

Missouri River Basin
Calendar Year 2016
Runoff Forecast
*1898-2015 Averages

3-Oct-16

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 2016	286	245	-39	166	57	161	715	876	876
AVERAGE*	313	264	13	29	101	52	720	771	771
DEPARTURE	-27	-19	-52	137	-44	109	-4	105	105
% OF AVG	91%	93%	-295%	576%	56%	311%	99%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
AVERAGE*	363	359	97	55	132	101	1,006	1,106	1,878
DEPARTURE	40	132	213	145	54	173	585	758	863
% OF AVG	111%	137%	319%	365%	141%	272%	158%	168%	146%
MAR 2016	350	532	211	83	152	431	1,328	1,759	4,499
AVERAGE*	597	1,001	584	213	210	324	2,605	2,928	4,806
DEPARTURE	-247	-469	-373	-130	-58	107	-1,277	-1,169	-307
% OF AVG	59%	53%	36%	39%	72%	133%	51%	60%	94%
APR 2016	558	594	389	405	228	445	2,173	2,618	7,118
AVERAGE*	639	1,077	504	143	179	382	2,542	2,923	7,729
DEPARTURE	-81	-483	-115	262	50	63	-368	-305	-612
% OF AVG	87%	55%	77%	283%	128%	117%	86%	90%	92%
MAY 2016	1,229	1,622	244	251	395	782	3,741	4,523	11,640
AVERAGE*	1,079	1,263	326	148	185	321	3,001	3,321	11,051
DEPARTURE	150	359	-82	103	210	461	740	1,202	590
% OF AVG	114%	128%	75%	170%	214%	244%	125%	136%	105%
JUN 2016	931	2,244	203	30	168	506	3,576	4,082	15,723
AVERAGE*	1,636	2,725	451	163	185	325	5,160	5,484	16,535
DEPARTURE	-705	-481	-248	-133	-17	182	-1,584	-1,402	-812
% OF AVG	57%	82%	45%	18%	91%	156%	69%	74%	95%
JUL 2016	481	1,092	240	31	118	289	1,962	2,251	17,974
AVERAGE*	829	1,819	191	59	138	247	3,035	3,282	19,817
DEPARTURE	-348	-727	49	-28	-20	42	-1,074	-1,031	-1,844
% OF AVG	58%	60%	125%	53%	85%	117%	65%	69%	91%
AUG 2016	261	247	180	53	100	193	841	1,034	19,008
AVERAGE*	360	613	78	42	116	151	1,208	1,359	21,176
DEPARTURE	-99	-366	102	11	-16	42	-367	-325	-2,169
% OF AVG	73%	40%	231%	127%	86%	128%	70%	76%	90%
SEP 2016	203	279	98	60	126	285	764	1,049	20,057
AVERAGE*	330	452	112	38	110	110	1,042	1,152	22,328
DEPARTURE	-127	-173	-14	22	16	175	-277	-102	-2,271
% OF AVG	62%	62%	87%	157%	114%	259%	73%	91%	90%
(Forecast)									
OCT 2016	270	380	72	5	125	180	852	1,032	21,089
AVERAGE*	379	528	72	5	119	90	1,103	1,193	23,521
DEPARTURE	-109	-148	0	0	6	90	-251	-161	-2,432
% OF AVG	71%	72%	100%	100%	105%	200%	77%	87%	90%
NOV 2016	300	310	68	5	118	100	801	901	21,990
AVERAGE*	380	390	68	5	118	83	961	1,044	24,564
DEPARTURE	-80	-80	0	0	0	17	-160	-143	-2,575
% OF AVG	79%	79%	100%	100%	100%	120%	83%	86%	90%
DEC 2016	280	220	4	13	100	60	617	677	22,667
AVERAGE*	328	252	4	13	100	60	697	757	25,321
DEPARTURE	-48	-32	0	0	0	0	-80	-80	-2,654
% OF AVG	85%	87%	100%	100%	100%	100%	89%	89%	90%
Calendar Year Totals									
AVERAGE*	5,551	8,255	1,980	1,301	1,873	3,707	18,960	22,667	
DEPARTURE	7,231	10,742	2,501	911	1,692	2,244	23,077	25,321	
% OF AVG	-1,680	-2,487	-521	390	181	1,462	-4,117	-2,654	
% OF AVG	77%	77%	79%	143%	111%	165%	82%	90%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast
*1898-2015 Averages

1-Sep-16

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 2016	286	245	-39	166	57	161	715	876	876
AVERAGE*	313	264	13	29	101	52	720	771	771
DEPARTURE	-27	-19	-52	137	-44	109	-4	105	105
% OF AVG	91%	93%	-295%	576%	56%	311%	99%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
AVERAGE*	363	359	97	55	132	101	1,006	1,106	1,878
DEPARTURE	40	132	213	145	54	173	585	758	863
% OF AVG	111%	137%	319%	365%	141%	272%	158%	168%	146%
MAR 2016	350	532	211	83	152	431	1,328	1,759	4,499
AVERAGE*	597	1,001	584	213	210	324	2,605	2,928	4,806
DEPARTURE	-247	-469	-373	-130	-58	107	-1,277	-1,169	-307
% OF AVG	59%	53%	36%	39%	72%	133%	51%	60%	94%
APR 2016	558	594	389	405	228	445	2,173	2,618	7,118
AVERAGE*	639	1,077	504	143	179	382	2,542	2,923	7,729
DEPARTURE	-81	-483	-115	262	50	63	-368	-305	-612
% OF AVG	87%	55%	77%	283%	128%	117%	86%	90%	92%
MAY 2016	1,229	1,622	244	251	395	782	3,741	4,523	11,640
AVERAGE*	1,079	1,263	326	148	185	321	3,001	3,321	11,051
DEPARTURE	150	359	-82	103	210	461	740	1,202	590
% OF AVG	114%	128%	75%	170%	214%	244%	125%	136%	105%
JUN 2016	931	2,244	203	30	168	506	3,576	4,082	15,723
AVERAGE*	1,636	2,725	451	163	185	325	5,160	5,484	16,535
DEPARTURE	-705	-481	-248	-133	-17	182	-1,584	-1,402	-812
% OF AVG	57%	82%	45%	18%	91%	156%	69%	74%	95%
JUL 2016	481	1,092	240	31	118	289	1,962	2,251	17,974
AVERAGE*	829	1,819	191	59	138	247	3,035	3,282	19,817
DEPARTURE	-348	-727	49	-28	-20	42	-1,074	-1,031	-1,844
% OF AVG	58%	60%	125%	53%	85%	117%	65%	69%	91%
AUG 2016	261	247	180	53	100	193	841	1,034	19,008
AVERAGE*	360	613	78	42	116	151	1,208	1,359	21,176
DEPARTURE	-99	-366	102	11	-16	42	-367	-325	-2,169
% OF AVG	72%	40%	231%	127%	87%	128%	70%	76%	90%
(Forecast)									
SEP 2016	250	215	125	45	105	135	740	875	19,883
AVERAGE*	330	452	112	38	110	110	1,042	1,152	22,328
DEPARTURE	-80	-237	13	7	-5	25	-302	-277	-2,445
% OF AVG	76%	48%	112%	119%	95%	123%	71%	76%	89%
OCT 2016	310	350	72	5	119	100	856	956	20,839
AVERAGE*	379	528	72	5	119	90	1,103	1,193	23,521
DEPARTURE	-69	-178	0	0	0	10	-247	-237	-2,682
% OF AVG	82%	66%	100%	100%	100%	111%	78%	80%	89%
NOV 2016	325	315	68	5	118	83	831	914	21,753
AVERAGE*	380	390	68	5	118	83	961	1,044	24,564
DEPARTURE	-55	-75	0	0	0	0	-130	-130	-2,812
% OF AVG	86%	81%	100%	100%	100%	100%	86%	88%	89%
DEC 2016	290	210	4	13	100	60	617	677	22,430
AVERAGE*	328	252	4	13	100	60	697	757	25,321
DEPARTURE	-38	-42	0	0	0	0	-80	-80	-2,892
% OF AVG	88%	83%	100%	100%	100%	100%	89%	89%	89%
Calendar Year Totals									
AVERAGE*	5,673	8,157	2,008	1,287	1,847	3,459	18,970	22,430	
DEPARTURE	7,231	10,742	2,501	911	1,692	2,244	23,077	25,321	
% OF AVG	-1,558	-2,585	-493	376	155	1,215	-4,106	-2,892	
% OF AVG	78%	76%	80%	141%	109%	154%	82%	89%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast
*1898-2015 Averages

1-Aug-16

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 2016	286	245	-39	166	57	161	715	876	876
AVERAGE*	313	264	13	29	101	52	720	771	771
DEPARTURE	-27	-19	-52	137	-44	109	-4	105	105
% OF AVG	91%	93%	-295%	576%	56%	311%	99%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
AVERAGE*	363	359	97	55	132	101	1,006	1,106	1,878
DEPARTURE	40	132	213	145	54	173	585	758	863
% OF AVG	111%	137%	319%	365%	141%	272%	158%	168%	146%
MAR 2016	350	532	211	83	152	431	1,328	1,759	4,499
AVERAGE*	597	1,001	584	213	210	324	2,605	2,928	4,806
DEPARTURE	-247	-469	-373	-130	-58	107	-1,277	-1,169	-307
% OF AVG	59%	53%	36%	39%	72%	133%	51%	60%	94%
APR 2016	558	594	389	405	228	445	2,173	2,618	7,118
AVERAGE*	639	1,077	504	143	179	382	2,542	2,923	7,729
DEPARTURE	-81	-483	-115	262	50	63	-368	-305	-612
% OF AVG	87%	55%	77%	283%	128%	117%	86%	90%	92%
MAY 2016	1,229	1,622	244	251	395	782	3,741	4,523	11,640
AVERAGE*	1,079	1,263	326	148	185	321	3,001	3,321	11,051
DEPARTURE	150	359	-82	103	210	461	740	1,202	590
% OF AVG	114%	128%	75%	170%	214%	244%	125%	136%	105%
JUN 2016	931	2,244	203	30	168	506	3,576	4,082	15,723
AVERAGE*	1,636	2,725	451	163	185	325	5,160	5,484	16,535
DEPARTURE	-705	-481	-248	-133	-17	182	-1,584	-1,402	-812
% OF AVG	57%	82%	45%	18%	91%	156%	69%	74%	95%
JUL 2016	481	1,092	240	31	118	289	1,962	2,251	17,974
AVERAGE*	829	1,819	191	59	138	247	3,035	3,282	19,817
DEPARTURE	-348	-727	49	-28	-20	42	-1,074	-1,031	-1,844
% OF AVG	58%	60%	125%	53%	85%	117%	65%	69%	91%
(Forecast)									
AUG 2016	250	430	78	30	100	160	888	1,048	19,022
AVERAGE*	360	613	78	42	116	151	1,208	1,359	21,176
DEPARTURE	-110	-183	0	-12	-16	9	-320	-311	-2,155
% OF AVG	69%	70%	100%	72%	86%	106%	73%	77%	90%
SEP 2016	230	350	112	38	100	110	830	940	19,961
AVERAGE*	330	452	112	38	110	110	1,042	1,152	22,328
DEPARTURE	-100	-102	0	0	-10	0	-212	-212	-2,366
% OF AVG	70%	77%	100%	100%	91%	100%	80%	82%	89%
OCT 2016	300	450	72	5	119	90	946	1,036	20,997
AVERAGE*	379	528	72	5	119	90	1,103	1,193	23,521
DEPARTURE	-79	-78	0	0	0	0	-157	-157	-2,523
% OF AVG	79%	85%	100%	100%	100%	100%	86%	87%	89%
NOV 2016	325	350	68	5	118	83	866	949	21,946
AVERAGE*	380	390	68	5	118	83	961	1,044	24,564
DEPARTURE	-55	-40	0	0	0	0	-95	-95	-2,618
% OF AVG	86%	90%	100%	100%	100%	100%	90%	91%	89%
DEC 2016	310	225	4	13	100	60	652	712	22,658
AVERAGE*	328	252	4	13	100	60	697	757	25,321
DEPARTURE	-18	-27	0	0	0	0	-45	-45	-2,663
% OF AVG	95%	89%	100%	100%	100%	100%	94%	94%	89%
Calendar Year Totals									
AVERAGE*	5,652	8,625	1,892	1,256	1,841	3,392	19,267	22,658	
DEPARTURE	7,231	10,742	2,501	911	1,692	2,244	23,077	25,321	
% OF AVG	-1,579	-2,117	-609	345	149	1,147	-3,810	-2,663	
% OF AVG	78%	80%	76%	138%	109%	151%	83%	89%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast
*1898-2015 Averages

1-Jul-16

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 2016	286	245	-39	166	57	161	715	876	876
AVERAGE*	313	264	13	29	101	52	720	771	771
DEPARTURE	-27	-19	-52	137	-44	109	-4	105	105
% OF AVG	91%	93%	-295%	576%	56%	311%	99%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
AVERAGE*	363	359	97	55	132	101	1,006	1,106	1,878
DEPARTURE	40	132	213	145	54	173	585	758	863
% OF AVG	111%	137%	319%	365%	141%	272%	158%	168%	146%
MAR 2016	350	532	211	83	152	431	1,328	1,759	4,499
AVERAGE*	597	1,001	584	213	210	324	2,605	2,928	4,806
DEPARTURE	-247	-469	-373	-130	-58	107	-1,277	-1,169	-307
% OF AVG	59%	53%	36%	39%	72%	133%	51%	60%	94%
APR 2016	558	594	389	405	228	445	2,173	2,618	7,118
AVERAGE*	639	1,077	504	143	179	382	2,542	2,923	7,729
DEPARTURE	-81	-483	-115	262	50	63	-368	-305	-612
% OF AVG	87%	55%	77%	283%	128%	117%	86%	90%	92%
MAY 2016	1,229	1,622	244	251	395	782	3,741	4,523	11,640
AVERAGE*	1,079	1,263	326	148	185	321	3,001	3,321	11,051
DEPARTURE	150	359	-82	103	210	461	740	1,202	590
% OF AVG	114%	128%	75%	170%	214%	244%	125%	136%	105%
JUN 2016	931	2,244	203	30	168	506	3,576	4,082	15,723
AVERAGE*	1,636	2,725	451	163	185	325	5,160	5,484	16,535
DEPARTURE	-705	-481	-248	-133	-17	182	-1,584	-1,402	-812
% OF AVG	57%	82%	45%	18%	91%	156%	69%	74%	95%
(Forecast)									
JUL 2016	540	1,175	95	30	120	300	1,960	2,260	17,983
AVERAGE*	829	1,819	191	59	138	247	3,035	3,282	19,817
DEPARTURE	-289	-644	-96	-29	-18	53	-1,075	-1,022	-1,834
% OF AVG	65%	65%	50%	51%	87%	122%	65%	69%	91%
AUG 2016	250	500	65	25	105	180	945	1,125	19,108
AVERAGE*	360	613	78	42	116	151	1,208	1,359	21,176
DEPARTURE	-110	-113	-13	-17	-11	29	-263	-234	-2,069
% OF AVG	69%	82%	83%	60%	91%	119%	78%	83%	90%
SEP 2016	230	400	105	30	100	125	865	990	20,098
AVERAGE*	330	452	112	38	110	110	1,042	1,152	22,328
DEPARTURE	-100	-52	-7	-8	-10	15	-177	-162	-2,230
% OF AVG	70%	89%	94%	79%	91%	114%	83%	86%	90%
OCT 2016	300	528	72	5	119	100	1,024	1,124	21,222
AVERAGE*	379	528	72	5	119	90	1,103	1,193	23,521
DEPARTURE	-79	0	0	0	0	10	-79	-69	-2,299
% OF AVG	79%	100%	100%	100%	100%	111%	93%	94%	90%
NOV 2016	325	390	68	5	118	90	906	996	22,218
AVERAGE*	380	390	68	5	118	83	961	1,044	24,564
DEPARTURE	-55	0	0	0	0	7	-55	-48	-2,347
% OF AVG	86%	100%	100%	100%	100%	108%	94%	95%	90%
DEC 2016	310	252	4	13	100	60	679	739	22,957
AVERAGE*	328	252	4	13	100	60	697	757	25,321
DEPARTURE	-18	0	0	0	0	0	-18	-18	-2,364
% OF AVG	95%	100%	100%	100%	100%	100%	97%	98%	91%
Calendar Year Totals									
AVERAGE*	5,711	8,973	1,728	1,242	1,849	3,454	19,502	22,957	
DEPARTURE	7,231	10,742	2,501	911	1,692	2,244	23,077	25,321	
% OF AVG	-1,520	-1,769	-773	331	156	1,210	-3,574	-2,364	
% OF AVG	79%	84%	69%	136%	109%	154%	85%	91%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast
*1898-2015 Averages

1-Jun-16

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 2016	286	245	-39	166	57	161	715	876	876
AVERAGE*	313	264	13	29	101	52	720	771	771
DEPARTURE	-27	-19	-52	137	-44	109	-4	105	105
% OF AVG	91%	93%	-295%	576%	56%	311%	99%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
AVERAGE*	363	359	97	55	132	101	1,006	1,106	1,878
DEPARTURE	40	132	213	145	54	173	585	758	863
% OF AVG	111%	137%	319%	365%	141%	272%	158%	168%	146%
MAR 2016	350	532	211	83	152	431	1,328	1,759	4,499
AVERAGE*	597	1,001	584	213	210	324	2,605	2,928	4,806
DEPARTURE	-247	-469	-373	-130	-58	107	-1,277	-1,169	-307
% OF AVG	59%	53%	36%	39%	72%	133%	51%	60%	94%
APR 2016	558	594	389	405	228	445	2,173	2,618	7,118
AVERAGE*	639	1,077	504	143	179	382	2,542	2,923	7,729
DEPARTURE	-81	-483	-115	262	50	63	-368	-305	-612
% OF AVG	87%	55%	77%	283%	128%	117%	86%	90%	92%
MAY 2016	1,229	1,622	244	251	395	782	3,741	4,523	11,640
AVERAGE*	1,079	1,263	326	148	185	321	3,001	3,321	11,051
DEPARTURE	150	359	-82	103	210	461	740	1,202	590
% OF AVG	114%	128%	75%	170%	214%	244%	125%	136%	105%
JUN 2016	1,485	2,677	325	180	280	550	4,947	5,497	17,137
AVERAGE*	1,636	2,725	451	163	185	325	5,160	5,484	16,535
DEPARTURE	-151	-48	-126	17	95	225	-213	13	603
% OF AVG	91%	98%	72%	111%	151%	169%	96%	100%	104%
JUL 2016	615	1,423	170	65	180	300	2,453	2,753	19,890
AVERAGE*	829	1,819	191	59	138	247	3,035	3,282	19,817
DEPARTURE	-214	-396	-21	6	42	53	-582	-529	73
% OF AVG	74%	78%	89%	111%	131%	122%	81%	84%	100%
AUG 2016	300	505	70	45	130	200	1,050	1,250	21,140
AVERAGE*	360	613	78	42	116	151	1,208	1,359	21,176
DEPARTURE	-60	-108	-8	3	14	49	-158	-109	-36
% OF AVG	83%	82%	90%	108%	112%	133%	87%	92%	100%
SEP 2016	315	452	112	38	115	140	1,032	1,172	22,312
AVERAGE*	330	452	112	38	110	110	1,042	1,152	22,328
DEPARTURE	-15	0	0	0	5	30	-10	20	-16
% OF AVG	96%	100%	100%	100%	105%	127%	99%	102%	100%
OCT 2016	379	528	72	5	119	90	1,103	1,193	23,505
AVERAGE*	379	528	72	5	119	90	1,103	1,193	23,521
DEPARTURE	0	0	0	0	0	0	0	0	-15
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	100%
NOV 2016	380	390	68	5	118	83	961	1,044	24,549
AVERAGE*	380	390	68	5	118	83	961	1,044	24,564
DEPARTURE	0	0	0	0	0	0	0	0	-15
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	100%
DEC 2016	328	252	4	13	100	60	697	757	25,306
AVERAGE*	328	252	4	13	100	60	697	757	25,321
DEPARTURE	0	0	0	0	0	0	0	0	-15
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	100%
Calendar Year Totals									
AVERAGE*	6,627	9,711	1,936	1,455	2,060	3,516	21,790	25,306	
DEPARTURE	7,231	10,742	2,501	911	1,692	2,244	23,077	25,321	
% OF AVG	-603	-1,031	-564	544	368	1,272	-1,287	-15	
% OF AVG	92%	90%	77%	160%	122%	157%	94%	100%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast
*1898-2015 Averages

1-May-16

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 2016	286	245	-39	166	57	161	715	876	876
AVERAGE*	313	264	13	29	101	52	720	771	771
DEPARTURE	-27	-19	-52	137	-44	109	-4	105	105
% OF AVG	91%	93%	-295%	576%	56%	311%	99%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
AVERAGE*	363	359	97	55	132	101	1,006	1,106	1,878
DEPARTURE	40	132	213	145	54	173	585	758	863
% OF AVG	111%	137%	319%	365%	141%	272%	158%	168%	146%
MAR 2016	350	532	211	83	152	431	1,328	1,759	4,499
AVERAGE*	597	1,001	584	213	210	324	2,605	2,928	4,806
DEPARTURE	-247	-469	-373	-130	-58	107	-1,277	-1,169	-307
% OF AVG	59%	53%	36%	39%	72%	133%	51%	60%	94%
APR 2016	558	594	389	405	228	445	2,173	2,618	7,118
AVERAGE*	639	1,077	504	143	179	382	2,542	2,923	7,729
DEPARTURE	-81	-483	-115	262	50	63	-368	-305	-612
% OF AVG	87%	55%	77%	283%	128%	117%	86%	90%	92%
(Forecast)									
MAY 2016	844	992	326	180	215	350	2,557	2,907	10,025
AVERAGE*	1,079	1,263	326	148	185	321	3,001	3,321	11,051
DEPARTURE	-235	-271	0	32	30	29	-444	-414	-1,026
% OF AVG	78%	79%	100%	122%	116%	109%	85%	88%	91%
JUN 2016	1,207	2,120	450	175	200	350	4,152	4,502	14,527
AVERAGE*	1,636	2,725	451	163	185	325	5,160	5,484	16,535
DEPARTURE	-429	-605	-1	12	15	25	-1,008	-982	-2,008
% OF AVG	74%	78%	100%	107%	108%	108%	80%	82%	88%
JUL 2016	584	1,398	191	59	138	247	2,370	2,617	17,144
AVERAGE*	829	1,819	191	59	138	247	3,035	3,282	19,817
DEPARTURE	-245	-421	0	0	0	0	-665	-665	-2,674
% OF AVG	70%	77%	100%	100%	100%	100%	78%	80%	87%
AUG 2016	300	505	78	42	116	151	1,041	1,192	18,336
AVERAGE*	360	613	78	42	116	151	1,208	1,359	21,176
DEPARTURE	-60	-108	0	0	0	0	-167	-167	-2,841
% OF AVG	83%	82%	100%	100%	100%	100%	86%	88%	87%
SEP 2016	315	452	112	38	110	110	1,027	1,137	19,472
AVERAGE*	330	452	112	38	110	110	1,042	1,152	22,328
DEPARTURE	-15	0	0	0	0	0	-15	-15	-2,855
% OF AVG	96%	100%	100%	100%	100%	100%	99%	99%	87%
OCT 2016	379	528	72	5	119	90	1,103	1,193	20,665
AVERAGE*	379	528	72	5	119	90	1,103	1,193	23,521
DEPARTURE	0	0	0	0	0	0	0	0	-2,855
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	88%
NOV 2016	380	390	68	5	118	83	961	1,044	21,709
AVERAGE*	380	390	68	5	118	83	961	1,044	24,564
DEPARTURE	0	0	0	0	0	0	0	0	-2,855
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	88%
DEC 2016	328	252	4	13	100	60	697	757	22,466
AVERAGE*	328	252	4	13	100	60	697	757	25,321
DEPARTURE	0	0	0	0	0	0	0	0	-2,855
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	89%
Calendar Year Totals									
AVERAGE*	5,934	8,499	2,172	1,370	1,739	2,752	19,714	22,466	
DEPARTURE	7,231	10,742	2,501	911	1,692	2,244	23,077	25,321	
% OF AVG	-1,297	-2,243	-329	459	47	508	-3,362	-2,855	
% OF AVG	82%	79%	87%	150%	103%	123%	85%	89%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast
*1898-2015 Averages

1-Apr-16

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 2016	286	245	-39	166	57	161	715	876	876
AVERAGE*	313	264	13	29	101	52	720	771	771
DEPARTURE	-27	-19	-52	137	-44	109	-4	105	105
% OF AVG	91%	93%	-295%	576%	56%	311%	99%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
AVERAGE*	363	359	97	55	132	101	1,006	1,106	1,878
DEPARTURE	40	132	213	145	54	173	585	758	863
% OF AVG	111%	137%	319%	365%	141%	272%	158%	168%	146%
MAR 2016	350	532	211	83	152	431	1,328	1,759	4,499
AVERAGE*	597	1,001	584	213	210	324	2,605	2,928	4,806
DEPARTURE	-247	-469	-373	-130	-58	107	-1,277	-1,169	-307
% OF AVG	59%	53%	36%	39%	72%	133%	51%	60%	94%
(Forecast)									
APR 2016	375	600	230	70	140	400	1,415	1,815	6,314
AVERAGE*	639	1,077	504	143	179	382	2,542	2,923	7,729
DEPARTURE	-264	-477	-274	-73	-39	18	-1,127	-1,108	-1,415
% OF AVG	59%	56%	46%	49%	78%	105%	56%	62%	82%
MAY 2016	910	960	250	120	160	321	2,400	2,721	9,035
AVERAGE*	1,079	1,263	326	148	185	321	3,001	3,321	11,051
DEPARTURE	-169	-303	-76	-28	-25	0	-601	-600	-2,015
% OF AVG	84%	76%	77%	81%	87%	100%	80%	82%	82%
JUN 2016	1,420	2,090	400	150	175	325	4,235	4,560	13,595
AVERAGE*	1,636	2,725	451	163	185	325	5,160	5,484	16,535
DEPARTURE	-216	-635	-51	-13	-10	0	-925	-924	-2,940
% OF AVG	87%	77%	89%	92%	95%	100%	82%	83%	82%
JUL 2016	710	1,370	191	59	138	247	2,468	2,715	16,310
AVERAGE*	829	1,819	191	59	138	247	3,035	3,282	19,817
DEPARTURE	-119	-449	0	0	0	0	-567	-567	-3,507
% OF AVG	86%	75%	100%	100%	100%	100%	81%	83%	82%
AUG 2016	330	505	78	42	116	151	1,071	1,222	17,532
AVERAGE*	360	613	78	42	116	151	1,208	1,359	21,176
DEPARTURE	-30	-108	0	0	0	0	-137	-137	-3,644
% OF AVG	92%	82%	100%	100%	100%	100%	89%	90%	83%
SEP 2016	330	452	112	38	110	110	1,042	1,152	18,684
AVERAGE*	330	452	112	38	110	110	1,042	1,152	22,328
DEPARTURE	0	0	0	0	0	0	0	0	-3,644
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	84%
OCT 2016	379	528	72	5	119	90	1,103	1,193	19,877
AVERAGE*	379	528	72	5	119	90	1,103	1,193	23,521
DEPARTURE	0	0	0	0	0	0	0	0	-3,643
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	85%
NOV 2016	380	390	68	5	118	83	961	1,044	20,921
AVERAGE*	380	390	68	5	118	83	961	1,044	24,564
DEPARTURE	0	0	0	0	0	0	0	0	-3,643
% OF AVG	100%	100%	100%	100%	100%	100%	100%	100%	85%
DEC 2016	328	252	4	13	100	60	697	757	21,678
AVERAGE*	328	252	4	13	100	60	697	757	25,321
DEPARTURE	0	0	0	0	0	0	0	0	-3,643
% OF AVG	100%	100%	--	100%	100%	100%	100%	100%	86%
Calendar Year Totals									
AVERAGE*	6,201	8,415	1,887	951	1,571	2,653	19,025	21,678	
DEPARTURE	7,231	10,742	2,501	911	1,692	2,244	23,077	25,321	
% OF AVG	-1,030	-2,327	-613	39	-121	409	-4,052	-3,643	
% OF AVG	86%	78%	75%	104%	93%	118%	82%	86%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast

1-Mar-16

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 2016	286	245	-39	166	57	161	715	876	876
NORMAL	312	263	13	28	100	51	716	767	767
DEPARTURE	-26	-18	-52	138	-43	110	-1	109	109
% OF NORM	92%	93%	-298%	590%	57%	317%	100%	114%	114%
FEB 2016	403	491	310	200	186	274	1,590	1,864	2,740
NORMAL	360	355	96	55	132	101	998	1,099	1,866
DEPARTURE	43	136	214	145	54	173	592	765	875
% OF NORM	112%	138%	323%	363%	141%	272%	159%	170%	147%
(Forecast)									
MAR 2016	475	695	490	180	190	315	2,030	2,345	5,085
NORMAL	597	1,002	587	214	210	325	2,610	2,935	4,801
DEPARTURE	-122	-307	-97	-34	-20	-10	-580	-590	285
% OF NORM	80%	69%	83%	84%	91%	97%	78%	80%	106%
APR 2016	475	695	330	110	155	300	1,765	2,065	7,150
NORMAL	643	1,080	508	144	180	384	2,555	2,939	7,740
DEPARTURE	-168	-385	-178	-34	-25	-84	-790	-874	-589
% OF NORM	74%	64%	65%	76%	86%	78%	69%	70%	92%
MAY 2016	845	850	280	140	160	275	2,275	2,550	9,700
NORMAL	1,082	1,265	321	147	185	322	3,000	3,322	11,061
DEPARTURE	-237	-415	-41	-7	-25	-47	-725	-772	-1,361
% OF NORM	78%	67%	87%	95%	86%	85%	76%	77%	88%
JUN 2016	1,200	1,800	445	160	185	325	3,790	4,115	13,815
NORMAL	1,640	2,720	445	160	185	325	5,149	5,474	16,536
DEPARTURE	-440	-920	0	0	0	0	-1,359	-1,359	-2,720
% OF NORM	73%	66%	100%	100%	100%	100%	74%	75%	84%
JUL 2016	680	1,200	189	58	138	246	2,265	2,511	16,326
NORMAL	831	1,822	189	58	138	246	3,038	3,284	19,819
DEPARTURE	-151	-622	0	0	0	0	-773	-773	-3,493
% OF NORM	82%	66%	100%	100%	100%	100%	75%	76%	82%
AUG 2016	320	465	77	42	116	149	1,020	1,169	17,495
NORMAL	361	614	77	42	116	149	1,210	1,359	21,178
DEPARTURE	-41	-149	0	0	0	0	-190	-190	-3,683
% OF NORM	89%	76%	100%	100%	100%	100%	84%	86%	83%
SEP 2016	330	453	112	37	110	109	1,042	1,151	18,646
NORMAL	330	453	112	37	110	109	1,042	1,151	22,329
DEPARTURE	0	0	0	0	0	0	0	0	-3,682
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	84%
OCT 2016	380	529	73	5	119	89	1,106	1,195	19,841
NORMAL	380	529	73	5	119	89	1,106	1,195	23,524
DEPARTURE	0	0	0	0	0	0	0	0	-3,682
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	84%
NOV 2016	380	391	68	4	118	81	961	1,042	20,883
NORMAL	380	391	68	4	118	81	961	1,042	24,566
DEPARTURE	0	0	0	0	0	0	0	0	-3,682
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	85%
DEC 2016	328	251	3	12	100	58	694	752	21,635
NORMAL	328	251	3	12	100	58	694	752	25,317
DEPARTURE	0	0	0	0	0	0	0	0	-3,682
% OF NORM	100%	100%	--	100%	100%	100%	100%	100%	85%
Calendar Year Totals									
	6,102	8,065	2,338	1,114	1,634	2,382	19,253	21,635	
NORMAL	7,242	10,745	2,491	907	1,693	2,240	23,078	25,317	
DEPARTURE	-1,140	-2,680	-153	207	-59	143	-3,825	-3,682	
% OF NORM	84%	75%	94%	123%	97%	106%	83%	85%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast

1-Feb-16

	Incremental Runoff in Reaches						Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City			
	Values in 1000 Acre Feet								
	(Forecast)								
JAN 2016	286	245	-39	166	57	161	715	876	876
NORMAL	312	263	13	28	100	51	716	767	767
DEPARTURE	-26	-18	-52	138	-43	110	-1	109	109
% OF NORM	92%	93%	-298%	590%	57%	317%	100%	114%	114%
FEB 2016	360	355	96	80	100	150	991	1,141	2,017
NORMAL	360	355	96	55	132	101	998	1,099	1,866
DEPARTURE	0	0	0	25	-32	49	-7	42	152
% OF NORM	100%	100%	100%	145%	76%	149%	99%	104%	108%
MAR 2016	597	960	587	230	210	325	2,584	2,909	4,926
NORMAL	597	1,002	587	214	210	325	2,610	2,935	4,801
DEPARTURE	0	-42	0	16	0	0	-26	-26	126
% OF NORM	100%	96%	100%	107%	100%	100%	99%	99%	103%
APR 2016	600	970	508	150	180	384	2,408	2,792	7,718
NORMAL	643	1,080	508	144	180	384	2,555	2,939	7,740
DEPARTURE	-43	-110	0	6	0	0	-147	-147	-21
% OF NORM	93%	90%	100%	104%	100%	100%	94%	95%	100%
MAY 2016	1,010	900	321	147	185	322	2,563	2,885	10,603
NORMAL	1,082	1,265	321	147	185	322	3,000	3,322	11,061
DEPARTURE	-72	-365	0	0	0	0	-437	-437	-458
% OF NORM	93%	71%	100%	100%	100%	100%	85%	87%	96%
JUN 2016	1,510	1,880	445	160	185	325	4,180	4,505	15,108
NORMAL	1,640	2,720	445	160	185	325	5,149	5,474	16,536
DEPARTURE	-130	-840	0	0	0	0	-969	-969	-1,427
% OF NORM	92%	69%	100%	100%	100%	100%	81%	82%	91%
JUL 2016	760	1,260	189	58	138	246	2,405	2,651	17,759
NORMAL	831	1,822	189	58	138	246	3,038	3,284	19,819
DEPARTURE	-71	-562	0	0	0	0	-633	-633	-2,060
% OF NORM	92%	69%	100%	100%	100%	100%	79%	81%	90%
AUG 2016	361	614	77	42	116	149	1,210	1,359	19,118
NORMAL	361	614	77	42	116	149	1,210	1,359	21,178
DEPARTURE	0	0	0	0	0	0	0	0	-2,060
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	90%
SEP 2016	330	453	112	37	110	109	1,042	1,151	20,269
NORMAL	330	453	112	37	110	109	1,042	1,151	22,329
DEPARTURE	0	0	0	0	0	0	0	0	-2,059
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	91%
OCT 2016	380	529	73	5	119	89	1,106	1,195	21,464
NORMAL	380	529	73	5	119	89	1,106	1,195	23,524
DEPARTURE	0	0	0	0	0	0	0	0	-2,059
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	91%
NOV 2016	380	391	68	4	118	81	961	1,042	22,506
NORMAL	380	391	68	4	118	81	961	1,042	24,566
DEPARTURE	0	0	0	0	0	0	0	0	-2,059
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	92%
DEC 2016	328	251	3	12	100	58	694	752	23,258
NORMAL	328	251	3	12	100	58	694	752	25,317
DEPARTURE	0	0	0	0	0	0	0	0	-2,059
% OF NORM	100%	100%	--	100%	100%	100%	100%	100%	92%
	Calendar Year Totals								
	6,902	8,808	2,440	1,091	1,618	2,399	20,859	23,258	
NORMAL	7,242	10,745	2,491	907	1,693	2,240	23,078	25,317	
DEPARTURE	-340	-1,937	-51	184	-75	160	-2,219	-2,059	
% OF NORM	95%	82%	98%	120%	96%	107%	90%	92%	

Missouri River Basin
Calendar Year 2016
Runoff Forecast

4-Jan-16

	Incremental Runoff in Reaches						Summation above Gavins Point	Summation above Sioux City	End-of-Month Accumulated Runoff above Sioux City
	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City			
	Values in 1000 Acre Feet								
	(Forecast)								
JAN 2016	280	360	60	30	120	90	850	940	940
NORMAL	312	263	13	28	100	51	716	767	767
DEPARTURE	-32	97	47	2	20	39	134	173	173
% OF NORM	90%	137%	462%	107%	120%	177%	119%	123%	123%
FEB 2016	365	400	180	60	140	101	1,145	1,246	2,186
NORMAL	360	355	96	55	132	101	998	1,099	1,866
DEPARTURE	5	45	84	5	8	0	147	147	320
% OF NORM	101%	113%	188%	109%	106%	100%	115%	113%	117%
MAR 2016	600	1,000	600	230	250	310	2,680	2,990	5,176
NORMAL	597	1,002	587	214	210	325	2,610	2,935	4,801
DEPARTURE	3	-2	13	16	40	-15	70	55	375
% OF NORM	101%	100%	102%	107%	119%	95%	103%	102%	108%
APR 2016	643	1,000	508	150	180	310	2,481	2,791	7,967
NORMAL	643	1,080	508	144	180	384	2,555	2,939	7,740
DEPARTURE	0	-80	0	6	0	-74	-74	-148	227
% OF NORM	100%	93%	100%	104%	100%	81%	97%	95%	103%
MAY 2016	1,050	920	321	147	185	300	2,623	2,923	10,890
NORMAL	1,082	1,265	321	147	185	322	3,000	3,322	11,061
DEPARTURE	-32	-345	0	0	0	-22	-377	-399	-171
% OF NORM	97%	73%	100%	100%	100%	93%	87%	88%	98%
JUN 2016	1,560	1,970	445	160	185	315	4,320	4,635	15,525
NORMAL	1,640	2,720	445	160	185	325	5,149	5,474	16,536
DEPARTURE	-80	-750	0	0	0	-10	-829	-839	-1,011
% OF NORM	95%	72%	100%	100%	100%	97%	84%	85%	94%
JUL 2016	790	1,320	189	58	138	246	2,495	2,741	18,266
NORMAL	831	1,822	189	58	138	246	3,038	3,284	19,819
DEPARTURE	-41	-502	0	0	0	0	-543	-543	-1,553
% OF NORM	95%	72%	100%	100%	100%	100%	82%	83%	92%
AUG 2016	361	614	77	42	116	149	1,210	1,359	19,625
NORMAL	361	614	77	42	116	149	1,210	1,359	21,178
DEPARTURE	0	0	0	0	0	0	0	0	-1,553
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	93%
SEP 2016	330	453	112	37	110	109	1,042	1,151	20,776
NORMAL	330	453	112	37	110	109	1,042	1,151	22,329
DEPARTURE	0	0	0	0	0	0	0	0	-1,553
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	93%
OCT 2016	380	529	73	5	119	89	1,106	1,195	21,971
NORMAL	380	529	73	5	119	89	1,106	1,195	23,524
DEPARTURE	0	0	0	0	0	0	0	0	-1,553
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	93%
NOV 2016	380	391	68	4	118	81	961	1,042	23,013
NORMAL	380	391	68	4	118	81	961	1,042	24,566
DEPARTURE	0	0	0	0	0	0	0	0	-1,553
% OF NORM	100%	100%	100%	100%	100%	100%	100%	100%	94%
DEC 2016	328	251	3	12	100	58	694	752	23,765
NORMAL	328	251	3	12	100	58	694	752	25,317
DEPARTURE	0	0	0	0	0	0	0	0	-1,552
% OF NORM	100%	100%	--	100%	100%	100%	100%	100%	94%
				Calendar Year Totals					
	7,067	9,208	2,636	935	1,761	2,158	21,607	23,765	
NORMAL	7,242	10,745	2,491	907	1,693	2,240	23,078	25,317	
DEPARTURE	-175	-1,537	145	28	68	-82	-1,471	-1,552	
% OF NORM	98%	86%	106%	103%	104%	96%	94%	94%	

**Missouri River Basin
Calendar Year 2015
Runoff With Holdouts Final**

25-Feb-16

	Fort Peck	Garrison	Oahe	Incremental Runoff in Reaches			Summation	Summation	End-of-Month
				Fort Randall	Gavins Point	Sioux City	above Gavins Point	above Sioux City	Accumulated Runoff above Sioux City
	Values in 1000 Acre Feet								
JAN 2015	399	369	44	107	111	146	1,030	1,176	1,176
NORMAL	312	263	13	28	100	51	716	767	767
DEPARTURE	87	106	31	78	11	95	314	409	409
% OF NORM	128%	140%	338%	379%	111%	287%	144%	153%	153%
FEB 2015	646	820	245	50	138	135	1,899	2,034	3,210
NORMAL	360	355	96	55	132	101	998	1,099	1,866
DEPARTURE	286	465	149	-5	6	34	901	935	1,344
% OF NORM	179%	231%	255%	91%	105%	134%	190%	185%	172%
MAR 2015	547	973	276	42	146	163	1,984	2,147	5,357
NORMAL	597	1,002	587	214	210	325	2,610	2,935	4,801
DEPARTURE	-50	-29	-311	-172	-64	-162	-626	-788	556
% OF NORM	92%	97%	47%	20%	70%	50%	76%	73%	112%
APR 2015	496	637	72	37	110	161	1,352	1,513	6,870
NORMAL	643	1,080	508	144	180	384	2,555	2,939	7,740
DEPARTURE	-147	-443	-436	-107	-70	-223	-1,203	-1,426	-870
% OF NORM	77%	59%	14%	26%	61%	42%	53%	51%	89%
MAY 2015	707	1,041	846	311	183	245	3,088	3,333	10,203
NORMAL	1,082	1,265	321	147	185	322	3,000	3,322	11,061
DEPARTURE	-375	-224	525	164	-2	-77	88	11	-859
% OF NORM	65%	82%	264%	211%	99%	76%	103%	100%	92%
JUN 2015	1,220	3,369	1,163	456	196	368	6,404	6,772	16,975
NORMAL	1,640	2,720	445	160	185	325	5,149	5,474	16,536
DEPARTURE	-420	649	718	296	11	43	1,255	1,298	439
% OF NORM	74%	124%	262%	285%	106%	113%	124%	124%	103%
JUL 2015	508	1,385	482	162	156	353	2,693	3,046	20,021
NORMAL	831	1,822	189	58	138	246	3,038	3,284	19,819
DEPARTURE	-323	-437	293	104	18	107	-345	-238	201
% OF NORM	61%	76%	255%	279%	113%	143%	89%	93%	101%
AUG 2015	336	509	268	86	99	313	1,298	1,611	21,632
NORMAL	361	614	77	42	116	149	1,210	1,359	21,178
DEPARTURE	-24	-105	191	44	-17	164	89	253	454
% OF NORM	93%	83%	348%	205%	85%	210%	107%	119%	102%
SEP 2015	215	311	152	54	117	205	849	1,054	22,686
NORMAL	330	453	112	37	110	109	1,042	1,151	22,329
DEPARTURE	-115	-142	40	17	7	96	-193	-97	357
% OF NORM	65%	69%	136%	146%	106%	188%	82%	92%	102%
OCT 2015	255	449	1	-27	80	160	758	918	23,604
NORMAL	380	529	73	5	119	89	1,106	1,195	23,524
DEPARTURE	-125	-80	-72	-32	-39	71	-348	-277	80
% OF NORM	67%	85%	1%	--	67%	180%	69%	77%	100%
NOV 2015	300	248	102	35	119	250	804	1,054	24,658
NORMAL	380	391	68	4	118	81	961	1,042	24,566
DEPARTURE	-80	-143	34	31	1	169	-157	12	92
% OF NORM	79%	63%	150%	--	101%	309%	84%	101%	100%
DEC 2015	293	351	94	38	131	242	907	1,149	25,807
NORMAL	328	251	3	12	100	58	694	752	25,317
DEPARTURE	-35	100	91	26	31	184	213	397	490
% OF NORM	89%	140%	--	317%	131%	417%	131%	153%	102%
	Calendar Year Totals								
	5,922	10,462	3,745	1,351	1,586	2,741	23,066	25,807	
NORMAL	7,242	10,745	2,491	907	1,693	2,240	23,078	25,317	
DEPARTURE	-1,320	-283	1,254	444	-107	501	-12	490	
% OF NORM	82%	97%	150%	149%	94%	122%	100%	102%	