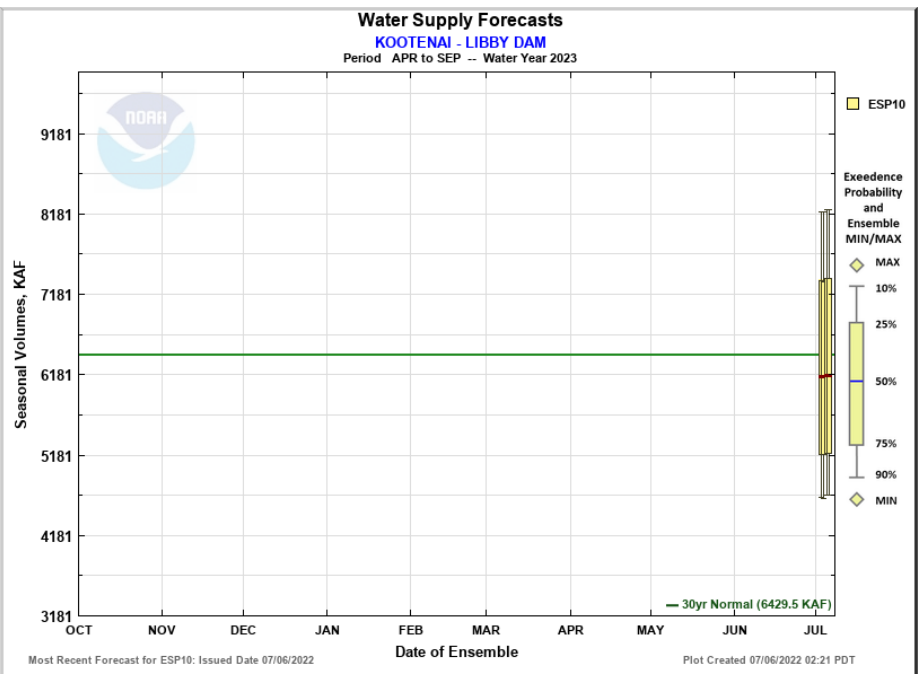
KOOTENAI - LIBBY DAM (LYDM8) Forecasts for Water Year 2023

Official Water Supply

ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	4688	6167	96	8240	6429
APR-JUL	3888	5296	95	7109	5570
APR-AUG	4337	5905	97	7750	6080
JAN-SEP	5285	6850	97	8884	7086
JAN-JUL	4524	6057	97	7797	6227
OCT-SEP	6163	7926	99	10180	7981

Move the mouse over the desired "Forecast Period" to display a graph.



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NF CLEARWATER - DWORSHAK DAM (DWR11)
Forecasts for Water Year 2022

Official Water Supply
ESP with 10 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	2986	2992	114	3043	2620
APR-JUL	2831	2831	114	2851	2474
JAN-SEP	3776	3783	107	3833	3543
JAN-JUL	3621	3622	107	3642	3397
OCT-SEP	4235	4242	106	4292	3998

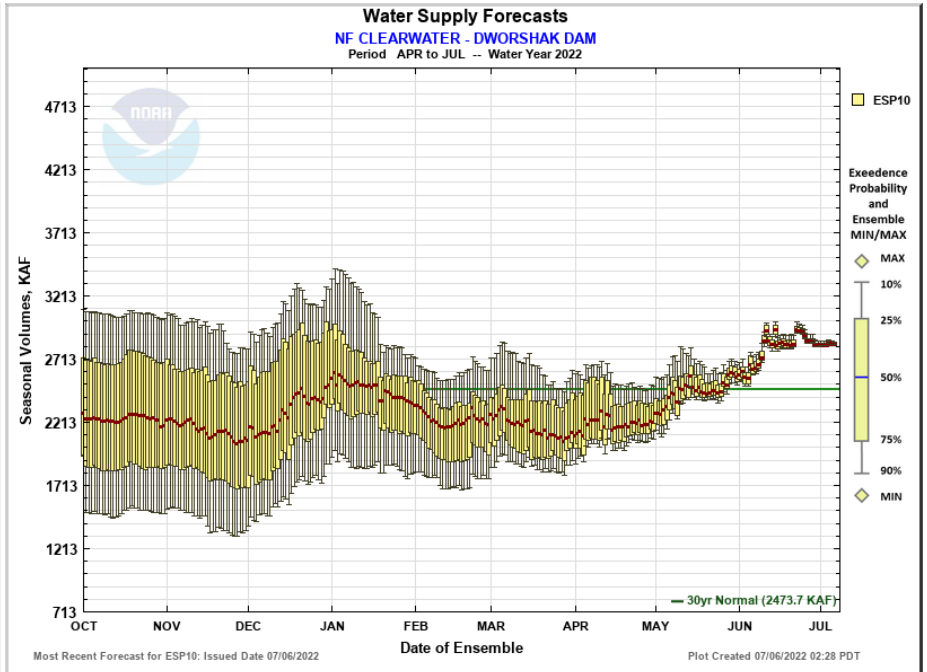
Experimental Water Supply
HEFS with 15 days EQPF Ensemble: 2022-07-06 Issued: 2022-07-06

APR-SEP	2983	2992	114	3064	2620
APR-JUL	2825	2833	115	2862	2474
JAN-SEP	3774	3783	107	3854	3543
JAN-JUL	3615	3623	107	3653	3397
OCT-SEP	4233	4242	106	4313	3998

Reference
ESP with 0 Days QPF Ensemble: 2022-07-06 Issued: 2022-07-06

APR-SEP	2979	3003	115	3083	2620
APR-JUL	2822	2836	115	2886	2474
JAN-SEP	3770	3793	107	3873	3543
JAN-JUL	3613	3627	107	3676	3397
OCT-SEP	4229	4252	106	4332	3998

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ESP10 HEFS ESP0

Data Files

CSV (ESP10 / APR-JUL)

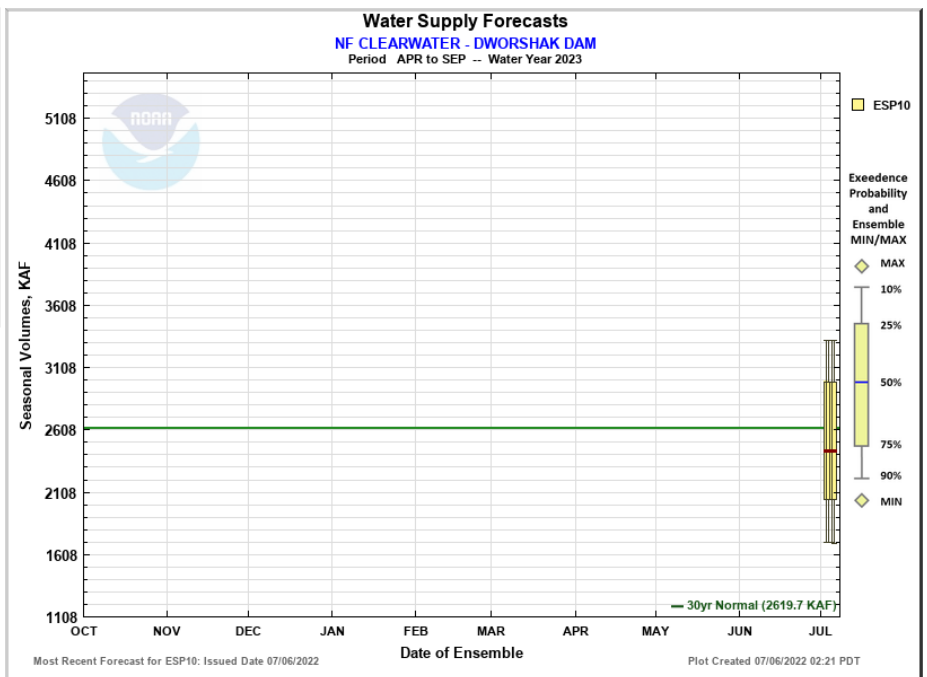
Forecast Ensemble

NF CLEARWATER - DWORSHAK DAM (DWR11)
Forecasts for Water Year 2023

Official Water Supply
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Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	1698	2436	93	3328	2620
APR-JUL	1597	2296	93	3132	2474
JAN-SEP	2458	3544	100	4429	3543
JAN-JUL	2351	3409	100	4279	3397
OCT-SEP	2825	3985	100	5040	3998

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