

NGTL System and Foothills Pipelines Ltd.

CUSTOMER OPERATIONS MEETING

SEPTEMBER 13, 2022

FOR INFORMATIONAL PURPOSES ONLY

Welcome and Thank You for Joining Us

Participating via WebEx:

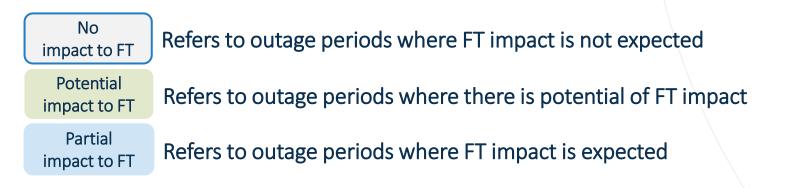
- Please sign-in through WebEx application <u>including your full name and company</u>
- To reduce background noise and improve audio quality, all WebEx participants will be placed on mute when entering the meeting
- Please submit your questions via using the raise hand function and coming off mute or 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.



Important Notes

Outage information in this presentation may not be accurate beyond the September 13, 2022 NGTL/Foothills Customer Operations (WebEx only) meeting For current outage information, please refer to the most recent Daily Operating Plan (DOP) on <u>my.TC Customer Express</u>

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This meeting covers operational and projectrelated topics on the NGTL and Foothills systems. For information on focused Commercial and Regulatory topics, please contact your Marketing Representative

Agenda



- 1. Projects Update
- 2. Review of August Operations
- **3**. Review of DOP Outages
- 4. Bulletins and Advisory Bulletins Overview
- 5. Verbal Updates / Q&A

Safety: our first core value



Believe zero is real

All harm, loss and incidents are preventable



Do it right Today's quality is tomorrow's safety



Take action

Stop unsafe work, actions and behaviours at work and at home 24/7



Learn from each other

Share and apply what we learn



Care and protect

Nothing is more important than the well-being of:

- Our people
- The communities we live and operate in
- The environment

Safety Innovation Integrity Responsibility Collaboration

Zero

is real

Project Updates

FOR INFORMATIONAL PURPOSES ONLY

2021 Expansion Project Update – ISD Summary (since August 11, 2022 update)



FOR INFORMATIONAL PURPOSES ONLY

2021 Expansion Project Update (since Aug 11, 2022 update)

Facilities already in-service (Map I.D. # 1, 2, 3, 4, 8, 9)

Deep Valley South (DVS) (Map I.D. # 5)

- Activities remaining: Caliper, anomaly digs and commissioning
 - Hydrotest successful, caliper run complete and anomaly digs have commenced
- ISD expected October 2022 (*no change from last communication)

Colt (Map I.D. # 5)

- Activities remaining: ~ 9 km of mainline
 - Construction has commenced in high ground areas
- ISD expected Q1 2023 (*no change from last communication)

3 km of Pipe Adjacent to Little Smoky R that connects DVN/DVS (Map I.D. # 4)

- Activities remaining: ~ 3 km of mainline
 - February 15th Caribou RAP
 - Accelerating mainline construction into Q4
- ISD expected Q1 2023 (*no change from last communication)

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 team continues to evaluate opportunities to expedite construction safely and in compliance with applicable regulatory requirements



Other Project Updates – ISD Summary

NGTL Projects: No changes to estimated in-service dates since last update

Edson Mainline Expansion	ISD Nov 2022
North Corridor Expansion	Bear Canyon, North Star, Red Earth, Hidden Lake North U/A (ISD Apr 2023)
Intra-Basin Expansion	Sunrise, Saturn, Saddle Hills U/A (ISD Nov 2023) Emerson Creek C/S (ISD April 2024)
WestPath 2022/2023	ABC and Raven (ISD Nov 2022) Turner Valley, Lundbreck and Longview (ISD Nov 2023)

Yahk Section Loop	ISD Dec 2022, with potential for Jan 2023 ISD
Elko Section Loop	ISD Nov 2023

Other Project Updates – NGTL

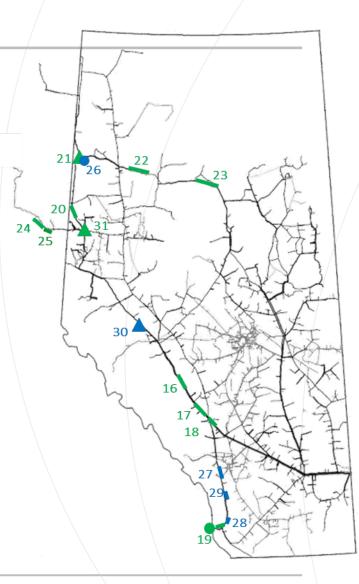
Edson Mainline Expansion

- Elk River (Map I.D. # 16) mainline construction on track to meet ISD
- Alford Creek (Map I.D. # 17) mainline construction on track to meet ISD
- ISD November 2022

North Corridor Expansion (Bear Canyon (Map I.D. # 20), North Star (Map I.D. # 22), Red Earth(Map I.D. # 23), Hidden Lake North U/A (Map I.D. #21))

- North Star Construction has kicked off with ROW preparation and camp site preparation is ongoing
- Construction plans continue to be assessed to mitigate risks around Caribou Restrictive Activity Period (RAP) on sections of Red Earth
 - All sections are required to be in service for full NCE capacity
- Hidden Lake North Unit Addition on track
- ISD April 2023

Note: EDML/Clearwater/West Path 2022 capacity requires 100% of NGTL 2021 Expansions to be in service





Other Project Updates – NGTL

Intra-Basin Expansion (Sunrise (Map I.D. # 24), Saturn (Map I.D. # 25), Emerson Creek C/S (Map I.D. #30), Saddle Hills U/A (Map I.D. #31))

- Sunrise Prime contractor mobilizing to site
- Saturn pending BC OGC permits continue consultation with Rightsholder (ISD November 2023)
- Emerson Creek C/S construction commenced in July (ISD April 2024)

West Path 2022/2023

- Raven (Map I.D. # 18) / ABC (Map I.D. # 19) Mainline construction on track
 - ISD November 2022
- Turner Valley (Map I.D. # 27) /Lundbreck (Map I.D. # 28) /Longview (Map I.D. # 29)
 - CER issued Recommendation report in May 2022. On July 19, 2022, NGTL received notice that the Governor in Council (GIC) decision to grant the Certificate of Public Convenience and Necessity for the NGTL West Path 2023 project had been delayed into November 2022
 - Working closely with other federal agencies to provide the required information for outstanding permits and land rights
 - ISD November 2023

Note: EDML/Clearwater/West Path 2022 capacity requires 100% of NGTL 2021 Expansions to be in service

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Other Project Updates – FH

West Path 2022/2023

- Yahk (Map I.D. # 1)
 - Grade and blasting progressing
 - Watercourse and road crossing installations are underway
 - ISD earliest December 2022, potentially into January 2023
 - This delay is not expected to further impact pending contracts that are impacted by the delay in the full completion of 2021 SXP
- Elko (Map I.D. # 2)
 - Clearing is largely complete. Grade and blast progressing
 - Working closely with municipal and federal agencies to provide the required information for outstanding permits and land rights
 - ISD November 2023

Note: WestPath 2022 capacity requires 100% of NGTL 2021 Expansions to be in service

CROWSNEST No.1 CS

ELKO No.2A CS

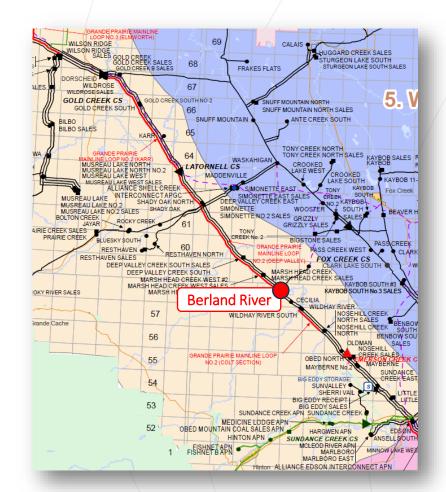
Review of August Operations

Berland River Compressor Station Maintenance

Background:

- Planned:
 - Berland River A2 Compressor Unit Maintenance: Aug 8 19
 - Berland River Compressor Station Maintenance: Aug 15 19
- Capability communicated in DOP:
 - USJR: 325 10⁶m³/d (A2 Unit), 321 10⁶m³/d (Station)
 - EGAT: 138 10⁶m³/d (A2 Unit), 133 10⁶m³/d (Station)
- Service Allowable:
 - USJR: 0% IT-R
 - Lower EGAT: Partial IT-D, 100% FT-D

Bulletin Date	Effective Date	Service Allowable	Comments
Aug 3	Aug 8 (08:00 MST)	USJR: 0% IT-R Lower EGAT: Partial IT-D, 100% FT-D	Bulletin issued
			Compressor maintenance completed as scheduled on Aug 19







Latornell Compressor Station Maintenance

Background:

- Planned Latornell Compressor Station Maintenance: Aug 21 26
- Capability communicated in DOP:
 - USJR: 326 10⁶m³/d
 - EGAT: 138 10⁶m³/d
- Service Allowable:
 - 0% IT-R (Upstream of Berland River)
 - Partial IT-D, 100% FT-D (Downstream of Berland River, including Lower EGAT)

Bulletin Date	Effective Date	Service Allowable	Comments
Aug 17	Aug 21 (08:00 MST)	0% IT-R (Upstream of Berland) Partial IT-D, 100% FT-D (Downstream Berland)	Bulletin issued
Aug 26			A2 unit returns to service as scheduled A1 unit outage delayed until August 29



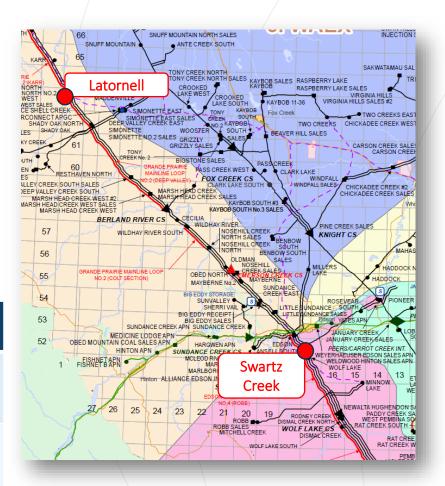


Swartz Creek A1 + Latornell A1 Compressor Station Maintenance

Background:

- Unplanned:
 - Swartz Creek A1 Compressor Station Maintenance (Returned Aug 26)
 - Extension of Latornell A1 Compressor Unit Maintenance (Returned Aug 29)
- Capability:
 - USJR: 319 10⁶m³/d
 - EGAT: 131 10⁶m³/d
- Service Allowable (in consideration of other planned outages starting Aug 27):
 - USJR: 0% IT-R
 - Greater EGAT: Partial IT-D, 100% FT-D

Effective Bulletin Service Allowable Comments Date Date Bulletin issued for planned USJR: 0% IT-R Aug 26 Aug 24 Woodenhouse C3, Otter Lake A1, and (08:00 MST) Greater EGAT: Partial IT-D, 100% FT-D Hidden Lake North outages Unplanned outage at Swartz Creek C/S (returned same day) Aug 26 Unplanned extension of Latornell A1 unit work until Aug 29





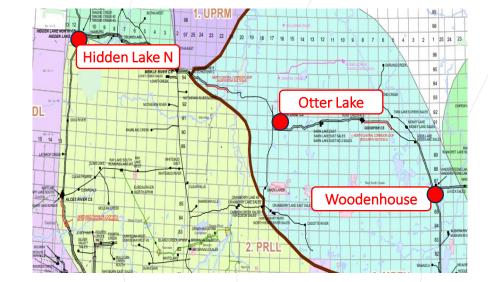
Woodenhouse C3 + Otter Lake A1 + Hidden Lake North Compressor Station Maintenance

Background:

- Planned:
 - Woodenhouse C3 Compressor Station Maintenance: Aug 27 Sept 2
 - Otter Lake A1 Compressor Station Maintenance: Aug 27 Sept 2
 - Hidden Lake North Compressor Station Maintenance: Aug 28 Sept 7
- Capability communicated in DOP:
 - USJR: 324 10⁶m³/d (Aug), 336 10⁶m³/d (Sept)
 - EGAT: 137 10⁶m³/d (Aug), 137 10⁶m³/d (Sept)
- Service Allowable:
 - USJR: 0% IT-R
 - Greater EGAT: Partial IT-D, 100% FT-D

Bulletin Date	Effective Date	Service Allowable	Comments
Aug 24	Aug 26 (08:00 MST)	USJR: 0% IT-R Greater EGAT: Partial IT-D, 100% FT-D	Bulletin issued
Sept 1	Sept 8 (08:00 MST)	USJR: 0% IT-R Lower EGAT: Partial IT-D, 100% FT-D	Compressor maintenance completed as scheduled





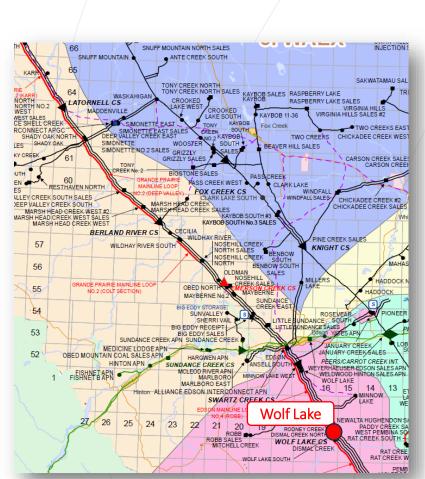


Wolf Lake Compressor Station Maintenance

Background:

- Planned:
 - Wolf Lake A3 Compressor Station Maintenance (Ongoing): Sep 7 18
- Capability:
 - USJR: 343 10⁶m³/d
 - EGAT: 145 10⁶m³/d
- Service Allowable:
 - USJR: 0% IT-R
 - Lower EGAT: Partial IT-D, 100% FT-D

Bulletin Date	Effective Date	Service Allowable	Comments
Sep 1	Sep 8 (08:00 MST)	USJR: 0% IT-R Lower EGAT: Partial IT-D, 100% FT-D	Bulletin issued for planned Wolf Lake A3 C/S Maintenance
Sep 18			Compressor maintenance on track to be completed as scheduled

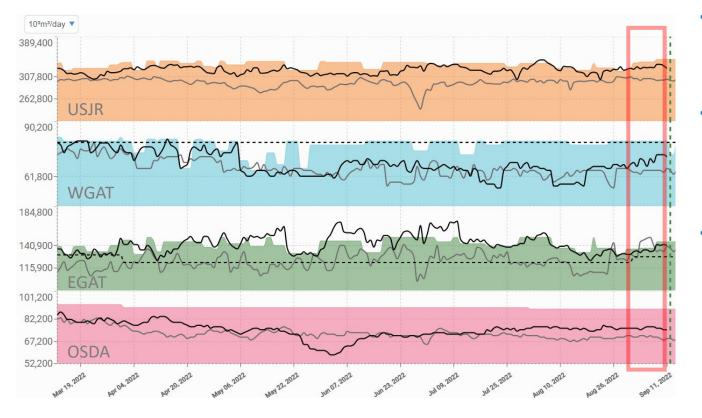




EGAT Authorization Levels



Why was the EGAT authorization level below the stated capacity in DOP?



Higher Ambient Temperatures

• High ambient temperatures across the province resulting in lower system throughput efficiency

Higher West Gate demand

 Higher WGAT demand due to completion of downstream interconnecting maintenance that had been limiting flows down the full path

Strong supply in West of Saddle area

- Supply in the West of Saddle area remained strong and mostly unchanged despite the broad area restriction in place
- Field receipts decreased in USJR; however, was in areas with a lower hydraulic equivalency requiring a further reduction in EGAT authorization to manage supply upstream of the bottleneck

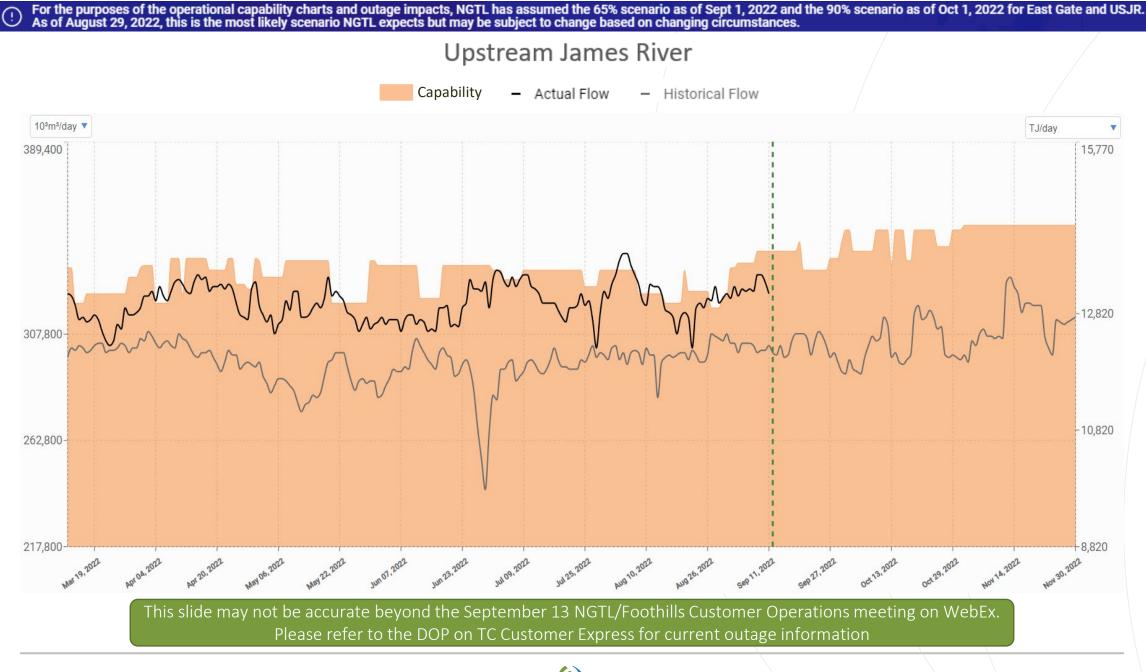
Review of DOP Outages From DOP as of Monday, September 12

Daily Operating Plan (DOP) – Current Assumptions

- Contracts tied to Deep Valley North (65% scenario) declared on September 1, 2022
- September 1 to 30, 2022 assumes all 2021 expansion facilities are in-service with the exception of Deep Valley South, Colt section and 3km of pipeline adjacent to Little Smoky River that connects to DVN/DVS
- Beyond October 1, 2022 assumes all 2021 expansion facilities are in-service with the exception of the Colt section and 3km of pipeline adjacent to Little Smoky River that connects to DVN/DVS (90% scenario)

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 ongoing and we will continue focus on safety, optimizing system capacity, and minimizing outage impacts.



For the purposes of the operational capability charts and outage impacts, NGTL has assumed the 65% scenario as of Sept 1, 2022 and the 90% scenario as of Oct 1, 2022 for East Gate and USJR. As of August 29, 2022, this is the most likely scenario NGTL expects but may be subject to change based on changing circumstances.

Upstream James River Receipt Area (USJR)

No impact to FT Partial impact to FT

Potential

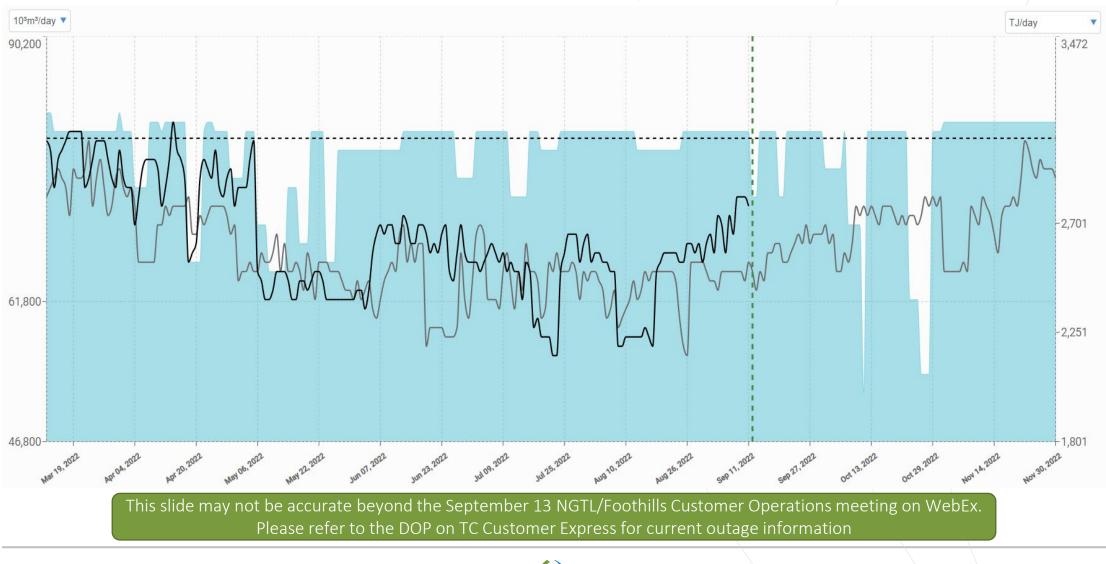
impact to FT

Outage Description	Start	End	USJR Outage Capability (10 ⁶ m³/d)	USJR Impact (10 ⁶ m ³ /d)	Area Outage Capability (10 ⁶ m³/d)	Outage Area Typical Flows (10 ⁶ m³/d)	Service Allowable Location/Area
Wolf Lake A3 – Compressor Station Maintenance	7-Sept-22	18-Sept-22	343	4	N/A	180-370	Potential impact to FT-R USJR
Nordegg B3 & B5 – Compressor Station Maintenance	20-Sept-22	26-Sept-22	335	12	N/A	280-370	Potential impact to FT-R USJR
Meikle River B2 – Compressor Station Maintenance	27-Sept-22	29-Sept-22	340	7	N/A	180-370	Potential impact to FT-R USJR
Otter Lake – Compressor Station Maintenance	3-Oct-22	8-Oct-22	343	9	N/A	180-370	Potential impact to FT-R USJR
Saddle Hills B3 – Compressor Station Maintenance	13-Oct-22	13-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	18-Oct-22	339	13	N/A	180-370	Potential impact to FT-R USJR
Alces River – Compressor Station Maintenance	17-Oct-22	18-Oct-22	340	12	N/A	780-370	Potential impact to FT-R USJR
Clearwater – Compressor Station Maintenance	25-Oct-22	28-Oct-22	345	7	N/A	180-370	Potential impact to FT-R USJR

This slide may not be accurate beyond the September 13 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)



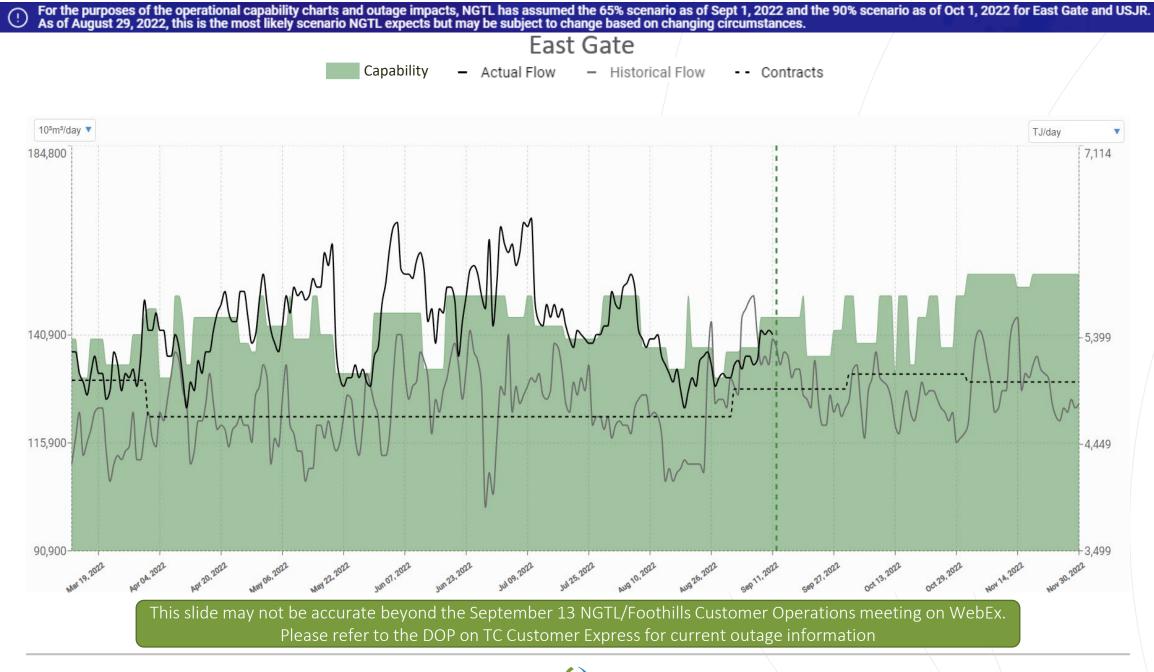
For the purposes of the operational capability charts and outage imp As of August 29, 2022, this is the most likely scenario NGTL expects	acts, NGTL has a but may be subje	ssumed the 65% ect to change bas	scenario as of Ser ed on changing ci	ot 1, 2022 and th rcumstances.	ne 90% scena	ario as of Oct 1, 2022 for East Gate and USJR.
West Gate Delivery Area (WGAT)					No	Potential Partial
Foothills Zone 8 (FHBC)				imp	oact to FT	impact to FT impact to FT
Outage Description	Start	End	Capability/ Allowable (10 ⁶ m³/d)	Impact (10 ⁶ m³/d)	System	Service Allowable Location/Area
Crowsnest K – Compressor Station Maintenance*	12-Sept-22	13-Sept-22	73	7	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Burton Creek – Compressor Station Maintenance*	19-Sept-22	20-Sept-22	73	7	NGTL	Potential Impact to FT Alberta/BC and Alberta/Montana Borders
Turner Valley A1 and A2 – Compressor Station Maintenance*	<mark>1-Oct-22</mark>	<mark>5-Oct-22</mark>	<mark>76</mark>	<mark>4</mark>	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 42 Western Alberta System Mainline Loop – Pipeline Maintenance	<mark>7-Oct-22</mark>	10-Oct-22	<mark>70</mark>	<mark>10</mark>	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 42 Western Alberta System Mainline Loop – Pipeline Maintenance	11-Oct-22	11-Oct-22	52	28	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
NPS 36 BC Mainline – Pipeline Maintenance	23-Oct-22	25-Oct-22	<mark>62</mark>	<mark>18</mark>	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
NPS 36 BC Mainline – Pipeline Maintenance	26-Oct-22	28-Oct-22	54	26	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC

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

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 13 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information





For the purposes of the operational capability charts and outage impacts, NGTL has assumed the 65% scenario as of Sept 1, 2022 and the 90% scenario as of Oct 1, 2022 for East Gate and USJR.
As of August 29, 2022, this is the most likely scenario NGTL expects but may be subject to change based on changing circumstances.

East Gate Delivery Area (EGAT)					(No Potential Partial impact to FT impact to FT impact to
Outage Description	Start	End	Capability (10 ⁶ m ³ /d)	Impact (10 ⁶ m ³ /d)	System	Service Allowable Location/Area
Acme – Compressor Station Maintenance	12-Sep-22	18-Sep-22	<mark>145</mark>	5	FHAB	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Schrader Creek East A3 – Compressor Station Maintenance	17-Oct-22	21-Oct-22	145	5	FHAB	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Clearwater – Compressor Station Maintenance	25-Oct-22	28-Oct-22	138	12	NGTL	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	<mark>14-Nov-22</mark>	<mark>17-Nov-22</mark>	<mark>152</mark>	<mark>3</mark>	NGTL	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

Beyond these known events impacting EGAT capability, NGTL continues to execute plans to address concerns raised by landowners regarding noise levels at one of our compressor stations.

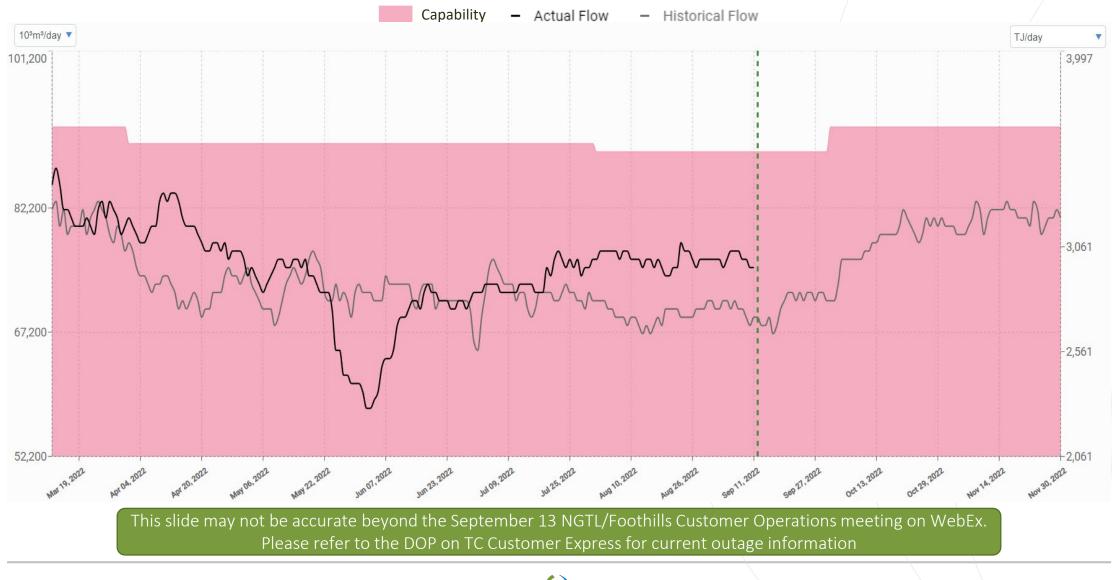
This slide may not be accurate beyond the September 13 NGTL/Foothills Customer Operations meeting on WebEx. Please refer to the DOP on TC Customer Express for current outage information

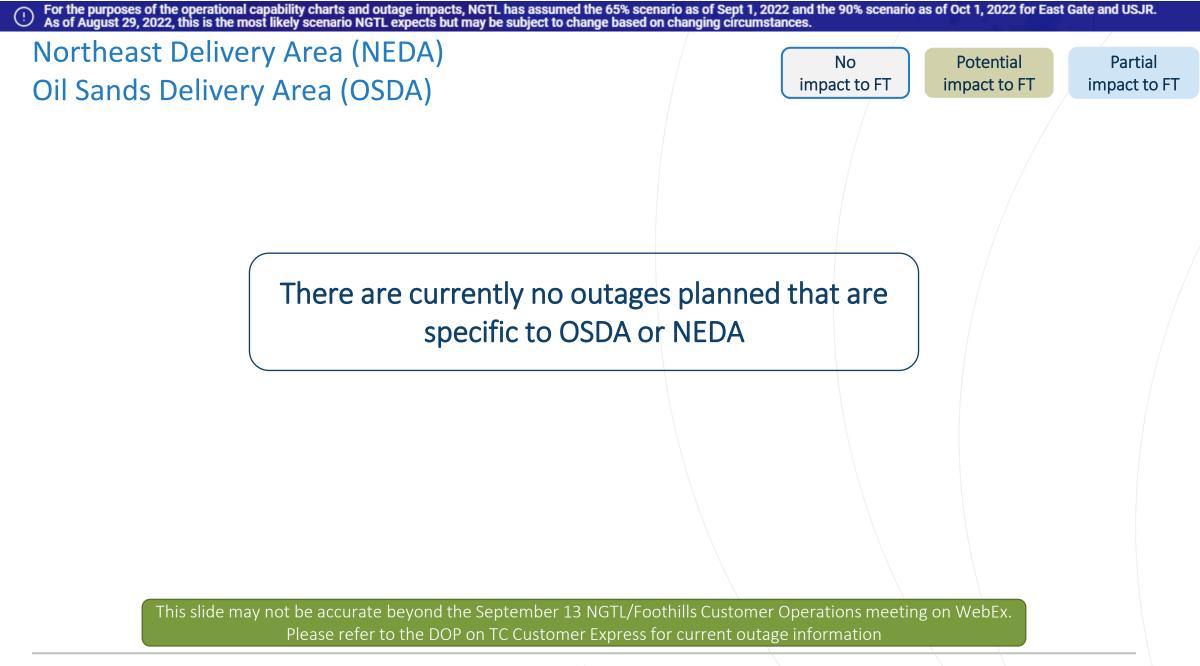


oothills Zone 9 (FHSK)					NoPotentialPartiaimpact to FTimpact to FTimpact to FT
Outage Description	Start	End	Capability (10 ⁶ m ³ /d)	System	Service Allowable Location/Area
PS 42 Foothills Mainline Zone 9 – Pipeline Maintenance	16-Nov-22	28-Nov-22	25	FHSK	No impact to FT anticipated Monchy Border Foothills Saskatchewan

Please refer to the DOP on TC Customer Express for current outage information







Bulletins and Advisories Overview

Service Bulletins

Purpose:

To communicate when there is a **change to** service authorization (FT or IT) or area of impact

Timing:

- Planned outages: 2 business days prior
- Unplanned outages: as early as possible before the next available nomination cycle (if immediate response required)

О т	C Ene	ergy				NG	TL	Non	-Crit	tica
lotice Ty	ype: Cap	acity Constr	aint Effect	tive Start	Date Tin	ne: Se	p 01,	2022 16:	35 CCT	-
	Servic	e (EGAT l'	T-D)							
			use C3, Otter Lake A1, an ments 2, 3, 4, 7, partial 8						-	id on sch
<u>NGAT:</u> N/A										
New Inform Updated Inf	nation	utages								
Outage ID	Start	End	Facility/Outage Name	9	Facility Type	e/Scope		Outage Type	Area of I	mpact
18374031	Aug 27, 20	22 Sep 02, 2022	Woodenhouse C3 and		Compressor			Planned	USJR, EG	
18372621	Aug 28, 20	22 Sep 07, 2022	Hidden Lake North		Compressor	Maintena	ance	Planned	USJR, EG	AT
18787620	Sep 07, 20	22 Sept 18, 2022	Wolf Lake A3		Compressor	Maintena	ance	Planned	USJR, EG	AT
18386862	Sep 20, 20	22 Sept 26, 2022	Nordegg B3 and B5		Compressor	Maintena	ance	Planned	USJR, EG	AT
Upstream J	ames River F	eceipt Area					_			
Effective:		August 27, 2022 at 0	08:00 MST	IT Allowable:	0%	IT-R	IT-S (re	eceipt)		
Expected Er	nd:	Until further notice		FT Allowable	:100%	FT-R	FT-P			
Interconnec	cts:	Aitken Creek, Big Ed	dy, Groundbirch East, Go	rdondale, Janua	ary Creek					
Segments:		2. 3. 4. 5. 7. partial (8. and partial 9							

Advisory Bulletins

Purpose:

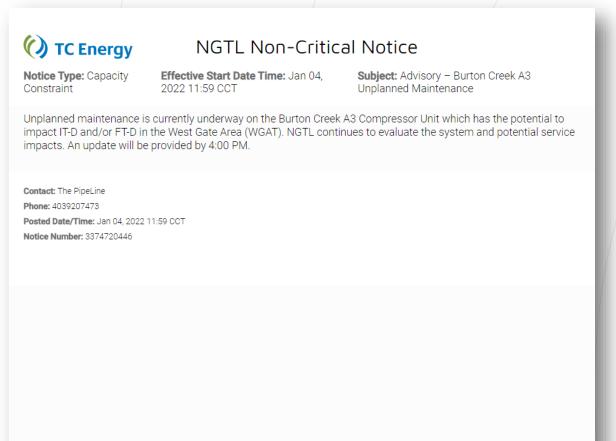
To communicate **unplanned outages** that may threaten **FT service**.

Typically:

- Cause of outage is under investigation
- Timeline for return to service unknown
- High risk to FT service if facility not returned in short order

Timing:

• As early as possible when there is risk FT service could be impacted



NGTL System Dashboard

Purpose:

To communicate **current and next gas day capacity.**

Timing:

• Every Morning at 8:30am

See Dashboard				
SHOW: E6M3 V	CAPABILITY AUTHORIZED *			CAPABILITY FORECAST *
Area	Current Gas Day (E6M3/day)	Current Gas Day FT **	Current Gas Day IT **	Next Gas Day (E6M3/day)
EGAT	145	100%	10%	145
WGAT		100%	100%	
Foothills SK		100%	100%	
Foothills BC		100%	100%	
OSDA		100%	100%	
Greater USJR	343	100%	0%	343
* <u>Bulletins</u> supercede any of this information Capability data updated daily at 8:30am MDT.				

** Authorized allowable percentage based on Evening Cycle Authorizations

NOTE: - Heating value assumed is 38.5, TC's default average

Capability data updated daily at 8:30am MDT. Last Updated: 2022-09-12

download historical CSV file (E6M3)

Verbal Updates & Q&A

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