



NGTL System and Foothills Pipelines Ltd.

CUSTOMER OPERATIONS MEETING

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

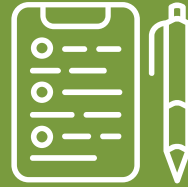
Refers to outage periods where FT impact is expected



Important Notes



Outage information in this presentation may not be accurate beyond the May 13, 2022 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



*Zero*week

Our value: *Zero*week brings us together

- All help to deliver safe, reliable and sustainable energy
- One vision across the company

Our focus: *Learn from each other*

- Learn from successes and errors
- Taking action to understand our safety culture
- Be an organization of problem solvers

Our Commitment

- Strong governance, responsible management and committed leadership

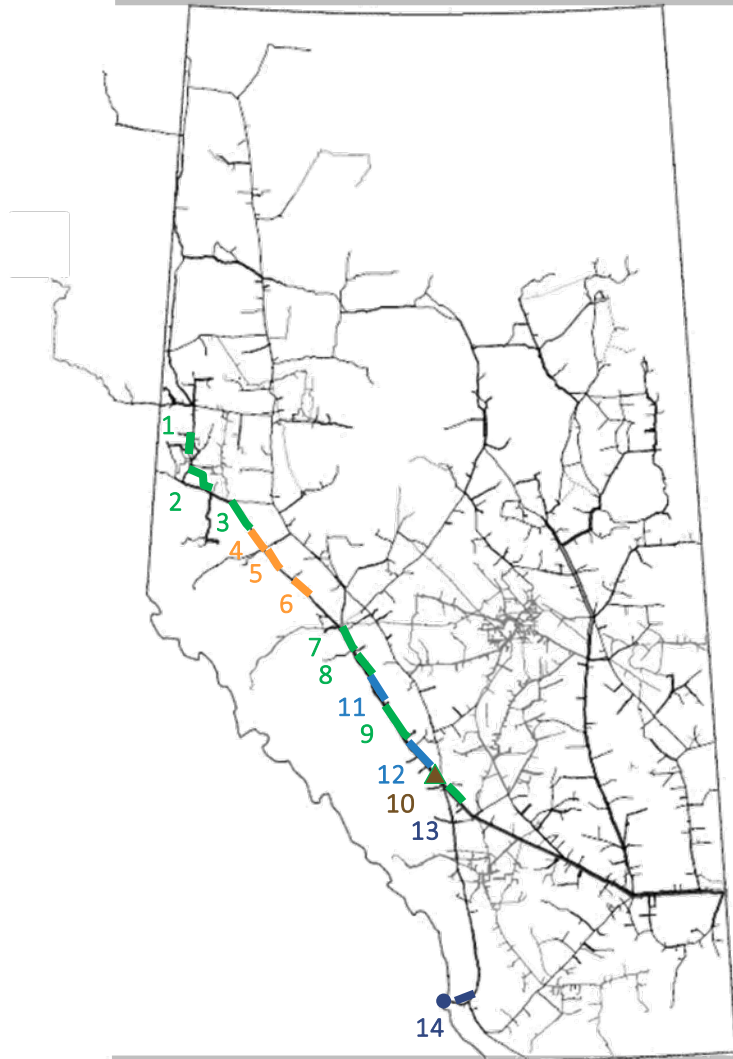
Agenda

1. 2021 Expansion Project Update
2. Review of DOP Outages
3. Open Floor & Verbal Updates



2021 Expansion Project Update

Facility Construction Status Illustration



<u>MAP I.D.</u>	<u>FACILITY</u>	<u>DESCRIPTION</u>	<u>Target In-Service Date</u>
1	GPML Loop No.4 (Valhalla)	36km NPS 48	In-service
2	GPML Loop No.3 (Elmworth)	44km NPS 48	In-service
3	GPML Loop No.2 (Karr)	57km NPS 48	In-service
4	GPML Loop No.2 (Deep Valley North)	69km NPS 48	Sept/Oct 2022**
5	GPML Loop No.2 (Deep Valley South)**	14km NPS 48	Q1 2023
6	GPML Loop No.2 (Colt Section)	42km NPS 48	May 2022*
7	Edson Mainline Loop No.4 (Robb)	32km NPS 48	In-service
8	Edson Mainline Loop No.4 (Dismal Creek)	49km NPS 48	In-service
9	Edson Mainline Loop No.4 (Brewster)		

In-service date uncertainty impacted by ground conditions and accessibility affecting construction and commissioning.

<u>MAP I.D.</u>	<u>FACILITY</u>	<u>DESCRIPTION</u>	<u>Target In-Service Date</u>
10	Clearwater CS Unit Addition & Coolers	30MW	In-service
11	Edson Mainline Loop No.4 (Elk River)	40km NPS 48	Nov-22
12	Edson Mainline Loop No.4 (Alford Creek)	45km NPS 48	Nov-22
13	Edson Mainline No. 4 (Raven River)	18km NPS 48	Nov-22
14	WASML Loop No. 2 (Alberta-BC) ABC Meter Station Expansion	6km NPS 48	Nov-22

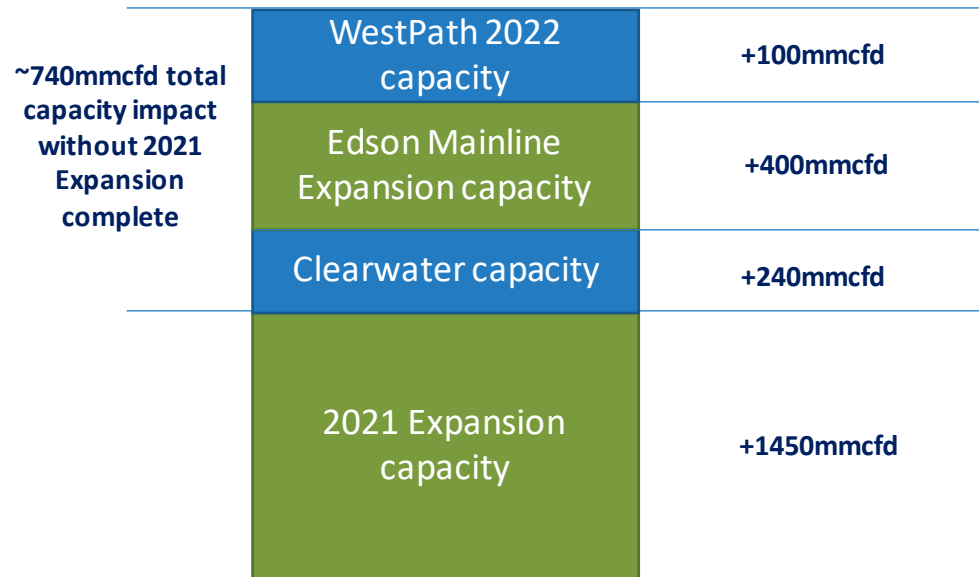
*Per the bulletin May = May or shortly thereafter

**Does not include Little Smoky River trenchless crossing and adjacent 3km of pipeline, which has a target in-service of Q1 2023

Until all 2021 Project facilities are completed and in-service, NGTL does not have system capacity to declare contracts dependent on Clearwater UA, EDML and West Path 2022



Design Capacity Illustration



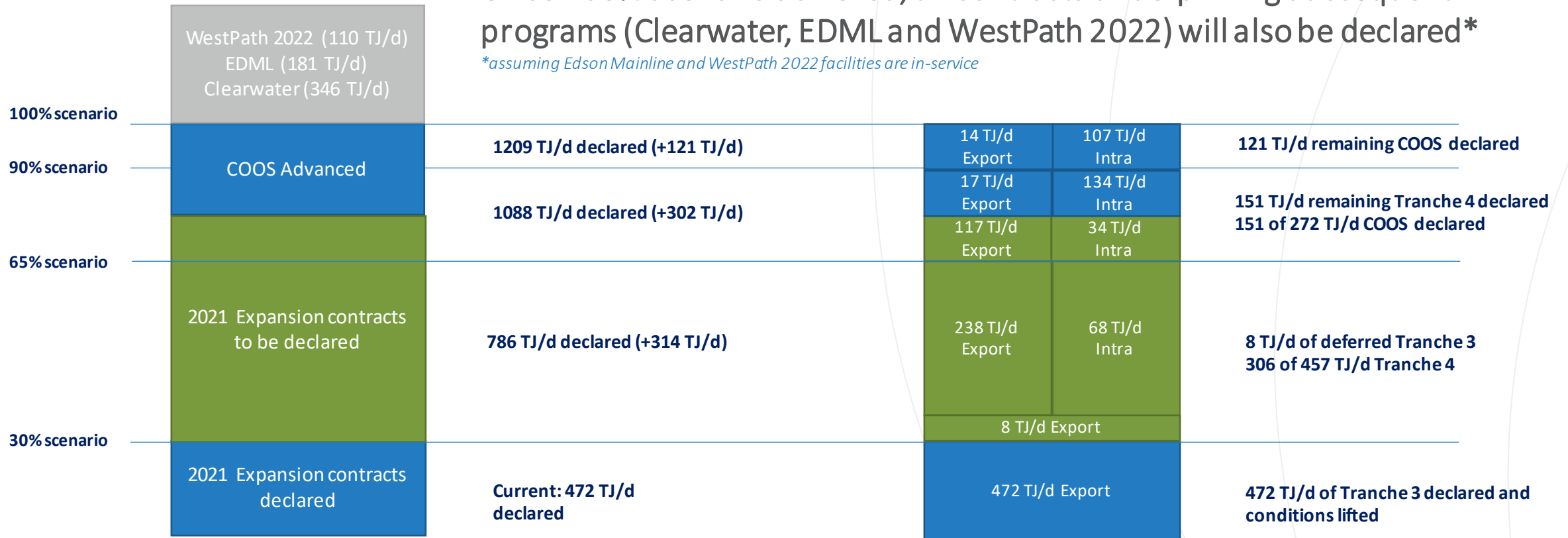
Design Capacity and contracts do not always match as NGTL designs to forecast design flows which are supported by existing and incremental contracts.



From April 22 Meeting: Contracts Priority Illustration

Once 100% scenario achieved, all contracts underpinning subsequent programs (Clearwater, EDML and WestPath 2022) will also be declared*

**assuming Edson Mainline and WestPath 2022 facilities are in-service*



Current view absent any potential mitigation options that may be identified



Generalized View of Design Capacity Staging

100% scenario	All 2021 SXP facilities in-service	Q1 2023
90% scenario	No Colt	Likely during September-October
65% scenario	One of Deep Valley North or South and no Colt	Likely during September-October
30% scenario	No Deep Valley North or South and no Colt	May or shortly thereafter

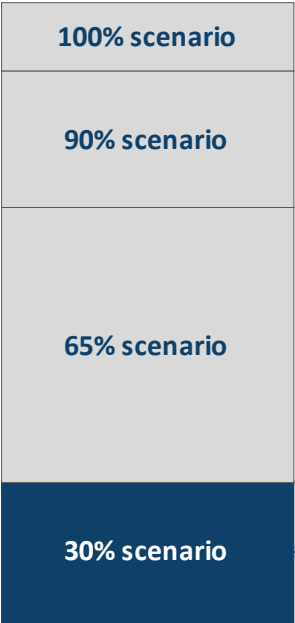
“The facilities that will provide the remaining 10% of the Project’s capacity require winter construction conditions and therefore NGTL anticipates being able to provide this capacity in the first quarter of 2023.”

“Construction will re-commence when the road access and ground conditions are conducive to resume activities outside of the environmentally sensitive areas, and, in mid-July 2022 when we can access the environmentally sensitive areas. NGTL continues to view the likely scenario for completion and in-service of facilities providing up to 1.3 Bcf/d (90%) of the Project’s capacity to be in September-October 2022.

“NGTL confirms that the last segment of pipe required to achieve 0.44 Bcf/d (30%) will be placed into service in May or shortly thereafter.”



What is Required to Reach 30%?



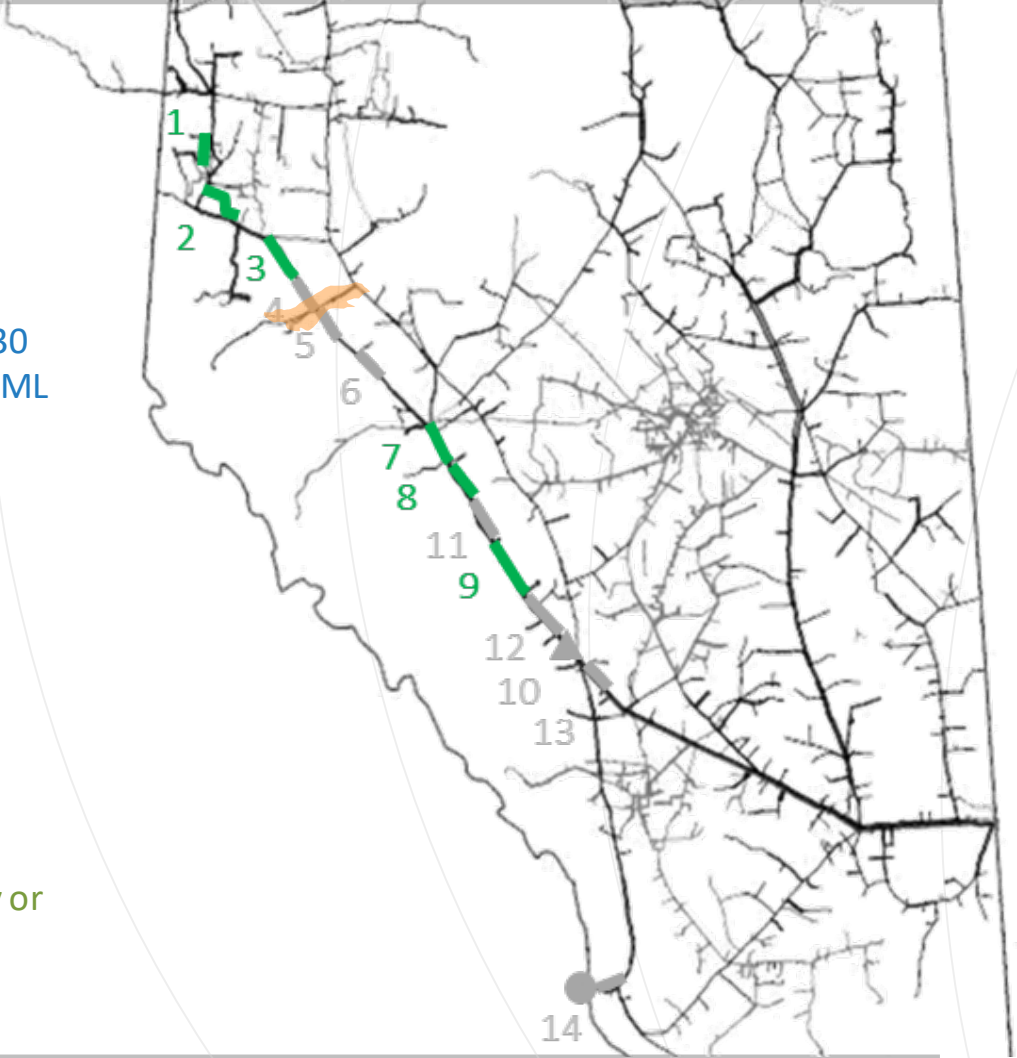
- Facilities already in-service (Map I.D. # 1, 2, 3, 8, 9)
- Robb (Map I.D. # 7)
 - Anomaly digs completed May 9
 - Final tie-ins commence May 16
 - Purge and load targeted for week of May 30
 - Commissioning scheduled after NPS 36 GPML ILI planned maintenance
 - In service currently scheduled for week of May 30

Not required for the 30%

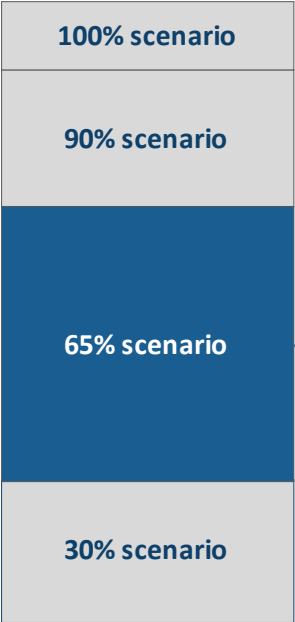
- Deep Valley North or South, Little Smoky River trenchless crossing and adjacent 3km of pipeline, Colt

Estimated in-service of 30% scenario

Completed and placed into service by the end of May or shortly thereafter



What is Required to Reach 65%?



- Deep Valley North (Map I.D. # 4)
 - Section 1 completed
 - Sections 2/3 anomaly digs required
 - Section 4 in service

OR,

- Deep Valley South (Map I.D. # 5)
 - **Activities remaining:** Hydrotest, caliper, anomaly digs and commissioning
 - Suspended hydrotest due to technical challenges

Not required for the 65%

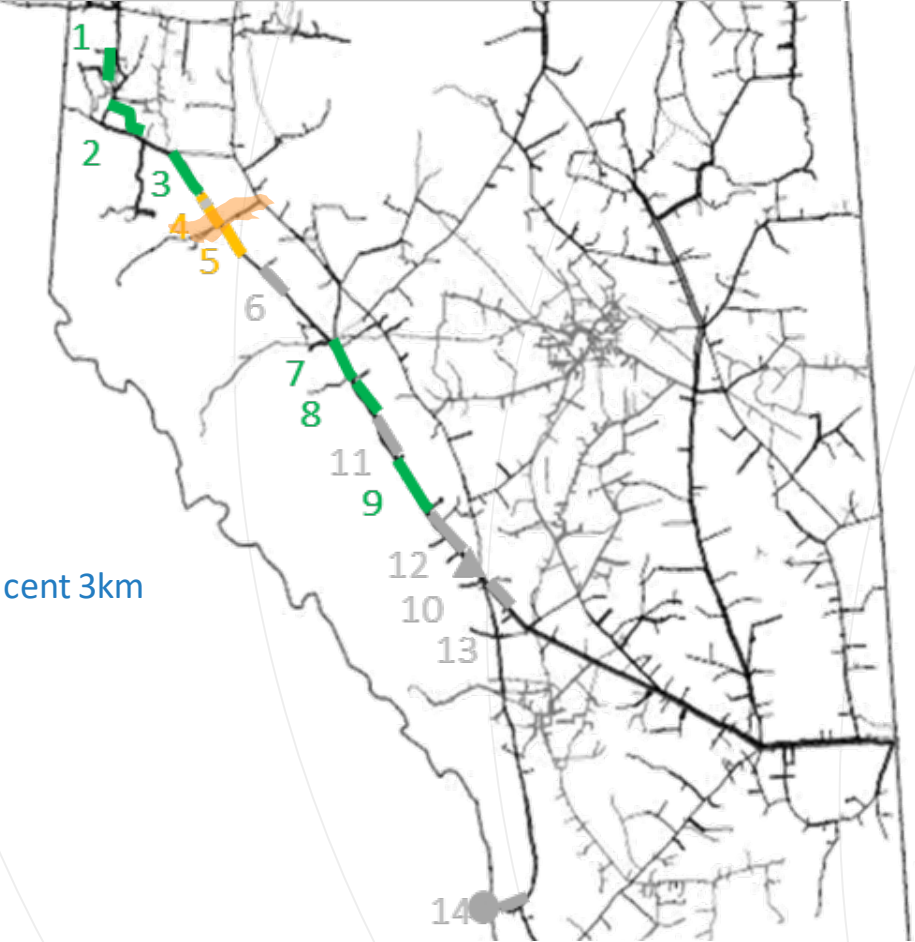
- Colt, Little Smoky River trenchless crossing and adjacent 3km of pipeline

Estimated in-service of 65% scenario

September/October 2022

Subject to

Ground conditions, weather & road access/conditions



Team continues to evaluate opportunities to expedite construction safely and within compliance



What is Required to Reach 90%?

100% scenario
90% scenario
65% scenario
30% scenario

- Deep Valley North (Map I.D. # 4)
 - Section 1 completed
 - Sections 2/3 – anomaly digs required
 - Section 4 in service

AND

- Deep Valley South (Map I.D. # 5)
 - **Activities remaining:** Hydrotest, caliper, anomaly digs and commissioning
 - Suspended hydrotest due to technical challenges

Not required for the 90%

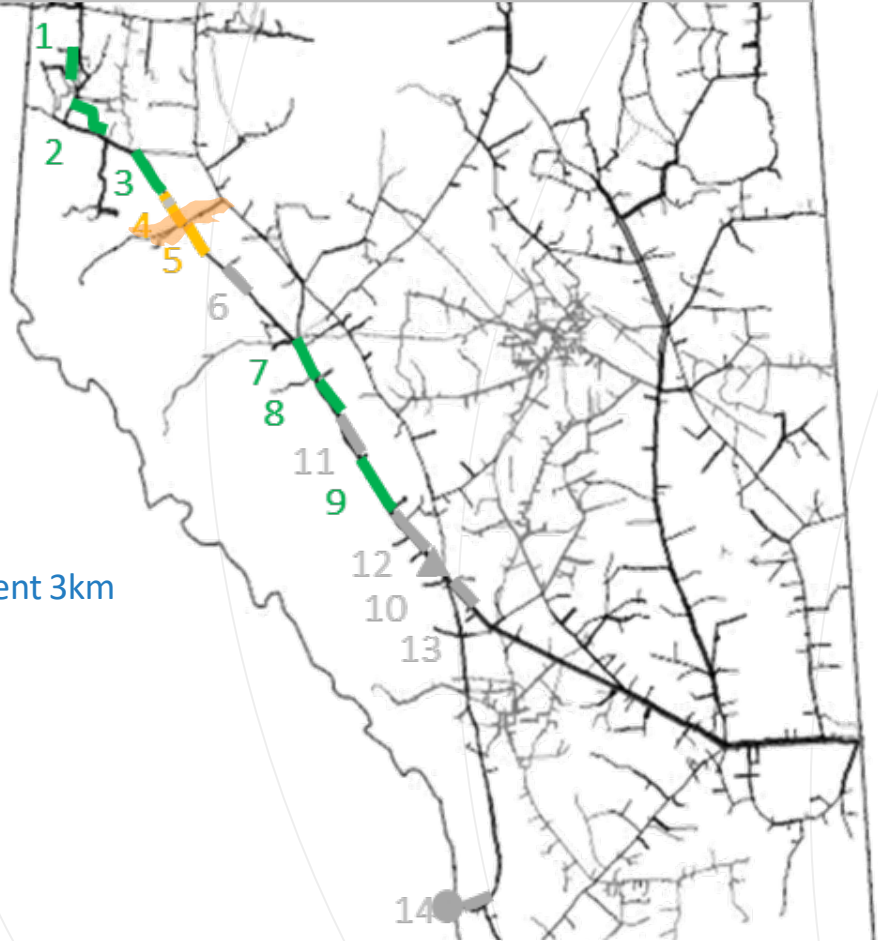
- Colt, Little Smoky River trenchless crossing and adjacent 3km of pipeline

Estimated in-service of 90% scenario

September/October 2022

Subject to

Ground conditions, weather & road access/conditions



Team continues to evaluate opportunities to expedite construction safely and within compliance



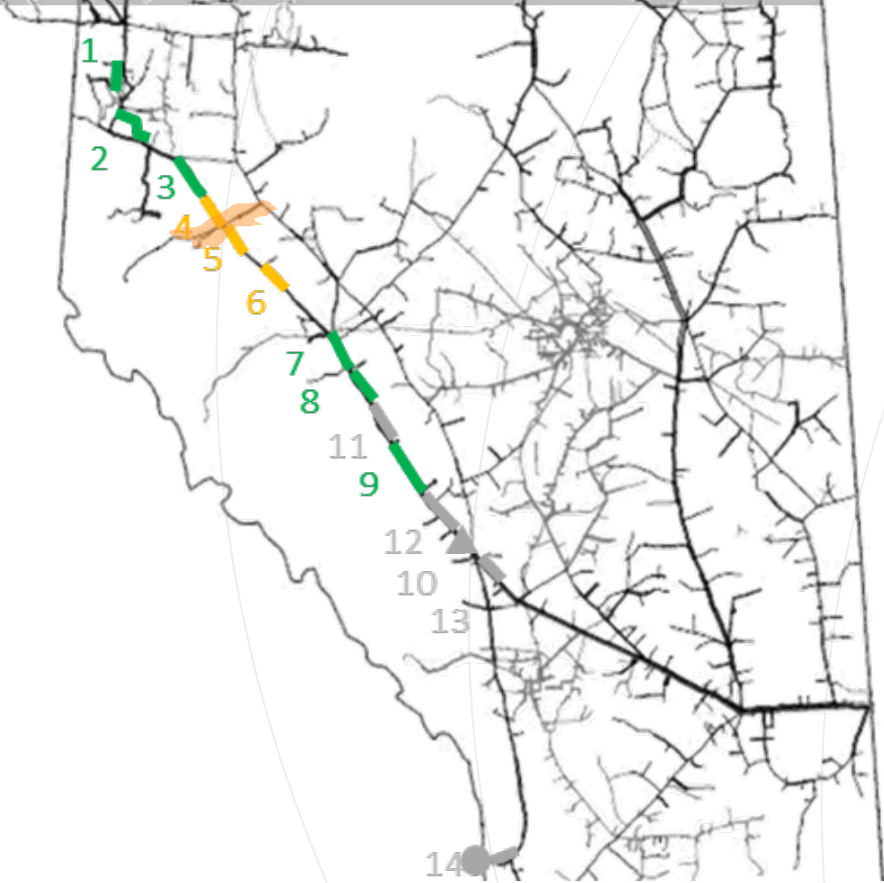
What is Required to Reach 100%?

100% scenario
90% scenario
65% scenario
30% scenario

- Little Smoky River Trenchless crossing and adjacent 3km of pipeline
- Colt (Map I.D. # 6)
 - 13 km of NPS 48

Estimated in-service of 100% scenario
Q1 2023

Subject to
Ground conditions, weather & road access/conditions



Review of DOP Outages

From DOP as of Thursday, May 12

Daily Operating Plan (DOP) – Update

Current Assumptions:

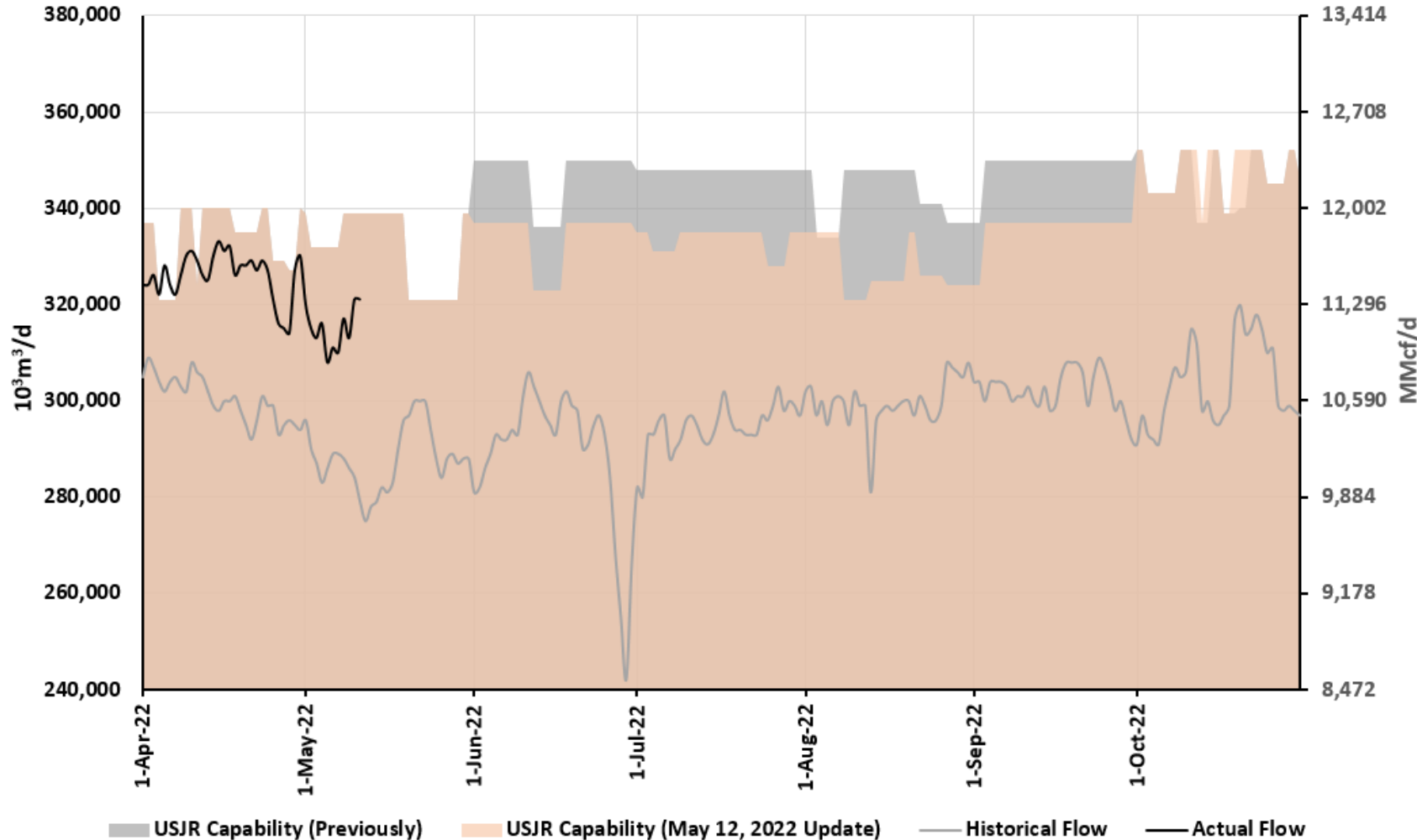
- April 1, 2022 through to September 30, 2022 assume all 2021 expansion facilities are in-service with the exception of the Deep Valley and Colt sections (comparable to 30% of the project's total capability on a design capacity basis)
- Beyond October 1, 2022 assumes all 2021 expansion facilities are in-service with the exception of the Colt section (comparable to 90% of the project's total capability on a design capacity basis)

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 focus on safety, optimizing system capacity, and minimizing outage impacts.



Upstream James River



May 12, 2022 Update:

- 30% scenario for April - Sept
- 90% scenario for October and beyond
- Outages added for communication: 4
- Days of outage impact eliminated resulting from scope and schedule optimization efforts: 9

This slide may not be accurate beyond the May 13, 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 Grande Prairie Mainline – Pipeline Maintenance	20-May-22	29-May-22	321	18	N/A	280-320	Potential impact to FT-R USJR
Goodfish – Compressor Station Maintenance	12-Jun-22	17-Jun-22	327	10	N/A	280-320	Potential impact to FT-R USJR
Meikle River C – Compressor Station Maintenance	12-Jun-22	17-Jun-22	323	14	N/A	280-320	Potential impact to FT-R USJR
Knight – Compressor Station Maintenance	4-Jul-22	8-Jul-22	331	4	N/A	280-320	Potential impact to FT-R USJR
Swartz Creek – Compressor Station Maintenance	25-Jul-22	28-Jul-22	328	7	N/A	280-320	Potential impact to FT-R USJR
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 of Berland
Berland River – Compressor Station Maintenance	8-Aug-22	12-Aug-22	321	14	N/A	280-320	Potential impact to FT-R USJR
Berland River B2 – Compressor Station Maintenance	8-Aug-22	19-Aug-22	325	10	N/A	280-320	Potential impact to FT-R USJR
Latornell – Compressor Station Maintenance	22-Aug-22	27-Aug-22	326	9	216	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

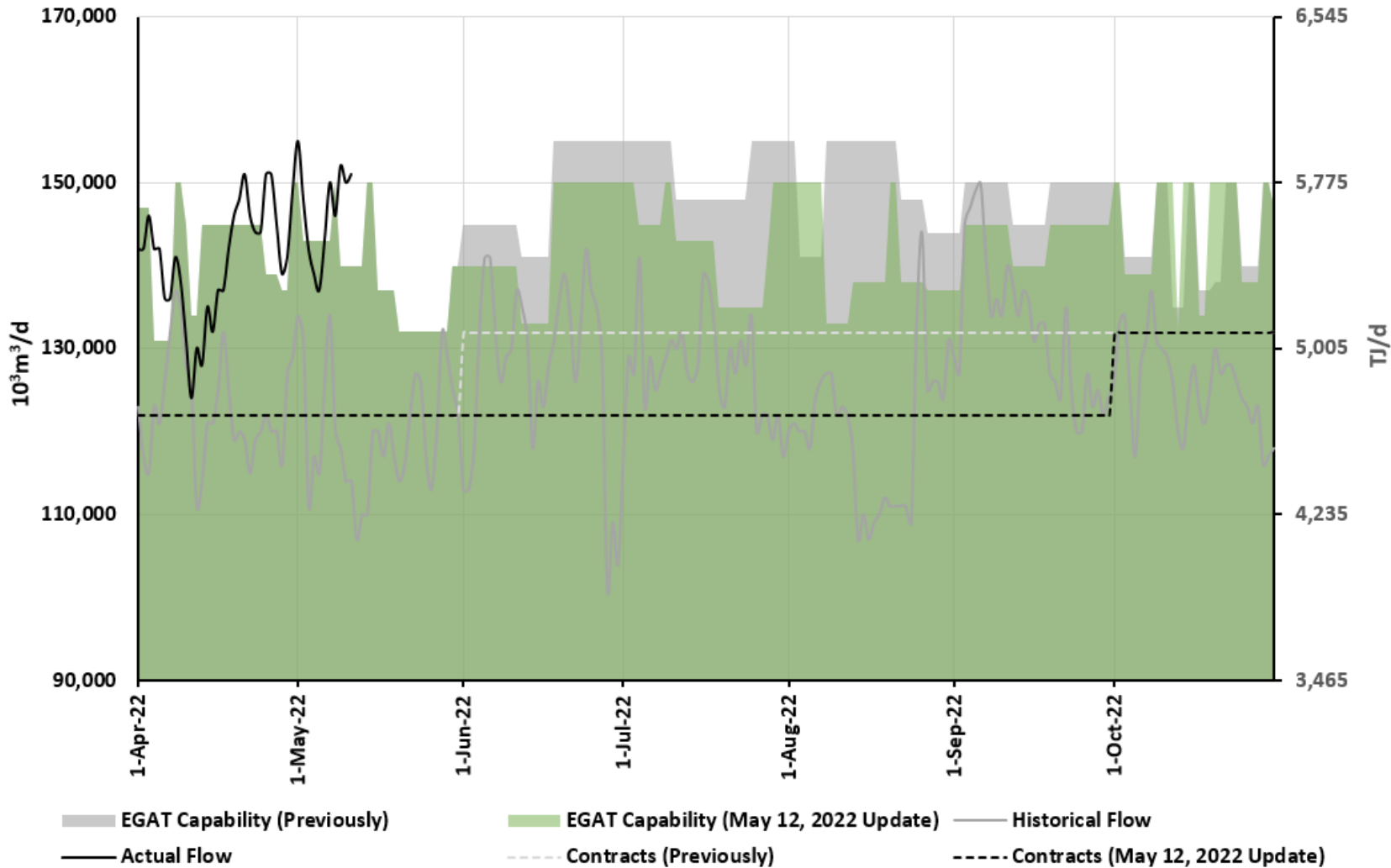
Partial
impact to FT

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
Otter Lake A1 – Compressor Station Maintenance	27-Aug-22	2-Sep-22	324	11	N/A	280-320	Potential impact to FT-R USJR
Woodenhouse C3 – Compressor Station Maintenance	27-Aug-22	2-Sep-22	324	11	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	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	280-320	Potential impact to FT-R USJR
Alces River – Compressor Station Maintenance	17-Oct-22	18-Oct-22	340	12	N/A	280-320	Potential impact to FT-R USJR
Clearwater – Compressor Station Maintenance	25-Oct-22	28-Oct-22	345	7	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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East Gate



May 12, 2022 Update:

- 30% scenario for April - Sept
- 90% scenario for October and beyond
- Outages added for communication: 3 (excluding the 4 added to the USJR area)
- Days of outage impact eliminated resulting from scope and schedule optimization efforts: 13

This slide may not be accurate beyond the May 13, 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	Capacity (10 ⁶ m ³ /d)	Impact (10 ⁶ m ³ /d)	System	Service Allowable Location/Area
Didsbury – Compressor Station Maintenance	16-May-22	20-May-22	137	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	28-May-22	12-Jun-22	140	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	143	7	FHAB	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
NPS 36 Eastern Alberta System Mainline Loop 2 – Pipeline Maintenance	19-Jul-22	27-Jul-22	135	15	NGTL	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	15-Aug-22	18-Aug-22	139	11	NGTL	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28
Schrader Creek – Compressor Station Maintenance	22-Aug-22	31-Aug-22	139	11	NGTL	No impact to FT-D anticipated Empress/McNeill Borders Segments 15, 16, 17, 18, 19, 20, 23, partial 21, and partial 28

This slide may not be accurate beyond the May 13, 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)	System	Service Allowable Location/Area
Acme – Compressor Station Maintenance	12-Sep-22	18-sept-22	140	5	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	3-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
Clearwater – Compressor Station Maintenance	25-Oct-22	28-Oct-22	138	10	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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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)	System	Service Allowable Location/Area
NPS 42 Foothills Mainline Zone 9 – Pipeline Maintenance	16-Nov-22	28-Nov-22	25	FHSK	No impact to FT anticipated Monchy Border Foothills Saskatchewan

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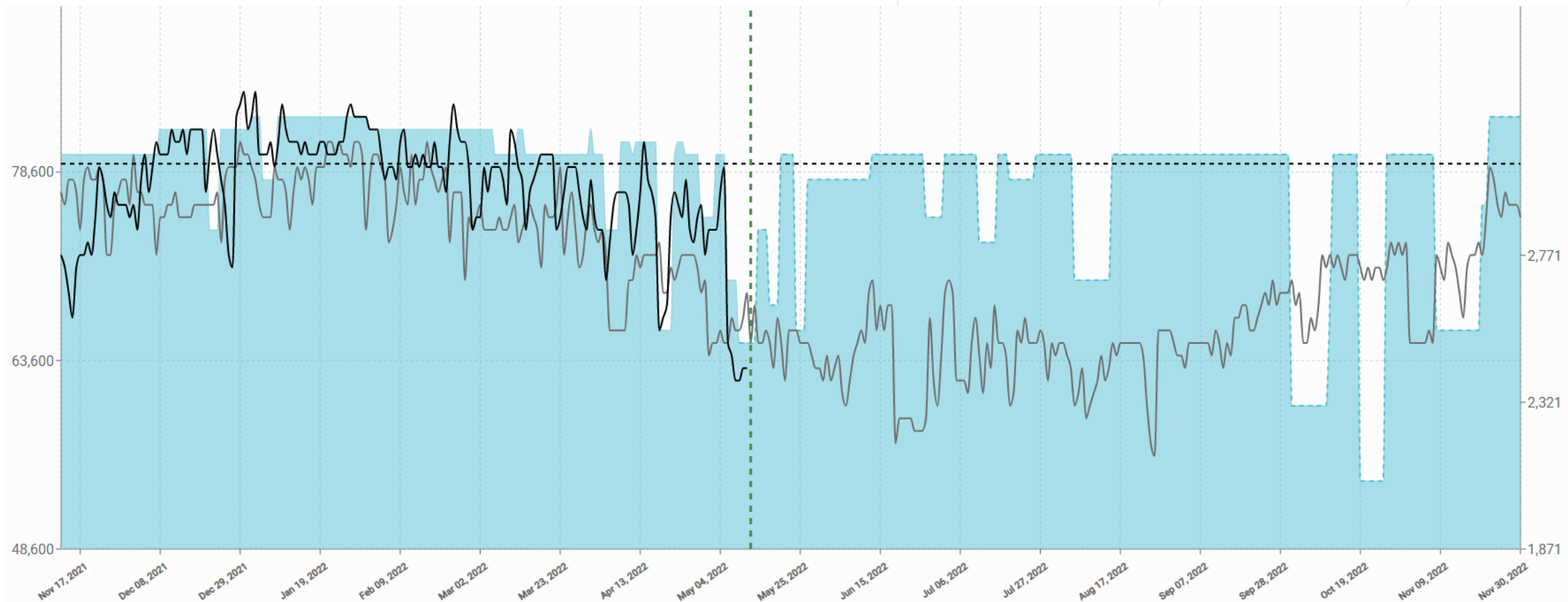




Alberta-B.C. Border

(includes both NGTL and Foothills BC outages)

■ Capability - Actual Flow - Historical Flow - - Contracts



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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
Crowsnest A – Compressor Station Maintenance*	9-May-22	13-May-22	65	16	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Crowsnest K – Compressor Station Maintenance*	9-May-22	16-May-22	74	7	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Elko – Compressor Station Maintenance*	17-May-22	19-May-22	68	13	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
Moyie – Compressor Station Maintenance*	24-May-22	26-May-22	66	15	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC
NPS 24 South Lateral – Pipeline Maintenance*	25-May-22	12-Jun-22	78	3	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders
Winchell Lake – Compressor Station Maintenance*	27-Jun-22	1-Jul-22	75	5	NGTL	Potential Impact to FT-D Alberta/BC and Alberta/Montana Borders Segments 22 and partial 21
Crowsnest B – Compressor Station Maintenance*	11-Jul-22	15-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
NPS 36 BC Mainline – Pipeline Modifications	5-Aug-22	14-Aug-22	70	10	FHBC	Potential Impact to FT Alberta/BC Border Foothills BC

*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
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

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Oil Sands Delivery Area

Capability
 Actual Flow
 Historical Flow
 Compared to



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





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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Daily Operating Plan (DOP) – Next Steps

- Continue to review outage impacts and optimize outage schedule
- Update operational capability charts and outage impacts in the DOP if construction progress varies from current expectations



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Verbal Updates