



NGTL System and Foothills Pipelines Ltd.

CUSTOMER OPERATIONS MEETING

FOR INFORMATIONAL PURPOSES ONLY



12/7/2023



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



SAFETY MOMENT

Holidays & Mental Health

The holidays can be a taxing time on our mental wellbeing.

This infographic provides some great tips on how to manage holiday stress and anxiety.

Increasing Symptoms of Mental Illness During the Holidays

- Increase in Mood Symptoms
- Substance Use Disorders
- Increase in Anxiety Symptoms
- Stress, Routine and Mental Illness

Decreasing Mental Illness Symptoms During the Holidays

- Reduce pressure on yourself
- Don't drink or use drugs
- Reasonable expectations
- Maintain the routine
- Set clear boundaries with your loved ones
- Only attend the events you want to attend
- Get help from a professional or a helpline

CANADA Pharmacy Online



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 December 7, 2023, NGTL/Foothills Customer Operations (WebEx only) meeting



For current outage and capability information, please refer to the most recent Daily Operating Plan ([DOP](#)), the [Dashboard](#) and [bulletins](#)



This meeting covers broad operational and project-related topics that impact operations on the NGTL and Foothills systems. For information on focused Commercial, Operational and Regulatory topics, please contact your [Marketing Representative](#)

Agenda

1. Projects Update
2. 2023 System Operation – Year In Review
3. Review of November Operations
4. Review of Upcoming 2023 Outages
5. Review of 2024 DOP Outages



Projects Update



Project Updates: ISD Summary (since November 2, 2023 update)

NGTL:	
Intra-Basin Expansion	<ul style="list-style-type: none">• Saturn (In-service) <i>*change since last update</i>• Saddle Hills Unit Addition (ISD April 2024)<ul style="list-style-type: none">• 80% construction complete• 37% commissioning complete• Emerson Creek Compressor Station (ISD April 2024)<ul style="list-style-type: none">• 95% construction complete• 46% commissioning complete
Valhalla North / Berland River (VNBR) (ISD April 2026)	<ul style="list-style-type: none">• Ongoing discussion with Altalink about connection to Berland River• Probability of ISD moving from first to second half of 2026

Availability of capacity remains subject to: Ground conditions, weather & road access/conditions, heated labour market, environmental and regulatory requirements and LTO approval by the CER

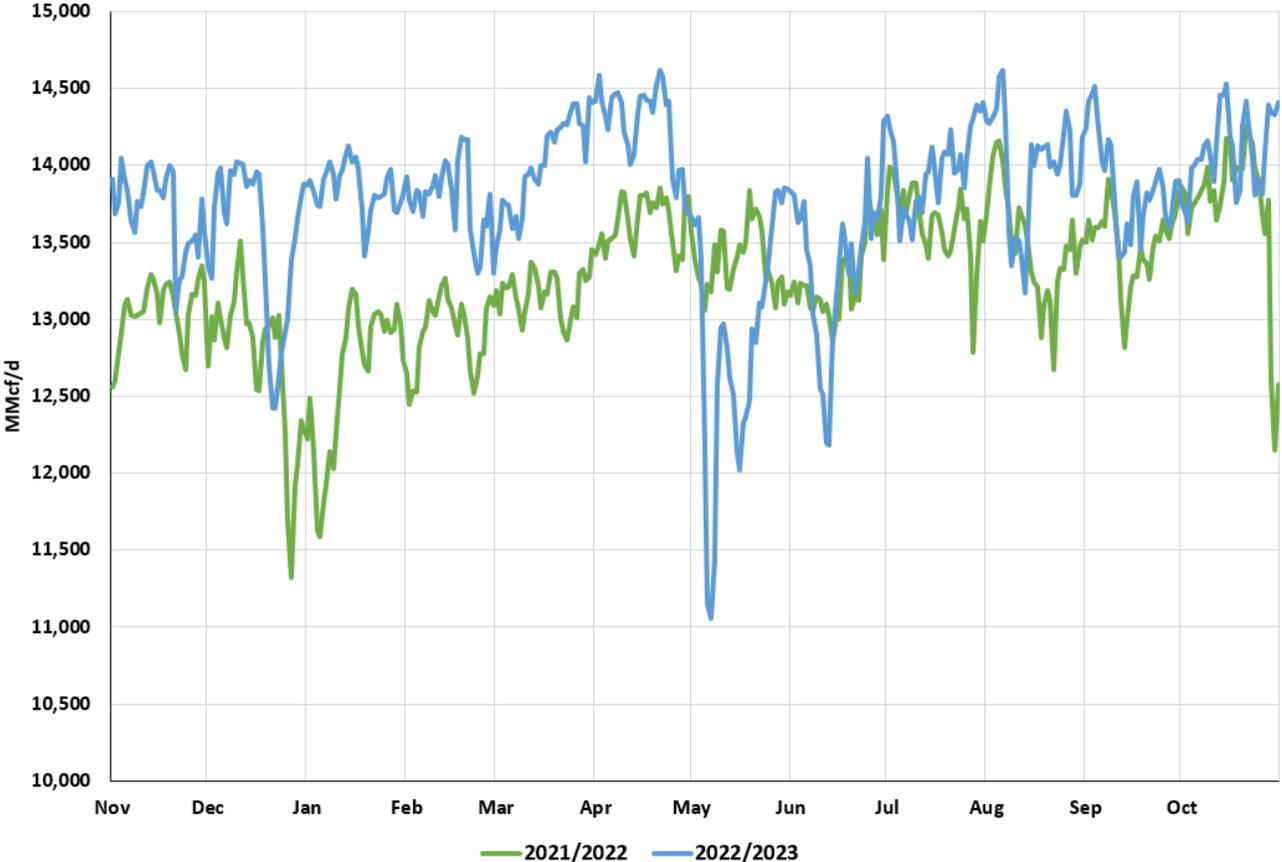


2023 System Operation Year in Review



System Throughput | Gas Year Comparison

Total NGTL Receipts (excluding Storage)



Receipts increasing

- 2023 average total receipts ~13.8 Bcf/d

Intra Deliveries increasing

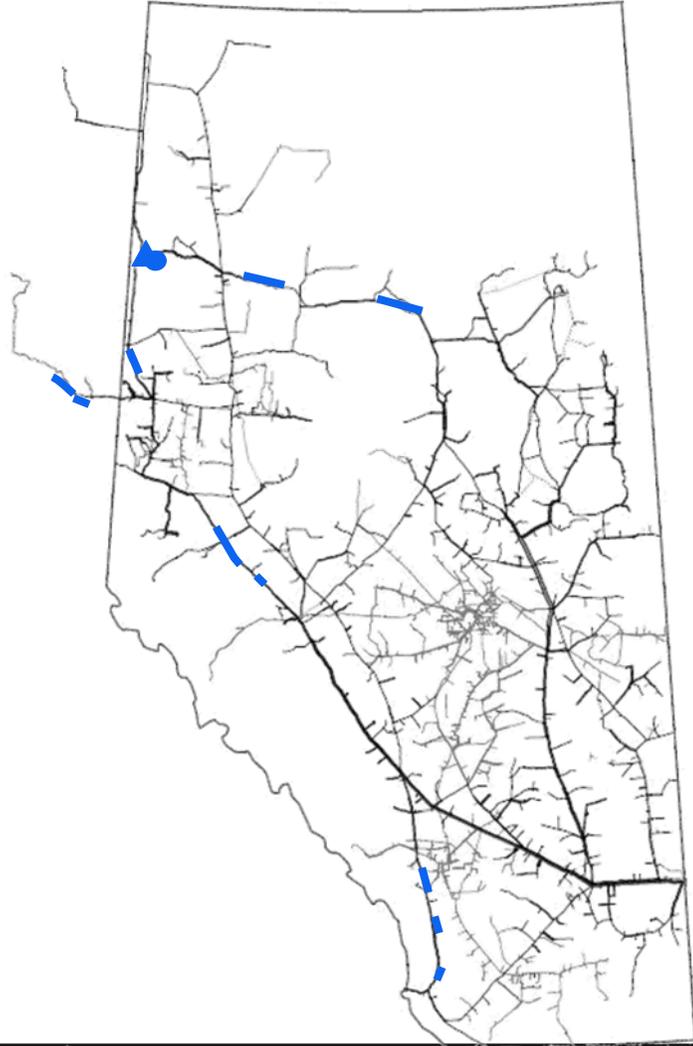
- 2023 average intra delivery ~6.0 Bcf/d

EGAT Export Deliveries decreasing
WGAT Export Deliveries increasing

- 2023 average EGAT delivery ~4.3 Bcf/d
- 2023 average WGAT delivery ~2.6 Bcf/d



New Facilities | 2022/2023 Gas Year Capacity Additions



~241 km of new pipe

- Remaining 10% of 2021 System Expansion (~28 km)
- North Corridor Expansion (~81 km)
- Intra-basin Expansion (~48 km)
- Foothills BC Expansion 2022/2023 (~44 km)
- West Path Delivery 2023 (~40 km)

1 new compressor unit addition

NGTL Restricted Days | 2022 and 2023



2
0
2
3*

Area	FT Restricted Days	IT Restricted Days	Unrestricted Days
USJR	26	128	211
EGAT	-	13	352
WGAT (NGTL/FHBC)	54	12	299
NEDA	-	19	346

*Up to and including November 30



2
0
2
2

Area	FT Restricted Days	IT Restricted Days	Unrestricted Days
USJR	11	114	240
EGAT	-	127	238
WGAT (NGTL/FHBC)	32	5	328
NEDA	-	27	338

USJR:

- All 2023 outages were planned except for one unplanned outage resulting in 10 FT Restricted Days

WGAT:

- All 2023 FT Restrictions were planned outages except for one unplanned 2-day extension and a 2-day unplanned outage
- Similar number of FT restricted days to 2022 when capital expansion related outages are factored out



Summary



Increased throughput and high utilization in 2023



Significant capacity additions in 2023



More service restricted days in 2023 than 2022 for USJR and WGAT
Less service restricted days in 2023 than 2022 for EGAT and NEDA



Review of November Operations

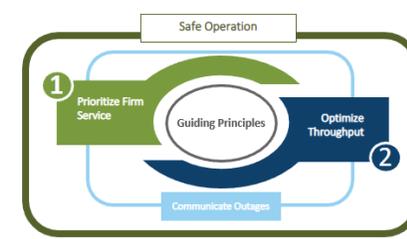
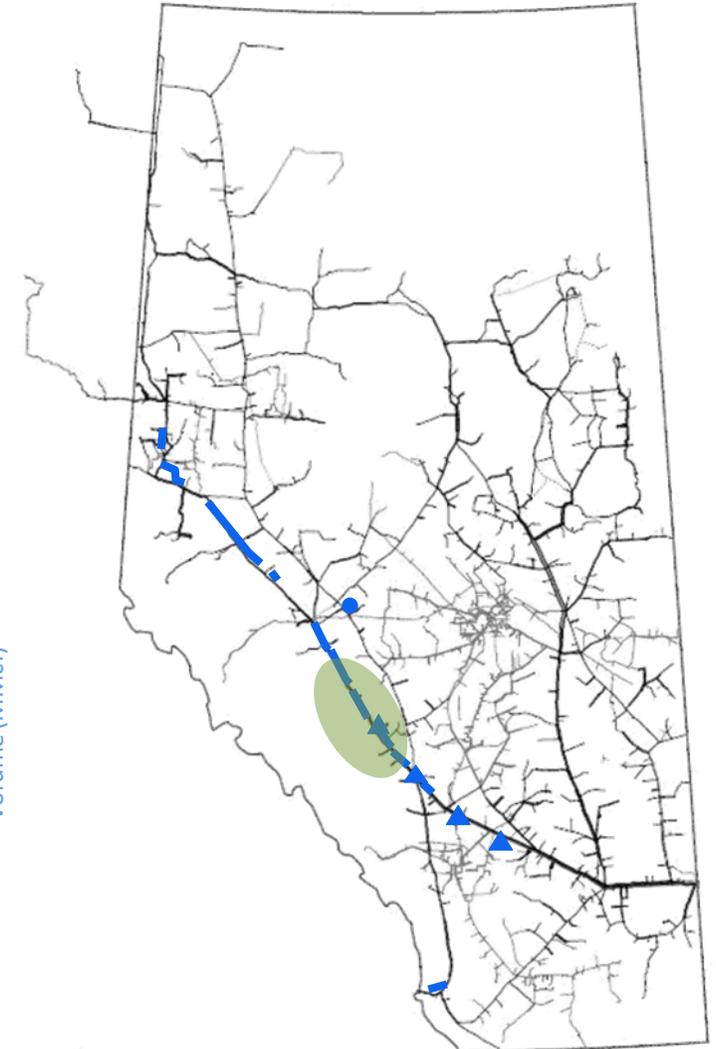


November Operations – Segment 8

Customers have been recently enquiring about higher pressures in the area.

Background:

- Expansion Facilities Changing System Dynamics
 - First winter with 2021 SXP complete
- Linepack target increase with increasing demands and cooler ambients
 - Higher linepack can mean higher pressures on the system and lower linepack can mean lower pressures on the system



Review of DOP Outages (2023)

(From DOP as of Wednesday, December 6)



No
impact to FT

Potential
impact to FT

Partial
impact to FT

West Gate Delivery Area (WGAT)

Outage Description	Start	End	Capability (10 ⁶ m ³ /d)	Impact (10 ⁶ m ³ /d)	Service Allowable Location/Area
NPS 42 FPL Zone 8 Segment 2A – Pipeline Maintenance	14-Dec-23	19-Dec-23	79	11	Potential Impact to FT Foothills BC

May not be accurate beyond the December 6 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



2024 Operational Outlook

(From DOP as of Wednesday, December 6)



2024 Outages

- Outages with the most significant impact to system capability were added to the DOP on November 1, 2023
- All known outages planned for Q1 and most Q2 outages have now been added
- Start and End Dates, Durations, Capability, Area of impact may be revised as new information becomes available

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.

Optimization efforts are on-going, and we will continue to focus on safety, optimizing system capacity and minimizing outage impacts.



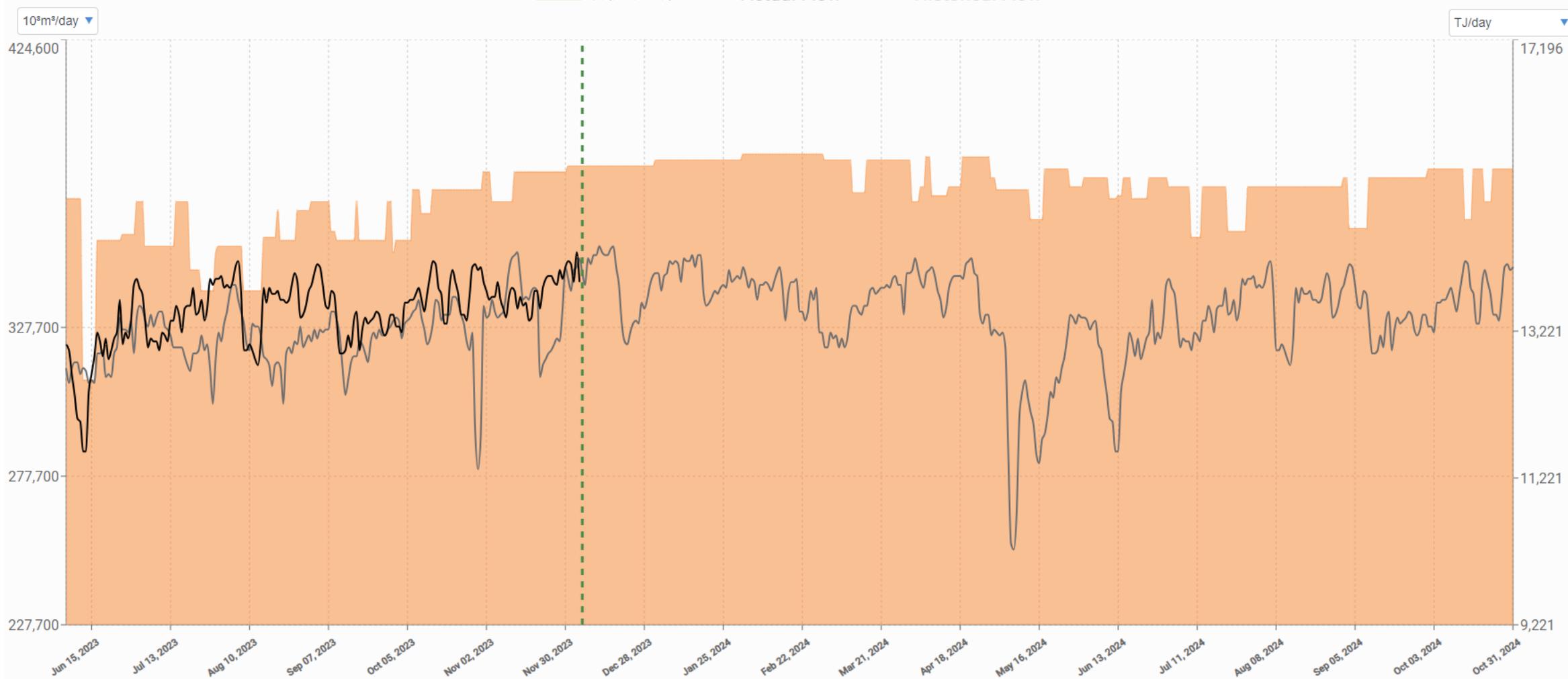
Daily Operating Plan (DOP): Facility Assumptions

Date	Expansion Facilities
December 2023	Intra-basin Expansion: <ul style="list-style-type: none"><li data-bbox="652 501 1314 539">• Groundbirch Mainline Loop (Saturn)
April 2024	Intra-basin Expansion: <ul style="list-style-type: none"><li data-bbox="652 686 1302 725">• Emerson Creek Compressor Station<li data-bbox="652 736 1179 775">• Saddle Hills C4 Unit Addition



Upstream James River

Capability - Actual Flow - Historical Flow



May not be accurate beyond the December 7 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
Goodfish A2 – Compressor Station Maintenance	11-Mar-24	13-Mar-24	373	11	241	195 - 225	Potential impact to FT-R USJR U/S Latornell
Leismer East – Compressor Station Maintenance	11-Mar-24	15-Mar-24	376	8	244	195 - 225	Potential impact to FT-R USJR U/S Latornell
Goodfish A1 – Compressor Station Maintenance	13-Mar-24	15-Mar-24	373	11	241	195 - 225	Potential impact to FT-R USJR U/S Latornell
Otter Lake – Compressor Station Maintenance	1-Apr-24	3-Apr-24	370	15	238	195 - 225	Potential impact to FT-R USJR U/S Latornell
Alces River – Compressor Station Maintenance	1-Apr-24	5-Apr-24	375	10	243	195 - 225	Potential impact to FT-R USJR U/S Latornell
Gold Creek – Compressor Station Maintenance	8-Apr-24	13-Apr-24	372	13	277	230 - 260	Potential impact to FT-R USJR U/S Berland River
Gold Creek B3 – Compressor Station Maintenance	8-Apr-24	18-Apr-24	375	10	280	230 - 260	Potential impact to FT-R USJR U/S Berland River
Pipestone Creek – Compressor Station Maintenance	29-Apr-24	12-May-24	378 (Apr) 374 (May)	7	283 (Apr) 279 (May)	230 - 260	Potential impact to FT-R USJR U/S Berland River
Meikle River D5 – Compressor Station Maintenance	13-May-24	17-May-24	364	17	232	195-225	Potential impact to FT-R USJR U/S Latornell
NPS 48 Grande Prairie Mainline Loop 2 – Pipeline Maintenance	27-May-24	31-May-24	375	6	280	230 – 260	Potential impact to FT-R USJR U/S Berland River
Latornell – Compressor Station Maintenance	10-Jun-24	12-Jun-24	371	7	276	230 – 260	Potential impact to FT-R USJR U/S Berland River
Latornell A2 – Compressor Station Maintenance	10-Jun-24	14-Jun-24	372	6	277	230-260	Potential impact to FT-R USJR U/S Berland River

May not be accurate beyond the December 7 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
NPS 36 Edson Mainline Extension – Pipeline Maintenance	18-Jun-24	23-Jun-24	371	7	276	230 – 260	Potential impact to FT-R USJR U/S Berland
NPS 48 Tanghe Creek Loop 2 – Pipeline Maintenance	9-July-24	12-July-24	358	17	226	195 - 225	Potential impact to FT-R USJR U/S Latornell
Otter Lake – Compressor Station Maintenance	22-Jul-24	28-Jul-24	360	15	228	195 - 225	Potential impact to FT-R USJR U/S Latornell
Meikle River C – Compressor Station Maintenance	3-Sep-24	9-Sep-24	361	17	229	195 - 225	Potential impact to FT-R USJR U/S Latornell
Alces River – Compressor Station Maintenance	3-Sep-24	5-Sep-24	368	10	236	195 - 225	Potential impact to FT-R USJR U/S Latornell
Miekle River D5 – Compressor Station Maintenance	14-Oct-24	16-Oct-24	364	17	232	195 - 225	Potential impact to FT-R USJR U/S Latornell
Goodfish – Compressor Station Maintenance	21-Oct-24	23-Oct-24	370	11	238	195 - 225	Potential impact to FT-R USJR U/S Latornell

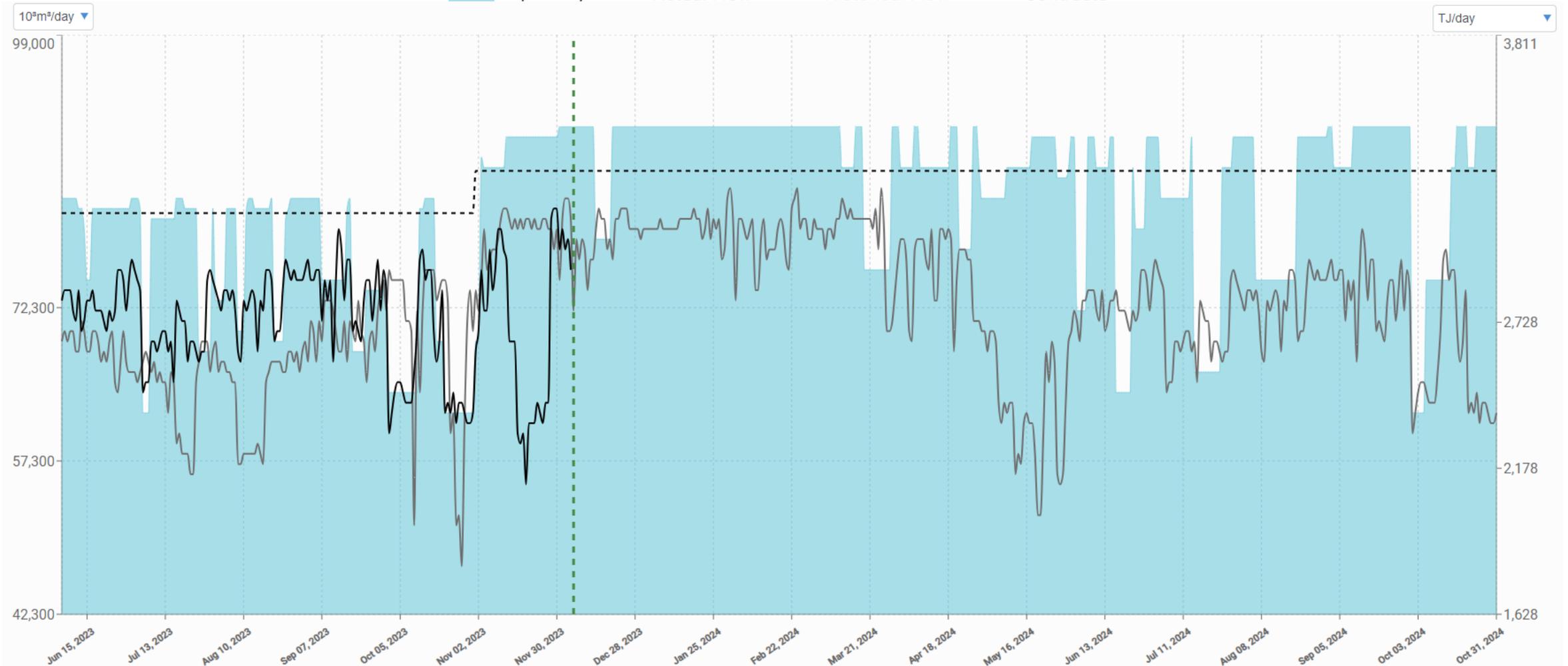
May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



Alberta-B.C. Border

(includes both NGTL and Foothills BC outages)

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



May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



West Gate Delivery Area (WGAT)

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)	Service Allowable Location/Area
NPS 42 Western Alberta System Mainline Loop – Pipeline Maintenance	19-Mar-24	28-Mar-24	76	14	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21
Burton Creek A3 – Compressor Station Maintenance	22-Apr-24	26-Apr-24	78	12	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 36 Foothills Zone 7 Leg 1C – Pipeline Maintenance	30-Apr-24	8-May-24	83	6	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Crowsnest H – Compressor Station Maintenance	27-May-24	30-May-24	85	4	Potential Impact to FT-D Foothills BC
Burton Creek – Compressor Station Maintenance	3-Jun-24	6-Jun-24	72	17	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Winchell Lake – Compressor Station Maintenance	17-Jun-24	20-Jun-24	84	5	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21
Crowsnest A – Compressor Station Maintenance	17-Jun-24	21-Jun-24	65	24	Potential Impact to FT-D Foothills BC
NPS 36 BC Mainline – Pipeline Maintenance	17-Jun-24	22-Jun-24	64	25	Potential Impact to FT Foothills BC
Moyie D – Compressor Station Maintenance	24-Jun-24	27-Jun-24	80	9	Potential Impact to FT Foothills BC
NPS 36 Western Alberta System Mainline – Pipeline Maintenance	3-Jul-24	13-Jul-24	83	6	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders

Note: Outages located in the USJR area show up in the WGAT table in DOP to indicate a broad area restriction could be applied to reduce flows through the bottleneck but have been excluded from this slide to avoid duplication

May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



West Gate Delivery Area (WGAT)

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)	Service Allowable Location/Area
NPS 36 BC Mainline – Pipeline Maintenance	15-Jul-24	24-Jul-24	68	21	Potential Impact to FT Foothills BC
NPS 36 Western Alberta System Mainline – Pipeline Maintenance	15-Jul-24	24-Jul-24	66	23	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21
Elko – Compressor Station Maintenance	6-Aug-24	20-Aug-24	75	14	Potential Impact to FT Foothills BC
Moyie – Compressor Station Maintenance	1-Oct-24	5-Oct-24	62	28	Potential Impact to FT Foothills BC
Turner Valley – Compressor Station Maintenance	1-Oct-24	14-Oct-24	75	15	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21

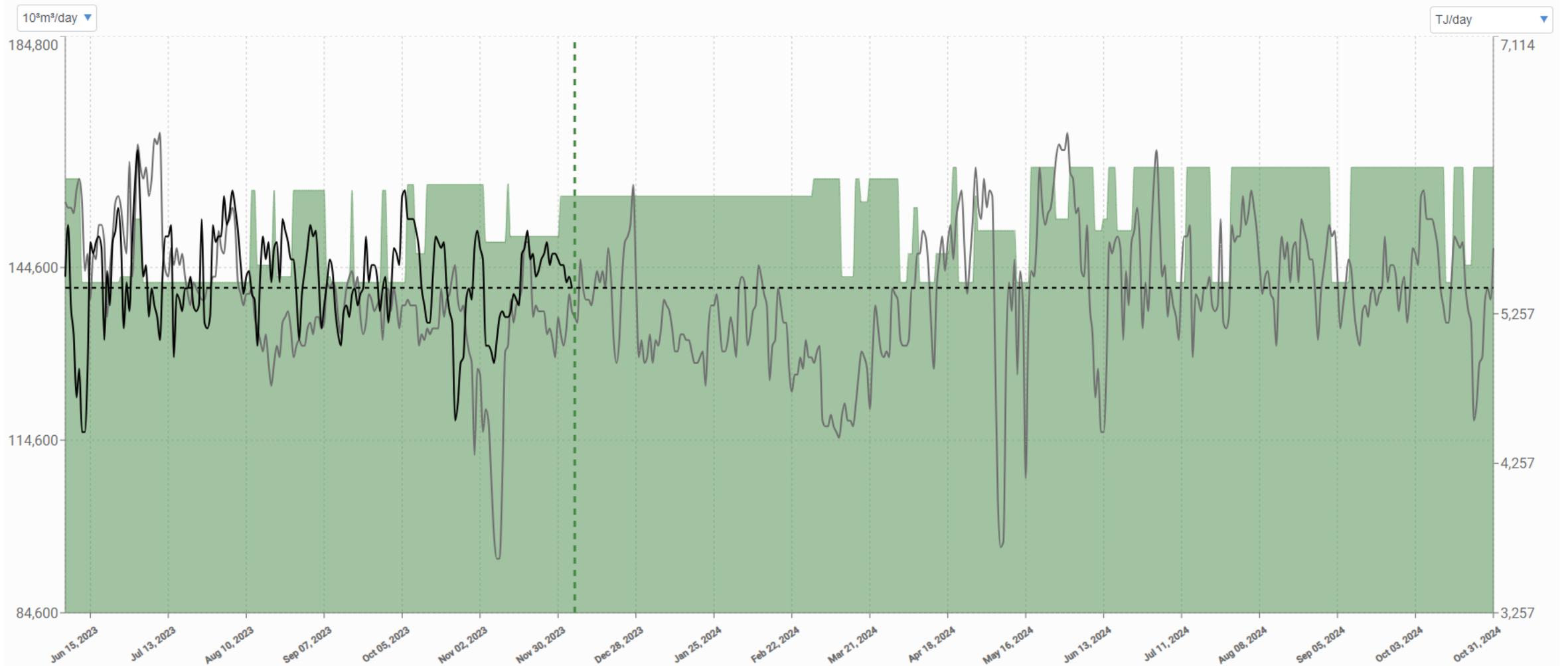
Note: Outages located in the USJR area show up in the WGAT table in DOP to indicate a broad area restriction could be applied to reduce flows through the bottleneck but have been excluded from this slide to avoid duplication

May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



East Gate

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



May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



East Gate Delivery Area (EGAT)

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)	Service Allowable Location/Area
Clearwater A6 – Compressor Station Maintenance	18-Mar-24	20-Mar-24	156	4	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
NPS 34 EAS and CAS – Pipeline Maintenance	2-Apr-24	10-Apr-24	155	7	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
NPS 42 Edson & CAS Mainline Loop – Pipeline Maintenance	11-Apr-24	19-Apr-24	151	11	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
NPS 42 Foothills Zone 6 – Pipeline Maintenance	22-Apr-24	27-Apr-24	142	20	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Acme – Compressor Station Maintenance	22-Apr-24	05-May-24	157	5	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	13-May-24	16-May-24	156	6	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	10-Jun-24	13-Jun-24	158	4	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28

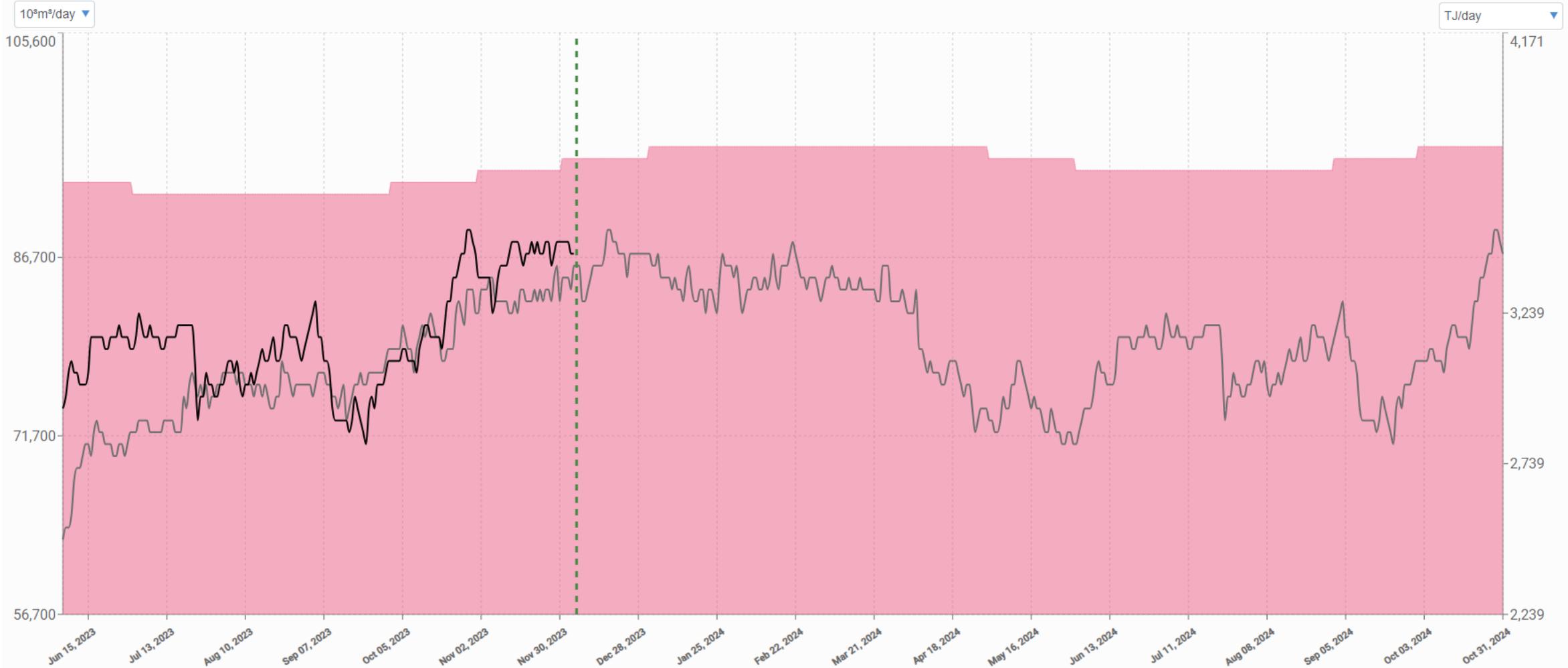
Note: Outages located in the USJR area show up in the EGAT table in DOP to indicate a broad area restriction could be applied to reduce flows through the bottleneck but have been excluded from this slide to avoid duplication

May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



Oil Sands Delivery Area

■ Capability - Actual Flow - Historical Flow



May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



Northeast Delivery Area (NEDA) Oilsands Delivery Area (OSDA)

No
impact to FT

Potential
impact to FT

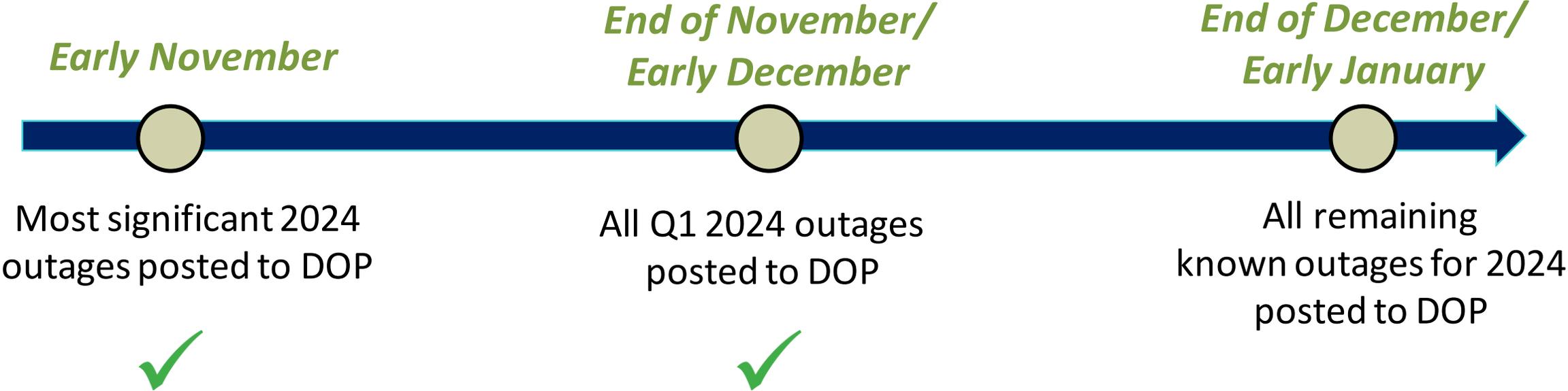
Partial
impact to FT

Outage Description	Start	End	Capability (10 ⁶ m ³ /d)	Service Allowable Location/Area
NPS30 Leismer Kettle River Crossover/NPS24 Kettle River Lateral Loop – Pipeline Maintenance	Jan 16	Jan 19	39	Potential Impact to FT-D Local Delivery: Segment 11

May not be accurate beyond the December 7 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information.



2024 Outage Communication Schedule | Next Steps



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



CONTACTS

**HAPPY
HOLIDAYS!!!**



MARKETING REPS

[Customer Express Contacts
\(tccustomerexpress.com\)](https://tccustomerexpress.com)

NELSON JALOTJOT

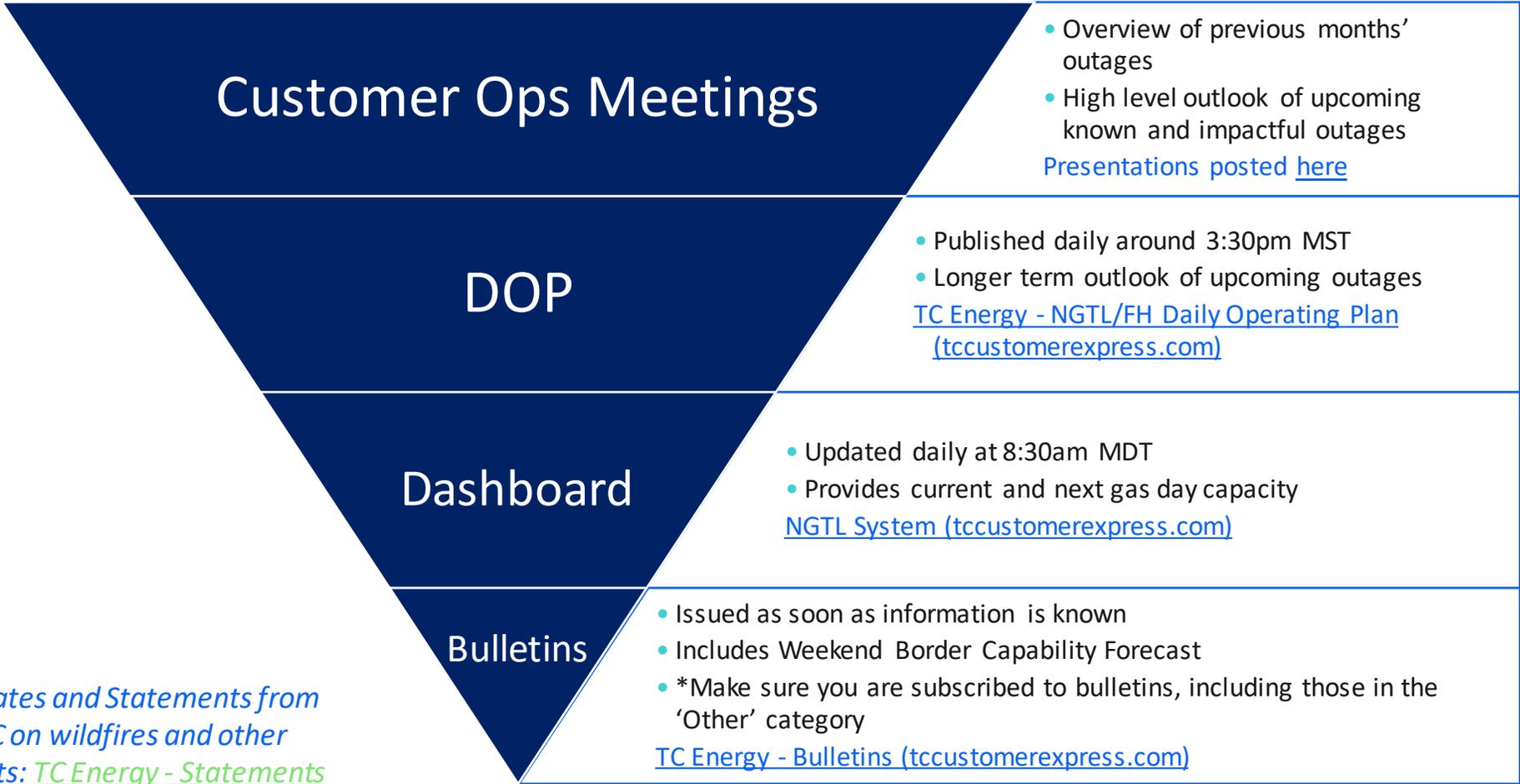
Chair, NGTL/FH Customer Ops

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Outage Communication Tools: Order



Updates and Statements from TC on wildfires and other events: [TC Energy - Statements](#)

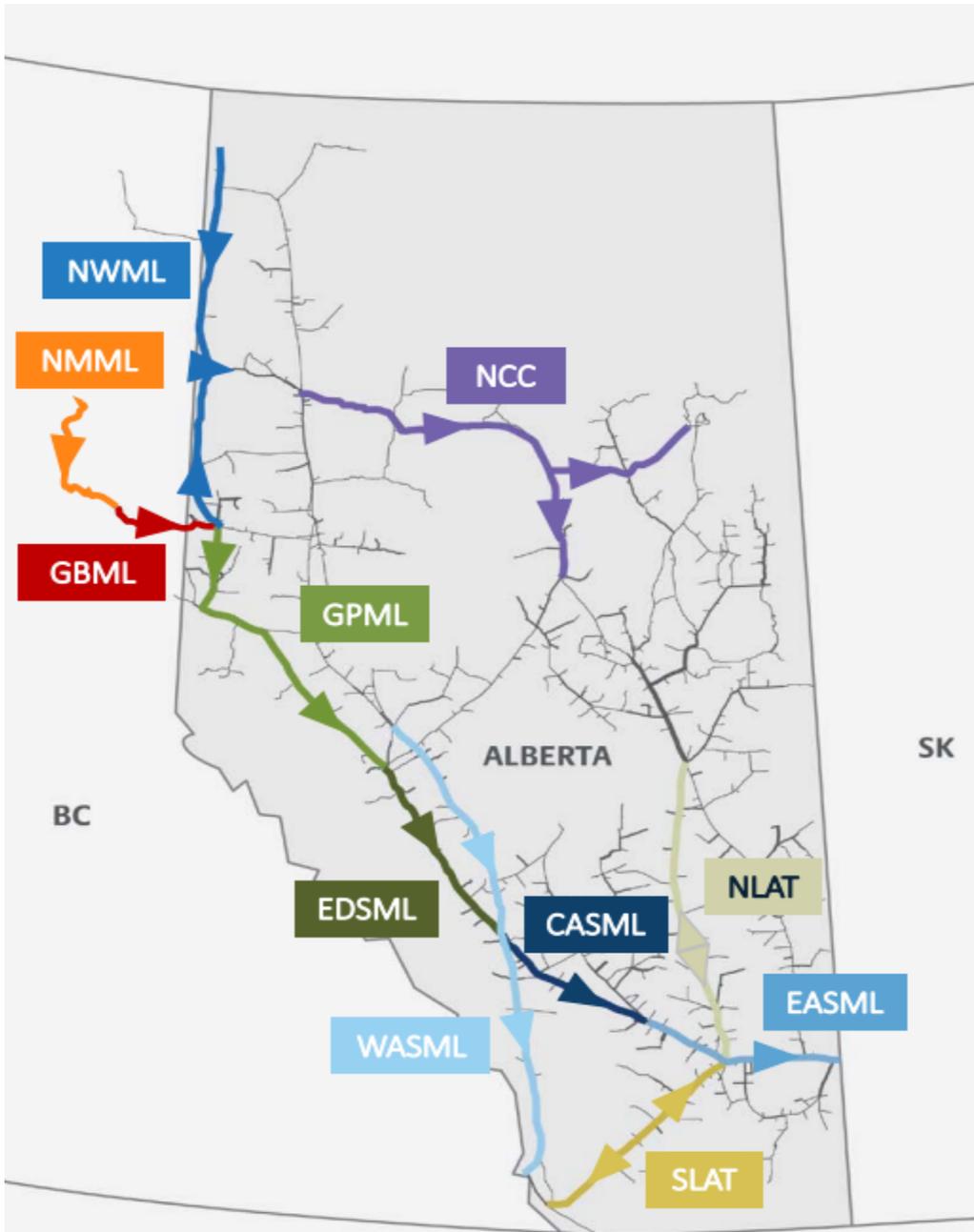
Each level of communication supersedes all information provided in communications above it.



Glossary of Terms

- ❖ **DOP:** Daily Operating Plan [DOP](#)
- ❖ **NGTL:** Nova Gas Transmission Ltd.
- ❖ **FH:** Foothills Pipeline System (BC or SK)
- ❖ **ISD:** In-Service Date
- ❖ **ILI:** Inline Inspection
- ❖ **Transportation Services**
 - ❖ **IT-R:** Interruptible Transportation - Receipt
 - ❖ **IT-D:** Interruptible Transportation - Delivery
 - ❖ **FT-R:** Firm Transportation - Receipt
 - ❖ **FT-D:** Firm Transportation - Delivery
- ❖ **Operational Areas**
 - ❖ **USJR:** Upstream James River
 - ❖ **WGAT:** West Gate
 - ❖ **EGAT:** East Gate
 - ❖ **OSDA:** Oilsands Delivery Area
 - ❖ **NEDA:** North-East Delivery Area

Commonly Referenced Flow Paths



- North Montney Mainline (NMML)
- Groundbirch Mainline (GBML)
- Northwest Mainline (NWML)
- North Central Corridor (NCC)
- Grande Prairie Mainline (GPML)
- Edson Mainline (EDSML)
- Western Alberta System Mainline (WASML)
- Central Alberta System Mainline (CASML)
- Eastern Alberta System Mainline (EASML)
- South Lateral (SLAT)
- North Lateral (NLAT)