



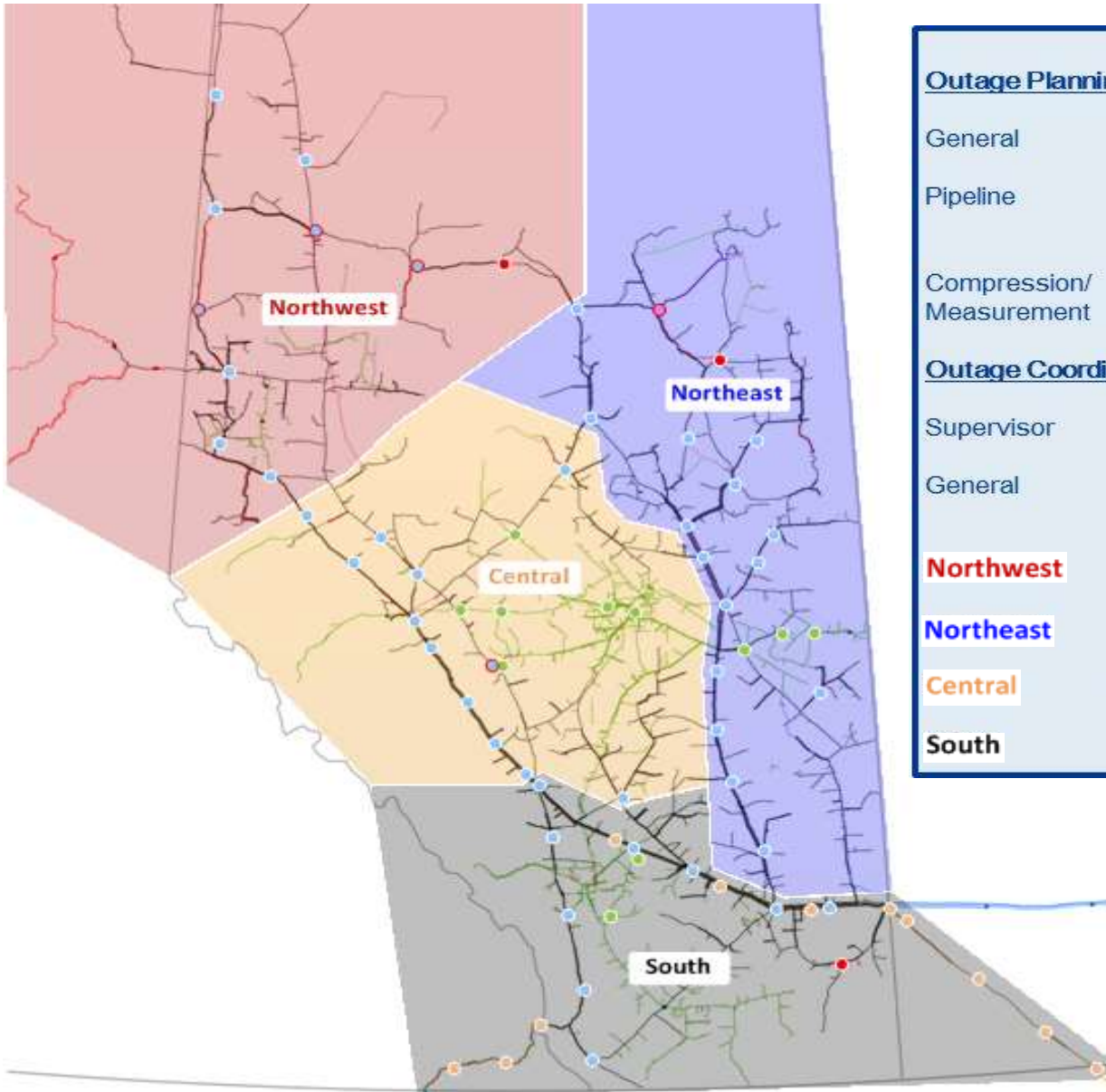
Monthly Outage Forecast

July 2016

July Monthly Outage Forecast

The Monthly Outage Forecast is a tool provided by TransCanada to show the estimated operational capability. This information is provided for informational purposes only and is not to be relied upon for any other purpose whatsoever. The information is based upon certain assumptions that may or may not be accurate, and therefore is subject to various risks and uncertainties. TransCanada shall not be liable for damages sustained as a result of any use or reliance on such information. Please note, only known and planned outages at the time of publishing will be included in the Monthly Outage Forecast. As new outages are planned they will be added to subsequent MOF reports.

NGTL MAP



Outage Planning

General	Chau Johnston	403.920.6061
Pipeline	Mike Wylie Rahim Ruda	403.920.7346 403.920.6360
Compression/ Measurement	Bruce Hansen	403.920.5613

Outage Coordination

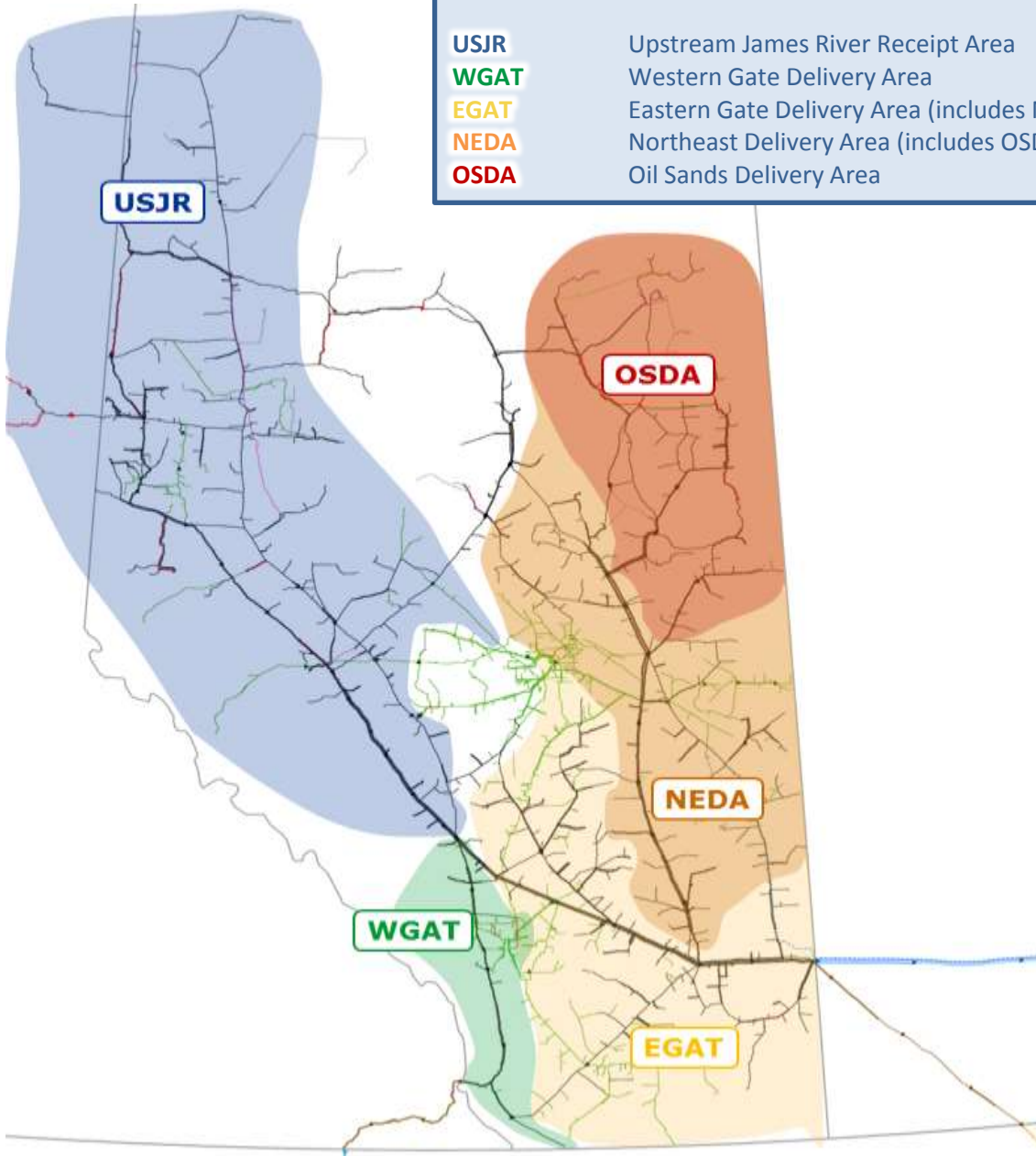
Supervisor	Jeff Stoffregen	403.920.6337
General	Chuang Li Ashley Lim	403.920.5291 403.920.6669
Northwest	Andrea Watters	403.920.7638
Northeast	Brooke Dillabough	403.920.5144
Central	Chris Pho	403.920.6016
South	Damola Daramola	403.920.6604

For NGTL System Facilities Segment codes please view link below

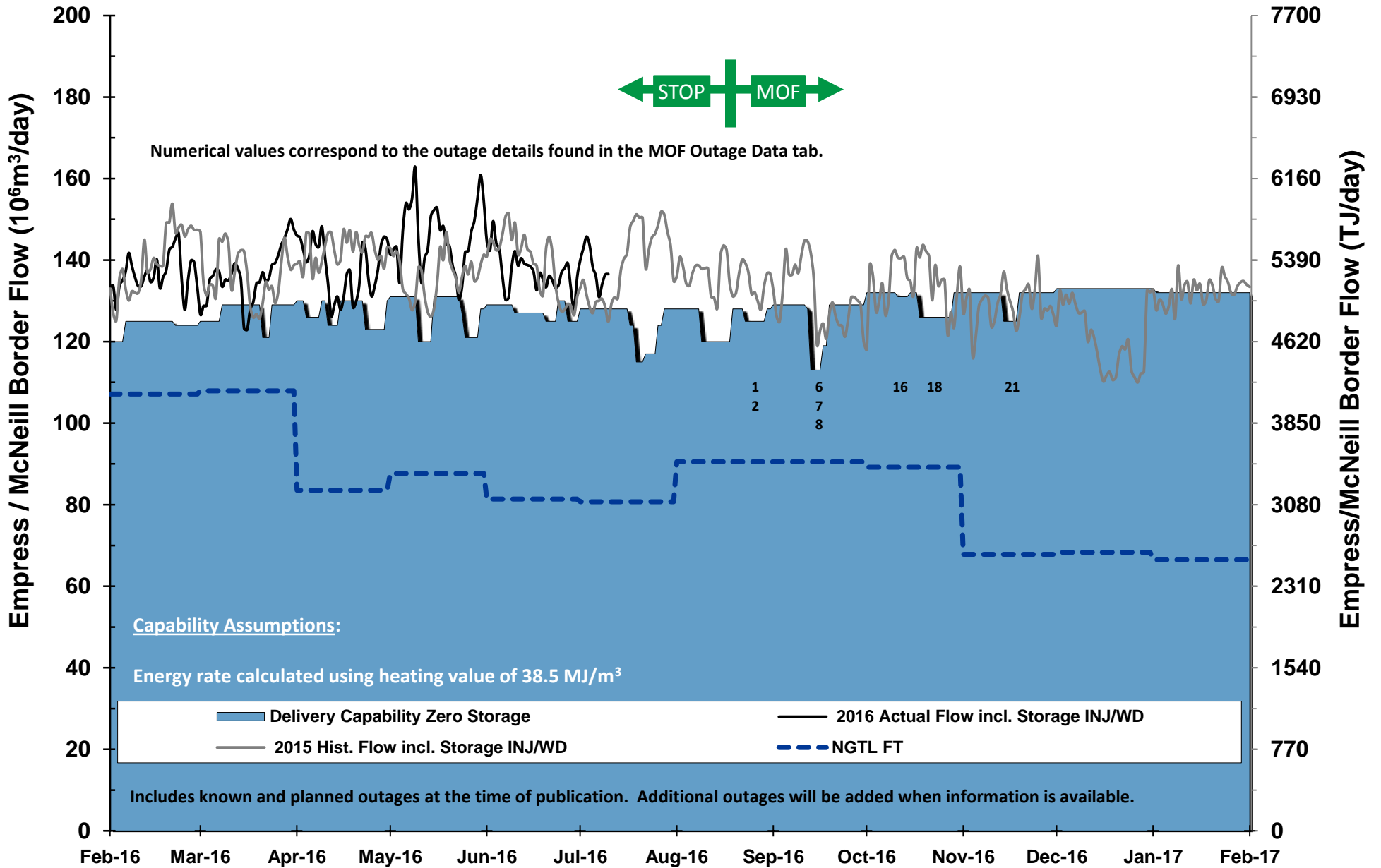
http://www.transcanada.com/customerexpress/docs/fh_system_maps/AB_System_Map_2015_Segments_Rev18.pdf

Operational Areas

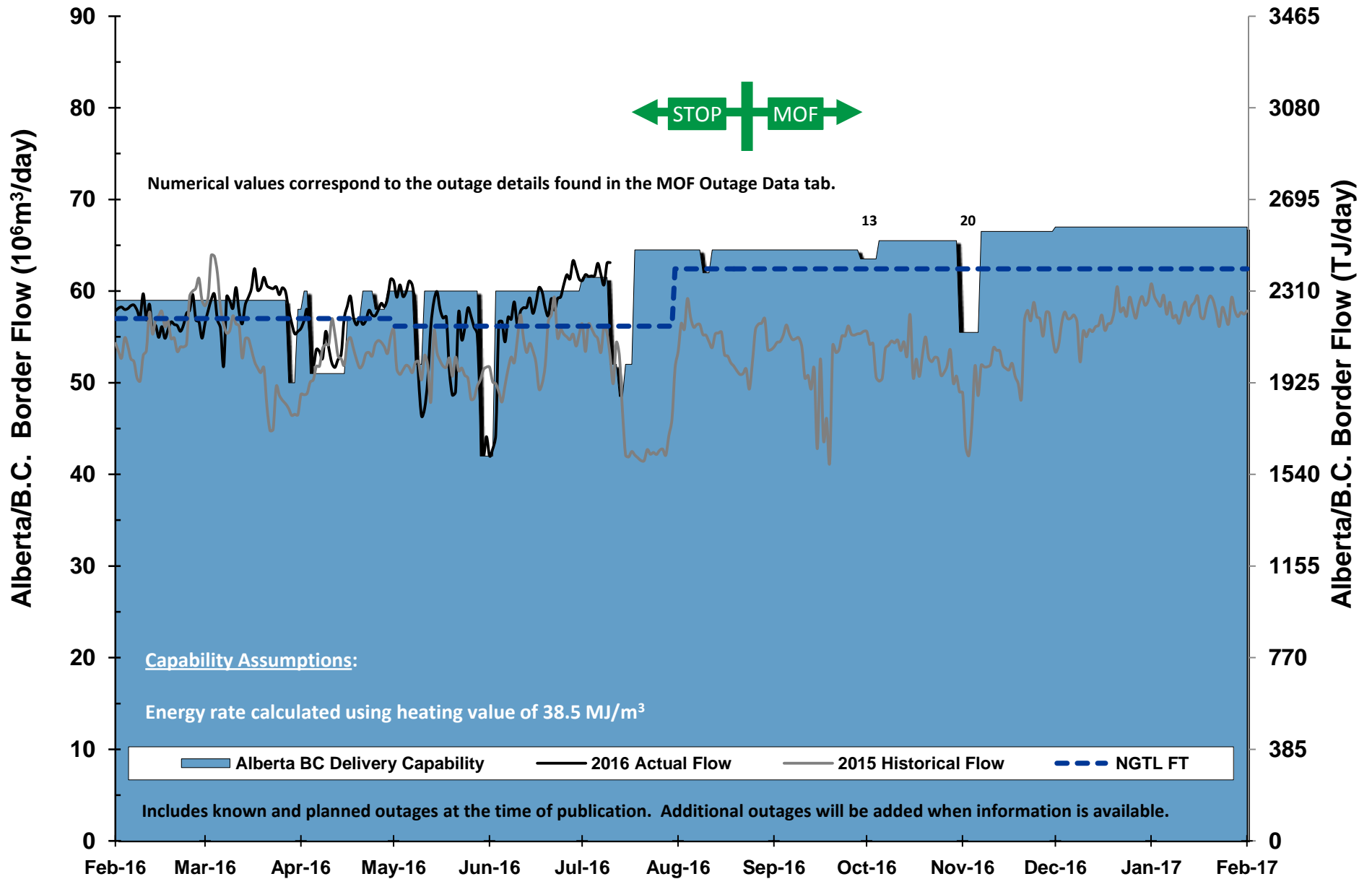
- USJR** Upstream James River Receipt Area
- WGAT** Western Gate Delivery Area
- EGAT** Eastern Gate Delivery Area (includes NEDA and OSDA)
- NEDA** Northeast Delivery Area (includes OSDA)
- OSDA** Oil Sands Delivery Area



Empress/McNeill Border



Alberta/B.C. Border

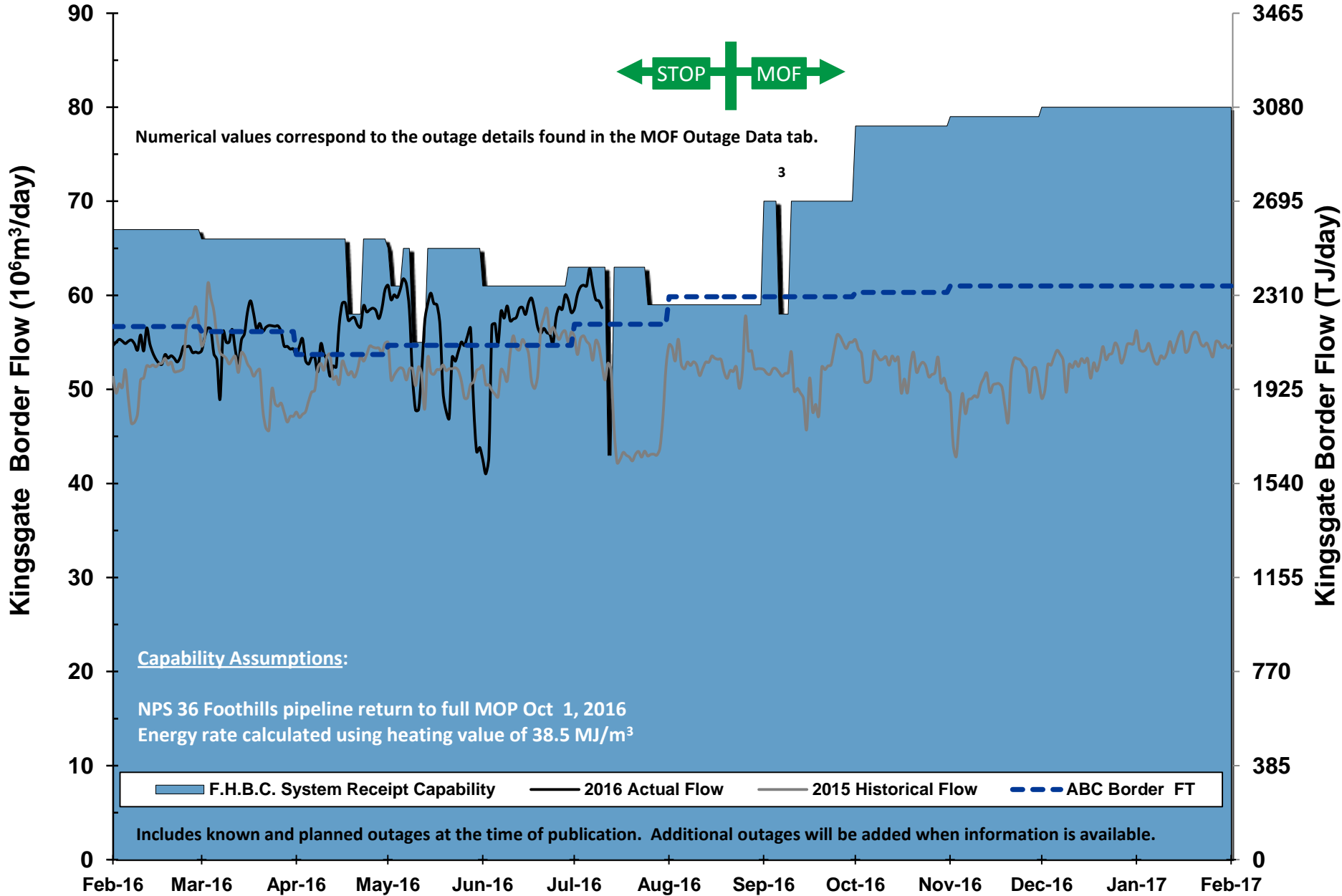


Kingsgate Border



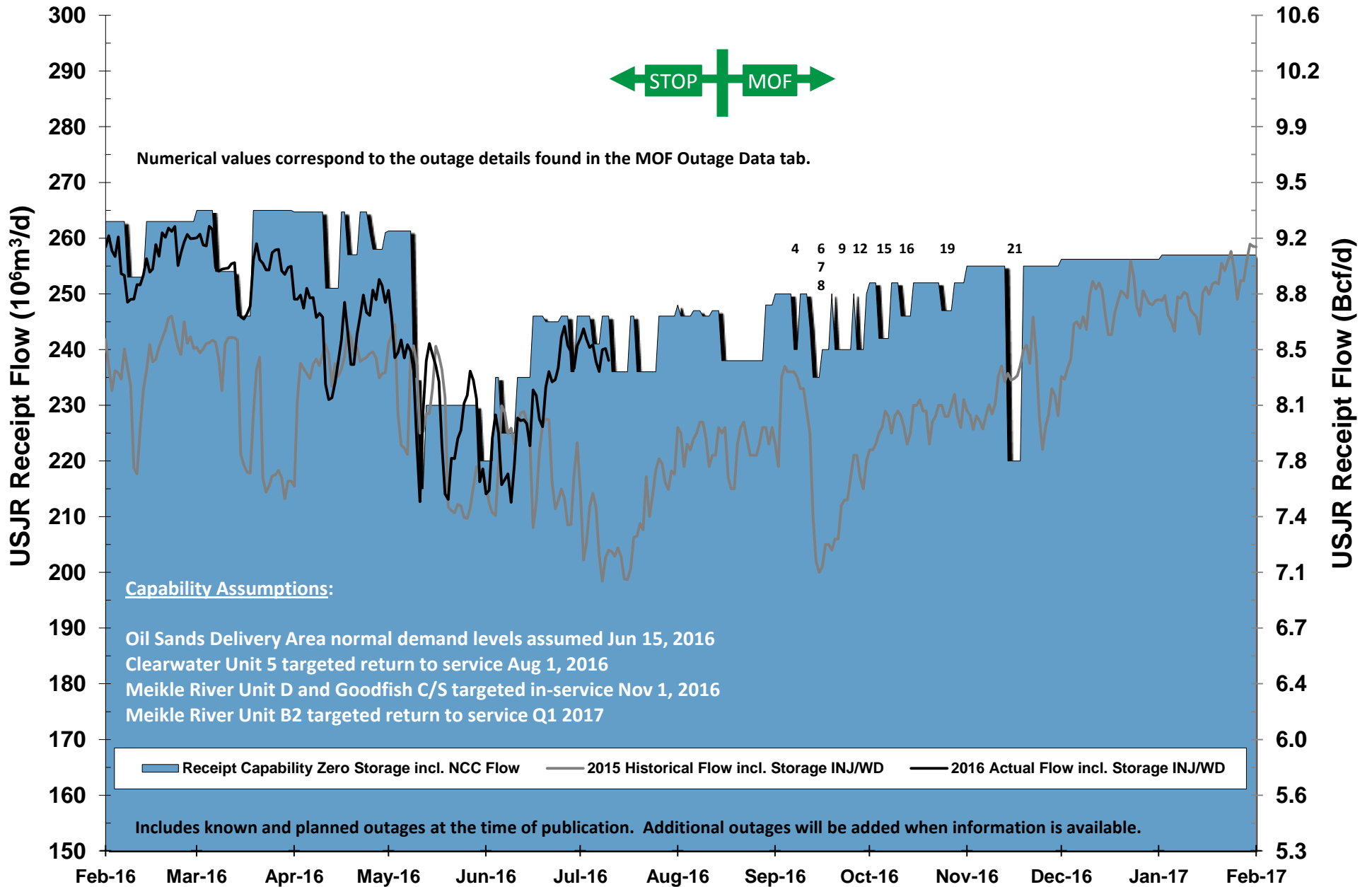
Numerical values correspond to the outage details found in the MOF Outage Data tab.

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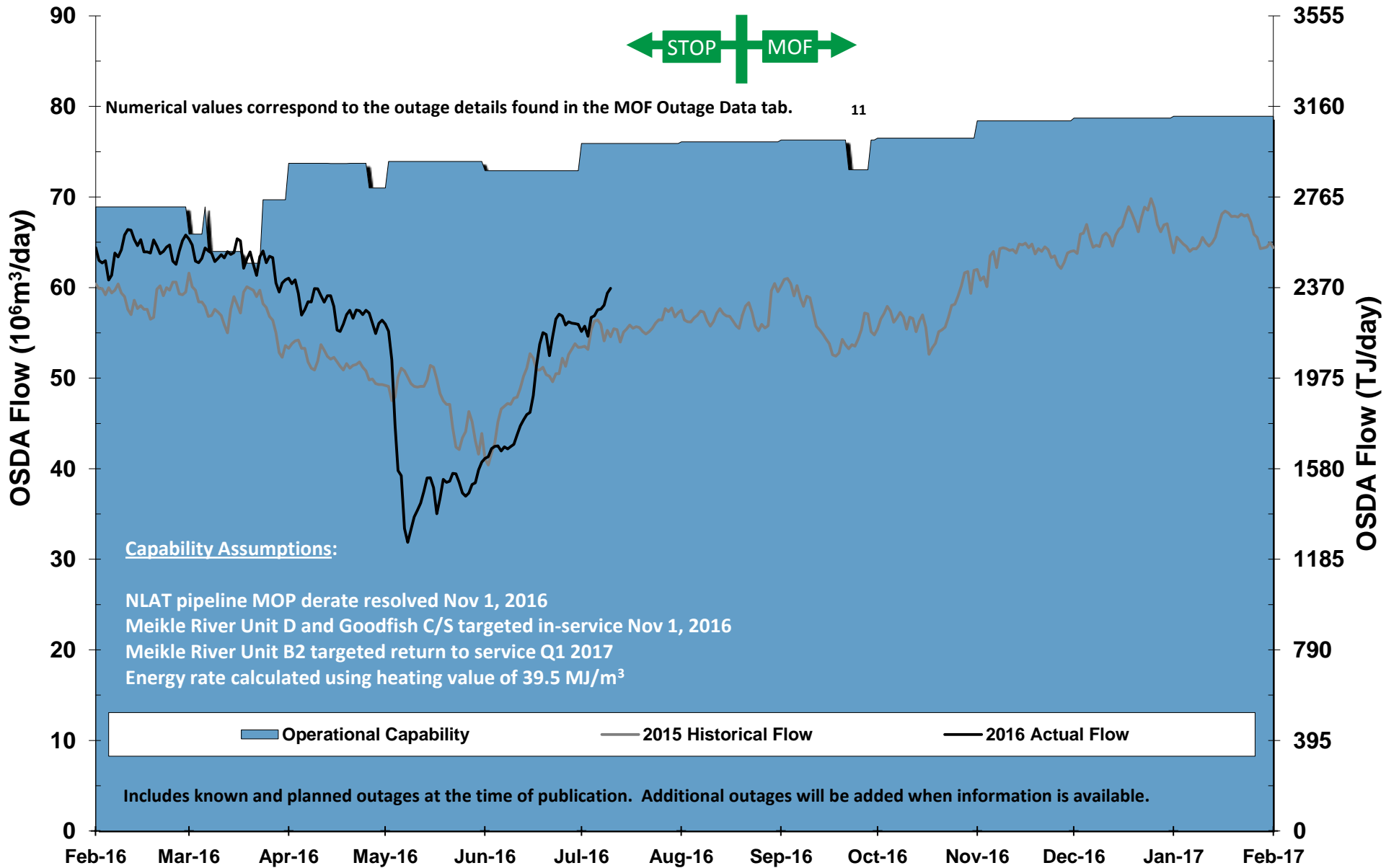
Upstream of James River Outlook

Segments 1, 2, 3, 4, 5, 7, partial 8, partial 9, 24, 26, partial 28



Oil Sands Delivery Area (OSDA) Outlook

Segments 10, 11, 14



Area Definitions

USJR Upstream James River Receipt Area: Groundbirch East, Gordondale, Big Eddy, January Creek, and Rat Creek West interconnects, and all receipt locations in Segments 1, 2, 3, 4, 5, 7, partial 8, partial 9, 24, 26, partial 28.
EGAT East Gate Delivery Area: Empress, McNeill, Unity, Cold Lake, Aeco C, Warwick Southeast, Chancellor, Carbon, Severn Creek, and Crossfield interconnects, and all delivery locations in Segments 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, partial 21, 22, 23, partial 28.
 • **NEDA** North and East Delivery Area: Unity, Cold Lake, Warwick Southeast interconnects, and all delivery locations in Segments 10, 11, 12, 13, 14, 15, 16, 23, partial 28:
 • **OSDA** Oil Sands Delivery Area: Cold Lake interconnect, and all delivery locations in Segments 10, 11, 14.
WGAT West Gate Delivery Area: Alberta B.C. and Alberta Montana interconnects, and delivery locations in partial Segment 21.

OUTAGE #	SEG #	OUTAGE DESCRIPTION	DATES		RECEIPT/DELIVERY IMPACT	CONTACT	AREA
			START	FINISH			
1	18	NPS 34 Eastern Alberta System (EAS) Mainline Loop - Pipeline Maintenance (7 days).	08/23/16	08/29/16	Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 127 E6m3/d. Typical Flow 125-135 e6m3/d	Damola Daramola	EGAT
2	6	NPS 24 Peerless Lake Lateral Loop - Pipeline Modifications (6 days within window). Dates Revised	08/23/16	08/29/16	Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 125 E6m3/d. Typical Flow 125-135 e6m3/d.	Brooke Dillabough	EGAT
3	21	Moyie C/S - Station Maintenance (4 days).	09/06/16	09/09/16	Potential IT/FT receipt restriction on the Foothills B.C. System. Capability 58 E6m3/d. Typical Flow 40 - 65 E6m3/d.	Damola Daramola	FHBC
4	5	Knight C/S - Station Maintenance (2 days).	09/07/16	09/08/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 240 E6m3/d. Typical Flow 230-260 E6m3/d.	Chris Pho	USJR
5	7	NPS 24 Cutbank Lateral Loop - Pipeline Maintenance (9 days).	09/12/16	09/20/16	Potential IT/FT receipt restriction at Musreau Lake, Musreau Lake West, Musreau Lake No 2, Musreau Lake North, Cutbank River, Copton Creek, Narraway River, Nose Mountain and Bilbo meter stations. Capability 9-14 e6m3/d. Typical Flow 15-20 e6m3/d. Nil required at Wapiti Centre Sales and Wapiti South Sales. Typical Flow 60 e3m3/d.	Andrea Watters	Local
6	3	Hidden Lake North C/S - Station Maintenance (5 days).	09/12/16	09/16/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 244 E6m3/d. Typical Flow 240-265 E6m3/d. Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 128 E6m3/d. Typical Flow 125-135 e6m3/d	Andrea Watters	USJR EGAT
7	12	NPS 30 Paul Lake Crossover - Pipeline Modifications (6 days within window).	09/13/16	09/18/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 240 E6m3/d. Typical Flow 240-265 E6m3/d. Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 119 E6m3/d. Typical Flow 125-135 E6m3/d.	Rahim Ruda	USJR EGAT
8	3	NPS 48 Tanghe Creek Lateral Loop 2 & Chinchaga Loop 3 - Pipeline Maintenance (4 days). Capacity Revised	09/13/16	09/16/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 235 E6m3/d, Typical Flow 230-265 E6m3/d. Potential IT/FT delivery in the East Gate Delivery Area. Empress/McNeill delivery Capability 113 E6m3/d. Typical Flow 125-135 e6m3/d.	Andrea Watters	USJR EGAT
9	9	NPS 30 Western Alberta System (WAS) Mainline - Pipeline Maintenance.	09/20/16	09/25/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 240 E6m3/d. Typical flow 230-265 E6m3/d. Nils required at Blue Rapids, Boggy Hall, Sand Creek, Alder Flats, Minnehik Buck Lake and Minnehik Buck Lake B meter stations. Typical Flow 4000 E3m3/d.	Chris Pho	USJR Local
10	19	NPS 42 Foothills Pipeline Zone 9 - Pipeline Maintenance (7 days).	09/22/16	09/28/16	Potential IT/FT restriction on the Foothills Saskatchewan System. Capability 35-50 E6m3/d. Typical Flow 40-45 E6m3/d.	Damola Daramola	FHSK
11	10	NPS 36 NCC Loop and Fort McKay Mainline - Pipeline Maintenance (7 days).	09/22/16	09/28/16	Potential IT/FT delivery restriction in the Oil Sands Delivery Area. Capability 73 E6m3/d. Typical Flow 60-70 E6m3/d.	Rahim Ruda	OSDA

C/S Compressor Station
 M/S Meter Station
 Light Shade Changed Entry
 Dark Shade New Entry

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 • **NEDA** North and East Delivery Area: Unity, Cold Lake, Warwick Southeast interconnects, and all delivery locations in Segments 10, 11, 12, 13, 14, 15, 16, 23, partial 28:
 • **OSDA** Oil Sands Delivery Area: Cold Lake interconnect, and all delivery locations in Segments 10, 11, 14.
WGAT West Gate Delivery Area: Alberta B.C. and Alberta Montana interconnects, and delivery locations in partial Segment 21.

OUTAGE #	SEG #	OUTAGE DESCRIPTION	DATES		RECEIPT/DELIVERY IMPACT	CONTACT	AREA
			START	FINISH			
12	7	Berland C/S - Station Maintenance (3 days).	09/27/16	09/29/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 240 E6m3/d. Typical Flow 230-265 E6m3/d.	Chris Pho	USJR
13	21	NPS 42 Western Alberta System (WAS) Mainline Loop - Pipeline Modifications (6 days). Dates and Capacity Revised	09/29/16	10/04/16	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B.C. delivery Capability 63 E6m3/d. Typical Flow 57-63 e6m3/d.	Chris Pho	WGAT
14	15	NPS 30 North Lateral Loop #2 - Pipeline Modifications (5 days within window).	10/01/16	10/15/16	Potential IT/FT delivery restriction in the North and East Delivery Area. Capability 102 E6m3/d. Typical Flow 95-105 E6m3/d.	Rahim Ruda	NEDA
15	7	Latornell C/S - Station Maintenance (4 days).	10/04/16	10/07/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 242 E6m3/d. Typical Flow 230-260 E6m3/d.	Chris Pho	USJR
16	3	Hidden Lake C/S - Station Maintenance (4 days).	10/11/16	10/14/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 246 E6m3/d. Typical Flow 230-265 E6m3/d. Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 131 E6m3/d. Typical Flow 125-135 e6m3/d	Andrea Watters	USJR EGAT
17	2	NPS 8 Dunvegan West Lateral - Pipeline Modifications (6 days within window). Dates Revised	10/12/16	10/17/16	Nil required at Dunvegan West and Dunvegan West #2. Typical Flow 50 E3m3/d.	Rahim Ruda	Local
18	18	NPS 42 Edson & Central Alberta System (CAS) Mainline Loop - Pipeline Maintenance (11 days). Dates and Capacity Revised	10/18/16	10/28/16	Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 126 E6m3/d. Typical Flow 125-135 E6m3/d.	Damola Daramola	EGAT
19	8	Clearwater #5 - Unit Maintenance (4 days).	10/24/16	10/27/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area, including full Segment 8. Capability 247 E6m3/d. Typical Flow 230-260 E6m3/d.	Chris Pho	USJR
20	21	NPS 42 Western Alberta System (WAS) Mainline Loop - Pipeline Maintenance (7 days). Dates and Capacity Revised	10/31/16	11/06/16	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. Capability 55 E6m3/d. Typical Flow 57-63 E6m3/d.	Damola Daramola	WGAT
21	6 & 12	NPS 24/30 NCC Peerless Lake/Marten Hills Lateral Loop #2/Paul Lake Crossover - Pipeline Maintenance (5 days). New	11/14/16	11/18/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 220 E6m3/d. Typical Flow 230-265 E6m3/d. Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 125 E6m3/d. Typical Flow 125-135 e6m3/d.	Chuang Li	USJR EGAT
22	20	NPS 10/12 Tide Lake Lateral - Pipeline Modifications (6 days within window).	12/01/16	12/15/16	Nils required at Tide Lake North, Tide Lake East, Tide Lake B, Tide Lake and Tide Lake South meter stations. Typical Flow 260-660 E3m3/d.	Rahim Ruda	Local

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23	20	NPS 12 Bigstone Lateral - Pipeline Modifications (6 days within window).	12/01/16	12/15/16	Nils required at Grizzly, Grizzly Sales and Bigstone Sales meter stations. Typical Receipt Flow 150 E3m3/d and Delivery Flow 50 E3m3/d.	Rahim Ruda	Local
24	20	NPS 8 Dorothy Lateral and NPS10 Cessford-Burfield Lateral - Pipeline Modifications (6 days within window). Dates Revised	2017	2017	Nils required at Dorothy, Lone Butte, Cessford Burfield West, Cessford Burfield West #2, Bullpound, Cessford North meter stations. Typical Flow 600 E3m3/d.	Rahim Ruda	Local
25	24	NPS 10 Judy Creek Lateral - Pipeline Modifications (6 days within window). Dates Revised	2017	2017	Nil required at Judy Creek and Virginia Hills. Typical Flow 300 E3m3/d. Nil required at Sakwatamau Sales. Typical Flow 0 E3m3/d.	Rahim Ruda	Local

C/S Compressor Station
 M/S Meter Station
 Light Shade Changed Entry
 Dark Shade New Entry