



NGTL System and Foothills Pipelines Ltd.

CUSTOMER OPERATIONS MEETING

FEBRUARY 10, 2022

FOR INFORMATIONAL PURPOSES ONLY

Welcome and Thank You for Joining Us

Participating via WebEx:

- Please sign-in through WebEx application including your full name and company
- To reduce background noise and improve audio quality, all WebEx participants will be placed on mute when entering the meeting
- Please submit your questions via using the raise hand function and coming off mute or the chat function and we will answer at the best possible opportunity



Forward Looking Information

This presentation includes certain forward-looking information. Statements that are forward-looking are based on certain assumptions and on what we know and expect today and generally include words like anticipate, expect, believe, may, will, should, estimate or other similar words.

The information provided is 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. TC Energy shall not be liable for damages sustained as a result of any use or reliance on such information.

The outages listed in this presentation are not an exhaustive list. Outage date, duration, and impact may be subject to change. Refer to the Daily Operating Plan (DOP) for all planned outages with potential service impact.

No
impact to FT

Refers to outage periods where FT impact is not expected

Potential
impact to FT

Refers to outage periods where there is potential of FT impact

Partial
impact to FT

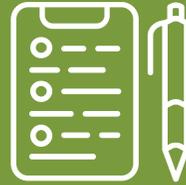
Refers to outage periods where FT impact is expected



Important Notes



Outage information in this presentation may not be accurate beyond the February 10 NGTL/Foothills Customer Operations (WebEx only) meeting



For current outage information, please refer to the most recent Daily Operating Plan (DOP) on my.TC Customer Express



This meeting will only cover operational topics related to the NGTL and Foothills systems. For information on Commercial and Regulatory topics, please contact your Marketing Representative

Stand Up, Sit Less, Move More

- To get the right balance, sit for 20 minutes, stand for 8 minutes, and move around for at least two minutes every 30 minutes
- Go out to eat during lunch, or at least get up and move
- Stretch every hour to realign and feel better!



STANDING DISC UNLOADING

- Stand up tall and place hands on low back or reach both arms up to the ceiling while looking up slightly
- Hold the position for (3) seconds, then lower your arms
- Repeat twice (2) more, reaching up and slightly back with your arms on each successive stretch



SHOULDER ROLLS

- Do ten (10) full range circular rolls backward
- Keep your arms relaxed at the side of your body and make the movements only with your shoulders



ANTI-SLOUCH POSITION

- Extend your arms with thumbs pointing backward
- Squeeze shoulder blades together
- Gently reach back and down with your fingers, while you reach the crown of your head up towards the ceiling
- Keep your chin tucked back and don't look up
- Hold for ten (10) seconds, repeat twice

Agenda

1. Review of December 2021 Outages and Restrictions
2. Review of DOP Outages
3. Customer Operations Meeting Survey



December 2021 Outages and Restrictions

December 2021 Outages and Restrictions

- Sustained extreme cold weather across the province from mid-December into early January
- High intra-provincial and industrial demand
- Unplanned outages reducing delivery capability
 - Turner Valley A1 and A3 Compressor Units
 - Alces River Compressor Station



Turner Valley Compressor Unit Outages

Background:

- Unplanned Turner Valley A1 outage December 15 – 22 (no impact)
- Unplanned Turner Valley A3 outage December 20 – 22
- With overlapping unit outages, West Gate capability was reduced to 74 10⁶m³/d

Bulletin Date	Effective Date	Service Allowable	Comments
December 21	December 21 (17:00 MST)	0% IT-D, Partial FT-D (Alberta-BC + Alberta-Montana)	Start of Turner Valley A3 Restriction
December 22	December 23 (08:00 MST)	100% IT-D, 100% FT-D	End of Turner Valley A3 Restriction

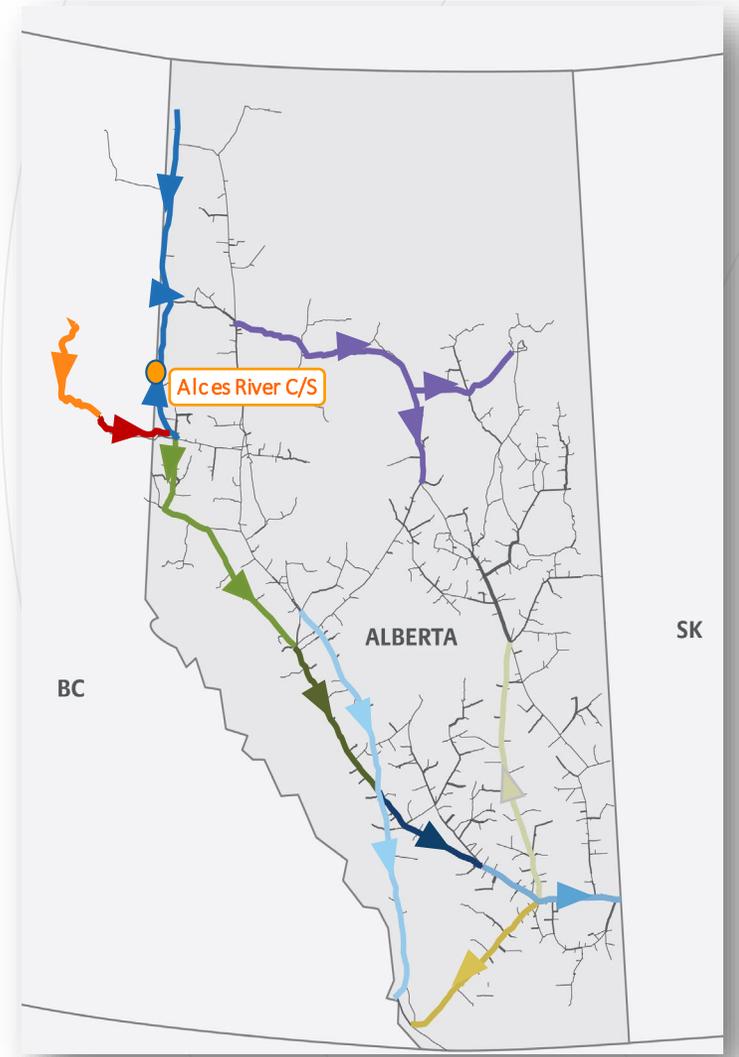


Alces River Compressor Station Outage

Background:

- Sustained extreme cold temperatures across the province
- Unplanned Alces River compressor station outage December 26 – 28 resulting in reduction of NCC capability
- North East Delivery Area (NEDA) capability reduced to 120 106m3/d

Bulletin Date	Effective Date	Service Allowable	Comments
December 26		Advisory	Start of Alces River Outage
December 26	December 26 (17:00 MST)	0% IT-D, 100% FT-D (NEDA)	Start of IT-D restriction
December 26	December 27 (08:00 MST)	0% IT-D, 75% FT-D (NEDA)	Start of FT-D restriction
December 28 (Morning)		Advisory	Alces River return to service, Linepack recovery required
December 28 (End of Day)		Advisory	Linepack recovery continues
December 29	December 29 (13:00 MST)	100% IT-D, 100% FT-D	Linepack recovered, End of service restriction



Review of DOP Outages

From DOP as of Wednesday,
February 9

2022 Outages | Update

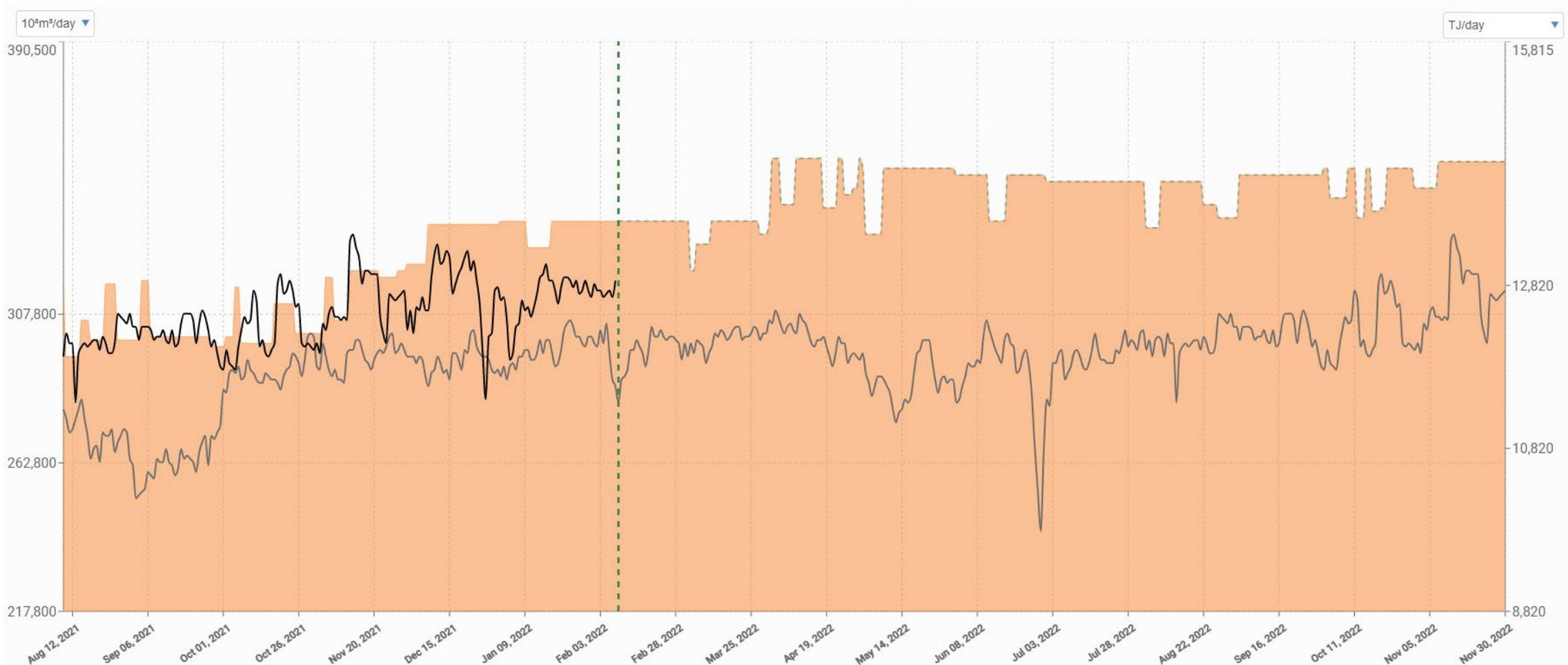
- Most significant outages were posted in early November 2021
- Majority of Q1 2022 outages were posted by the end of November 2021
- Majority of outages for the remainder of 2022 have now been posted
- Changes can and will still occur as a result of ongoing efforts to refine analysis, optimize schedule (including alignment with impactful downstream interconnecting outages), and minimize impacts

Outages and/or maintenance work is posted to the DOP if there is reasonable expectation that the event could or will result in a change to service authorization levels

Refer to the Daily Operating Plan (DOP) for the most current outage information

Upstream James River

Capability - Actual Flow - Historical Flow - - Compared to



This slide may not be accurate beyond the February 10, NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information



Upstream James River Receipt Area (USJR)

No impact to FT

Potential impact to FT

Partial impact to FT

Outage Description	Start	End	USJR Outage Capability (10 ⁶ m ³ /d)	USJR Impact (10 ⁶ m ³ /d)	Area Outage Capability (10 ⁶ m ³ /d)	Outage Area Typical Flows (10 ⁶ m ³ /d)	Service Allowable Location/Area
Latornell A2 – Compressor Station Maintenance	5-Mar-22	6-Mar-22	321	15	211	165-205	Potential impact to FT-R USJR U/S of Berland*
Meikle River B2 – Compressor Station Maintenance	6-Mar-22	11-Mar-22	329	7	N/A	280-320	Potential impact to FT-R USJR
Wolf Lake - Compressor Station Maintenance	28-Mar-22	30-Mar-22	332	4	N/A	280-320	Potential impact to FT-R USJR
Meikle River D5 – Compressor Station Maintenance	4-Apr-22	8-Apr-22	341	14	231	165-205	Potential impact to FT-R USJR U/S of Berland
Saddle Hills B3 – Compressor Station Maintenance	18-Apr-22	22-Apr-22	340	15	217	160-190	Potential impact to FT-R USJR U/S of Latornell
Alces River – Compressor Station Maintenance	25-Apr-22	27-Apr-22	344	11	N/A	280-320	Potential impact to FT-R USJR
Otter Lake B2 – Compressor Station Maintenance	28-Apr-22	29-Apr-22	346	9	N/A	280-320	Potential impact to FT-R USJR
Clearwater – Compressor Station Maintenance	2-May-22	3-May-22	332	20	N/A	280-320	Potential impact to FT-R USJR
Gold Creek – Compressor Station Maintenance	2-May-22	7-May-22	332	20	N/A	280-320	Potential impact to FT-R USJR
Goodfish – Compressor Station Maintenance	12-Jun-22	17-Jun-22	340	10	N/A	280-320	Potential impact to FT-R USJR
Meikle River C – Compressor Station Maintenance	12-Jun-22	17-Jun-22	336	14	226	165-205	Potential impact to FT-R USJR U/S of Berland

*Risk to FT-R expected to be within a subset of USJR only. If adequate downstream IT-D exists to offset an FT-R curtailment, area of IT-D curtailment could include portions of segments 7, 8, and 9 based on hydraulic equivalency analysis and location of the bottleneck.

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Upstream James River Receipt Area (USJR)

No impact to FT

Potential impact to FT

Partial impact to FT

Outage Description	Start	End	USJR Outage Capability (10 ⁶ m ³ /d)	USJR Impact (10 ⁶ m ³ /d)	Area Outage Capability (10 ⁶ m ³ /d)	Outage Area Typical Flows (10 ⁶ m ³ /d)	Service Allowable Location/Area
Meikle River D5 – Compressor Station Maintenance	3-Aug-22	5-Aug-22	334	14	228	165-205	Potential impact to FT-R USJR U/S of Berland
NPS 36 NCC Loop & Fort McKay Mainline – Pipeline Maintenance	3-Aug-22	7-Aug-22	334	14	228	165-205	Potential impact to FT-R USJR U/S Berland
Latornell – Compressor Station Maintenance	22-Aug-22	27-Aug-22	341	7	231	165-205	Potential impact to FT-R USJR U/S of Berland*
Otter Lake A1 – Compressor Station Maintenance	27-Aug-22	2-Sep-22	337	11	N/A	280-320	Potential impact to FT-R USJR
Woodenhouse C3 – Compressor Station Maintenance	27-Aug-22	2-Sept-22	337	11	N/A	280-320	Potential impact to FT-R USJR
NPS 48 Grande Prairie LP2 – Pipeline Maintenance (Cancelled)	7-Sep-22	15-Sep-22	332	18	N/A	280-320	Potential impact to FT-R USJR
Otter Lake – Compressor Station Maintenance	3-Oct-22	8-Oct-22	343	9	N/A	280-320	Potential impact to FT-R USJR
Saddle Hills B3 – Compressor Station Maintenance	12-Oct-22	14-Oct-22	337	15	214	160-190	Potential impact to FT-R USJR U/S of Latornell
Paul Lake – Compressor Station Maintenance	17-Oct-22	19-Oct-22	339	13	N/A	280-320	Potential impact to FT-R USJR
Alces River – Compressor Station Maintenance	17-Oct-22	21-Oct-22	340	12	N/A	280-320	Potential impact to FT-R USJR
Hidden Lake North – Compressor Station Maintenance	31-Oct-22	7-Nov-22	346	8	224	160-190	Potential impact to FT-R USJR U/S of Latornell

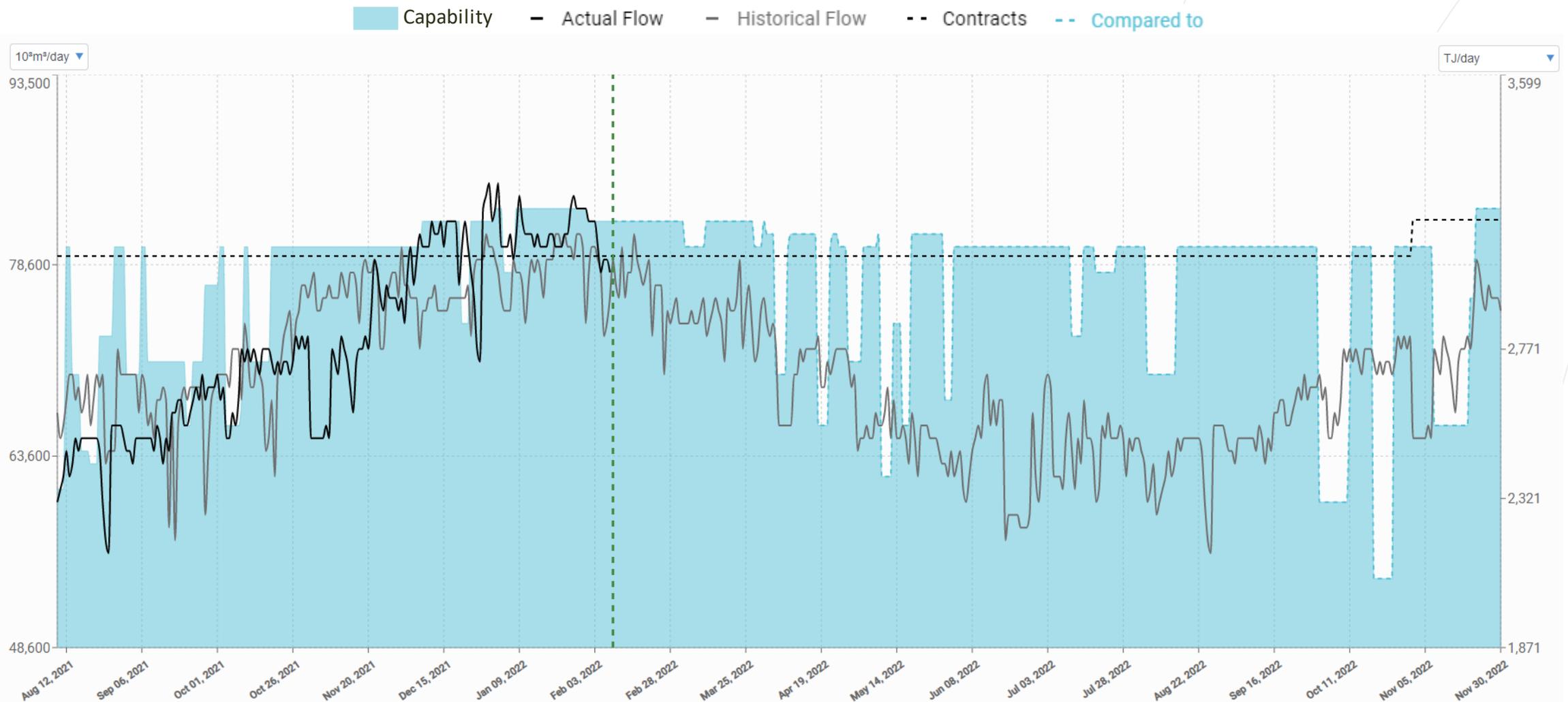
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Alberta-B.C. Border

(includes both NGTL and Foothills BC outages)



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West Gate Delivery Area (WGAT) Foothills Zone 8 (FHBC)

No
impact to FT

Potential
impact to FT

Partial
impact to FT

Outage Description	Start	End	Capability/ Allowable (10 ⁶ m ³ /d)	Impact (10 ⁶ m ³ /d)	System	Service Allowable Location/Area
NPS 36 FPL Zone 8 Segment 4 – Pipeline Maintenance	4-Apr-22	7-Apr-22	70	11	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Burton Creek A3 – Compressor Station Maintenance	4-Apr-22	7-Apr-22	74	7	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Burton Creek – Compressor Station Maintenance*	18-Apr-22	21-Apr-22	66	15	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 36 FPL Zone 8 Segment 3 – Pipeline Maintenance*	28-Apr-22	2-May-22	71	10	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Crowsnest A – Compressor Station Maintenance	9-May-22	12-May-22	62	19	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Crowsnest K – Compressor Station Maintenance*	9-May-22	15-May-22	74	7	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Moyie – Compressor Station Maintenance*	16-May-22	18-May-22	66	15	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Elko – Compressor Station Maintenance*	30-May-22	1-Jun-22	67	14	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Crowsnest B – Compressor Station Maintenance	11-Jul-22	14-Jul-22	73	7	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
NPS 36 FPL Zone 7 Western Leg 1B – Pipeline Maintenance*	19-Jul-22	25-Jul-22	78	2	NGTL	Potential Impact to FT Alberta/BC and Alberta/Montana Borders Segments 22 and partial 21

*Aligned with downstream maintenance that is expected to be limiting West Path capability

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West Gate Delivery Area (WGAT) Foothills Zone 8 (FHBC)

No
impact to FT

Potential
impact to FT

Partial
impact to FT

Outage Description	Start	End	Capability/ Allowable (10 ⁶ m ³ /d)	Impact (10 ⁶ m ³ /d)	System	Service Allowable Location/Area
Winchell Lake – Compressor Station Maintenance*	8-Aug-22	12-Aug-22	75	5	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segments 22 and partial 21
NPS 36 BC Mainline – Pipeline Modifications	5-Aug-22	14-Aug-22	70	10	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
NPS 48 BC Mainline Loop - Pipeline Modifications	1-Oct-22	11-Oct-22	68	12	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
NPS 42 Western Alberta System Mainline Loop – Pipeline Maintenance	1-Oct-22	10-Oct-22	60	20	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 36 BC Mainline – Pipeline Maintenance	19-Oct-22	25-Oct-22	54	26	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
NPS 36 WAS Mainline – Pipeline Modifications	8-Nov-22	19-Nov-22	66	17	NGTL	Potential Impact to FT-D Alberta/BC Border
Turner Valley A1 and A2 – Compressor Station Maintenance	8-Nov-22	21-Nov-22	76	5	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders

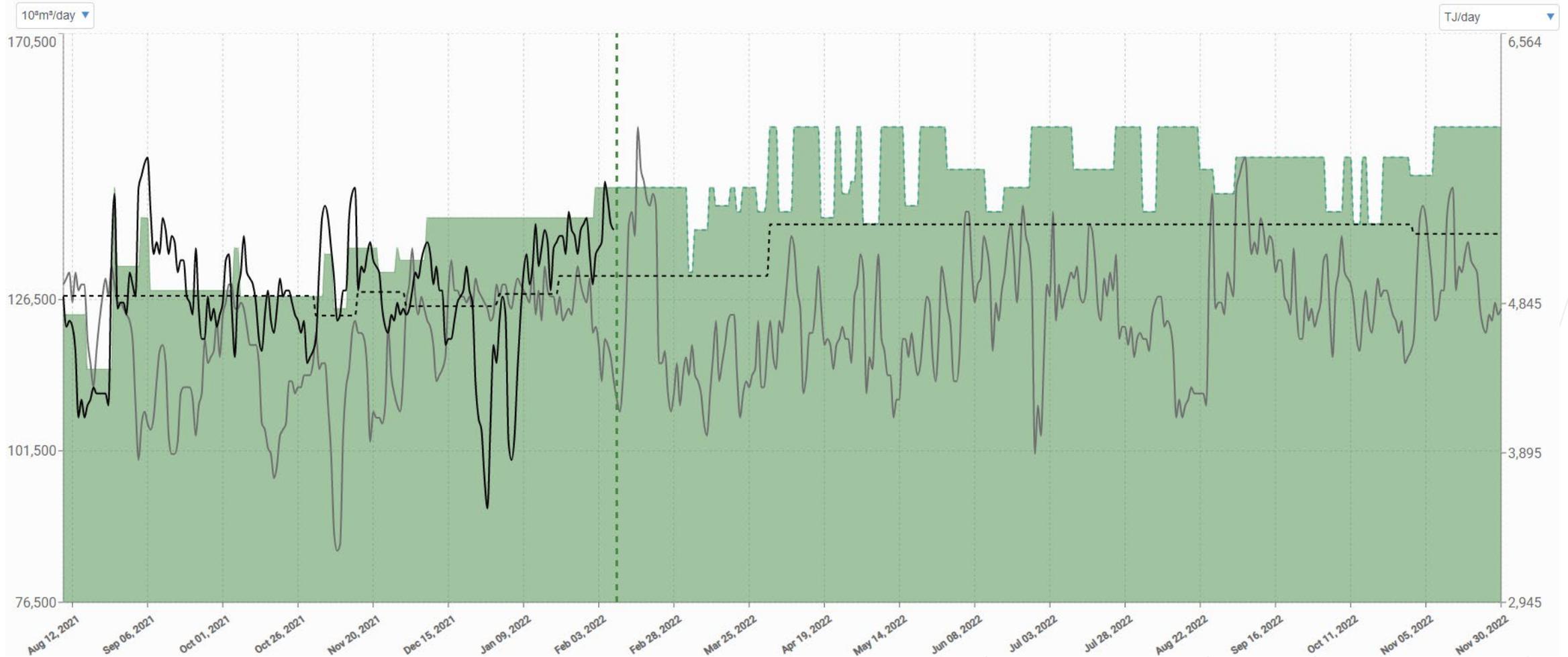
*Aligned with downstream maintenance that is expected to be limiting West Path capability

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East Gate

■ Capability — Actual Flow - - Historical Flow - - Contracts - - Compared to



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East Gate Delivery Area (EGAT) Foothills Zone 9 (FHSK)

No
impact to FT

Potential
impact to FT

Partial
impact to FT

Outage Description	Start	End	Capability (10 ⁶ m ³ /d)	Impact (10 ⁶ m ³ /d)	System	Service Allowable Location/Area
Beiseker B3 – Compressor Station Maintenance	21-Mar-22	22-Mar-22	140	4	NGTL	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Hussar B8 – Compressor Station Maintenance	14-Mar-22	18-Mar-22	142	3	NGTL	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Beiseker A – Compressor Station Maintenance	21-Mar-22	22-Mar-22	141	4	NGTL	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Didsbury – Compressor Station Maintenance	16-May-22	20-May-22	142	13	NGTL	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Jenner - Compressor Station Maintenance	13-Jun-22	26-Jun-22	145	10	FHAB	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Crawling Valley – Compressor Station Maintenance	11-Jul-22	24-Jul-22	148	7	FHAB	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Beiseker B3 - Compressor Station Maintenance	3-Oct-22	7-Oct-22	143	7	NGTL	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28

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Oil Sands Delivery Area

Capability
 Actual Flow
 Historical Flow
 Compared to



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Northeast Delivery Area (NEDA) Oil Sands Delivery Area (OSDA)

No
impact to FT

Potential
impact to FT

Partial
impact to FT

There are currently no outages planned that are specific to OSDA or NEDA

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We Want to Hear From You

Purpose: To inform, educate and discuss any operational updates

Delivery: The second Thursday of every month via WebEx

We want to hear your thoughts and opinions on the following:

1. Would you like to see any changes to the cadence of the meetings? If yes, to what?
2. What feedback would you like to provide regarding existing material and presentation format?
3. What are some topics you would like to hear/learn about?

The survey will be sent out following the meeting
and will close **Friday, February 18**

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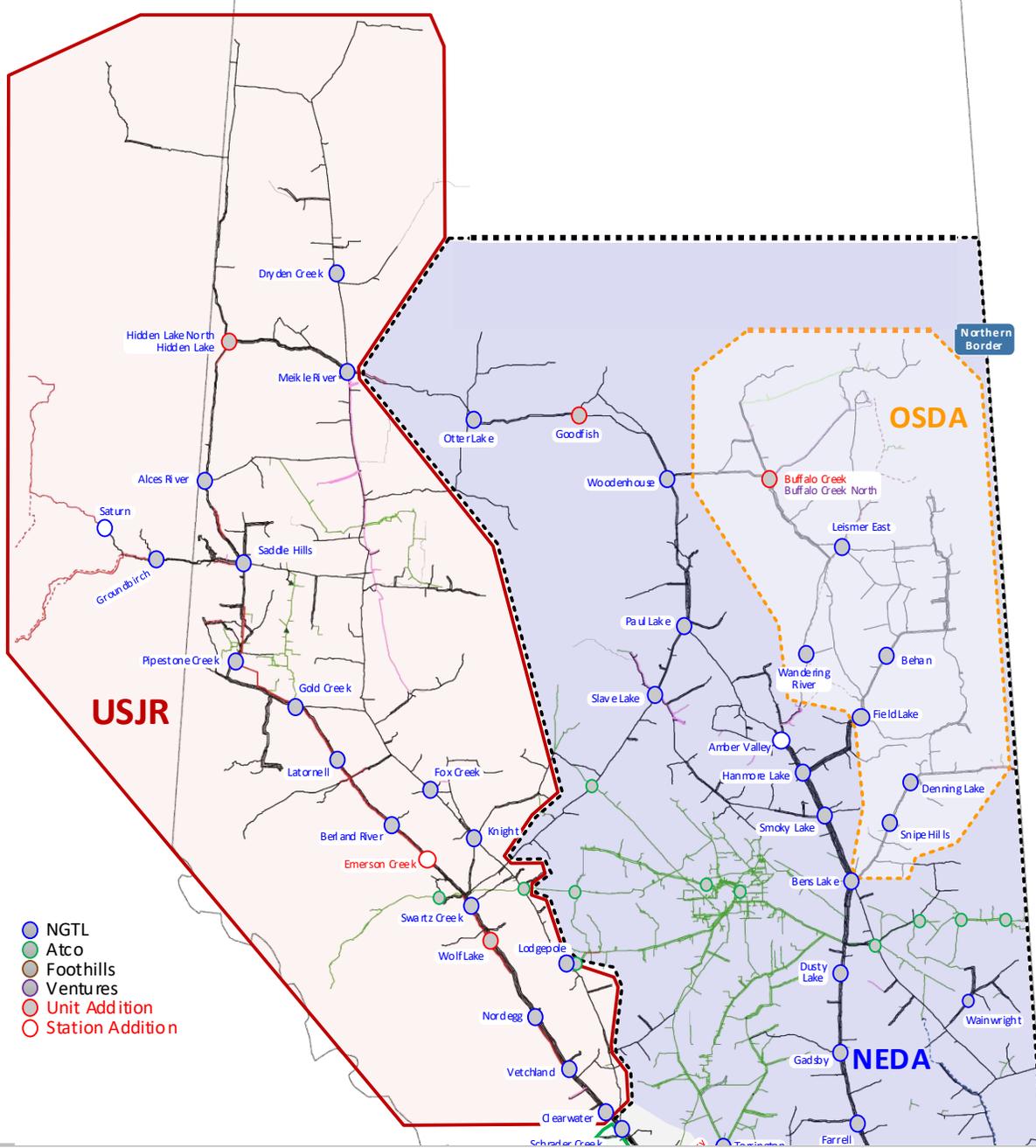
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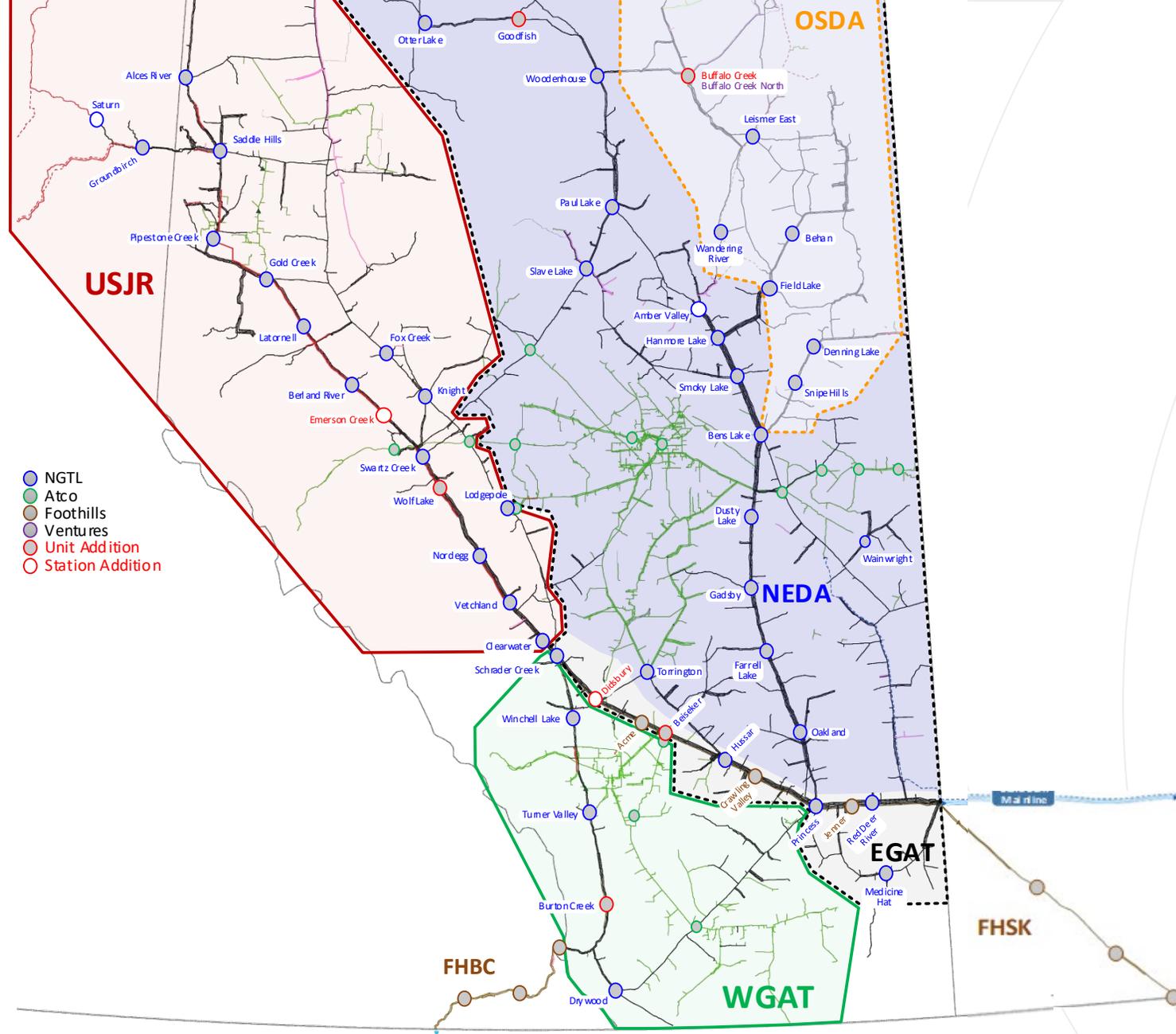


Reference Maps and Flow Paths

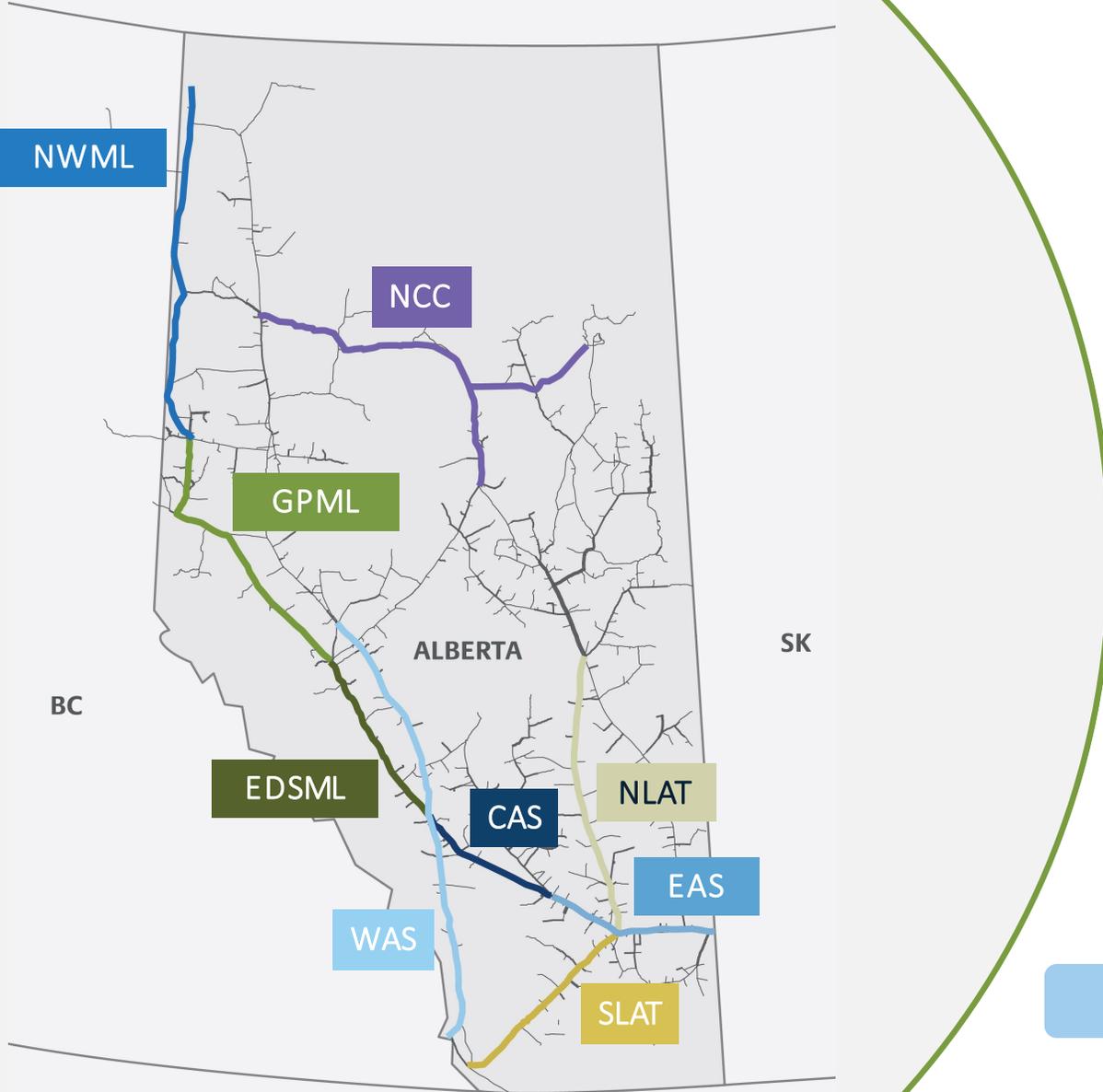
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Commonly Referenced Flow Paths



- Northwest Mainline (NWML)
- Grande Prairie Mainline (GPML)
- Edson Mainline (EDSML)
- Western Alberta System Mainline (WAS)
- Central Alberta System Mainline (CAS)
- Eastern Alberta System Mainline (EAS)
- South Lateral (SLAT)
- North Lateral (NLAT)
- North Central Corridor (NCC)

Click [HERE](#) to access this information on Customer Express