



MONTANA
DEPARTMENT OF
REVENUE

**2024 Capitalization Rate Study
Pipelines - Midstream MLPs**

Completed: April 26, 2024

MONTANA DEPARTMENT OF REVENUE

Yield Capitalization Rate Conclusion

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

Capital Structure ^[1]

Equity	60.00%
Debt	40.00%

Equity Cost of Capital

		Weighting
Capital Asset Pricing Model - Ex Post ^[2]	13.16%	48%
Capital Asset Pricing Model - Ex Ante ^[2]	10.30%	12%
3 Stage Dividend Discount Model - Dividends ^[3]	18.00%	20%
3 Stage Dividend Discount Model - Earnings ^[3]	17.44%	20%
Weighted Average	14.64%	100%
Selected Cost of Equity	14.64%	

Debt Cost of Capital

		Weighting
A - Mergent's - Avg. YTM of A Rated Corporate Bonds ^[4]	5.25%	0%
Baa - Mergent's - Avg. YTM of Baa Rated Corporate Bonds ^[4]	5.64%	67%
Ba - Avg. of MTDOR Debt Study ^[5] , Bloomberg and Capital IQ	6.70%	17%
B - Avg. of MTDOR Debt Study ^[5] , Bloomberg and Capital IQ	7.67%	17%
Weighted Average	6.15%	100%
Selected Cost of Debt	6.15%	

Weighted Average Cost of Capital (WACC)

Source of Capital	Capital Structure	Cost of Capital	Marginal Tax Rate	Pre-tax Cost of Capital	After-tax Cost of Capital
Equity	60.00%	14.64%		8.78%	8.78%
Debt	40.00%	6.15%	24.00%	2.46%	1.87%
WACC	100.00%			11.25%	10.66%
WACC (Rounded)					10.70%

Notes

[1] From worksheet: Capital Structure

[2] From worksheet: Capital Asset Pricing Model Summary

[3] From worksheet: Yield Equity Summary

[4] January 2024, Mergent Bond Record

[5] Montana Department of Revenue High Yield Debt Study

MONTANA DEPARTMENT OF REVENUE

**Direct Capitalization Rate Conclusion
Industry: Pipelines - Midstream MLPs
2024 Assessment Year**

Capital Structure ^[1]

Equity	60.00%
Debt	40.00%

Equity Capitalization Rate ^[2]

NOI After-tax	9.74%
GCF	16.14%

Debt Capitalization Rate ^[3]

Calculated Current Yield	6.14%
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NOI After-tax Direct Capitalization Rate

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	Pre-tax Capitalization Rate	After-tax Capitalization Rate
Equity	60.00%	9.74%		5.84%	5.84%
Debt	40.00%	6.14%	24.00%	2.46%	1.87%
Total	100.00%			8.30%	7.71%
Total (Rounded)					7.75%

GCF Direct Capitalization Rate

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	Pre-tax Capitalization Rate	After-tax Capitalization Rate
Equity	60.00%	16.14%		9.68%	9.68%
Debt	40.00%	6.14%	24.00%	2.46%	1.87%
WACC	100.00%			12.14%	11.55%
Total (Rounded)					11.55%

Notes:

[1] From worksheet: Capital Structure

[2] From worksheet: Direct Equity Summary

[3] From worksheet: Calculated Current Yield

MONTANA DEPARTMENT OF REVENUE

**Selection of Guideline Companies
Industry: Pipelines - Midstream MLPs
2024 Assessment Year**

Screening Requirements:

The universe of companies is all companies listed in Value Line under the Pipeline MLPs industry.

Companies were then selected using the following screening criteria:

1. Primarily engaged in the transportation, storage, and terminaling of natural gas, crude, natural gas liquids, and other prod
2. Actively traded on an American exchange.
3. Incorporated as a limited partnership.
4. No significant merger & acquisition activity during the year.

Company Ticker	Transportation etc. of natural gas / crude products	Actively traded on an American Exchange	Incorporated as LP	Consider as Potential Guideline Company	Not Engaged in Material M&A Activity	Use as Guideline Company	Note
CAPL	No						
CEQP	No						
CQP	No						
DKL	Yes	Yes	Yes	No			
EPD	Yes	Yes	Yes	Yes	Yes	Yes	
ET	Yes	Yes	Yes		No		[4]
GEL	Yes	Yes	Yes	No			
GLP	No						
GPP	No						
HEP	Yes				No		[1]
HESM	Yes	Yes	Yes		No		[5]

MONTANA DEPARTMENT OF REVENUE

**Selection of Guideline Companies
Industry: Pipelines - Midstream MLPs
2024 Assessment Year**

Screening Requirements:

The universe of companies is all companies listed in Value Line under the Pipeline MLPs industry.

Companies were then selected using the following screening criteria:

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3. Incorporated as a limited partnership.
4. No significant merger & acquisition activity during the year.

Company Ticker	Transportation etc. of natural gas / crude products	Actively traded on an American Exchange	Incorporated as LP	Consider as Potential Guideline Company	Not Engaged in Material M&A Activity	Use as Guideline Company	Note
KRP	No						
MMLP	Yes	Yes	Yes	No			
MMP	Yes				No		[2]
MPLX	Yes	Yes	Yes	Yes	Yes	Yes	
NGL	No						
NS	Yes	Yes	Yes	Yes	Yes	Yes	[3]
PAA	Yes	Yes	Yes	Yes	Yes	Yes	
PAGP	No						
SMLP	Yes	Yes	Yes	Yes	Yes	Yes	
SPH	No						
WES	Yes	Yes	Yes	Yes	Yes	Yes	[6]

[1] Agreed to be acquired by DINO

[2] Agreed to be acquired by OKE

[3] M&A activity announced after lein date

[4] Acquired CEQP 11/23

[5] Set to be acquired by CHV

[6] Acquisition activity determined to not be disqualifying

MONTANA DEPARTMENT OF REVENUE

Support for Capital Structure
Industry: Pipelines - Midstream MLPs
2024 Assessment Year

(\$ and Shares Outstanding In Millions, Except Per Share Amounts)

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ticker Symbol	Company	Industry Group	Financial Strength	Shares Outstanding	End of Year Closing Stock Price	MV Common Stock	MV Preferred Stock	MV Long Term Debt	PV of Operating Leases	Total Common, Preferred, LT Debt, & Op Leases	% Common	% Preferred	% Debt & Op Leases
		<i>Value Line</i>	<i>Value Line</i>	<i>10-K</i>	<i>Yahoo</i>	<i>ExF</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>G+H+I+J</i>	<i>G/K</i>	<i>H/K</i>	<i>(I+J)/K</i>
							<i>Note [1]</i>	<i>Note [2]</i>					
EPD	Enterprise Products	PIPEMLP	B++	2,168.25	26.35	57,133	49	27,448	398	85,028	67%	0%	33%
MPLX	MPLX LP	PIPEMLP	B+	1,003.50	36.72	36,849	895	19,261	256	57,261	64%	2%	34%
NS	NuStar Energy L.P.	PIPEMLP	B	126.52	18.68	2,363	756	3,482	144	6,746	35%	11%	54%
PAA	Plains All Amer. Pipe.	PIPEMLP	B	701.01	15.15	10,620	2,296	7,351	343	20,610	52%	11%	37%
SMLP	Summit Midstream Partners LP	PIPEMLP	C	10.38	17.91	186	97	1,456	11	1,750	11%	6%	84%
WES	Western Midstream	PIPEMLP	C++	379.52	29.26	11,105	0	7,629	60	18,794	59%	0%	41%
All Companies						61,123	4,044	39,180	814	105,160	58%	4%	38%
	Average										48%	5%	47%
	Median										55%	4%	39%
	Trimmed Average										53%	5%	42%
	High										67%	11%	84%
	Low										11%	0%	33%
	Selected										60%		40%

Notes

[1] Market value of preferred stock assumed to equal book value

[2] Market value of debt is fair value of long term debt from 10-K notes

MCA 15-1-210, rationale for changes to guideline companies:

2024 - First year combining liquid and gas pipelines into one MLP study

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model (CAPM)

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

$$k_e = R_f + \beta \times ERP$$

		<i>Ex Post</i>	<i>Ex Ante</i>
$k_e =$	Cost of Equity	13.16%	10.30%
$R_f =$	Risk Free Rate	4.20%	4.20%
$\beta =$	Beta	1.25	1.25
$ERP =$	Equity Risk Premium ($R_m - R_f$)	7.17%	4.88%
$R_m =$	Market Rate of Return	11.37%	9.08%

Risk Free Rate Measures (R_f):

The Value Line Investment Survey: Selection & Opinion^[1]

January 5, 2024 Page 841

Selected Yields on Taxable U.S. Treasury Securities as of 12/22/23

10-year	3.90%
30-year	4.05%

Federal Reserve Statistical Release^[2]

U.S. government securities, Treasury constant maturities, Nominal, December 29, 2023

10-year	3.88%
20-year	4.20%
30-year	4.03%

Risk Free Rate Selected 4.20%

Notes

[1] "Value Line Selection & Opinion", Value Line (January 5, 2024)

[2] <https://www.federalreserve.gov/releases/h15/>

Ex Post - Equity Risk Premium Measures ($ERP = R_m - R_f$)

Kroll, 2024 Cost of Capital Navigator

		<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
ERP "Historical" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	11.31%	4.14%	7.17%
ERP "Supply-side" - <i>Ex Post</i>	<i>Arithmetic Avg.</i>	10.36%	4.14%	6.22%
Ex Post Equity Risk Premium Selected		<u><u>11.37%</u></u>	<u><u>4.20%</u></u>	<u><u>7.17%</u></u>

MONTANA DEPARTMENT OF REVENUE

Capital Asset Pricing Model (CAPM)

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

$$k_e = R_f + \beta \times ERP$$

Ex Ante - Equity Risk Premium Measures (ERP = Rm - Rf)

DOR 3 Stage Dividend Growth Model, S & P 500, See Exhibit

	<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
ERP - <i>Ex Ante</i>	7.22%	4.20%	3.02%

Kroll, 2024 Cost of Capital Navigator

	<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
ERP "Conditional" - <i>Ex Ante</i>	9.00%	3.50%	5.50%

Damodaran Implied ERP (Jan 5, 2024)

	<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
Implied Premium - <i>Ex Ante</i> - Trailing 12 month, with adjusted payout	8.45%	3.88%	4.57%
Implied Premium - <i>Ex Ante</i> - Trailing 12 month cash yields	8.48%	3.88%	4.60%
Implied Premium - <i>Ex Ante</i> - Average CF yield last 10 years	9.95%	3.88%	6.07%
Implied Premium - <i>Ex Ante</i> - Net cash yield	8.31%	3.88%	4.43%
Implied Premium - <i>Ex Ante</i> - Normalized earnings and payout	<u>8.17%</u>	<u>3.88%</u>	<u>4.29%</u>
Damodaran Average	8.67%	3.88%	4.79%

	<u>R_m</u>	<u>R_f</u>	<u>ERP</u>
<u>Average</u>	8.51%		4.64%
<u>Median</u>	8.45%		4.57%
<u>High</u>	9.95%		6.07%
<u>Low</u>	7.22%		3.02%

Ex Ante Equity Risk Premium Selected

9.08%	4.20%	4.88%
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MONTANA DEPARTMENT OF REVENUE

Support for Beta Selection in CAPM
 Industry: Pipelines - Midstream MLPs
 2024 Assessment Year

A	B	C	D	E
Ticker Symbol	Company	Industry Group	Financial Strength	Beta
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>
EPD	Enterprise Products	PIPEMLP	B++	1.00
MPLX	MPLX LP	PIPEMLP	B+	0.95
NS	NuStar Energy L.P.	PIPEMLP	B	1.15
PAA	Plains All Amer. Pipe.	PIPEMLP	B	1.40
SMLP	Summit Midstream Partners LP	PIPEMLP	C	1.65
WES	Western Midstream	PIPEMLP	C++	1.35
Average				1.25
Median				1.25
Trimmed Average				1.23
High				1.65
Low				0.95
Selected				1.25

MONTANA DEPARTMENT OF REVENUE

Inflation & Real Growth

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

A	B	C	D	Nominal Growth	
				E	F
Source Description	Inflation (CPI)	Real Growth (GDP)	Nominal Growth	Low	High
Livingston Survey ^[1]	2.30%	2.00%	4.30%		
Survey of Professional Forecasters ^[2]	2.24%	2.00%	4.24%		
Congressional Budget Office ^[3]	2.20%	1.90%	4.10%		
Average	2.25%	1.97%	4.21%		
Median	2.24%	2.00%	4.24%		
High	2.30%	2.00%	4.30%		
Low	2.20%	1.90%	4.10%		
Selected	2.25%	2.00%	4.25%	4.10%	4.30%

Inflationary Trend Factors						
Year	Dec. CPI-U Index	Percent Change From Previous	Dec. to Dec. Conversion Factor	Annual Avg. CPI-U Index	Percent Change From Previous	Annual Conversion Factor
	<i>Note [5]</i>	<i>Note [6]</i>	<i>Note [7]</i>	<i>Note [5]</i>	<i>Note [6]</i>	<i>Note [7]</i>
2012	229.601	1.7%	1.3360	229.594	2.0%	1.3271
2013	233.049	1.5%	1.3162	232.957	1.4%	1.3080
2014	234.812	0.8%	1.3063	236.736	1.6%	1.2871
2015	236.525	0.7%	1.2969	237.017	0.1%	1.2856
2016	241.432	2.0%	1.2705	240.007	1.2%	1.2696
2017	246.524	2.1%	1.2443	245.120	2.1%	1.2431
2018	251.233	1.9%	1.2210	251.107	2.4%	1.2134
2019	256.974	2.2%	1.1937	255.657	1.8%	1.1918
2020	260.474	1.3%	1.1776	258.811	1.2%	1.1773
2021	278.802	6.6%	1.1002	270.970	4.5%	1.1245
2022	296.797	6.1%	1.0335	292.655	7.4%	1.0412
2023	306.746	3.2%	1.0000	304.702	4.0%	1.0000

Notes

[1] Federal Reserve Bank of Philadelphia The Livingston Survey December 15, 2023 Table 3 Inflation Rate and Real GDP mean

<https://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey>

[2] Federal Reserve Bank of Philadelphia Survey of Professional Forecasters February 9, 2024 Table 8 and Table 9 Average over next 10-Year mean

<https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/survey-of-professional-forecasters>

[3] The Budget and Economic Outlook: 2024 To 2034, Table 2-1

<https://www.cbo.gov/about/products/budget-economic-data#4>

[5] Historical Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, all items, index averages (1982-84=100, unless otherwise noted)

<https://www.bls.gov/cpi/tables/supplemental-files/>

[6] (Row year - Previous Year) / Row Year

[7] Most current year / Row year

MONTANA DEPARTMENT OF REVENUE

3 Stage Dividend Discount Model (DDM)

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

$$k_e = (D_1 / P_0) + g$$

k_e = Cost of Equity

D_1 = Expected Dividend

P_0 = Current Price Per Share

g = Sustainable Long-Term Growth

A	B	C	D	E	F	G	H	I
Ticker	Company	2023 Year End Stock Price	2024 Est Div'ds Decl'd per sh	Expected Equity Payout Yield	Sustainable Long-Term Growth Rate ^[1]	Sustainable Long-Term Growth Rate ^[1]	Cost of Equity Dividend Growth	Cost of Equity Earnings Growth
		<i>Yahoo</i>	<i>Value Line</i>	<i>D/C</i>	<i>Dividends</i>	<i>Earnings</i>	<i>E+F</i>	<i>E+G</i>
		P_0	D_1	D_1/P_0	g	g	k_e	k_e
EPD	Enterprise Products	26.35	2.15	8.16%	11.56%	5.00%	19.72%	13.16%
MPLX	MPLX LP	36.72	3.45	9.40%	3.50%	6.55%	12.90%	15.95%
NS	NuStar Energy L.P.	18.68	1.60	8.57%	10.39%	14.63%	18.95%	23.20%
PAA	Plains All Amer. Pipe.	15.15	1.27	8.38%	23.62%	18.50%	32.01%	26.89%
SMLP	Summit Midstream Partners LP	17.91	0.00	0.00%	0.00%	0.00%		
WES	Western Midstream	29.26	2.31	7.89%	7.43%	4.41%	15.33%	12.31%
Average							19.78%	18.30%
Median							18.95%	15.95%
Trimmed Average							18.00%	17.44%
High							32.01%	26.89%
Low							12.90%	12.31%
Selected							18.00%	17.44%

Notes:

[1] From worksheet: DDM Sustainable Long-Term Growth

Implied Sustainable LTG:

11.30%

9.82%

MONTANA DEPARTMENT OF REVENUE

Support for DDM - Short Term Growth Rate Calculations

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

A	B	C	D	E	F	G
Ticker	Company	End of Year Closing Stock Price	Div'ds Decl'd per sh 2024 Est	Expected Dividend Yield	Div'ds Decl'd per sh 2026-2028 Est	Short-Term Growth Rate
		<i>Yahoo</i>	<i>Value Line</i>	<i>D / C</i>	<i>Value Line</i>	<i>Note [1]</i>
EPD	Enterprise Products	26.35	2.15	8.16%	3.15	13.58%
MPLX	MPLX LP	36.72	3.45	9.40%	3.80	3.27%
NS	NuStar Energy L.P.	18.68	1.60	8.57%	2.25	12.04%
PAA	Plains All Amer. Pipe.	15.15	1.27	8.38%	2.65	27.79%
SMLP	Summit Midstream Partners LP	17.91	0.00	0.00%	0.00	0.00%
WES	Western Midstream	29.26	2.31	7.89%	2.95	8.49%

A	B	C	D	E
Ticker	Company	Earnings per share 2024 Est	Earnings per share 2026-2028 Est	Short-Term Growth Rate
		<i>Value Line</i>	<i>Value Line</i>	<i>Note [1]</i>
EPD	Enterprise Products	2.70	3.15	5.27%
MPLX	MPLX LP	3.90	4.80	7.17%
NS	NuStar Energy L.P.	1.40	2.25	17.13%
PAA	Plains All Amer. Pipe.	1.55	2.80	21.79%
SMLP	Summit Midstream Partners LP	0.00	0.00	0.00%
WES	Western Midstream	2.85	3.25	4.48%

Notes

[1] 4 year compound annual growth rate (CAGR) - 3 periods

MONTANA DEPARTMENT OF REVENUE

Support for DDM - Sustainable Long Term Growth

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

Dividend Growth Rate									Stage 1				
Ticker	Company	Year End Stock Price	Expected Short-Term Dividend Growth Rate	Expected Long-Term Growth Rate	Expected Dividend Yield	Internal Rate of Return	Implied Sustainable Long-Term Growth Rate (g)	Initial Investment	D ₁	D ₂	D ₃	D ₄	D ₅
		Yahoo	Note [1]	Note [2]	D_1/P_0	$K_e = IRR \text{ of } D_1:D_{500}$	$g = IRR - Div. \text{ Yield}$						
EPD	Enterprise Products	26.35	13.58%	4.25%	8.16%	19.72%	11.56%	(26.35)	2.15	2.44	2.77	3.15	3.58
MPLX	MPLX LP	36.72	3.27%	4.25%	9.40%	12.90%	3.50%	(36.72)	3.45	3.56	3.68	3.80	3.92
NS	NuStar Energy L.P.	18.68	12.04%	4.25%	8.57%	18.95%	10.39%	(18.68)	1.60	1.79	2.01	2.25	2.52
PAA	Plains All Amer. Pipe.	15.15	27.79%	4.25%	8.38%	32.01%	23.62%	(15.15)	1.27	1.62	2.07	2.65	3.39
SMLP	Summit Midstream Partners LP	17.91	0.00%	4.25%	0.00%			(17.91)	0.00	0.00	0.00	0.00	0.00
WES	Western Midstream	29.26	8.49%	4.25%	7.89%	15.33%	7.43%	(29.26)	2.31	2.51	2.72	2.95	3.20

Earnings Growth Rate									Stage 1				
Ticker	Company	Year End Stock Price	Expected Short-Term Earnings Growth Rate	Expected Long-Term Growth Rate	Expected Dividend Yield	Internal Rate of Return	Implied Sustainable Long-Term Growth Rate (g)	Initial Investment	D ₁	D ₂	D ₃	D ₄	D ₅
		Yahoo	Note [1]	Note [2]	D_1/P_0	$K_e = IRR \text{ of } D_1:D_{500}$	$g = IRR - Div. \text{ Yield}$						
EPD	Enterprise Products	26.35	5.27%	4.25%	8.16%	13.16%	5.00%	(26.35)	2.15	2.26	2.38	2.51	2.64
MPLX	MPLX LP	36.72	7.17%	4.25%	9.40%	15.95%	6.55%	(36.72)	3.45	3.70	3.96	4.25	4.55
NS	NuStar Energy L.P.	18.68	17.13%	4.25%	8.57%	23.20%	14.63%	(18.68)	1.60	1.87	2.20	2.57	3.01
PAA	Plains All Amer. Pipe.	15.15	21.79%	4.25%	8.38%	26.89%	18.50%	(15.15)	1.27	1.55	1.88	2.29	2.79
SMLP	Summit Midstream Partners LP	17.91	0.00%	4.25%	0.00%			(17.91)	0.00	0.00	0.00	0.00	0.00
WES	Western Midstream	29.26	4.48%	4.25%	7.89%	12.31%	4.41%	(29.26)	2.31	2.41	2.52	2.63	2.75

Notes:

[1] From worksheet: DDM Short Term Growth Rate Calculations

[2] From worksheet: Inflation & Real Growth

MONTANA DEPARTMENT OF REVENUE

Support for DDM - Sustainable Long Term Growth

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

Dividend	Stage 2															Stage 3		
Ticker	D ₆	D ₇	D ₈	D ₉	D ₁₀	D ₁₁	D ₁₂	D ₁₃	D ₁₄	D ₁₅	D ₁₆	D ₁₇	D ₁₈	D ₁₉	D ₂₀	D ₂₁	D ₂₂	D ₅₀₀
EPD	4.04	4.56	5.16	5.82	6.58	7.43	8.39	9.48	10.71	12.10	13.66	15.43	17.43	19.69	22.24	23.19	24.17	10,561,109,024
MPLX	4.06	4.19	4.33	4.48	4.62	4.78	4.94	5.10	5.27	5.45	5.63	5.82	6.01	6.21	6.42	6.70	6.98	3,049,374,213
NS	2.81	3.13	3.50	3.90	4.35	4.85	5.41	6.03	6.72	7.50	8.36	9.32	10.40	11.59	12.93	13.48	14.05	6,139,195,512
PAA	4.27	5.39	6.81	8.59	10.85	13.69	17.28	21.81	27.53	34.74	43.85	55.35	69.86	88.17	111.29	116.02	120.95	52,840,295,876
SMLP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
WES	3.46	3.75	4.06	4.39	4.75	5.14	5.56	6.02	6.51	7.05	7.62	8.25	8.93	9.66	10.45	10.90	11.36	4,963,382,355

Earnings	Stage 2															Stage 3		
Ticker	D ₆	D ₇	D ₈	D ₉	D ₁₀	D ₁₁	D ₁₂	D ₁₃	D ₁₄	D ₁₅	D ₁₆	D ₁₇	D ₁₈	D ₁₉	D ₂₀	D ₂₁	D ₂₂	D ₅₀₀
EPD	2.78	2.92	3.07	3.23	3.40	3.58	3.77	3.96	4.17	4.39	4.61	4.85	5.11	5.37	5.65	5.89	6.14	2,683,645,029
MPLX	4.87	5.21	5.57	5.96	6.37	6.82	7.29	7.80	8.35	8.93	9.55	10.22	10.93	11.69	12.51	13.04	13.59	5,937,704,192
NS	3.50	4.07	4.74	5.51	6.40	7.44	8.66	10.06	11.70	13.61	15.82	18.40	21.39	24.87	28.92	30.15	31.43	13,730,771,424
PAA	3.37	4.07	4.90	5.91	7.13	8.61	10.38	12.52	15.10	18.22	21.97	26.50	31.97	38.56	46.51	48.48	50.54	22,081,822,944
SMLP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
WES	2.87	3.00	3.14	3.28	3.42	3.58	3.74	3.90	4.08	4.26	4.45	4.65	4.85	5.07	5.30	5.52	5.76	2,514,377,847

MONTANA DEPARTMENT OF REVENUE

Support for Yield Capitalization Rate - Debt Rating

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

A	B	C	D	E	F
Ticker Symbol	Company	Industry Group	Financial Strength	Moody's Long Term Rating	Yield to Maturity
		<i>Value Line</i>	<i>Value Line</i>	<i>Moodys.com</i>	
EPD	Enterprise Products	PIPEMLP	B++	Baa1	5.64%
MPLX	MPLX LP	PIPEMLP	B+	Baa2	5.64%
NS	NuStar Energy L.P.	PIPEMLP	B	Ba3	6.70%
PAA	Plains All Amer. Pipe.	PIPEMLP	B	Baa3	5.64%
SMLP	Summit Midstream Partners LP	PIPEMLP	C	B3	7.67%
WES	Western Midstream	PIPEMLP	C++	Baa2	5.64%
Average					6.15%
Median					5.64%
Trimmed Average					5.91%
High					7.67%
Low					5.64%
Selected					6.15%

MONTANA DEPARTMENT OF REVENUE

Support for Direct Capitalization - Equity Capitalization Rates

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Ticker	Company	End of Year Closing Stock Price	VL Historic EPS	VL Est EPS	VL Historic P/E Ratio	VL Est P/E Ratio	Ke Estimate - Earnings (Hist. P/E)	Ke Estimate - Earnings (Est. P/E)	VL Historic Cash Flow Per Share	VL Est Cash Flow Per Share	VL Historic P/CF Ratio	VL Est P/CF Ratio	Ke Estimate - Cash Flow (Hist. P/CF)	Ke Estimate - Cash Flow (Est. P/CF)	Market Value of Equity	Book Value of Equity	MTBR
		Yahoo	Value Line	Value Line	C/D	C/E	1/F	1/G	Value Line	Value Line	C/J	C/K	1/L	1/M	Price x Shrs	Value Line	P/Q
EPD	Enterprise Products	26.35	2.52	2.70	10.46	9.76	9.56%	10.25%	3.56	3.65	7.40	7.22	13.51%	13.85%	57,133	26,623	2.15
MPLX	MPLX LP	36.72	3.88	3.90	9.46	9.42	10.57%	10.62%	4.91	5.05	7.48	7.27	13.37%	13.75%	36,849	13,277	2.78
NS	NuStar Energy L.P.	18.68	1.00	1.40	18.68	13.34	5.35%	7.49%	3.71	4.55	5.04	4.11	19.86%	24.36%	2,363	1,349	1.75
PAA	Plains All Amer. Pipe.	15.15	1.40	1.55	10.82	9.77	9.24%	10.23%	2.58	3.25	5.87	4.66	17.03%	21.45%	10,620	10,057	1.06
SMLP	Summit Midstream Partners LP	17.91	(6.12)	0.00	(2.93)				(16.23)	0.00	(1.10)				186	883	0.21
WES	Western Midstream	29.26	2.60	2.85	11.25	10.27	8.89%	9.74%	4.68	4.20	6.25	6.97	15.99%	14.35%	11,105	2,972	3.74
Average					9.62	10.51	8.72%	9.67%			5.16	6.04	15.95%	17.55%			1.95
Median					10.64	9.77	9.24%	10.23%			6.06	6.97	15.99%	14.35%			1.95
Trimmed Average					10.50	9.93	9.23%	10.07%			6.14	6.28	15.51%	16.55%			1.93
High					18.68	13.34	10.57%	10.62%			7.48	7.27	19.86%	24.36%			3.74
Low					(2.93)	9.42	5.35%	7.49%			(1.10)	4.11	13.37%	13.75%			0.21
Selected						10.27		9.74%				6.20		16.14%			1.95

MONTANA DEPARTMENT OF REVENUE

Support for Direct Capitalization - Debt Capitalization Rate

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

(\$ in Millions)

A	B	C	D	E	F	G	H	I	J
Ticker	Company	Current Year Interest Exp.	Previous Year MV LT Debt	Previous Year BV LT Debt	Current Year MV LT Debt	Current Year BV LT Debt	Average MV LT Debt	Current Yield	MTBR
		<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	$(D+F)/2$	(C/H)	(F/G)
EPD	Enterprise Products	1,269	24,995	28,295	27,448	28,748	26,222	4.84%	0.95
MPLX	MPLX LP	897	17,986	19,796	19,261	20,431	18,624	4.82%	0.94
NS	NuStar Energy L.P.	241	3,225	3,298	3,482	3,415	3,354	7.20%	1.02
PAA	Plains All Amer. Pipe.	386	7,646	8,446	7,351	7,751	7,499	5.15%	0.95
SMLP	Summit Midstream Partners LP	141	1,419	1,490	1,456	1,471	1,437	9.79%	0.99
WES	Western Midstream	348	6,114	6,785	7,629	7,901	6,872	5.07%	0.97
	All Companies	2,013			39,180	40,969	37,784	5.33%	0.96
	Average							6.14%	0.97
	Median							5.11%	0.96
	Trimmed Average							5.56%	0.96
	High							9.79%	1.02
	Low							4.82%	0.94
	Selected							6.14%	0.97

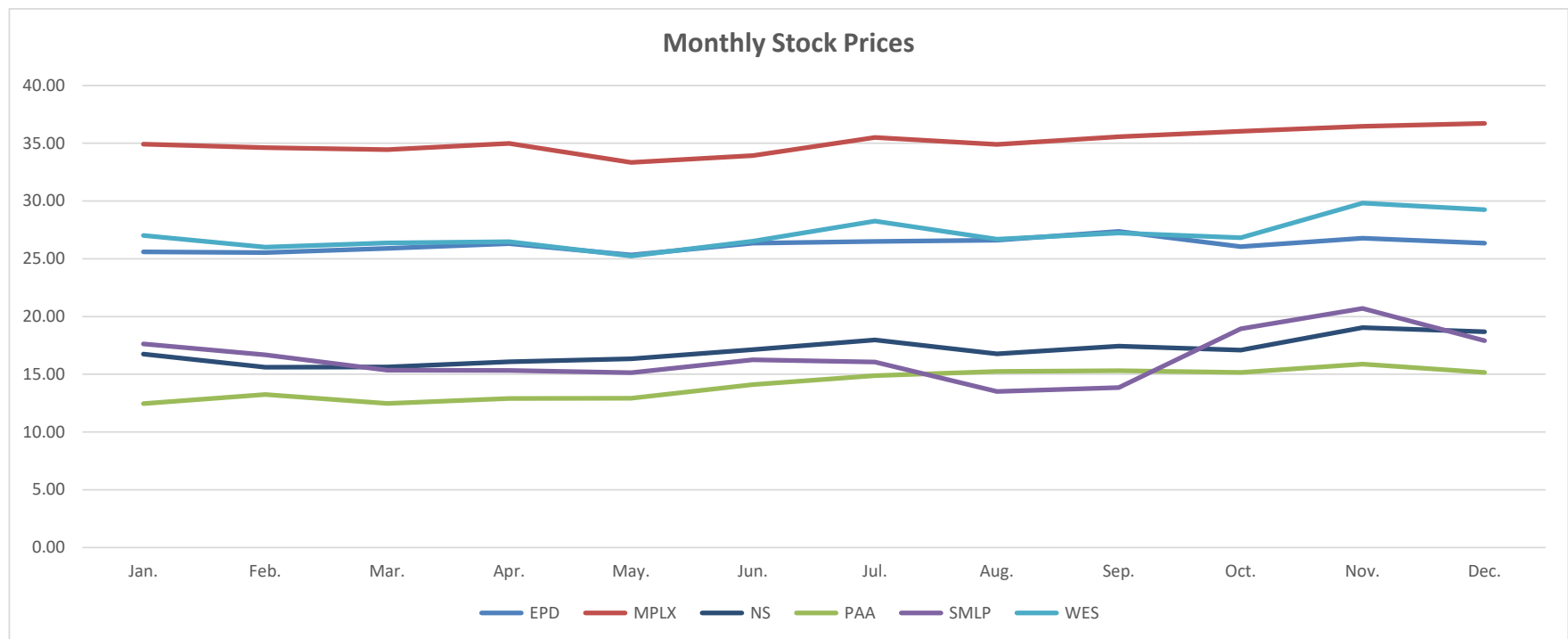
MONTANA DEPARTMENT OF REVENUE

Support of Stock Price - From YAHOO Finance

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

		End of Period Closing Stock Price											
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ticker	Company	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
EPD	Enterprise Products	25.60	25.53	25.90	26.31	25.33	26.35	26.51	26.61	27.37	26.04	26.78	26.35
MPLX	MPLX LP	34.92	34.63	34.45	34.99	33.34	33.94	35.51	34.89	35.57	36.04	36.46	36.72
NS	NuStar Energy L.P.	16.75	15.61	15.64	16.08	16.33	17.14	17.97	16.76	17.44	17.10	19.04	18.68
PAA	Plains All Amer. Pipe.	12.46	13.25	12.47	12.90	12.92	14.10	14.88	15.25	15.32	15.15	15.88	15.15
SMLP	Summit Midstream Partners LP	17.62	16.69	15.35	15.33	15.14	16.25	16.06	13.51	13.85	18.95	20.70	17.91
WES	Western Midstream	27.02	26.01	26.37	26.47	25.24	26.52	28.27	26.69	27.23	26.83	29.82	29.26



MONTANA DEPARTMENT OF REVENUE

Maintenance Capital Expenditures Estimate Based on Guideline Companies

Industry: Pipelines - Midstream MLPs

2024 Assessment Year

(\$ In Millions)

¹	²		³	⁴	⁵	⁶	⁷	⁸	⁹	¹⁰	¹¹
A	B	C	D	E	F	G	H	I	J	K	L
Ticker	Company	Inflation	PP&E, Gross	PP&E, Gross	Average PP&E	Depreciation Expense	Average Life of Assets			Replacement Cost (RC)	RC as % of Depreciation
			<i>Current Year</i>	<i>Previous Year</i>		<i>Current Year</i>		<i>Note [1]</i>	<i>Note [1]</i>	<i>Note [1]</i>	
		<i>MTDOR (CPI)</i>	<i>10-K, Notes</i>	<i>10-K, Notes</i>	<i>(D+E)/2</i>	<i>10-K</i>	<i>F/G</i>	<i>C*H</i>	<i>1/(1+C)^H</i>	<i>G*/(1-J)</i>	<i>K/G</i>
EPD	Enterprise Products	2.25%	66,217	63,122	64,670	1,860	35	0.78	0.46	2,701	145.23%
MPLX	MPLX LP	2.25%	27,385	25,911	26,648	1,213	22	0.49	0.61	1,551	127.84%
NS	NuStar Energy L.P.	2.25%	5,790	5,734	5,762	251	23	0.52	0.60	324	129.14%
PAA	Plains All Amer. Pipe.	2.25%	21,143	20,020	20,582	1,048	20	0.44	0.65	1,308	124.82%
SMLP	Summit Midstream Partners LP	2.25%	2,469	2,395	2,432	141	17	0.39	0.68	171	121.80%
WES	Western Midstream	2.25%	14,945	13,366	14,156	601	24	0.53	0.59	781	129.94%
Average											129.79%
Median											128.49%
Trimmed Average											127.93%
High											145.23%
Low											121.80%
Selected											129.79%

Notes

[1] Cornell, B. & Gerger, R. (2017). Estimating Terminal Values with Inflation: The Inputs Matter-It Is Not a Formulaic Exercise. *Business Valuation Review*, Volume 36, Number 4, 117-123.