J.P. Morgan's

Mid-West Energy
Infrastructure/MLP 1x1 Forum

September 20, 2018

Forward-Looking Statements

Statements contained in this presentation other than statements of historical fact are forward-looking statements. While these forward-looking statements, and any assumptions upon which they are based, are made in good faith and reflect our current judgment regarding the direction of our business, actual results will likely vary, sometimes materially, from any estimates, predictions, projections, assumptions or other future performance presented or suggested in this presentation. These forward-looking statements can generally be identified by the words "anticipates," "believes," "expects," "plans," "intends," "estimates," "forecasts," "budgets," "projects," "could," "should," "may" and similar expressions. These statements reflect our current views with regard to future events and are subject to various risks, uncertainties and assumptions.

We undertake no duty to update any forward-looking statement to conform the statement to actual results or changes in the company's expectations. For more information concerning factors that could cause actual results to differ from those expressed or forecasted, see NuStar Energy L.P.'s annual report on Form 10-K and quarterly reports on Form 10-Q, filed with the SEC and available on NuStar's website at www.nustarenergy.com. We use financial measures in this presentation that are not calculated in accordance with generally accepted accounting principles ("non-GAAP") and our reconciliations of non-GAAP financial measures to GAAP financial measures are located in the appendix to this presentation. These non-GAAP financial measures should not be considered an alternative to GAAP financial measures.

Overview

Our Newly Simplified Structure: One Public Company, No IDRs

NuStar Energy L.P.

NYSE: NS

IPO Date: 4/16/2001	
Common Unit Price (9/18/18):	**$27.78**
Annualized Distribution/Common Unit:	**$2.40**
Yield (9/18/18):	**8.6%**
Market Capitalization:	**$3.0 billion**
Enterprise Value:	**$7.7 billion**

Credit Ratings

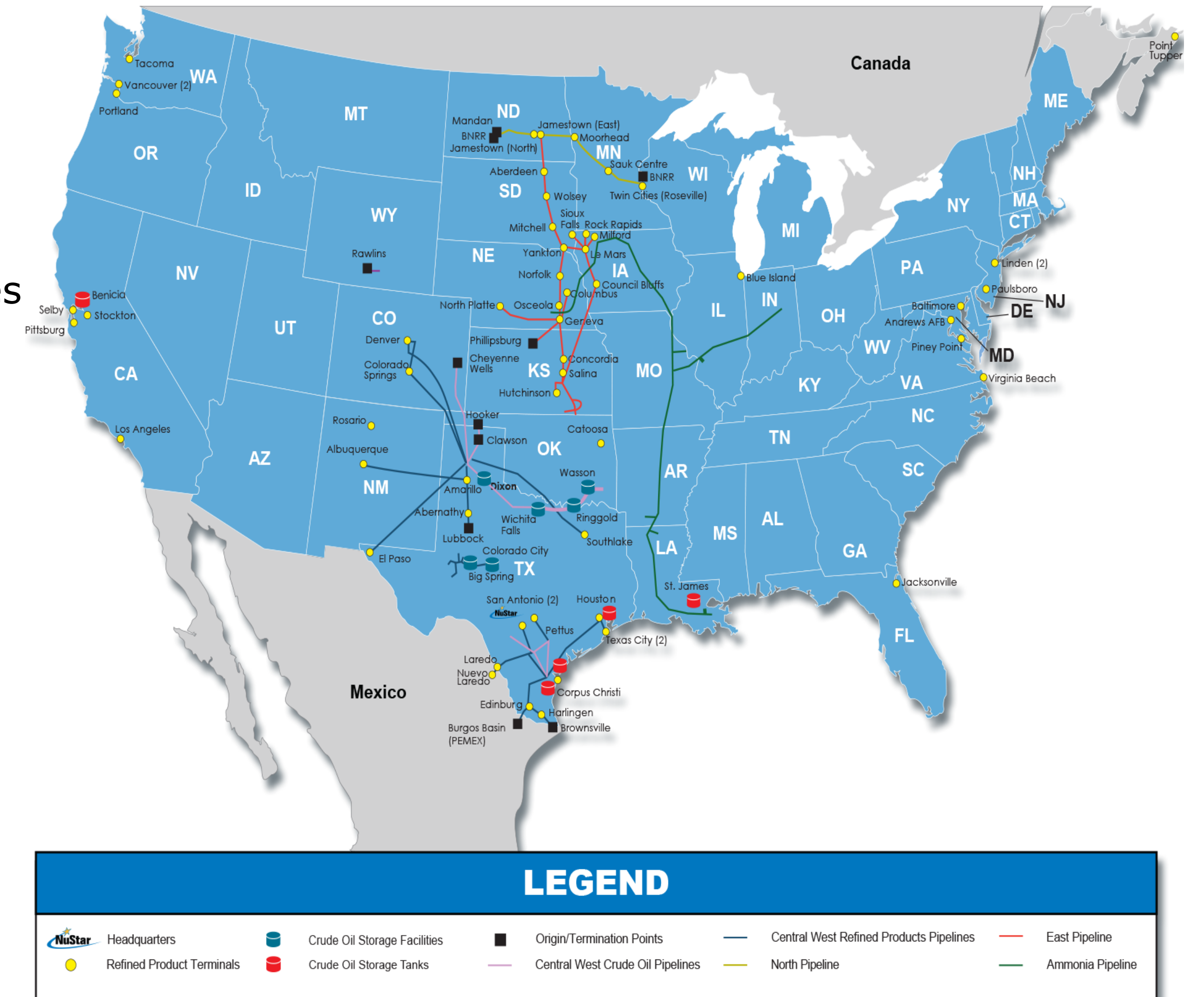
Moody's: Ba2/Negative

S&P: BB/Negative

Fitch: BB/Negative

NuStar Has a Broad, Diverse Portfolio of Assets

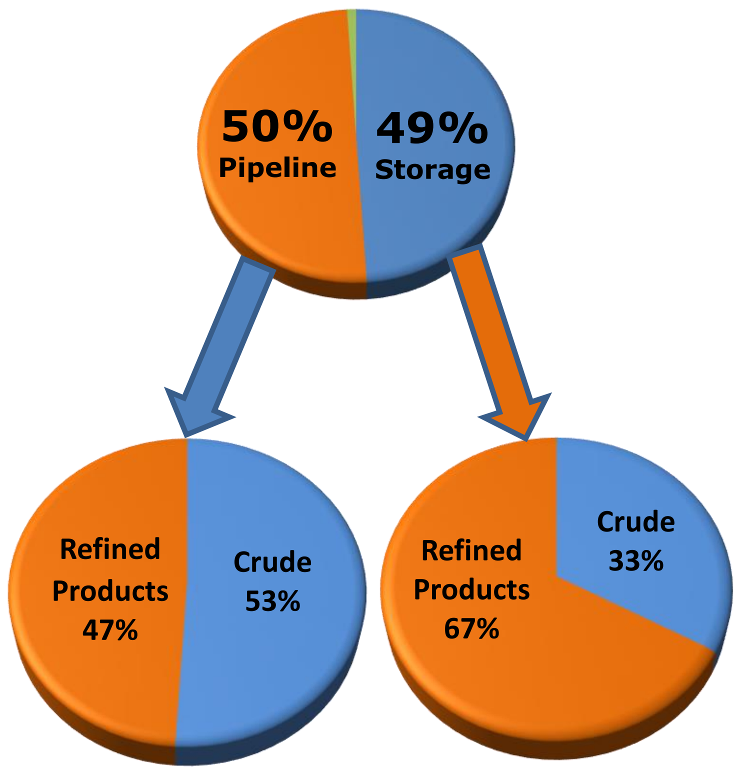
- **Current Profile**
  - Total Pipeline Miles: ~9,700
  - Total Storage Capacity: ~97MM bbls
  - Volumes Handled[1]:
    - >1.4MM BPD pipeline volumes
    - >330M BPD storage throughput terminal volumes
  - Total Enterprise Value: ~$8B
  - Total Assets: ~$7B
- **Key Takeaways:**
  - Highly integrated U.S. crude oil pipeline & terminal system
  - Minimal direct exposure to commodity prices
  - Significant crude oil midstream footprint in the Midland Basin of the Permian



(1) *Average daily Pipeline segment and Storage segment volumes for the quarter ending 6/30/18.*

NuStar's Assets are Well-Balanced and Have Performed Consistently, Through Market Challenges

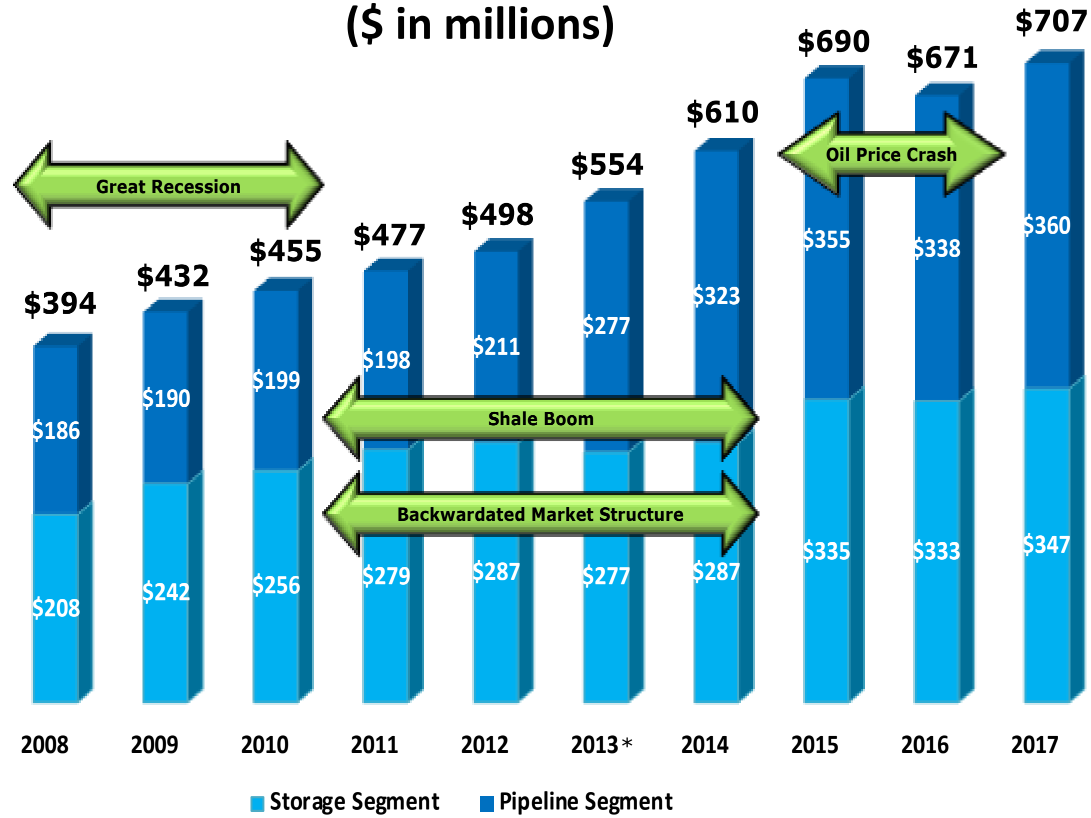
2017 EBITDA[1], By Segment



Pipeline Throughput Volumes, by Product

Storage Revenues, by Product

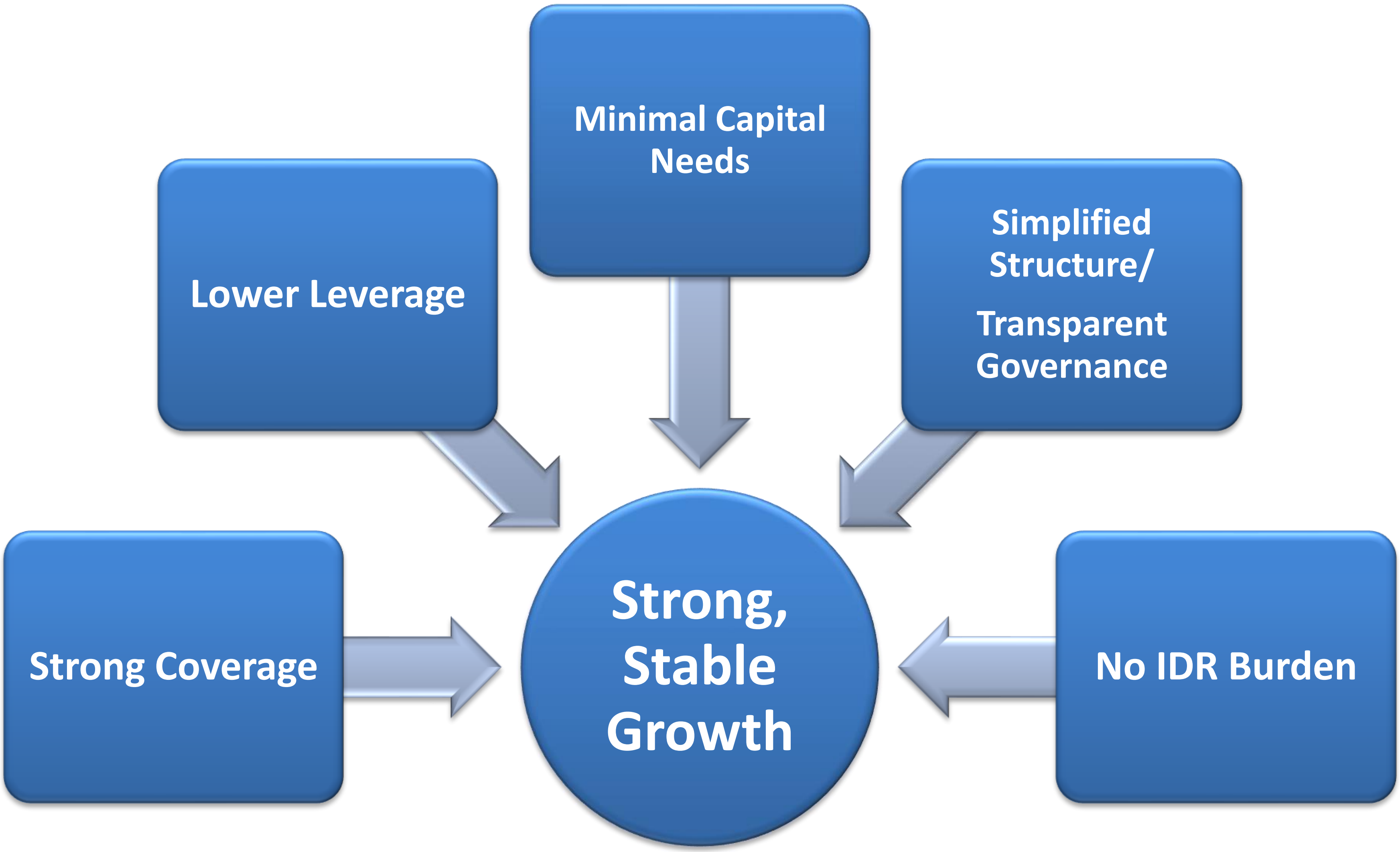
Historical Pipeline and Storage Segment EBITDA[1] ($ in millions)



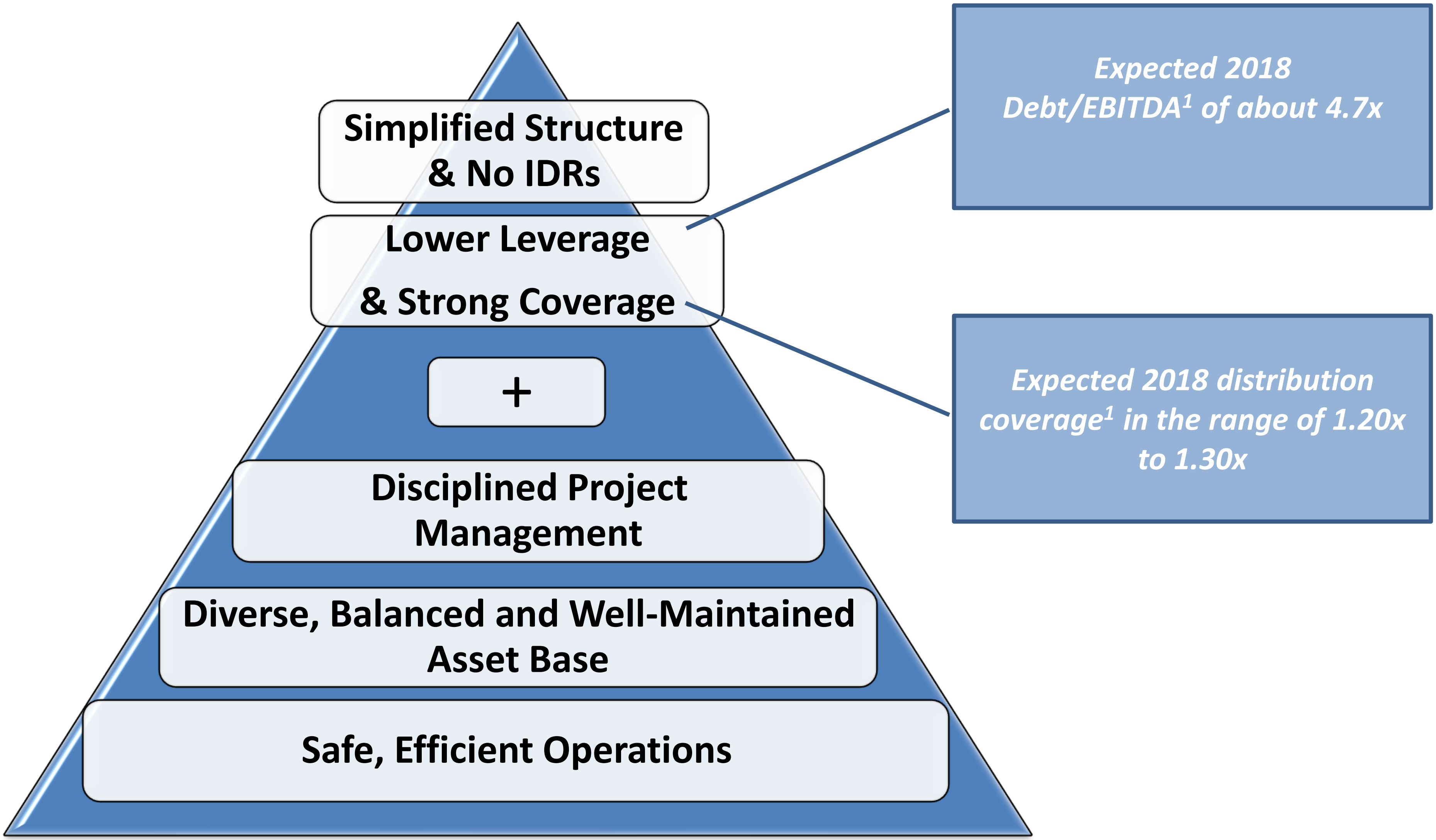
* Adjusted for Goodwill Impairment Loss

1 - Please see Appendix for reconciliations of non-GAAP financial measures to their most directly comparable GAAP measures

With Our Simplification Complete, We Have Achieved the Five Characteristics Critical to MLP Success as Markets Recover



We Are Well-Positioned to Build on Our Foundational Strengths …

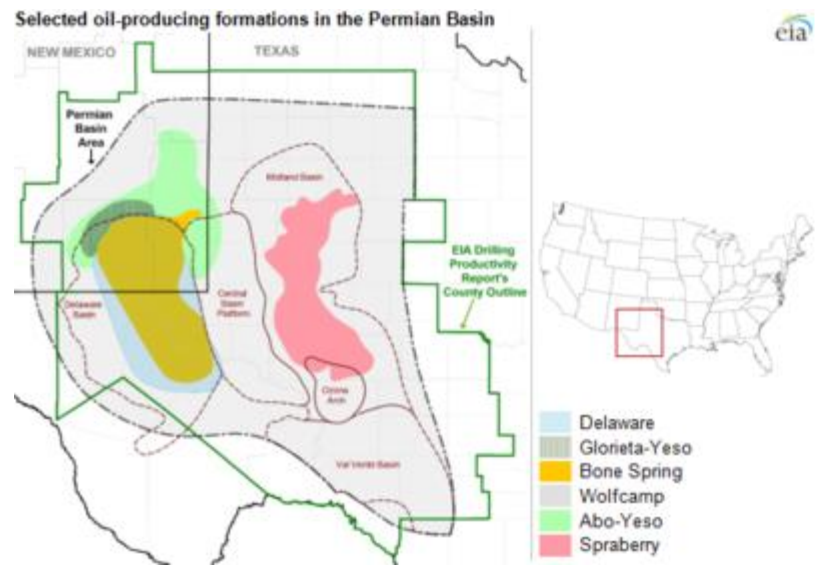


1 - Please see Appendix for reconciliations of non-GAAP financial measures to their most directly comparable GAAP measures

Permian Crude System Growth Platform

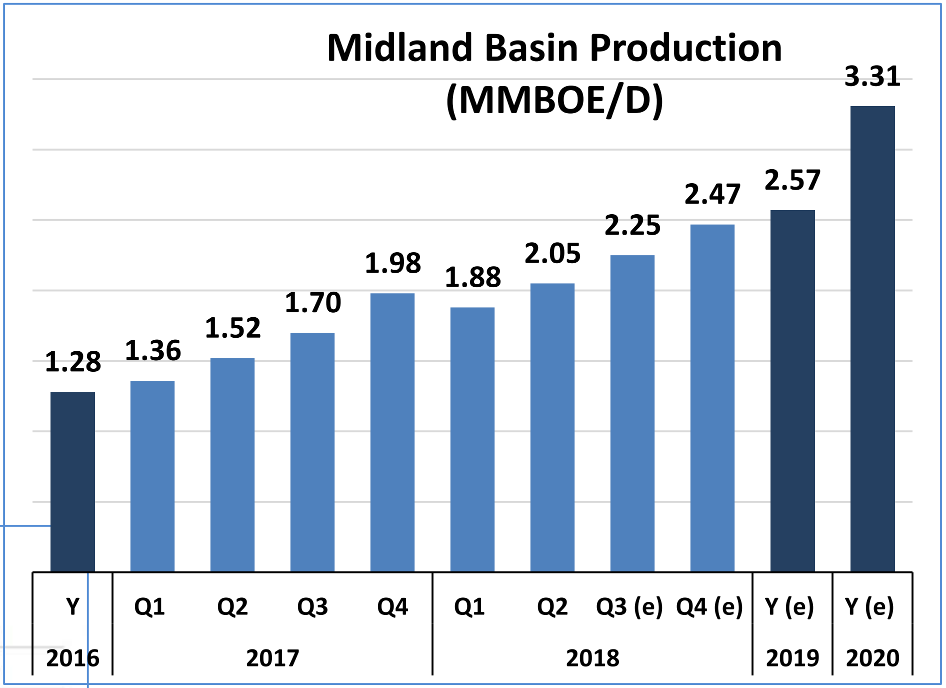
The Permian Phenomenon

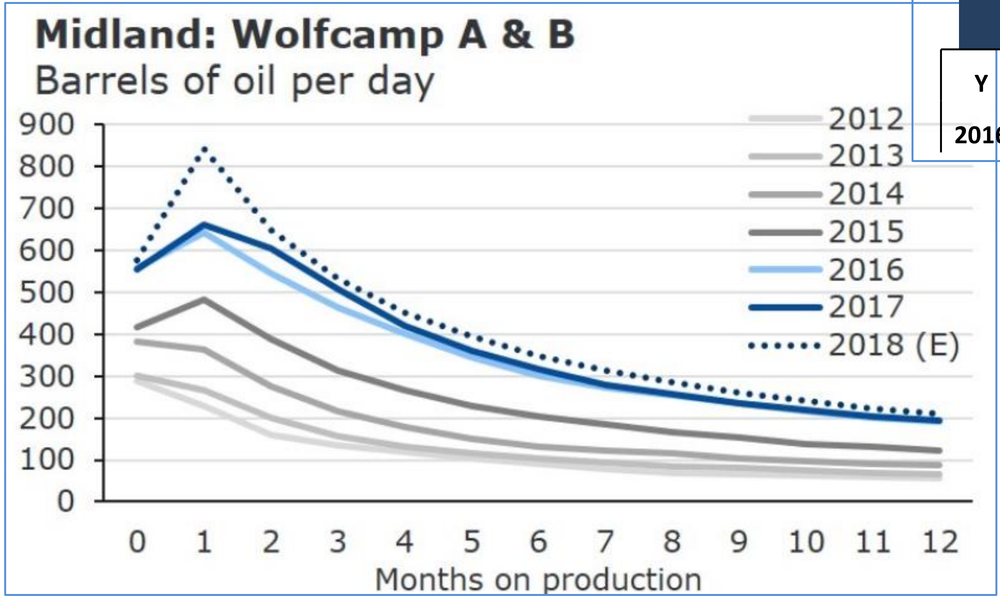
- **A massive oil basin of epic proportions…**
  - A pool of more recoverable oil than any field in the world except for Saudi Arabia's Ghawar
  - 250 miles wide, 300 miles long (75,000 square miles)
  - The Wolfcamp Formation, all by itself, is estimated to hold 20 billion barrels of oil
- **The world's hottest oil basin**
  - Many major U.S. E&P firms have shifted resources away from other plays to focus on the Permian
    - Permian investments reaped ***double-digit returns*** in 2017, even with oil barely 60% of what it was in 2014
  - Currently accounts for ***55% of nation's active oil rigs***
  - If it were a standalone country, the Permian Basin would ***already rank #7 among the world's top liquids producers***
- **The Basin's growth projections are unprecedented**
  - Expected to rise to a record 3.5 million barrels of oil per day by year end, ***over 25% of nation's output***
  - Could reach 5.0 million barrels a day by the end of 2020, ***more than either Iran or Iraq***
  - Expected to surge to ***8.0-10.0 million barrels per day over next decade***, potentially surpassing all OPEC members



Advances in Drilling Activity and Technology Are Driving the Basin's Unparalleled Growth

- Permian Basin rig count, now 485, has grown from 342 or 42%, since we acquired our system last May[1]
- The basin's record-level DUCs will baseload 2018 completion activity, and experts predict >600mb/d growth in 2018





- As techniques and technology have evolved, producers have improved well performance, reflected in higher initial production rates (IP) and estimated ultimate recovery (EUR)

Source: Baker Hughes, Rystad Energy

1. *As of August 10, 2018*

Producers Remain Bullish on Permian Growth, Strength & Resiliency

DIAMONDBACK Energy

August 9, 2018 Second Quarter 2018 Conference Call

"The second quarter was another strong quarter for Diamondback as we continued our operational excellence by ***growing production 10% quarter-over-quarter…****"*

"But in general on the Midland Basin side, we complete or we drill roughly 22 wells per rig per year, and ***we drill longer and longer laterals on average each year…****"*

CONCHO

August 2, 2018 Second Quarter 2018 Conference Call

"With nearly half the drilling rigs and completion crews in the country running in the Permian Basin, the region is as busy as we've ever seen. ***We estimate that more than $50 billion in capital will be invested to drill and complete wells in the Permian in 2018****."*

PIONEER NATURAL RESOURCES

August 8, 2018 Second Quarter 2018 Conference Call

""On the well front, we just wanted to point out as an example that **we continue to show impressive performance***. The example in particular here is the Wolfcamp D…" "And numbers are sort of staggering.* **About a 75% improvement over the early life of these wells compared to the earlier style completions** *that were done say 3 and 4 years ago in the exact same area."*

PARSLEY ENERGY

August 8, 2018 Second Quarter 2018 Conference Call

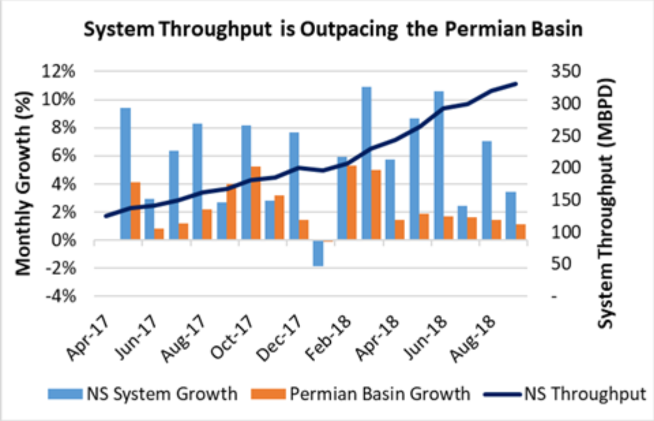
"We surged past 100,000 Boe per day during the second quarter, extending a **remarkable run of production growth that is unmatched in the industry***."*

"With our rigs and crews well-seasoned and running smoothly, **we're confident that we can sustain our drilling and completion performance** *while spreading facility cost over more wells and taking steps towards an optimized full-scale development approach."*

Source: Earnings Call Transcripts

Our Permian Crude System Continues to Prove Itself – "Core of the Core"

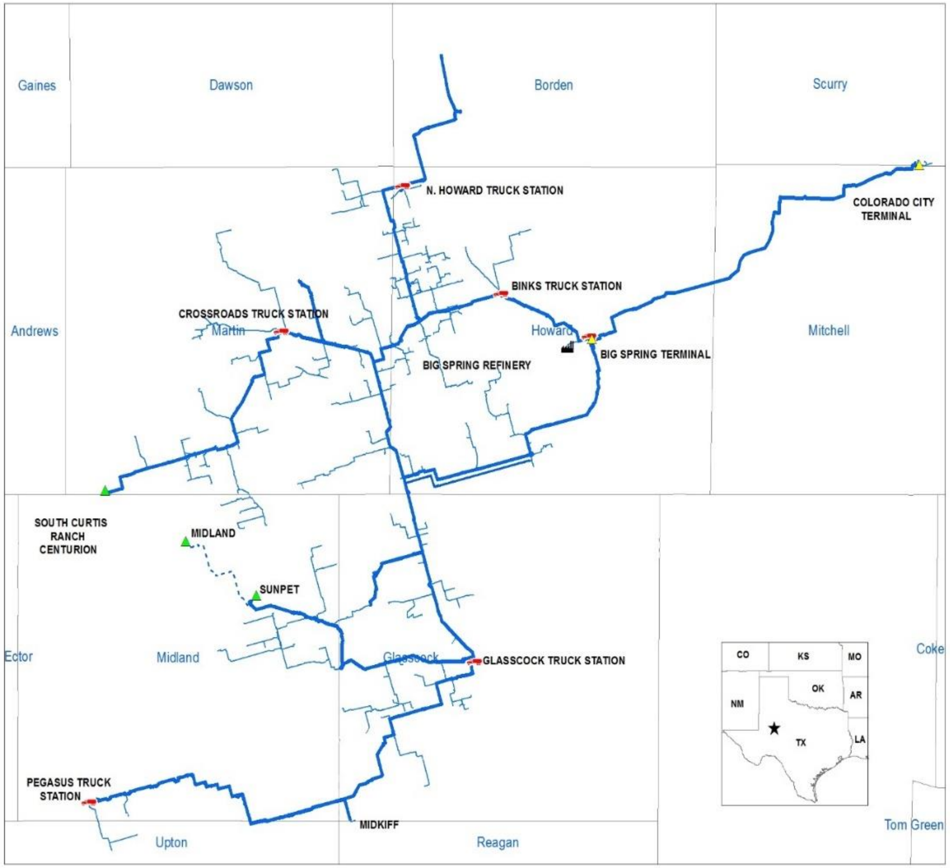
- **Our system throughput is now 330,000 BPD, up 164% since the acquisition**
  - Permian overall up 49% in same period
- **Based on our producer projections, we expect our 2018 exit rate to be 360,000-380,000 BPD**
- **Since last May, we have:**
  - Constructed ~200 miles of pipe
  - Added 20,000 dedicated acres
    - We expect 82 new wells on this additional acreage, through 2019
  - Increased the number of well connection sites on our system from 102 to 173
    - Recently approved projects to connect to another 40 sites
- **We project the System's expected EBITDA to more than double from 2018 to 2020**
- **We are constructing a 10-bay truck rack with capability to load 30,000 BPD**
  - Evaluating whether to construct a second truck rack with up to 10,000 BPD of loading capacity
- **We are evaluating additional connections, including connecting Wichita Falls Crude Pipeline to Sunrise Expansion (Colorado City to Wichita Falls)**



Source: EIA Drilling Productivity Report

System is located in 5 of the 6 most active counties in the prolific Midland Basin

- ~700 miles of pipeline with 460,000 BPD of capacity, 1MM barrels of storage capacity, over 500,000 dedicated acres, as well as 5MM acres of Areas of Mutual Interest, or AMI



- **The system provides customers with excellent access to multiple downstream end markets**
  - Delivery points and flow assurance into Big Spring, Midland and Colorado City

Our Permian System's Receipts and EBITDA Are Growing Rapidly

Source: EIA Drilling Productivity Report

1 - Please see Appendix for reconciliations of non-GAAP financial measures to their most directly comparable GAAP measures

We are Focused on Three Key Objectives to Continue to Realize Our System's Growth Potential

NuStar

Providing Flow Assurance	• Working to match producers with downstream markets with "firm" space • Identifying new shippers and marketers with downstream pipeline capacity • Completing truck loading projects to add new takeaway capacity • Working to connect to multiple new takeaway pipelines
Developing Our Existing System	• Anticipate building another ~60 new well connections next year • Completing connections to Enterprise's Midland Terminal and Plains' SunRise Pipeline • Developing expansion projects to increase our system's capacity and efficiency
Expanding On Our Reach	• Continuing to bring new volumes from existing producers through interconnects and dedicated acreage • Leveraging our Permian Crude System to benefit other NuStar assets, including our South Texas System, Corpus Christi North Beach Terminal and Wichita Falls pipelines

Growth Projects Outside the Permian

Outside the Permian, We Have Developed Projects to Utilize Our Existing Assets to Enhance Unitholder Value

South Texas Crude & Corpus Christi-North Beach Dock Connections

Northern Mexico Refined Product Supply

West Coast Bio-Fuels Strategy

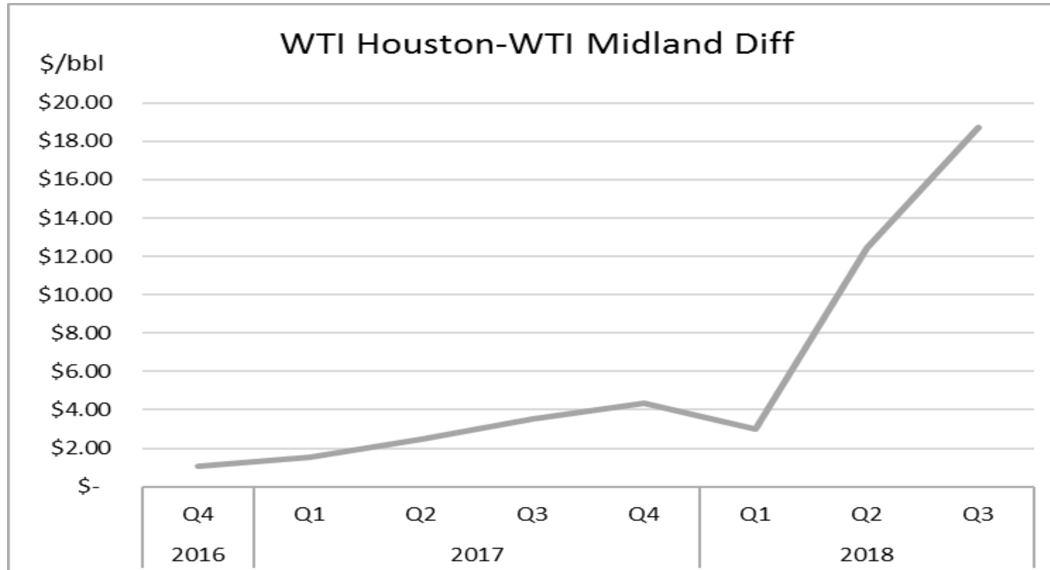
St. James Opportunities

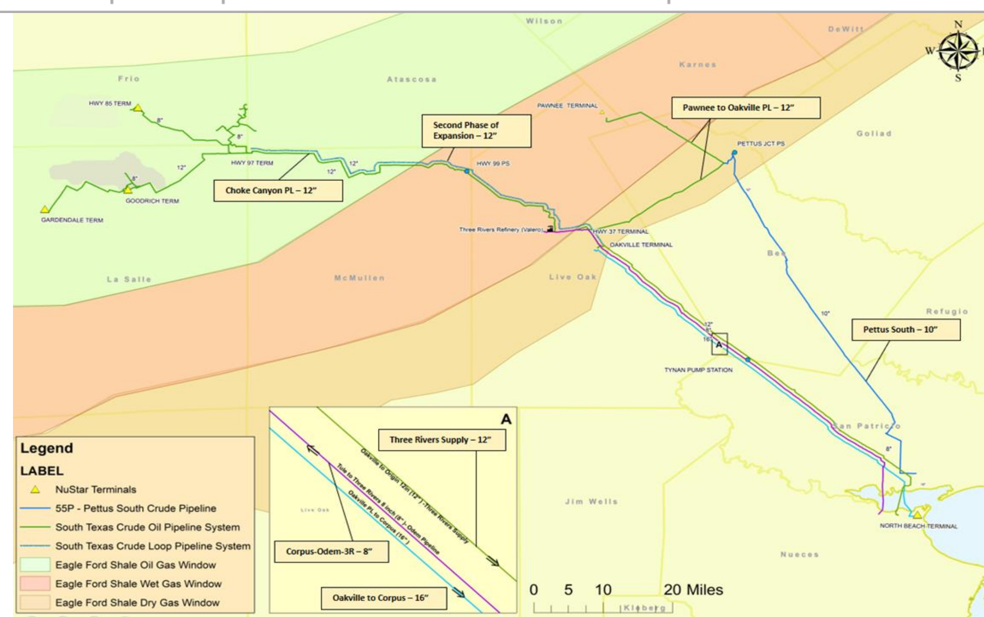
Permian Shippers/Producers are Incentivized to Take Advantage of the Price Dislocation Between WTI-Midland and WTI-Houston

- **The basin's greater-than-expected production ramp-up has widened the differential as the market anticipates additional long-haul capacity will not likely be completed before late second quarter 2019**

- **During this interim period, shippers/producers are looking to find ways to benefit from the price dislocation**

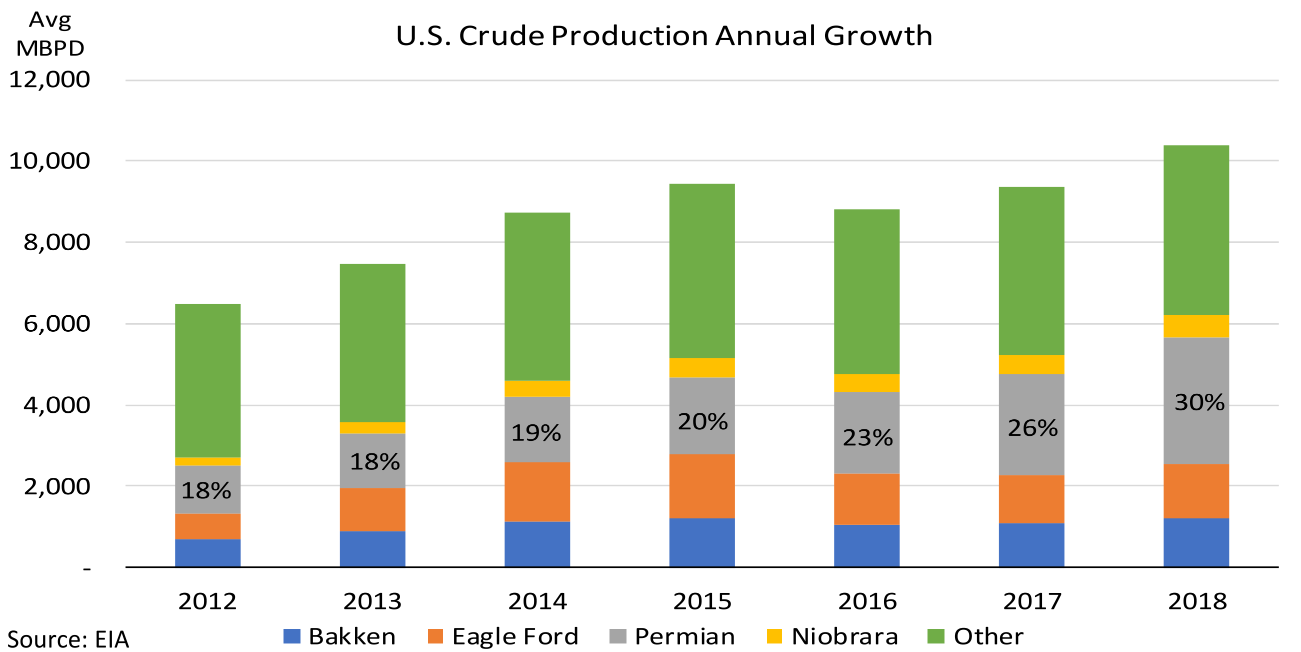
- **We are actively developing projects to facilitate movement of Permian barrels to Corpus ahead of long-haul project completion dates on our South Texas assets**
  - Our system is uniquely positioned to be an early mover for motivated shippers





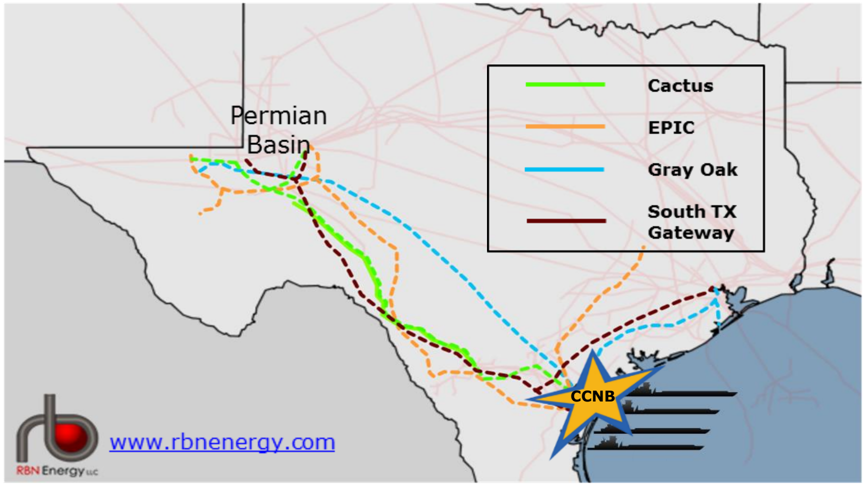
Completions of Long-Haul Capacity Are Expected to Narrow the Price Dislocation, But Permian Production is Projected to Drive Strong Growth in Exports…

- **According to EIA, the U.S. is now the largest crude oil producer, surpassing Russia and Saudi Arabia**
  - Some analysts now expect the U.S. to export as much as five million BPD by 2023
- **We believe the Permian's production of light oil, in particular, will drive healthy growth in exports from Corpus**
  - Permian barrels are increasingly light, and regional refineries are running as much light, sweet crude as they can
  - Because of this regional supply/demand imbalance, most analysts expect incremental Permian crude production growth will be exported out of the region to supply refineries elsewhere in the U.S. and around the globe



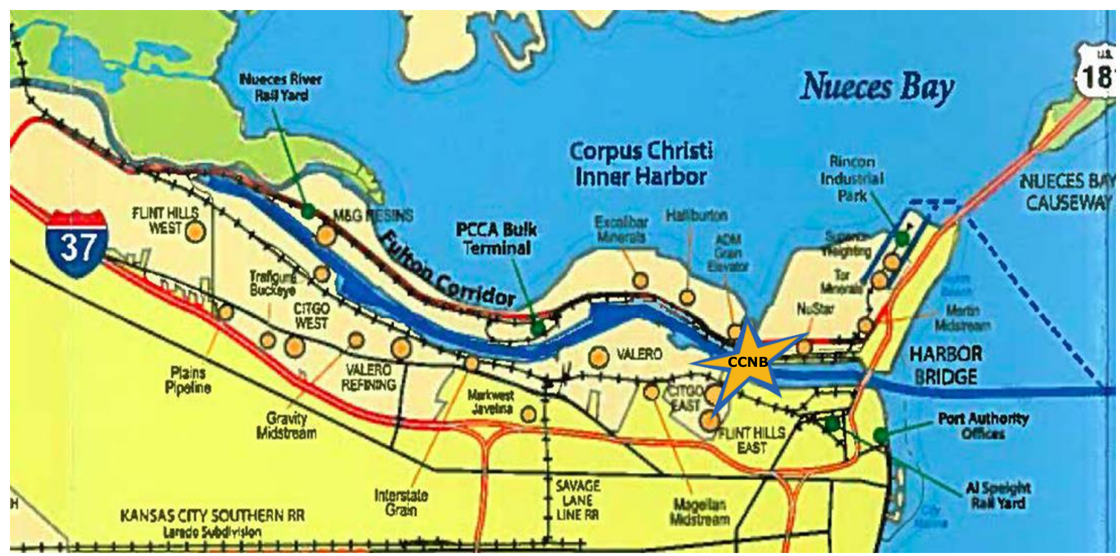
Source: EIA

… And NuStar's CCNB Dock Facility is Uniquely Positioned to Benefit From That Growth



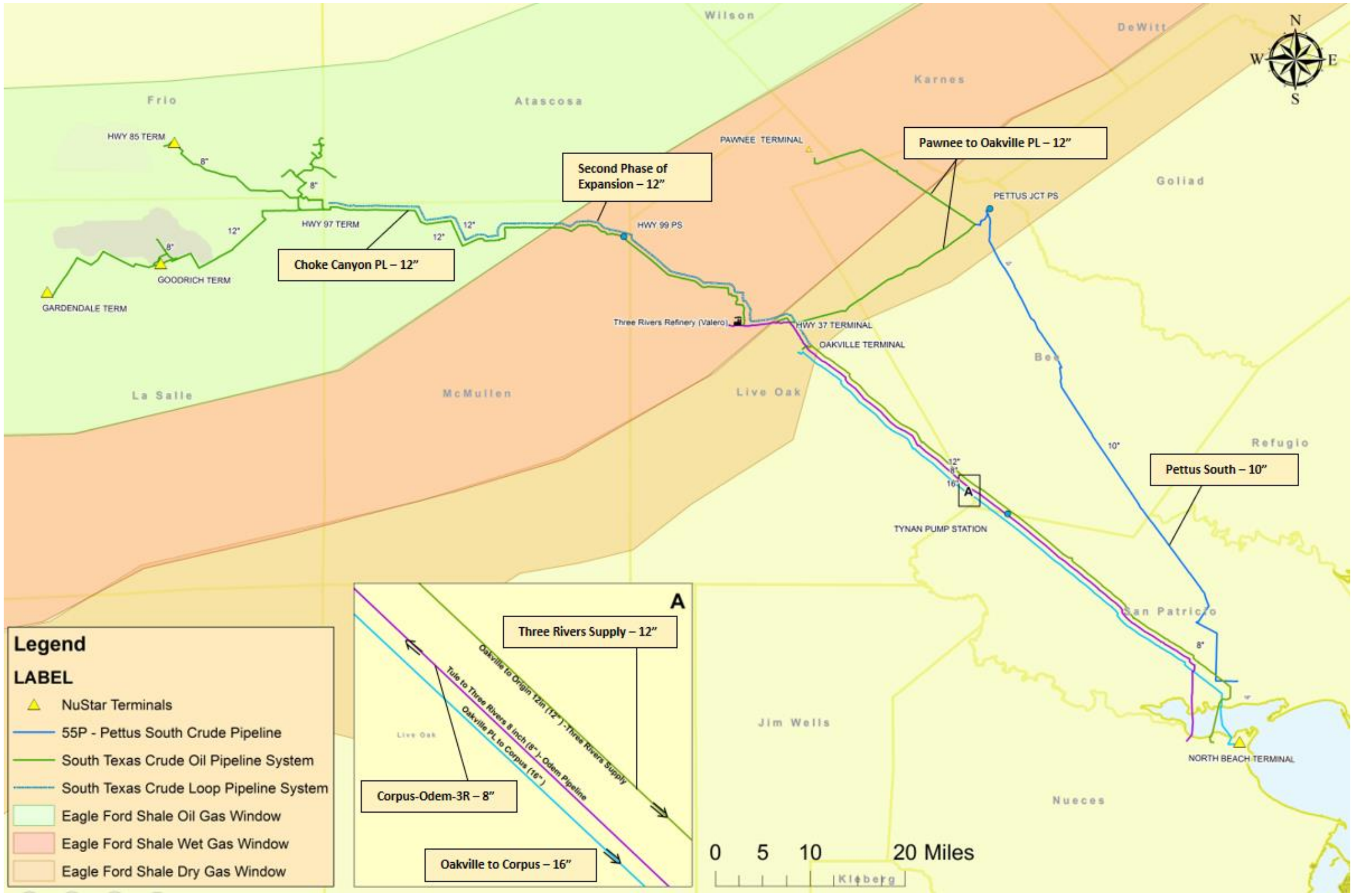
- **With between 1.4 and 2.0 million BPD of additional Permian long-haul pipeline capacity coming into service over the next two years and headed toward Corpus, the Port of Corpus Christi should benefit from incremental Permian light barrels headed for other markets**
  - ❑ The Port of Corpus Christi offers a cost-effective alternative to Houston's congestion and constraints

- **NuStar's CCNB facility:**
  - ❑ 3.3 million barrels of segregated crude storage capacity (Expandable to ~4.3 million barrels)
  - ❑ Four docks with a combined 100,000 barrels per hour loading capacity
  - ❑ Located at entrance to Port, which saves customers an estimated 4-6 hours, compared to inland facilities



We Have Also Recently Renewed T&D Commitments in South Texas

- **We now have T&D contracts for ~116,000 BPD**
  - ❑ Renewed commitments totaling ~50,000 BPD with existing customers
  - ❑ Maintaining throughput by offering industry-leading service options and flexibility to attract/retain committed/walkup customers



Our Northern Mexico Supply Projects Are Progressing On Schedule

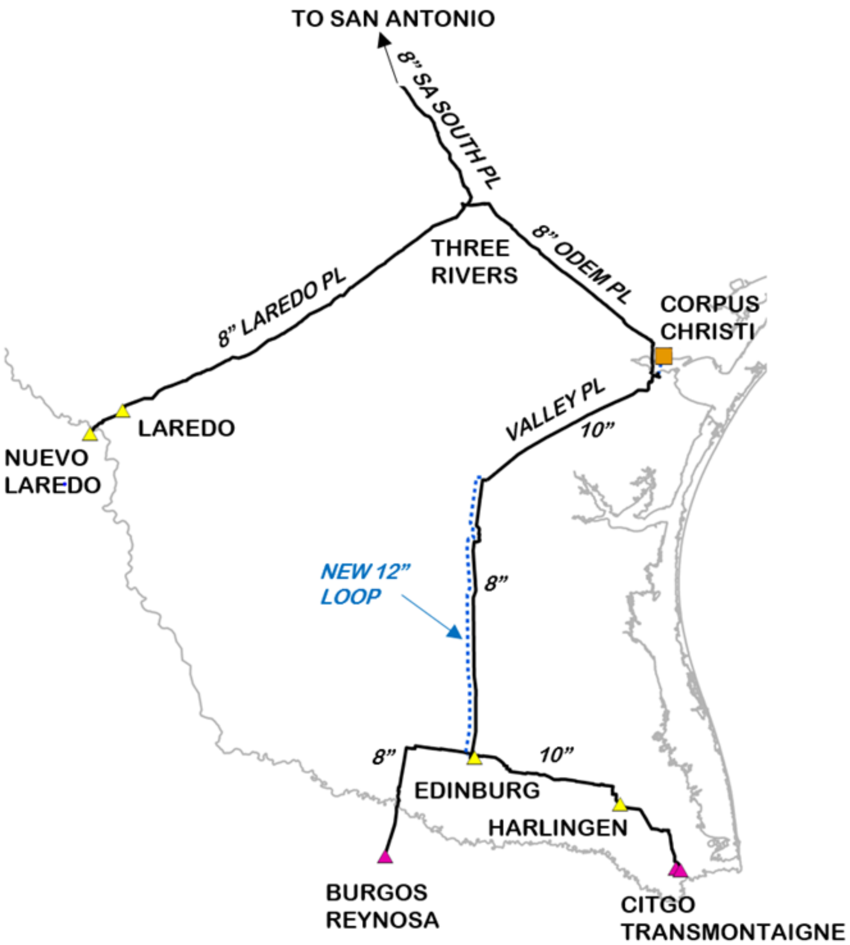
- **Nuevo Laredo Project - Valero Energy has recently announced their plans related to our projects to supply refined products to Nuevo Laredo via our Odem and Laredo pipeline systems**

- **Howard Energy Corpus Christi Connection – Howard Energy has announced an open season for capacity on a pipeline to supply their Corpus Christi rail terminal via a connection to our Corpus Christi pipeline infrastructure**

- **Valley Pipeline Project – We have secured a commitment from a large customer for the majority of the capacity of an expansion of our Valley Pipeline system. The customer will supply refined products to Mexico via a third party's Brownsville terminal**
  - We will conduct an open-season to solicit commitments for additional capacity during the 3rd quarter

Our Northern Mexico Supply Projects Are Progressing On Schedule (continued)

- **These long-term throughput & deficiency contracts will support a series of healthy-return capital projects to:**
  - ❑ Connect to pipelines and third-party rail facilities in Corpus Christi
  - ❑ Supply refined products to Nuevo Laredo via our Odem and Laredo pipeline systems
  - ❑ Upgrade our Nuevo Laredo Terminal
  - ❑ Expand our Valley Pipeline System to supply refined products to South Texas and Mexico via NuStar's and third party terminals in Edinburg, Harlingen and Brownsville



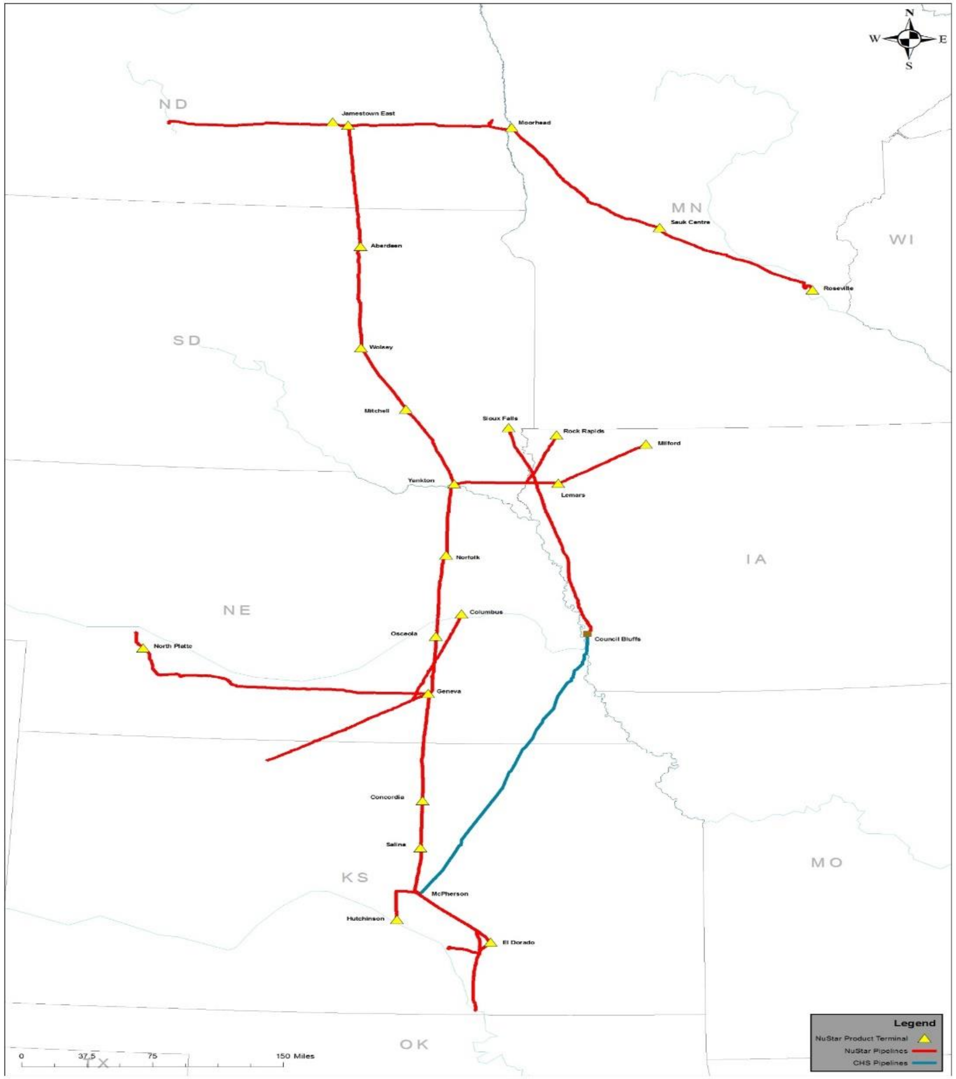
The Council Bluffs System That We Acquired in April is Performing Well as We Complete Our Integration

- **In April, we closed on an immediately accretive $38 million acquisition of CHS' Council Bluffs system, consisting of a 227-mile pipeline and 18 storage tanks**

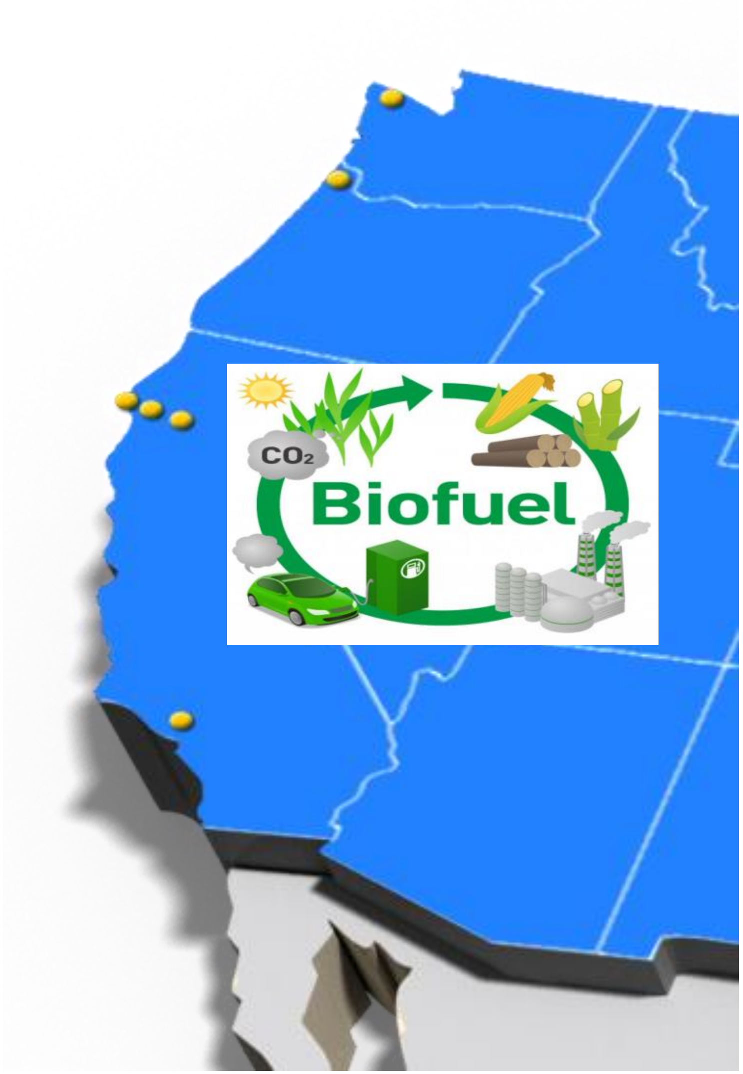
- **Since April, we have worked to integrate the pipeline and terminal into our Central East system**
  - ❑ We are on schedule to complete our integration in early October, when we are scheduled to reactivate two intermediate pump stations at Abilene, Kansas and Tecumseh, Nebraska

- **Even during our integration, we have achieved our expectations for volumes at the terminal rack and exceeded expectations for line throughput**

- **We expect to see increased volumes when the rack is opened to third-party customers**
  - ❑ Third-party throughput will continue to increase as intermediate pump stations are reactivated



NuStar is Executing Our West Coast Bio-Fuel Strategy With Multiple Projects Across the Region

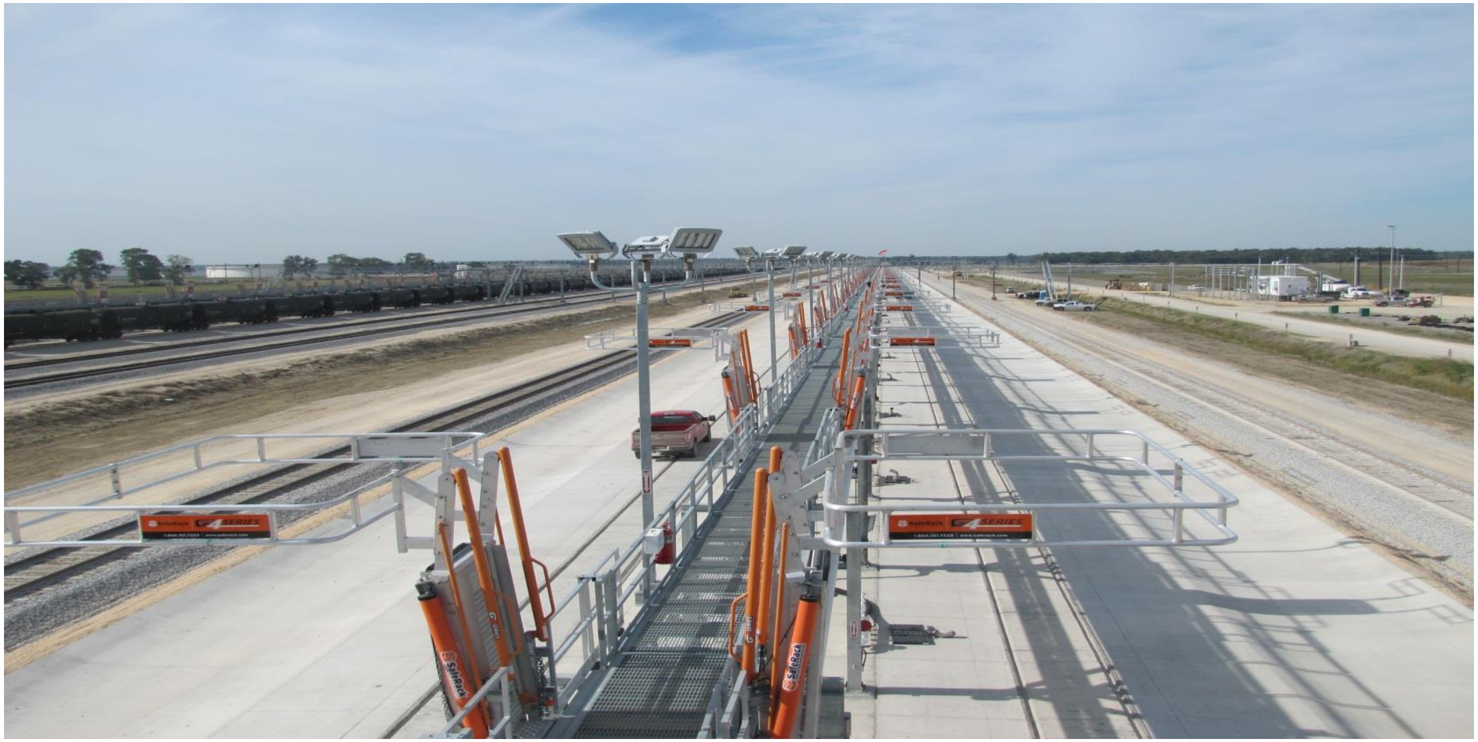


- **Bio- and low-carbon fuel mandates in West Coast states have created opportunities for clean products storage in our assets in the region**
- **We have developed low-cost, high-return bio-fuel capital projects at a number of our West Coast facilities**
  - The projects, in the aggregate, total ~$70 million
- **The projects are contract-backed with strong counterparties**

Our St. James Terminal is Also Benefiting From Price Dislocations

- **We executed new contract for unit train off-loading due to widening differentials out of the Permian (expect 3-10 trains per month)**

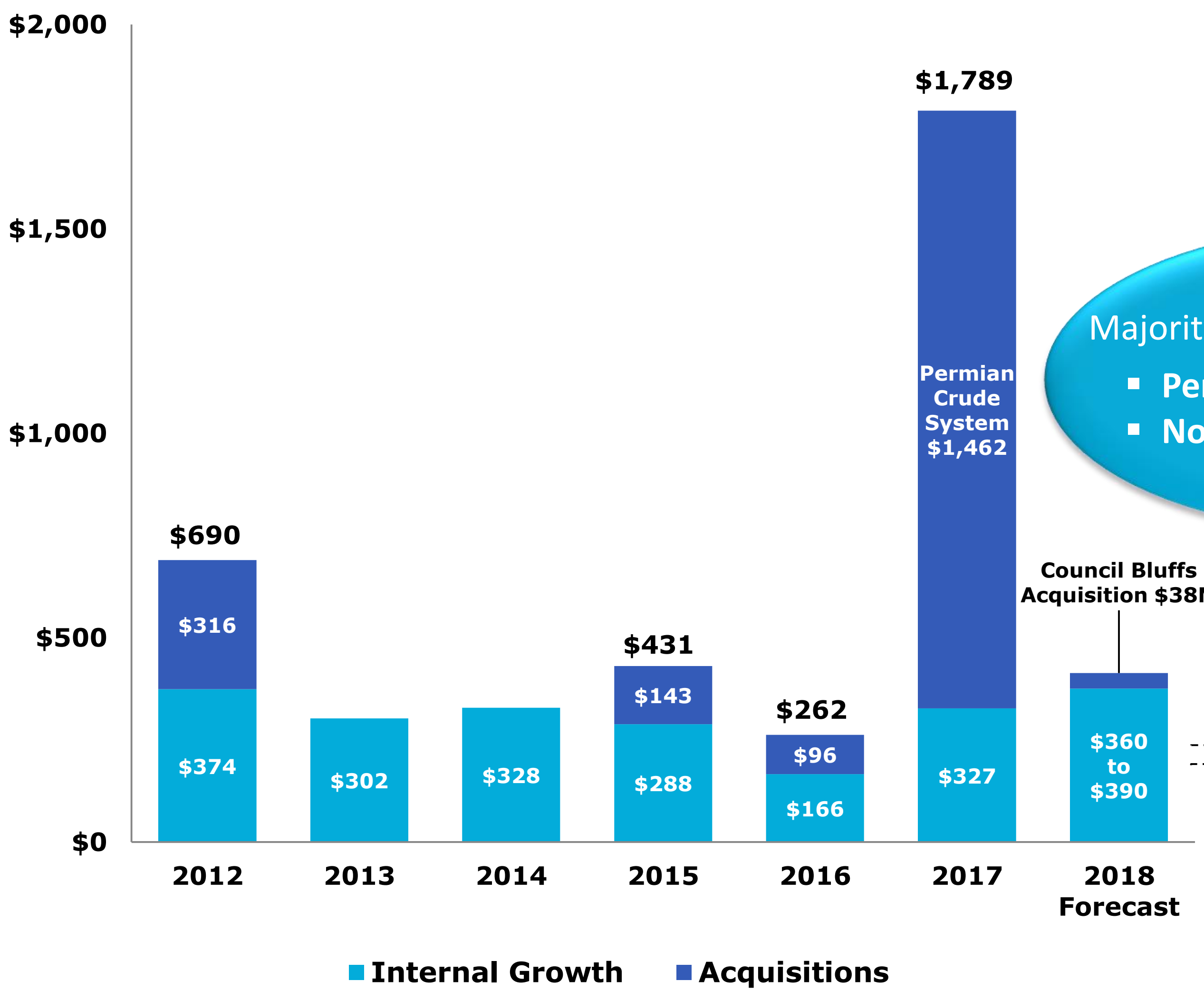
- **St. James is likely to be among the first of our facilities to benefit from a return to contango**



Finance Update

We Project 2018 Strategic Capital Spending Needs In the Range of $360 to $390 Million

NuStar

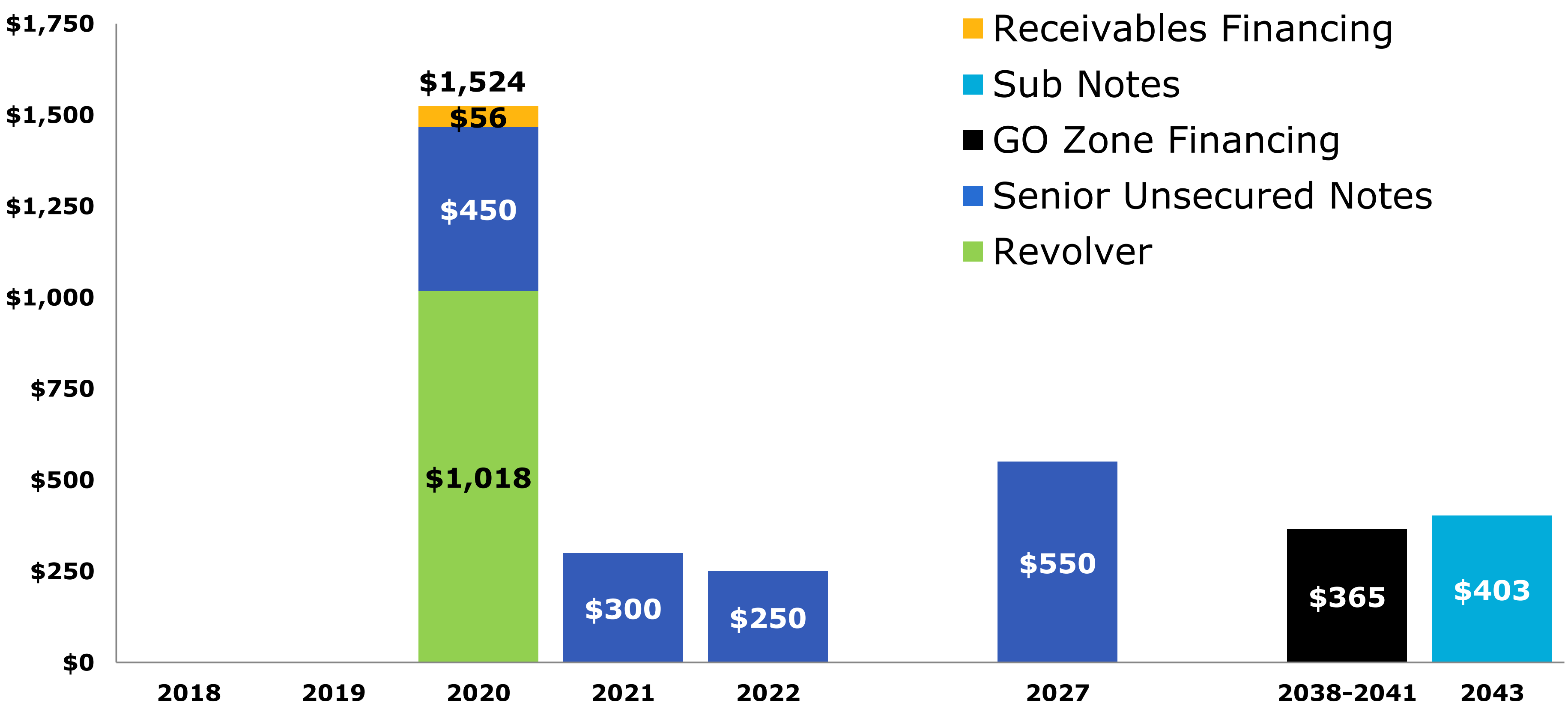


Majority of 2018 spending relates to:

- **Permian Crude System (~$190)**
- **Northern Mexico (~$50)**

Debt Maturity Schedule
(as of June 30, 2018)

- **We have no significant maturities until 2020**



- **We repaid our $350 million 7.65% senior unsecured notes that matured in April with our revolver, but we plan to issue up to $500 million new senior unsecured notes by EOY**

Capital Structure as of June 30, 2018
($ in Millions)

$1.75 billion Credit Facility	$1,018
NuStar Logistics Notes (4.75%)	250
NuStar Logistics Notes (4.80%)	450
NuStar Logistics Notes (5.625%)	550
NuStar Logistics Notes (6.75%)	300
NuStar Logistics Sub Notes	403
GO Zone Bonds	365
Receivables Financing	56
Short-term Debt & Other	51
Total Debt	**$3,443**

Series D Preferred Units – Mezzanine[2]	$371
Partner's Equity	
Series A, B and C Preferred Units	$756
Common Equity, General Partner and AOCI	1,701
Total Partners' Equity	2,457
Total Capitalization	$6,271

- **As of June 30, 2018:**
  - Credit Facility availability ~$554 million
  - Debt to EBITDA ratio[1] 4.7x

1 - Please see Appendix for reconciliations of non-GAAP financial measures to their most directly comparable GAAP measures

2 – On July 13, 2018, we closed on the issuance of an additional $190 million of Series D preferred units

Appendix

Reconciliation of Non-GAAP Financial Information

NuStar Energy L.P. utilizes financial measures, such as earnings before interest, taxes, depreciation and amortization (EBITDA), distributable cash flow (DCF) and distribution coverage ratio, which are not defined in U.S. generally accepted accounting principles (GAAP). Management believes these financial measures provide useful information to investors and other external users of our financial information because (i) they provide additional information about the operating performance of the partnership's assets and the cash the business is generating, (ii) investors and other external users of our financial statements benefit from having access to the same financial measures being utilized by management and our board of directors when making financial, operational, compensation and planning decisions and (iii) they highlight the impact of significant transactions.

Our board of directors and management use EBITDA and/or DCF when assessing the following: (i) the performance of our assets, (ii) the viability of potential projects, (iii) our ability to fund distributions, (iv) our ability to fund capital expenditures and (v) our ability to service debt. In addition, our board of directors uses a distribution coverage ratio, which is calculated based on DCF, as one of the factors in its compensation determinations. DCF is a widely accepted financial indicator used by the master limited partnership (MLP) investment community to compare partnership performance. DCF is used by the MLP investment community, in part, because the value of a partnership unit is partially based on its yield, and its yield is based on the cash distributions a partnership can pay its unitholders.

None of these financial measures are presented as an alternative to net income, or for any period presented reflecting discontinued operations, income from continuing operations. They should not be considered in isolation or as substitutes for a measure of performance prepared in accordance with GAAP. For purposes of segment reporting, we do not allocate general and administrative expenses to our reported operating segments because those expenses relate primarily to the overall management at the entity level. Therefore, EBITDA reflected in the segment reconciliations exclude any allocation of general and administrative expenses consistent with our policy for determining segmental operating income, the most directly comparable GAAP measure.

Reconciliation of Non-GAAP Financial Information (continued)

The following is the non-GAAP reconciliation for the calculation of our Consolidated Debt Coverage Ratio, as defined in our revolving credit agreement (the Revolving Credit Agreement) (in thousands of dollars, except ratio data):

	For the Four Quarters Ended June 30, 2018	Projected for the Year Ended December 31, 2018
Net income	$ 219,306	$ 210,000 - 235,000
Interest expense, net	187,765	190,000 - 200,000
Income tax expense	12,624	10,000 - 15,000
Depreciation and amortization expense	287,646	290,000 - 300,000
EBITDA	707,341	700,000 - 750,000
Other income (a)	(75,642)	(80,000) - (85,000)
Equity awards (b)	7,292	10,000 - 15,000
Material project adjustments and other items (c)	(1,637)	5,000 - 15,000
Consolidated EBITDA, as defined in the Revolving Credit Agreement	$ 637,354	$ 635,000 - 695,000
Total consolidated debt	$ 3,454,998	$ 3,400,000 - 3,650,000
NuStar Logistics' floating rate subordinated notes	(402,500)	(402,500)
Proceeds held in escrow associated with the Gulf Opportunity Zone Revenue Bonds	(41,476)	(41,500)
Consolidated Debt, as defined in the Revolving Credit Agreement	$ 3,011,022	$ 2,956,000 - 3,206,000
Consolidated Debt Coverage Ratio (Consolidated Debt to Consolidated EBITDA)	4.7x	4.6x - 4.7x

(a) Other income is excluded for purposes of calculating Consolidated EBITDA, as defined in the Revolving Credit Agreement.

(b) This adjustment represents the non-cash expense related to the vestings of equity-based awards with the issuance of our common units.

(c) This adjustment represents the percentage of the projected Consolidated EBITDA attributable to any Material Project and other noncash items, as defined in the Revolving Credit Agreement.

Reconciliation of Non-GAAP Financial Information (continued)

The following is a reconciliation of EBITDA, DCF and distribution coverage ratio (in thousands of dollars, except ratio data):

	Projected for the Year Ended December 31, 2018
Net income	$ 210,000 - 235,000
Interest expense, net	190,000 - 200,000
Income tax expense	10,000 - 15,000
Depreciation and amortization expense	290,000 - 300,000
EBITDA	700,000 - 750,000
Interest expense, net	(190,000) - (200,000)
Reliability capital expenditures	(80,000) - (100,000)
Income tax expense	(10,000) - (15,000)
Unit-based compensation (a)	5,000 - 10,000
Preferred unit distributions	(95,000) - (100,000)
Insurance gain adjustment (b)	(44,000)
Other items	5,000 - 20,000
DCF available to common limited partners	$ 291,000 - 321,000
Distributions applicable to common limited partners	$ 245,000 - 250,000
Distribution coverage ratio (c)	1.2x - 1.3x

(a) We intend to satisfy the vestings of equity-based awards with the issuance of our common units. As such, the expenses related to these awards are considered non-cash and added back to DCF. Certain awards include distribution equivalent rights (DERs). Payments made in connection with DERs are deducted from DCF.

(b) DCF excludes a portion of the insurance gain, which is added to DCF to offset reliability capital expenditures as they are incurred for hurricane repairs at our St. Eustatius terminal.

(c) Distribution coverage ratio is calculated by dividing DCF available to common limited partners by distributions applicable to common limited partners.

Reconciliation of Non-GAAP Financial Information (continued)

The following is a reconciliation of operating income to EBITDA for the pipeline segment (in thousands of dollars):

	Years Ended December 31,									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operating income	$ 135,086	$ 139,869	$ 148,571	$ 146,403	$ 158,590	$ 208,293	$ 245,233	$ 270,349	$ 248,238	$ 231,795
Plus depreciation and amortization expense	50,749	50,528	50,617	51,165	52,878	68,871	77,691	84,951	89,554	128,061
EBITDA	$ 185,835	$ 190,397	$ 199,188	$ 197,568	$ 211,468	$ 277,164	$ 322,924	$ 355,300	$ 337,792	$ 359,856

The following is a reconciliation of operating income (loss) to EBITDA for the storage segment (in thousands of dollars):

	Years Ended December 31,									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operating income (loss)	$ 141,079	$ 171,245	$ 178,947	$ 196,508	$ 198,842	$ (127,484)	$ 183,104	$ 217,818	$ 214,801	$ 219,439
Plus depreciation and amortization expense	66,706	70,888	77,071	82,921	88,217	99,868	103,848	116,768	118,663	127,473
EBITDA	$ 207,785	$ 242,133	$ 256,018	$ 279,429	$ 287,059	$ (27,616)	$ 286,952	$ 334,586	$ 333,464	$ 346,912
Impact from non-cash goodwill impairment charges						$ 304,453				
Adjusted EBITDA						$ 276,837				

The following is a reconciliation of operating income to EBITDA for the fuels marketing segment (in thousands of dollars):

	Year Ended December 31,
	2017
Operating income	$ 5,982
Plus depreciation and amortization expense	—
EBITDA	$ 5,982

The following is a reconciliation of operating (loss) income to EBITDA for the Permian Crude System (in thousands of dollars):

	Three Months Ended					Projected for the Three Months Ended
	June 30, 2017	September 30, 2017	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018
Operating (loss) income	$ (3,424)	$ 1,050	$ 650	$ (1,847)	$ 3,605	$ 13,000
Plus depreciation and amortization expense	10,227	11,005	13,165	13,477	15,059	15,000
EBITDA	$ 6,803	$ 12,055	$ 13,815	$ 11,630	$ 18,664	$ 28,000

Reconciliation of Non-GAAP Financial Information (continued)

The following are the non-GAAP reconciliations of net income to EBITDA and the calculation of EBITDA for each of our segments as a percentage of total segment EBITDA (in thousands of dollars, except percentage data):

	Year Ended December 31, 2017
	Consolidated
Net income	$ 147,964
Interest expense, net	173,083
Income tax expense	9,937
Depreciation and amortization expense	264,232
EBITDA	595,216
General and administrative expenses	112,240
Other expense, net	5,294
Segment EBITDA	$ 712,750

	Segment EBITDA	Segment Percentage (a)
Pipeline segment (see previous slide for EBITDA reconciliation)	$ 359,856	50%
Storage segment (see previous slide for EBITDA reconciliation)	346,912	49%
Fuels marketing segment (see previous slide for EBITDA reconciliation)	5,982	1%
Segment EBITDA	$ 712,750	100%

(a) Segment percentage calculated as segment EBITDA for each segment divided by total segment EBITDA.