

# Outstanding questions and follow-up, updated February 13, 2020

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## 1. Please provide an update on Temporary Service Protocol (TSP)

*Response:*

*This is a general question please so let us know if the response is lacking. TSP details can be found [HERE](#). There have been no changes to previously communicated TSP parameters. TSP applicable outages in the USJR tables are described as “potential Impact to FT-R” with an expectation of employing TSP if required. NGTL will hold a special Customer Operations Meeting in March to more fully review the 2020 TSP period and planned maintenance.*

## 2. Can you explain why the dashboard says USJR capability is 323 e6m3/d vs current flows of 303 e6m3/d leaving a gap of 20 e6m3/d or 700mmcf/d? As an example, what would happen if you allowed 200-500 mmcf/d of USJR IT-R downstream of Berland.

*Response:*

*The capability displayed in the dashboard describes the maximum amount of gas able to be flowed in a given area. Actual utilization is dependent on factors external to NGTL and cannot be forecast with any accuracy. Fulsome response will require follow-up offline as it is a complex topic requiring better understanding of the question(s).*

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3. Does the delay of the installation of the Burton Creek unit addition from June to August also delay the ABC border expansion by ~270 mmcf/d from June to Aug?

*Response:*

*The WASML Loop and Turner Valley Unit Addition are still anticipated to be in service June 1, 2020, which will increase capacity at the Alberta/British Columbia Border by approximately 100 TJ/d. The Burton Creek Unit Addition delays approximately 188 TJ/d of capacity from June 2020 to August 2020.*

4. Will that count as a TSP outage if an unplanned outage goes on while a receipt outage is going on? (specific outage was not referred to)

*Response:*

*TSP as defined does not apply to unplanned outages (which are those with less than 48 hours notice). As per previously shared information (click [HERE](#)), in instances of an unplanned outage overlapping with a planned TSP outage, the outage resulting in the deeper constraint will drive whether TSP is applied. Please refer to material in the link provided above for further explanation and examples. This information will be reviewed in March as part of an in-person Customer Operations Meeting.*

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5. Are the typical flows listed in the local area/location for USJR going to be updated now that North Montney Mainline (NMML) has started up?

*Response:*

*Yes, and typical flows are already being updated. So far since receipts from the NMML area started to flow there has been no material increase in net receipts from segment 4. To the best of our ability we are always reviewing and revising the reported typical flow to reflect the recent actual historical flow.*

6. Would you separate planned and unplanned outages in the DOP for the purposes of TSP?

*Response:*

*We are mindful of the increased need for clear, consistent communication during TSP 2020 and are currently discussing internally. We will include the suggestion in our discussions. Current process is to first identify unplanned outages affecting receipt FT service availability through NrG Highway notice, and add to DOP upon its daily update. This process will continue.*

7. Were there any withdrawals from Warwick Gas Storage during the cold weather event?

*Response*

*TC Energy is unable to disclose flow in a forum such as this at specific locations.*

# Monthly NGTL/Foothills Operations meeting

February 6, 2020



# Safety moment – Slips and trips

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- In Canada, more than 42,000 workers get injured annually due to falls
- 66% are due to slips and trips on the same level. 34% from heights.

## Tips to avoid injury

- To the extent possible avoid slippery surfaces (icy areas and snow banks)
- Walk slowly and deliberately. Focus on the path ahead.
- Wear appropriate footwear with visible and heavy treads
- Check to make sure entrance areas and stairs are clear of snow

# Agenda

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- 1 What is a monthly NGTL/Foothills Operations meeting?
- 2 Why are we including monthly meetings?
- 3 Meeting format
- 4 Look ahead at upcoming operational events/outages
- 5 Other operational topics: NEDA FT-D restriction: Alberta cold snap (Jan 16)

# What is a monthly NGTL/Foothills Operations meeting?

## WHAT IT IS

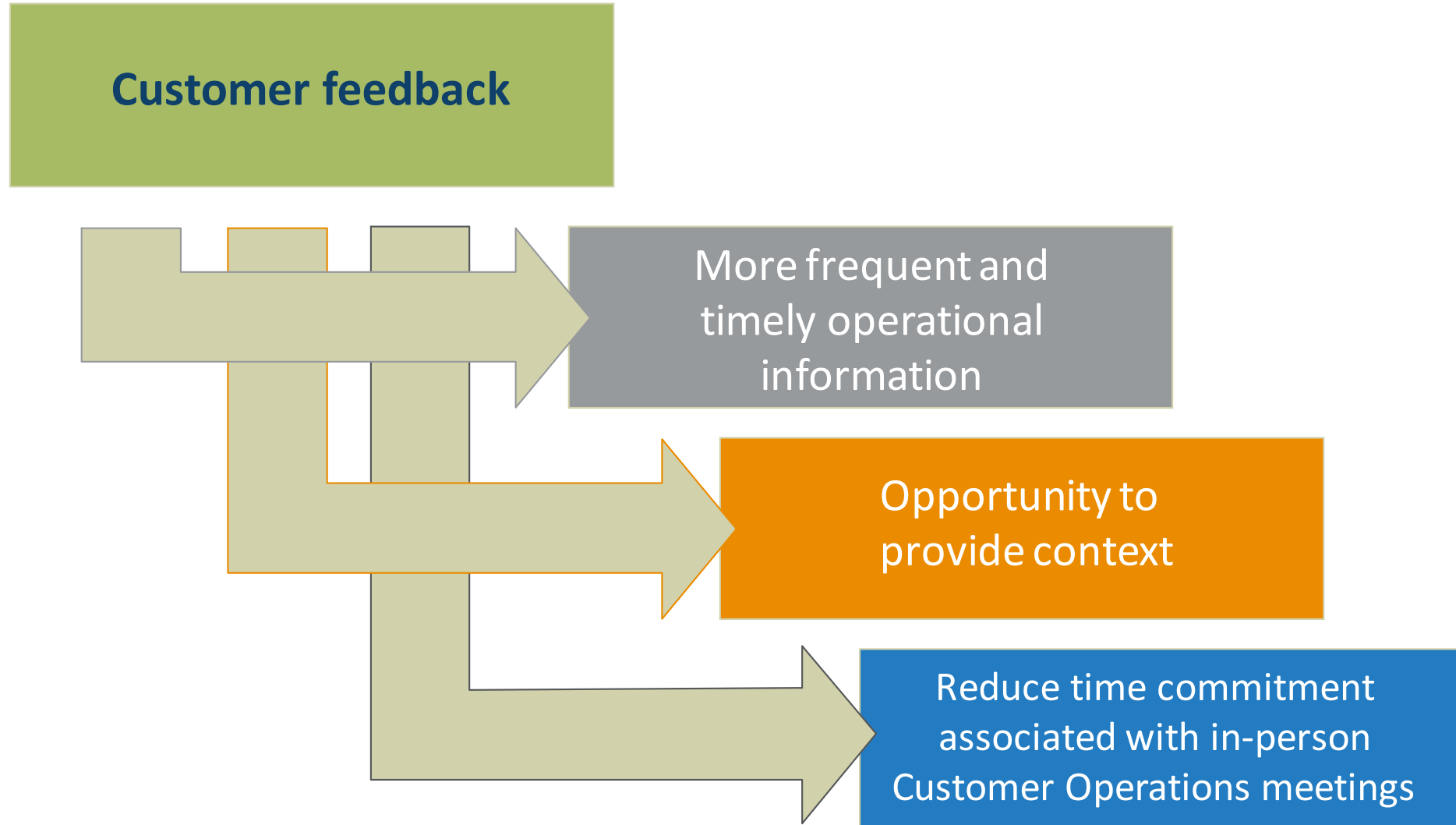
- Open to all NGTL & Foothills customers
- 1 hour monthly WebEx only meeting
- Look ahead at upcoming operational events/outages
- Address appropriate operational topics
- Q&A
- Opportunity to identify future topics

- Tariff changes
- Commercial, policy or regulatory issues
- Forum to address complex topics that require significant preparation and material
- Discussion of non-public or speculative information

## WHAT IT ISN'T

# Why are we including monthly meetings?

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# Meeting format

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- Meetings will take place on the first Thursday of every month at 1 pm
- Meeting duration – 1 hour
- Meetings will be held on WebEx only. No pre-read materials provided.
- Look ahead at upcoming operational events/outages (20-30 mins)
- Address appropriate operational topics (10-15 mins)
  - Customers can submit topics of interest
  - Topics should be submitted by the 20<sup>th</sup> of previous month
  - Topics will be addressed as time permits
- Q&A session
  - Questions may be sent in advance
  - Questions not answered during the meeting may be scribed and posted to TC Customer Express

Email Jeff Stoffregen with your questions and your topics of interest

# Customer feedback on monthly operational meetings

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Current format will be tested for the next 3 monthly meetings

TC Energy will send out a survey to solicit feedback and implement changes to meeting format

In the meantime, please feel free to reach out with any suggestions you may have

# Contact info

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Look ahead at upcoming operational  
events/ outages

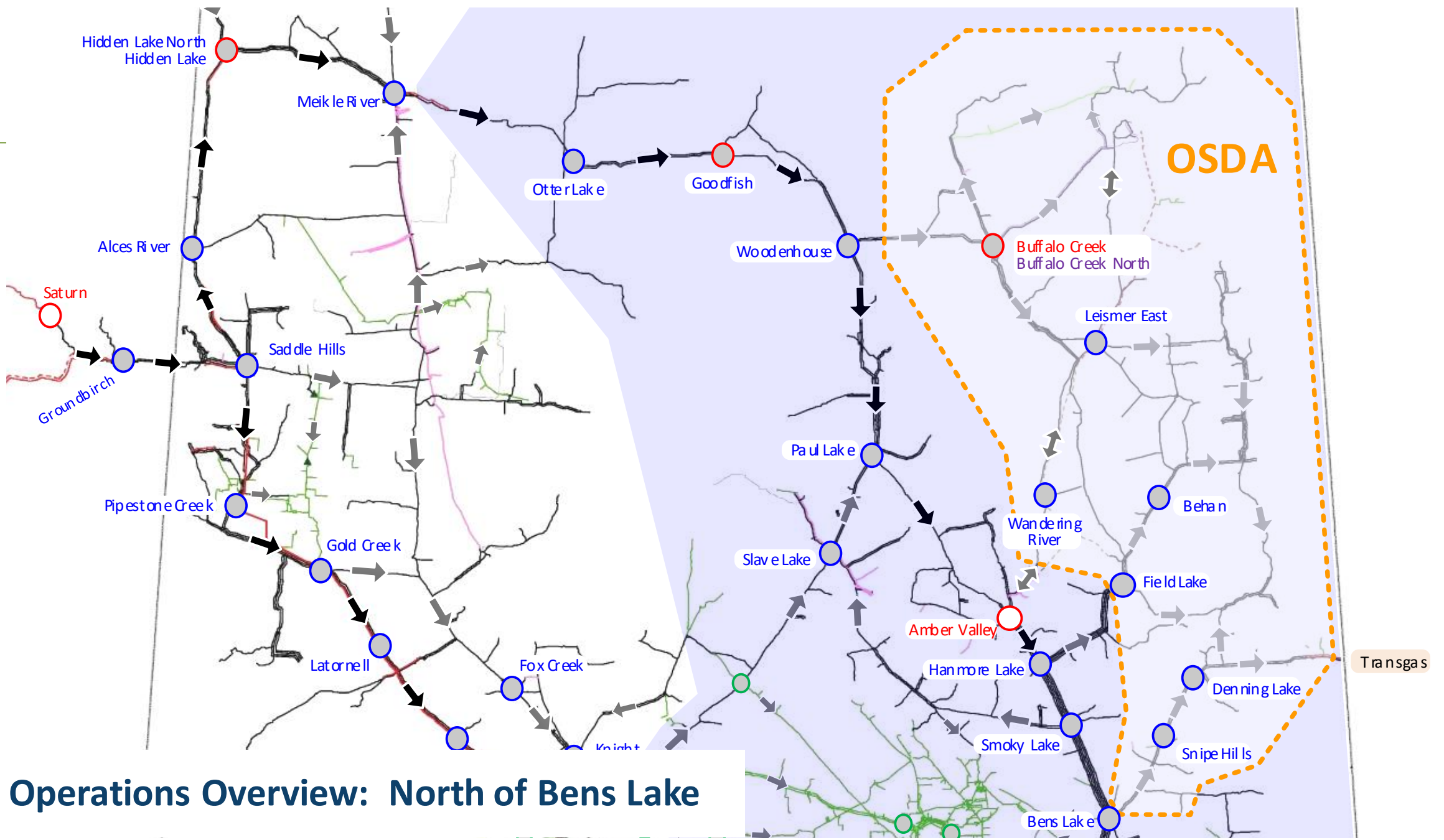
# NGTL/Foothills Outages Review

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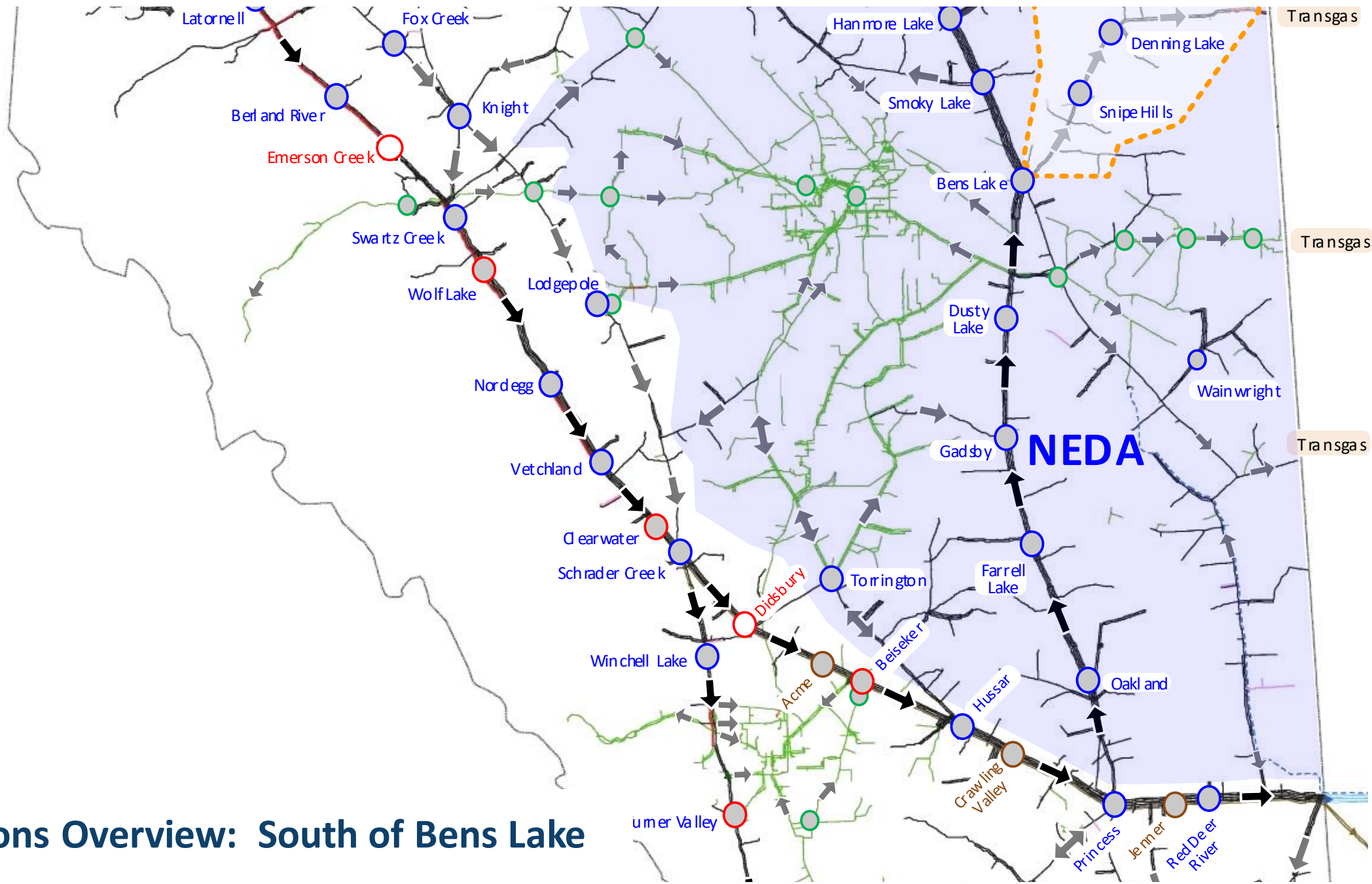
1. System Maps: Operational Areas
2. NGTL Foothills Daily Operating Plan (DOP)
  - Outage Tables
  - Capability and Historical Flow Charts
  - Base Capability table



NEDA FT-D restriction: Alberta Cold Snap (Jan 16)



## Operations Overview: North of Bens Lake

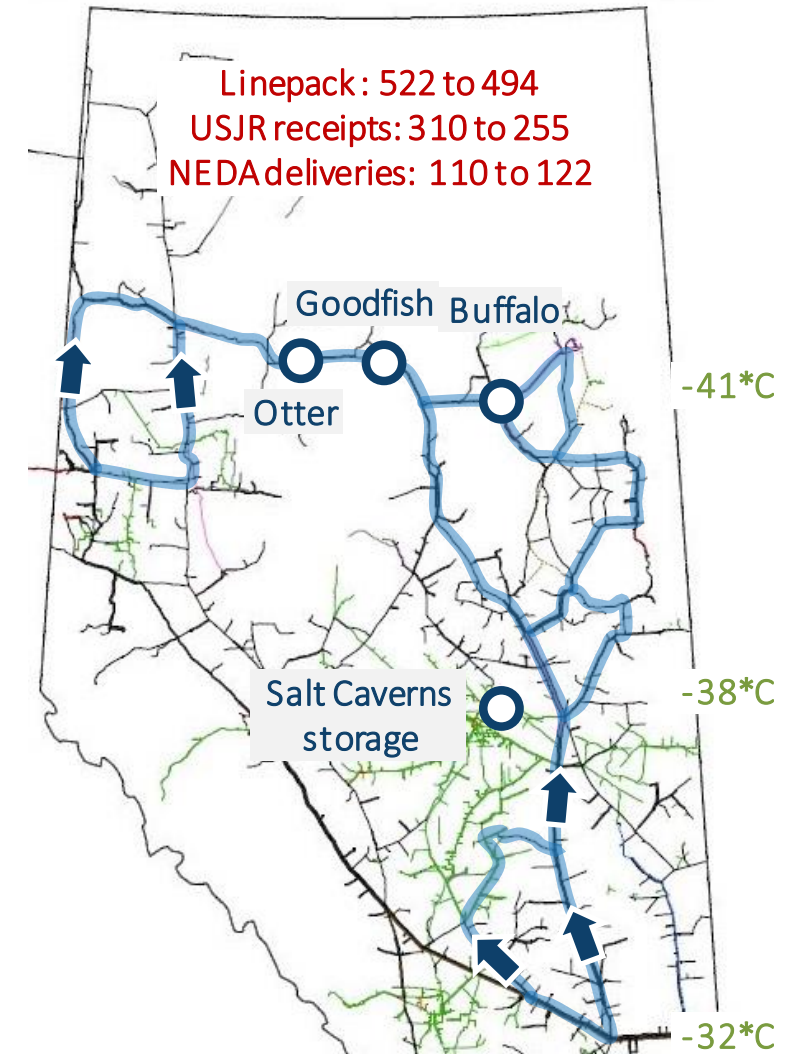


## Operations Overview: South of Bens Lake



# High level summary

- **Cold weather event and high Alberta gas consumption**
  - Sustained cold weather with lows of  $-32$  to  $-41$  (degree celcius)
  - NEDA gas consumption increased from 110 E6m3 to 122 E6m3 (increase of 500 TJ/day)
- **Dynamic and suboptimal system linepack**
  - Linepack target 510 E6m3
  - High of 522 E6m3 on Jan 11 (485 TJ above target)
  - Low of 494 E6m3 on Jan 14 (650 TJ below target)
- **Unplanned Outages**
  - Otter Lake C/S
  - Goodfish C/S
  - Buffalo Creek North C/S
  - Salt Cavern Storage



# Sequence of key events

Date	System Linepack	Supply Demand Tolerance	NEDA Service Availability	Comments
Saturday January 11	522	-1/+1	100% FT, 100% IT	N/A
Sunday January 12	514	-1/+1	100%FT, 100% IT	
Monday January 13	504	-1/+1	100%FT, 100% IT	<ul style="list-style-type: none"> <li>• Extreme cold weather</li> <li>• Goodfish C/S &amp; Salt Caverns storage unplanned outages</li> <li>• Field receipts drop from 284 to 255 (loss of 1.1 PJ/day)</li> <li>• Increased NEDA gas consumption</li> <li>• Reduced NEDA delivery pressures</li> <li>• Meikle River planned outage deferred (threat to NEDA)</li> </ul>
Tuesday January 14	494	-1/+2		<ul style="list-style-type: none"> <li>• Goodfish C/S &amp; Otter Lake C/S unplanned outages</li> <li>• Low NEDA delivery pressures</li> <li>• NEDA FT-D restriction</li> </ul>
Wednesday January 15	499	0/+2	85%FT, 0% IT	<ul style="list-style-type: none"> <li>• Buffalo Creek unplanned outage</li> <li>• Low NEDA pressures</li> </ul>
Thursday January 16	496	0/+2	85%FT, 0% IT	
Friday January 17	496	0/+2	100%FT, 0% IT	<ul style="list-style-type: none"> <li>• Normalizing NEDA delivery pressures</li> </ul>

# Findings

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- NEDA system compromised by unplanned outages
  - Goodfish C/S, Otter Lake C/S, Buffalo Creek North C/S, and Salt Caverns storage
- Overall NGTL system performance compromised by low system linepack
  - Hussar suction pressure 4800kPa; well below design expectation of 5400kPa
- NEDA receipts and deliveries as expected
  - Receipts at design flow of 85 TJ/day (minimal local receipts)
  - Deliveries near but below peak design flow

# Follow-up

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Root cause analysis and pursuit of improved reliability underway

Assess linepack management tools and/or alternatives

Finalize review of NEDA area system design – preliminary findings to show no material gaps

**Questions?**

