



Vector Pipeline™

# **Vector Pipeline**

**Customer Meeting**  
**Scottsdale, Arizona**  
**October 10, 2019**



Vector Pipeline™

# **Pete Cianci**

## **President**



Vector Pipeline™

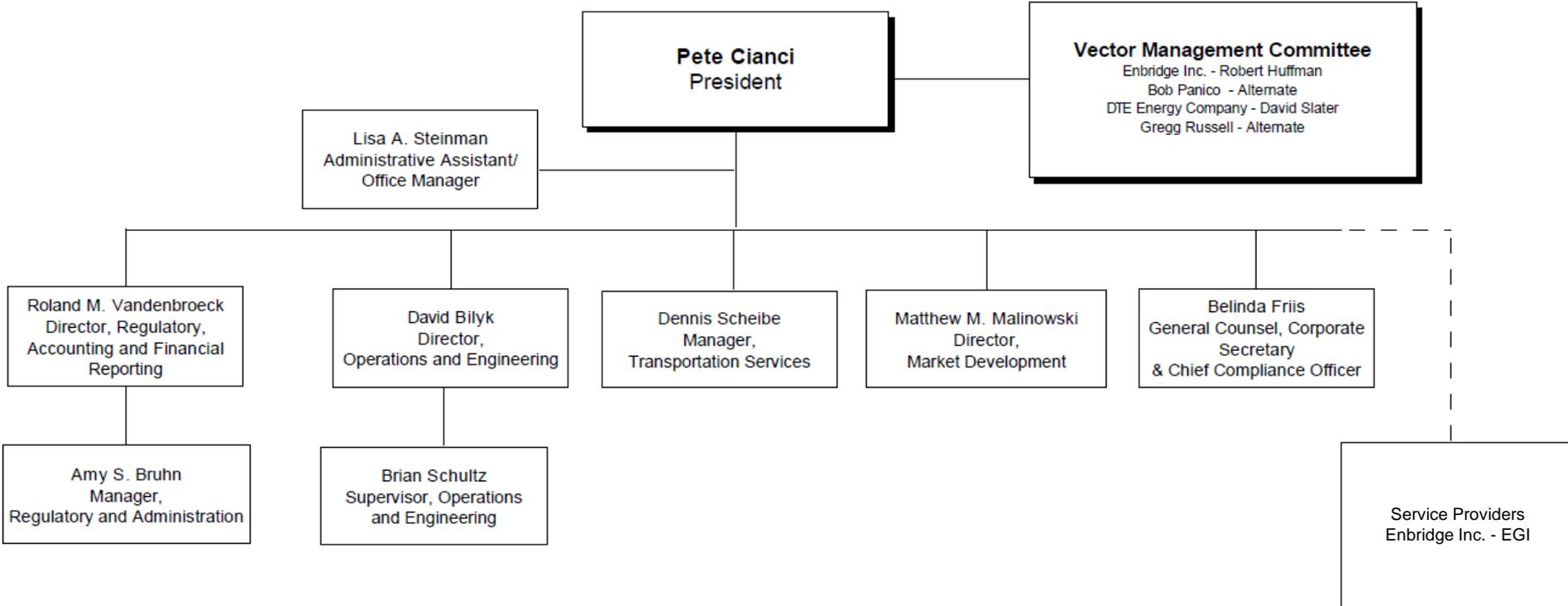
# Meeting Agenda

- Pete – Welcome and Organizational Changes
- Matt
  - Project and System Update
  - What's Next
- Dennis
  - Capacity Postings
  - Gas Purchases/Sales
  - QuickNom Update



Vector Pipeline™

# Organization





Vector Pipeline™

# **Matt Malinowski**

## **Director, Market Development**



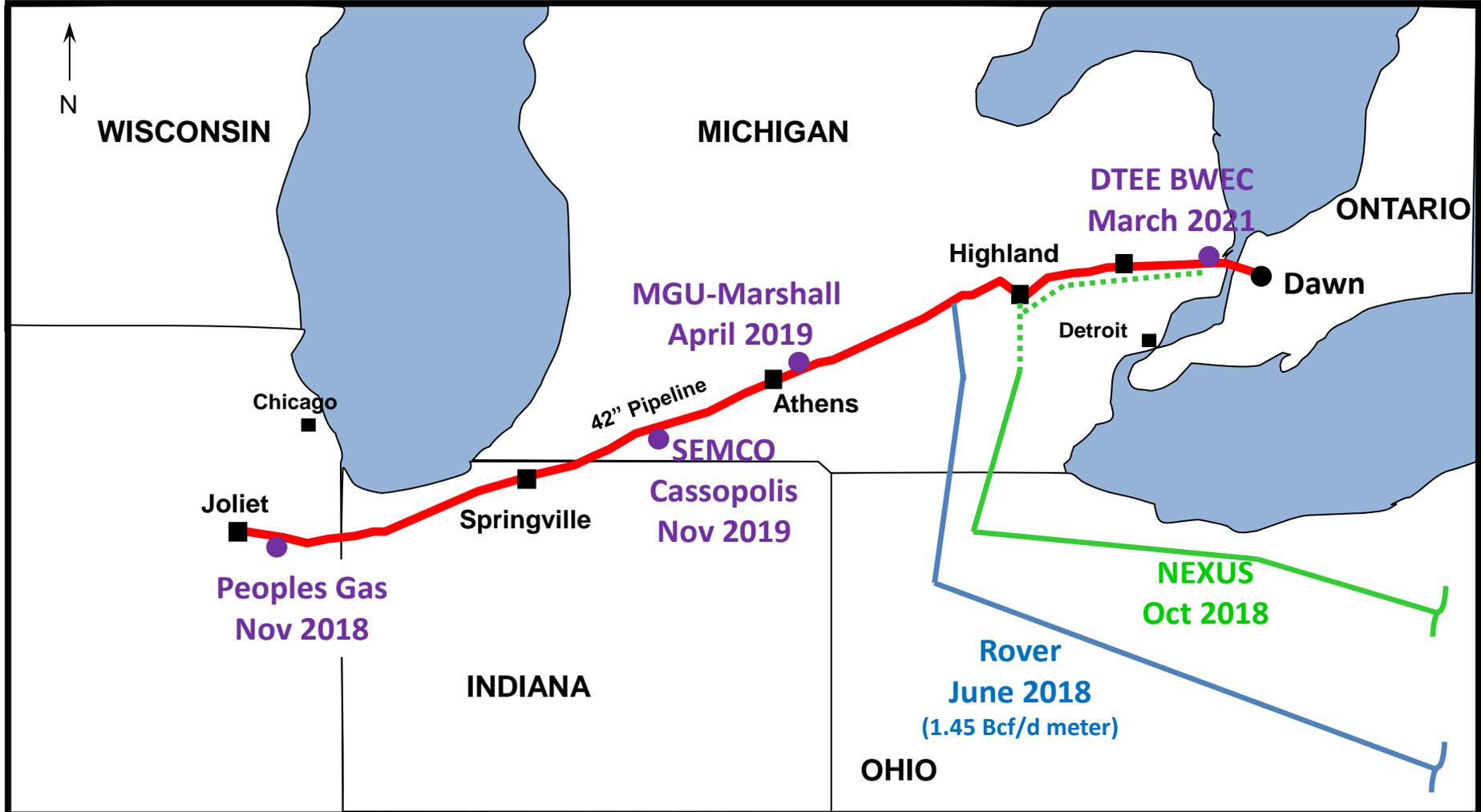
Vector Pipeline™

# Projects



# New Interconnections

Vector Pipeline™





Vector Pipeline™

# Rover Interconnect

- New receipt near Howell, Michigan
- Meter Station Capacity-1.45 Bcf/d
- Began flowing gas June 2018
- Final ramp-up to 950 MDth/d on Nov. 1, 2019
  - Peak volumes over 1.0 Bcf/d
  - 2019 YTD average – 963 MDth/d



Vector Pipeline™

# Milford Junction

- Modifications to allow the Vector-DTE Gas interconnection at Milford, Michigan to be bi-directional allowing for receipt of NEXUS Supply
- Installed 0.6 miles, 30-inch “jumper line” to allow lower pressure receipts to flow into the inlet of Vector’s Highland Compressor
- First flow in late 2018
- Allows flexibility to sell backhauls with Milford as Primary Receipt Point



Vector Pipeline™

# Peoples Interconnect

- Peoples Gas – Smith Road Interconnect
  - New delivery near Manhattan, Illinois with Peoples Gas Light and Coke
  - 280 MDth/d metering capacity
  - Predominantly winter-use for supply and redelivery of Michigan storage gas
  - In-service Fourth Quarter 2018



Vector Pipeline™

# MGU Interconnection

- MGU – Marshall Interconnect
  - New delivery near Marshall, Michigan with Michigan Gas Utilities
  - 35 MDth/d metering capacity
  - MGU will primarily use to fill its storage field in the summer months
  - Annual potential for MGU transport customers into Coldwater market
  - In-service April 2019



Vector Pipeline™

# SEMCO Interconnection

- SEMCO – Cassopolis Interconnect
  - New delivery near Cassopolis located in Southwest Michigan
  - 12 MDth/d metering capacity
  - SEMCO will use to serve this market
  - In-service November 2019



Vector Pipeline™

# DTEE Interconnect (Proposed)

- DTE Electric – Bluewater Energy Center (DTEE-BWEC)
  - New 1100 MW powerplant to replace coal
  - Meters and short lateral to be constructed near St. Clair, Michigan
  - Receipt meters from Vector 42-inch mainline and DTE Gas
  - 180 MDth/d load
  - Test gas 2021
  - Plant commercial in-service 2022



Vector Pipeline™

# Potential Projects

- Chicago/Northern Indiana Markets
  - Exploring growth within this region
- Continue pursuing LDC Interconnects
- New powerplants
  - Phase 2 SJEC (MISO)
  - 3 other announced developments close to our mainline
  - Coal retirements in Michigan & Indiana



Vector Pipeline™

# Springville Compressor

- Two existing 15,000 hp Solar Mars power turbines
- Bi-directional capability installed
- New impellers on both gas compressors to handle wide range of flows
- Modified piping for lower flows (recycle loops)
- Major construction completed January 2019





Vector Pipeline™

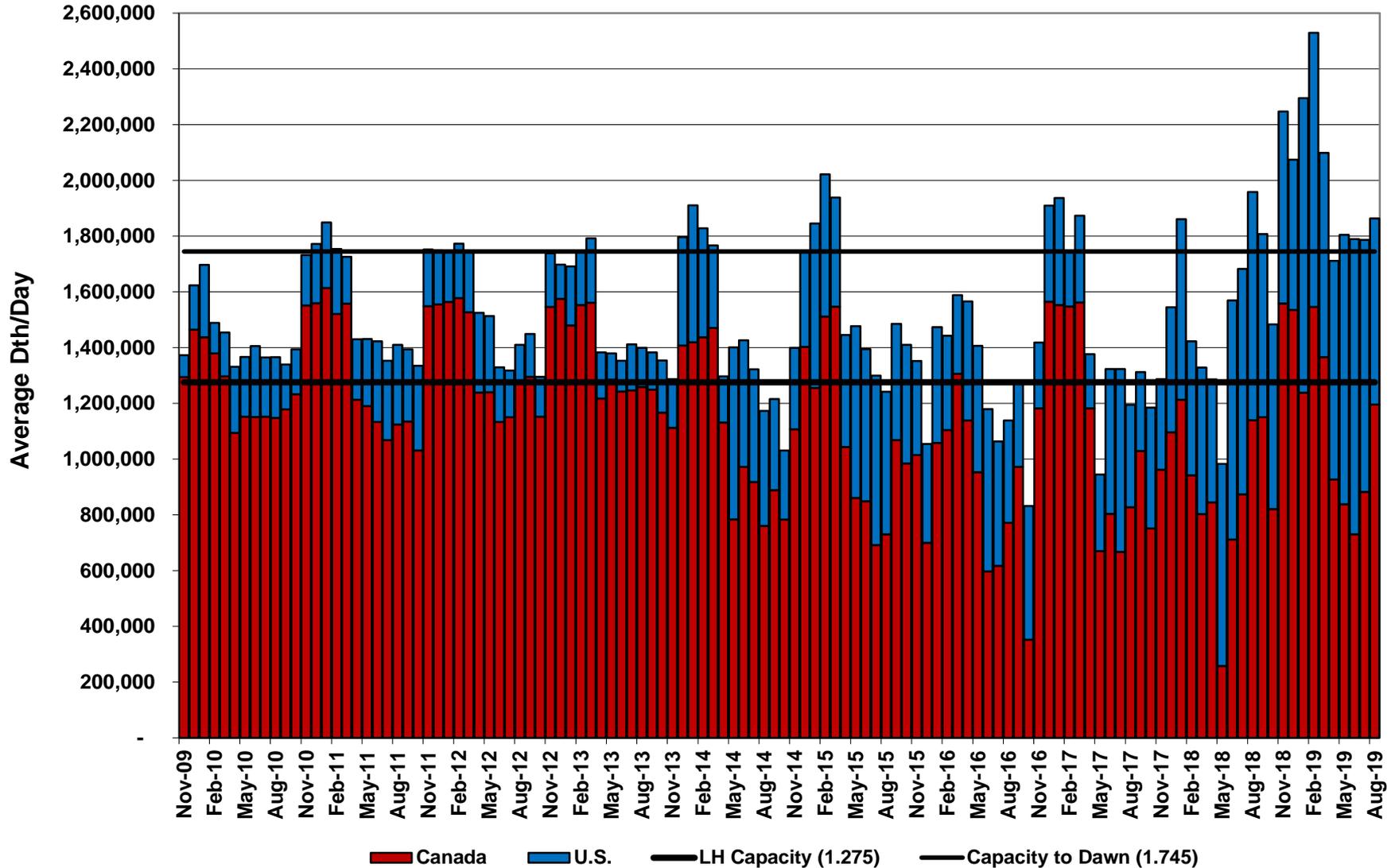
# Recent Operations



Vector Pipeline™

# Scheduled Deliveries

(Includes Longhaul, Shorthaul, Backhaul, Lease and Segmentation)

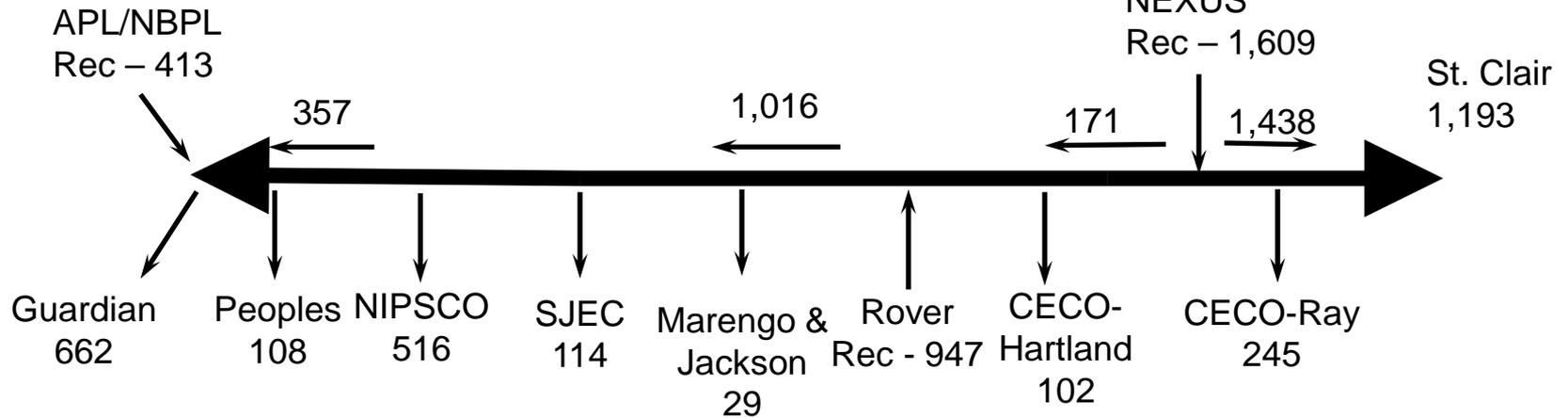




# Winter 2018/19

Winter 2018/19 System Peak – 2,969 Dth  
January 31, 2019

Michigan  
Receipts  
Wash 10  
Bluewater  
DTE Gas/  
NEXUS  
Rec – 1,609



Temperature Range – S.E. Mich. (White Lake): -13°F to -1°F

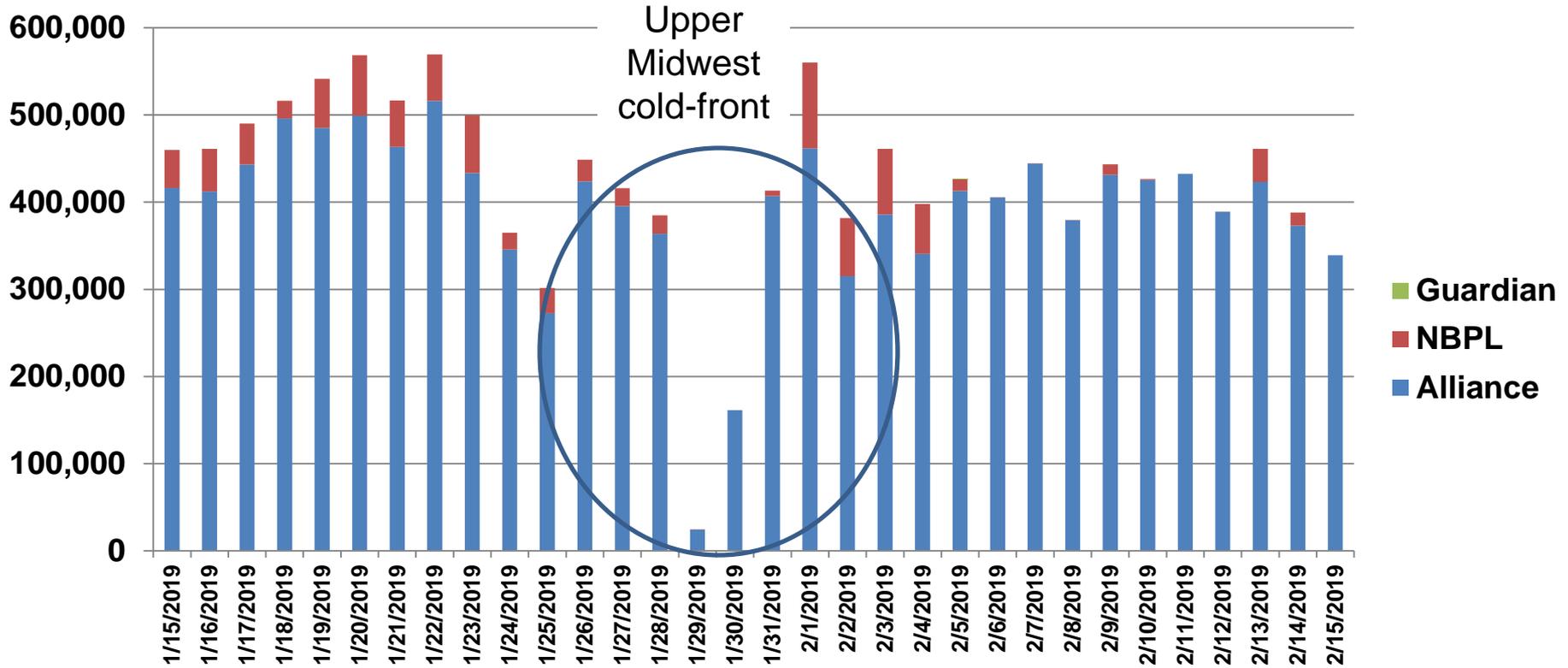


Vector Pipeline™

# Joliet Receipts

## Jan 15, 2019 to Feb 15, 2019

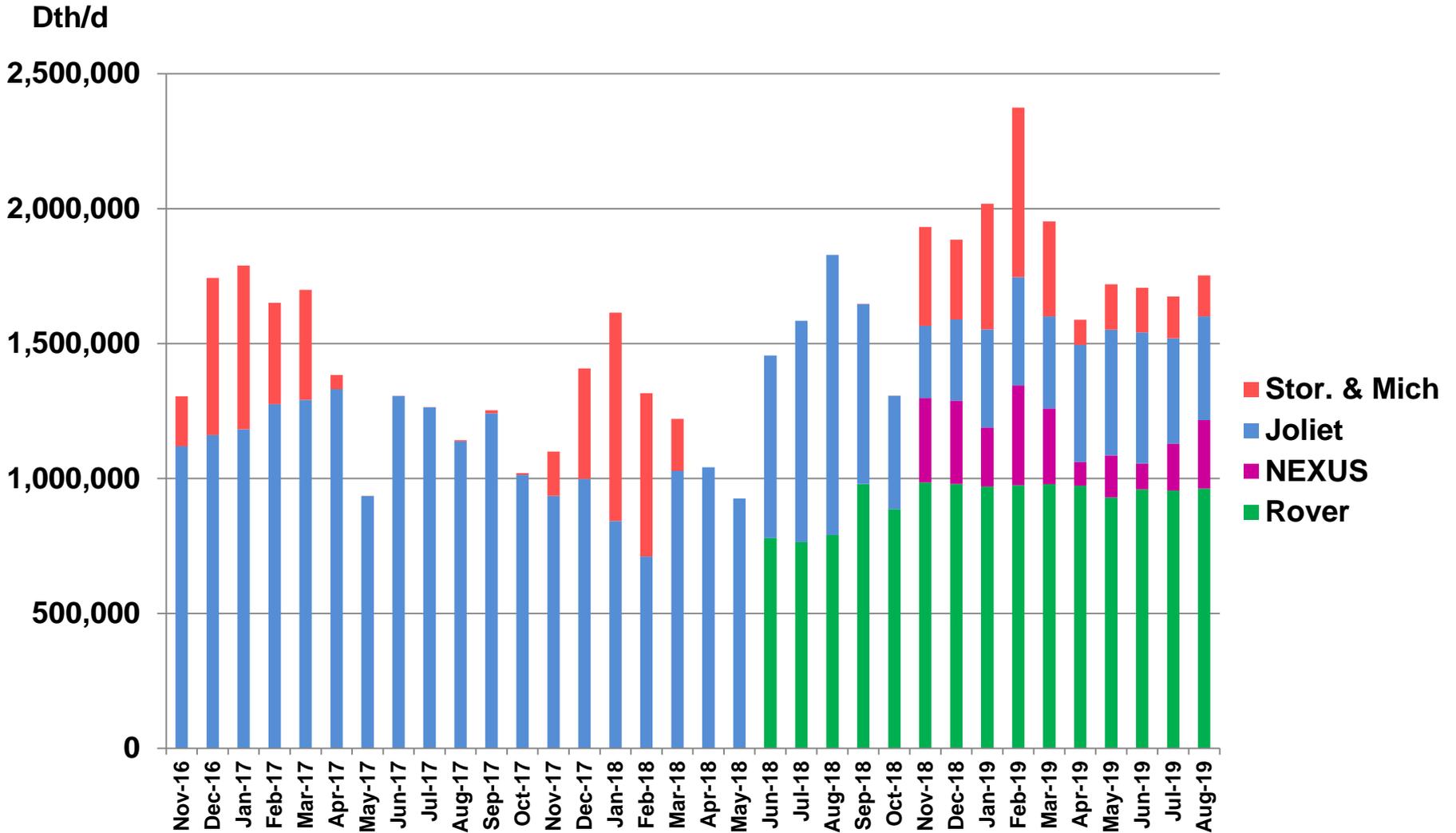
Dth/d





Vector Pipeline™

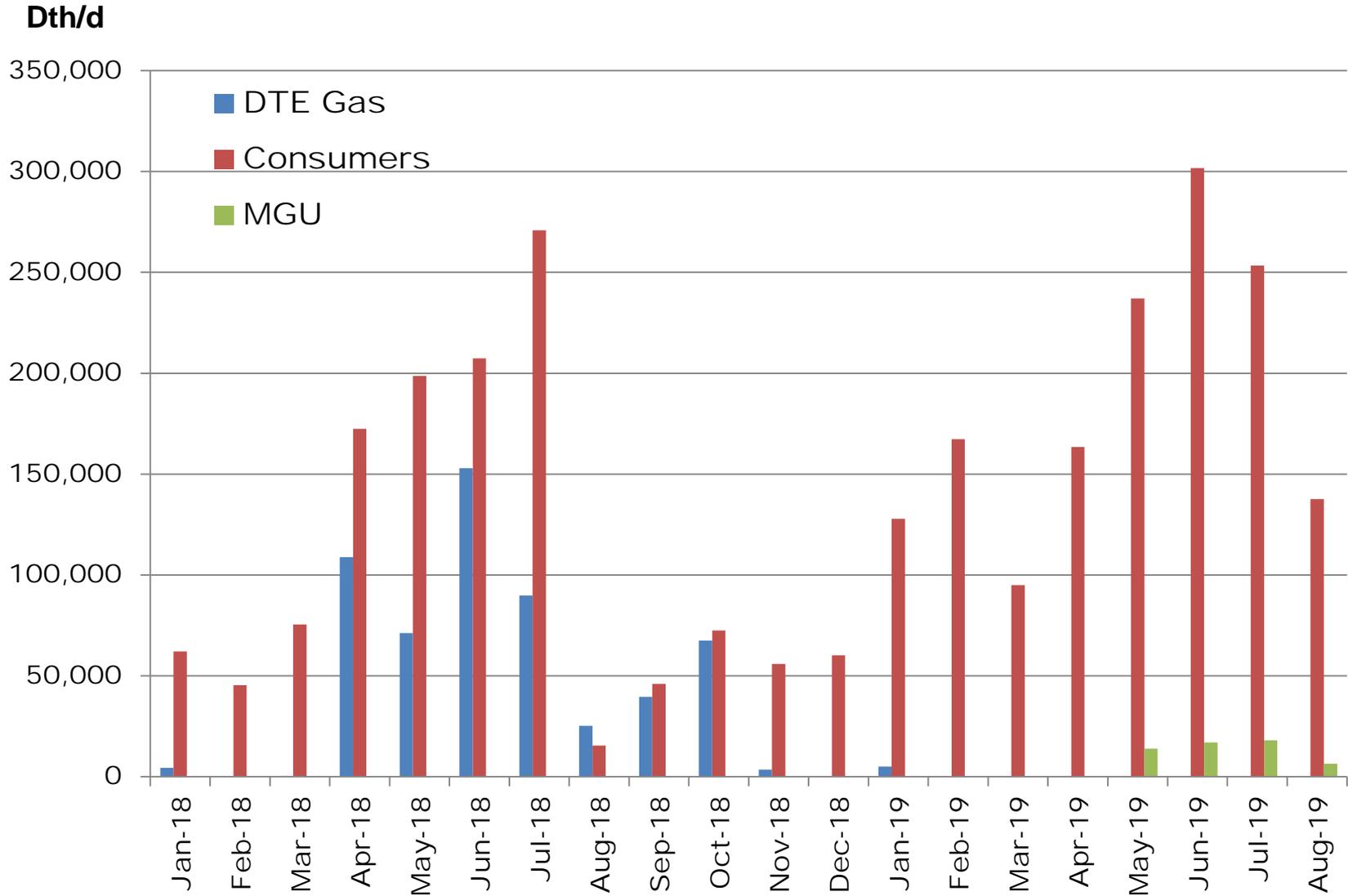
# Receipts from Pipelines and Storage





Vector Pipeline™

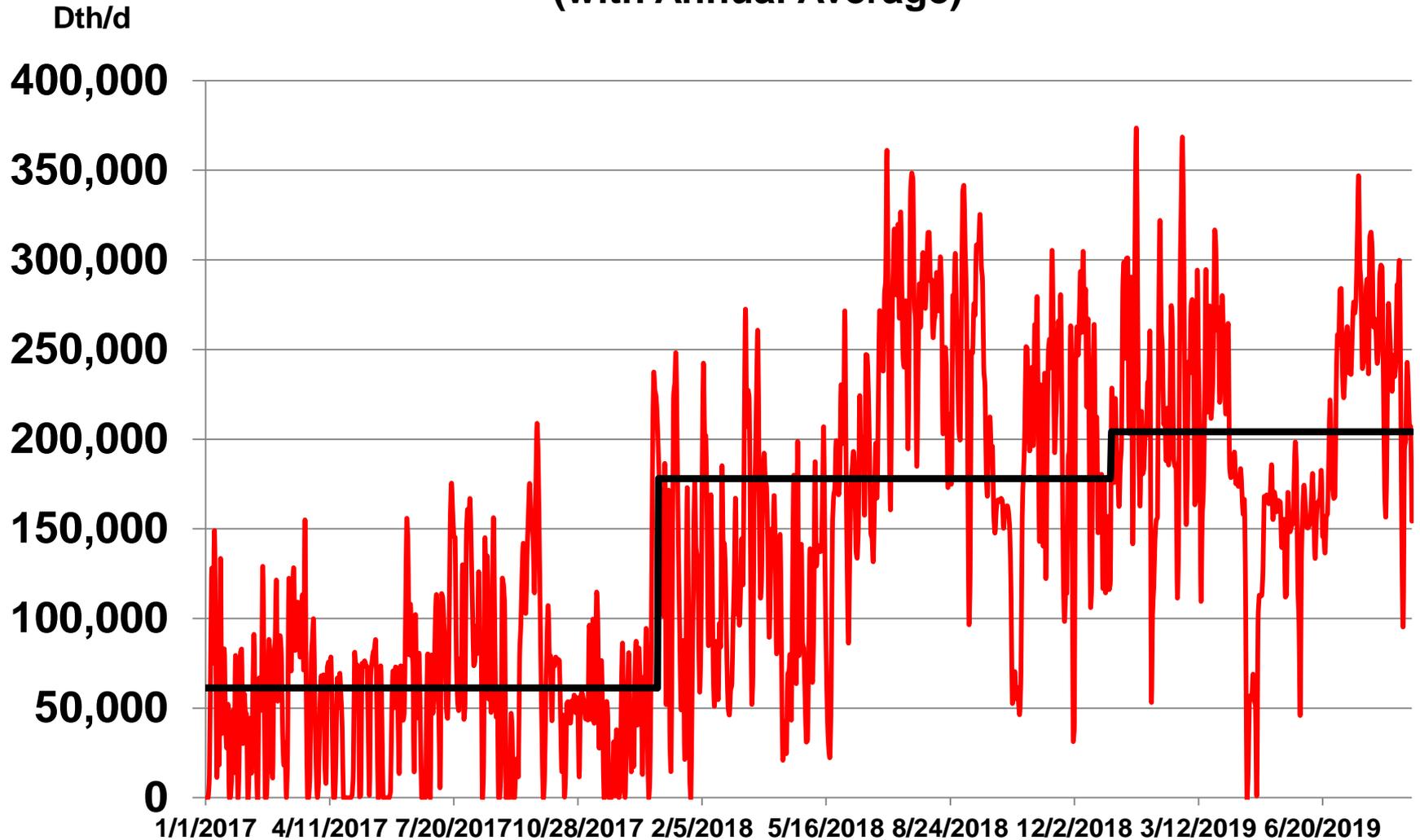
# Net Deliveries to Michigan LDCs





Vector Pipeline™

# Deliveries to US and Canadian Power plants (with Annual Average)





Vector Pipeline™

# Historical BTU Content

(Btu/cf @ St. Clair)

<u>Year</u>	<u>Btu/cf</u>
2012	1026
2013	1035
2014	1045
2015	1054
2016	1054
2017	1051
2018	1065
YTD	1068



Vector Pipeline™

# BTU Issues

- Vector's Tariff has a maximum BTU of 1100 BTU per standard cubic foot
- As BTU's continue to climb, Vector needs to monitor all receipts for out-of-spec gas
- Certain interconnecting supply pipelines have much higher BTU limits (or none)
- Reduced volumes on west end of the pipeline may cause certain supply points to be shut in by Vector from time to time if Vector cannot blend gas down
- NBPL – no explicit BTU limit in their Tariff



Vector Pipeline™

# Turbine Advisory

- In August a Product Safety Advisory was issued for one engine at Highland and one at Washington
- Vector immediately took the units offline – Critical Notices were issued.
- IT-1 was restricted to zero however no Firm services were impacted
- Both stations are now back in service – new or replacement equipment has been installed



Vector Pipeline™

# What's Next for Vector



Vector Pipeline™

# Future Maintenance

- Vector is required to perform its seven-year inline inspections in 2020 per PHMSA regulations
- Plan is to perform work in late spring (April and May)
- Specific dates will be posted as the details for this job become known. Goal is to post the specific dates late in fourth quarter of 2019



Vector Pipeline™

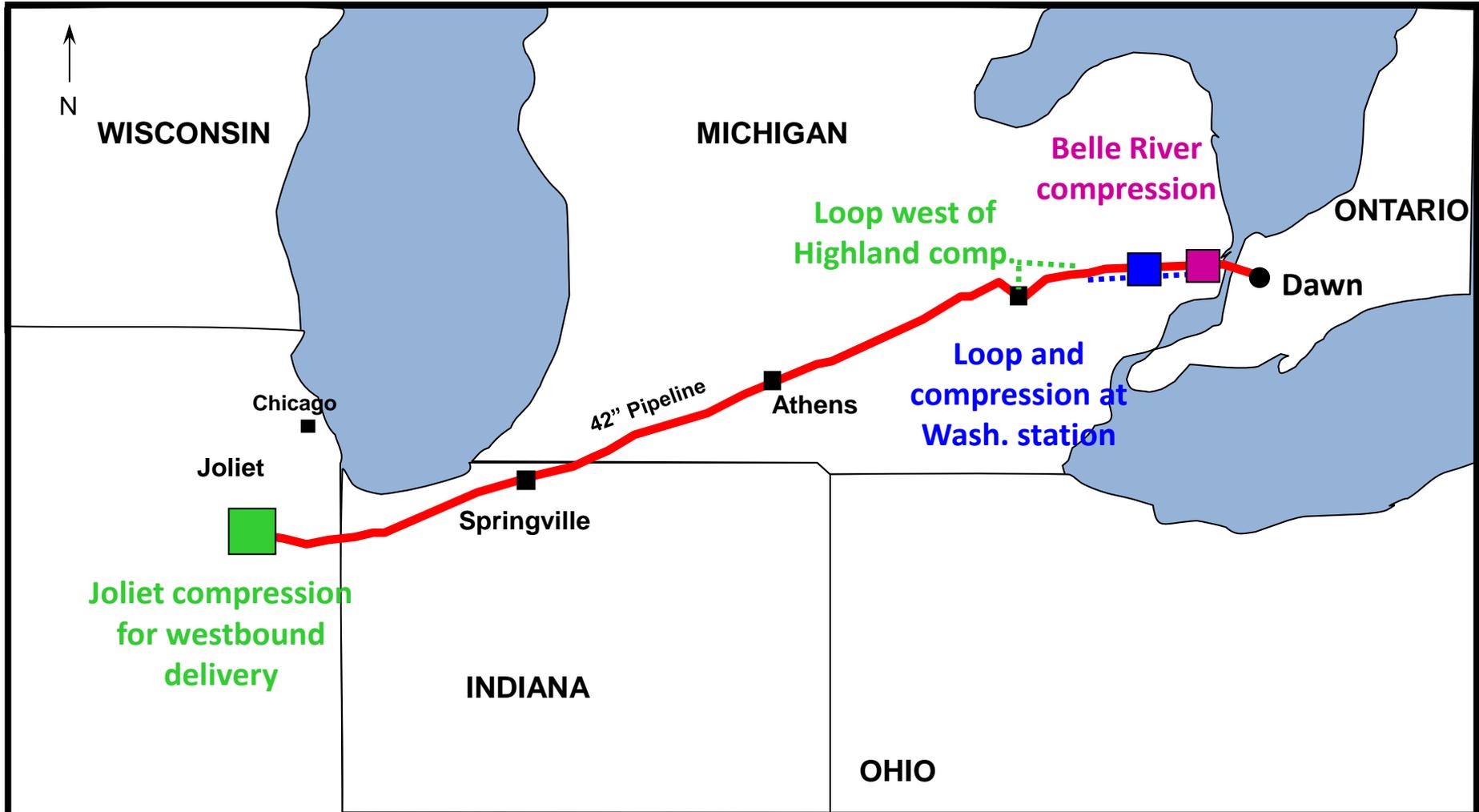
# Expansion

- Michigan-Dawn and Michigan-Chicago spreads are strong during the winter months
- Eastbound Expansions:
  - Vector can expand eastbound capacity from MI storage, Michigan supply or Joliet to Dawn with the addition of loop and compression.
  - These same expansions also increase our westbound capacity (MI Storage to Joliet markets)
- Compression can be modified or added at Joliet to deliver MI supply / MI storage services to markets west of Chicago (Northern Border markets)



Vector Pipeline™

# Expansion Facilities





Vector Pipeline™

# **Dennis Scheibe**

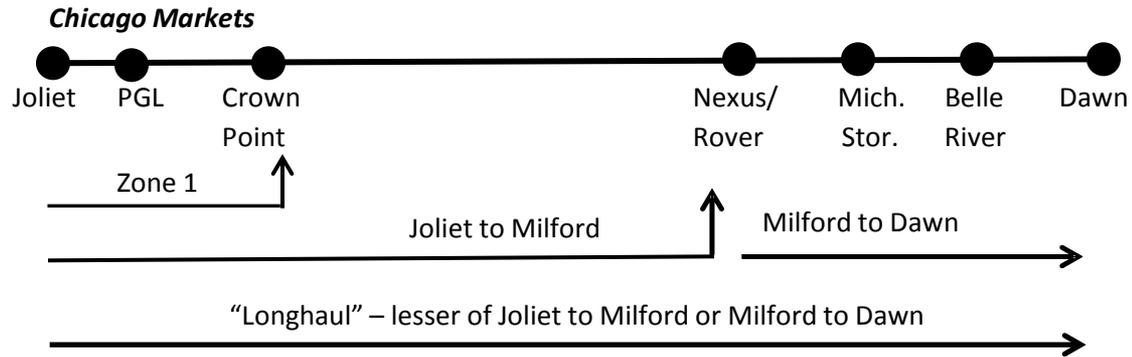
## **Manager, Transportation Services**



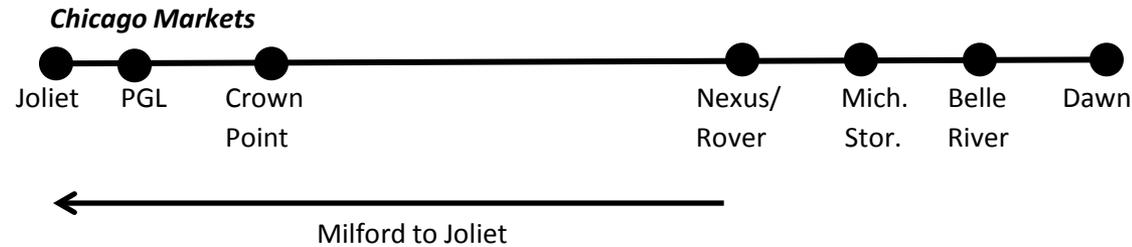
Vector Pipeline™

# Capacity Posting by Segments

Forward Haul



Back Haul





Vector Pipeline™

# Example of Capacity Posting

## PROJECTED IT AVAILABILITY

**August 5, 2019**

Note: Vector's "Traditional Joliet to Dawn" longhaul availability can be determined by using the lesser of the "Joliet to Milford Junction" or the "Rover to Dawn" segment.

Projected IT-1 by segment available August 5, 2019 (current day):

- Joliet to Crown Point 1,003,272
- Joliet to Milford Junction 335,569
- Rover to Dawn 110,000
- Milford Junction to Joliet 1,424,375

Projected IT-1 by segment available August 6, 2019:

- Joliet to Crown Point 981,956
- Joliet to Milford Junction 98,251
- Rover to Dawn 92,210
- Milford Junction to Joliet 1,290,495



Vector Pipeline™

# Select Capacity Availability Winter 2019/20

<u>Backhauls to Joliet</u>	<u>Available</u>
from Storage	<b>Sold out!</b>
from Milford	70,000

<u>Delivery Point</u>	<u>Available</u>
Crown Point	515,000
Peoples Gas	120,000
Guardian	<b>35,000</b>



Vector Pipeline™

# Winter Forward Spreads from Michigan

October 4, 2019

	<u>19/20</u>	<u>20/21</u>
MichCon to Dawn	\$0.271	\$0.170
MichCon to Chicago	\$0.281	\$0.222
MichCon to Ventura	\$0.739	\$0.635



Vector Pipeline™

# Contract Path / Secondary Points

- Contract and flow patterns may limit Shippers' abilities to flow to secondary out-of-path points
- Secondary In-path: Between primary receipt and primary delivery and in the same direction at contract rate
- Secondary Out-of-Path: Outside of the primary receipt or delivery and/or in the opposite direction of the primary path.
  - Unless explicitly agreed to with Vector, secondary, out-of-path points are not discounted.
- Direction Matters!



Vector Pipeline™

# New Tariff Language for Gas Purchases/Sales

- Section 43 added to clarify the ability to make operational purchases and sales
- Anticipates the periodic sale of gas dependent upon system operating conditions
- Baseload quantities sold at the Milford Junction TTS point
- Critical Notice will be posted when quantities will be available before the start of bid week
- Fixed price bidding
- Requires the execution of a NAESB agreement in advance



Vector Pipeline™

# QuickNom EBB Update

- Met with several customers
- Generally satisfied with QuickNom functionality
- Intuitive and easy to use
  - “user friendly and easy to navigate”
  - “5+ rating for ease of nominations”
  - “capacity release functionality is simple and clear”
- Easy for customers to cross-train reps
- Retain QuickNom based on feedback and cost considerations



Vector Pipeline™

# 2020 Mastio Pipeline Study

- Vector participates every other year
- We value your candid feedback on our performance
- Want to get connected to the appropriate people in your organization to obtain the most meaningful results



Vector Pipeline™

# Questions

# ?



Vector Pipeline™

**Thank You!**  
**We appreciate your business!**