



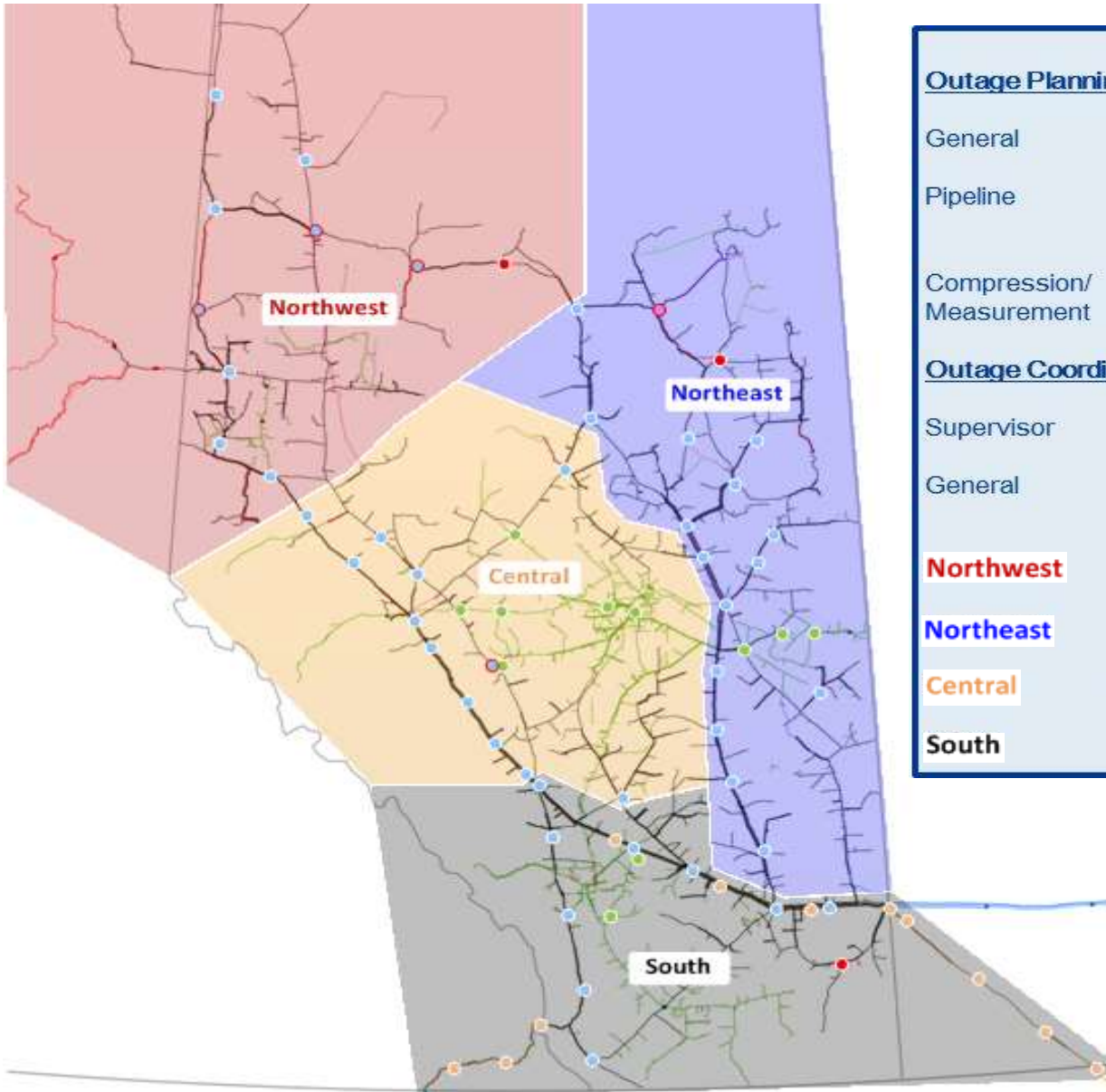
# Monthly Outage Forecast

## June 2016

## June 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



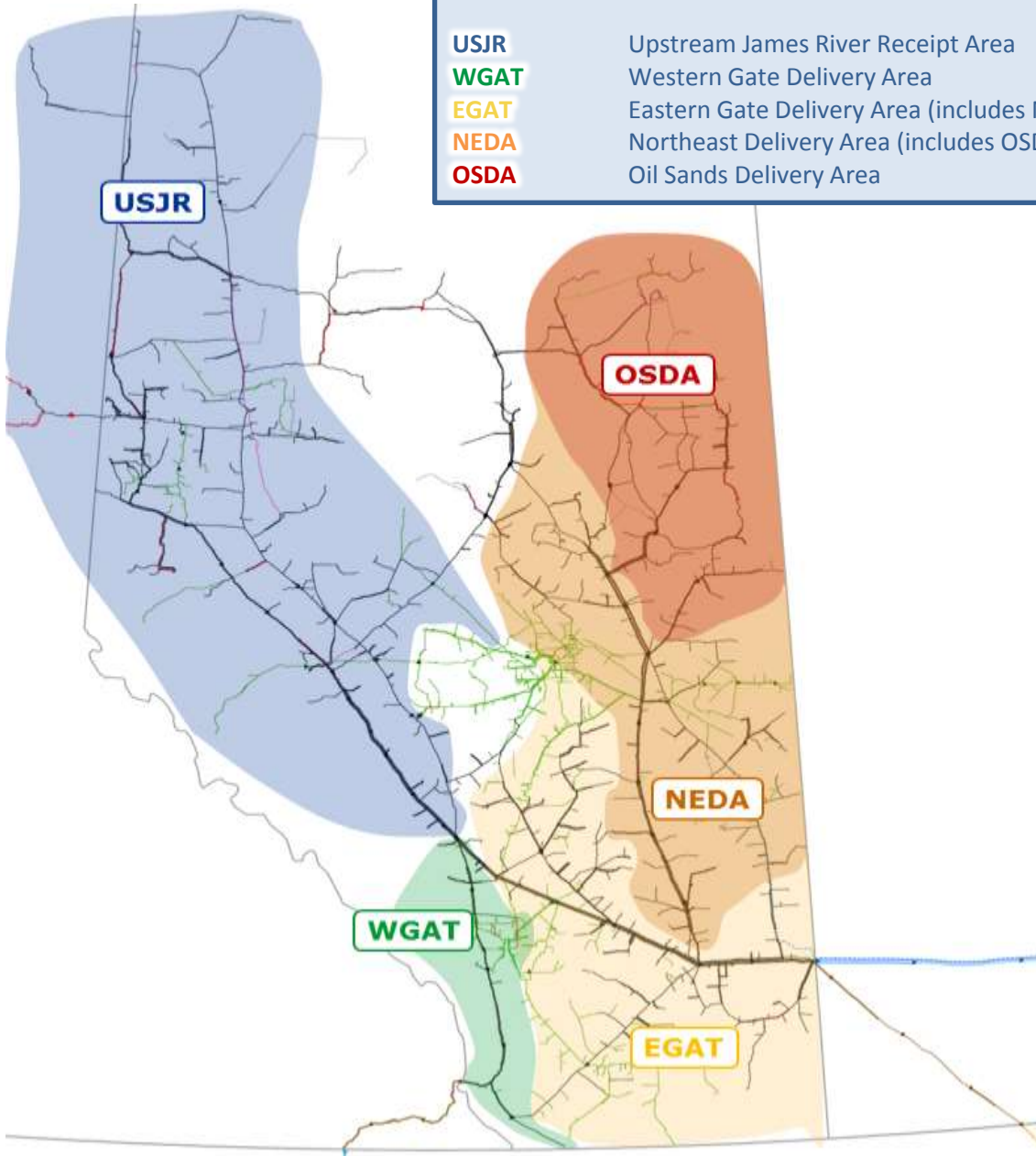
<b>Outage Planning</b>		
General	Chau Johnston	403.920.6061
Pipeline	Mike Wylie Rahim Ruda	403.920.7346 403.920.6360
Compression/ Measurement	Bruce Hansen	403.920.5613
<b>Outage Coordination</b>		
Supervisor	Jeff Stoffregen	403.920.6337
General	Chuang Li Ashley Lim	403.920.5291 403.920.6669
<b>Northwest</b>	Andrea Watters	403.920.7638
<b>Northeast</b>	Brooke Dillabough	403.920.5144
<b>Central</b>	Chris Pho	403.920.6016
<b>South</b>	Damola Daramola	403.920.6604

**For NGTL System Facilities Segment codes please view link below**

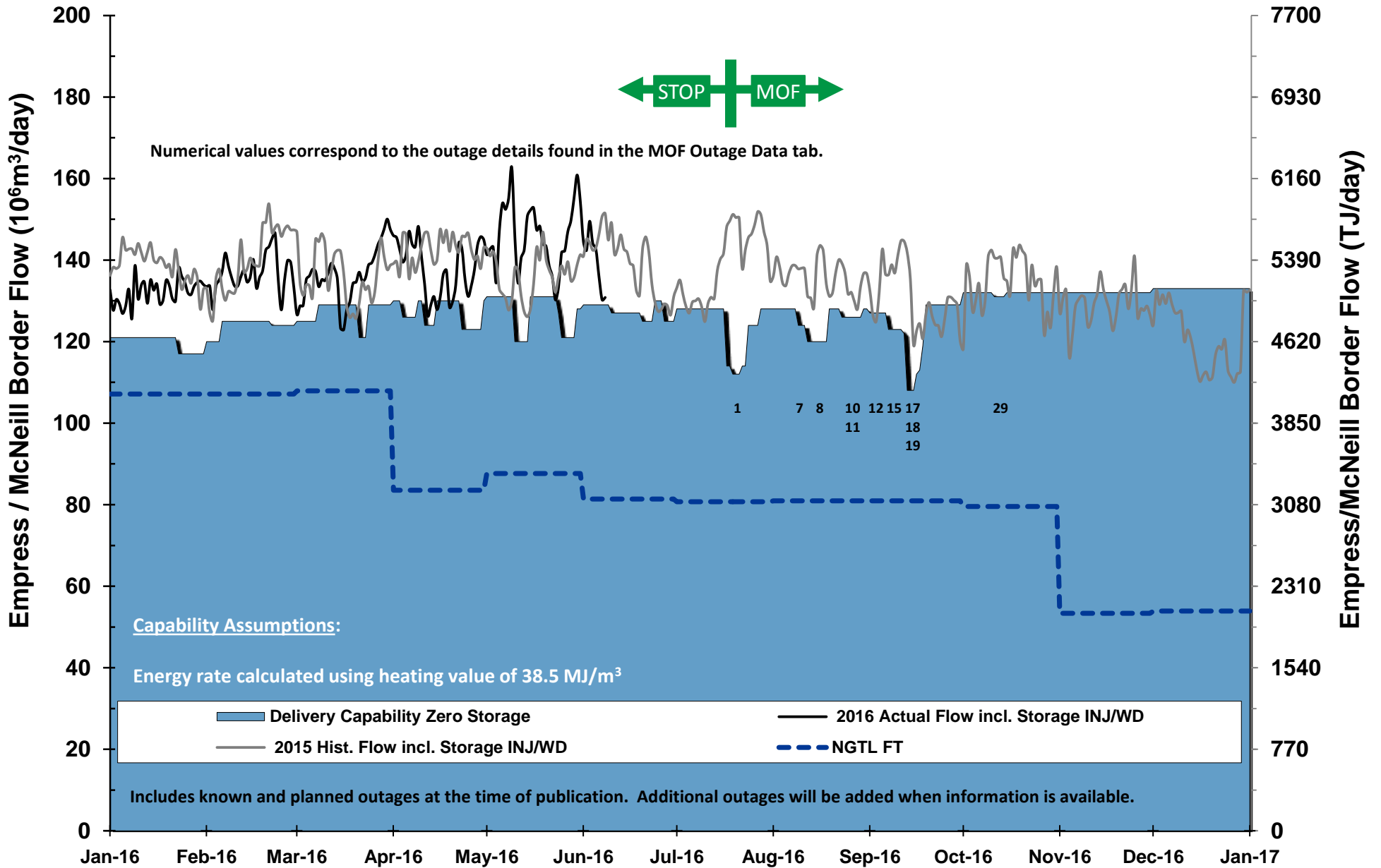
[http://www.transcanada.com/customerexpress/docs/fh\\_system\\_maps/AB\\_System\\_Map\\_2015\\_Segments\\_Rev18.pdf](http://www.transcanada.com/customerexpress/docs/fh_system_maps/AB_System_Map_2015_Segments_Rev18.pdf)

### Operational Areas

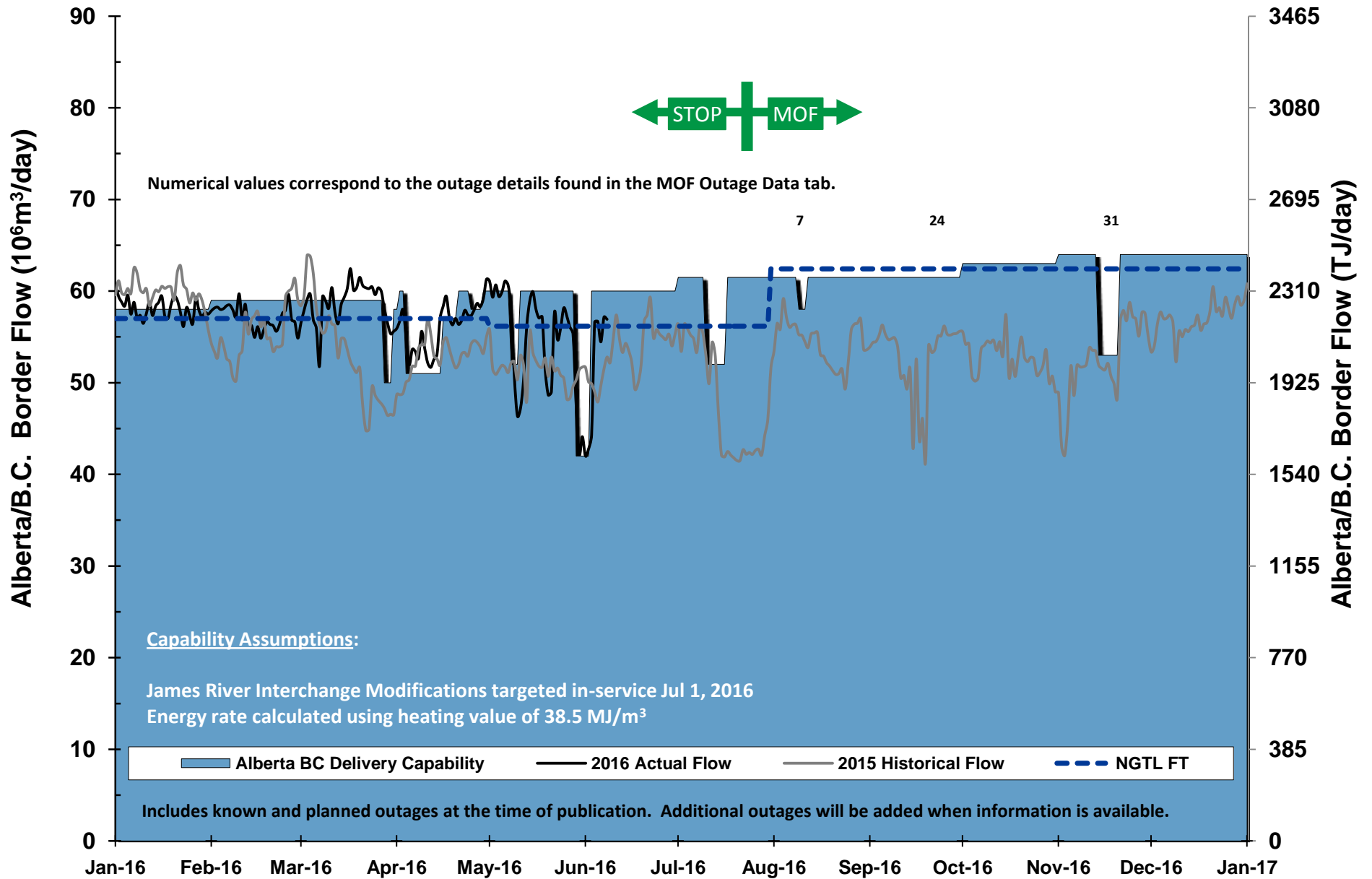
<b>USJR</b>	Upstream James River Receipt Area
<b>WGAT</b>	Western Gate Delivery Area
<b>EGAT</b>	Eastern Gate Delivery Area (includes NEDA and OSDA)
<b>NEDA</b>	Northeast Delivery Area (includes OSDA)
<b>OSDA</b>	Oil Sands Delivery Area



# Empress/McNeill Border



# Alberta/B.C. Border

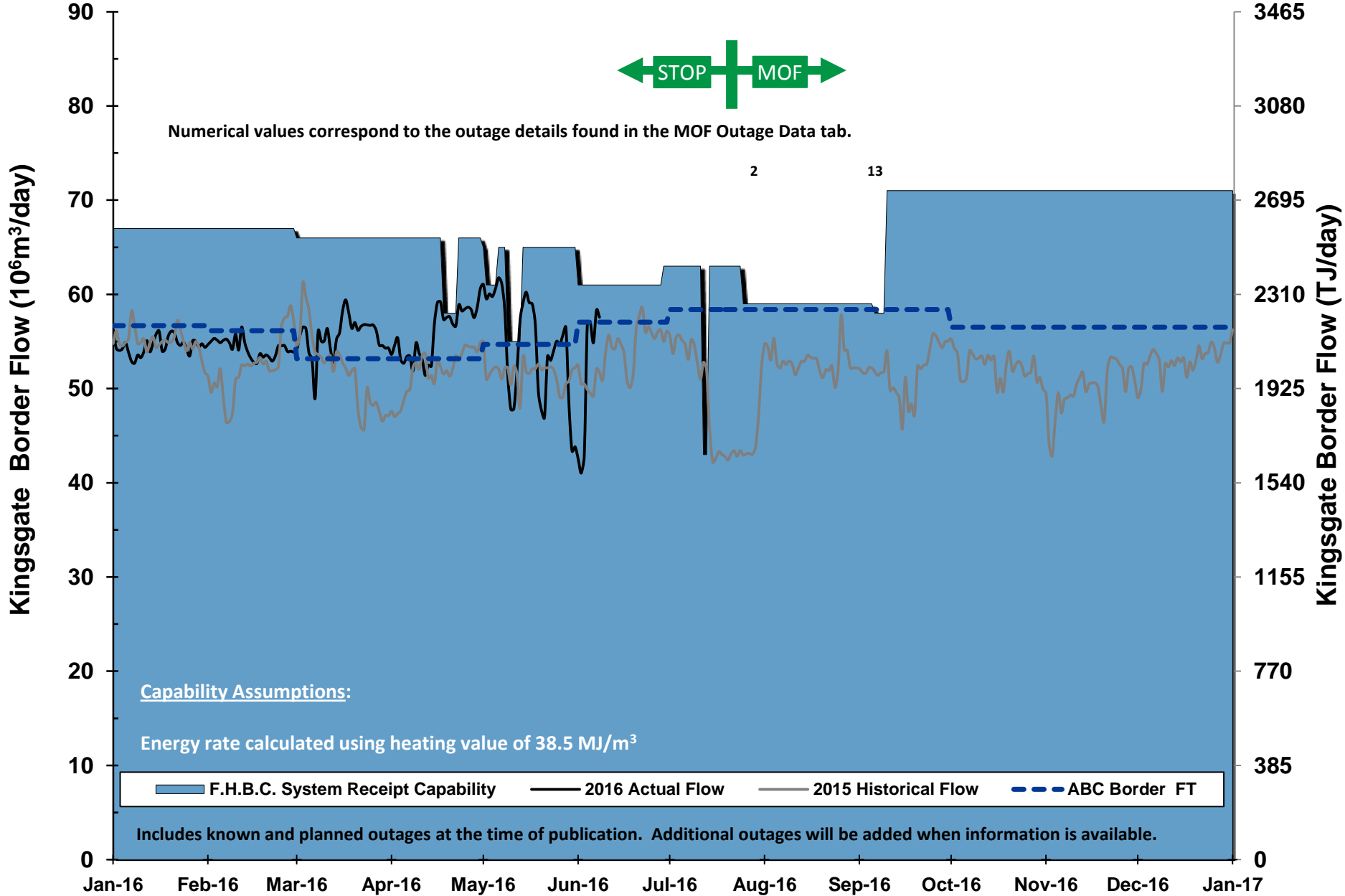


# Kingsgate Border



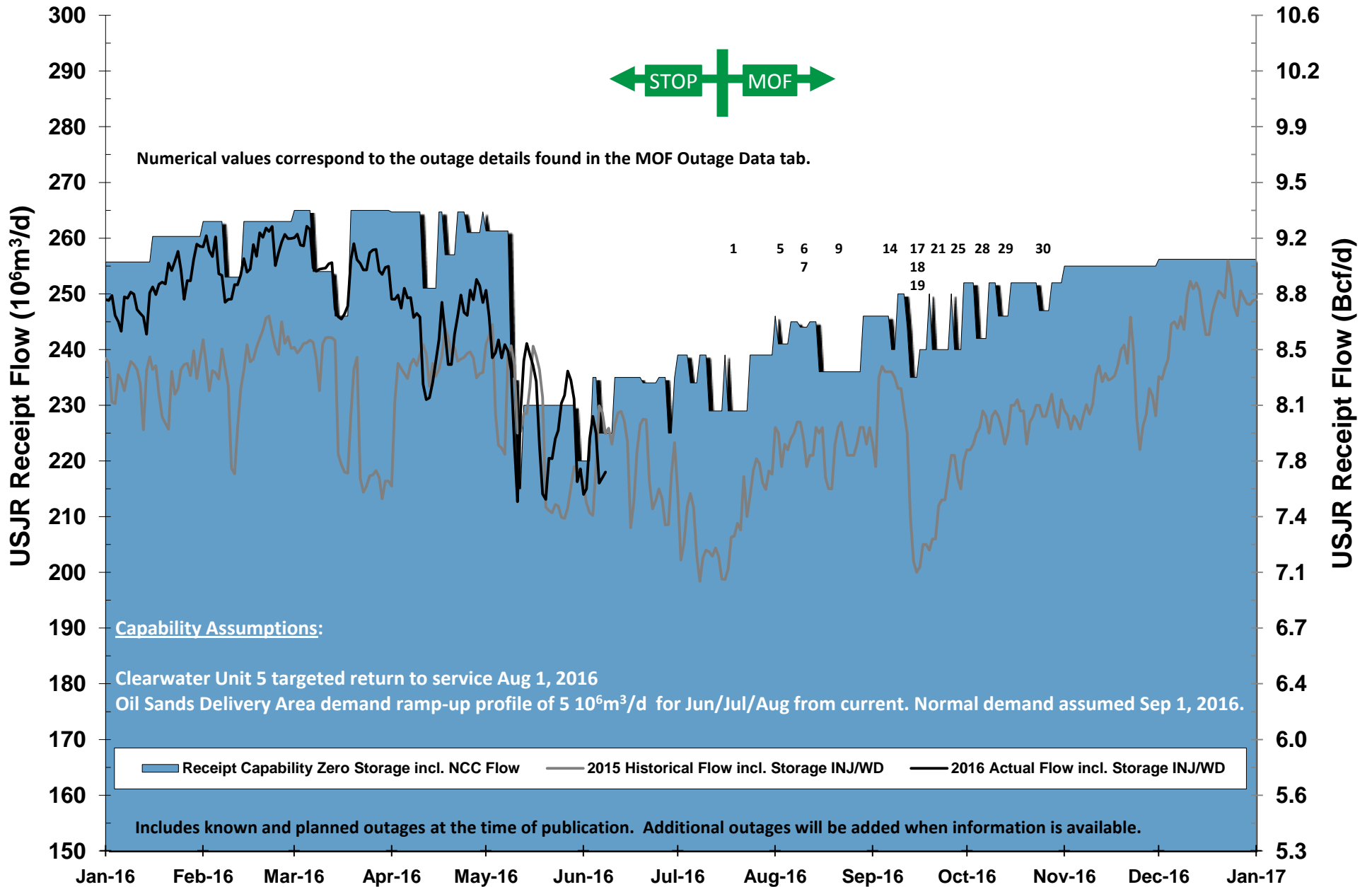
Numerical values correspond to the outage details found in the MOF Outage Data tab.

2                      13



# Upstream of James River Outlook

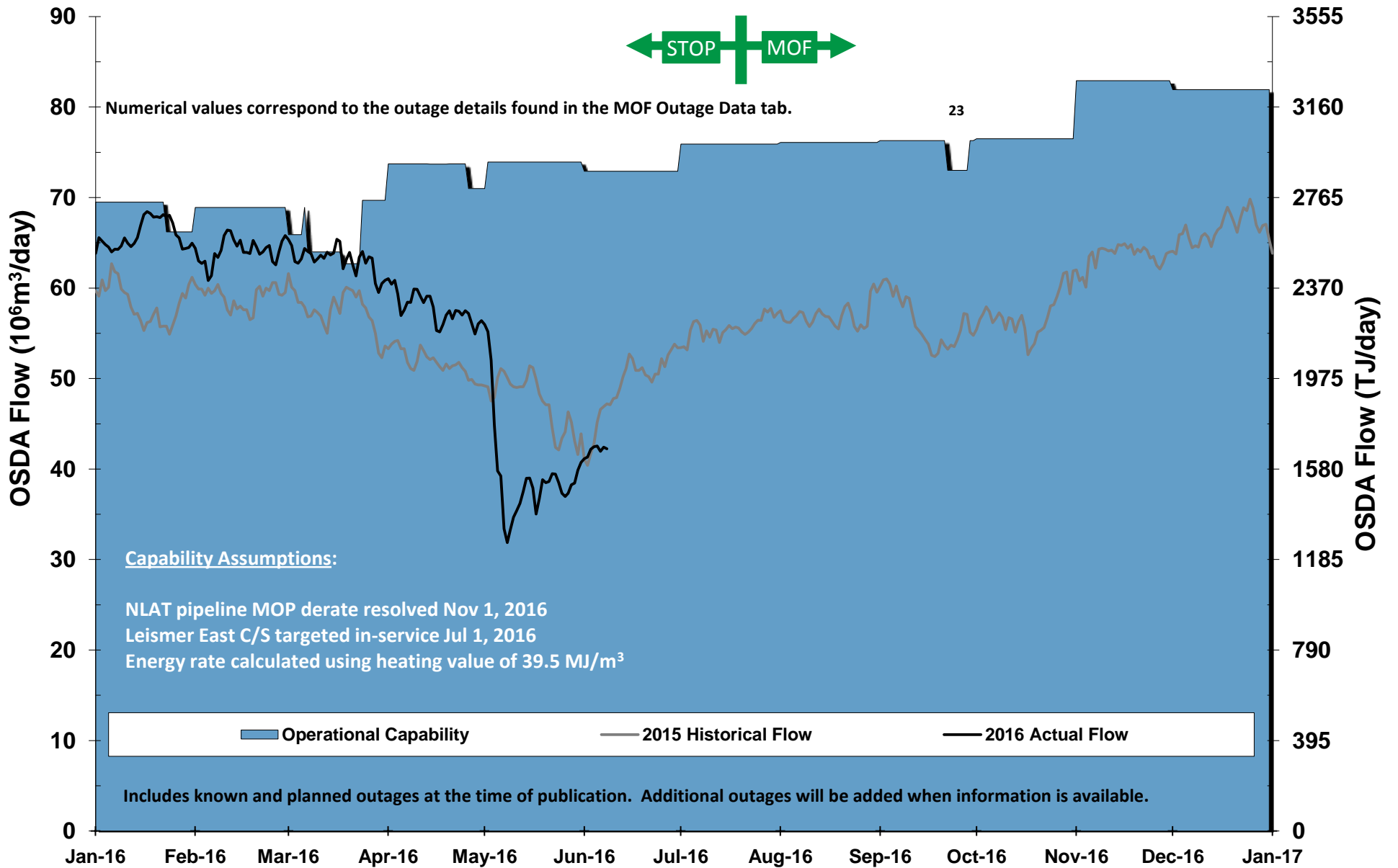
Segments 1, 2, 3, 4, 5, 7, partial 8, partial 9, 24, 26, partial 28





# 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	3	<b>NPS 48 Chinchaga Lateral Loop</b> - Pipeline Modifications (7 days) <b>Dates and Capacity Revised</b>	07/17/16	07/23/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 229 E6m3/d. Typical Flow 230-265 E6m3/d. Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 118 E6m3/d. Typical Flow 125-135 e6m3/d	Andrea Watters	USJR EGAT
2	21	<b>NPS 36 Foothills Pipeline Zone 8</b> - Pipeline Maintenance (38 days). <b>New</b>	07/25/16	08/31/16	Potential IT/FT receipt restriction on the Foothills B.C. System. Capability 59 E6m3/d. Typical flow 40 - 65 E6m3/d.	Chau Johnston	FHBC
3	21	<b>NPS 18/20 Waterton Montana Lateral Loop</b> - Pipeline Maintenance (4 days). <b>Capacity Revised</b>	07/24/16	07/27/16	Potential IT/FT delivery restriction at the Alberta Montana Border. Capability 1500 E3m3/d. Typical Flow 1500-2500 E3m3/d.	Chris Pho	Local
4	21	<b>Drywood C/S</b> - Station Maintenance (3 days).	07/26/16	07/28/16	Potential IT/FT delivery restriction at the Alberta Montana Border. Capability 2500 E3m3/d. Typical Flow 1500- 2500 E3m3/d.	Damola Daramola	Local
5	8	<b>Clearwater #1</b> - Unit Maintenance (4 days). <b>Dates and Capacity Revised</b>	08/02/16	08/05/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area, including full Segment 8. Capability 241 E6m3/d. Typical Flow 230-260 E6m3/d.	Chris Pho	USJR
6	8	<b>NPS 42 Edson Mainline Loop #2</b> - Pipeline Maintenance (9 days). <b>New</b>	08/06/16	08/14/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 245 E6m3/d. Typical Flow 230-260 E6m3/d.	Chris Pho	USJR
7	18	<b>Schrader Creek East &amp; West</b> - Station Maintenance (3 days). <b>Dates and Capacity Revised</b>	08/09/16	08/11/16	Potential IT/FT receipt restriction in Segments 8, 9 and partial 28. Capability 244 E6m3/d. Typical Flow 230-260 E6m3/d. Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill Capability 124 E6m3/d. Typical Flow 125-135 E6m3/d. Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. delivery Capability 58 E6m3/d. Typical Flow 57-63 E6m3/d.	Damola Daramola	USJR EGAT WGAT
8	18	<b>NPS 42 Foothills Pipeline Zone 6</b> - Pipeline Maintenance (7 days). <b>Dates Revised</b>	08/12/16	08/18/16	Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 120 E6m3/d. Typical flow 125-135 e6m3/d.	Chris Pho	EGAT
9	8	<b>Swartz Creek C/S</b> - Station Maintenance (14 days). <b>Capacity Revised</b>	08/15/16	08/28/16	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 236 E6m3/d. Typical flow 230-260 E6m3/d.	Chris Pho	USJR
10	12	<b>NPS 24 Flat Lake Lateral Loop #3</b> - Pipeline Modifications (5 days within window). <b>Capacity Revised</b>	08/15/16	08/30/16	Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 127 E6m3/d. Typical Flow 125-135 e6m3/d.	Rahim Ruda	EGAT
11	18	<b>NPS 34 Eastern Alberta System (EAS) Mainline Loop</b> - Pipeline Maintenance (7 days). <b>Dates Revised</b>	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

C/S Compressor Station  
 M/S Meter Station  
 Light shade - Indicates change  
 Dark shade - Indicates new

**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			
12	6	<b>NPS 24 Peerless Lake Lateral Loop</b> - Pipeline Modifications (6 days within window). <b>Capacity Revised</b>	09/01/16	09/15/16	Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 125 E6m3/d. Typical Flow 125-135 e6m3/d.	Rahim Ruda	EGAT
13	21	<b>Moyie C/S</b> - Station Maintenance (4 days). <b>New</b>	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
14	5	<b>Knight C/S</b> - Station Maintenance (2 days). <b>Capacity Revised</b>	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
15	18	<b>NPS 42 Edson &amp; Central Alberta System (CAS) Mainline Loop</b> - Pipeline Maintenance (11 days).	09/07/16	09/17/16	Potential IT/FT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 123 E6m3/d. Typical Flow 125-135 E6m3/d.	Damola Daramola	EGAT
16	7	<b>NPS 24 Cutbank Lateral Loop</b> - Pipeline Maintenance (9 days). <b>Dates Revised</b>	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
17	3	<b>Hidden Lake North C/S</b> - Station Maintenance (5 days). <b>Dates and Capacity Revised</b>	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
18	12	<b>NPS 30 Paul Lake Crossover</b> - Pipeline Modifications (6 days within window). <b>Dates and Capacity Revised</b>	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
19	3	<b>NPS 48 Tanghe Creek Lateral Loop 2 &amp; Chinchaga Loop 3</b> - Pipeline Maintenance (4 days). <b>Dates and Capacity Revised</b>	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 118 E6m3/d. Typical Flow 125-135 e6m3/d.	Andrea Watters	USJR EGAT
20	24	<b>NPS 10 Judy Creek Lateral</b> - Pipeline Modifications (6 days within window).	09/15/16	09/30/16	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
21	9	<b>NPS 30 Western Alberta System (WAS) Mainline</b> - Pipeline Maintenance. <b>Capacity Revised</b>	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
22	19	<b>NPS 42 Foothills Pipeline Zone 9</b> - Pipeline Maintenance (7 days). <b>Dates Revised</b>	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

C/S Compressor Station  
 M/S Meter Station  
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			START	FINISH			
23	10	<b>NPS 36 NCC Loop and Fort McKay Mainline</b> - Pipeline Maintenance (7 days). <b>New</b>	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
24	21	<b>NPS 42 Western Alberta System (WAS) Mainline Loop</b> - Pipeline Modifications (7 days). <b>Dates and Capacity Revised</b>	09/23/16	09/29/16	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B.C. delivery Capability 61 E6m3/d. Typical Flow 57-63 e6m3/d.	Chris Pho	WGAT
25	7	<b>Berland C/S</b> - Station Maintenance (3 days). <b>New</b>	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
26	2	<b>NPS 8 Dunvegan West Lateral</b> - Pipeline Modifications (6 days within window).	10/01/16	10/15/16	Nil required at Dunvegan West and Dunvegan West #2. Typical Flow 50 E3m3/d.	Rahim Ruda	Local
27	15	<b>NPS 30 North Lateral Loop #2</b> - 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
28	7	<b>Latornell C/S</b> - Station Maintenance (4 days). <b>New</b>	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
29	3	<b>Hidden Lake C/S</b> - Station Maintenance (4 days). <b>Capacity Revised</b>	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
30	8	<b>Clearwater #5</b> - Unit Maintenance (4 days). <b>Capacity Revised</b>	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
31	21	<b>NPS 42 Western Alberta System (WAS) Mainline Loop</b> - Pipeline Maintenance (7 days).	11/14/16	11/20/16	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. Capability 53 E6m3/d. Typical Flow 57-63 E6m3/d.	Damola Daramola	WGAT
32	20	<b>NPS 10/12 Tide Lake Lateral</b> - 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
33	20	<b>NPS 8 Dorothy Lateral and NPS10 Cessford-Burfield Lateral</b> - Pipeline Modifications (6 days within window).	12/01/16	12/15/16	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

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			START	FINISH			
34	20	<b>NPS 12 Bigstone Lateral</b> - Pipeline Modifications (6 days within window). <b>New</b>	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

C/S Compressor Station  
M/S Meter Station  
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Dark shade - Indicates new