

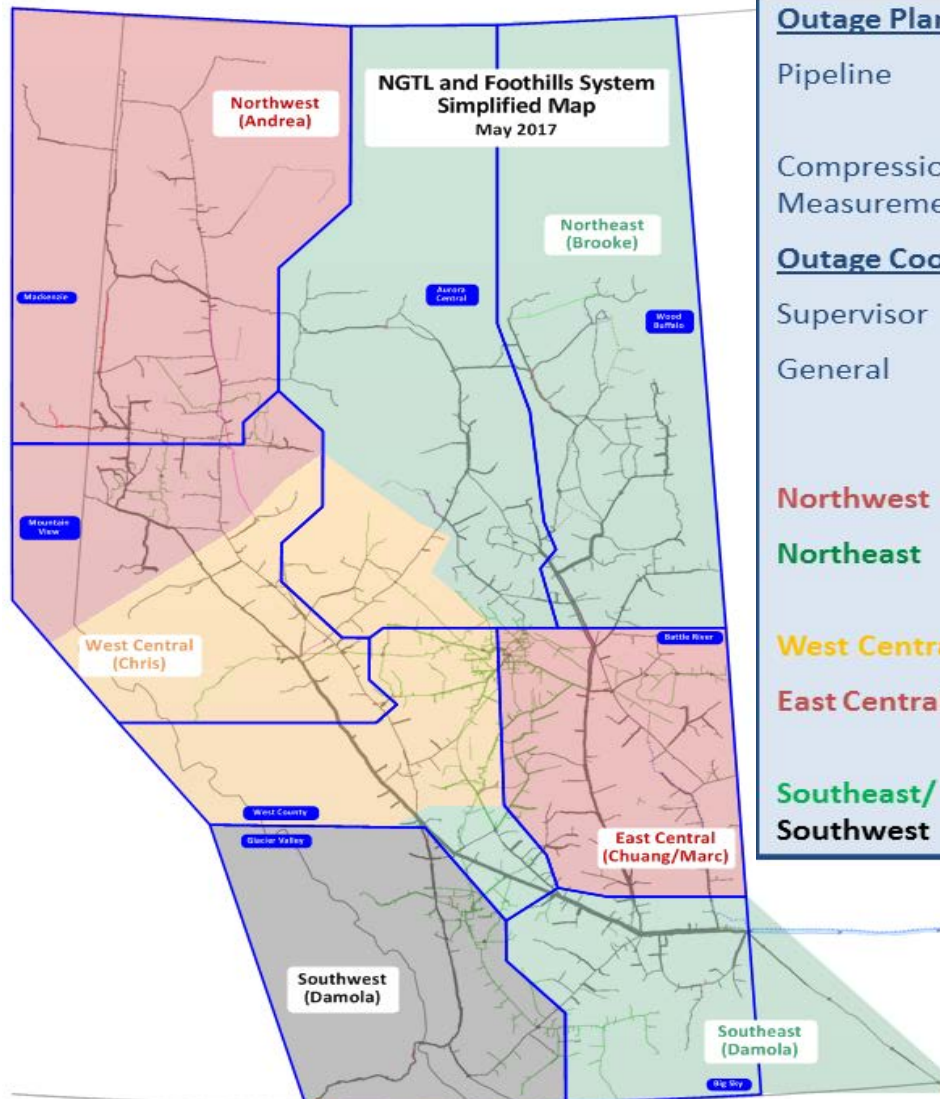


NGTL System & Foothills Pipeline Monthly Outage Forecast June 2017



June Monthly Outage Forecast

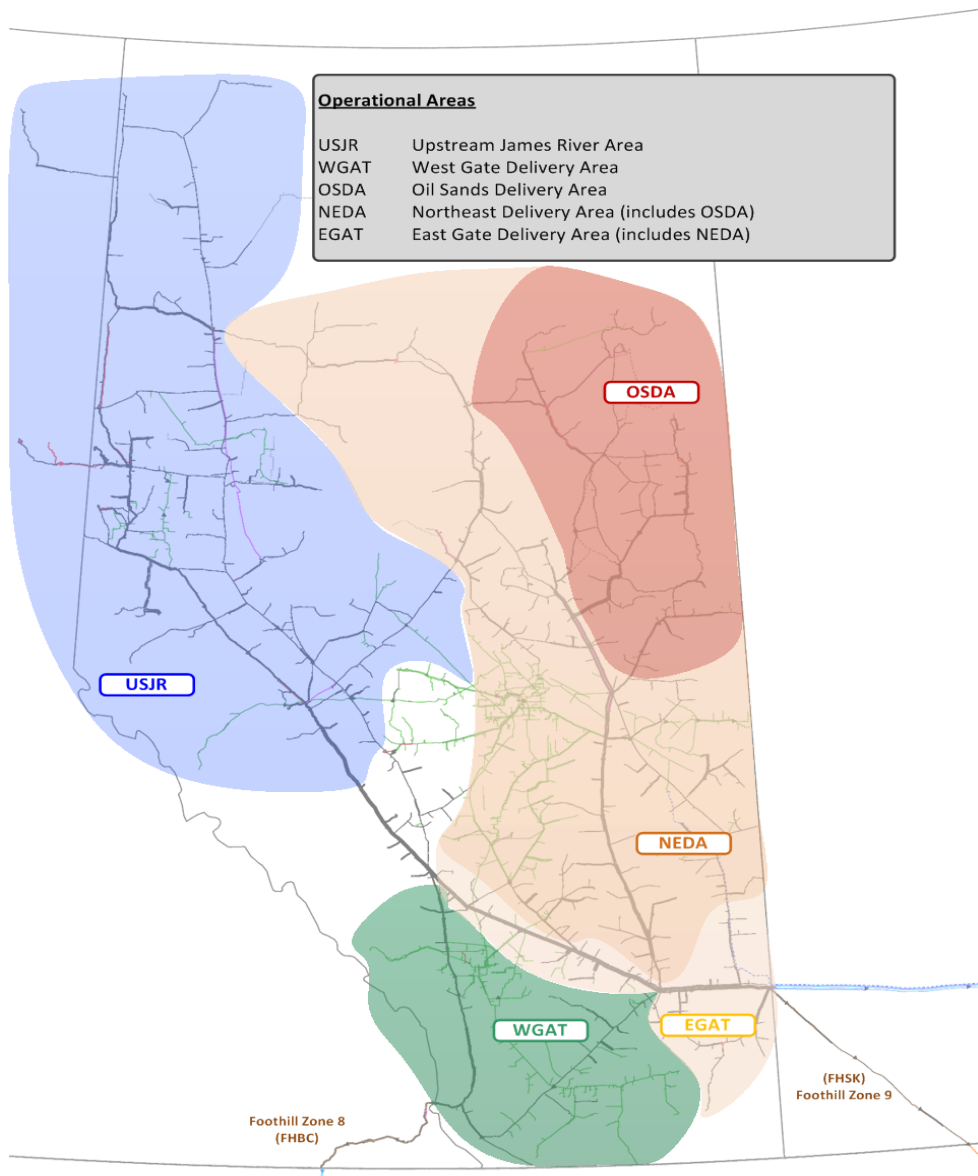
The Monthly Outage Forecast is a tool provided by TransCanada to show the estimated operational capability. This information is provided for informational purposes only and is not to be relied upon for any other purpose whatsoever. The information is based upon certain assumptions that may or may not 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.



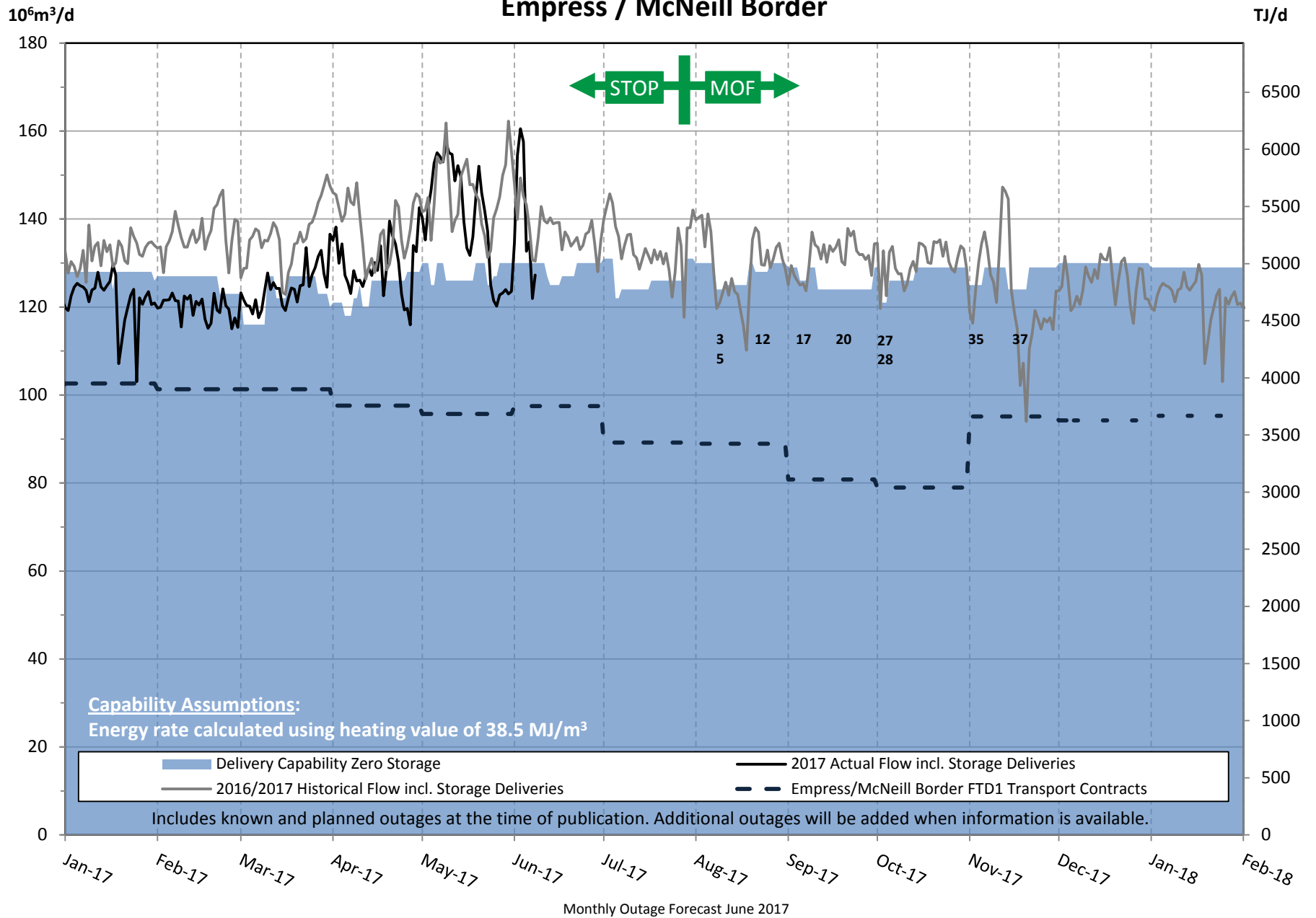
Outage Planning		
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Compression/ Measurement	Bruce Hansen	403.920.5613
Outage Coordination		
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General	Chuang Li	403.920.5291
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	Kristi Eng	403.920.7749
Northwest	Andrea Watters	403.920.7638
Northeast	Brooke Penner (Dillabough)	403.920.5144
West Central	Chris Pho	403.920.6016
East Central	Chuang Li	403.920.5291
	Marc Fattouche	587.933.4759
Southeast/ Southwest	Damola Daramola	403.920.6604
	Anam M. Ali	403-920-5219

For NGTL System Facilities Segment codes please view link below

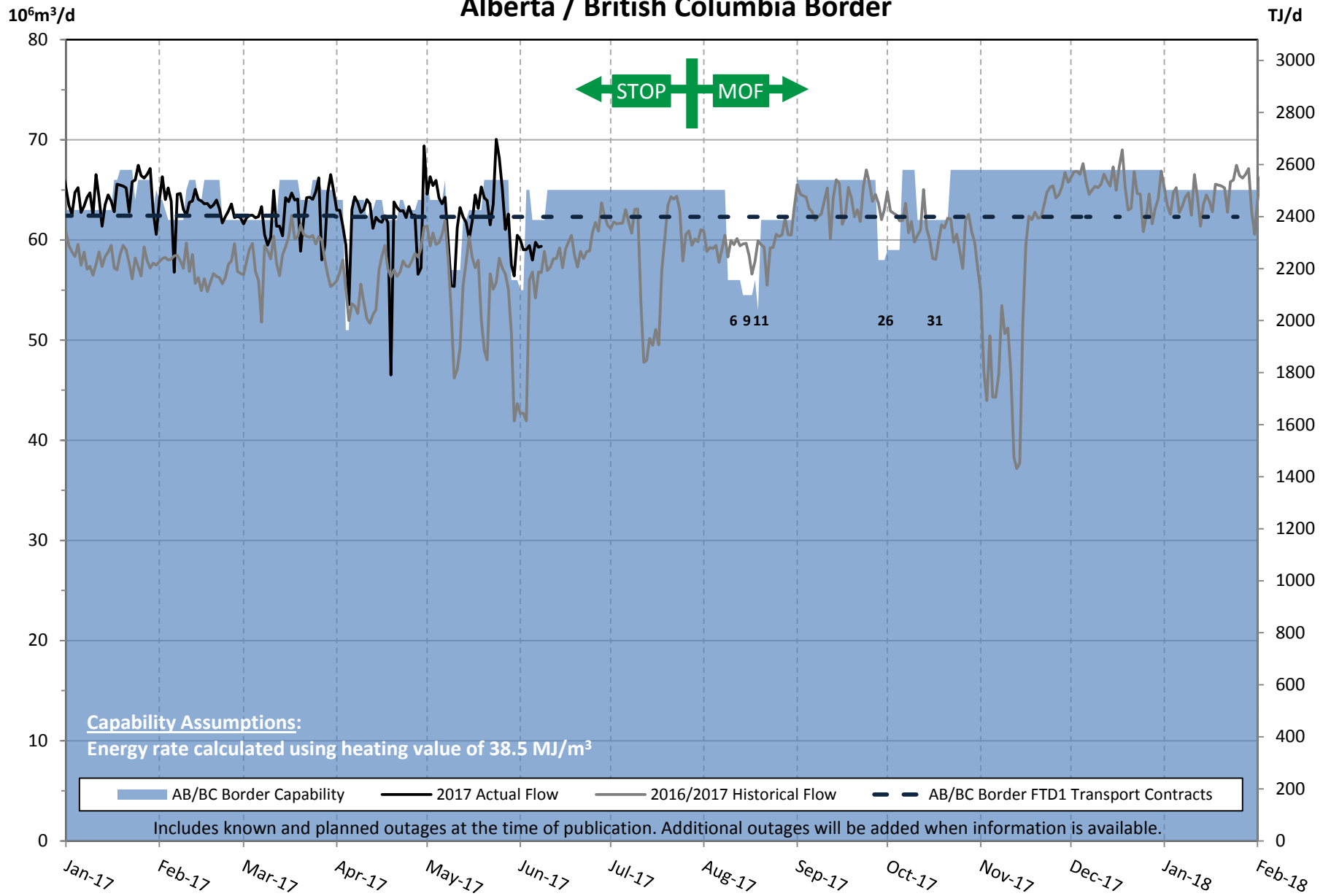
http://www.tccustomerexpress.com/docs/fh_system_maps/AB_System_Map_2017_Segments_May.pdf



Empress / McNeill Border



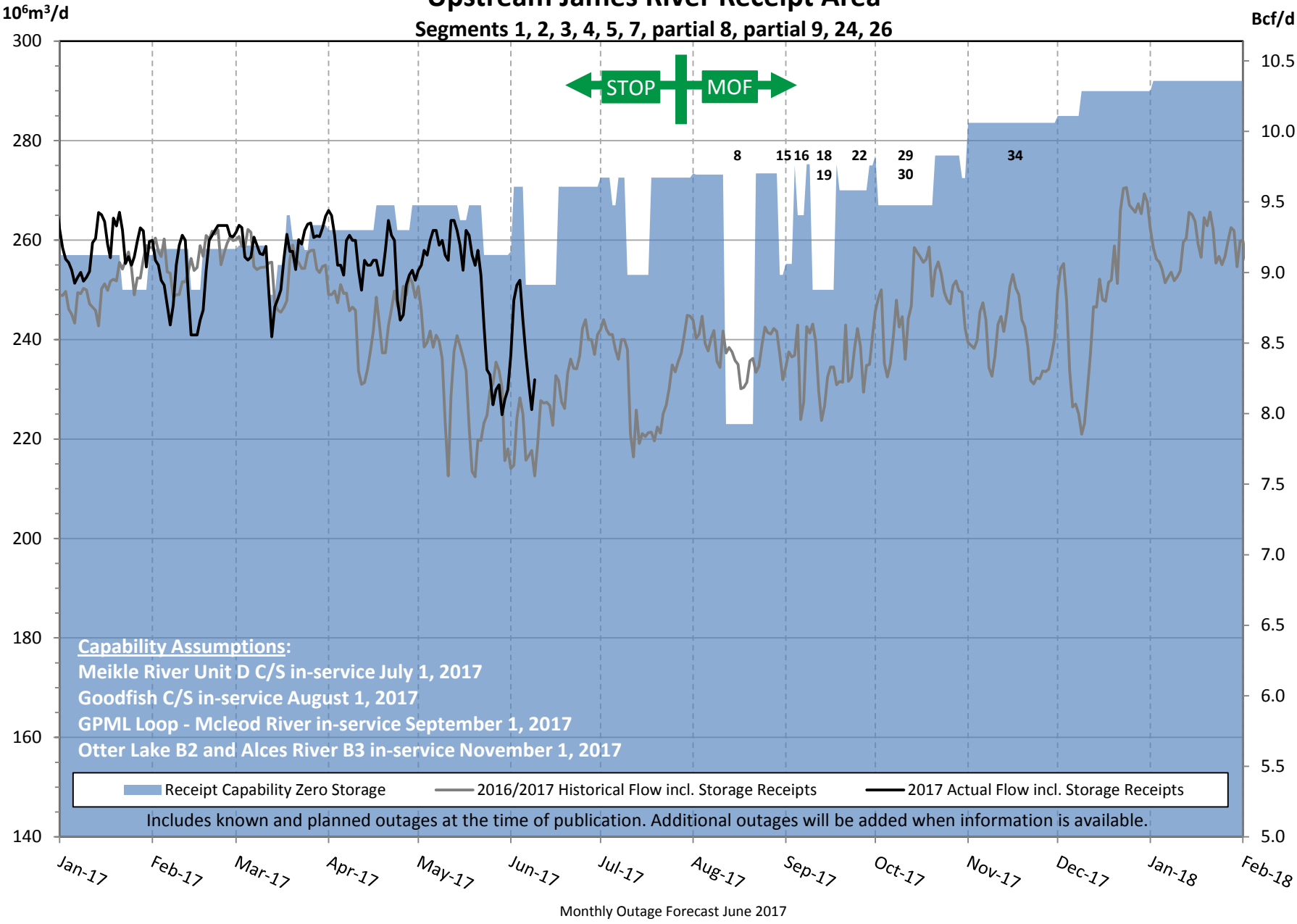
Alberta / British Columbia Border



Monthly Outage Forecast June 2017

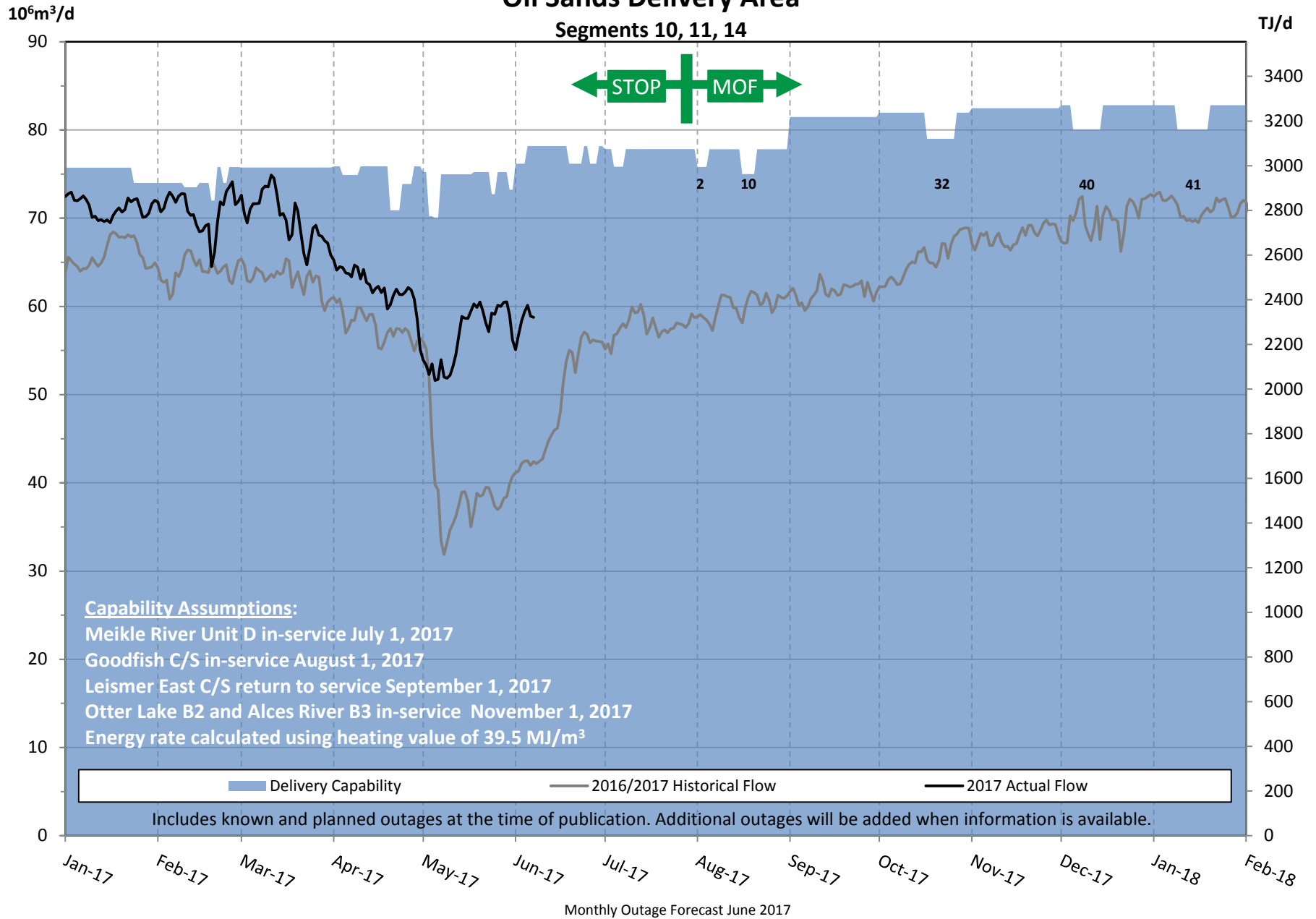
Upstream James River Receipt Area

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



Oil Sands Delivery Area

Segments 10, 11, 14



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Area Definitions

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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 6, 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 6, 10, 11, 12, 13, 14, 15, 16, 17, 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 (Delivery locations in partial Segment 21 and Segment 22 have temporarily been removed)

FHBC Foothills Zone 8

FHSK Foothills Zone 9

OUTAGE #	SEG #	OUTAGE DESCRIPTION	DATES		RECEIPT/DELIVERY IMPACT	CONTACT	AREA
			START	FINISH			
1	24	NPS 10 Greencourt Lateral - Pipeline Maintenance (17 days).	07/25/17	08/10/17	Nil required at Greencourt meter station. Typical Flow 15 E3m3/d. Nil required at Greencourt West Sales meter station. Typical Flow 5 E3m3/d	Chris Pho	Local
2	12	Hanmore Lake B & C C/S - Station Maintenance (4 days). Capacity revised	08/01/17	08/04/17	Potential IT/FT delivery restriction in Segments 11 & 14. Capability 36 E6m3/d. Typical Flow 28-38 E6m3/d.	Brooke Penner (Dillabough)	OSDA
3	18	Schrader Creek East & West C/S - Station Maintenance (3 days).	08/08/17	08/10/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 124 E6m3/d. Typical Flow 125-135 e6m3/d.	Damola Daramola	EGAT
4	21	NPS 12 Burnt Timber Lateral - Pipeline Modifications (6 days).	08/09/17	08/14/17	Nil required at Burnt Timber Sales meter station. Typical Flow 100 E3m3/d.	Anam M. Ali	Local
5	19	NPS 42 Eastern Alberta System Mainline Loop #3 - Pipeline Maintenance (10 days). Duration revised	08/09/17	08/18/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 125 E6m3/d. Typical Flow 125-135 E6m3/d.	Damola Daramola	EGAT
6	21	NPS 36 Western Alberta System Mainline - Pipeline Maintenance (11 days).	08/09/17	08/19/17	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. Capability 56 E6m3/d. Typical Flow 57-64 E6m3/d.	Damola Daramola	WGAT
7	19	NPS 42 Foothills Pipeline Zone 9 - Pipeline Maintenance (11 days). Dates revised	08/11/17	08/21/17	Potential IT/FT receipt restriction on Foothills Zone 9. Capability 28-40 E6m3/d. Typical Flow 40-45 E6m3/d.	Damola Daramola	FHSK
8	7	NPS 48 Edson Mainline Loop 3 - Pipeline Modifications (10 days).	08/12/17	08/21/17	Partial FT receipt restriction in Segments 1, 2, 3, 4, 5, 7, partial 8 (upstream of Vetchland C/S), partial 9 (upstream of Schrader Creek C/S), 24, 26. Capability 223 E6m3/d. Typical Flow 255-270 e6m3/d.	Chris Pho	USJR
	7	NPS 36/42 Grande Prairie Mainline Loop - Pipeline Modifications (6 days within window).	08/12/17	08/21/17	No expected additional impact due to alignment with NPS 48 Edson Mainline Loop 3 (Outage 18).	Andrea Watters	USJR
	7	NPS 36 Grande Prairie Mainline Loop - Pipeline Modifications (6 days within window).	08/12/17	08/21/17	No expected additional impact due to alignment with NPS 48 Edson Mainline Loop 3 (Outage 18).	Andrea Watters	USJR
	7	Latornell C/S - Station Maintenance (10 days). Dates Revised	08/12/17	08/21/17	No expected additional impact due to alignment with NPS 48 Edson Mainline Loop 3 (Outage 18).	Chris Pho	USJR

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

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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 6, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, partial 21, 22, 23, partial 28.

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- **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 (Delivery locations in partial Segment 21 and Segment 22 have temporarily been removed)

FHBC Foothills Zone 8

FHSK Foothills Zone 9

OUTAGE #	SEG #	OUTAGE DESCRIPTION	DATES		RECEIPT/DELIVERY IMPACT	CONTACT	AREA
			START	FINISH			
	8	Swartz Creek C/S - Station Maintenance (5 days).	08/14/17	08/18/17	No expected additional impact due to alignment with NPS 48 Edson Mainline Loop 3 (Outage 18).	Chris Pho	USJR
	8	Nordegg C/S - Station Maintenance (5 days)	08/14/17	08/18/17	No expected additional impact due to alignment with NPS 48 Edson Mainline Loop 3 (Outage 18).	Chris Pho	USJR
9	21	Drywood C/S - Station Maintenance (4 days).	08/14/17	08/17/17	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. Capability 63 E6m3/d. Typical Flow 57-64 E6m3/d.	Anam M. Ali	WGAT
10	10	NPS 16 Pelican Mainline - Pipeline Modifications (5 days). Capacity Revised	08/16/17	08/20/17	Potential IT/FT delivery restriction in the Oil Sands Delivery Area. Capability 75 E6m3/d. Typical Flow 65-75 E6m3/d. Nil required at Thornbury North meter station. Typical Flow 65 E3m3/d.	Brooke Penner (Dillabough)	OSDA Local
11	22	NPS 24 South Lateral - Pipeline Maintenance (13 days)	08/19/17	08/31/17	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. Capability 62 E6m3/d. Typical Flow 57-64 E6m3/d.	Damola Daramola	WGAT
12	18	Schrader Creek West #2 - Unit Maintenance (5 days)	08/21/17	08/25/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 128 E6m3/d. Typical Flow 125-135 e6m3/d.	Anam M. Ali	EGAT
13	15	NPS 8 Dorothy Lateral and NPS10 Cessford-Burfield Lateral - Pipeline Modifications (8 days).	08/21/17	08/28/17	Nils required at Dorothy, Lone Butte, Cessford Burfield West, Cessford Burfield West #2, Bullpound, Cessford North meter stations. Typical Flow 600 E3m3/d.	Marc Fattouche	Local
14	5	NPS 12 Bigstone Lateral - Pipeline Maintenance (6 days).	08/23/17	08/28/17	Nil required at Grizzly meter station. Typical Flow 85 E3m3/d	Chris Pho	Local
15	7	NPS 36 Grande Prairie Mainline Loop - Pipeline Modifications (5 days).	08/30/17	09/03/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 253 E6m3/d. Typical Flow 255-270 e6m3/d.	Andrea Watters	USJR
16	5	Knight C/S - Station Maintenance (3 days).	09/05/17	09/07/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 265 E6m3/d. Typical Flow 255-270 e6m3/d.	Chris Pho	USJR
17	19	Jenner C/S - Station Maintenance (3 days).	09/05/17	09/07/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 126 E6m3/d. Typical Flow 125-135 e6m3/d.	Damola Daramola	EGAT

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

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	<ul style="list-style-type: none"> • NEDA North and East Delivery Area: Unity, Cold Lake, Warwick Southeast interconnects, and all delivery locations in Segments 6, 10, 11, 12, 13, 14, 15, 16, 17, 23, partial 28: • OSDA Oil Sands Delivery Area: Cold Lake interconnect, and all delivery locations in Segments 10, 11, 14.
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FHBC	Foothills Zone 8
FHSK	Foothills Zone 9

OUTAGE #	SEG #	OUTAGE DESCRIPTION	DATES		RECEIPT/DELIVERY IMPACT	CONTACT	AREA
			START	FINISH			
18	6	NPS 42 North Central Corridor - Pipeline Maintenance (7 days) New	09/10/17	09/17/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 250 E6m3/d. Typical Flow 255-270 e6m3/d.	Andrea Watters	USJR
19	6	Woodenhouse A1 & B2 C/S - Station Maintenance (5 days).	09/11/17	09/15/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 268 E6m3/d. Typical Flow 255-270 e6m3/d. Potential IT/FT delivery restriction in the North and East Delivery Area. Capability 93 E6m3/d. Typical Flow 60-100 E6m3/d.	Brooke Penner (Dillabough)	USJR NEDA
20	18	Beiseker C/S - Station Maintenance (19 days). New	09/11/17	09/29/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 124 E6m3/d. Typical Flow 125-135 e6m3/d.	Damola Daramola	EGAT
21	6	NPS 8 Mitsue Lateral - Pipeline Maintenance (8 days). New	09/14/17	09/21/17	Nil required at Mitsue, Overlea and Nipisi meter stations. Typical Flow 200 E3m3/d.	Brooke Penner (Dillabough)	Local
22	7	NPS 42 Grande Prairie Mainline Loop - Pipeline Modifications (10 days). Dates Revised	09/19/17	09/28/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 270 E6m3/d. Typical Flow 255-270 e6m3/d. Nil required at Mayberne #2 meter station. Typical Flow 550 E3m3/d.	Chris Pho	USJR Local
23	19	NPS 42 Foothills Pipeline Zone 9 - Pipeline Maintenance (9 days).	09/21/17	09/29/17	Potential IT/FT receipt restriction on Foothills Zone 9. Capability 28-40 E6m3/d. Typical Flow 40-45 E6m3/d.	Damola Daramola	FHSK
24	13	NPS 16 Redwater Lateral Extension - Pipeline Maintenance (6 days).	09/24/17	09/29/17	Nil required at Newbrook and Weasel Creek meter station. Typical Flow 20 E3m3/d	Marc Fattouche	Local
25	16	Unity Border M/S - Station Maintenance (4 days within window)	09/25/17	10/05/17	Nil required at Unity Border meter station. Typical Flow 3000 e3m3/d.	Chris Pho	Local
26	21	NPS 36 Foothills Zone 7 - Pipeline Maintenance (8 days). Dates revised	09/28/17	10/05/17	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. Capability 58 E6m3/d. Typical Flow 57-64 E6m3/d.	Damola Daramola	WGAT
27	18	Beiseker #2 - Station Maintenance (12 days). Dates Revised	10/02/17	10/13/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 126 E6m3/d. Typical Flow 125-135 e6m3/d.	Damola Daramola	EGAT
28	18	Crawling Valley C/S - Station Maintenance (3 days).	10/02/17	10/04/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 124 E6m3/d. Typical Flow 125-135 e6m3/d.	Damola Daramola	EGAT

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

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			START	FINISH			
29	8	Nordegg C/S - Station Maintenance (19 days).	10/02/17	10/20/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 267 E6m3/d. Typical Flow 255-270 e6m3/d.	Chris Pho	USJR
30	6	Paul Lake B2 C/S - Station Maintenance (4 days).	10/10/17	10/13/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 270 E6m3/d. Typical Flow 255-270 E6m3/d. Potential IT/FT delivery restriction in the North and East Delivery Area. Capability 95 E6m3/d. Typical Flow 60-100 E6m3/d.	Brooke Penner (Dillabough)	USJR NEDA
31	21	NPS 42 Western Alberta System Mainline Loop - Pipeline Maintenance (11 days).	10/11/17	10/21/17	Potential IT/FT delivery restriction in the West Gate Delivery Area. Alberta B. C. Capability 62 E6m3/d. Typical Flow 57-64 E6m3/d.	Damola Daramola	WGAT
32	10	NPS 16 Pelican Mainline - Pipeline Modifications (10 days). New	10/17/17	10/26/17	Potential IT/FT delivery restriction in the Oil Sands Delivery Area. Capability 79 E6m3/d. Typical Flow 65-75 E6m3/d.	Brooke Penner (Dillabough)	OSDA
33	23	NPS 8 Wainwright East Lateral - Pipeline Modifications (7 days).	10/24/17	10/30/17	Nil required at Wainwright East meter station. Typical Flow 35 E3m3/d.	Marc Fattouche	Local
34	8	Clearwater #5 - Unit Modifications (40 days).	10/30/17	12/08/17	Potential IT/FT receipt restriction in the Upstream James River Receipt Area. Capability 284 E6m3/d. Typical Flow 255-270 e6m3/d.	Chris Pho	USJR
35	19	NPS 36 Eastern Alberta System Mainline Loop #2 - Pipeline Maintenance (5 days). Dates revised	11/01/17	11/05/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill delivery Capability 125 E6m3/d. Typical Flow 125-135 E6m3/d.	Damola Daramola	EGAT
36	12	NPS 10 Hairy Hills Lateral - Pipeline Modifications (7 days).	11/01/17	11/06/17	Nil required at Hairy Hill meter station. Typical Flow 55 E3m3/d.	Marc Fattouche	Local
37	19	NPS 34 Eastern Alberta System Mainline Loop & Central Alberta System Mainline - Pipeline Maintenance (7 days). New	11/14/17	11/20/17	Potential IT delivery restriction in the East Gate Delivery Area. Empress/McNeill Capability 124 E6m3/d. Typical Flow 125-135 E6m3/d.	Damola Daramola	EGAT
38	16	NPS 8 Kessler Lateral - Pipeline Modifications (6 days).	11/20/17	11/25/17	Nils required at Provost Kessler and Provost West meter stations. Typical Flow 130 E3m3/d.	Marc Fattouche	Local
39	19	NPS 10 Iddesleigh South Lateral - Pipeline Modifications (4 days).	12/04/17	12/07/17	Nil required at Iddesleigh South meter station. Typical Flow 115 E3m3/d.	Rahim Ruda	Local

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			START	FINISH			
40	10	NPS 16 Pelican Mainline - Pipeline Modifications (10 days). New	12/05/17	12/14/17	Potential IT/FT delivery restriction in the Oil Sands Delivery Area. Capability 80 E6m3/d. Typical Flow 65-75 E6m3/d.	Brooke Penner (Dillabough)	OSDA
41	10	NPS 16 Pelican Mainline - Pipeline Modifications (10 days). New	01/09/18	01/18/18	Potential IT/FT delivery restriction in the Oil Sands Delivery Area. Capability 80 E6m3/d. Typical Flow 65-75 E6m3/d.	Brooke Penner (Dillabough)	OSDA

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