

EPNG / Mojave/ Sierrita 2017-18 Winter Preparedness

Kinder Morgan Western Region Pipelines
October 26, 2017

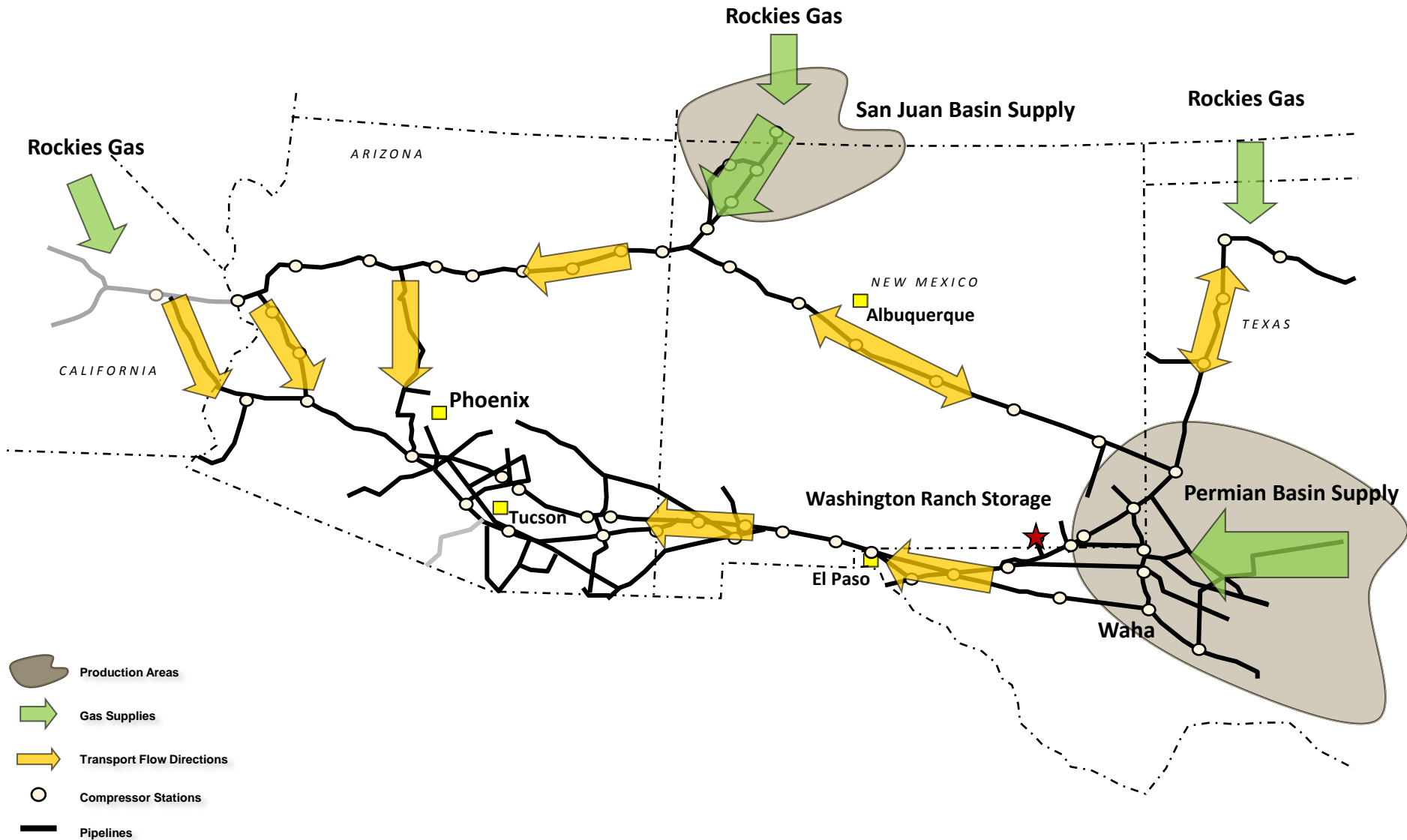
Agenda

- Operations Overview
- Emergency Communication
- Winter Preparedness Planning
- Maintenance Planning Process
- Remaining 2017 Planning Maintenance
- Gas Control Contacts

Operations Overview

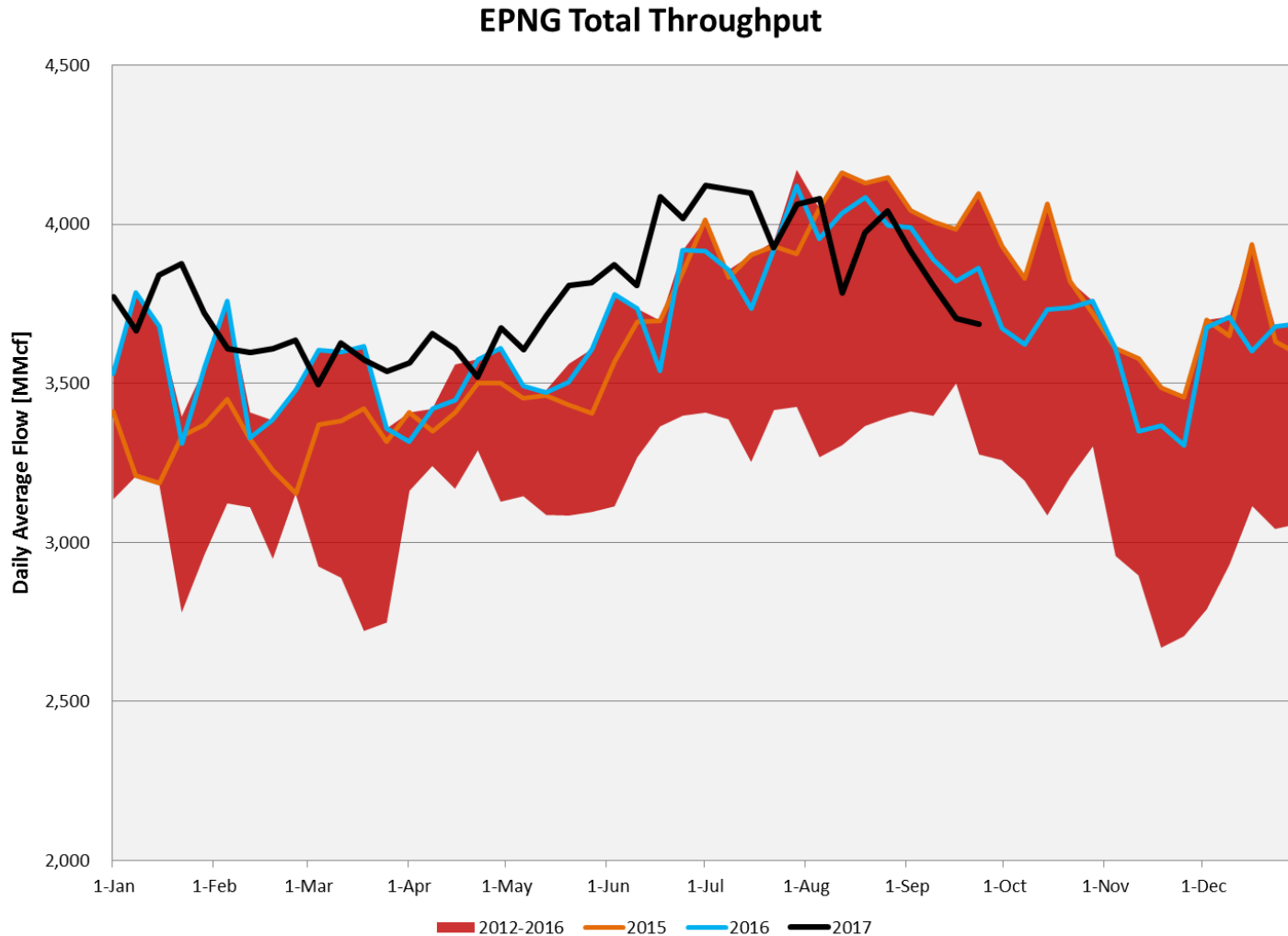
EPNG System Overview

Supply Locations and Flow Direction



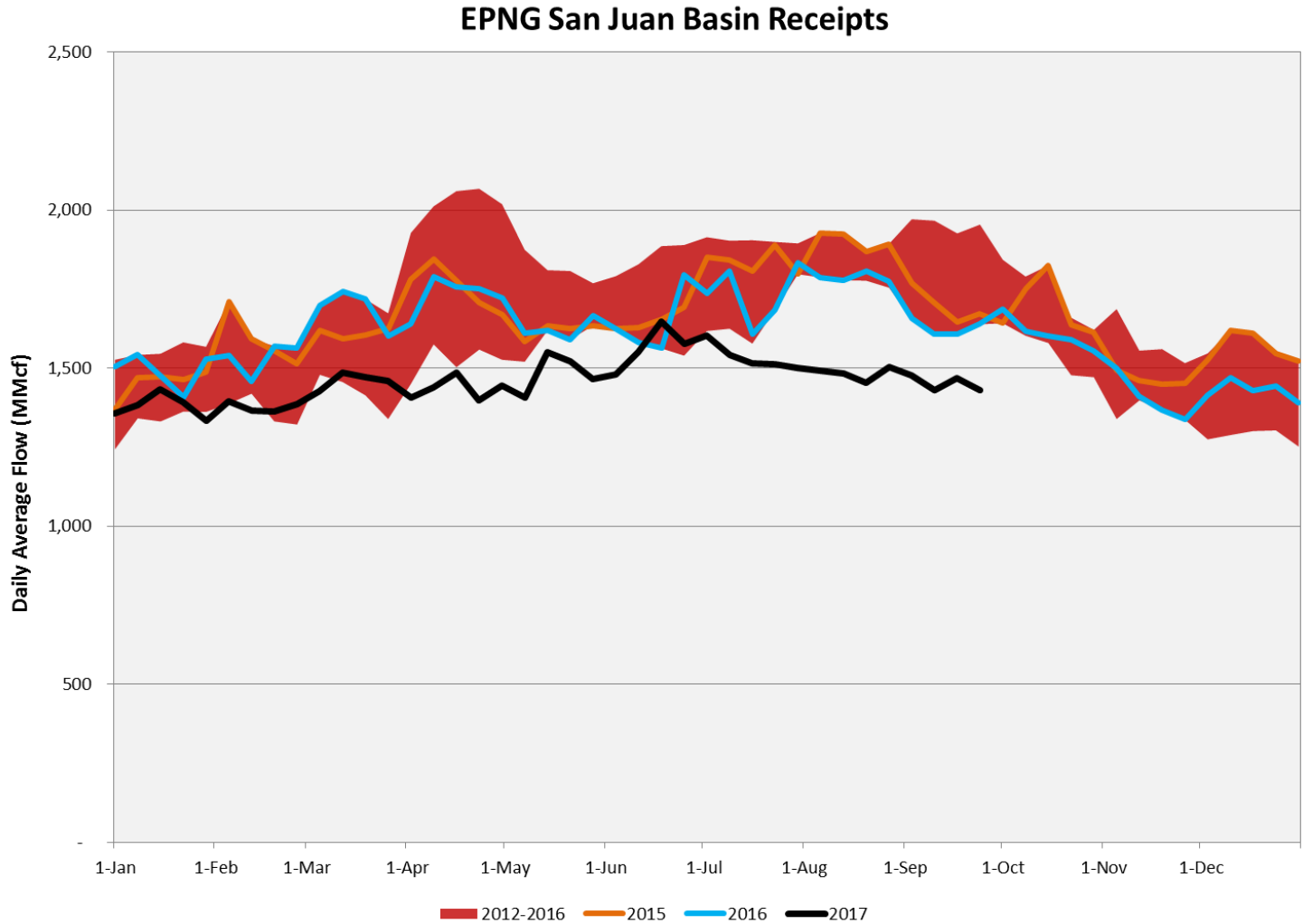
EPNG Total System

2012-2017 Throughput Trends (MMcf/d)



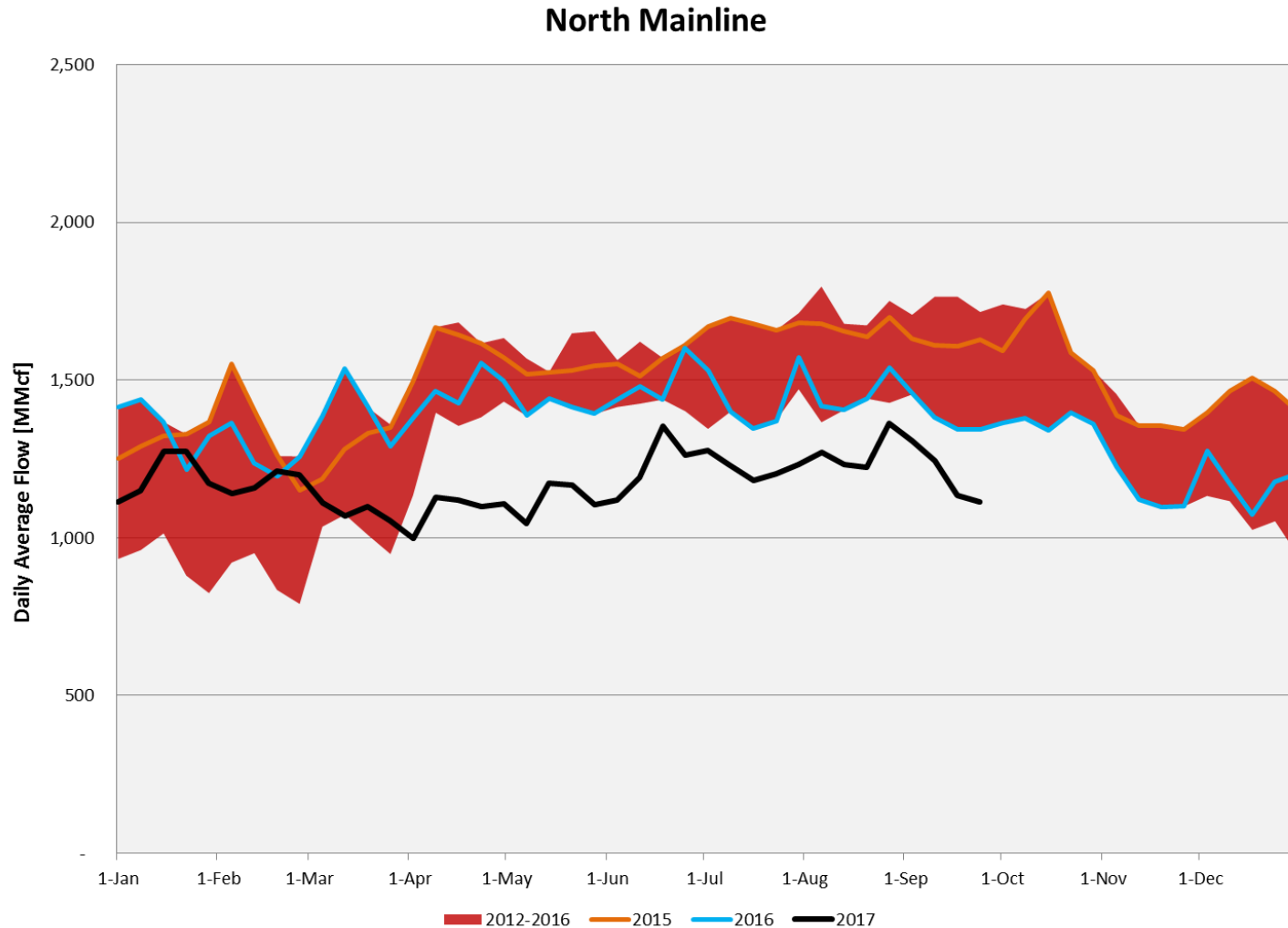
San Juan Basin

2012-2017 Throughput Trends (MMcf/d)



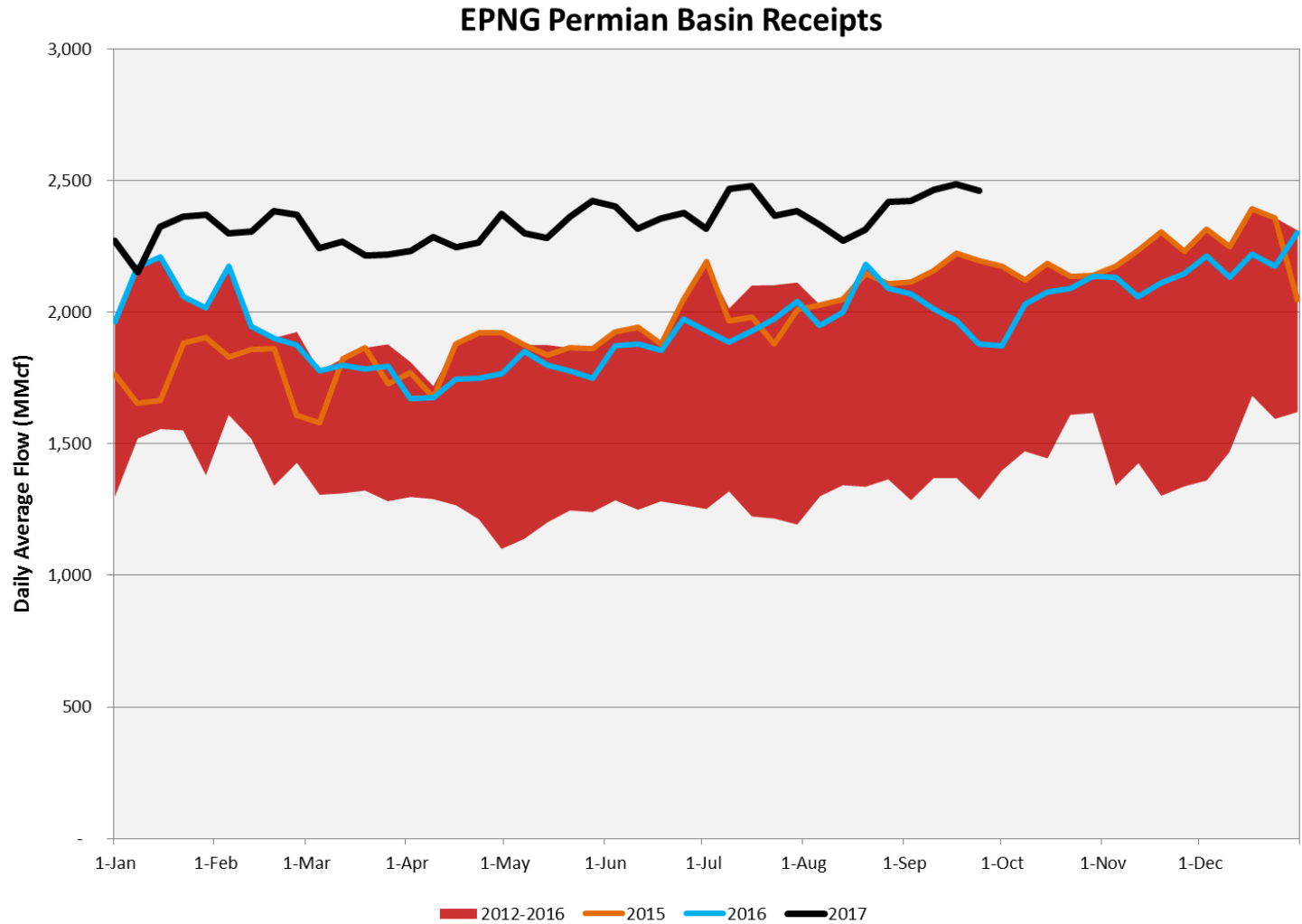
North Mainline

2012-2017 Throughput Trends (MMcf/d)



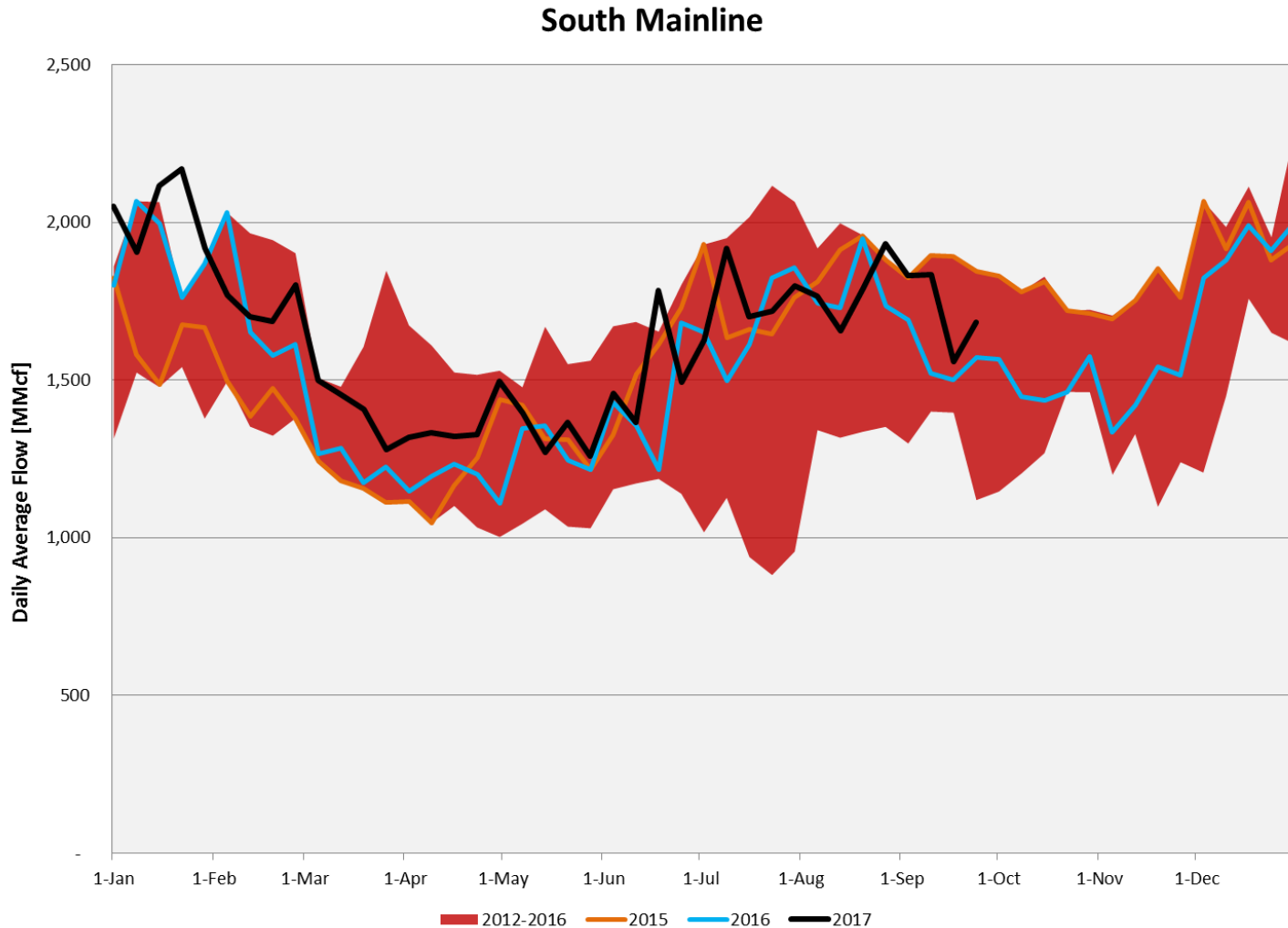
Permian Basin

2012-2017 Throughput Trends (MMcf/d)



South Mainline

2012-2017 Throughput Trends (MMcf/d)



SOC/COC* Summary

	Condition Type (Number of Days)					
	Warnings		SOC		COC	
	DRAFT	PACK	DRAFT	PACK	DRAFT	PACK
2013	14	7	1	1	1	0
2014	15	15	9	0	0	0
2015	9	19	2	3	3	0
2016	12	10	7	2	0	0
2017 ^(YTD)	12	0	5	0	0	0

Emergency Communications

- Shipper and Stakeholder Mass Communication
 - EBB Notices
 - Text messages
 - Emails to shipper-maintained group email addresses
 - Telephone message sent by EPNG to emergency contacts
 - System Status Hotline (1-855-762-0100) parties can call for a recorded status of the system (updated as needed throughout an event)
- Standard critical notice to promote quicker action
- Banner on internet homepage to alert users to an emergency

Winter Preparedness Plans

● Staffing

- Gas Control is 24 x 7 x 365.
- Field technicians are on-site or on-call.

● Local Facility preparation (Begin about November 1st)

- Vehicle inspections – prepare vehicles for cold weather.
- Two-Way Radio functional tests
- Facility inspections with focus on weatherproofing.
 - Heat tracing, heat lamps, thermal blankets, etc.
- Snow Removal Equipment Inspection (Where applicable)
- Assessment of back-up power needs (existing stand-by generation and rental generators as deemed necessary).

Winter Preparedness Plans (Cont)

● Communication and Coordination

- Customer Winter Preparedness Meeting (WebEx/conference call) – October 26, 2017.
- Customer-specific winter preparedness meetings or communications.
- Monitor Weather Forecast.
- Conference Calls between Gas Control and Operations to discuss preparations.
- Shipper and Stakeholder Mass Communication via EBB notices and text messages.
- Shipper-Specific Communications.

● Operational Response

- Multiple flow paths for supply to reach the market.
- Access to supply area storage: Washington Ranch, Keystone Gas Storage and Merchant Ranch Storage.
- EPNG has developed excellent working relationships with both affiliated and non-affiliated interconnecting pipelines which provide additional layers of contingency management in responding to emergency situations.

Maintenance Planning Process and Communication

Maintenance Planning Process

Annual Maintenance Planning Process

- July/August – Process Begins
 - Review of annually recurring maintenance
 - Development of Pipeline Integrity project list for the next year.
 - Development of additional O&M and project related maintenance outages for the next year.
- October
 - Gas Control preliminary review.
 - Project Planning Meeting with Project Engineering , Pipeline Engineering and Operations to review global schedule.
- November
 - Gas Control Review of Global Schedule .
 - Operations meetings/concalls to resolve scheduling conflicts.
 - Preliminary capacity impact analysis by System Design for larger outages.
 - Approval of Annual Plan.
- Communication to Customers
 - December 15 - Annual Plan for 1st Quarter posted to EBB.
 - Mid-March - Annual Plan updated for the remainder of the year posted to the EBB.

Maintenance Planning Process

Communication to Customers

● Annual Maintenance Plan

- December 15 - Annual Plan for 1st Quarter posted to EBB.
- Mid-March - Annual Plan updated for the remainder of the year posted to the EBB.
- Updated as required throughout the year.

● Monthly Maintenance

- Monthly schedule posted 9 business days before the following month.
- Updated as required prior to and during the month.

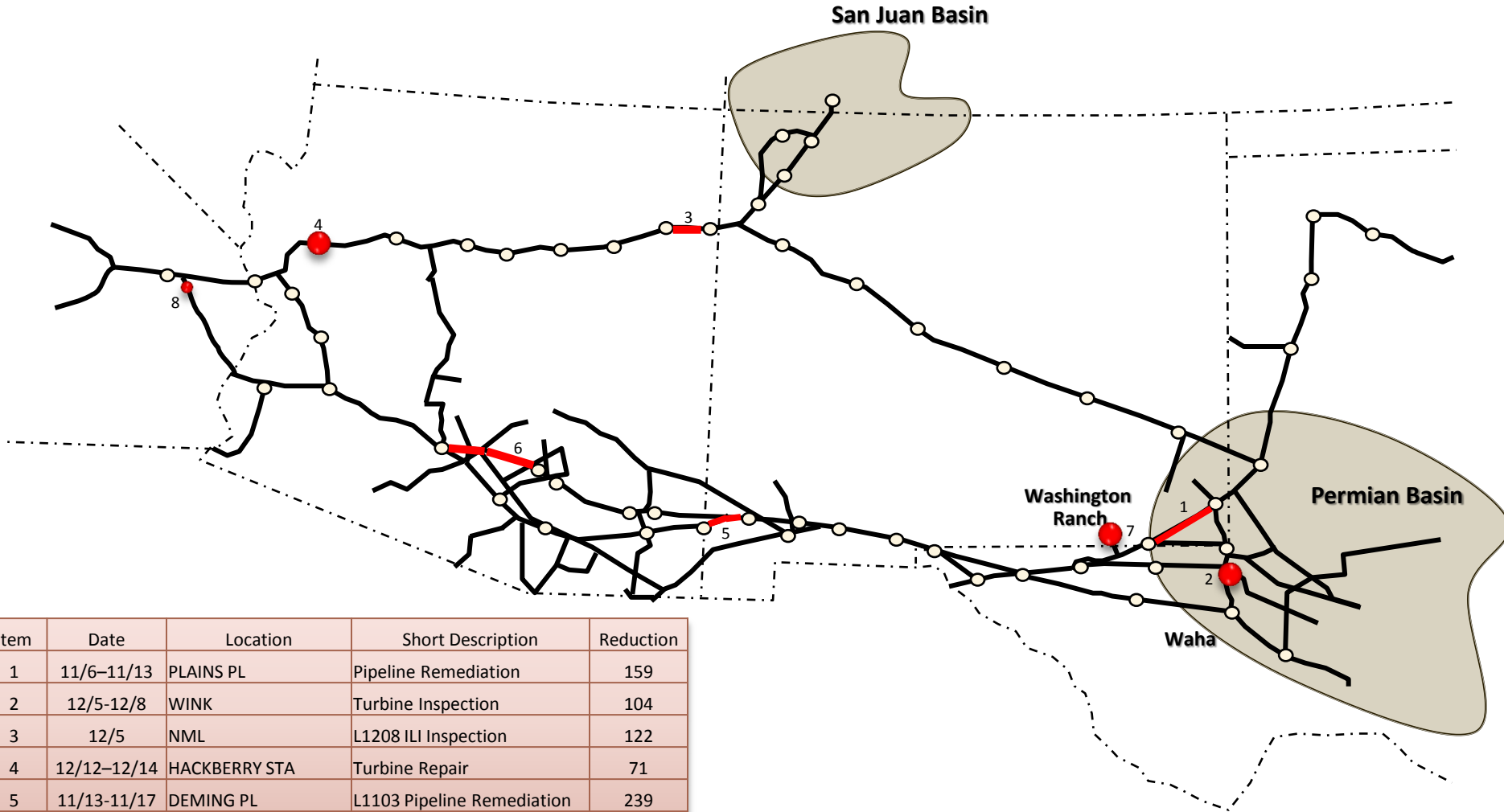
● EBB

- EPNG - <http://pipeportal.kindermorgan.com/PortalUI/DefaultB.aspx?TSP=EPNG>
- Mojave - <http://pipeportal.kindermorgan.com/PortalUI/DefaultB.aspx?TSP=MOPC>
- Sierrita - <http://pipeportal.kindermorgan.com/PortalUI/DefaultKM.aspx?TSP=SGP>

Planned Maintenance

Nov 2017 – Dec 2017

November - December Maintenance Highlights



Item	Date	Location	Short Description	Reduction
1	11/6–11/13	PLAINS PL	Pipeline Remediation	159
2	12/5-12/8	WINK	Turbine Inspection	104
3	12/5	NML	L1208 ILI Inspection	122
4	12/12–12/14	HACKBERRY STA	Turbine Repair	71
5	11/13-11/17	DEMING PL	L1103 Pipeline Remediation	239
6	11/11	PHOENIX	L2000 Pipeline Remediation	545
7	11/10-11/17	WASHINGTON RANCH	Annual Bottom Hole Survey	250
8	11/3-11/6	L1903 Cadiz South	FCV Replacement	510

*Volume indicates the maximum potential impact on pipeline capacity (MMcf/d) . Volume impacts >=100 MMcf/d 18

Gas Control Contacts

Gas Control Contacts

- **Russ Pyeatt - Manager**
 - (719) 520-3729 (office)
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- **Dan English - Lead Controller**
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- **Vic Villalva - Maintenance Planner**
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 - vic_villalva@kindermorgan.com