



NGTL System and Foothills Pipelines Ltd.

CUSTOMER OPERATIONS MEETING

FOR INFORMATIONAL PURPOSES ONLY



SEPTEMBER 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

Signs and Signals



- Flashing YELLOW prepare to stop
- Flashing RED means STOP!
- Stop 20 metres/yards behind buses
- Never pass a school bus with flashing red
- Proceed once red lights no longer flashing
- Pass any school bus with caution



Know the Zones

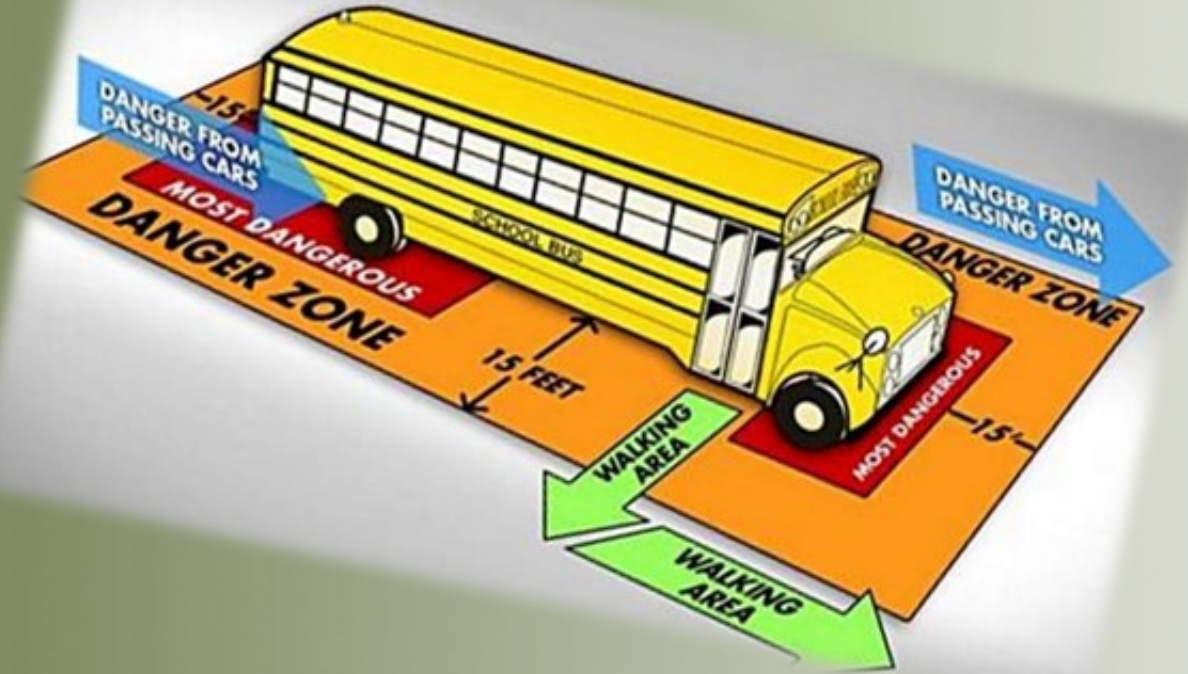
- School zones are in effect
- Times may be different in your community
- When in doubt, slow down

Watch for Low Visibility

School may start or finish during:

- Dawn or Dusk
- Fog or Cloud
- Rain or Shine

Note: Kids may be wearing masks that lower peripheral vision, so YOU need to spot THEM.



Life Saving Rule #1

We will drive safely and without distraction.



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

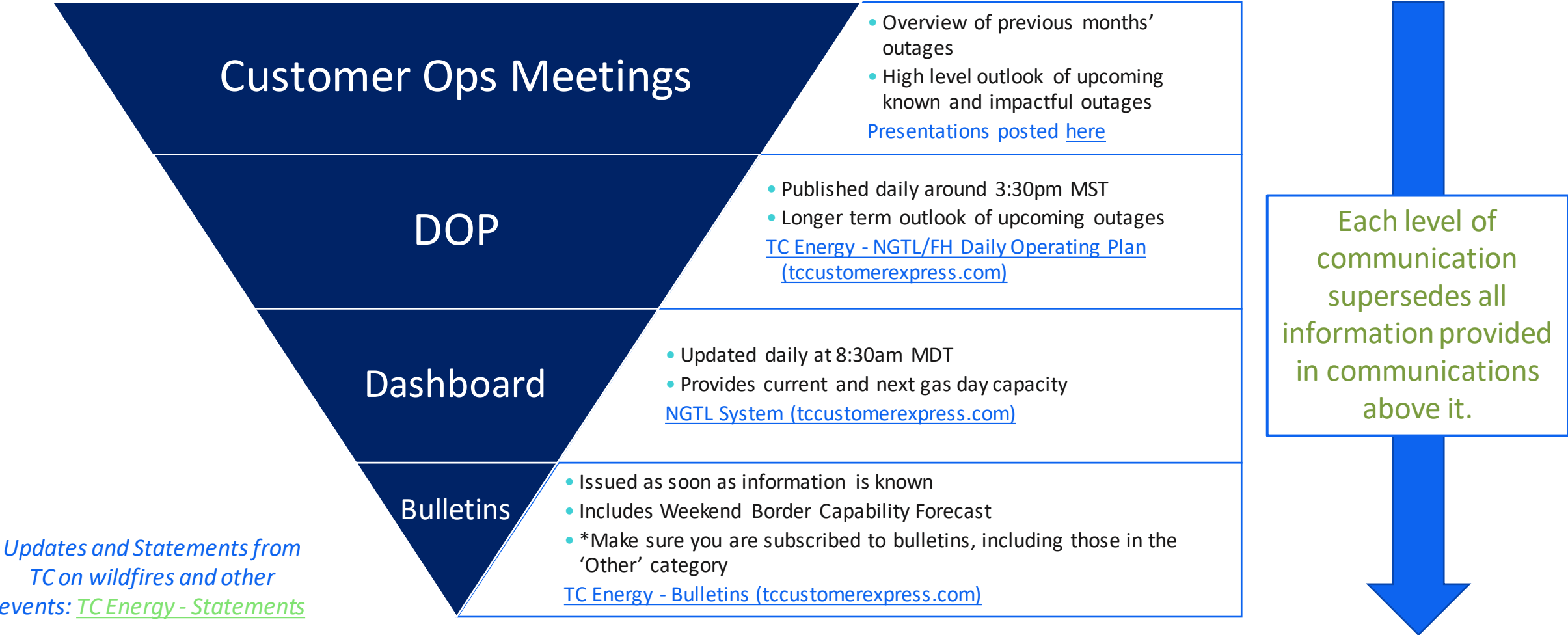


For current outage and capability information, please refer to the most recent Daily Operating Plan ([DOP](#)), the [Dashboard](#) and [bulletins](#)



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](#)

Outage Communication Tools: Order



Agenda



1. Project Updates
2. Review of August Operations
3. Review of Upcoming DOP Outages



Project Updates



Project Updates: ISD Summary (since August 3, 2023 update)

NGTL Projects:	
Intra-Basin Expansion	Saturn (ISD Nov 2023) Saddle Hills Unit Addition (ISD April 2024) Emerson Creek Compressor Station (ISD April 2024)
WestPath 2023	Turner Valley, Lundbreck and Longview (ISD Nov 2023)
FH Projects:	
Elko Section Loop	ISD Nov 2023 <i>*50% capacity achieved by Nov 1, 2023 with remaining capacity achieved by end of Nov 2023 (slide 11 for further details)</i>

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



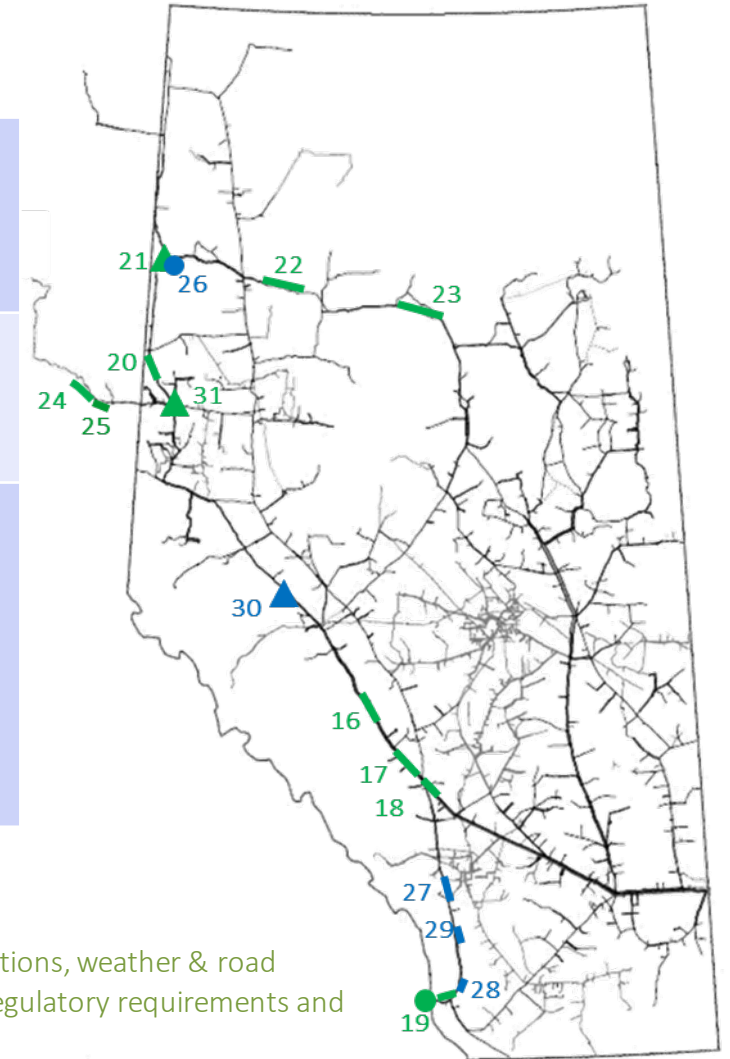
Project Updates: NGTL (since August 3, 2023 update)

Intra-Basin Expansion

Saturn (Map I.D. # 24) ISD Nov 2023	<ul style="list-style-type: none"> Construction activities continue to progress.
Emerson Creek Compressor Station (Map I.D. #30) ISD April 2024	<ul style="list-style-type: none"> 68% construction complete 2 of 3 tie-in outages have been completed
Saddle Hills Unit Addition (Map I.D. #31) ISD April 2024	<ul style="list-style-type: none"> 46% construction complete Outage scheduled this month for tie-in work

West Path 2023 (ISD Nov 2023)

Turner Valley (Map I.D. # 27)	<ul style="list-style-type: none"> All pipe has been installed and backfilled
Lundbreck (Map I.D. # 28)	<ul style="list-style-type: none"> Mainline construction activities are underway
Longview (Map I.D. # 29)	<ul style="list-style-type: none"> All pipe has been installed and backfill activities are near completion



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



Project Update: FH (since August 3, 2023 update)

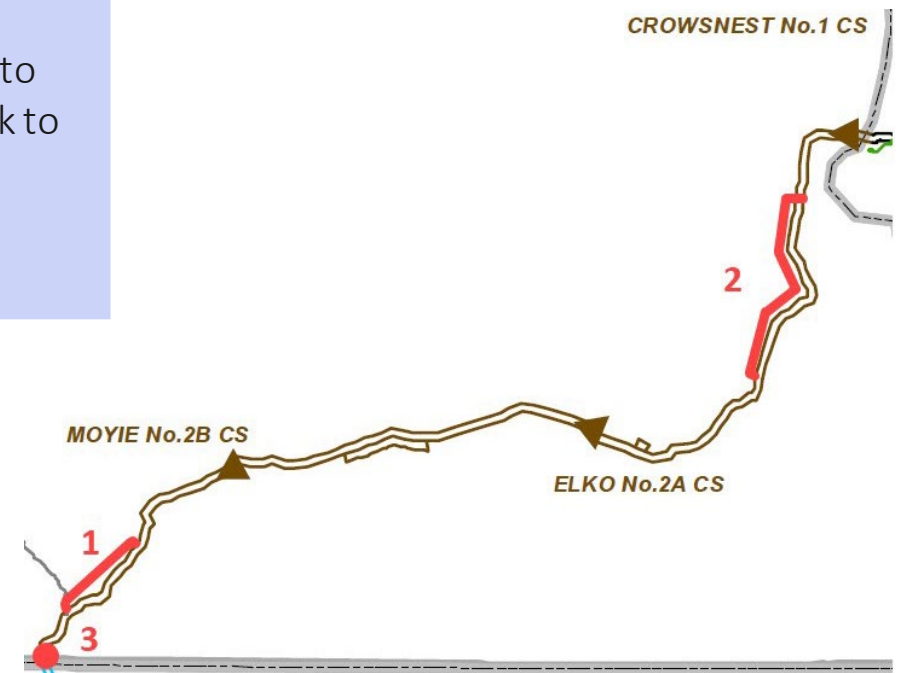
West Path 2023

- Yahk in-service (Map I.D. #1)

Elko (Map I.D. #2)
ISD Nov 2023

- Pipe installation at watercourse crossings are complete
- Blasting activities through mountainous terrain complete
- Installation of pipe is near completion
- Contingency valve currently being installed to allow project to achieve 50% capacity by Nov 1. Remaining capacity on track to be available prior to end of November.

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



Review of August Operations

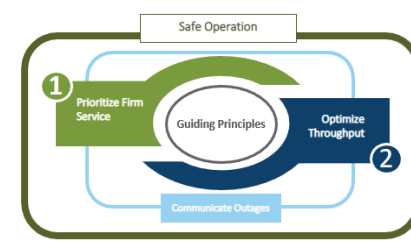


Upstream James River



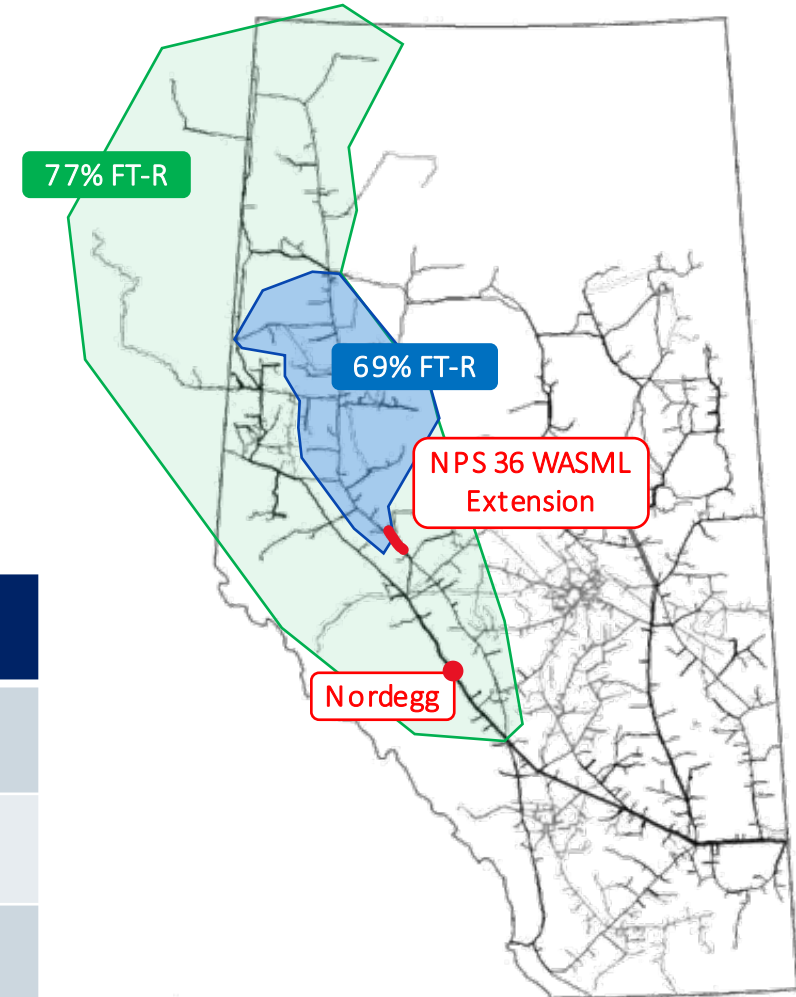
NPS 36 Western Alberta System Mainline Extension - Pipeline Maintenance

Nordegg B3 and B5 – Compressor Station Maintenance



Background:

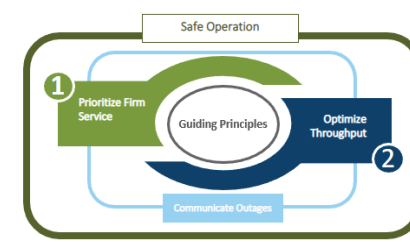
- Planned:
 - NPS 36 WASML Extension Pipeline Maintenance: Aug 8 – 13
 - Outage duration extended to Aug 14
 - Nordegg B3 and B5 Compressor Station Maintenance: Aug 8 - 13
- Capability communicated in DOP:
 - USJR: 340 10⁶m³/d
 - Local (Partial Segments 2 and 5): 16 10⁶m³/d
- Service Allowable:
 - USJR (excluding Partial Segments 2 and 5): 0% IT-R, 77% FT-R
 - Local (Partial Segments 2 and 5): 0% IT-R, 69% FT-R



Bulletin Date	Effective Date	Service Allowable	Comments
Aug 2	Aug 7 (21:00 MST)	USJR: 0% IT-R, 77% FT-R Local: 0% IT-R, 69% FT-R	Bulletin Issued
		USJR: 0% IT-R, 77% FT-R Local: 0% IT-R, 69% FT-R	End date for NPS 36 WASML Ext outage updated to Aug 14
Aug 14	Aug 15 (08:00 MST)	USJR: 0% IT-R, 100% FT-R	NPS 36 WASML Ext completed NPS 48 GPML Loop 2 outage starts

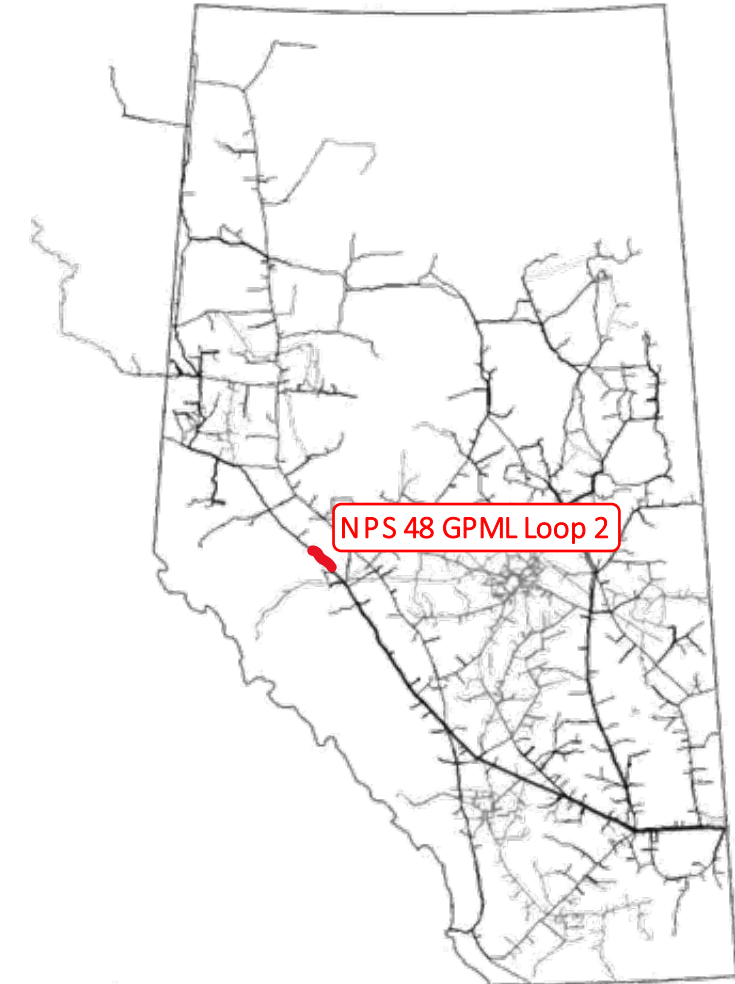


NPS 48 Grande Prairie Mainline Loop 2 – Pipeline Modifications



Background:

- **Planned:**
 - NPS 48 GPML Loop 2 Pipeline Maintenance: Aug 14 – 19
 - Previously scheduled to be completed in May but was deferred due to Wildfires
- **Capability communicated in DOP:**
 - USJR: 358 10⁶m³/d
 - EGAT: 145 10⁶m³/d
- **Service Allowable:**
 - USJR: 0% IT-R, 100% FT-R



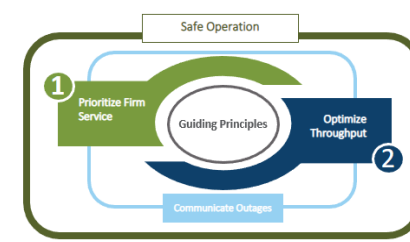
Bulletin Date	Effective Date	Service Allowable	Comments
Aug 14	Aug 15 (08:00 MST)	USJR: 0% IT-R, 100% FT-R	Maintenance started as soon as the NPS 36 WASML Ext outage was completed
Aug 18	Aug 19 (08:00 MST)	USJR: 100% IT-R, 100% FT-R	Observing available system capability and forecasted cooler ambient temperatures. NPS 48 GPML Loop 2 work on track to be completed as scheduled.



West Gate

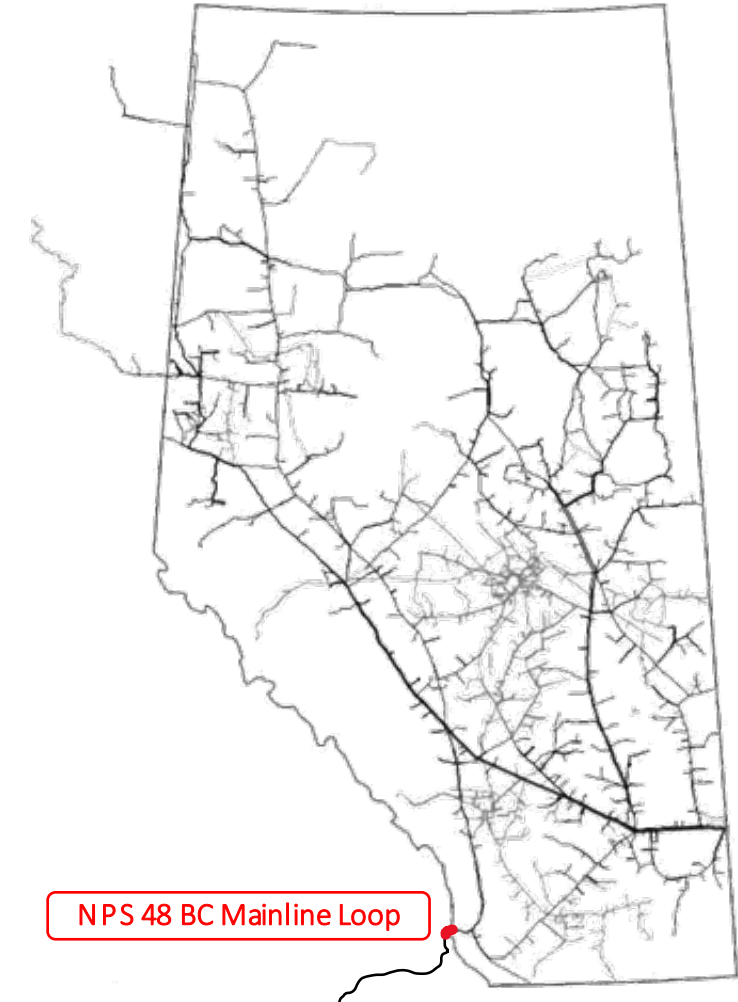


NPS 48 BC Mainline Loop - Pipeline Maintenance



Background:

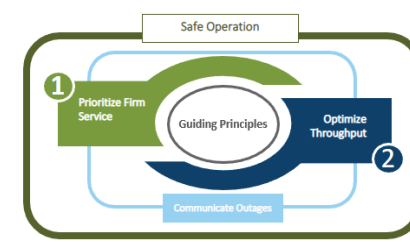
- **Planned:**
 - NPS 48 BC Mainline Loop Pipeline Maintenance: Aug 8 - 10
- **Capability communicated in DOP:**
 - WGAT: 70 10⁶m³/d
- **Service Allowable:**
 - WGAT: 0% IT-D, Partial FT-D (70 10⁶m³/d)



Bulletin Date	Effective Date	Service Allowable	Comments
Aug 2	Aug 8 (08:00 MST)	FHBC: 0% IT, Partial FT	Maintenance started as scheduled
Aug 10	Aug 11 (08:00 MST)	FHBC: 100% IT, 100% FT	Maintenance completed as scheduled

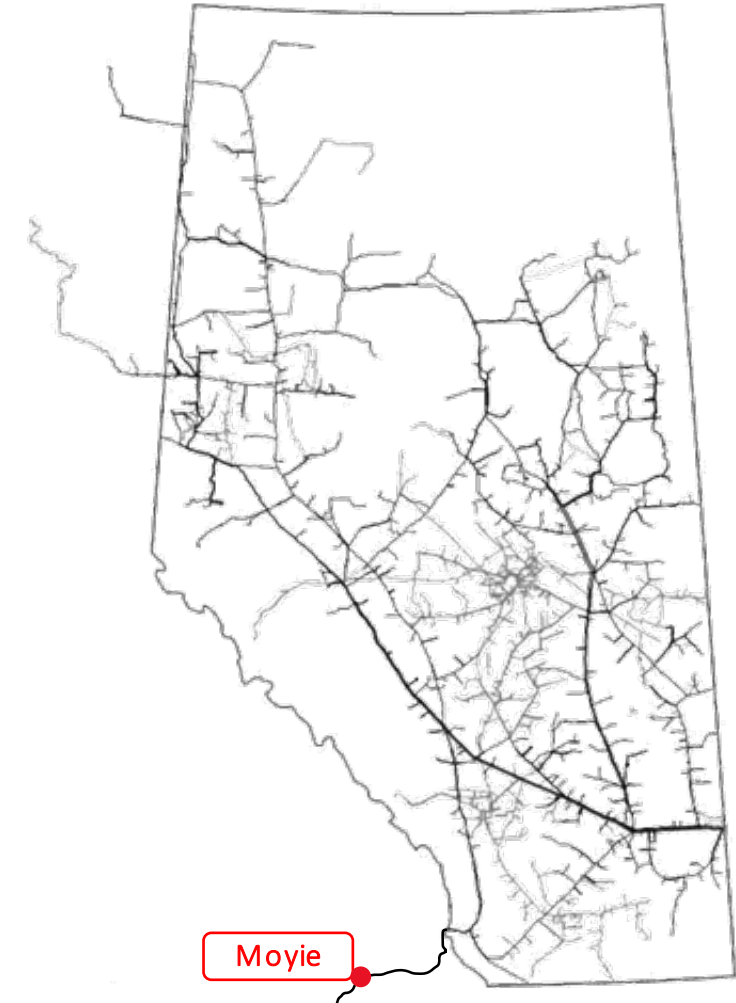


Moyie – Compressor Station Maintenance



Background:

- **Planned:**
 - Moyie Compressor Station Maintenance: Aug 21 - 25
- **Capability communicated in DOP:**
 - WGAT: 69 10⁶m³/d
- **Service Allowable:**
 - WGAT: 0% IT-D, Partial FT-D (69 10⁶m³/d)



Bulletin Date	Effective Date	Service Allowable	Comments
Aug 17	Aug 21 (08:00 MST)	FHBC: 0% IT, Partial FT	Maintenance started as scheduled
Aug 24	Aug 25 (08:00 MST)	FHBC: 100% IT, 100% FT	Maintenance completed Aug 24



Review of DOP Outages

(From DOP as of Wednesday, September 6)



2023 Outages

- All known planned outages at this time are included in the [DOP](#) (Including work deferrals due to the wildfires)
 - We continue to optimize the outage schedule to reduce impacts; however, opportunity is limited due to work that has been shifted to late summer due to the wildfires
 - If there is adequate manpower and resources available, we will continue to move forward with all work even if it may result in impacts to service
 - Important that all required maintenance is completed prior to the winter season to avoid system derates or limitations and ensure reliability through the winter
- Start and end dates, durations, capability, area of impact may be revised as new information becomes available or further optimization opportunities are identified

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.

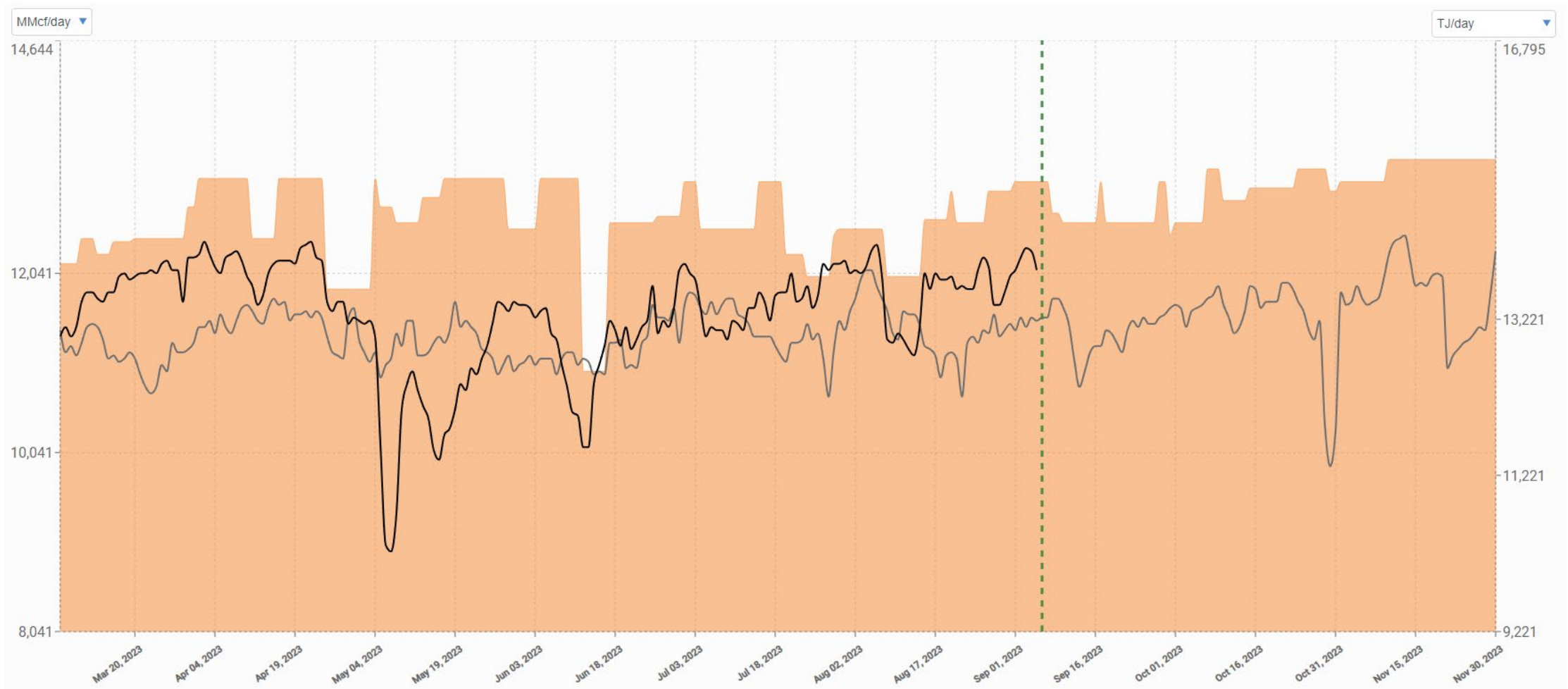
Daily Operating Plan (DOP): Facility Assumptions

Date	Expansion Facilities
November 2023	<p>Intra-basin Expansion:</p> <ul style="list-style-type: none"> • Groundbirch Mainline Loop (Saturn) <p>2023 West Path:</p> <ul style="list-style-type: none"> • WASML Loop 2 (Turner Valley), WASML Loop 2 (Lundbreck), WASML Loop 2 (Longview) <p>Foothills BC Expansion:</p> <ul style="list-style-type: none"> • BC Mainline Loop 2 (Elko)



Upstream James River

Capability - Actual Flow - Historical Flow



This slide may not be accurate beyond the September 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

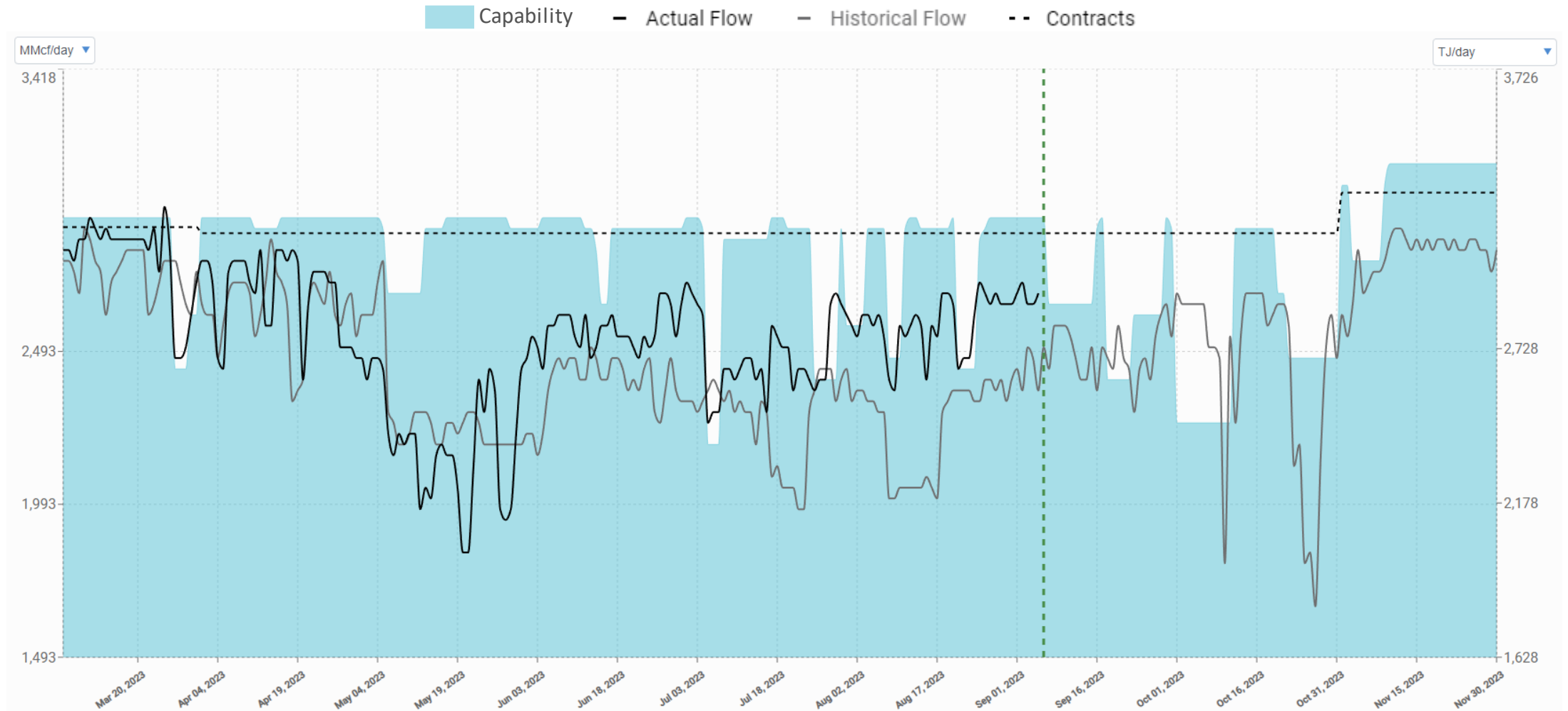
Outage Description	Start	End	USJR Outage Capability (10 ⁶ m ³ /d)	USJR Impact (10 ⁶ m ³ /d)	Area Outage Capability (10 ⁶ m ³ /d)	Outage Area Typical Flows (10 ⁶ m ³ /d)	Service Allowable Location/Area
NPS 24 North Central Corridor – Pipeline Maintenance	8-Sep-23	13-Sep-23	360	10	233	180 - 220	Potential impact to FT-R USJR U/S Latornell
Otter Lake – Compressor Station Maintenance	11-Sep-23	16-Sep-23	357	13	230	180 - 220	Potential impact to FT-R USJR U/S Latornell
Saddle Hills B3 – Compressor Station Maintenance	18-Sep-23	27-Sep-23	357	13	230	180 - 220	Potential impact to FT-R USJR U/S Latornell
Meikle River D5 – Compressor Station Maintenance	30-Sep-23	6-Oct-23	353 (Sep) 357 (Oct)	17	226	180 - 220	Potential impact to FT-R USJR U/S Latornell
Clearwater – Compressor Station Maintenance	10-Oct-23	14-Oct-23	364	10	N/A	320 - 350	Potential impact to FT-R USJR
Latornell A1 – Compressor Station Maintenance	10-Oct-23	23-Oct-23	368	6	N/A	320 - 350	Potential impact to FT-R USJR
NPS 42 Grande Prairie Mainline Loop – Pipeline Modifications	30-Oct-23	9-Nov-23	367 (Oct) 370 (Nov)	7	N/A	320 - 350	Potential impact to FT-R USJR

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Alberta-B.C. Border

(includes both NGTL and Foothills BC outages)



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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 Western Alberta System Mainline – Pipeline Maintenance	7-Sep-23	12-Sep-23	75	8	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Crowsnest B – Compressor Station Maintenance	13-Sep-23	15-Sep-23	75	8	Potential Impact to FT Foothills BC
Turner Valley A3 – Compressor Station Maintenance	18-Sep-23	20-Sep-23	79	4	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Elko – Compressor Station Maintenance	18-Sep-23	22-Sep-23	68	15	Potential Impact to FT Foothills BC
NPS 48 Western Alberta System Mainline Loop 2 – Pipeline Modifications	18-Sep-23	28-Sep-23	74	9	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 36 Western Alberta System Mainline (Seg 1) – Pipeline Modifications	1-Oct-23	11-Oct-23	64	19	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segment 22 and Partial 21
NPS 36 Western Alberta System Mainline (Seg 2) – Pipeline Modifications	1-Oct-23	11-Oct-23	64	19	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 48 BC Mainline Loop – Pipeline Modifications	1-Oct-23	11-Oct-23	64	19	Potential Impact to FT Foothills BC
Crowsnest K – Compressor Station Maintenance	2-Oct-23	11-Oct-23	75	8	Potential Impact to FT Foothills BC

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

This slide may not be accurate beyond the September 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

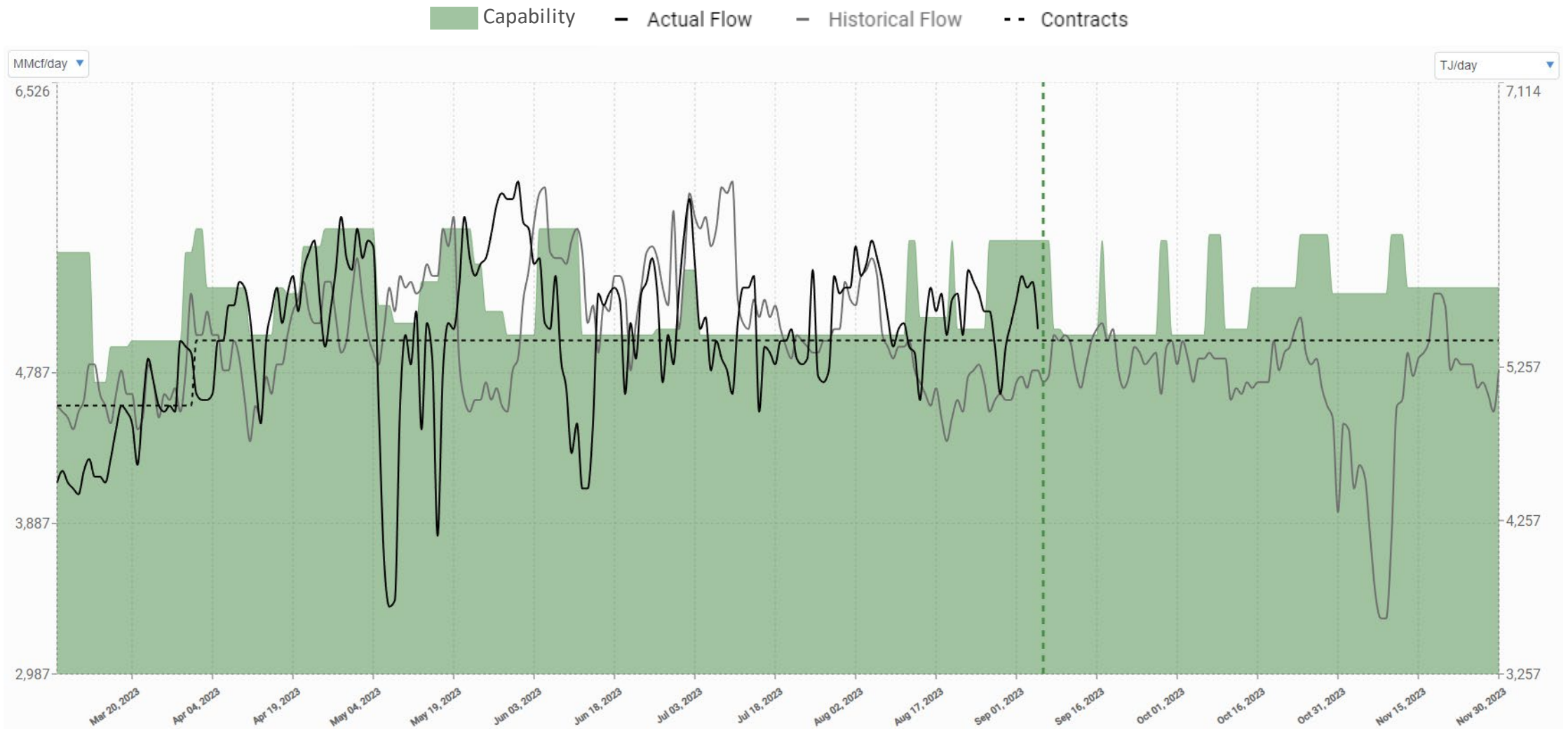
Outage Description	Start	End	Capability (10 ⁶ m ³ /d)	Impact (10 ⁶ m ³ /d)	Service Allowable Location/Area
Turner Valley A1 & A2 – Compressor Station Maintenance	20-Oct-23	31-Oct-23	76	7	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Turner Valley – Compressor Station Maintenance	22-Oct-23	31-Oct-23	70	13	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 42 Western Alberta System Mainline Loop – Pipeline Modifications	1-Nov-23	9-Nov-23	87	1	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 42 FPL Zone 8 Segment 2A – Pipeline Maintenance	3-Nov-23	8-Nov-23	79	9	Potential Impact to FT Foothills BC
NPS 36 Western Alberta System Mainline – Pipeline Maintenance	16-Nov-23	22-Nov-23	75	13	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

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



East Gate



This slide may not be accurate beyond the September 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 – Compressor Station Maintenance	10-Oct-23	14-Oct-23	143	16	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Clearwater A1 & A5 – Compressor Station Maintenance	16-Oct-23	20-Oct-23	155	4	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Clearwater A6 – Compressor Station Maintenance	6-Nov-23	19-Nov-23	150	9	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-Nov-23	30-Nov-23	150	9	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28

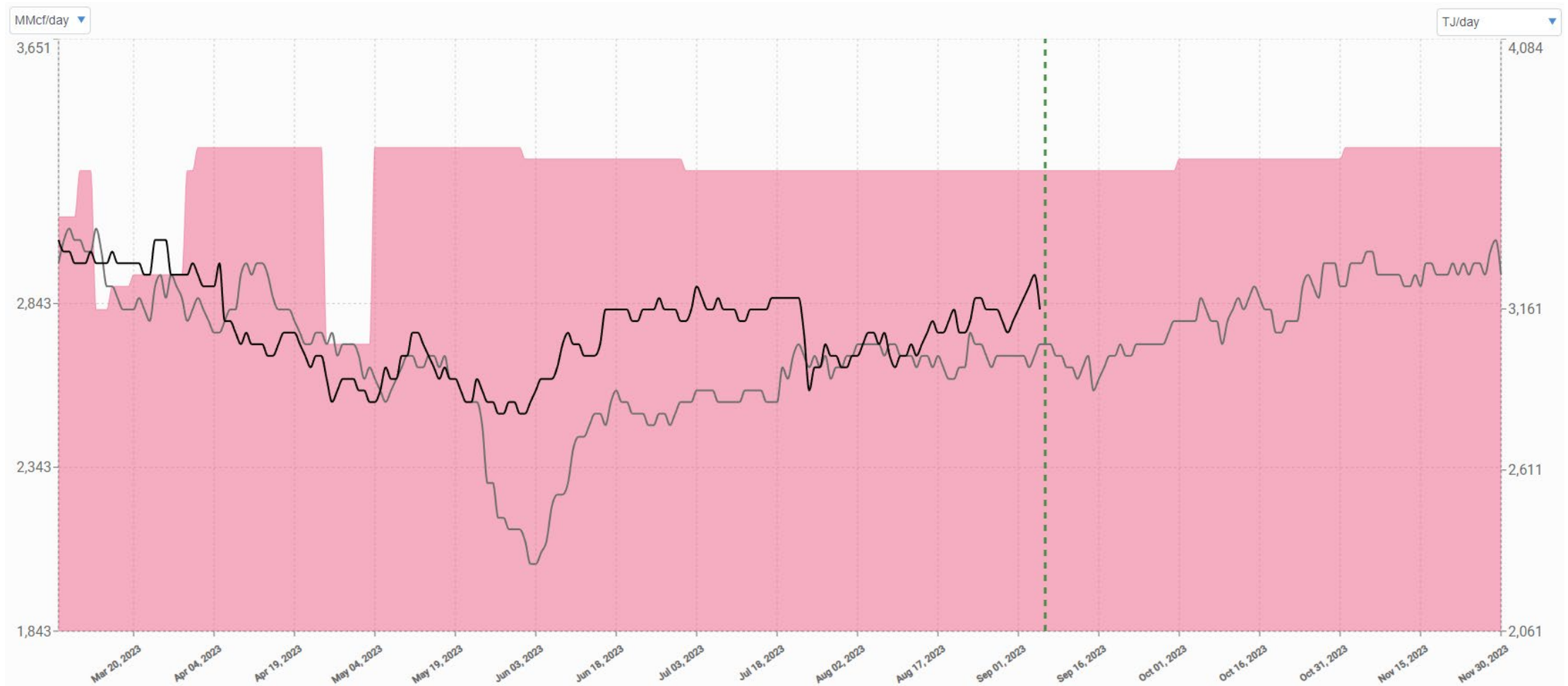
Note: Outages located in the USJR area show up in the EGAT table in DOP to indicate a broad area restriction could be applied to reduce flows through the bottleneck but have been excluded from this slide to avoid duplication

This slide may not be accurate beyond the September 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



This slide may not be accurate beyond the September 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

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

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



Plant Turnaround Information



Reminder: Plant Turnaround Information

- Where possible, we will continue to make all efforts to align maintenance with customer maintenance activities to maximize coordination opportunities and minimize impacts
- All customer specific information received will remain strictly confidential within the outage planning and coordination teams

Most common places to find the form:

- Customer Express
- Bottom of the Daily Operation Plan (DOP)

Where to send the form: ab_bc_ops_planning@tcenergy.com

The image shows a screenshot of a web form titled "PLANT TURNAROUND INFORMATION FORM" with the TC Energy logo in the top right corner. The form includes the following sections:

- Date:** A text input field.
- Email to:** ab_bc_ops_planning@tcenergy.com
- Your Contact Information:** Fields for Your Name, Company Name, Phone, Secondary Phone (Optional), and Email.
- Please select one of the following:** Two checkboxes: Information for new Plant Turnaround and Update to existing Plant Turnaround information.
- Plant Turnaround Information:** Fields for NGTL Meter Station Name, NGTL Meter Station Number, Start Date, End Date, Start Time, and End Time.
- Type of Plant Turnaround:** Two checkboxes: Complete Turnaround (Zero Flow) and Partial Turnaround. Below the Partial Turnaround checkbox are two input fields: "Expected Flow during turnaround: 10^m/d" and "Typical Flow: 10^m/d".
- Additional Comments:** A large text area for notes.

At the bottom of the form, it says: "Email this form to: ab_bc_ops_planning@tcenergy.com. Direct any questions to the Pipeline @ (403) 920-7473."

Please report your maintenance and turnaround schedules for the remainder of 2023 and beyond
Click [HERE](#) for the PTA form

CONTACTS



MARKETING REPS

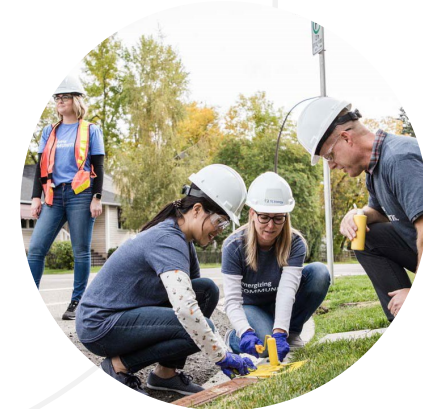
[Customer Express Contacts
\(tccustomerexpress.com\)](https://tccustomerexpress.com)

MINH BADAU

Chair, NGTL/FH Customer Ops

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minh_badau@tcenergy.com



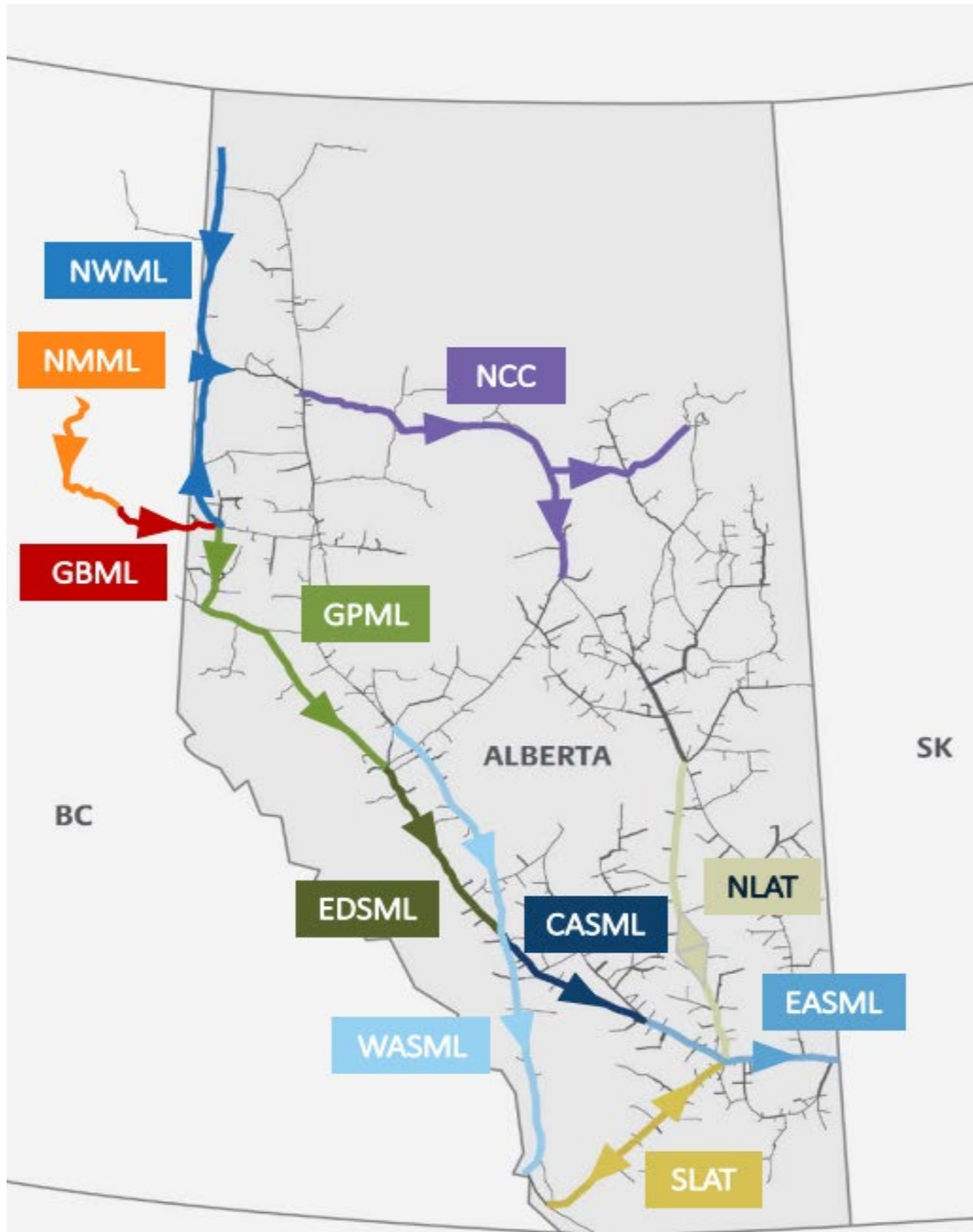
Glossary of Terms

- ❖ **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)