

Missouri River Basin
Calendar Year 2021
Runoff Forecast
*1898-2020 Averages

1-Sep-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2021	288	243	31	133	206	124	900	1,024	1,024
AVERAGE*	313	263	13	32	102	61	723	784	784
DEPARTURE	-25	-20	18	101	104	63	177	240	240
% OF AVG	92%	92%	235%	417%	202%	203%	125%	131%	131%
FEB 2021	241	145	34	61	178	107	660	767	1,791
AVERAGE*	365	363	102	61	135	109	1,026	1,135	1,919
DEPARTURE	-124	-218	-68	0	43	-2	-366	-368	-128
% OF AVG	66%	40%	33%	100%	132%	98%	64%	68%	93%
MAR 2021	528	682	164	129	383	184	1,886	2,070	3,861
AVERAGE*	602	1,017	595	225	221	351	2,660	3,011	4,930
DEPARTURE	-74	-335	-431	-97	162	-167	-774	-942	-1,069
% OF AVG	88%	67%	28%	57%	173%	52%	71%	69%	78%
APR 2021	368	442	19	31	260	175	1,120	1,296	5,157
AVERAGE*	649	1,088	507	149	183	407	2,576	2,983	7,913
DEPARTURE	-281	-646	-488	-118	77	-232	-1,456	-1,687	-2,756
% OF AVG	57%	41%	4%	21%	142%	43%	43%	43%	65%
MAY 2021	654	875	122	65	230	141	1,945	2,086	7,242
AVERAGE*	1,093	1,286	336	160	192	349	3,067	3,416	11,329
DEPARTURE	-439	-411	-214	-95	38	-208	-1,122	-1,330	-4,087
% OF AVG	60%	68%	36%	41%	120%	40%	63%	61%	64%
JUN 2021	781	1,670	137	-19	181	143	2,750	2,893	10,136
AVERAGE*	1,637	2,752	447	163	189	346	5,188	5,534	16,863
DEPARTURE	-856	-1,082	-310	-182	-9	-203	-2,438	-2,641	-6,727
% OF AVG	48%	61%	31%	-11%	96%	41%	53%	52%	60%
JUL 2021	196	444	34	74	202	187	950	1,137	11,272
AVERAGE*	830	1,829	200	63	142	265	3,064	3,329	20,192
DEPARTURE	-634	-1,385	-166	11	60	-78	-2,114	-2,192	-8,920
% OF AVG	24%	24%	17%	117%	142%	70%	31%	34%	56%
AUG 2021	231	210	11	55	117	128	622	750	12,023
AVERAGE*	360	614	85	47	119	162	1,225	1,387	21,579
DEPARTURE	-130	-404	-74	8	-2	-34	-603	-637	-9,556
% OF AVG	64%	34%	13%	116%	98%	79%	51%	54%	56%
SEP 2021	(Forecast) 200	220	40	25	110	110	595	705	12,728
AVERAGE*	328	453	114	41	115	133	1,051	1,184	22,763
DEPARTURE	-128	-233	-74	-16	-5	-23	-456	-479	-10,035
% OF AVG	61%	49%	35%	61%	96%	83%	57%	60%	56%
OCT 2021	225	330	40	1	110	90	706	796	13,524
AVERAGE*	381	534	74	2	122	109	1,113	1,222	23,985
DEPARTURE	-156	-204	-34	-1	-12	-19	-407	-426	-10,461
% OF AVG	59%	62%	54%	50%	90%	83%	63%	65%	56%
NOV 2021	230	260	45	1	105	75	641	716	14,240
AVERAGE*	382	390	68	2	120	92	962	1,054	25,039
DEPARTURE	-152	-130	-23	-1	-15	-17	-321	-338	-10,799
% OF AVG	60%	67%	66%	50%	88%	82%	67%	68%	57%
DEC 2021	200	140	6	10	90	60	446	506	14,746
AVERAGE*	329	256	9	15	102	71	711	782	25,821
DEPARTURE	-129	-116	-3	-5	-12	-11	-265	-276	-11,075
% OF AVG	61%	55%	67%	67%	88%	85%	63%	65%	57%
Calendar Year Totals									
AVERAGE*	4,141	5,662	682	566	2,171	1,523	13,222	14,746	
DEPARTURE	7,269	10,845	2,550	960	1,742	2,455	23,366	25,821	
% OF NORM	-3,128	-5,183	-1,868	-394	429	-932	-10,144	-11,075	
	57%	52%	27%	59%	125%	62%	57%	57%	

Missouri River Basin
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2-Aug-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2021	288	243	31	133	206	124	900	1,024	1,024
AVERAGE*	313	263	13	32	102	61	723	784	784
DEPARTURE	-25	-20	18	101	104	63	177	240	240
% OF AVG	92%	92%	235%	417%	202%	203%	125%	131%	131%
FEB 2021	241	145	34	61	178	107	660	767	1,791
AVERAGE*	365	363	102	61	135	109	1,026	1,135	1,919
DEPARTURE	-124	-218	-68	0	43	-2	-366	-368	-128
% OF AVG	66%	40%	33%	100%	132%	98%	64%	68%	93%
MAR 2021	528	682	164	129	383	184	1,886	2,070	3,861
AVERAGE*	602	1,017	595	225	221	351	2,660	3,011	4,930
DEPARTURE	-74	-335	-431	-97	162	-167	-774	-942	-1,069
% OF AVG	88%	67%	28%	57%	173%	52%	71%	69%	78%
APR 2021	368	442	19	31	260	175	1,120	1,296	5,157
AVERAGE*	649	1,088	507	149	183	407	2,576	2,983	7,913
DEPARTURE	-281	-646	-488	-118	77	-232	-1,456	-1,687	-2,756
% OF AVG	57%	41%	4%	21%	142%	43%	43%	43%	65%
MAY 2021	654	875	122	65	230	141	1,945	2,086	7,242
AVERAGE*	1,093	1,286	336	160	192	349	3,067	3,416	11,329
DEPARTURE	-439	-411	-214	-95	38	-208	-1,122	-1,330	-4,087
% OF AVG	60%	68%	36%	41%	120%	40%	63%	61%	64%
JUN 2021	781	1,670	137	-19	181	143	2,750	2,893	10,136
AVERAGE*	1,637	2,752	447	163	189	346	5,188	5,534	16,863
DEPARTURE	-856	-1,082	-310	-182	-9	-203	-2,438	-2,641	-6,727
% OF AVG	48%	61%	31%	-11%	96%	41%	53%	52%	60%
JUL 2021	196	444	34	74	202	187	950	1,137	11,272
AVERAGE*	830	1,829	200	63	142	265	3,064	3,329	20,192
DEPARTURE	-634	-1,385	-166	11	60	-78	-2,114	-2,192	-8,920
% OF AVG	24%	24%	17%	117%	142%	70%	31%	34%	56%
(Forecast)									
AUG 2021	130	220	30	40	150	110	570	680	11,952
AVERAGE*	360	614	85	47	119	162	1,225	1,387	21,579
DEPARTURE	-230	-394	-55	-7	31	-52	-655	-707	-9,627
% OF AVG	36%	36%	35%	85%	126%	68%	47%	49%	55%
SEP 2021	170	200	55	25	120	75	570	645	12,597
AVERAGE*	328	453	114	41	115	133	1,051	1,184	22,763
DEPARTURE	-158	-253	-59	-16	5	-58	-481	-539	-10,166
% OF AVG	52%	44%	48%	61%	104%	56%	54%	54%	55%
OCT 2021	225	330	45	1	110	70	711	781	13,378
AVERAGE*	381	534	74	2	122	109	1,113	1,222	23,985
DEPARTURE	-156	-204	-29	-1	-12	-39	-402	-441	-10,607
% OF AVG	59%	62%	61%	50%	90%	64%	64%	64%	56%
NOV 2021	230	260	45	1	105	75	641	716	14,094
AVERAGE*	382	390	68	2	120	92	962	1,054	25,039
DEPARTURE	-152	-130	-23	-1	-15	-17	-321	-338	-10,945
% OF AVG	60%	67%	66%	50%	88%	82%	67%	68%	56%
DEC 2021	200	140	6	10	90	60	446	506	14,600
AVERAGE*	329	256	9	15	102	71	711	782	25,821
DEPARTURE	-129	-116	-3	-5	-12	-11	-265	-276	-11,221
% OF AVG	61%	55%	67%	67%	88%	85%	63%	65%	57%
Calendar Year Totals									
AVERAGE*	4,011	5,652	721	551	2,214	1,450	13,150	14,600	
DEPARTURE	7,269	10,845	2,550	960	1,742	2,455	23,366	25,821	
% OF NORM	-3,258	-5,193	-1,829	-409	472	-1,005	-10,216	-11,221	
	55%	52%	28%	57%	127%	59%	56%	57%	

Missouri River Basin
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2-Jul-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2021	288	243	31	133	206	124	900	1,024	1,024
AVERAGE*	313	263	13	32	102	61	723	784	784
DEPARTURE	-25	-20	18	101	104	63	177	240	240
% OF AVG	92%	92%	235%	417%	202%	203%	125%	131%	131%
FEB 2021	241	145	34	61	178	107	660	767	1,791
AVERAGE*	365	363	102	61	135	109	1,026	1,135	1,919
DEPARTURE	-124	-218	-68	0	43	-2	-366	-368	-128
% OF AVG	66%	40%	33%	100%	132%	98%	64%	68%	93%
MAR 2021	528	682	164	129	383	184	1,886	2,070	3,861
AVERAGE*	602	1,017	595	225	221	351	2,660	3,011	4,930
DEPARTURE	-74	-335	-431	-97	162	-167	-774	-942	-1,069
% OF AVG	88%	67%	28%	57%	173%	52%	71%	69%	78%
APR 2021	368	442	19	31	260	175	1,120	1,296	5,157
AVERAGE*	649	1,088	507	149	183	407	2,576	2,983	7,913
DEPARTURE	-281	-646	-488	-118	77	-232	-1,456	-1,687	-2,756
% OF AVG	57%	41%	4%	21%	142%	43%	43%	43%	65%
MAY 2021	654	875	122	65	230	141	1,945	2,086	7,242
AVERAGE*	1,093	1,286	336	160	192	349	3,067	3,416	11,329
DEPARTURE	-439	-411	-214	-95	38	-208	-1,122	-1,330	-4,087
% OF AVG	60%	68%	36%	41%	120%	40%	63%	61%	64%
JUN 2021	781	1,670	137	-19	181	143	2,750	2,893	10,136
AVERAGE*	1,637	2,752	447	163	189	346	5,188	5,534	16,863
DEPARTURE	-856	-1,082	-310	-182	-9	-203	-2,438	-2,641	-6,727
% OF AVG	48%	61%	31%	-11%	96%	41%	53%	52%	60%
JUL 2021	(Forecast) 380	850	90	20	130	100	1,470	1,570	11,706
AVERAGE*	830	1,829	200	63	142	265	3,064	3,329	20,192
DEPARTURE	-450	-979	-110	-43	-12	-165	-1,594	-1,759	-8,486
% OF AVG	46%	46%	45%	32%	92%	38%	48%	47%	58%
AUG 2021	220	320	50	15	100	80	705	785	12,491
AVERAGE*	360	614	85	47	119	162	1,225	1,387	21,579
DEPARTURE	-140	-294	-35	-32	-19	-82	-520	-602	-9,088
% OF AVG	61%	52%	59%	32%	84%	49%	58%	57%	58%
SEP 2021	220	280	70	15	100	75	685	760	13,251
AVERAGE*	328	453	114	41	115	133	1,051	1,184	22,763
DEPARTURE	-108	-173	-44	-26	-15	-58	-366	-424	-9,512
% OF AVG	67%	62%	61%	37%	87%	56%	65%	64%	58%
OCT 2021	260	350	50	1	110	70	771	841	14,092
AVERAGE*	381	534	74	2	122	109	1,113	1,222	23,985
DEPARTURE	-121	-184	-24	-1	-12	-39	-342	-381	-9,893
% OF AVG	68%	66%	68%	50%	90%	64%	69%	69%	59%
NOV 2021	300	300	50	1	110	75	761	836	14,928
AVERAGE*	382	390	68	2	120	92	962	1,054	25,039
DEPARTURE	-82	-90	-18	-1	-10	-17	-201	-218	-10,111
% OF AVG	79%	77%	74%	50%	92%	82%	79%	79%	60%
DEC 2021	280	220	7	12	90	60	609	669	15,597
AVERAGE*	329	256	9	15	102	71	711	782	25,821
DEPARTURE	-49	-36	-2	-3	-12	-11	-102	-113	-10,224
% OF AVG	85%	86%	78%	80%	88%	85%	86%	86%	60%
Calendar Year Totals									
AVERAGE*	4,520	6,378	824	465	2,077	1,333	14,263	15,597	
DEPARTURE	7,269	10,845	2,550	960	1,742	2,455	23,366	25,821	
% OF NORM	-2,749	-4,467	-1,726	-495	335	-1,122	-9,103	-10,224	
	62%	59%	32%	48%	119%	54%	61%	60%	

Missouri River Basin
Calendar Year 2021
Runoff Forecast
*1898-2020 Averages

1-Jun-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2021	288	243	31	133	206	124	900	1,024	1,024
AVERAGE*	313	263	13	32	102	61	723	784	784
DEPARTURE	-25	-20	18	101	104	63	177	240	240
% OF AVG	92%	92%	235%	417%	202%	203%	125%	131%	131%
FEB 2021	241	145	34	61	178	107	660	767	1,791
AVERAGE*	365	363	102	61	135	109	1,026	1,135	1,919
DEPARTURE	-124	-218	-68	0	43	-2	-366	-368	-128
% OF AVG	66%	40%	33%	100%	132%	98%	64%	68%	93%
MAR 2021	528	682	164	129	383	184	1,886	2,070	3,861
AVERAGE*	602	1,017	595	225	221	351	2,660	3,011	4,930
DEPARTURE	-74	-335	-431	-97	162	-167	-774	-942	-1,069
% OF AVG	88%	67%	28%	57%	173%	52%	71%	69%	78%
APR 2021	368	442	19	31	260	175	1,120	1,296	5,157
AVERAGE*	649	1,088	507	149	183	407	2,576	2,983	7,913
DEPARTURE	-281	-646	-488	-118	77	-232	-1,456	-1,687	-2,756
% OF AVG	57%	41%	4%	21%	142%	43%	43%	43%	65%
MAY 2021	654	875	122	65	230	141	1,945	2,086	7,242
AVERAGE*	1,093	1,286	336	160	192	349	3,067	3,416	11,329
DEPARTURE	-439	-411	-214	-95	38	-208	-1,122	-1,330	-4,087
% OF AVG	60%	68%	36%	41%	120%	40%	63%	61%	64%
JUN 2021	(Forecast) 900	1,800	280	120	230	230	3,330	3,560	10,802
AVERAGE*	1,637	2,752	447	163	189	346	5,188	5,534	16,863
DEPARTURE	-737	-952	-167	-43	41	-116	-1,858	-1,974	-6,061
% OF AVG	55%	65%	63%	74%	122%	66%	64%	64%	64%
JUL 2021	460	1,200	170	45	170	160	2,045	2,205	13,007
AVERAGE*	830	1,829	200	63	142	265	3,064	3,329	20,192
DEPARTURE	-370	-629	-30	-18	28	-105	-1,019	-1,124	-7,185
% OF AVG	55%	66%	85%	71%	120%	60%	67%	66%	64%
AUG 2021	280	400	75	35	130	120	920	1,040	14,047
AVERAGE*	360	614	85	47	119	162	1,225	1,387	21,579
DEPARTURE	-80	-214	-10	-12	11	-42	-305	-347	-7,532
% OF AVG	78%	65%	88%	74%	109%	74%	75%	75%	65%
SEP 2021	290	340	110	35	115	100	890	990	15,037
AVERAGE*	328	453	114	41	115	133	1,051	1,184	22,763
DEPARTURE	-38	-113	-4	-6	0	-33	-161	-194	-7,726
% OF AVG	88%	75%	96%	85%	100%	75%	85%	84%	66%
OCT 2021	350	500	70	2	115	95	1,037	1,132	16,169
AVERAGE*	381	534	74	2	122	109	1,113	1,222	23,985
DEPARTURE	-31	-34	-4	0	-7	-14	-76	-90	-7,816
% OF AVG	92%	94%	95%	100%	94%	87%	93%	93%	67%
NOV 2021	380	360	65	2	110	85	917	1,002	17,171
AVERAGE*	382	390	68	2	120	92	962	1,054	25,039
DEPARTURE	-2	-30	-3	0	-10	-7	-45	-52	-7,868
% OF AVG	99%	92%	96%	100%	92%	92%	95%	95%	69%
DEC 2021	330	250	9	15	100	70	704	774	17,945
AVERAGE*	329	256	9	15	102	71	711	782	25,821
DEPARTURE	1	-6	0	0	-2	-1	-7	-8	-7,876
% OF AVG	100%	98%	100%	100%	98%	99%	99%	99%	69%
Calendar Year Totals									
AVERAGE*	5,068	7,238	1,148	673	2,227	1,590	16,355	17,945	
DEPARTURE	7,269	10,845	2,550	960	1,742	2,455	23,366	25,821	
% OF NORM	-2,201	-3,607	-1,402	-287	485	-865	-7,011	-7,876	
% OF AVG	70%	67%	45%	70%	128%	65%	70%	69%	

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1-May-21

Incremental Runoff in Reaches

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AVERAGE*	313	263	13	32	102	61	723	784	784
DEPARTURE	-25	-20	18	101	104	63	177	240	240
% OF AVG	92%	92%	235%	417%	202%	203%	125%	131%	131%
FEB 2021	241	145	34	61	178	107	660	767	1,791
AVERAGE*	365	363	102	61	135	109	1,026	1,135	1,919
DEPARTURE	-124	-218	-68	0	43	-2	-366	-368	-128
% OF AVG	66%	40%	33%	100%	132%	98%	64%	68%	93%
MAR 2021	528	682	164	129	383	184	1,886	2,070	3,861
AVERAGE*	602	1,017	595	225	221	351	2,660	3,011	4,930
DEPARTURE	-74	-335	-431	-97	162	-167	-774	-942	-1,069
% OF AVG	88%	67%	28%	57%	173%	52%	71%	69%	78%
APR 2021	368	448	19	31	260	175	1,126	1,301	5,162
AVERAGE*	649	1,088	507	149	183	407	2,576	2,983	7,913
DEPARTURE	-281	-640	-488	-118	77	-232	-1,450	-1,682	-2,751
% OF AVG	57%	41%	4%	21%	142%	43%	44%	44%	65%
MAY 2021	(Forecast) 530	840	130	96	230	230	1,826	2,056	7,218
AVERAGE*	1,093	1,286	336	160	192	349	3,067	3,416	11,329
DEPARTURE	-563	-446	-206	-64	38	-119	-1,241	-1,360	-4,111
% OF AVG	48%	65%	39%	60%	120%	66%	60%	60%	64%
JUN 2021	810	1,800	300	140	190	250	3,240	3,490	10,708
AVERAGE*	1,637	2,752	447	163	189	346	5,188	5,534	16,863
DEPARTURE	-827	-952	-147	-23	1	-96	-1,948	-2,044	-6,155
% OF AVG	49%	65%	67%	86%	101%	72%	62%	63%	64%
JUL 2021	430	1,200	150	55	140	230	1,975	2,205	12,913
AVERAGE*	830	1,829	200	63	142	265	3,064	3,329	20,192
DEPARTURE	-400	-629	-50	-8	-2	-35	-1,089	-1,124	-7,279
% OF AVG	52%	66%	75%	87%	99%	87%	64%	66%	64%
AUG 2021	240	470	75	45	115	140	945	1,085	13,998
AVERAGE*	360	614	85	47	119	162	1,225	1,387	21,579
DEPARTURE	-120	-144	-10	-2	-4	-22	-280	-302	-7,581
% OF AVG	67%	77%	88%	96%	97%	86%	77%	78%	65%
SEP 2021	280	390	100	35	105	110	910	1,020	15,018
AVERAGE*	328	453	114	41	115	133	1,051	1,184	22,763
DEPARTURE	-48	-63	-14	-6	-10	-23	-141	-164	-7,745
% OF AVG	85%	86%	88%	85%	91%	83%	87%	86%	66%
OCT 2021	350	490	65	2	110	95	1,017	1,112	16,130
AVERAGE*	381	534	74	2	122	109	1,113	1,222	23,985
DEPARTURE	-31	-44	-9	0	-12	-14	-96	-110	-7,855
% OF AVG	92%	92%	88%	100%	90%	87%	91%	91%	67%
NOV 2021	350	360	60	2	110	80	882	962	17,092
AVERAGE*	382	390	68	2	120	92	962	1,054	25,039
DEPARTURE	-32	-30	-8	0	-10	-12	-80	-92	-7,947
% OF AVG	92%	92%	88%	100%	92%	87%	92%	91%	68%
DEC 2021	310	240	9	15	90	60	664	724	17,816
AVERAGE*	329	256	9	15	102	71	711	782	25,821
DEPARTURE	-19	-16	0	0	-12	-11	-47	-58	-8,005
% OF AVG	94%	94%	100%	100%	88%	85%	93%	93%	69%
Calendar Year Totals									
AVERAGE*	4,725	7,308	1,137	744	2,117	1,785	16,031	17,816	
DEPARTURE	7,269	10,845	2,550	960	1,742	2,455	23,366	25,821	
% OF NORM	-2,544	-3,537	-1,413	-216	375	-670	-7,335	-8,005	
	65%	67%	45%	78%	122%	73%	69%	69%	

Missouri River Basin
Calendar Year 2021
Runoff Forecast
*1898-2020 Averages

1-Apr-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2021	288	243	31	133	206	124	900	1,024	1,024
AVERAGE*	313	263	13	32	102	61	723	784	784
DEPARTURE	-25	-20	18	101	104	63	177	240	240
% OF AVG	92%	92%	235%	417%	202%	203%	125%	131%	131%
FEB 2021	241	145	34	61	178	107	660	767	1,791
AVERAGE*	365	363	102	61	135	109	1,026	1,135	1,919
DEPARTURE	-124	-218	-68	0	43	-2	-366	-368	-128
% OF AVG	66%	40%	33%	100%	132%	98%	64%	68%	93%
MAR 2021	528	682	214	129	383	184	1,936	2,119	3,911
AVERAGE*	602	1,017	595	225	221	351	2,660	3,011	4,930
DEPARTURE	-74	-335	-381	-97	162	-167	-724	-892	-1,019
% OF AVG	88%	67%	36%	57%	173%	52%	73%	70%	79%
	(Forecast)								
APR 2021	550	770	230	100	190	280	1,840	2,120	6,031
AVERAGE*	649	1,088	507	149	183	407	2,576	2,983	7,913
DEPARTURE	-99	-318	-277	-49	7	-127	-736	-863	-1,882
% OF AVG	85%	71%	45%	67%	104%	69%	71%	71%	76%
MAY 2021	900	1,050	220	130	170	280	2,470	2,750	8,781
AVERAGE*	1,093	1,286	336	160	192	349	3,067	3,416	11,329
DEPARTURE	-193	-236	-116	-30	-22	-69	-597	-666	-2,548
% OF AVG	82%	82%	65%	81%	89%	80%	81%	81%	78%
JUN 2021	1,300	2,300	380	150	170	300	4,300	4,600	13,381
AVERAGE*	1,637	2,752	447	163	189	346	5,188	5,534	16,863
DEPARTURE	-337	-452	-67	-13	-19	-46	-888	-934	-3,482
% OF AVG	79%	84%	85%	92%	90%	87%	83%	83%	79%
JUL 2021	680	1,500	180	55	130	230	2,545	2,775	16,156
AVERAGE*	830	1,829	200	63	142	265	3,064	3,329	20,192
DEPARTURE	-150	-329	-20	-8	-12	-35	-519	-554	-4,036
% OF AVG	82%	82%	90%	87%	92%	87%	83%	83%	80%
AUG 2021	330	560	80	45	115	140	1,130	1,270	17,426
AVERAGE*	360	614	85	47	119	162	1,225	1,387	21,579
DEPARTURE	-30	-54	-5	-2	-4	-22	-95	-117	-4,153
% OF AVG	92%	91%	94%	96%	97%	86%	92%	92%	81%
SEP 2021	300	420	110	35	105	110	970	1,080	18,506
AVERAGE*	328	453	114	41	115	133	1,051	1,184	22,763
DEPARTURE	-28	-33	-4	-6	-10	-23	-81	-104	-4,257
% OF AVG	91%	93%	96%	85%	91%	83%	92%	91%	81%
OCT 2021	350	490	65	2	110	95	1,017	1,112	19,618
AVERAGE*	381	534	74	2	122	109	1,113	1,222	23,985
DEPARTURE	-31	-44	-9	0	-12	-14	-96	-110	-4,367
% OF AVG	92%	92%	88%	100%	90%	87%	91%	91%	82%
NOV 2021	350	360	60	2	110	80	882	962	20,580
AVERAGE*	382	390	68	2	120	92	962	1,054	25,039
DEPARTURE	-32	-30	-8	0	-10	-12	-80	-92	-4,459
% OF AVG	92%	92%	88%	100%	92%	87%	92%	91%	82%
DEC 2021	310	240	9	15	90	60	664	724	21,304
AVERAGE*	329	256	9	15	102	71	711	782	25,821
DEPARTURE	-19	-16	0	0	-12	-11	-47	-58	-4,517
% OF AVG	94%	94%	100%	100%	88%	85%	93%	93%	83%
Calendar Year Totals									
AVERAGE*	6,127	8,760	1,613	857	1,957	1,989	19,314	21,304	
DEPARTURE	7,269	10,845	2,550	960	1,742	2,455	23,366	25,821	
% OF NORM	-1,142	-2,085	-937	-103	215	-466	-4,052	-4,517	
% OF AVG	84%	81%	63%	89%	112%	81%	83%	83%	

Missouri River Basin
Calendar Year 2021
Runoff Forecast
*1898-2020 Averages

1-Mar-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2021	288	243	31	133	206	124	900	1,024	1,024
AVERAGE*	313	263	13	32	102	61	723	784	784
DEPARTURE	-25	-20	18	101	104	63	177	240	240
% OF AVG	92%	92%	235%	417%	202%	203%	125%	131%	131%
FEB 2021	241	167	34	61	178	108	682	790	1,814
AVERAGE*	365	363	102	61	135	109	1,026	1,135	1,919
DEPARTURE	-124	-196	-68	0	43	-1	-344	-345	-105
% OF AVG	66%	46%	33%	100%	132%	99%	66%	70%	95%
(Forecast)									
MAR 2021	420	710	300	170	200	280	1,800	2,080	3,894
AVERAGE*	602	1,017	595	225	221	351	2,660	3,011	4,930
DEPARTURE	-182	-307	-295	-55	-21	-71	-860	-931	-1,036
% OF AVG	70%	70%	50%	76%	90%	80%	68%	69%	79%
APR 2021	460	760	230	100	140	300	1,690	1,990	5,884
AVERAGE*	649	1,088	507	149	183	407	2,576	2,983	7,913
DEPARTURE	-189	-328	-277	-49	-43	-107	-886	-993	-2,029
% OF AVG	71%	70%	45%	67%	77%	74%	66%	67%	74%
MAY 2021	960	1,130	280	130	170	300	2,670	2,970	8,854
AVERAGE*	1,093	1,286	336	160	192	349	3,067	3,416	11,329
DEPARTURE	-133	-156	-56	-30	-22	-49	-397	-446	-2,475
% OF AVG	88%	88%	83%	81%	89%	86%	87%	87%	78%
JUN 2021	1,400	2,360	400	150	170	300	4,480	4,780	13,634
AVERAGE*	1,637	2,752	447	163	189	346	5,188	5,534	16,863
DEPARTURE	-237	-392	-47	-13	-19	-46	-708	-754	-3,229
% OF AVG	86%	86%	89%	92%	90%	87%	86%	86%	81%
JUL 2021	710	1,570	180	55	130	230	2,645	2,875	16,509
AVERAGE*	830	1,829	200	63	142	265	3,064	3,329	20,192
DEPARTURE	-120	-259	-20	-8	-12	-35	-419	-454	-3,683
% OF AVG	86%	86%	90%	87%	92%	87%	86%	86%	82%
AUG 2021	330	560	80	45	115	155	1,130	1,285	17,794
AVERAGE*	360	614	85	47	119	162	1,225	1,387	21,579
DEPARTURE	-30	-54	-5	-2	-4	-7	-95	-102	-3,785
% OF AVG	92%	91%	94%	96%	97%	96%	92%	93%	82%
SEP 2021	300	420	110	35	105	120	970	1,090	18,884
AVERAGE*	328	453	114	41	115	133	1,051	1,184	22,763
DEPARTURE	-28	-33	-4	-6	-10	-13	-81	-94	-3,879
% OF AVG	91%	93%	96%	85%	91%	90%	92%	92%	83%
OCT 2021	350	490	65	2	110	100	1,017	1,117	20,001
AVERAGE*	381	534	74	2	122	109	1,113	1,222	23,985
DEPARTURE	-31	-44	-9	0	-12	-9	-96	-105	-3,984
% OF AVG	92%	92%	88%	100%	90%	92%	91%	91%	83%
NOV 2021	350	360	60	2	110	85	882	967	20,968
AVERAGE*	382	390	68	2	120	92	962	1,054	25,039
DEPARTURE	-32	-30	-8	0	-10	-7	-80	-87	-4,071
% OF AVG	92%	92%	88%	100%	92%	92%	92%	92%	84%
DEC 2021	310	240	9	15	90	65	664	729	21,697
AVERAGE*	329	256	9	15	102	71	711	782	25,821
DEPARTURE	-19	-16	0	0	-12	-6	-47	-53	-4,124
% OF AVG	94%	94%	100%	100%	88%	92%	93%	93%	84%
Calendar Year Totals									
AVERAGE*	6,119	9,010	1,779	899	1,724	2,167	19,530	21,697	
DEPARTURE	7,269	10,845	2,550	960	1,742	2,455	23,366	25,821	
% OF NORM	-1,150	-1,835	-771	-61	-18	-288	-3,836	-4,124	
% OF AVG	84%	83%	70%	94%	99%	88%	84%	84%	

Missouri River Basin
Calendar Year 2021
Runoff Forecast
*1898-2019 Averages

1-Feb-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2021	288	243	31	206	206	124	973	1,096	1,096
AVERAGE*	312	263	12	31	101	57	720	777	777
DEPARTURE	-24	-20	18	174	104	67	252	319	319
% OF AVG	92%	92%	251%	654%	203%	216%	135%	141%	141%
(Forecast)									
FEB 2021	330	330	100	60	130	110	950	1,060	2,156
AVERAGE*	364	361	100	59	134	106	1,017	1,123	1,901
DEPARTURE	-34	-31	0	1	-4	4	-67	-63	256
% OF AVG	91%	91%	100%	102%	97%	104%	93%	94%	113%
MAR 2021	500	850	510	190	190	345	2,240	2,585	4,741
AVERAGE*	602	1,012	592	223	219	344	2,647	2,991	4,892
DEPARTURE	-102	-162	-82	-33	-29	1	-407	-406	-151
% OF AVG	83%	84%	86%	85%	87%	100%	85%	86%	97%
APR 2021	550	900	410	120	150	405	2,130	2,535	7,276
AVERAGE*	650	1,089	509	150	182	402	2,579	2,981	7,873
DEPARTURE	-100	-189	-99	-30	-32	3	-449	-446	-597
% OF AVG	85%	83%	81%	80%	82%	101%	83%	85%	92%
MAY 2021	860	1,050	300	140	170	330	2,520	2,850	10,126
AVERAGE*	1,092	1,286	335	159	191	346	3,063	3,408	11,282
DEPARTURE	-232	-236	-35	-19	-21	-16	-543	-558	-1,155
% OF AVG	79%	82%	90%	88%	89%	95%	82%	84%	90%
JUN 2021	1,300	2,220	410	150	170	310	4,250	4,560	14,686
AVERAGE*	1,638	2,754	449	163	188	343	5,192	5,535	16,816
DEPARTURE	-338	-534	-39	-13	-18	-33	-942	-975	-2,130
% OF AVG	79%	81%	91%	92%	91%	90%	82%	82%	87%
JUL 2021	650	1,470	180	55	130	240	2,485	2,725	17,411
AVERAGE*	830	1,833	200	61	141	262	3,065	3,328	20,144
DEPARTURE	-180	-363	-20	-6	-11	-22	-580	-603	-2,732
% OF AVG	78%	80%	90%	90%	92%	92%	81%	82%	86%
AUG 2021	330	560	80	45	115	155	1,130	1,285	18,696
AVERAGE*	361	616	85	47	118	161	1,227	1,388	21,532
DEPARTURE	-31	-56	-5	-2	-3	-6	-97	-103	-2,835
% OF AVG	91%	91%	94%	96%	97%	97%	92%	93%	87%
SEP 2021	330	455	115	40	115	135	1,055	1,190	19,886
AVERAGE*	329	455	115	41	114	133	1,054	1,187	22,719
DEPARTURE	1	0	0	-1	1	2	1	3	-2,832
% OF AVG	100%	100%	100%	97%	101%	101%	100%	100%	88%
OCT 2021	380	535	75	3	120	110	1,113	1,223	21,109
AVERAGE*	381	536	74	3	122	109	1,115	1,224	23,943
DEPARTURE	-1	-1	1	0	-2	1	-2	-1	-2,833
% OF AVG	100%	100%	102%	100%	99%	101%	100%	100%	88%
NOV 2021	380	390	70	2	120	90	962	1,052	22,161
AVERAGE*	381	390	68	2	120	92	961	1,054	24,996
DEPARTURE	-1	0	2	0	0	-2	1	-2	-2,835
% OF AVG	100%	100%	103%	95%	100%	97%	100%	100%	89%
DEC 2021	330	255	9	15	100	70	709	779	22,940
AVERAGE*	328	256	9	15	101	70	709	779	25,775
DEPARTURE	2	-1	0	0	-1	0	0	0	-2,834
% OF AVG	101%	100%	103%	102%	99%	100%	100%	100%	89%
Calendar Year Totals									
AVERAGE*	6,228	9,258	2,290	1,026	1,716	2,424	20,517	22,940	
DEPARTURE	7,268	10,850	2,548	954	1,730	2,425	23,350	25,775	
% OF NORM	-1,040	-1,592	-258	72	-14	-1	-2,834	-2,835	
% OF AVG	86%	85%	90%	108%	99%	100%	88%	89%	

Missouri River Basin
Calendar Year 2021
Runoff Forecast
*1898-2019 Averages

4-Jan-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
	Values in 1000 Acre Feet								
	(Forecast)								
JAN 2021	310	260	15	35	120	70	740	810	810
AVERAGE*	312	263	12	31	101	57	720	777	777
DEPARTURE	-2	-3	3	4	19	13	20	33	33
% OF AVG	99%	99%	123%	111%	119%	122%	103%	104%	104%
FEB 2021	340	340	90	50	120	95	940	1,035	1,845
AVERAGE*	364	361	100	59	134	106	1,017	1,123	1,901
DEPARTURE	-24	-21	-10	-9	-14	-11	-77	-88	-56
% OF AVG	94%	94%	90%	85%	90%	89%	92%	92%	97%
MAR 2021	550	920	520	190	190	300	2,370	2,670	4,515
AVERAGE*	602	1,012	592	223	219	344	2,647	2,991	4,892
DEPARTURE	-52	-92	-72	-33	-29	-44	-277	-321	-377
% OF AVG	91%	91%	88%	85%	87%	87%	90%	89%	92%
APR 2021	590	990	450	130	160	350	2,320	2,670	7,185
AVERAGE*	650	1,089	509	150	182	402	2,579	2,981	7,873
DEPARTURE	-60	-99	-59	-20	-22	-52	-259	-311	-688
% OF AVG	91%	91%	88%	87%	88%	87%	90%	90%	91%
MAY 2021	910	1,070	300	140	170	310	2,590	2,900	10,085
AVERAGE*	1,092	1,286	335	159	191	346	3,063	3,408	11,282
DEPARTURE	-182	-216	-35	-19	-21	-36	-473	-508	-1,197
% OF AVG	83%	83%	90%	88%	89%	90%	85%	85%	89%
JUN 2021	1,360	2,290	410	150	170	310	4,380	4,690	14,775
AVERAGE*	1,638	2,754	449	163	188	343	5,192	5,535	16,816
DEPARTURE	-278	-464	-39	-13	-18	-33	-812	-845	-2,041
% OF AVG	83%	83%	91%	92%	91%	90%	84%	85%	88%
JUL 2021	690	1,520	180	55	130	240	2,575	2,815	17,590
AVERAGE*	830	1,833	200	61	141	262	3,065	3,328	20,144
DEPARTURE	-140	-313	-20	-6	-11	-22	-490	-513	-2,554
% OF AVG	83%	83%	90%	90%	92%	92%	84%	85%	87%
AUG 2021	330	560	80	45	115	155	1,130	1,285	18,875
AVERAGE*	361	616	85	47	118	161	1,227	1,388	21,532
DEPARTURE	-31	-56	-5	-2	-3	-6	-97	-103	-2,657
% OF AVG	91%	91%	94%	96%	97%	97%	92%	93%	88%
SEP 2021	330	455	115	40	115	135	1,055	1,190	20,065
AVERAGE*	329	455	115	41	114	133	1,054	1,187	22,719
DEPARTURE	1	0	0	-1	1	2	1	3	-2,654
% OF AVG	100%	100%	100%	97%	101%	101%	100%	100%	88%
OCT 2021	380	535	75	3	120	110	1,113	1,223	21,288
AVERAGE*	381	536	74	3	122	109	1,115	1,224	23,943
DEPARTURE	-1	-1	1	0	-2	1	-2	-1	-2,655
% OF AVG	100%	100%	102%	100%	99%	101%	100%	100%	89%
NOV 2021	380	390	70	2	120	90	962	1,052	22,340
AVERAGE*	381	390	68	2	120	92	961	1,054	24,996
DEPARTURE	-1	0	2	0	0	-2	1	-2	-2,656
% OF AVG	100%	100%	103%	95%	100%	97%	100%	100%	89%
DEC 2021	330	255	10	15	100	70	710	780	23,120
AVERAGE*	328	256	9	15	101	70	709	779	25,775
DEPARTURE	2	-1	1	0	-1	0	1	1	-2,655
% OF AVG	101%	100%	114%	102%	99%	100%	100%	100%	90%
	Calendar Year Totals								
AVERAGE*	6,500	9,585	2,315	855	1,630	2,235	20,885	23,120	
DEPARTURE	7,268	10,850	2,548	954	1,730	2,425	23,350	25,775	
% OF NORM	-768	-1,265	-233	-99	-100	-190	-2,465	-2,655	
% OF AVG	89%	88%	91%	90%	94%	92%	89%	90%	

Missouri River Basin
Calendar Year 2020
Runoff Forecast
*1898-2019 Averages

4-Jan-21

Incremental Runoff in Reaches

	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
Values in 1000 Acre Feet									
JAN 2020	350	291	55	130	152	439	979	1,417	1,417
AVERAGE*	312	263	12	31	101	57	720	777	777
DEPARTURE	38	28	43	98	51	382	258	640	640
% OF AVG	112%	111%	453%	413%	151%	767%	136%	182%	182%
FEB 2020	560	598	348	269	313	385	2,087	2,472	3,889
AVERAGE*	364	361	100	59	134	106	1,017	1,123	1,901
DEPARTURE	196	237	248	210	179	278	1,070	1,348	1,988
% OF AVG	154%	165%	349%	457%	234%	362%	205%	220%	205%
MAR 2020	594	1,600	1,070	504	478	1,146	4,329	5,391	9,280
AVERAGE*	602	1,012	592	223	219	344	2,647	2,991	4,892
DEPARTURE	-8	588	478	281	259	802	1,681	2,400	4,388
% OF AVG	99%	158%	181%	226%	219%	333%	164%	180%	190%
APR 2020	534	968	249	122	300	1,064	2,173	3,237	12,517
AVERAGE*	650	1,089	509	150	182	402	2,579	2,981	7,873
DEPARTURE	-116	-121	-260	-28	118	662	-406	256	4,644
% OF AVG	82%	89%	49%	82%	165%	265%	84%	109%	159%
MAY 2020	1,309	1,399	493	253	323	763	3,777	4,540	17,057
AVERAGE*	1,092	1,286	335	159	191	346	3,063	3,408	11,282
DEPARTURE	217	113	158	94	132	417	715	1,132	5,775
% OF AVG	120%	109%	147%	159%	169%	221%	123%	133%	151%
JUN 2020	1,537	2,660	114	236	300	689	4,847	5,536	22,593
AVERAGE*	1,638	2,754	449	163	188	343	5,192	5,535	16,816
DEPARTURE	-101	-94	-335	73	112	346	-345	1	5,777
% OF AVG	94%	97%	25%	145%	160%	201%	93%	100%	134%
JUL 2020	774	1,347	200	236	288	593	2,845	3,438	26,031
AVERAGE*	830	1,833	200	61	141	262	3,065	3,328	20,144
DEPARTURE	-56	-486	0	175	147	331	-220	110	5,887
% OF AVG	93%	74%	100%	386%	204%	226%	93%	103%	129%
AUG 2020	179	189	76	62	237	281	743	1,024	27,055
AVERAGE*	361	616	85	47	118	161	1,227	1,388	21,532
DEPARTURE	-182	-427	-9	15	119	120	-484	-364	5,523
% OF AVG	50%	31%	89%	133%	200%	175%	61%	74%	126%
SEP 2020	269	180	39	30	163	138	680	818	27,873
AVERAGE*	329	455	115	41	114	133	1,054	1,187	22,719
DEPARTURE	-60	-274	-76	-12	48	5	-373	-368	5,155
% OF AVG	82%	40%	34%	71%	142%	104%	65%	69%	123%
OCT 2020	390	178	98	-78	170	83	758	841	28,714
AVERAGE*	381	536	74	3	122	109	1,115	1,224	23,943
DEPARTURE	9	-358	24	-81	48	-26	-357	-383	4,772
% OF AVG	102%	33%	133%	--	140%	76%	68%	69%	120%
NOV 2020	481	454	46	-24	228	43	1,184	1,227	29,942
AVERAGE*	381	390	68	2	120	92	961	1,054	24,996
DEPARTURE	100	64	-22	-26	108	-49	223	174	4,945
% OF AVG	126%	116%	67%	--	190%	47%	123%	116%	120%
DEC 2020	368	348	91	-1	208	137	1,014	1,151	31,093
AVERAGE*	328	256	9	15	101	70	709	779	25,775
DEPARTURE	39	92	82	-15	107	67	305	373	5,318
% OF AVG	112%	136%	1038%	-5%	206%	196%	143%	148%	121%
Calendar Year Totals									
	7,344	10,212	2,878	1,738	3,159	5,761	25,332	31,093	
AVERAGE*	7,268	10,850	2,548	954	1,730	2,425	23,350	25,775	
DEPARTURE	76	-638	330	784	1,429	3,336	1,981	5,318	
% OF NORM	101%	94%	113%	182%	183%	238%	108%	121%	