# NGTL System and Foothills Pipe Lines Ltd. Customer Operations Meeting

June 4, 2020



## 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
- Please submit your questions via the chat function and we will answer them 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

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#### **Important note**

- Outage information in this presentation (slides 11 to 20) is **NOT** applicable beyond the June
  - 4, NGTL/Foothills Customer Operations (WebEx only) meeting.

• For current outage information, please refer to the most recent <u>Daily Operating Plan</u> (DOP) on TC Customer Express

## **Our Focus During COVID-19**

- Protect our teams, partners and communities
- Ensure no interruption to our customers
- Secure supply of critical equipment and services with our partners

#### Notice something is off?

Please reach out: Marketing Reps or 403.920.PIPE

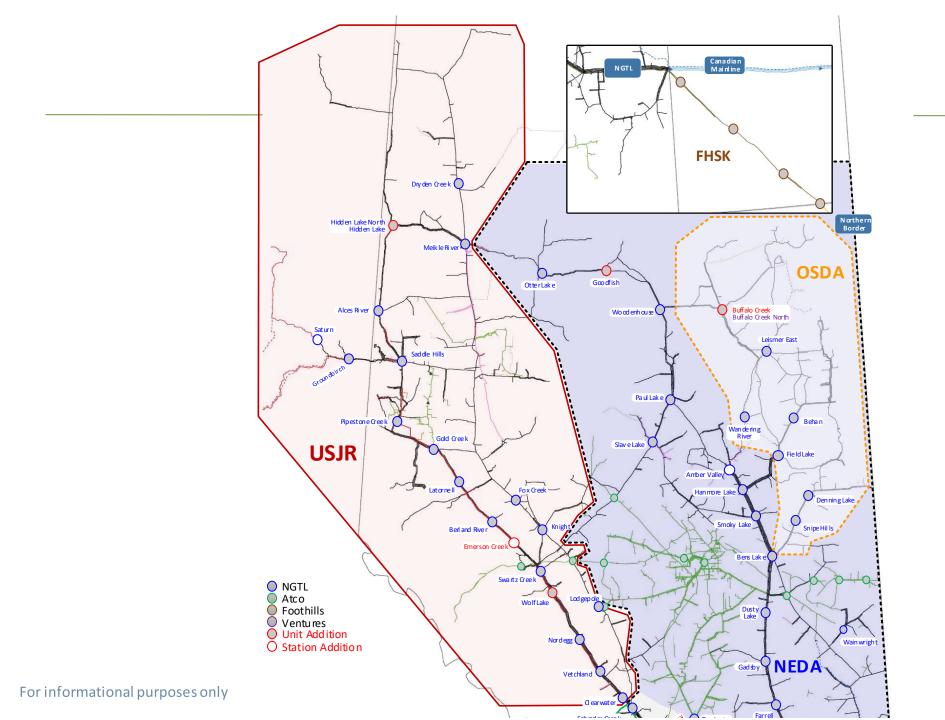
## Safety moment – Grilling Safety tips

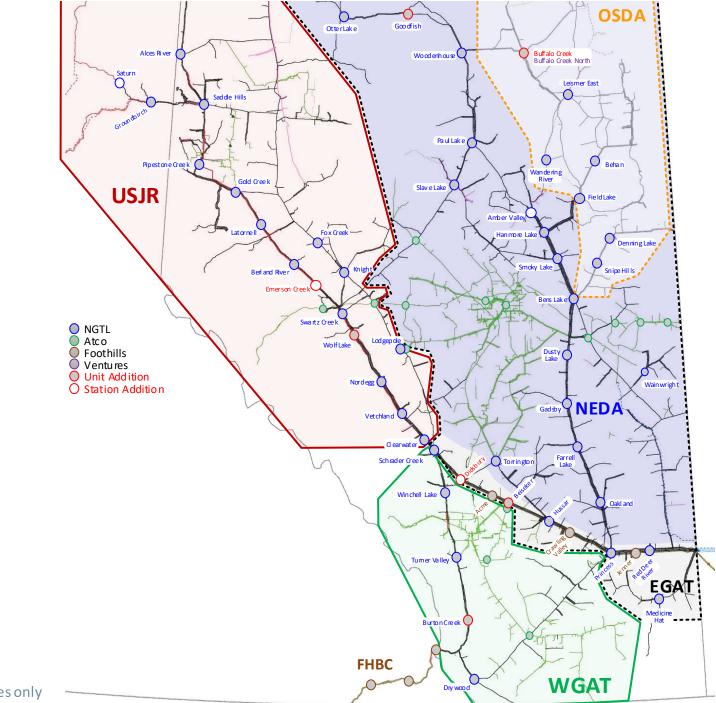
- Grill outside and away from structures
- Make sure your grill is stable
- Check for propane leaks
- Be ready to put out the fire



- 1. Review outages in Daily Operating Plan (DOP)
- 2. Customer Operations Action Team Follow-up Q&A on TC Customer Express enhancements (Implemented on May 26, 2020)
- 3. Update on launch of DOP 2.0
- 4. Survey Monthly Customer Operations meetings

2020 Outage Review From DOP as of Wednesday, June 3

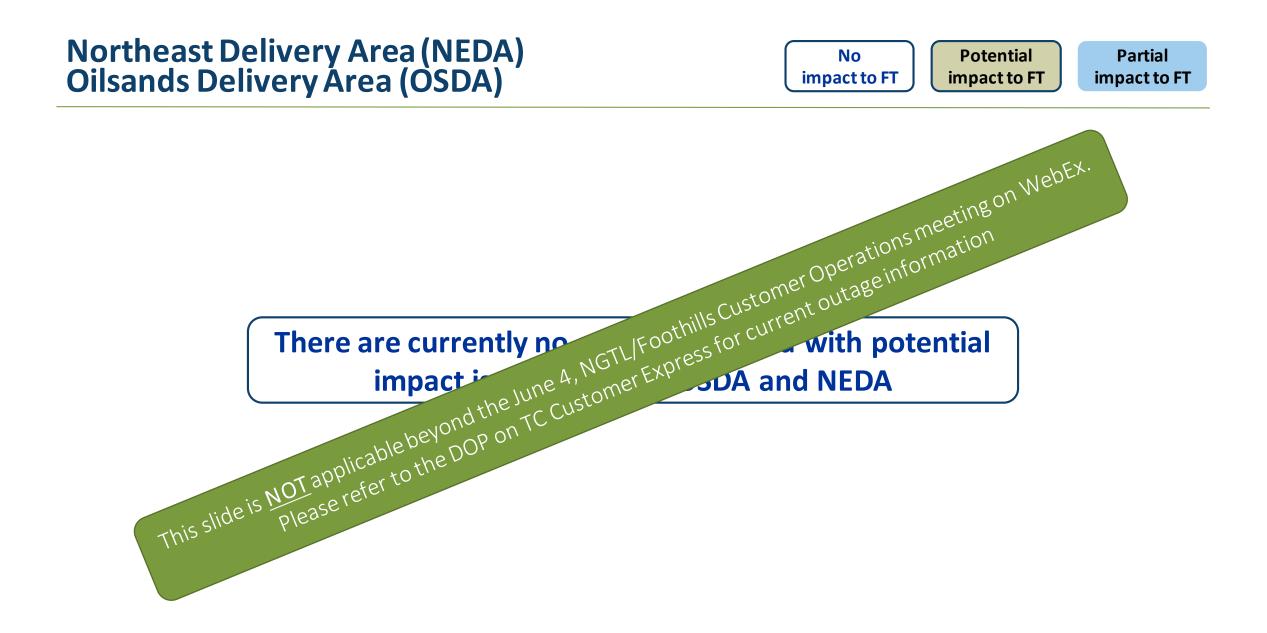






Last Updated: June 3, 2020

11





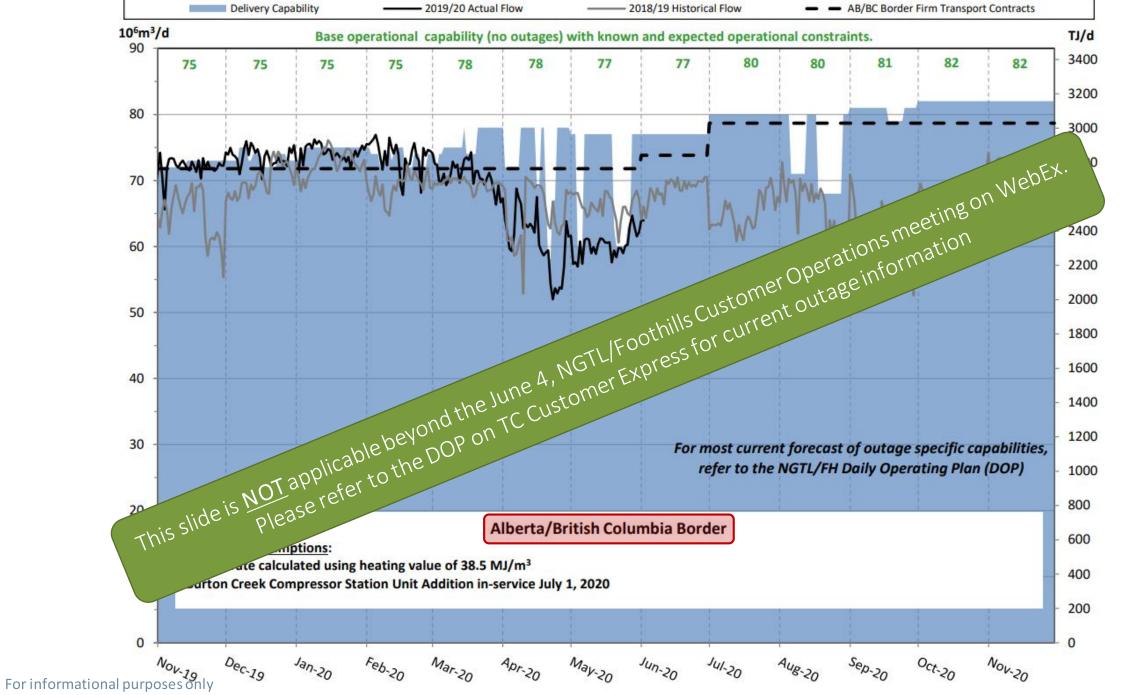
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#### East Gate Delivery Area (EGAT) Foothills Zone 9 (FHSK)

No<br/>impact to FTPotential<br/>impact to FTPartial<br/>impact to FT

Outage ID	Start	End	Capability/ Allowable (10 <sup>3</sup> m <sup>3</sup> /day)	Service Allowable Location/Area No impact to FT-D anticipated: Empress/McNeill P Segments 15, 16, 17, 18, 19, 20, partial 21 No impact to FT-D anticipation of the segments 15, 16, 17 No impact to FT-D anticipation of the segments 15, 16, 17 No impact to FT-D anticipation of the segments 15, 16, 17 No impact to FT-D anticipation of the segments 15, 16, 17 No impact to FT-D anticipation of the segments 15, 16, 17 No impact to FT-D anticipation of the segments 15, 16, 17 No impact to FT-D anticipation of the segments 15, 16, 17 No impact to FT-D: McNeill Borders on the segments 15, 16, 17 No impact to FT-D: McNeill Border Foothills SK	otions meeting on WebEX.
15782678	AUG 18, 2020	AUG 28, 2020	128,000	No impact to FT-D anticipated: Empress/McNeill P Segments 15, 16, 17, 18, 19, 20, partial 21	outage informed and EAS ML Loop - Pipeline Maintenance
15862705	SEP 28, 2020	OCT 25, 2020	135,000	No impact to FT-D anticipate Segments 15, 16, 13 NGTL/FOOTHILS Concerned with the segments 15, 16, 13 NGTL/FOOTHILS Concerned with the second	MPS 42 Central Alberta System Mainline Loop - Pipeline Maintenance
15695808	OCT 12, 2020	OCT 21, 2020	130,000	No. June 4, Wener EXP. and the June 4, Mer EXP.	Beiseker - Compressor Station Modifications
			licable bey	e DOP on re	
15786231	OCT	is NOT aph	refer to the	rotential impact to FT-D: McNeill Border Foothills SK	NPS 42 Foothills Zone 9 (Shaunavon to Monchy)- Pipeline Maintenance
	This sho	Pie			



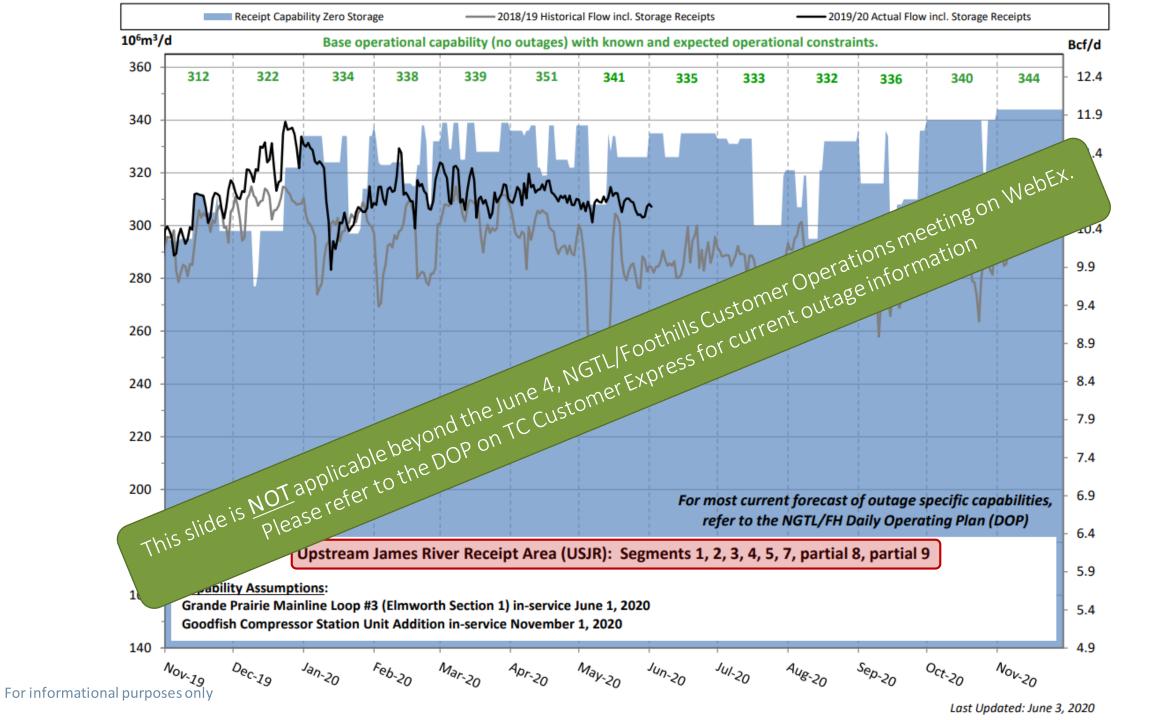
Last Updated: June 3, 2020

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

NO impact to FT Potential impact to FT impact to FT

Partial impact to FT

Outage ID	Start	End	Capability/ Allowable (10 <sup>3</sup> m <sup>3</sup> /day)	Service Allowable Location/Area	Outage WebEX.
<mark>16659081</mark>	AUG 06, 2020	AUG 12, 2020	71,000	No impact to FT-D anticipated: Alberta/BC Border Segments 22 and partial 21	NPC meeting Pipeline Maintenance
15782794	AUG 18, 2020	AUG 28, 2020	68,000	Partial impact to FT-D: Alberta/BC and Alberta/Montapa	peration information seem Mainline - Pipeline Maintenance
<mark>16659086</mark>	SEP 18, 2020	SEP 24, 2020	79,000	No impact to FT-D anticipated: Alberta/BC Barner Oner Oner Oner Oner Oner Oner Oner	Jutage Mainline - Pipeline Maintenance
	This slide	is NOT app Please	blicable bey refer to the	Service Allowable Location/Area	



**Outage ID** 

15782799

15714004

15714477

15714003

15714006

15777973

15714476

Start

JUL 17, 2020

JUL 17, 2020

JUL 17, 2020

AUG 10, 2020

AUG 10, 2020

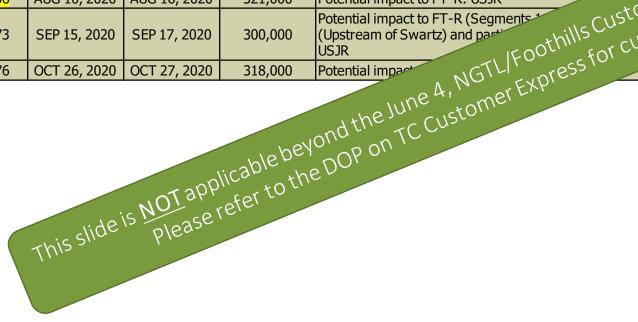
#### **Upstream James**

Capability/

Allowable (10 <sup>3</sup> m <sup>3</sup> /day)	Location/Area	Outage Des
300,000	Partial impact to FT-R: USJR	[TSP Eligible] NPS and NEB ne
323,000	Potential impact to FT-R: USJR	[TSD- meeting station Maintenance
321,000	Potential impact to FT-R: USJR	ations in ation pressor Station Maintenance
308,000	Potential impact to FT-R: USJR	Deracinfornia compressor Station Maintenance
321,000	Potential impact to FT-R: USJR	water A5 - Compressor Station Maintenance
300,000	Potential impact to FT-R (Segments a Custon (Upstream of Swartz) and particular to Custon Current C	Outage Des         [TSP Eligible] NPS         Maintenance         [TSP         Maintenance         [TSP         Maintenance         [TSP         Station Maintenance         perations         meting         perations         meting         meting         station Maintenance         perations         meting         meting <t< td=""></t<>

[TSP Eligible] Vetchland - Compressor Station Maintenance

18



End

JUL 29, 2020

JUL 29, 2020

AUG 07, 2020

AUG 14, 2020

AUG 16, 2020

s River Receipt Area (USJR)	No impact to FT

Service Allowable

Potential impact to FT

**Partial** impact to FT

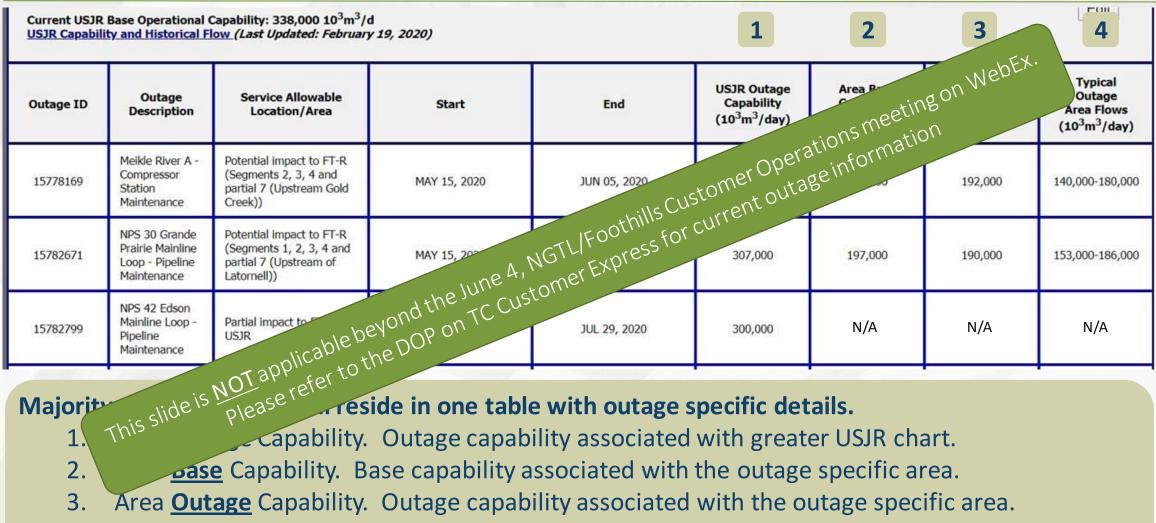
Upstream	James	<b>River</b>	Receipt	t Area	(USJR)	
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No	
impact to FT	

Outage ID	Start	(Duration) End	Capability/ Allowable (10 <sup>3</sup> m <sup>3</sup> /day)	Typical Flow (10³m³/day)	Location/Area Potential impact to FT-R: Segments 2, 3, 4 and partial (Upstream Gold Creek) Potential impact to FT-R: Segmente (Upstream Latornell) Potential impact (Upstream (Upstream Custon	Out- vog on WebEX.
15778169	JUN 01, 2020	JUN 05, 2020	186,000	140,000- 180,000	Potential impact to FT-R: Segments 2, 3, 4 and partial - (Upstream Gold Creek)	ions meeting pressor Station
15778214	JUN 08, 2020	JUN 12, 2020	<mark>183,000</mark>	150,000- 180,000	Potential impact to FT-R: Segments Operation (Upstream Latornell)	e informe adfish - Compressor Station
15778167	JUN 08, 2020	JUN 14, 2020	<mark>183,000</mark>	150,000- 180,000	Potential impact (Upstream IF OOT hills CUSTE CURRENT OC	[TSP eligible] Hidden Lake - Compressor Station Maintenance
14434331	JUN 20, 2020	JUN 26, 2020	185,000	140,000- 180	he 4, NGTLITEXpress 1 2, 3, 4 and partial 7	[TSP eligible] NPS 30 Grande Prairie Mainline Loop - Pipeline Modifications
<mark>14248812</mark>	JUL 06, 2020	JUL 10, 2020	184 bev	ond the Jun	GOLD TO FT-R Segments 2, 3, 4 and partial 7 Gold Creek)	[TSP Eligible] Alces River B - Compressor Station Maintenance
15778057	JUL 17, 2020	JUL	licable bei	DOPO	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream Gold Creek)	[TSP eligible] Pipestone Creek - Compressor Station Maintenance
15782671	Au is slide	IS NOT CA	reter	140,000- 180,000	Potential impact to FT-R: Segments 2, 3, 4 and partial 7 (Upstream of Gold Creek)	[TSP eligible] NPS 30 Grande Prairie Mainline Loop - Pipeline Maintenance
15782796	This	o, 2020	175,000	174,000- 219,000	Partial impact to FT-R: Segments 2, 3, 4, 5 and partial 7 (Upstream of Berland River)	[TSP eligible] NPS 36 Northwest Mainline - Pipeline Maintenance
15781939	SEP 17, 2020	SEP 27, 2020	212,000	1		[TSP eligible] NPS 36 Western Alberta System Mainline Extension - Pipeline Maintenance

Potential impact to FT

#### USJR Table Mock-up: Additional Columns (mid June )



4. Typical Outage Area Flow. Recently observed range of receipt flow within outage area.

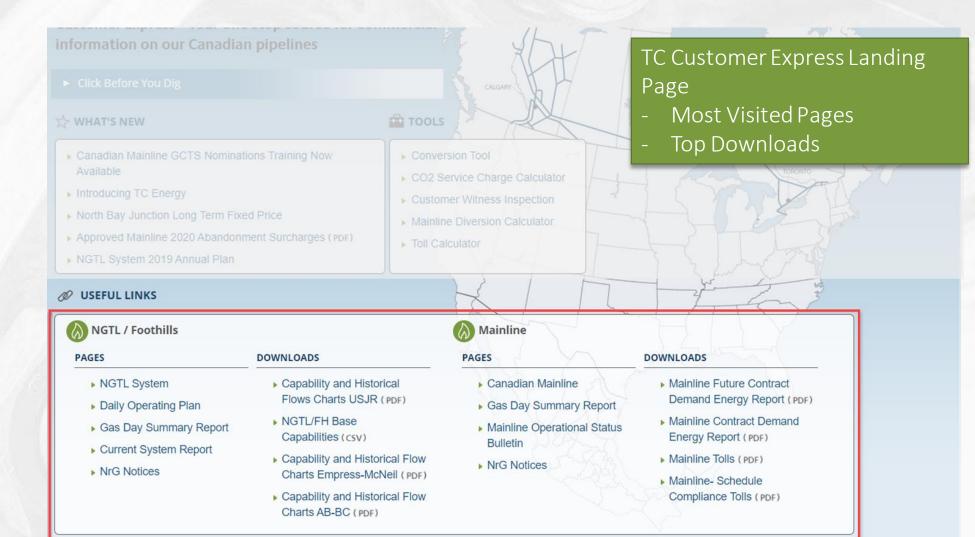
## TC Customer Express Enhancements

Q&A

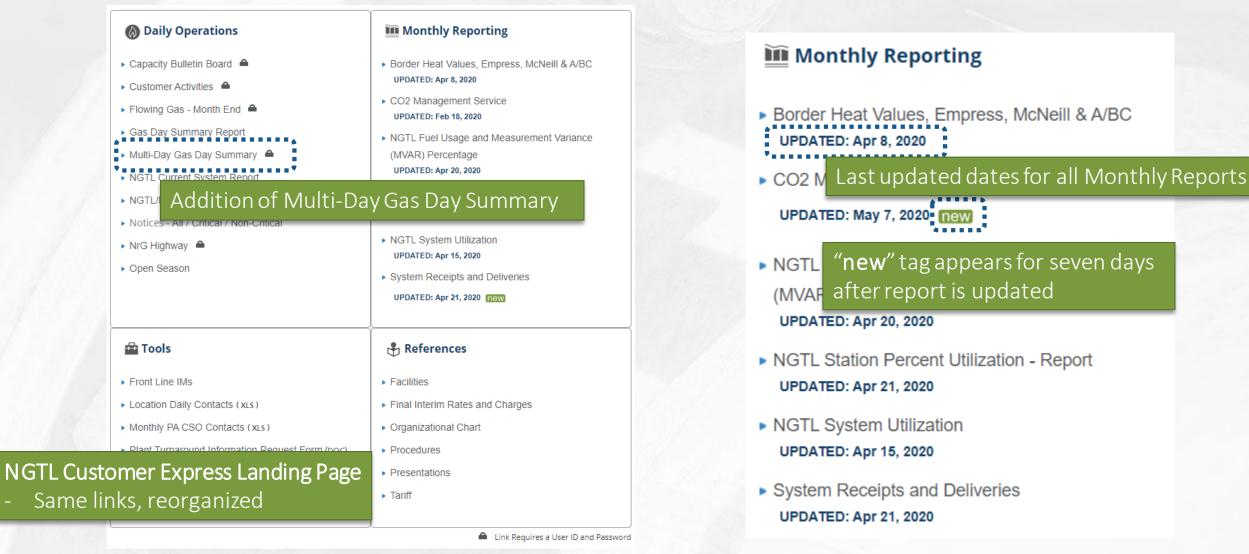
## **TC Customer Express enhancements timeline**

- May 7 TC Customer Express enhancements presented during Customer Operations meeting
- May 20 NrG bulletin sent informing customers of Go-Live date of May 26
- May 26 TC Customer Express enhancements implemented
- June 4 TC Customer Express Q&A session at monthly Customer Operations meeting

#### **Reorganized content on <u>TC Customer Express</u> landing page**



#### **Reorganized Content and "Last updated" date on NGTL Landing Page**



## Linepack graph added to NGTL Dashboard

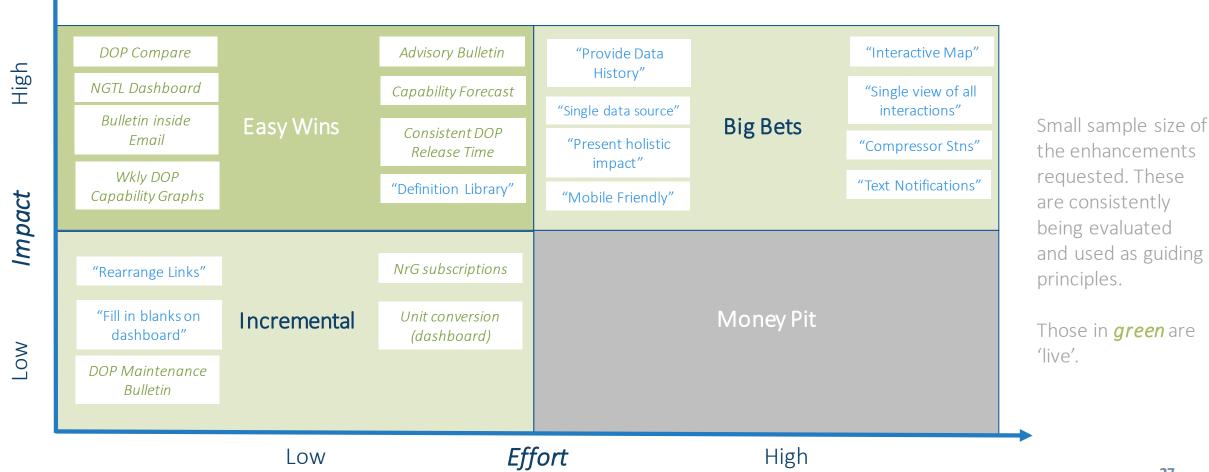
WGAT	74		100%		34% 74	
Foothills SK			100%		100%	
Foothills BC			100%		100%	
OSDA			100%		100%	
Greater USJR	339		100%		NGTL Dashboard	
** Authorized allowabl	e percentage bas	sed on Evening	horizations	- Linepack graph: snapshot for	the last	
NOTE: - Heating value			-		7 days	
	E3M3/DAY	TC's default av	werage MMCF		APR 22, 2020 - APR 28, 2020	
NOTE: - Heating value			-	550		
NOTE: - Heating value	E3M3/DAY	E6M3/DAY	MMCF	550 540	APR 22, 2020 - APR 28, 2020	
NOTE: - Heating value LINEPACK Current Linepack	E3M3/DAY 502,900	E6M3/DAY 502.9	MMCF 17,754		APR 22, 2020 - APR 28, 2020	

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## Update on launch of DOP 2.0

## **COAT | How we got here**

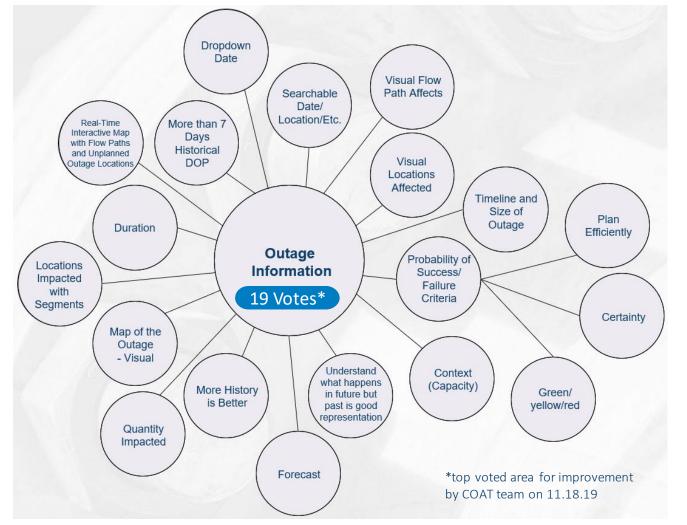
As we collected the COAT feedback for each enhancement, we noticed that many suggestions landed in our 'big bets' area. This was a complete step change that required an updated problem solving methodology and re-imagination of our communications.



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## **Re-Imagination | Building the 'vision'**

Feedback from our November 18<sup>th</sup> workshop, along with previous COAT inputs were used to develop the vision of what a successful working prototype should be. We honed in on the key/repeated ideas below and focused on 'how' a user would want to consume the data.



#### As a TC customer...

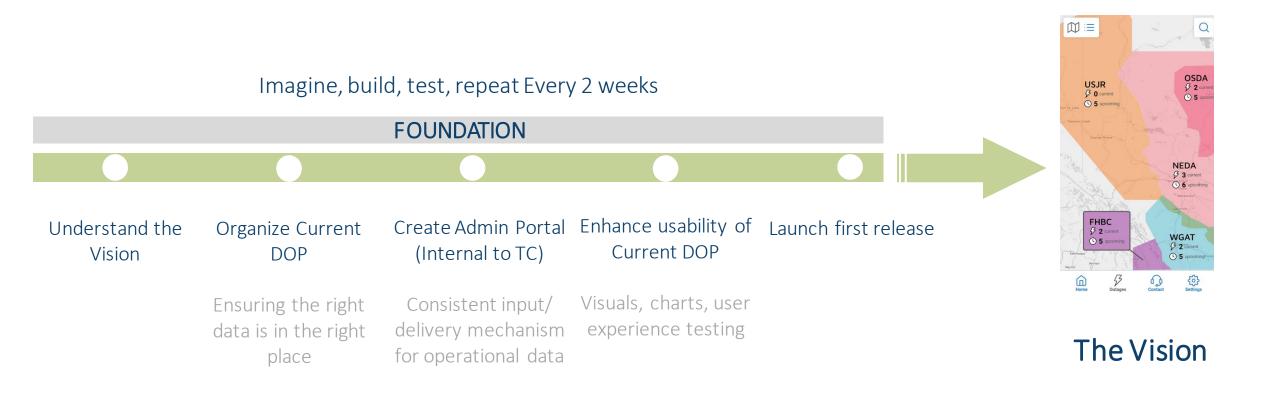
"I want planned and unplanned outage notifications..."

"I want some depiction of a level of certainty on when these outages will occur and the level of holistic impact they will have on the system..."

"I want to see historical outage information so that I can determine trends. This helps me forecast future outages and their potential impact..."

## **Re-imagination | Big Bets Team Delivery**

To get closer to the vision, we'll need to lay the ground work. This is mainly around understanding where we want to go (vision) and identifying the right data early on. Naturally, we'll then need to tweak and/or build our internal processes for consistency and speed. Since we'll be working in **two-week** *sprints,* it gives us a lot of flexibility to test, fail, learn and re-prioritize together, as a Big Bets Team.

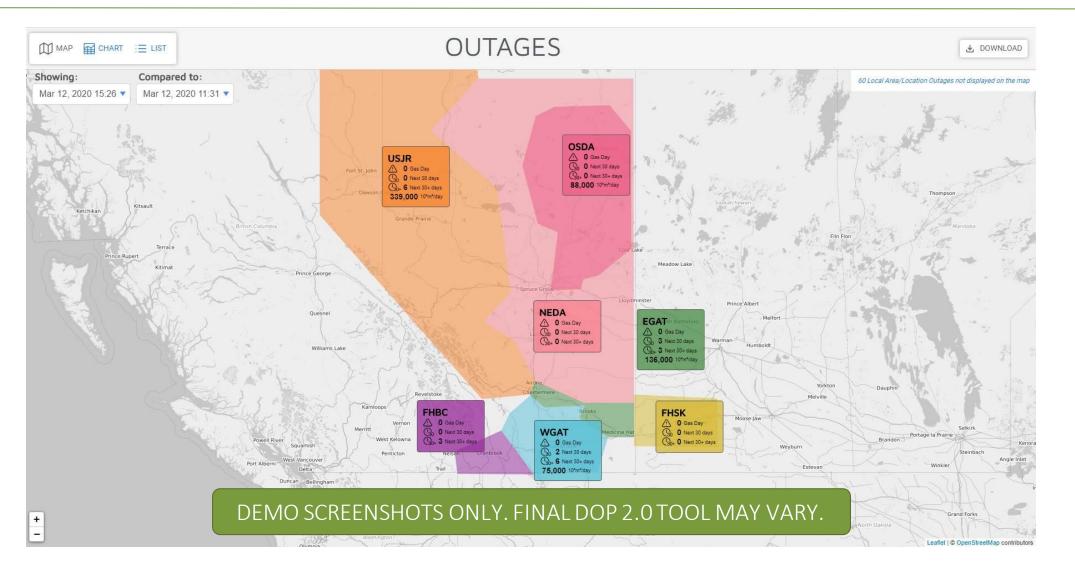


## **Getting set up for DOP 2.0**

- Current files for HTML and DOP Compare will be removed
- CSV file will be available through new link (the same information will be provided)
- Supported browsers: Chrome, Firefox, Safari and Edge
- Estimated release date: mid-July 2020

## **DEMO SCREENSHOTS**

## Daily Operating Plan (DOP) 2.0 – Map view



#### DOP 2.0 – List view

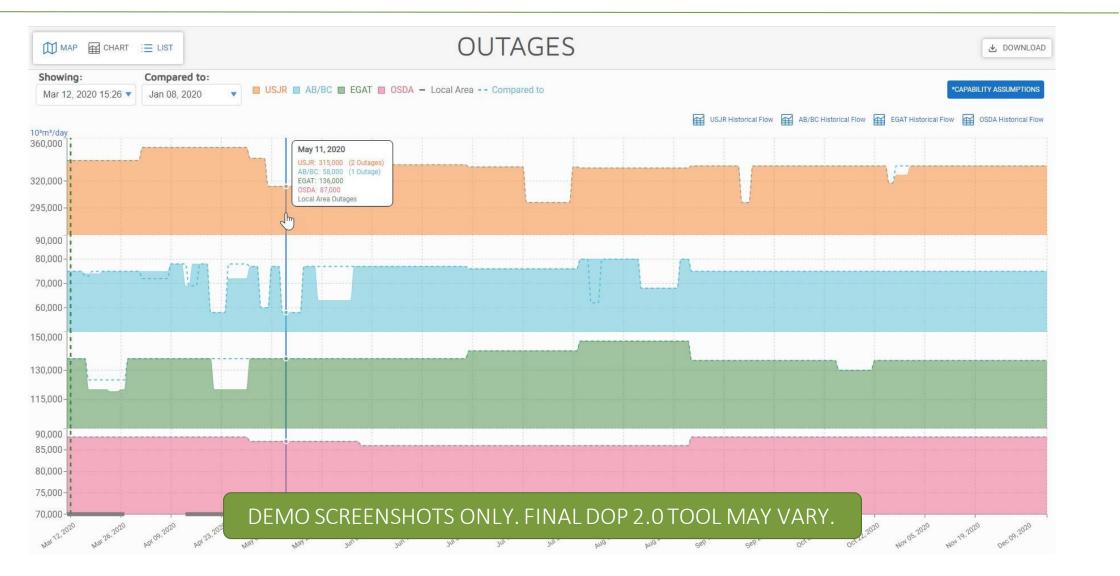
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Showing:         Compared to           Mar 12, 2020 15:26 ▼         Mar 12, 2020				
Receipt Upstream James River Base Operational Capability	339,000 10ªm³/day	Receipt Local Area/Location	Delivery West Gate Base Operational Capability 75,	000 10ªm²/day
O         Gas Day           Image: Gas Day         Image: Gas Day	> 0	▲     1 Gas Day     1       ▲     1 Gas Day     1       ▲     5 Next 30 days     1       ▲     30 + 30 Next 30+ days     €	Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of the system           Image: Object of the system         Image: Object of	>
Capability and Historical Flow	>	*Local Area/Location Outages not displayed on the map	Capability and Historical Flow	>
Foothills BC		East Gate Base Operational Capability 136,000 10ªm²/day	Delivery North & East Delivery Area	
0         Gas Day           ①30         0         Next 30 days           ①30+         3         Next 30+ days	>	∴         0         Gas Day         1           C30         3         Next 30 days         >           C30+         3         Next 30+ days         >	Image: Object of the state of the	>
		Capability and Historical Flow	Capability and Historical Flow	>
<sup>telivery</sup> Dil Sands Delivery Area Base Operational Capability	88,000 10³m³/day	Receipt Foothills Saskatchewan	Delivery Local Area/Location	
🕐 0 Gas Day		🖄 0 Gas Day	🙆 0 Gas Day	
(130 0 Next 30 days	DEMO SCR	EENSHOTS ONLY. FINAL DOP 2		REMOVED / COMPLETED CHANGED

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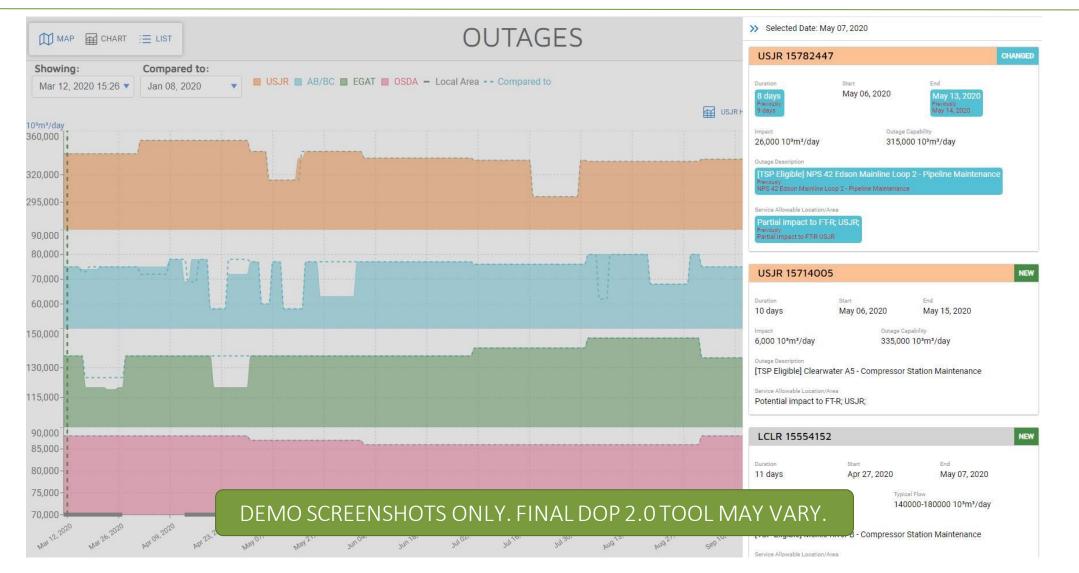
#### DOP 2.0 – USJR area from List view

howing:		Compare		Base Operational Capability		Historical Flow Chart Last Updated	HISTORICAL FLOW CHART
Mar 12, 2020 15:26 🔻		Jan 08, 2020 🔹 3		339,00010³m³/day		Mar 11, 2020	-
XT 30+	DAYS						
ANGED					15782447		
ation days viously lays	Start May 06, 2020	End May 13, 2020 Previously May 14, 2020	Impact 26,000 10°m³/day	Outage Capability 315,000 10 <sup>3</sup> m³/day	Outage Description TSP Eligible] NPS 42 Edson Mainline Loop 2 - Pipeline Maintenance Previousy NPS 42 Edson Mainline Loop 2 - Pipeline Maintenance	Service Allowable Location/Area Partial impact to FT-R; USJR; Pervicely Partial impact to FT-R USJR	
N					15714005	i	
ation days	Start May 06, 2020	<sup>End</sup> May 15, 2020	Impact 6,000 10³m³/day	Outage Capability 335,000 10ªm³/day	Outage Description [TSP Eligible] Clearwater A5 - Compressor Station Maintenance	Service Allowable Location/Area Potential impact to FT-R; USJR;	
ANGED					15782799	С	
ation days	Start Jul 17, 2020	End Jul 29, 2020	Impact 33,000 103m3/day	Outage Capability 300,000 10³m³/day	Outage Description [TSP Eligible] NPS 42 Edson Mainline Loop - Pipeline Maintenance Previously. NPS 42 Edson Mainline Loop - Pipeline Maintenance - changed	Service Allowable Location/Area Partial impact to FT-R; USJR; Previously; Partial impact to FT-R USJR	
N					15777973		
ation lays	Start Sep 15, 2020	<sup>End</sup> Sep 17, 2020	Impact 34,000 10°m³/day	Outage Capability 300,000 10³m³/day	Outage Description [TSP Eligible] Berland River - Compressor Station Maintenance	Service Allowable Location/Area Potential impact to FT-R (Segments 1, 2, 3, 4, 5, 7, partial 8 (Upstream of	f Swartz) and partial 9 (Upstream of Lodgepole)); USJR
ANGED					15714476		
ation	Start Oct 26, 2020	End Oct 27, 2020	Impact 16,000 10 <sup>3</sup> m <sup>3</sup> /day	Outage Capability 318,000 10³m³/day	Outage Description [TSP Eligible] Vetchland - Compressor Station Maintenance Previousy Vetchland - Compressor Station Maintenance	Service Allowable Location/Area Potential impact to FT-R; USJR; Precosily; Partial impact to FT-R USJR - changed	

### DOP 2.0 – Chart view

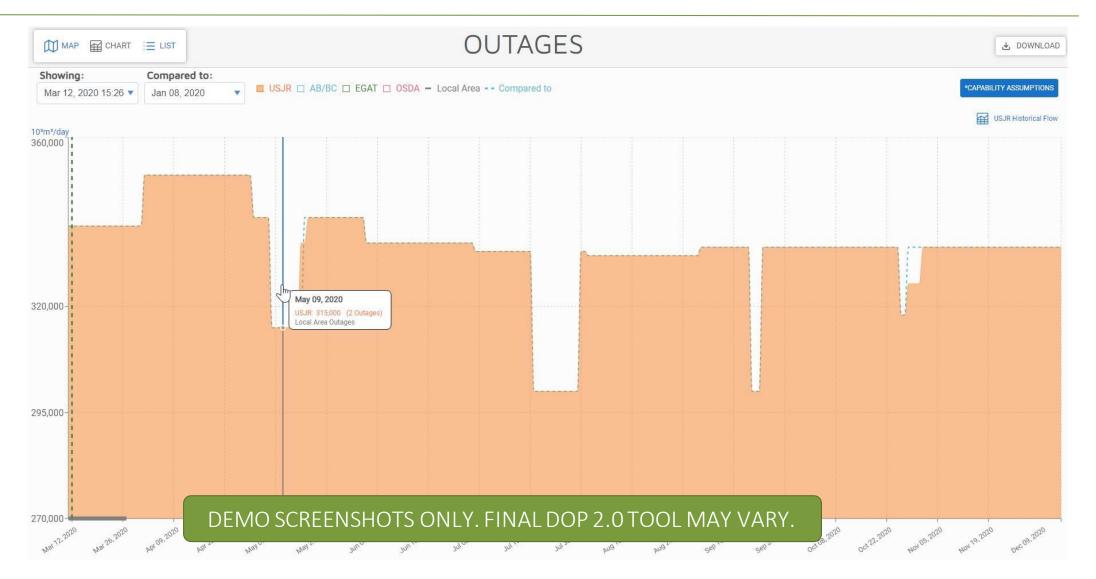


### DOP 2.0 – Chart view



#### For informational purposes only

### DOP 2.0 – Chart view





### **Survey - Monthly Customer Operations meetings**

Let us know how we can improve monthly Customer Operations meetings!

Survey open until June 14, 2020

https://www.surveymonkey.com/r/936H7KL

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