sector circumstances that could develop. Currently, NW Holdings and NW Natural expect to have ample liquidity in the form of cash on hand and from operations and available credit capacity under credit facilities to support funding needs.

NW Holdings

For NW Holdings, short-term liquidity is primarily provided by cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities. NW Holdings also has a universal shelf registration statement filed with the SEC for the issuance of debt and equity securities. NW Holdings long-term debt, if any, and equity issuances are primarily used to provide equity contributions to NW Holdings' operating subsidiaries for operating and capital expenditures and other corporate purposes. NW Holdings' issuance of securities is not subject to regulation by state public utility commissions, but the dividends from NW Natural to NW Holdings are subject to regulatory ring-fencing provisions. NW Holdings guarantees the debt of its wholly-owned subsidiary. NWN Water. See "Long-Term Debf" below for more information regarding NWN Water debt.

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC in connection with the holding company reorganization, NW Natural may not pay dividends or make distributions to NW Holdings if NW Natural's credit ratings and common equity ratio, defined as the ratio of equity to long-term debt, fall below specified levels. If NW Natural's long-term secured credit ratings are below A- for S&P and A3 for Moody's, dividends may be issued so long as NW Natural's common equity ratio is 45% or more. If NW Natural's long term secured credit ratings are below BBB for S&P and Baa2 for Moody's, dividends may be issued so long as NW Natural's common equity ratio is 46% or more. Dividends may not be issued if NW Natural's long-term secured credit ratings are BB+ or below for S&P or Ba1 or below for Moody's, or if NW Natural's common equity ratio is below 44%, where the ratio is measured using common equity and long-term debt excluding imputed debt or debt-like lease obligations. In each case, common equity ratios are determined based on a preceding or projected 13-month average. In addition, there are certain OPUC notice requirements for dividends in excess of 5% of NW Natural's retained earnings.

Additionally, if NW Natural's common equity (excluding goodwill and equity associated with non-regulated assets), on a preceding or projected 13-month average basis, is less than 46% of NW Natural's capital structure, NW Natural is required to notify the OPUC, and if the common equity ratio falls below 44%, file a plan with the OPUC to restore its equity ratio to 44%. This condition is designed to ensure NW Natural continues to be adequately capitalized under the holding company structure. Under the WUTC order, the average common equity ratio must not exceed 56%.

At December 31, 2020 and 2019, NW Natural satisfied the ring-fencing provisions described above.

Based on several factors, including current cash reserves, committed credit facilities, its ability to receive dividends from its operating subsidiaries, in particular NW Natural, and an expected ability to issue long-term debt and equity securities in the capital markets, NW Holdings believes its liquidity is sufficient to meet anticipated near-term cash requirements, including all contractual obligations, investing, and financing activities as discussed in "Contractual Obligations" and "Cash Flows" below.

NW HOLDINGS DIVIDENDS. Quarterly dividends have been paid on common stock each year since NW Holdings' predecessor's stock was first issued to the public in 1951. Annual common stock dividend payments per share, adjusted for stock splits, have increased each year since 1956. The declarations and amount of future dividends to shareholders will depend upon earnings, cash flows, financial condition, NW Natural's ability to pay dividends to NW Holdings and other factors. The amount and timing of dividends payable on common stock is at the sole discretion of the NW Holdings Board of Directors.

Natural Gas Distribution Segment

For the NGD business segment, short-term borrowing requirements typically peak during colder winter months when the NGD business borrows money to cover the lag between natural gas purchases and bill collections from customers. Short-term liquidity for the NGD business is primarily provided by cash balances, internal cash flow from operations, proceeds from the sale of commercial paper notes, as well as available cash from multi-year credit facilities, short-term credit facilities, company-owned life insurance policies, the sale of long-term debt, and equity contributions from NW Holdings. NW Natural's long-term debt and contributions from NW Holdings are primarily used to finance NGD capital expenditures, refinance maturing debt, and provide temporary funding for other general corporate purposes of the NGD business.

Based on its current debt ratings (see "Credit Ratings" below), NW Natural has been able to issue commercial paper and long-term debt at attractive rates and has not needed to borrow or issue letters of credit from its back-up credit facility. In the event NW Natural is not able to issue new debt due to adverse market conditions or other reasons, NW Natural expects that near-term liquidity needs can be met using internal cash flows, issuing commercial paper, receiving equity contributions from NW Holdings, or, for the NGD segment, drawing upon a committed credit facility. NW Natural also has a universal shelf registration statement filed with the SEC for the issuance of secured and unsecured debt securities. As previously described, NW Natural drew on its credit facility, secured a term loan, and issued FMBs to ensure ample liquidity during market volatility resulting from the commencement of the COVID-19 pandemic.

In the event senior unsecured long-term debt ratings are downgraded, or outstanding derivative positions exceed a certain credit threshold, counterparties under derivative contracts could require NW Natural to post cash, a letter of credit, or other forms of collateral, which could expose NW Natural to additional cash requirements and may trigger increases in short-term borrowings while in a net loss position. NW Natural was not required to post collateral at December 31, 2020. However, if the credit risk-

related contingent features underlying these contracts were triggered on December 31, 2020, assuming long-term debt ratings dropped to non-investment grade levels, NW Natural could have been required to post \$0.1 million in collateral with our counterparties. See "Credit Ratings" below and Note 16.

Other items that may have a significant impact on NW Natural's liquidity and capital resources include NW Natural's pension contribution requirements and environmental expenditures.

PENSION CONTRIBUTION. NW Natural expects to make contributions to its company-sponsored defined benefit plan, which is closed to new employees, over the next several years until the plan is fully funded under the Pension Protection Act rules, including the rules issued under the Moving Ahead for Progress in the 21st Century Act (MAP-21), as amended. See "Application of Critical Accounting Policies—Accounting for Pensions and Postretirement Benefits" below and Note 10 for more information.

ENVIRONMENTAL EXPENDITURES. NW Natural expects to continue using cash resources to fund environmental liabilities. NW Natural has authorizations in Oregon and Washington to defer costs related to remediation of properties that are owned or were previously owned by NW Natural. In Oregon, a Site Remediation and Recovery Mechanism (SRRM) is currently in place to recovery prudently incurred costs allocable to Oregon customers, subject to an earnings test. On October 21, 2019 the WUTC authorized an Environmental Cost Recovery Mechanism (ECRM) for recovery of prudently incurred costs allocable to Washington customers beginning November 1, 2019. See Note 18, and "Results of Operations—Regulatory Matters—Environmental Cost Deferral and Recovery" above.

Based on several factors, including current credit ratings, NW Natural's commercial paper program, current cash reserves, committed credit facilities, and an expected ability to issue long-term debt and receive equity contributions from NW Holdings, NW Natural believes its liquidity is sufficient to meet anticipated near-term cash requirements, including all contractual obligations, investing, and financing activities as discussed in "Contractual Obligations" and "Cash Flows" below.

NW NATURAL DIVIDENDS. The declarations and amount of future dividends to NW Holdings will depend upon earnings, cash flows, financial condition, the satisfaction of OPUC and WUTC regulatory ring-fencing restrictions, and other factors. The amount and timing of dividends payable on common stock is subject to approval of the NW Natural Board of Directors.

OFF-BALANCE SHEET ARRANGEMENTS. Except for certain lease and purchase commitments, NW Holdings and NW Natural have no material off-balance sheet financing arrangements. See "Contractual Obligations" below.

Contractual Obligations

The following table shows contractual obligations from continuing operations at December 31, 2020 by maturity and type of obligation:

In millions		Payments Due in Years Ending December 31,												
		2021		2022		2023		2024		2025		Thereafter		Total
NW Natural														
Short-term debt maturities	\$	231.5	\$	_	\$	_	\$		\$	_	\$	_	\$	231.5
Long-term debt maturities		60.0				90.0		_		30.0		744.7		924.7
Interest on long-term debt		40.3		38.6		37.7		34.6		34.0		446.0		631.2
Postretirement benefit payments(1)		26.8		27.5		28.4		29.1		29.7		161.9		303.4
Operating leases		6.8		6.8		7.0		7.1		7.2		123.8		158.7
Gas purchases ⁽²⁾		83.5		_		_						<u> </u>		83.5
Gas pipeline capacity commitments		85.6		87.8		82.1		77.1		74.4		516.3		923.3
Other purchase commitments(3)		0.8		5.3		4.7		5.9		5.0		13.3		35.0
Other long-term liabilities(4)		18.2		_		_		_		_		_		18.2
NW Natural Total		553.5		166.0		249.9		153.8		180.3	10,00	2,006.0		3,309.5
Other (NW Holdings)														
Short-term debt maturities		73.0		_				_		_		<u> </u>		73.0
Short- and long-term obligations(5)		35.9		0.4		0.4		0.4		0.3		2.0		39.4
NW Holdings Total	\$	662.4	\$	166.4	\$	250.3	\$	154.2	\$	180.6	\$	2,008.0	\$	3,421.9

⁽¹⁾ Postretirement benefit payments primarily consists of two NW Natural items: (1) estimated pension and other postretirement plan payments, which are funded by plan assets and future cash contributions, and (2) required payments to the Western States multiemployer pension plan due to NW Natural's withdrawal from the plan in December 2013. See Note 10.

⁽²⁾ Gas purchases include contracts which use price formulas tied to monthly index prices. The commitment amounts presented incorporate the December 2020 first of month index price for each supply basin from which gas is purchased. For a summary of gas purchase and gas pipeline capacity commitments, see Note 17.

⁽³⁾ Other purchase commitments primarily consist of remaining balances under existing purchase orders and gas storage agreements.

- (4) Other long-term liabilities includes accrued deferred compensation plan liabilities for executives and directors. The timing of these payments are uncertain; however, these payments are unlikely to all occur in the next 12 months.
- (5) Short- and long-term obligations include short- and long-term debt obligations and other immaterial liabilities.

In addition to known contractual obligations listed in the above table, NW Natural has also recognized liabilities for future environmental remediation or action. The exact timing of payments beyond 12 months with respect to those liabilities cannot be reasonably estimated due to numerous uncertainties surrounding the course of environmental remediation and the preliminary nature of site investigations. See Note 18 for a further discussion of environmental remediation cost liabilities.

At December 31, 2020, 606 of NW Natural's natural gas distribution employees were members of the Office and Professional Employees International Union (OPEIU) Local No. 11. In November 2019, union employees ratified a new collective bargaining agreement that took effect on December 1, 2019, expires on May 31, 2024, and is effective thereafter from year to year unless either party serves notice of its intent to negotiate modifications to the collective bargaining agreement.

Short-Term Debt

The primary source of short-term liquidity for NW Holdings is cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time.

The primary source of short-term liquidity for NW Natural is from the sale of commercial paper, available cash from a multi-year credit facility, and short-term credit facilities. NW Natural has a separate commercial paper program and separate bank facilities. In addition to issuing commercial paper or bank loans to meet working capital requirements, including seasonal requirements to finance gas purchases and accounts receivable, short-term debt may also be used to temporarily fund capital requirements. For NW Natural, commercial paper and bank loans are periodically refinanced through the sale of long-term debt or equity contributions from NW Holdings. Commercial paper, when outstanding, is sold through two commercial banks under an issuing and paying agency agreement and is supported by one or more unsecured revolving credit facilities. See "Credit Agreements" below.

At December 31, 2020 and 2019, NW Holdings had short-term debt outstanding of \$304.5 million and \$149.1 million, respectively. The weighted average interest rate of NW Holdings' short-term debt outstanding at December 31, 2020 and 2019 was 0.5% and 2.0%, respectively. NW Natural had short-term debt outstanding of \$231.5 million and \$125.1 million, respectively. The weighted average interest rate of NW Natural's short-term debt outstanding at December 31, 2020 and 2019 was 0.4% and 2.0%, respectively.

Credit Agreements

NW Holdings

NW Holdings has a \$100 million credit agreement, with a feature that allows it to request increases in the total commitment amount, up to a maximum of \$150 million. The maturity date of the agreement is October 2, 2023, with available extensions of commitments for two additional one-year periods, subject to lender approval.

All lenders under the NW Holdings credit agreement are major financial institutions with committed balances and investment grade credit ratings as of December 31, 2020 as follows:

In millions

Lender rating, by category	Loan Commitment
AA/Aa	\$ 100
Total	\$ 100

Based on credit market conditions, it is possible one or more lending commitments could be unavailable to NW Holdings if the lender defaulted due to lack of funds or insolvency; however, NW Holdings does not believe this risk to be imminent due to the lenders' strong investment-grade credit ratings.

The NW Holdings credit agreement permits the issuance of letters of credit in an aggregate amount of up to \$40 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. The credit agreement requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at December 31, 2020 and 2019, with consolidated indebtedness to total capitalization ratios of 58.6% and 54.3%, respectively.

The agreement also requires NW Holdings to maintain debt ratings (which are defined by a formula using NW Natural's credit ratings in the event NW Holdings does not have a credit rating) with Standard & Poor's (S&P) and Moody's Investors Service, Inc. (Moody's) and notify the lenders of any change in its senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Holdings' debt ratings by S&P or Moody's is not an event of default, nor is

the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreements are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreements when ratings are changed. NW Holdings does not currently maintain ratings with S&P or Moody's.

Interest charges on the credit agreement are indexed to the London Interbank Offered Rate (LIBOR). The agreement contains a provision to transition to an equivalent replacement rate upon the phase-out of LIBOR in 2022.

NW Holdings had no letters of credit issued and outstanding at December 31, 2020 and 2019. NW Holdings had a \$1.0 million letter of credit issued and outstanding, separate from the aforementioned credit agreement, at December 31, 2019 for purposes of facilitating the Suncadia acquisition, which was extinguished after the close of the transaction in February 2020.

NW Natural

NW Natural has a multi-year credit agreement for unsecured revolving loans totaling \$300 million, with a feature that allows NW Natural to request increases in the total commitment amount, up to a maximum of \$450 million. The maturity date of the agreement is October 2, 2023 with an available extension of commitments for two additional one-year periods, subject to lender approval.

All lenders under the NW Natural credit agreement are major financial institutions with committed balances and investment grade credit ratings as of December 31, 2020 as follows:

In millions

Lender rating, by category	Loan Commitme	ent
AA/Aa	\$	300
Total	\$	300

Based on credit market conditions, it is possible one or more lending commitments could be unavailable to NW Natural if the lender defaulted due to lack of funds or insolvency; however, NW Natural does not believe this risk to be imminent due to the lenders' strong investment-grade credit ratings.

The NW Natural credit agreement permits the issuance of letters of credit in an aggregate amount of up to \$60 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. There were no outstanding balances under this credit agreement at December 31, 2020 or 2019. The credit agreement requires NW Natural to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Natural was in compliance with this covenant at December 31, 2020 and 2019, with consolidated indebtedness to total capitalization ratios of 57.9% and 54.1%, respectively.

The agreement also requires NW Natural to maintain credit ratings with S&P and Moody's and notify the lenders of any change in NW Natural's senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Natural's debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the agreement are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreement when ratings are changed. See "Credit Ratings" below.

Interest charges on the credit agreement are indexed to LIBOR. The agreement contains a provision to transition to an equivalent replacement rate upon the phase-out of LIBOR.

Credit Ratings

NW Holdings does not currently maintain ratings with S&P or Moody's. NW Natural's credit ratings are a factor of liquidity, potentially affecting access to the capital markets including the commercial paper market. NW Natural's credit ratings also have an impact on the cost of funds and the need to post collateral under derivative contracts.

The following table summarizes NW Natural's current credit ratings:

	S&P	Moody's
Commercial paper (short-term debt)	A-1	P-2
Senior secured (long-term debt)	AA-	A2
Senior unsecured (long-term debt)	n/a	Baa1
Corporate credit rating	A+	n/a
Ratings outlook	Stable	Stable

The above credit ratings and ratings outlook are dependent upon a number of factors, both qualitative and quantitative, and are subject to change at any time. The disclosure of or reference to these credit ratings is not a recommendation to buy, sell or hold NW Holdings or NW Natural securities. Each rating should be evaluated independently of any other rating.

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC in connection with the holding company reorganization, NW Holdings and NW Natural are required to maintain separate credit ratings, long-term debt ratings, and preferred stock ratings, if any.

Long-Term Debt

The following NW Natural debentures were retired in the periods indicated:

	Year Ended December 31,						
In millions		2020	2019	2018			
NW Natural First Mortgage Bonds							
Series 6.60% due 2018	\$	– \$	— \$	22			
Series 1.55% due 2018				75			
Series 8.31% due 2019		_	10	_			
Series 7.63% due 2019			20	_			
Series 5.37% due 2020		75	_	_			
Total	\$	75 \$	30 \$	97			

In June 2019, NWN Water, a wholly-owned subsidiary of NW Holdings, entered into a two-year term loan agreement for \$35.0 million. The loan carried an interest rate of 0.70% at December 31, 2020, which is based upon the one-month LIBOR rate. The loan is guaranteed by NW Holdings and requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at December 31, 2020, with a consolidated indebtedness to total capitalization ratio of 58.6%.

In March 2020, NW Natural issued \$150.0 million of FMBs with an interest rate of 3.60%, due in 2050. In February 2020, NW Natural retired \$75.0 million of FMBs with an interest rate of 5.37%.

\$10.0 million of FMBs with an interest rate of 9.05% and \$50.0 million of FMBs with an interest rate of 3.18% will mature in August and September 2021, respectively.

See "Financial Condition-Contractual Obligations" above for long-term debt maturing over the next five years.

Bankruptcy Ring-fencing Restrictions

As part of the ring-fencing conditions agreed upon with the OPUC and WUTC in connection with the holding company reorganization, NW Natural is required to have one director who is independent from NW Natural management and from NW Holdings and to issue one share of NW Natural preferred stock to an independent third party. NW Natural was in compliance with both of these ring-fencing provisions as of December 31, 2020 and 2019. NW Natural may file a voluntary petition for bankruptcy only if approved unanimously by the Board of Directors of NW Natural, including the independent director, and by the holder of the preferred share.

Cash Flows

Operating Activities

Changes in our operating cash flows are primarily affected by net income or loss, changes in working capital requirements, and other cash and non-cash adjustments to operating results.

Operating activity highlights include:

					NW Holdings				
In millions		2020			2019			2018	
Cash provided by operating activities	\$		143.0	\$	18	5.3	\$		168.8
		NW Natural							
In millions		2020			2019			2018	
Cash provided by operating activities	9		146.2	9	18	12	•		173.5

The significant drivers of changes in cash provided by operating activities discussed below apply to both NW Holdings and NW Natural.

2020 COMPARED TO 2019. The significant factors contributing to the \$42.3 million and \$40.0 million decreases in NW Holdings and NW Natural cash flow provided by operating activities, respectively, were as follows:

- a decrease of \$25.8 million at NW Natural from increased receivables;
- a decrease of \$18.0 million due to higher contributions paid to qualified defined benefit pension plans;
- · a decrease of \$15.8 million from decreased cash collections from our decoupling mechanism; and
- a decrease of \$11.6 million due to higher environmental expenditures; partially offset by
- a decrease of \$41.1 million in net deferred gas costs as the actual costs during the 2019-20 winter season were in line with estimates embedded in the PGA
 as opposed to gas costs in the 2018-2019 winter season that were 14% above PGA estimates.

2019 COMPARED TO 2018. The significant factors contributing to the \$16.5 million and \$12.7 million increases in NW Holdings and NW Natural cash flow provided by operating activities, respectively, were as follows:

- an increase of \$27.5 million at NW Holdings and \$24.9 million at NW Natural due to net income tax refunds in 2019 compared to payments in 2018. The
 refunds were primarily due to bonus depreciation taken on NW Natural's North Mist gas storage expansion which was placed into service in May 2019, as
 well as \$6.0 million in income taxes paid in 2018 and refunded to NW Natural in 2019;
- an increase of \$10.6 million from collections of both current and deferred pension expenses as a result of NW Natural's Oregon rate case; and
- · an increase of \$4.6 million due to lower contributions paid to qualified defined benefit pension plans; partially offset by
- a net decrease of \$28.5 million at NW Natural from changes in receivables, inventories, and accounts payable, primarily reflecting increased gas purchase
 expenditures from average weather in 2019 compared to warmer-than average weather in 2018 as well as higher gas costs than those included in customer
 rates.

During the year ended December 31, 2020, NW Natural contributed \$29.0 million to its qualified defined benefit pension plan, compared to \$11.0 million for 2019 and \$15.5 million in 2018. The amount and timing of future contributions will depend on market interest rates and investment returns on the plans' assets. See Note 10.

NW Holdings and NW Natural have lease and purchase commitments relating to our operating activities that are financed with cash flows from operations. For information on cash flow requirements related to leases and other purchase commitments, see "Financial Condition—Contractual Obligations" above and Note 17.

Investing Activities

Investing activity highlights include:

	NW Holdings						
In millions	2020	20	19	2018			
Cash used in investing activities	\$ (29	94.3) \$	(303.8) \$	(217.5)			
Capital expenditures	(27	73.0)	(223.5)	(214.6)			
		NW Natural					
In millions	2020	20	19	2018			
Cash used in investing activities	\$ (26	64.1) \$	(243.1) \$	(238.5)			
Capital expenditures	(26	66.0)	(221.4)	(214.3)			

2020 COMPARED TO 2019. Cash used in investing activities decreased \$9.5 million at NW Holdings and increased \$21.0 million and NW Natural, respectively.

The decrease in cash used at NW Holdings was driven by \$12.5 million of proceeds from the sale of Gill Ranch and \$7.0 million from the sale of Trail West. The increase in cash used at NW Natural was due to continued capital expenditures for customer growth, system reinforcement, and technology, partially offset by lower leasehold improvement expenditures at the new corporate operations center and \$8.1 million of proceeds from the sale of assets.

2019 COMPARED TO 2018. Cash used in investing activities increased \$86.3 million and \$4.6 million at NW Holdings and NW Natural, respectively. The increase at NW Natural was driven by continued capital expenditures for customer growth, system reinforcement, and technology, as well as leasehold improvement additions at NW Natural's new corporate operations center. The increase was partially offset by lower capital expenditures due to the completion of the North Mist gas storage expansion in May 2019. The increase at NW Holdings was driven by \$55.9 million higher expenditures for acquisitions, net of cash acquired.

NW Natural capital expenditures for 2021 are expected to be in the range of \$280 million to \$320 million and for the five-year period from 2021 to 2025 are expected to range from \$1.0 billion to \$1.2 billion. NW Natural Water is expected to invest approximately \$15 million in 2021 related to maintenance capital expenditures for water and wastewater utilities currently owned or under a purchase and sale agreement, and for the five-year period from 2021 to 2025 capital expenditures are expected to invest approximately \$40 million to \$50 million.

The timing and amount of the core capital expenditures and projects for 2021 and the next five years could change based on regulation, growth, and cost estimates. Additional investments in our infrastructure during and after 2021 that are not incorporated in the estimates provided above will depend largely on additional regulations, growth, and expansion opportunities. Required funds for the investments are expected to be internally generated or financed with long-term debt or equity, as appropriate.

Financing Activities

Financing activity highlights include:

		NW Holdings		
In millions	2020	2019	2018	
Cash provided by financing activities	\$ 171.8	\$ 115.5	\$ 57.8	
Proceeds from issuances of CP, maturities greater than 90 days	195.0	_		
Change in short-term debt, net	(39.6)	(68.5) 163.3	
Change in long-term debt	75.0	145.0	(47.0)	
Proceeds from common stock issued		93.0	_	
Cash dividend payments on common stock	(55.4)	(53.3) (51.3)	
	NW Natural			
In millions	2020	2019	2018	
Cash provided by financing activities	\$ 122.4	\$ 54.9	\$ 69.8	
Proceeds from issuances of CP, maturities greater than 90 days	195.0	_	_	
Change in short-term debt, net	(88.6)	(92.4) 163.3	
Change in long-term debt	75.0	110.0	(47.0)	
Cash dividend payments on common stock	(55.4)	(53.4) (38.4)	

2020 COMPARED TO 2019. Cash provided by financing activities increased \$56.3 million and \$67.5 million at NW Holdings and NW Natural, respectively.

The increase in cash provided by financing activities at NW Natural was primarily driven by \$198.8 million of higher borrowings of short-term debt, net, and \$2.0 million of higher cash dividends paid. The increases were partially offset by decreases of \$35.0 million in long-term borrowing and the \$93.2 million in capital contribution from NW Holdings to NW Natural in 2019.

The increase at NW Holdings was primarily due to \$223.9 million higher in short-term borrowing, partially offset by decreases of \$93.0 million in common stock issuance proceeds and \$70.0 million lower repayments of long-term debt.

2019 COMPARED TO 2018. Cash provided by financing activities increased \$57.7 million and decreased \$14.9 million at NW Holdings and NW Natural, respectively.

The decrease in cash provided by financing activities at NW Natural was primarily driven by \$255.7 million in higher repayments of short-term debt compared to 2018 and \$15.0 million higher cash dividends paid. The decrease was partially offset by net issuances of \$110.0 million in long-term debt in 2019 compared to net repayments of \$47.0 million in 2018, as well as a capital contribution from NW Holdings to NW Natural of \$93.0 million.

The increase at NW Holdings was primarily due to proceeds of \$93.0 million from the June 2019 issuance of NW Holdings common stock, the issuance of \$35.0 million of long-term debt at NW Natural Water, and short-term debt issuances of \$24 million at NW Holdings. These increases were partially offset by the debt activity at NW Natural described above.

Pension Cost and Funding Status of Qualified Retirement Plans

NW Natural's pension costs are determined in accordance with accounting standards for compensation and retirement benefits. See "Application of Critical Accounting Policies and Estimates – *Pensions and Postretirement Benefits*" below. Pension expense for NW Natural's qualified defined benefit plan, which is allocated between operations and maintenance expenses, capital expenditures, and through October 31, 2018, the deferred regulatory balancing account, totaled \$18.4 million in 2020, an increase of \$1.9 million from 2019. The fair market value of pension assets in this plan increased to \$373.9 million at December 31, 2020 from \$313.1 million at December 31, 2019. The increase was due to a gain on plan assets of \$54.6 million and \$29.0 million in employer contributions, partially offset by benefit payments of \$22.7 million.

Contributions made to NW Natural's company-sponsored qualified defined benefit pension plan are based on actuarial assumptions and estimates, tax regulations, and funding requirements under federal law. The qualified defined benefit pension plan was underfunded by \$151.2 million at December 31, 2020. NW Natural plans to make contributions during 2021 of \$20.1 million. See Note 10 for further pension disclosures.

Contingent Liabilities

Loss contingencies are recorded as liabilities when it is probable that a liability has been incurred and the amount of the loss is reasonably estimable in accordance with accounting standards for contingencies. See "Application of Critical Accounting Policies and Estimates" below. At December 31, 2020, NW Natural's total estimated liability related to environmental sites was \$120.5 million. See Note 18 and "Results of Operations—Regulatory Matters—Rate Mechanisms—Environmental Cost Deferral and Recovery" above.

NW Holdings is not currently party to any direct claims or litigation, though in the future it may be subject to claims and litigation arising in the ordinary course of business.

New Accounting Pronouncements

For a description of recent accounting pronouncements that may have an impact on our financial condition, results of operations, or cash flows, see Note 2.

APPLICATION OF CRITICAL ACCOUNTING POLICIES AND ESTIMATES

In preparing financial statements in accordance with U.S. GAAP, management exercises judgment to assess the potential outcomes and related accounting impacts in the selection and application of accounting principles, including making estimates and assumptions that affect reported amounts of assets, liabilities, revenues, expenses, and related disclosures in the financial statements. Management considers critical accounting policies to be those which are most important to the representation of financial condition and results of operations and which require management's most difficult and subjective or complex judgments, including accounting estimates that could result in materially different amounts if reported under different conditions or used different assumptions. Our most critical estimates and judgments for both NW Holdings and NW Natural include accounting for:

- · regulatory accounting;
- · revenue recognition;
- · derivative instruments and hedging activities;
- · pensions and postretirement benefits;
- income taxes;
- · environmental contingencies; and
- impairment of long-lived assets and goodwill.

Management has discussed its current estimates and judgments used in the application of critical accounting policies with the Audit Committees of the Boards of NW Holdings and NW Natural. Within the context of critical accounting policies and estimates, management is not aware of any reasonably likely events or circumstances that would result in materially different amounts being reported.

Regulatory Accounting

The NGD segment is regulated by the OPUC and WUTC, which establish the rates designed to recover specific costs of providing regulatory services, and, to a certain extent, set forth special accounting treatment for certain regulatory transactions for which NW Natural records regulatory assets and liabilities. In general, the same accounting principles as non-regulated

companies reporting under U.S. GAAP are used. However, authoritative guidance for regulated operations (regulatory accounting) requires different accounting treatment for regulated companies to show the effects of such regulation. For example, NW Natural accounts for the cost of gas using a PGA deferral and cost recovery mechanism, which is submitted for approval annually to the OPUC and WUTC. See "Results of Operations—Regulatory Matters—Rate Mechanisms —Purchased Gas Adjustment" above. There are other expenses and revenues that the OPUC or WUTC may require NW Natural to defer for recovery or refund in future periods. Regulatory accounting requires NW Natural to account for these types of deferred expenses (or deferred revenues) as regulatory assets (or regulatory liabilities) on the balance sheet. When the recovery of these regulatory assets from, or refund of regulatory liabilities to, customers is approved, NW Natural recognizes the expense or revenue on the income statement at the same time the adjustment to amounts included in rates charged to customers.

The conditions that must be satisfied to adopt the accounting policies and practices of regulatory accounting include:

- an independent regulator sets rates;
- · the regulator sets the rates to cover specific costs of delivering service; and
- the service territory lacks competitive pressures to reduce rates below the rates set by the regulator.

Because NW Natural's NGD operations satisfy all three conditions, NW Natural continues to apply regulatory accounting to NGD operations. Future accounting changes, regulatory changes, or changes in the competitive environment could require NW Natural to discontinue the application of regulatory accounting for some or all of our regulated businesses. This would require the write-off of those regulatory assets and liabilities that would no longer be probable of recovery from or refund to customers.

Based on current accounting and regulatory competitive conditions, NW Natural believes it is reasonable to expect continued application of regulatory accounting for NGD activities. Further, it is reasonable to expect the recovery or refund of NW Natural's regulatory assets and liabilities at December 31, 2020 through future customer rates. If it is determined that all or a portion of these regulatory assets or liabilities no longer meet the criteria for continued application of regulatory accounting, then NW Natural would be required to write-off the net unrecoverable balances against earnings in the period such determination is made. The net balance in regulatory asset and liability accounts was a net liability of \$308.5 million and \$285.3 million as of December 31, 2020 and 2019, respectively. See Note 2 for more detail on regulatory balances.

Revenue Recognition

Revenues, which are derived primarily from the sale, transportation, and storage of natural gas, are recognized upon the delivery of gas commodity or services rendered to customers.

Accrued Unbilled Revenue

For a description of the policy regarding accrued unbilled revenue, most of which relates to the NGD business at NW Natural, see Note 2. The following table presents changes in key metrics if the estimated percentage of unbilled volume at December 31 was adjusted up or down by 1%:

	2020				
In millions		Up 1%		Down 1%	
Unbilled revenue increase (decrease)(1)	\$	0.9	\$	(0.9)	
Margin increase (decrease) ⁽¹⁾		0.1		(0.1)	
Net income before tax increase (decrease)(1)		0.1		(0.1)	

not Includes impact of regulatory mechanisms including decoupling mechanism and excludes the impact of unbilled revenue from water services.

Derivative Instruments and Hedging Activities

NW Natural's gas acquisition and hedging policies set forth guidelines for using financial derivative instruments to support prudent risk management strategies. These policies specifically prohibit the use of derivatives for trading or speculative purposes. Financial derivative contracts are utilized to hedge a portion of natural gas sale requirements. These contracts include swaps, options, and combinations of option contracts. NW Natural primarily uses these derivative financial instruments to manage commodity price variability. A small portion of NW Natural's derivative hedging strategy involves foreign currency exchange contracts.

Derivative instruments are recorded on the balance sheet at fair value. If certain regulatory conditions are met, then the derivative instrument fair value is recorded together with an offsetting entry to a regulatory asset or liability account pursuant to regulatory accounting, and no unrealized gain or loss is recognized in current income or loss. See "Regulatory Accounting" above for additional information. The gain or loss from the fair value of a derivative instrument subject to regulatory deferral is included in the recovery from, or refund to, NGD business customers in future periods. If a derivative contract is not subject to regulatory deferral, then the accounting treatment for unrealized gains and losses is recorded in accordance with accounting standards for derivatives and hedging which is either in current income or loss or in accumulated other comprehensive income or loss (AOCI or AOCL). Derivative contracts outstanding at December 31, 2020, 2019 and 2018 were measured at fair value using models or other market accepted valuation methodologies derived from observable market data. Estimates of fair value may change significantly from period-to-period depending on market conditions, notional amounts, and prices. These changes may have an impact on results of operations, but the impact would largely be mitigated due to the majority of derivative activities

being subject to regulatory deferral treatment. For more information on derivative activity and associated regulatory treatment, see Note 2 and Note 16.

The following table summarizes the amount of gains realized from commodity price transactions for the last three years:

In millions	20	20	2019		2018
NGD business net gain on:					
Commodity Swaps	\$	2.3	\$	17.9 \$	7.4

Realized gains and losses from commodity hedges shown above were recorded in cost of gas and were, or will be, included in annual PGA rates.

Pensions and Postretirement Benefits

NW Natural maintains a qualified non-contributory defined benefit pension plan, non-qualified supplemental pension plans for eligible executive officers and certain key employees, and other postretirement employee benefit plans covering certain non-union employees. NW Natural also has a qualified defined contribution plan (Retirement K Savings Plan) for all eligible employees. Only the qualified defined benefit pension plan and Retirement K Savings Plan have plan assets, which are held in qualified trusts to fund the respective retirement benefits. The qualified defined benefit retirement plan for union and non-union employees was closed to new participants several years ago. Non-union and union employees hired or re-hired after December 31, 2006 and 2009, respectively, and employees of certain NW Holdings subsidiaries are provided an enhanced Retirement K Savings Plan benefit. The postretirement Welfare Benefit Plan for non-union employees was also closed to new participants several years ago.

Net periodic pension and postretirement benefit costs (retirement benefit costs) and projected benefit obligations (benefit obligations) are determined using a number of key assumptions including discount rates, rate of compensation increases, retirement ages, mortality rates and an expected long-term return on plan assets. See Note 10.

Accounting standards also require balance sheet recognition of unamortized actuarial gains and losses and prior service costs in AOCI or AOCL, net of tax. However, the retirement benefit costs related to qualified defined benefit pension and postretirement benefit plans are generally recovered in rates charged to NGD customers, which are set based on accounting standards for pensions and postretirement benefit expenses. As such, NW Natural received approval from the OPUC to recognize the unamortized actuarial gains and losses and prior service costs as a regulatory asset or regulatory liability based on expected rate recovery, rather than including it as AOCI or AOCL under common equity. See "Regulatory Accounting" above and Note 2, "Industry Regulation".

In 2011, NW Natural received regulatory approval from the OPUC and began deferring a portion of pension expense above or below the amount set in rates to a regulatory balancing account on the balance sheet. As part of general rate case proceedings, on October 26, 2018, the OPUC issued an order to freeze NW Natural's pension balancing account as of October 31, 2018. In March 2019, the OPUC issued an order resolving the remaining open items for NW Natural's 2018 Oregon general rate case regarding recovery of the pension balancing account. At December 31, 2020, the cumulative amount deferred for future pension cost recovery was \$50.5 million, including accrued interest. The regulatory balancing account includes the recognition of accrued interest on the account balance at NW Natural's authorized rate of return from 2011 through October 31, 2018, and at 4.3% thereafter. See "Regulatory Matters - Rate Mechanisms - Pension Cost Deferral and Pension Balancing Account" above for more information.

A number of factors, as discussed above, are considered in developing pension and postretirement benefit assumptions. For the December 31, 2020 measurement date, NW Natural reviewed and updated:

- the weighted-average discount rate assumptions for pensions decreased from 3.16% for 2019 to 2.36% for 2020, and our weighted-average discount rate assumptions for other postretirement benefits decreased from 3.11% for 2019 to 2.34% for 2020. The new rate assumptions were determined for each plan based on a matching of benchmark interest rates to the estimated cash flows, which reflect the timing and amount of future benefit payments. Benchmark interest rates are drawn from the FTSE Above Median Curve, which consists of high quality bonds rated AA- or higher by S&P or Aa3 or higher by Moody's;
- the expected annual rate of future compensation increases for bargaining unit employees, which remained consistent with 2019, of 6.50% in 2020 and 3.50% thereafter. The rate for 2020 reflects a new collective bargaining agreement that took effect December 1, 2019. The expected annual rate of future compensation was 3.50% for non-bargaining employees;
- the expected long-term return on qualified defined benefit plan assets remains unchanged at 7.25%;
- the mortality rate assumptions were updated from Pri-2012 mortality tables using scale MP-2019 to Pri-2012 mortality tables using scale MP-2020, which
 partially offset increases of the projected benefit obligation; and
- · other key assumptions, which were based on actual plan experience and actuarial recommendations.

At December 31, 2020, the net pension liability (benefit obligations less market value of plan assets) for NW Natural's qualified defined benefit plan decreased \$13.1 million compared to 2019. The decrease in the net pension liability is primarily due to the

\$60.9 million increase in plan assets, partially offset by the \$47.8 million increase to the pension benefit obligation. The liability for non-qualified plans increased \$2.7 million, and the liability for other postretirement benefits decreased \$0.5 million in 2020.

The expected long-term rate of return on plan assets is determined by averaging the expected earnings for the target asset portfolio. In developing expected return, historical actual performance and long-term return projections are analyzed, which gives consideration to the current asset mix and target asset allocation.

NW Natural believes its pension assumptions are appropriate based on plan design and an assessment of market conditions. The following shows the sensitivity of retirement benefit costs and benefit obligations to changes in certain actuarial assumptions:

Dollars in millions	Change in Assumption	Impact on 2020 Retirement Benefit Costs	Impact on Retir Benefit Obligati Dec. 31, 20	ions at
Discount rate:	(0.25) %			
Qualified defined benefit plans		\$ 1.5	\$	18.4
Non-qualified plans		_		1.0
Other postretirement benefits		0.1		0.9
Expected long-term return on plan assets:	(0.25) %			
Qualified defined benefit plans		0.8		N/A

In July 2012, President Obama signed MAP-21 into law. This legislation changed several provisions affecting pension plans, including temporary funding relief and Pension Benefit Guaranty Corporation (PBGC) premium increases, which shifts the level of minimum required contributions from the short-term to the long-term as well as increasing the operational costs of running a pension plan. MAP-21 established a new minimum and maximum corridor for segment rates based on a 25-year average of bond yields, which resulted in lower minimum contributions requirements than those under previous regulations. MAP-21, as amended, provides for the current corridor to be in effect through 2020 and subsequently broaden on an annual basis from 2021 through 2024.

Income Taxes

Valuation Allowances

Deferred tax assets are recognized to the extent that these assets are believed to be more likely than not to be realized. In making such a determination, available positive and negative evidence is considered, including future reversals of existing taxable temporary differences, projected future taxable income, taxplanning strategies, and results of recent operations. NW Holdings and NW Natural have determined that all recorded deferred tax assets are more likely than not to be realized as of December 31, 2020. See Note 11.

Uncertain Tax Benefits

The calculation of tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in the jurisdictions in which we operate. A tax benefit from a material uncertain tax position will only be recognized when it is more likely than not that the position, or some portion thereof, will be sustained upon examination, including resolution of any related appeals or litigation processes, on the basis of the technical merits. NW Holdings and NW Natural participate in the Compliance Assurance Process (CAP) with the Internal Revenue Service (IRS). Under the CAP program companies work with the IRS to identify and resolve material tax matters before the federal income tax return is filed each year. No reserves for uncertain tax benefits were recorded during 2020, 2019, or 2018. See Note 11.

Tax Legislation

When significant proposed or enacted changes in income tax rules occur we consider whether there may be a material impact to our financial position, results of operations, cash flows, or whether the changes could materially affect existing assumptions used in making estimates of tax related balances.

On December 22, 2017, H.R.1 - An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018, also known as the Tax Cuts and Jobs Act (TCJA), was enacted. The TCJA lowered the U.S. federal corporate income tax rate to 21% from the existing maximum rate of 35%, effective for our tax year beginning January 1, 2018. The TCJA includes specific provisions related to regulated public utilities that generally provide for the continued deductibility of interest expense and the elimination of bonus depreciation. Certain rate normalization requirements for accelerated cost recovery benefits related to regulated plant balances also continue. See Note 11 for more information on how we are impacted by the TCJA.

With respect to other tax legislation, the final tangible property regulations applicable to all taxpayers were issued on September 13, 2013 and were generally effective for taxable years beginning on or after January 1, 2014. In addition, procedural guidance related to the regulations was issued under which taxpayers may make accounting method changes to comply with the

regulations. We have evaluated the regulations and do not anticipate any material impact. However, unit-of-property guidance applicable to natural gas distribution networks has not yet been issued and is expected in the near future. We will further evaluate the effect of these regulations after this guidance is issued, but believe the current method is materially consistent with the new regulations and do not expect this additional guidance to have a material effect on our financial statements.

Regulatory Matters

Regulatory tax assets and liabilities are recorded to the extent it is probable they will be recoverable from, or refunded to, customers in the future. At December 31, 2020 and 2019, NW Natural had net regulatory income tax assets of \$14.6 million and \$16.9 million, respectively, representing future rate recovery of deferred tax liabilities resulting from differences in NGD plant financial statement and tax bases and NGD plant removal costs. These regulatory assets are currently being recovered through customer rates. At December 31, 2020 and 2019, regulatory income tax assets of \$2.5 million and \$2.5 million, respectively, were recorded by NW Natural, representing probable future rate recovery of deferred tax liabilities resulting from the equity portion of AFUDC. At December 31, 2020, a regulatory income tax asset of \$1.7 million was recorded by NW Natural, representing future recovery of Oregon Corporate Activity Tax that was deferred between January 1, 2020 and October 31, 2020.

At December 31, 2020 and 2019, regulatory liability balances, representing the estimated net benefit to NGD customers resulting from the change in deferred taxes as a result of the TCJA, of \$197.8 million and \$205.0 million, respectively, were recorded by NW Natural. These balances include a gross up for income taxes of \$52.4 million and \$54.3 million, respectively.

The TCJA includes specific guidance for determining the shortest time period over which the portion of this regulatory liability resulting from accelerated cost recovery of NGD plant may accrue to the benefit of customers to avoid incurring federal normalization penalties. However, it is anticipated that until such time that customers receive the direct benefit of this regulatory liability, the balance, net of the additional gross up for income taxes, will continue to provide an indirect benefit to customers by reducing the NGD rate base which determines customer rates for service. Regulatory orders were issued by Oregon in March 2019 and by Washington in October 2019 addressing the provision of these TCJA tax benefits to customers. See "Regulatory Matters-Regulatory Proceeding Updates-Tax Reform Deferral" for more information.

NGD rates in effect for Oregon through October 31, 2018 and for Washington through October 31, 2019 included an allowance to provide for the recovery of the anticipated provision for income taxes incurred as a result of providing regulated services. The provision for income taxes during these periods included an allowance for federal income taxes determined by utilizing the pre-TCJA federal corporate income tax rate of 35 percent. NW Natural recorded an additional regulatory liability in 2018 and 2019 reflecting the deferral of estimated rate benefit for customers due to the newly enacted 21 percent federal corporate income tax rate. At December 31, 2019, a regulatory liability of \$1.7 million was recorded to reflect this estimated revenue deferral. The liability has been completely amortized to customers' benefit as of December 31, 2020.

Environmental Contingencies

Environmental liabilities are accounted for in accordance with accounting standards under the loss contingency guidance when it is probable that a liability has been incurred and the amount of the loss is reasonably estimable. Amounts recorded for environmental contingencies take numerous factors into consideration, including, among other variables, changes in enacted laws, regulatory orders, estimated remediation costs, interest rates, insurance proceeds, participation by other parties, timing of payments, and the input of legal counsel and third-party experts. Accordingly, changes in any of these variables or other factual circumstances could have a material impact on the amounts recorded for our environmental liabilities. For a complete discussion of environmental accounting policies refer to Note 2. For a discussion of current environmental sites and liabilities refer to Note 18. In addition, for information regarding the regulatory treatment of these costs and NW Natural's regulatory recovery mechanism, see "Results of Operations—Regulatory Matters—Rate Mechanisms—Environmental Cost Deferral and Recovery" above.

Impairment of Long-Lived Assets and Goodwill

Long-Lived Assets

We review the carrying value of long-lived assets whenever events or changes in circumstances indicate the carrying amount of the assets might not be recoverable. Factors that would necessitate an impairment assessment of long-lived assets include a significant adverse change in the extent or manner in which the asset is used, a significant adverse change in legal factors or business climate that could affect the value of the asset, or a significant decline in the observable market value or expected future cash flows of the asset, among others.

When such factors are present, we assess the recoverability by determining whether the carrying value of the asset will be recovered through expected future cash flows. An asset is determined to be impaired when the carrying value of the asset exceeds the expected undiscounted future cash flows from the use and eventual disposition of the asset. If an impairment is indicated, we record an impairment loss for the difference between the carrying value and the fair value of the long-lived assets. Fair value is estimated using appropriate valuation methodologies, which may include an estimate of discounted cash flows.

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Goodwill and Business Combinations

In a business combination, goodwill is initially measured as any excess of the acquisition-date fair value of the consideration transferred over the acquisition-date fair value of the net identifiable assets acquired.

The carrying value of goodwill is reviewed annually during the fourth quarter using balances as of October 1, or whenever events or changes in circumstance indicate that such carrying values may not be recoverable.

NW Holdings' policy for goodwill assessments begins with a qualitative analysis in which events and circumstances are evaluated, including macroeconomic conditions, industry and market conditions, regulatory environments, and the overall financial performance of the reporting unit. If the qualitative assessment indicates that the carrying value may be at risk of recoverability, a quantitative evaluation is performed to measure the carrying value against the fair value of the reporting unit. This evaluation may involve the assessment of future cash flows and other subjective factors for which uncertainty exists and could impact the estimation of future cash flows. These factors include, but are not limited to, the amount and timing of future cash flows, future growth rates, and the discount rate. Unforeseen events and changes in circumstances or market conditions could adversely affect these estimates, which could result in an impairment charge. A qualitative assessment was performed during the fourth quarter of 2020 which indicated a quantitative assessment was not required; thus, no goodwill impairment was recorded. See Note 2 and Note 15 for additional information.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at fair value at the acquisition date, and the fair value of any non-controlling interest in the acquiree. Acquisition-related costs are expensed as incurred. When NW Natural acquires a business, it assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. When there is substantial judgment or uncertainty around the fair value of acquired assets, we may engage a third party expert to assist in determining the fair values of certain assets or liabilities.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

NW Holdings and NW Natural are exposed to various forms of market risk including commodity supply risk, commodity price risk, interest rate risk, foreign currency risk, credit risk and weather risk. The following describes NW Holdings' and NW Natural's exposure to these risks, as applicable.

Commodity Supply Risk

NW Natural enters into spot, short-term, and long-term natural gas supply contracts, along with associated pipeline transportation contracts, to manage commodity supply risk. Historically, NW Natural has arranged for physical delivery of an adequate supply of gas, including gas in Mist storage and off-system storage facilities, to meet expected requirements of core NGD customers. NW Natural's long-term gas supply contracts are primarily index-based and subject to monthly re-pricing, a strategy that is intended to substantially mitigate credit exposure to physical gas counterparties. Absolute notional amounts under physical gas contracts related to open positions on derivative instruments were 458 million therms and 513 million therms as of December 31, 2020 and 2019, respectively.

Commodity Price Risk

Natural gas commodity prices are subject to market fluctuations due to unpredictable factors including weather, pipeline transportation congestion, drilling technologies, market speculation, and other factors that affect supply and demand. Commodity price risk is managed with financial swaps and physical gas reserves from a long-term investment in working interests in gas leases operated by Jonah Energy. These financial hedge contracts and gas reserves volumes are generally included in NW Natural's annual PGA filing for recovery, subject to a regulatory prudence review. Notional amounts under financial derivative contracts were \$168.5 million and \$123.3 million as of December 31, 2020 and 2019, respectively. The fair value of financial swaps, based on market prices at December 31, 2020, was an unrealized gain of \$12.8 million, which would result in cash inflows of \$1.3 million in 2021 and \$12.5 million in 2022, and cash outflows of \$1.0 million in 2023.

Interest Rate Risk

NW Holdings and NW Natural are exposed to interest rate risk primarily associated with new debt financing needed to fund capital requirements, including future contractual obligations and maturities of long-term and short-term debt. Interest rate risk is primarily managed through the issuance of fixed-rate debt with varying maturities. NW Holdings and NW Natural may also enter into financial derivative instruments, including interest rate swaps, options and other hedging instruments, to manage and mitigate interest rate exposure. NW Holdings and NW Natural did not have any interest rate swaps outstanding as of December 31, 2020 or 2019.

Foreign Currency Risk

The costs of certain pipeline and off-system storage services purchased from Canadian suppliers are subject to changes in the value of the Canadian currency in relation to the U.S. currency. Foreign currency forward contracts are used to hedge against fluctuations in exchange rates for NW Natural's commodity-related demand and reservation charges paid in Canadian dollars. Notional amounts under foreign currency forward contracts were \$5.9 million and \$6.7 million as of December 31, 2020 and 2019, respectively. If all of the foreign currency forward contracts had been settled on December 31, 2020, a gain of \$0.3 million would have been realized. See Note 16.

Credit Risk

Credit Exposure to Natural Gas Suppliers

Certain gas suppliers have either relatively low credit ratings or are not rated by major credit rating agencies. To manage this supply risk, NW Natural purchases gas from a number of different suppliers at liquid exchange points. NW Natural evaluates and monitors suppliers' creditworthiness and maintains the ability to require additional financial assurances, including deposits, letters of credit, or surety bonds, in case a supplier defaults. In the event of a supplier's failure to deliver contracted volumes of gas, the NGD business would need to replace those volumes at prevailing market prices, which may be higher or lower than the original transaction prices. NW Natural expects these costs would be subject to its PGA sharing mechanism discussed above. Since most of NW Natural's commodity supply contracts are priced at the daily or monthly market index price tied to liquid exchange points, and NW Natural has adequate storage flexibility, NW Natural believes it is unlikely a supplier default would have a material adverse effect on its financial condition or results of operations.

Credit Exposure to Financial Derivative Counterparties

Based on estimated fair value at December 31, 2020, NW Natural's overall credit exposure relating to commodity contracts is considered immaterial as it reflects amounts owed to financial derivative counterparties (see table below). However, changes in natural gas prices could result in counterparties owing NW Natural money. Therefore, NW Natural's financial derivatives policy requires counterparties to have at least an investment-grade credit rating at the time the derivative instrument is entered into and specific limits on the contract amount and duration based on each counterparty's credit rating. NW Natural actively monitors and manages derivative credit exposure and places counterparties on hold for trading purposes or requires cash collateral, letters of credit, or guarantees as circumstances warrant.

The following table summarizes NW Natural's overall financial swap and option credit exposure, based on estimated fair value, and the corresponding counterparty credit ratings. The table uses credit ratings from S&P and Moody's, reflecting the higher of the S&P or Moody's rating or a middle rating if the entity is split-rated with more than one rating level difference:

	Financial Deri Unrealiz	Financial Derivative Position by Credit Rating Unrealized Fair Value Gain (Loss)						
In millions	2020		2019					
AA/Aa	\$	11.2 \$	4.0					
A/A		1.6	1.6					
Total	\$	12.8 \$	5.6					

In most cases, NW Natural also mitigates the credit risk of financial derivatives by having master netting arrangements with counterparties which provide for making or receiving net cash settlements. Generally, transactions of the same type in the same currency that have settlement on the same day with a single counterparty are netted and a single payment is delivered or received depending on which party is due funds.

Additionally, NW Natural has master contracts in place with each derivative counterparty, most of which include provisions for posting or calling for collateral. Generally, NW Natural can obtain cash or marketable securities as collateral with one day's notice. Various collateral management strategies are used to reduce liquidity risk. The collateral provisions vary by counterparty but are not expected to result in the significant posting of collateral, if any. NW Natural has performed stress tests on the portfolio and concluded the liquidity risk from collateral calls is not material. Derivative credit exposure is primarily with investment grade counterparties rated AA-/Aa3 or higher. Contracts are diversified across counterparties, business types and countries to reduce credit and liquidity risk.

At December 31, 2020, financial derivative credit risk on a volumetric basis was geographically concentrated 43% in the United States and 57% in Canada, based on counterparties' location. At December 31, 2019, financial derivative credit risk on a volumetric basis was geographically concentrated 38% in the United States and 62% in Canada with our counterparties.

Credit Exposure to Insurance Companies

Credit exposure to insurance companies for loss or damage claims could be material. NW Holdings and NW Natural regularly monitor the financial condition of insurance companies who provide general liability insurance policy coverage to NW Holdings, NW Natural, their predecessors, and their subsidiaries.

Weather Risk

NW Natural has a weather normalization mechanism in Oregon; however, it is exposed to weather risk primarily from NGD business operations. A large percentage of NGD margin is volume driven, and current rates are based on an assumption of average weather. NW Natural's weather normalization mechanism in Oregon is for residential and commercial customers, which is intended to stabilize the recovery of NGD business fixed costs and reduce fluctuations in customers' bills due to colder or warmer than average weather. Customers in Oregon are allowed to opt out of the weather normalization mechanism. As of December 31, 2020, approximately 8% of Oregon customers had opted out. In addition to the Oregon customers opting out, Washington residential and commercial customers account for approximately 12% of our total customer base and are not covered by weather normalization. The combination of Oregon and Washington customers not covered by a weather normalization mechanism is 18% of all residential and commercial customers. See "Results of Operations—Regulatory Matters—Rate Mechanisms—WARM" above.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Supplemental Schedules Omitted

All other schedules are omitted because of the absence of the conditions under which they are required or because the required information is included elsewhere in the financial statements.

NW HOLDINGS MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

NW Holdings management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, as amended. NW Holdings' internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). NW Holdings' internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions involving company assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of financial statements in accordance with U.S. GAAP, and that receipts and expenditures are being made only in accordance with authorizations of management and the NW Holdings Board of Directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of the unauthorized acquisition, use, or disposition of NW Holdings' assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements or fraud. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

NW Holdings management assessed the effectiveness of NW Holdings' internal control over financial reporting as of December 31, 2020. In making this assessment, NW Holdings management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013).

financial reporting as of December 31, 2020.

The effectiveness of internal control over financial reporting as of December 31, 2020 has been audited by PricewaterhouseCoopers LLP, an independent

Based on NW Holdings management's assessment and those criteria, NW Holdings management has concluded that it maintained effective internal control over

The effectiveness of internal control over financial reporting as of December 31, 2020 has been audited by PricewaternouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears in this annual report.

/s/ David H. Anderson

David H. Anderson

President and Chief Executive Officer

<u>/s/ Frank H, Burkhartsmeyer</u>
Frank H. Burkhartsmeyer
Senior Vice President and Chief Financial Officer

February 26, 2021

NW NATURAL MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

NW Natural management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934, as amended. NW Natural's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). NW Natural's internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions involving company assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of financial statements in accordance with U.S. GAAP, and that receipts and expenditures are being made only in accordance with authorizations of management and the NW Natural Board of Directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of the unauthorized acquisition, use, or disposition of NW Natural's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements or fraud. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

NW Natural management assessed the effectiveness of NW Natural's internal control over financial reporting as of December 31, 2020. In making this assessment, NW Natural management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework (2013)*.

Based on NW Natural management's assessment and those criteria, NW Natural management has concluded that it maintained effective internal control over financial reporting as of December 31, 2020.

/s/ David H. Anderson

David H. Anderson

President and Chief Executive Officer

/s/ Frank H. Burkhartsmeyer
Frank H. Burkhartsmeyer
Senior Vice President and Chief Financial Officer

February 26, 2021

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Northwest Natural Holding Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Northwest Natural Holding Company and its subsidiaries (the "Company") as of December 31, 2020 and 2019, and the related consolidated statements of comprehensive income (loss), shareholders' equity and cash flows for each of the three years in the period ended December 31, 2020, including the related notes and financial statement schedules listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the Effects of Regulatory Matters

As described in Note 2 to the consolidated financial statements, there were \$380.7 million of regulatory assets and \$690.0 million of regulatory liabilities as of December 31, 2020. As disclosed by management, the Company has operations that are subject to the actions of regulators which establish rates in general rate cases and other proceedings which are designed to recover specific costs of providing regulatory services for which management records regulatory assets and liabilities. Regulatory accounting requires management to account for deferred expenses (or deferred revenues) as regulatory assets (or regulatory liabilities) on the balance sheet. When the recovery of these regulatory assets from, or refund of regulatory liabilities to, customers is approved, management recognizes the expense or revenue on the income statement at the same time the adjustment to amounts is included in rates charged to customers.

The principal considerations for our determination that performing procedures relating to the Company's accounting for the effects of regulatory matters is a critical audit matter are the significant judgment by management in assessing the potential outcomes and related accounting impacts of rate cases and other proceedings. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence obtained related to the recovery of regulatory assets and the settlement of regulatory liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's assessment of rate cases and other proceedings, including the probability of recovery of regulatory assets and the settlement of regulatory liabilities and related accounting and disclosure impacts. These procedures also included, among others (i) evaluating the reasonableness of management's assessment regarding the probability of recovery of regulatory assets and settlement of regulatory liabilities, (ii) evaluating the sufficiency of the disclosures in the consolidated financial statements, and (iii) testing the regulatory assets and liabilities, including those subject to regulatory proceedings, also involved considering the provisions and formulas outlined in rate orders, other regulatory correspondence, and the application of relevant regulatory precedents.

/s/ PricewaterhouseCoopers LLP
Portland, Oregon
February 26, 2021
We have served as the Company's auditor since 1997.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholder of Northwest Natural Gas Company:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Northwest Natural Gas Company and its subsidiaries (the "Company") as of December 31, 2020 and 2019, and the related consolidated statements of comprehensive income (loss), shareholder's equity and cash flows for each of the three years in the period ended December 31, 2020, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for the Effects of Regulatory Matters

As described in Note 2 to the consolidated financial statements, there were \$380.6 million of regulatory assets and \$689.2 million of regulatory liabilities as of December 31, 2020. As disclosed by management, the Company has operations that are subject to the actions of regulators which establish rates in general rate cases and other proceedings which are designed to recover specific costs of providing regulatory services for which management records regulatory assets and liabilities. Regulatory accounting requires management to account for deferred expenses (or deferred revenues) as regulatory assets (or regulatory liabilities) on the balance sheet. When the recovery of these regulatory assets from, or refund of regulatory liabilities to, customers is approved, management recognizes the expense or revenue on the income statement at the same time the adjustment to amounts is included in rates charged to customers.

The principal considerations for our determination that performing procedures relating to the Company's accounting for the effects of regulatory matters is a critical audit matter are the significant judgment by management in assessing the potential outcomes and related accounting impacts of rate cases and other proceedings. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence obtained related to the recovery of regulatory assets and the settlement of regulatory liabilities.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's assessment of rate cases and other proceedings, including the probability of recovery of regulatory assets and the settlement of regulatory liabilities and related accounting and disclosure impacts. These procedures also included, among others (i) evaluating the reasonableness of management's assessment regarding the probability of recovery of regulatory assets

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and settlement of regulatory liabilities, (ii) evaluating the sufficiency of the disclosures in the consolidated financial statements, and (iii) testing the regulatory assets and liabilities, including those subject to regulatory proceedings, also involved considering the provisions and formulas outlined in rate orders, other regulatory correspondence, and the application of relevant regulatory precedents.
/s/ PricewaterhouseCoopers LLP Portland, Oregon February 26, 2021
We have served as the Company's auditor since 1997.
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CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

		Year Ended December 31,			,	
In thousands, except per share data		2020		2019		2018
Operating revenues	\$	773,679	\$	746,372	\$	706,143
Operating expenses:						
Cost of gas		262,755		254,911		255,519
Operations and maintenance		180,129		178,191		156,698
Environmental remediation		9,691		12,337		11,127
General taxes		35,078		32,388		32,172
Revenue taxes		30,291		30,325		30,082
Depreciation and amortization		103,683		91,496		85,156
Other operating expenses		3,701		3,250		3,227
Total operating expenses		625,328		602,898		573,981
Income from operations		148,351		143,474		132,162
Other income (expense), net		(13,944)		(22,836)		(3,601)
Interest expense, net		43,052		42,685		37,059
Income before income taxes	1135	91,355		77,953	2724	91,502
Income tax expense		21,082		12,642		24,191
Net income from continuing operations		70,273	12,000	65,311	1	67,311
Income (loss) from discontinued operations, net of tax		6,508		(3,576)		(2,742)
Net income		76,781	1	61,735		64,569
Other comprehensive income (loss):						
Change in employee benefit plan liability, net of taxes of \$1,025 for 2020, \$956 for 2019, and \$(166) for 2018		(2,848)		(2,655)		476
Amortization of non-qualified employee benefit plan liability, net of taxes of \$(244) for 2020, \$(172) for 2019, and \$(278) for 2018		679		476		774
Comprehensive income	\$	74,612	\$	59,556	\$	65,819
Average common shares outstanding:						
Basic		30,541		29,786		28,803
Diluted		30,599		29,859		28,873
Earnings from continuing operations per share of common stock:						
Basic	\$	2.30	\$	2.19	\$	2.34
Diluted	1	2.30		2.19		2.33
Earnings (loss) from discontinued operations per share of common stock:						
Basic	\$	0.21	\$	(0.12)	\$	(0.10)
Diluted		0.21		(0.12)		(0.09)
Earnings per share of common stock:						
Basic	\$	2.51	\$	2.07	\$	2.24
Diluted	ESSI	2.51	Right	2.07	Time I	2.24

CONSOLIDATED BALANCE SHEETS

	As of	Decembe	er 31,
In thousands	2020		2019
Assets:			
Current assets:			
Cash and cash equivalents	\$ 30,1	68 \$	9,648
Accounts receivable	88,0	83	67,137
Accrued unbilled revenue	57,9	49	56,192
Allowance for uncollectible accounts	(3,2	19)	(673
Regulatory assets	31,7	45	41,929
Derivative instruments	13,6	78	6,802
Inventories	42,6	91	43,985
Gas reserves	11,4	09	15,278
Income taxes receivable	6,0	00	256
Other current assets	44,7	41	38,004
Discontinued operations - current assets		_	15,134
Total current assets	323,2	45	293,692
Non-current assets:			
Property, plant, and equipment	3,734,0	39	3,476,746
Less: Accumulated depreciation	1,079,2	69	1,037,847
Total property, plant, and equipment, net	2,654,7	70	2,438,899
Gas reserves	34,4	84	48,394
Regulatory assets	348,9	27	343,146
Derivative instruments	6,1	35	3,337
Other investments	49,2	59	63,333
Operating lease right of use asset	77,4	46	2,950
Assets under sales-type leases	143,7	59	146,310
Goodwill	69,2	25	49,929
Other non-current assets	49,1	29	38,464
Total non-current assets	3,433,1	34	3,134,762
Total assets	\$ 3,756,3	79 \$	3,428,454

CONSOLIDATED BALANCE SHEETS

	As of De	cember 31,
In thousands	2020	2019
Liabilities and equity:		
Current liabilities:		
Short-term debt	\$ 304,525	\$ 149,100
Current maturities of long-term debt	95,344	75,109
Accounts payable	97,966	113,370
Taxes accrued	13,812	11,971
Interest accrued	7,441	7,451
Regulatory liabilities	50,362	44,657
Derivative instruments	4,198	2,000
Operating lease liabilities	1,105	2,101
Other current liabilities	52,330	62,705
Discontinued operations - current liabilities		13,709
Total current liabilities	627,083	482,173
Long-term debt	860,081	805,955
Deferred credits and other non-current liabilities:		
Deferred tax liabilities	319,292	295,643
Regulatory liabilities	639,663	625,717
Pension and other postretirement benefit liabilities	217,287	228,129
Derivative instruments	2,852	609
Operating lease liabilities	80,621	841
Other non-current liabilities	120,767	123,388
Total deferred credits and other non-current liabilities	1,380,482	1,274,327
Commitments and contingencies (see Note 17 and Note 18)		
Equity:		
Common stock - no par value; authorized 100,000 shares; issued and outstanding 30,589 and 30,472 at December 31, 2020 and 2019, respectively	565,112	558,282
Retained earnings	336,523	318,450
Accumulated other comprehensive loss	(12,902)	(10,733)
Total equity	888,733	865,999
Total liabilities and equity	\$ 3,756,379	\$ 3,428,454

NORTHWEST NATURAL HOLDING COMPANY

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

In thousands	Commor	Stock	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Equity
Balance at December 31, 2017	\$ 44	18,865	\$ 302,349	\$ (8,438)	\$ 742,776
Comprehensive income		_	64,569	1,250	65,819
Dividends on common stock, \$1.89 per share		_	(54,736)		(54,736)
Stock-based compensation		3,020	_		3,020
Shares issued pursuant to equity based plans		5,175			5,175
Cash purchase of shares for business combination		(7,945)	_	_	(7,945)
Value of shares transferred for business combination		8,525	<u> </u>	<u> </u>	8,525
Balance at December 31, 2018	45	7,640	312,182	(7,188)	762,634
Comprehensive income (loss)		_	61,735	(2,179)	59,556
Dividends on common stock, \$1.90 per share		_	(56,833)	_	(56,833)
Stock-based compensation		2,601		_	2,601
Shares issued pursuant to equity based plans		5,085	_	_	5,085
Issuance of common stock, net of issuance costs	9	2,956		_	92,956
Reclassification of tax effects from the TCJA		_	1,366	(1,366)	_
Balance at December 31, 2019	55	58,282	318,450	(10,733)	865,999
Comprehensive income (loss)		_	76,781	(2,169)	74,612
Dividends on common stock, \$1.91 per share		_	(58,708)		(58,708)
Stock-based compensation		4,361		_	4,361
Shares issued pursuant to equity based plans		2,469	_	_	2,469
Balance at December 31, 2020	\$ 56	55,112	\$ 336,523	\$ (12,902)	\$ 888,733

CONSOLIDATED STATEMENTS OF CASH FLOWS

		Year Ended December 31,		
In thousands	202	0	2019	2018
Operating activities:				
Net income	\$ 76	,781	\$ 61,735	\$ 64,569
Adjustments to reconcile net income to cash provided by operations:				
Depreciation and amortization	103	,683	91,496	85,156
Regulatory amortization of gas reserves	17	,779	19,172	16,684
Deferred income taxes	18	,667	6,317	14,356
Qualified defined benefit pension plan expense	18	,370	16,497	8,108
Contributions to qualified defined benefit pension plans	(28	,980)	(10,970)	(15,540)
Deferred environmental expenditures, net	(27	,871)	(16,226)	(14,528
Environmental remediation expense	9	,691	12,337	11,127
Regulatory revenue deferral from the TCJA		_	853	7,929
Regulatory disallowance of pension costs		_	10,500	_
Gain on sale of discontinued operations, net of tax	(5	,902)	_	
Other	(6	,942)	13,907	1,596
Changes in assets and liabilities:				
Receivables, net	(16	,799)	5,844	181
Inventories	1	,262	(5,969)	3,207
Income and other taxes	(10	,710)	4,528	(16,904
Accounts payable	(15	,910)	(16,485)	16,792
Deferred gas costs	17	,590	(23,471)	(14,395
Decoupling mechanism	2	,884	18,661	4,497
Other, net	(12	,467)	(4,140)	(3,419
Discontinued operations	1	,894	712	(645
Cash provided by operating activities	143	,020	185,298	168,771
Investing activities:				
Capital expenditures	(273	,016)	(223,471)	(214,636
Acquisitions, net of cash acquired	•	,263)	(56,786)	(873
Leasehold improvement expenditures	THE REPORT OF THE PARTY OF THE	,878)	(18,812)	(4,415
Proceeds from the sale of assets		,149	659	477
Proceeds from sale of equity method investment	AND THE RESIDENCE OF THE PARTY	.000		
Proceeds from sale of discontinued operations	12	,500		_
Other		,654	(3,544)	1,421
Discontinued operations		,423)	(1,827)	573
Cash used in investing activities	A PORT OF THE SAME OF THE PROPERTY OF THE PARTY OF THE PA	,277)	(303,781)	(217,453

	Year	Year Ended December 31,		
	2020	2019	2018	
Financing activities:				
Proceeds from stock options exercised	68	2,015	1,546	
Proceeds from common stock issued	_	92,956	_	
Long-term debt issued	150,000	175,000	50,000	
Long-term debt retired	(75,000)	(30,000)	(97,000	
Proceeds from term loan due within one year	150,000			
Repayment of term loan	(150,000)	_	_	
Proceeds from issuances of commercial paper, maturities greater than 90 days	195,025	<u>-</u>		
Changes in other short-term debt, net	(39,600)	(68,520)	163,274	
Cash dividend payments on common stock	(55,420)	(53,339)	(51,311	
Stock purchases related to acquisitions	_		(7,951	
Other	(3,296)	(2,614)	(715	
Cash provided by financing activities	171,777	115,498	57,843	
Increase (decrease) in cash and cash equivalents	20,520	(2,985)	9,161	
Cash and cash equivalents, beginning of period	9,648	12,633	3,472	
Cash and cash equivalents, end of period	\$ 30,168	\$ 9,648	\$ 12,633	
Supplemental disclosure of cash flow information:				
Interest paid, net of capitalization	\$ 42,651	\$ 41,231	\$ 35,324	
Income taxes paid (refunded)	13,644	(96)	27,370	

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31,			,		
In thousands		2020		2019		2018
Operating revenues	\$	758,748	\$	739,944	\$	705,571
Operating expenses:						
Cost of gas		262,980		255,135		255,743
Operations and maintenance		168,869		169,091		155,225
Environmental remediation		9,691		12,337		11,127
General taxes		34,459		32,075		32,086
Revenue taxes		30,291		30,325		30,082
Depreciation and amortization		101,586		90,405		84,986
Other operating expenses		3,232		3,230		3,223
Total operating expenses		611,108		592,598		572,472
Income from operations		147,640		147,346		133,099
Other income (expense), net		(15,116)		(22,968)		(3,599)
Interest expense, net		40,866		41,339		36,992
Income before income taxes		91,658		83,039		92,508
Income tax expense		21,095		14,065		24,459
Net income from continuing operations		70,563		68,974		68,049
Loss from discontinued operations, net of tax		_				(1,723)
Net income		70,563	HIME	68,974		66,326
Other comprehensive income (loss):						
Change in employee benefit plan liability, net of taxes of \$1,025 for 2020, \$956 for 2019, and \$(166) for 2018		(2,848)		(2,655)		476
Amortization of non-qualified employee benefit plan liability, net of taxes of \$(244) for 2020, \$(172) for 2019, and \$(278) for 2018		679		476		774
Comprehensive income	\$	68,394	\$	66,795	\$	67,576

See Notes to Consolidated Financial Statements

CONSOLIDATED BALANCE SHEETS

	As of	Decemb	ember 31,		
In thousands	2020		2019		
Assets:					
Current assets:					
Cash and cash equivalents	\$ 10,4	53 \$	5,919		
Accounts receivable	80,0	35	66,823		
Accrued unbilled revenue	57,8	90	56,139		
Receivables from affiliates	6	60	787		
Allowance for uncollectible accounts	(3,1)	(7)	(672)		
Regulatory assets	31,7	15	41,929		
Derivative instruments	13,6	78	6,802		
Inventories	42,3	25	43,896		
Gas reserves	11,4)9	15,278		
Other current assets	37,9)9	33,258		
Total current assets	282,9	7	270,159		
Non-current assets:					
Property, plant, and equipment	3,683,7	76	3,456,075		
Less: Accumulated depreciation	1,075,4	16	1,036,593		
Total property, plant, and equipment, net	2,608,3	30	2,419,482		
Gas reserves	34,4	34	48,394		
Regulatory assets	348,8	37	343,146		
Derivative instruments	6,1	35	3,337		
Other investments	49,2	12	49,837		
Operating lease right of use asset	77,3	28	2,760		
Assets under sales-type leases	143,7	59	146,310		
Other non-current assets	48,1	74	38,062		
Total non-current assets	3,316,3	39	3,051,328		
Total assets	\$ 3,599,3	36 \$	3,321,487		

See Notes to Consolidated Financial Statements

CONSOLIDATED BALANCE SHEETS

	As of December 31,			
In thousands	2020	2019		
Liabilities and equity:				
Current liabilities:				
Short-term debt	\$ 231,525	\$ 125,100		
Current maturities of long-term debt	59,955	74,907		
Accounts payable	95,170	111,641		
Payables to affiliates	13,820	1,546		
Taxes accrued	13,724	11,717		
Interest accrued	7,338	7,441		
Regulatory liabilities	50,362	44,657		
Derivative instruments	4,198	2,000		
Operating lease liabilities	1,054	1,979		
Other current liabilities	51,907	61,438		
Total current liabilities	529,053	442,426		
Long-term debt	857,265	769,081		
Deferred credits and other non-current liabilities:				
Deferred tax liabilities	318,034	309,297		
Regulatory liabilities	638,793	625,717		
Pension and other postretirement benefit liabilities	217,287	228,129		
Derivative instruments	2,852	609		
Operating lease liabilities	80,559	772		
Other non-current liabilities	120,309	123,260		
Total deferred credits and other non-current liabilities	1,377,834	1,287,784		
Commitments and contingencies (see Note 17 and Note 18)				
Equity:				
Common stock	319,506	319,557		
Retained earnings	528,580	513,372		
Accumulated other comprehensive loss	(12,902)	(10,733)		
Total equity	835,184	822,196		
Total liabilities and equity	\$ 3,599,336	\$ 3,321,487		

See Notes to Consolidated Financial Statements

CONSOLIDATED STATEMENTS OF SHAREHOLDER'S EQUITY

			Accumulated Other Comprehensive	Total	
In thousands	Common Stock	Retained Earnings	Income (Loss)	Equity	
Balance at December 31, 2017	\$ 448,865	\$ 302,349	\$ (8,438)	\$ 742,776	
Comprehensive income	_	66,326	1,250	67,576	
Dividends on common stock		(41,035)		(41,035)	
Stock-based compensation ⁽¹⁾	2,161	_	_	2,161	
Shares issued pursuant to equity based plans	3,075		_	3,075	
Transfer of investments to NW Holdings as of October 1, 2018	(227,649)	168,764	_	(58,885)	
Balance at December 31, 2018	226,452	496,404	(7,188)	715,668	
Comprehensive income (loss)	_	68,974	(2,179)	66,795	
Dividends on common stock		(53,372)		(53,372)	
Capital contribution from parent	93,105	_	_	93,105	
Reclassification of tax effects from the TCJA		1,366	(1,366)		
Balance at December 31, 2019	319,557	513,372	(10,733)	822,196	
Comprehensive income (loss)		70,563	(2,169)	68,394	
Dividends on common stock	_	(55,355)	_	(55,355)	
Other	(51)	_	_	(51)	
Balance at December 31, 2020	\$ 319,506	\$ 528,580	\$ (12,902)	\$ 835,184	

⁽¹⁾ Stock-based compensation is based on stock awards of NW Natural to be issued in shares of NW Holdings.

CONSOLIDATED STATEMENTS OF CASH FLOWS

		Year Ended December 3				
In thousands		2020		2019		2018
Operating activities:					and the last	
Net income	\$	70,563	\$	68,974	\$	66,326
Adjustments to reconcile net income to cash provided by operations:						
Depreciation and amortization		101,586		90,405		84,986
Regulatory amortization of gas reserves		17,779		19,172		16,684
Deferred income taxes		4,645		4,046		12,330
Qualified defined benefit pension plan expense		18,370		16,497		8,108
Contributions to qualified defined benefit pension plans		(28,980)		(10,970)		(15,540
Deferred environmental expenditures, net		(27,871)		(16,226)		(14,528
Environmental remediation expense		9,691		12,337		11,127
Regulatory revenue deferral from the TCJA		_		853		7,929
Regulatory disallowance of pension costs		_		10,500		
Other		(7,025)		12,317		883
Changes in assets and liabilities:						
Receivables, net		(16,540)		9,264		(3,920
Inventories		1,539		(5,990)		3,212
Income and other taxes		10,832		496		(7,854
Accounts payable		(18,909)		(18,548)		13,937
Deferred gas costs		17,590		(23,471)		(14,395
Decoupling mechanism		2,884		18,661		4,497
Other, net		(9,935)		(2,141)		(3,458
Discontinued operations		_		_		3,184
Cash provided by operating activities		146,219		186,176		173,508
Investing activities:			1			
Capital expenditures		(266,048)		(221,380)		(214,328
Leasehold improvement expenditures		(7,878)		(18,812)		(4,415
Proceeds from the sale of assets		8,149		659		47
Other		1,654		(3,544)		42
Discontinued operations	_	_		_		(20,617
Cash used in investing activities		(264,123)		(243,077)		(238,462
Financing activities:						
Proceeds from stock options exercised		_		_		1,368
Long-term debt issued		150,000		140,000		50,00
Long-term debt retired		(75,000)		(30,000)		(97,000
Proceeds from term loan due within one year		150,000		_		_
Repayment of term loan		(150,000)		_		
Proceeds from issuances of commercial paper, maturities greater than 90 days		195,025				_
Changes in other short-term debt, net		(88,600)		(92,400)		163,30
Cash contributions received from parent		_		93,155		_
Cash dividend payments on common stock		(55,355)		(53,372)		(38,38
Other		(3,632)		(2,510)		(1,53
Discontinued operations						(7,95
Cash provided by financing activities		122,438		54,873		69,79
Increase (decrease) in cash and cash equivalents		4,534		(2,028)		4,83
Cash and cash equivalents, beginning of period		5,919		7,947		3,11
Cash and cash equivalents, end of period	•	10,453	\$	5,919	\$	7.94
Supplemental disclosure of cash flow information:	<u> </u>	10.400		0.010		1,07
Interest paid, net of capitalization	S	40,624	\$	39,927	\$	35,30
Income taxes paid (refunded)		6,100	Ψ	2,479	Ψ	27,35

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND PRINCIPLES OF CONSOLIDATION

On October 1, 2018, we completed a reorganization into a holding company structure. In this reorganization, shareholders of NW Natural (the predecessor publicly held parent company) became shareholders of NW Holdings on a one-for-one basis; maintaining the same number of shares and ownership percentage as held in NW Natural immediately prior to the reorganization. NW Natural became a wholly-owned subsidiary of NW Holdings. Additionally, certain subsidiaries of NW Natural were transferred to NW Holdings. This reorganization was accounted for as a transaction among entities under common control. As required under accounting guidance, these subsidiaries are presented in this report as discontinued operations in the consolidated results of NW Natural. See Note 19 for additional information.

The accompanying consolidated financial statements represent the respective, consolidated financial results of NW Holdings and NW Natural and all respective companies that each registrant directly or indirectly controls, either through majority ownership or otherwise. This is a combined report of NW Holdings and NW Natural, which includes separate consolidated financial statements for each registrant.

NW Natural's regulated natural gas distribution activities are reported in the natural gas distribution (NGD) segment. The NGD segment is NW Natural's core operating business and serves residential, commercial, and industrial customers in Oregon and southwest Washington. The NGD segment is the only reportable segment for NW Holdings and NW Natural. All other activities, water businesses, and other investments are aggregated and reported as other at their respective registrant.

NW Holdings and NW Natural consolidate all entities in which they have a controlling financial interest. Investments in corporate joint ventures and partnerships that NW Holdings does not directly or indirectly control, and for which it is not the primary beneficiary, include NNG Financial's investment in Kelso-Beaver Pipeline, which is accounted for under the equity method, and NWN Energy's investment in Trail West Holdings, LLC (TWH), which was accounted for under the equity method through August 6, 2020 when it was sold to a third party. See Note 14 for activity related to TWH. NW Holdings and its direct and indirect subsidiaries are collectively referred to herein as NW Natural and its direct and indirect subsidiaries are collectively referred to herein as NW Natural. The consolidated financial statements of NW Holdings and NW Natural are presented after elimination of all intercompany balances and transactions.

In June 2018, NWN Gas Storage, a wholly-owned subsidiary of NW Natural at the time and now a wholly-owned subsidiary of NW Holdings, entered into a Purchase and Sale Agreement that provided for the sale of all of the membership interests in its wholly-owned subsidiary, Gill Ranch Storage, LLC (Gill Ranch). We concluded that the sale of Gill Ranch qualified as assets and liabilities held for sale and discontinued operations. As such, the results of Gill Ranch were presented as a discontinued operation for NW Holdings for all periods presented and for NW Natural up until the holding company reorganization was effective on October 1, 2018 on the consolidated statements of comprehensive income and cash flows, and the assets and liabilities associated with Gill Ranch were classified as discontinued operations assets and liabilities on the NW Holdings consolidated balance sheet. See Note 19 for additional information. Additionally, we reevaluated reportable segments and concluded that the remaining gas storage activities no longer met the requirements to be separately reported as a segment. Interstate Storage Services is reported in Other under NW Natural and NW Holdings as applicable, and all prior periods reflect this change. See Note 4, which provides segment information.

Notes to the consolidated financial statements reflect the activity of continuing operations for both NW Holdings and NW Natural for all periods presented, unless otherwise noted. Certain reclassifications have been made to conform prior period information to the current presentation. The reclassifications did not have a material effect on our consolidated financial statements.

2. SIGNIFICANT ACCOUNTING POLICIES

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect reported amounts in the consolidated financial statements and accompanying notes. Actual amounts could differ from those estimates, and changes would most likely be reported in future periods. Management believes the estimates and assumptions used are reasonable.

Industry Regulation

NW Holdings' principal business is to operate as a holding company for NW Natural and its other subsidiaries.

NW Natural's principal business is the distribution of natural gas, which is regulated by the OPUC and WUTC. NW Natural also has natural gas storage services, which are regulated by the FERC, and to a certain extent by the OPUC and WUTC. Additionally, certain of NW Holdings' subsidiaries own water businesses, which are regulated by the public utility commission in the state in which the water utility is located, which is currently Oregon, Washington, Idaho and Texas. Accounting records and practices of the regulated businesses conform to the requirements and uniform system of accounts prescribed by these regulatory authorities in accordance with U.S. GAAP. The businesses in which customer rates are regulated by the OPUC, WUTC, IPUC, PUTC, and FERC have approved cost-based rates which are intended to allow such businesses to earn a reasonable return on invested capital.

In applying regulatory accounting principles, NW Holdings and NW Natural capitalize or defer certain costs and revenues as regulatory assets and liabilities pursuant to orders of the applicable state public utility commission, which provide for the recovery of revenues or expenses from, or refunds to, utility customers in future periods, including a return or a carrying charge in certain cases.

Amounts NW Natural deferred as regulatory assets and liabilities were as follows:

	Regul	Regulatory Assets				
In thousands	2020		2019			
Current:						
Unrealized loss on derivatives(1)	\$ 4,19	8 \$	2,000			
Gas costs	1,97	9	20,140			
Environmental costs ⁽²⁾	4,99	2	4,762			
Decoupling ⁽³⁾	36	1	1,969			
Pension balancing ⁽⁴⁾	7,13	1	5,939			
Income taxes	3,48	4	2,209			
Other ⁽⁵⁾	9,60	0	4,910			
Total current	\$ 31,74	5 \$	41,929			
Non-current:						
Unrealized loss on derivatives(1)	\$ 2,85	2 \$	609			
Pension balancing ⁽⁴⁾	43,38	3	48,251			
Income taxes	15,36	8	17,173			
Pension and other postretirement benefit liabilities	170,81	2	173,262			
Environmental costs ⁽²⁾	90,62	3	87,624			
Gas costs	3,92	5	2,866			
Decoupling ⁽³⁾	1,03	1	_			
Other(5)	20,89	3	13,361			
Total non-current	\$ 348,88	7 \$	343,146			
Other (NW Holdings)		0	_			
Total non-current -NW Holdings	\$ 348,92	7 \$	343,146			

	Regula	Regulatory Liabilities			
in thousands	2020		2019		
Current:					
Gas costs	\$ 1,11	8 \$	1,223		
Unrealized gain on derivatives ⁽¹⁾	13,67	4	6,622		
Decoupling ⁽³⁾	11,79	3	4,831		
Income taxes (6)	8,21	7	8,435		
Other ⁽⁵⁾	15,56	0	23,546		
Total current	50,36	2	44,657		
Non-current:					
Gas costs	\$ 31	4 \$	2,013		
Unrealized gain on derivatives ⁽¹⁾	6,13	5	3,337		
Decoupling (3)	1,72	3	6,378		
Income taxes (6)	189,58	7	198,219		
Accrued asset removal costs ⁽⁷⁾	427,96	0	401,893		
Other ⁽⁵⁾	13,07	4	13,877		
Total non-current	\$ 638,79	3 \$	625,717		
Other (NW Holdings)	87	0			
Total non-current -NW Holdings	\$ 639,66	3 \$	625,717		

- Unrealized gains or losses on derivatives are non-cash items and, therefore, do not earn a rate of return or a carrying charge. These amounts are recoverable through natural gas distribution rates as part of the annual Purchased Gas Adjustment (PGA) mechanism when realized at settlement.
- Refer to the Environmental Cost Deferral and Recovery table in Note 18 for a description of environmental costs.
- This deferral represents the margin adjustment resulting from differences between actual and expected volumes.
- Refer to Note 10 for information regarding the deferral of pension expenses.
- Balances consist of deferrals and amortizations under approved regulatory mechanisms and typically earn a rate of return or carrying charge.
- This balance represents estimated amounts associated with the Tax Cuts and Jobs Act. See Note 11.
- Estimated costs of removal on certain regulated properties are collected through rates. See "Accounting Policies—Plant, Property, and Accrued Asset Removal Costs"

The amortization period for NW Natural's regulatory assets and liabilities ranges from less than one year to an indeterminable period. Regulatory deferrals for gas costs payable are generally amortized over 12 months beginning each November 1 following the gas contract year during which the deferred gas costs are recorded. Similarly, most other regulatory deferred accounts are amortized over 12 months. However, certain regulatory account balances, such as income taxes, environmental costs, pension liabilities, and accrued asset removal costs, are large and tend to be amortized over longer periods once NW Natural has agreed upon an amortization period with the respective regulatory agency.

We believe all costs incurred and deferred at December 31, 2020 are prudent. All regulatory assets and liabilities are reviewed annually for recoverability, or more often if circumstances warrant. If we should determine that all or a portion of these regulatory assets or liabilities no longer meet the criteria for continued application of regulatory accounting, then NW Natural would be required to write-off the net unrecoverable balances in the period such determination is made.

Regulatory interest income of \$4.8 million and \$19.6 million and regulatory interest expense of \$1.8 million and \$12.3 million was recognized within other income (expense), net for the years ended December 31, 2020 and 2019, respectively.

Environmental Regulatory Accounting.
See Note 18 for information about the SRRM and OPUC orders regarding implementation.

COVID-19 Impact

During 2020, our regulated utilities received approval in their respective jurisdictions to defer certain financial impacts associated with COVID-19 such as bad debt expense, financing costs to secure liquidity, lost revenues related to late fees and reconnection fees, and other COVID-19 related costs, net of offsetting direct expense reductions associated with COVID-19. As a result, we recorded a regulatory asset of approximately \$4.8 million for incurred costs associated with COVID-19 that are recoverable.

New Accounting Standards

NW Natural and NW Holdings consider the applicability and impact of all accounting standards updates (ASUs) issued by the Financial Accounting Standards Board (FASB). ASUs not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on consolidated financial position or results of operations.

Recently Adopted Accounting Pronouncements

ACCUMULATED OTHER COMPREHENSIVE INCOME. On February 14, 2018, the FASB issued ASU 2018-02, "Income Statement—Reporting Comprehensive Income: Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This update was issued in response to concerns from certain stakeholders regarding the current requirements under U.S. GAAP that deferred tax assets and liabilities are adjusted for a change in tax laws or rates, and the effect is to be included in income from continuing operations in the period of the enactment date. This requirement is also applicable to items in accumulated other comprehensive income where the related tax effects were originally recognized in other comprehensive income. The adjustment of deferred taxes due to the new corporate income tax rate enacted through the Tax Cuts and Jobs Act (TCJA) on December 22, 2017 recognized in income from continuing operations causes the tax effects of items within accumulated other comprehensive income (referred to as stranded tax effects) to not reflect the appropriate tax rate. The amendments in this update allow but do not require a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the TCJA and require certain disclosures about stranded tax effects. NW Natural adopted and applied the standard in the first quarter of 2019. NW Natural elected to reclassify the stranded tax effects of the TCJA of \$1.4 million from accumulated other comprehensive loss to retained earnings in the period of adoption. Going forward, our policy is that, in the event that regulation changes result in stranded tax effects, such amounts will be reclassified from accumulated other comprehensive income (loss) to retained earnings in the final period that the related deferred tax balance remeasurement is expected to impact income from continuing operations.

CLOUD COMPUTING. On August 29, 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract." The purpose of the amendment is to align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The amendments in this update were effective beginning January 1, 2020. Early adoption was permitted, and NW Holdings and NW Natural early adopted ASU 2018-15 in the quarter ended March 31, 2019 utilizing the prospective application methodology. The adoption of this ASU did not materially affect the financial statements and disclosures of NW Holdings or NW Natural.

CREDIT LOSSES. On June 16, 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses on Financial Instruments," which applies to financial assets subject to credit losses and measured at amortized cost. The new standard requires financial assets measured at amortized cost to be presented at the net amount expected to be collected and the allowance for credit losses is to be recorded as a valuation account that is deducted from the amortized cost basis. The amendments in this update were effective beginning January 1, 2020 and were applied with the modified retrospective methodology. The adoption of this ASU did not materially affect the financial statements and disclosures of NW Holdings or NW Natural.

The majority of NW Holdings' and NW Natural's financial assets are either short-term in nature, such as trade receivables, or relate to leased gas facilities under approved rate schedules.

DERIVATIVES AND HEDGING. On August 28, 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities." The purpose of the amendment is to more closely align hedge accounting with companies' risk management strategies. The ASU amends the accounting for risk component hedging, the hedged item in fair value hedges of interest rate risk, and amounts excluded from the assessment of hedge effectiveness. The guidance also amends the recognition and presentation of the effect of hedging instruments and includes other simplifications of hedge accounting. The amendments in this ASU were effective beginning January 1, 2019 and were applied prospectively to hedging instruments. The adoption did not have an impact on the financial statements or disclosures of NW Holdings or NW Natural.

FAIR VALUE MEASUREMENT. On August 28, 2018, the FASB issued AŠU 2018-13, "Changes to the Disclosure Requirements for Fair Value Measurement." The purpose of the amendment is to modify the disclosure requirements for fair value measurements. The amendments in this ASU were effective beginning January 1, 2020. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements and the narrative description of measurement uncertainty should be applied prospectively. All other amendments should be applied retrospectively. NW Holdings and NW Natural do not have either Level 3 fair value measurements or transfers between Level 1 or Level 2 in their current portfolios. The adoption did not have an impact on the financial statements or disclosures of NW Holdings or NW Natural.

LEASES. On February 25, 2016, the FASB issued ASU 2016-02, "Leases," which revises the existing lease accounting guidance. Pursuant to the new standard ("ASC 842"), lessees are required to recognize all leases, including operating leases that are greater than 12 months at lease commencement, on the balance sheet and record corresponding right of use assets and lease liabilities. Lessor accounting will remain substantially the same under the new standard. Quantitative and qualitative disclosures are also required for users of the financial statements to have a clear understanding of the nature of our leasing activities.

We elected the alternative prospective transition approach for adoption beginning January 1, 2019. All comparative periods prior to January 1, 2019 will retain the financial reporting and disclosure requirements of ASC 840 "Leases" ("ASC 840"). There was no cumulative effect adjustment to the opening balance of retained earnings recorded as of January 1, 2019 for adoption as there were no initial direct costs or other capitalized costs related to the legacy leases that needed to be derecognized upon adoption of ASC 842.

We elected the land easement optional practical expedient to not evaluate existing or expired land easements that were not previously accounted for as leases under the ASC 840 lease guidance. For the existing lease portfolio, we did not elect the optional practical expedient package to retain the legacy lease accounting conclusions upon adoption; we re-assessed our existing contracts under the new leasing standard including whether the contract meets the definition of a lease and lease classification. As a result, we determined that most of our underground gas storage contracts no longer meet the definition of a lease under the new lease standard.

Upon adoption on January 1, 2019, NW Holdings recorded an operating lease right of use asset and an associated operating lease liability of approximately \$7.3 million, of which \$7.0 million was recorded at NW Natural. Lease liabilities are measured using NW Natural's incremental borrowing rate based on information available at the lease commencement date in determining the present value of lease payments. See Note 7 for more information.

RETIREMENT BENEFITS. On August 28, 2018, the FASB issued ASU 2018-14, "Changes to the Disclosure Requirements for Defined Benefit Plans." The purpose of the amendment is to modify the disclosure requirements for defined benefit pension and other postretirement plans. The amendments in this ASU were effective beginning January 1, 2020 and were applied retrospectively. The adoption of this ASU did not materially affect the financial statements and disclosures of NW Holdings or NW Natural.

Recently Issued Accounting Pronouncements

INCOME TAXES. On December 18, 2019, the FASB issued ASU 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes." The purpose of the amendment is to reduce cost and complexity related to accounting for income taxes by removing certain exceptions to the general principles and improving consistent application for other areas in Topic 740. The amendments in this ASU are effective beginning January 1, 2021. Early adoption is permitted. The amended presentation and disclosure guidance should be applied retrospectively. We do not expect this ASU to materially affect the financial statements and disclosures of NW Holdings or NW Natural.

REFERENCE RATE REFORM. On March 12, 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting." The purpose of the amendment is to provide optional expedients and exceptions for applying generally accepted accounting principles (GAAP) to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The amendments in this ASU apply only to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform. The amendments in this ASU are effective for all entities as of March 12, 2020 through December 31, 2022. We do not expect this ASU to materially affect the financial statements and disclosures of NW Holdings or NW Natural.

Accounting Policies

The accounting policies discussed below apply to both NW Holdings and NW Natural.

Plant, Property, and Accrued Asset Removal Costs

Plant and property are stated at cost, including capitalized labor, materials, and overhead. In accordance with regulatory accounting standards, the cost of acquiring and constructing long-lived plant and property generally includes an allowance for funds used during construction (AFUDC) or capitalized interest. AFUDC represents the regulatory financing cost incurred when debt and equity funds are used for construction (see "AFUDC" below). When constructed assets are subject to market-based rates rather than cost-based rates, the financing costs incurred during construction are included in capitalized interest in accordance with U.S. GAAP, not as regulatory financing costs under AFUDC.

In accordance with long-standing regulatory treatment, our depreciation rates consist of three components: one based on the average service life of the asset, a second based on the estimated salvage value of the asset, and a third based on the asset's estimated cost of removal. We collect, through rates, the estimated cost of removal on certain regulated properties through depreciation expense, with a corresponding offset to accumulated depreciation. These removal costs are non-legal obligations as defined by regulatory accounting guidance. Therefore, we have included these costs as non-current regulatory liabilities rather than as accumulated depreciation on our consolidated balance sheets. In the rate setting process, the liability for removal costs is treated as a reduction to the net rate base on which the NGD business has the opportunity to earn its allowed rate of return.

The costs of NGD plant retired or otherwise disposed of are removed from NGD plant and charged to accumulated depreciation for recovery or refund through future rates. Gains from the sale of regulated assets are generally deferred and refunded to customers. For assets not related to NGD, we record a gain or loss upon the disposal of the property, and the gain or loss is recorded in operating income or loss in the consolidated statements of comprehensive income.

The provision for depreciation of NGD property, plant, and equipment is recorded under the group method on a straight-line basis with rates computed in accordance with depreciation studies approved by regulatory authorities. The weighted-average depreciation rate for NGD assets in service was approximately 3.0% for 2020, 2.9% for 2019, and 2.8% for 2018, reflecting the approximate weighted-average economic life of the property. This includes 2020 weighted-average depreciation rates for the

following asset categories: 2.6% for transmission and distribution plant, 2.0% for gas storage facilities, 6.7% for general plant, and 5.1% for intangible and other fixed assets.

AFUDC. Certain additions to NGD plant include AFUDC, which represents the net cost of debt and equity funds used during construction. AFUDC is calculated using actual interest rates for debt and authorized rates for ROE, if applicable. If short-term debt balances are less than the total balance of construction work in progress, then a composite AFUDC rate is used to represent interest on all debt funds, shown as a reduction to interest charges, and on ROE funds, shown as other income. While cash is not immediately recognized from recording AFUDC, it is realized in future years through rate recovery resulting from the higher NGD cost of service. Our composite AFUDC rate was 1.9% in 2020, 3.9% in 2019, and 5.2% in 2018.

IMPAIRMENT OF LONG-LIVED ASSETS. We review the carrying value of long-lived assets whenever events or changes in circumstances indicate the carrying amount of the assets may not be recoverable. Factors that would necessitate an impairment assessment of long-lived assets include a significant adverse change in the extent or manner in which the asset is used, a significant adverse change in legal factors or business climate that could affect the value of the asset, or a significant decline in the observable market value or expected future cash flows of the asset, among others.

When such factors are present, we assess the recoverability by determining whether the carrying value of the asset will be recovered through expected future cash flows. An asset is determined to be impaired when the carrying value of the asset exceeds the expected undiscounted future cash flows from the use and eventual disposition of the asset. If an impairment is indicated, we record an impairment loss for the difference between the carrying value and the fair value of the long-lived assets. Fair value is estimated using appropriate valuation methodologies, which may include an estimate of discounted cash flows.

Cash and Cash Equivalents

For purposes of reporting cash flows, cash and cash equivalents include cash on hand plus highly liquid investment accounts with original maturity dates of three months or less. At December 31, 2020 and 2019, NW Holdings had outstanding checks of \$4.4 million and \$3.2 million, respectively, substantially all of which is recorded at NW Natural. These balances are included in accounts payable in the .NW Holdings and NW Natural balance sheets.

Restricted cash is primarily comprised of funds from public purpose charges for programs that assist low-income customers with bill payments or energy efficiency. As of December 31, 2020 and 2019, NW Natural had restricted cash of \$5.3 million and \$3.0 million, respectively. These balances are included in other current assets in the NW Holdings and NW Natural balance sheets. Changes in these balances are presented in changes in assets and liabilities - other, net in the NW Holdings and NW Natural statements of cash flows. There were no transfers between restricted cash and cash and cash equivalents during the years ended December 31, 2020 and 2019.

Revenue Recognition and Accrued Unbilled Revenue

Revenues, derived primarily from the sale and transportation of natural gas, are recognized upon delivery of gas or water, or service to customers. Revenues include accruals for gas or water delivered but not yet billed to customers based on estimates of deliveries from meter reading dates to month end (accrued unbilled revenue). Accrued unbilled revenue is dependent upon a number of factors that require management's judgment, including total natural gas receipts and deliveries, customer use of natural gas or water by billing cycle, and weather factors. Accrued unbilled revenue is reversed the following month when actual billings occur. NW Holdings' accrued unbilled revenue at December 31, 2020 and 2019 was \$57.9 million and \$56.2 million, respectively, substantially all of which is accrued unbilled revenue at NW Natural.

Revenues not related to NGD are derived primarily from Interstate Storage Services, asset management activities at the Mist gas storage facility, and other investments and business activities. At the Mist underground storage facility, revenues are primarily firm service revenues in the form of fixed monthly reservation charges. In addition, we also have asset management service revenue from an independent energy marketing company that optimizes commodity, storage, and pipeline capacity release transactions. Under this agreement, guaranteed asset management revenue is recognized using a straight-line, pro-rata methodology over the term of each contract. Revenues earned above the guaranteed amount are recognized as they are earned.

Revenue Taxes

Revenue-based taxes are primarily franchise taxes, which are collected from customers and remitted to taxing authorities. Revenue taxes are included in operating expenses in the statements of comprehensive income for NW Holdings and NW Natural. All revenue taxes are recorded at NW Natural and were \$30.3 million, \$30.3 million, and \$30.1 million for 2020, 2019, and 2018, respectively.

Accounts Receivable and Allowance for Uncollectible Accounts

Accounts receivable consist primarily of amounts due for natural gas sales and transportation services to NGD customers, plus amounts due for gas storage services. NW Holdings and NW Natural establish allowances for uncollectible accounts (allowance) for trade receivables, including accrued unbilled revenue, based on the aging of receivables, collection experience of past due account balances including payment plans, and historical trends of write-offs as a percent of revenues. A specific allowance is established and recorded for large individual customer receivables when amounts are identified as unlikely to be partially or fully

recovered. Inactive accounts are written-off against the allowance after they are 120 days past due or when deemed uncollectible. Differences between the estimated allowance and actual write-offs will occur based on a number of factors, including changes in economic conditions, customer creditworthiness, and natural gas prices. The allowance for uncollectible accounts is adjusted quarterly, as necessary, based on information currently available.

ALLOWANCE FOR TRADE RECEIVABLES. Accounts receivable consist primarily of amounts due for natural gas sales and transportation services to NGD customers and amounts due for gas storage services. The payment term of these receivables is generally 15 days. For these short-term receivables, it is not expected that forecasted economic conditions would significantly affect the loss estimates under stable economic conditions. For extreme situations like a financial crisis, natural disaster, and the economic slowdown caused by pandemics like COVID-19, we enhance our review and analysis.

After considering the significant exposure to quarantine-related job losses in Oregon and Washington state, NW Holdings and NW Natural expanded our standard review procedures for our allowance for uncollectible accounts calculation, including analyzing the significant indications of unemployment rate and comparing to historic economic data during the 2007-2009 time period when the country experienced an economic recession. We then considered other qualitative information including recent customer interactions related to payment plans and credit issues, statistics from our website related to credit inquiries, and economic stimulus provided by the federal government which could have a beneficial impact on residential and commercial customers' abilities to ultimately make payment on their accounts. Our provision calculation for residential and commercial accounts was estimated as a percentage of accounts that no customer payment was received for 90 or more days. For industrial accounts, we continue to analyze those accounts on an account-by-account basis with specific reserves taken as necessary.

The following table presents the activity related to the NW Holdings provision for uncollectible accounts by pool, substantially all of which is related to NW Natural's accounts receivable:

	As of	December 31, 2019						As of December 31, 2020		
In thousands	Ве	Beginning Balance		Provision recorded ⁽¹⁾		te-offs recognized, net of recoveries	Ending Balance			
Allowance for uncollectible accounts										
related to accounts receivable:										
Residential	\$	432	\$	2,159	\$	(438)	\$	2,153		
Commercial		57		821		(174)		704		
Industrial		72		77		(7)		142		
Accrued unbilled and other		112		166		(58)		220		
Total	\$	673	\$	3,223	\$	(677)	\$	3,219		

⁽¹⁾ Includes \$2.3 million that was deferred to a regulatory asset for costs associated with COVID-19 that are recoverable in future rates.

ALLOWANCE FOR NET INVESTMENTS IN SALES-TYPE LEASES. NW Natural currently holds two net investments in sales-type leases, with substantially all of the net investment balance related to the North Mist natural gas storage agreement with Portland General Electric (PGE) which is billed under an OPUC-approved rate schedule. See Note 7 for more information on the North Mist lease. Due to the nature of this service, PGE may recover the costs of the lease through general rate cases. Therefore, we expect the risk of loss due to the credit of this lessee to be remote. As such, no allowance for uncollectibility was recorded for our sales-type lease receivables. NW Natural will continue monitoring the credit health of the lessees and the overall economic environment, including the economic factors closely tied to the financial health of our current and future lessees.

Inventories

NGD gas inventories, which consist of natural gas in storage for NGD customers, are stated at the lower of weighted-average cost or net realizable value. The regulatory treatment of these inventories provides for cost recovery in customer rates. NGD gas inventories injected into storage are priced in inventory based on actual purchase costs, and those withdrawn from storage are charged to cost of gas during the period they are withdrawn at the weighted-average inventory cost.

Gas storage inventories, which primarily represented inventories at the Gill Ranch Facility and are included in Discontinued operations - current assets on the consolidated balance sheets, mainly consist of natural gas received as fuel-in-kind from storage customers. Gas storage inventories are valued at the lower of average cost or net realizable value. Cushion gas is not included in inventory balances, is recorded at original cost, and is classified as a long-term plant asset.

Materials and supplies inventories consist of inventories both related to and unrelated to NGD and are stated at the lower of average cost or net realizable value.

NW Natural's NGD and gas storage inventories totaled \$24.7 million and \$27.5 million at 2020 and 2019, respectively. At December 31, 2020 and 2019, NW Holdings' materials and supplies inventories, which are comprised primarily of NW Natural's materials and supplies, totaled \$18.0 million and \$16.5 million, respectively.

Gas Reserves

Gas reserves are payments to acquire and produce natural gas reserves. Gas reserves are stated at cost, adjusted for regulatory amortization, with the associated deferred tax benefits recorded as liabilities on the balance sheet. The current portion is calculated based on expected gas deliveries within the next fiscal year. NW Natural recognizes regulatory amortization of this asset on a volumetric basis calculated using the estimated gas reserves and the estimated therms extracted and sold each month. The amortization of gas reserves is recorded to cost of gas along with gas production revenues and production costs. See Note 13.

Derivatives

NW Natural's derivatives are measured at fair value and recognized as either assets or liabilities on the balance sheet. Changes in the fair value of the derivatives are recognized in earnings unless specific regulatory or hedge accounting criteria are met. Accounting for derivatives and hedges provides an exception for contracts intended for normal purchases and normal sales for which physical delivery is probable. In addition, certain derivative contracts are approved by regulatory authorities for recovery or refund through customer rates. Accordingly, the changes in fair value of these approved contracts are deferred as regulatory assets or liabilities pursuant to regulatory accounting principles. NW Natural's financial derivatives generally qualify for deferral under regulatory accounting. NW Natural's index-priced physical derivative contracts also qualify for regulatory deferral accounting treatment.

Derivative contracts entered into for NGD requirements after the annual PGA rate has been set and maturing during the PGA year are subject to the PGA incentive sharing mechanism. In Oregon, NW Natural participates in a PGA sharing mechanism under which it is required to select either an 80% or 90% deferral of higher or lower gas costs such that the impact on current earnings from the gas cost sharing is either 20% or 10% of gas cost differences compared to PGA prices, respectively. For each of the PGA years in Oregon beginning November 1, 2020, 2019, and 2018, NW Natural selected the 90% deferral of gas cost differences. In Washington, 100% of the differences between the PGA prices and actual gas costs are deferred. See Note 16.

NW Natural's financial derivatives policy sets forth the guidelines for using selected derivative products to support prudent risk management strategies within designated parameters. NW Natural's objective for using derivatives is to decrease the volatility of gas prices and cash flows without speculative risk. The use of derivatives is permitted only after the risk exposures have been identified, are determined not to exceed acceptable tolerance levels, and are determined necessary to support normal business activities. NW Natural does not enter into derivative instruments for trading purposes. All derivatives for NW Holdings are currently held at NW Natural.

Fair Value

In accordance with fair value accounting, we use the following fair value hierarchy for determining inputs for our debt, pension plan assets, and derivative fair value measurements:

- · Level 1: Valuation is based on quoted prices for identical instruments traded in active markets;
- Level 2: Valuation is based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are
 not active, and model-based valuation techniques for which all significant assumptions are observable in the market; and
- Level 3: Valuation is generated from model-based techniques that use significant assumptions not observable in the market. These unobservable
 assumptions reflect our own estimates of assumptions market participants would use in valuing the asset or liability.

In addition, the fair value for certain pension trust investments is determined using Net Asset Value per share (NAV) as a practical expedient, and therefore they are not classified within the fair value hierarchy. These investments primarily consist of institutional investment products.

When developing fair value measurements, it is our policy to use quoted market prices whenever available or to maximize the use of observable inputs and minimize the use of unobservable inputs when quoted market prices are not available. Fair values are primarily developed using industry-standard models that consider various inputs including: (a) quoted future prices for commodities; (b) forward currency prices; (c) time value; (d) volatility factors; (e) current market and contractual prices for underlying instruments; (f) market interest rates and yield curves; (g) credit spreads; and (h) other relevant economic measures. NW Natural considers liquid points for natural gas hedging to be those points for which there are regularly published prices in a nationally recognized publication or where the instruments are traded on an exchange.

Goodwill and Business Combinations

NW Holdings, through its wholly-owned subsidiary NWN Water and NW Water's wholly-owned subsidiaries, has completed various acquisitions that resulted in the recognition of goodwill. Goodwill is measured as the excess of the acquisition-date fair value of the consideration transferred over the acquisition-date fair value of the net identifiable assets assumed. Adjustments are recorded during the measurement period to finalize the allocation of the purchase price. The carrying value of goodwill is

reviewed annually during the fourth quarter using balances as of October 1, or whenever events or changes in circumstance indicate that such carrying values may not be recoverable. The goodwill assessment policy begins with a qualitative analysis in which events and circumstances are evaluated, including macroeconomic conditions, industry and market conditions, regulatory environments, and overall financial performance of the reporting unit. If the qualitative assessment indicates that the carrying value may be at risk of recoverability, a quantitative evaluation is performed to measure the carrying value of the goodwill against the fair value of the reporting unit. The reporting unit is determined primarily based on current operating segments and the level of review provided by the Chief Operating Decision Maker (CODM) and/or segment management on the operating segment's financial results. Reporting units are evaluated periodically for changes in the corporate environment.

As of December 31, 2020 and 2019, NW Holdings had goodwill of \$69.2 million and \$49.9 million, respectively. All of NW Holdings' goodwill was acquired through the business combinations completed by NWN Water and its wholly-owned subsidiaries. No impairment charges were recorded as a result of the fourth quarter goodwill impairment assessment.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at fair value at the acquisition date, and the fair value of any non-controlling interest in the acquiree. Acquisition-related costs are expensed as incurred. When NW Natural acquires a business, it assesses the financial assets acquired and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as of the acquisition date. When there is substantial judgment or uncertainty around the fair value of acquired assets, we may engage a third party expert to assist in determining the fair values of certain assets or liabilities.

Income Taxes

We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the enactment date period unless, for NW Natural, a regulatory order specifies deferral of the effect of the change in tax rates over a longer period of time.

For NW Natural, deferred income tax assets and liabilities are also recognized for temporary differences where the deferred income tax benefits or expenses have previously been flowed through in the ratemaking process of the NGD business. Regulatory tax assets and liabilities are recorded on these deferred tax assets and liabilities to the extent it is believed they will be recoverable from or refunded to customers in future rates.

Deferred investment tax credits on NGD plant additions, which reduce income taxes payable, are deferred for financial statement purposes and amortized over

NW Holdings files consolidated or combined income tax returns that include NW Natural. Income tax expense is allocated on a separate company basis incorporating certain consolidated return considerations. Subsidiary income taxes payable or receivable are generally settled with NW Holdings, the common agent for income tax matters.

Interest and penalties related to unrecognized tax benefits, if any, are recognized within income tax expense and accrued interest and penalties are recognized within the related tax liability line in the consolidated balance sheets. No accrued interest or penalties for uncertain tax benefits have been recorded. See Note 11.

Environmental Contingencies

the life of the related plant.

Loss contingencies are recorded as liabilities when it is probable a liability has been incurred and the amount of the loss is reasonably estimable in accordance with accounting standards for contingencies. Estimating probable losses requires an analysis of uncertainties that often depend upon judgments about potential actions by third parties. Accruals for loss contingencies are recorded based on an analysis of potential results.

With respect to environmental liabilities and related costs, estimates are developed based on a review of information available from numerous sources, including completed studies and site specific negotiations. NW Natural's policy is to accrue the full amount of such liability when information is sufficient to reasonably estimate the amount of probable liability. When information is not available to reasonably estimate the probable liability, or when only the range of probable liabilities can be estimated and no amount within the range is more likely than another, it is our policy to accrue at the low end of the range. Accordingly, due to numerous uncertainties surrounding the course of environmental remediation and the preliminary nature of several site investigations, in some cases, it may not be possible to reasonably estimate the high end of the range of possible loss. In those cases, the nature of the potential loss and the fact that the high end of the range cannot be reasonably estimated is disclosed. See Note 18.

Subsequent Events

We monitor significant events occurring after the balance sheet date and prior to the issuance of the financial statements to determine the impacts, if any, of events on the financial statements to be issued.

3. EARNINGS PER SHARE

Basic earnings or loss per share are computed using NW Holdings' net income or loss and the weighted average number of common shares outstanding for each period presented. Diluted earnings per share are computed in the same manner, except using the weighted average number of common shares outstanding plus the effects of the assumed exercise of stock options and the payment of estimated stock awards from other stock-based compensation plans that are outstanding at the end of each period presented. Anti-dilutive stock awards are excluded from the calculation of diluted earnings or loss per common share.

NW Holdings' diluted earnings or loss per share are calculated as follows:

In thousands, except per share data	2020		2019	2018
Net income from continuing operations	\$ 70,273	\$	65,311	\$ 67,311
Income (loss) from discontinued operations, net of tax	6,508		(3,576)	(2,742)
Net income	\$ 76,781	\$	61,735	\$ 64,569
Average common shares outstanding - basic	30,541		29,786	28,803
Additional shares for stock-based compensation plans (See Note 8)	58		73	70
Average common shares outstanding - diluted	 30,599		29,859	28,873
Earnings from continuing operations per share of common stock:		1		
Basic	\$ 2.30	\$	2.19	\$ 2.34
Diluted	2.30		2.19	2.33
Earnings (loss) from discontinued operations per share of common stock:				
Basic	\$ 0.21	\$	(0.12)	\$ (0.10)
Diluted	0.21		(0.12)	(0.09)
Earnings per share of common stock:				
Basic	\$ 2.51	\$	2.07	\$ 2.24
Diluted	2.51		2.07	2.24
Additional information:				
Anti-dilutive shares	1			2

4. SEGMENT INFORMATION

We primarily operate in one reportable business segment, which is NW Natural's local gas distribution business and is referred to as the NGD segment. During the second quarter of 2018, we moved forward with long-term strategic plans, which included a shift away from the California gas storage business, by entering into a Purchase and Sale Agreement that provided for the sale of all of the membership interests in Gill Ranch. See Note 19 for additional information. As such, we reevaluated reportable segments and concluded that the remaining gas storage activities no longer meet the requirements of a reportable segment. Interstate Storage Services and asset management activities at the Mist gas storage facility are now reported as other under NW Natural. NW Natural and NW Holdings also have investments and business activities not specifically related to the NGD segment, which are aggregated and reported as other and described below for each entity.

No individual customer accounts for over 10% of NW Holdings' or NW Natural's operating revenues.

Natural Gas Distribution

NW Natural's local gas distribution segment (NGD) is a regulated utility principally engaged in the purchase, sale, and delivery of natural gas and related services to customers in Oregon and southwest Washington. The NGD business is responsible for building and maintaining a safe and reliable pipeline distribution system, purchasing sufficient gas supplies from producers and marketers, contracting for firm and interruptible transportation of gas over interstate pipelines to bring gas from the supply basins into its service territory, and re-selling the gas to customers subject to rates, terms, and conditions approved by the OPUC or WUTC. NGD also includes taking customer-owned gas and transporting it from interstate pipeline connections, or city gates, to the customers' end-use facilities for a fee, which is approved by the OPUC or WUTC. Approximately 88% of NGD customers are located in Oregon and 12% in Washington. On an annual basis, residential and commercial customers typically account for around 60% of total NGD volumes delivered and around 90% of NGD margin. Industrial customers largely account for the remaining volumes and NGD margin. A small amount of the margin is also derived from miscellaneous services, gains or losses from an incentive gas cost sharing mechanism, and other service fees.

Industrial sectors served by the NGD business include: pulp, paper, and other forest products; the manufacture of electronic, electrochemical and electrometallurgical products; the processing of farm and food products; the production of various mineral products; metal fabrication and casting; the production of machine tools, machinery, and textiles; the manufacture of asphalt, concrete, and rubber; printing and publishing; nurseries; and government and educational institutions.

In addition to NW Natural's local gas distribution business, the NGD segment also includes the portion of the Mist underground storage facility used to serve NGD customers, the North Mist gas storage expansion in Oregon, NWN Gas Reserves, which is a wholly-owned subsidiary of Energy Corp, and NW Natural RNG Holding Company, LLC, a holding company established to invest in the development and procurement of renewable natural gas.

NW Natural

NW Natural's activities in Other include Interstate Storage Services and third-party asset management services for the Mist facility in Oregon, appliance retail center operations, and corporate operating and non-operating revenues and expenses that cannot be allocated to NGD operations.

Earnings from Interstate Storage Services assets are primarily related to firm storage capacity revenues. Earnings from the Mist facility also include revenue, net of amounts shared with NGD customers, from management of NGD assets at Mist and upstream pipeline capacity when not needed to serve NGD customers. Under the Oregon sharing mechanism, NW Natural retains 80% of the pre-tax income from these services when the costs of the capacity were not included in NGD rates, or 10% of the pre-tax income when the costs have been included in these rates. The remaining 20% and 90%, respectively, are recorded to a deferred regulatory account for crediting back to NGD customers.

NW Holdings

NW Holdings' activities in Other include all remaining activities not associated with NW Natural, specifically NWN Water, which consolidates the water and wastewater utility operations and is pursuing other investments in the water sector through itself and wholly-owned subsidiaries; NWN Gas Storage, a wholly-owned subsidiary of NWN Energy; NWN Energy's equity investment in TWH through August 6, 2020; and other pipeline assets in NNG Financial. For more information on the sale of TWH, see Note 14. Other also includes corporate revenues and expenses that cannot be allocated to other operations, including certain business development activities.

All prior period amounts have been retrospectively adjusted to reflect the change in reportable segments and the designation of Gill Ranch as a discontinued operation for NW Holdings, and the designation of subsidiaries previously owned by NW Natural that are now owned by NW Holdings as discontinued operations for NW Natural.

Segment Information Summary

Inter-segment transactions were immaterial for the periods presented. The following table presents summary financial information concerning the reportable segment and other for continuing operations. See Note 19 for information regarding discontinued operations for NW Holdings and NW Natural.

In thousands	NGD	Other (NW Natural)	NW Natural	Other (NW Holdings)		NW Holdings
2020						
Operating revenues	\$ 741,072	\$ 17,676	\$ 758,748	\$ 14,931	\$	773,679
Depreciation and amortization	100,591	995	101,586	2,097		103,683
Income (loss) from operations	137,724	9,916	147,640	711		148,351
Net income (loss) from continuing operations	63,555	7,008	70,563	(290)		70,273
Capital expenditures	263,777	2,271	266,048	6,968		273,016
Total assets at December 31, 2020	3,549,868	49,468	3,599,336	157,043		3,756,379
2019						
Operating revenues	\$ 720,528	\$ 19,416	\$ 739,944	\$ 6,428	\$	746,372
Depreciation and amortization	89,415	990	90,405	1,091		91,496
Income (loss) from operations	135,918	11,428	147,346	(3,872)		143,474
Net income (loss) from continuing operations	60,828	8,146	68,974	(3,663)		65,311
Capital expenditures	219,880	1,500	221,380	2,091		223,471
Total assets at December 31, 2019(1)	3,273,835	47,652	3,321,487	91,833		3,413,320
2018						
Operating revenues	\$ 680,648	\$ 24,923	\$ 705,571	\$ 572	\$	706,143
Depreciation and amortization	83,732	1,254	84,986	170		85,156
Income (loss) from operations	118,095	15,004	133,099	(937)		132,162
Net income (loss) from continuing operations	57,491	10,558	68,049	(738)		67,311
Capital expenditures	212,323	2,005	214,328	308		214,636
Total assets at December 31, 2018 ⁽¹⁾	3,141,969	50,767	3,192,736	36,657		3,229,393

⁽¹⁾ Total assets for NW Holdings exclude assets related to discontinued operations of \$15.1 million and \$13.3 million as of December 31, 2019, and 2018, respectively.

Natural Gas Distribution Margin

NGD margin is a financial measure used by the CODM, consisting of NGD operating revenues, reduced by the associated cost of gas, environmental remediation expense, and revenue taxes. The cost of gas purchased for NGD customers is generally a pass-through cost in the amount of revenues billed to regulated NGD customers. Environmental remediation expense represents collections received from customers through environmental recovery mechanisms in Oregon and Washington as well as adjustments for the Oregon environmental earnings test when applicable. This is offset by environmental remediation expense presented in operating expenses. Revenue taxes are collected from NGD customers and remitted to taxing authorities. The collections from customers are offset by the expense recognition of the obligation to the taxing authority. By subtracting cost of gas, environmental remediation expense, and revenue taxes from NGD operating revenues, NGD margin provides a key metric used by the CODM in assessing the performance of the NGD segment.

The following table presents additional segment information concerning NGD margin:

 2020		2019		2018
\$ 721,950	\$	708,472	\$	680,386
19,122		12,056		262
 741,072		720,528		680,648
262,980		255,135		255,743
9,691		12,337		11,127
30,291		30,325		30,082
\$ 438,110	\$	422,731	\$	383,696
\$	\$ 721,950 19,122 741,072 262,980 9,691 30,291	\$ 721,950 \$ 19,122 741,072 262,980 9,691 30,291	\$ 721,950 \$ 708,472 19,122 12,056 741,072 720,528 262,980 255,135 9,691 12,337 30,291 30,325	\$ 721,950 \$ 708,472 \$ 19,122 12,056 741,072 720,528 262,980 255,135 9,691 12,337 30,291 30,325

5. COMMON STOCK

As of December 31, 2020 and 2019, NW Holdings had 100 million shares of common stock authorized. As of December 31, 2020, NW Holdings had 203,923 shares reserved for issuance of common stock under the Employee Stock Purchase Plan (ESPP) and 271,949 shares reserved for issuance under the Dividend Reinvestment and Direct Stock Purchase Plan (DRPP). At NW Holdings' election, shares sold through the DRPP may be purchased in the open market or through original issuance of shares reserved for issuance under the DRPP.

The Restated Stock Option Plan (SOP) was terminated with respect to new grants in 2012; however, options granted before the Restated SOP was terminated remain outstanding until the earlier of their expiration, forfeiture, or exercise. Options are now exercisable for shares of NW Holdings common stock. There were 9,438 options outstanding at December 31, 2020, which were granted prior to termination of the plan.

On June 7, 2019, NW Holdings completed the issuance of 1,437,500 shares of common stock, inclusive of the overallotment option granted to the underwriters, which was exercised in full. All shares were issued on June 7, 2019 at an offering price of \$67.00 per share. The issuance resulted in proceeds to NW Holdings of \$93.0 million, net of discounts and expenses. The issuance was executed to raise funds for general corporate purposes, including for equity contributions to NW Holdings' subsidiaries, that are reflected as equity transfers on occurrence. Contributions received by NW Natural were also used, in part, to repay short-term indebtedness.

Stock Repurchase Program

NW Holdings has a share repurchase program under which it may purchase its common shares on the open market or through privately negotiated transactions. NW Holdings currently has Board authorization through May 2022 to repurchase up to an aggregate of the greater of 2.8 million shares or \$100 million. No shares of common stock were repurchased pursuant to this program during the year ended December 31, 2020. Since the plan's inception in 2000 under NW Natural, a total of 2.1 million shares have been repurchased at a total cost of \$83.3 million.

The following table summarizes the changes in the number of shares of NW Holdings' common stock issued and outstanding:

In thousands	Shares
Balance, December 31, 2017	28,736
Sales to employees under ESPP	19
Stock-based compensation	64
Sales to shareholders under DRPP	61
Balance, December 31, 2018	28,880
Sales to employees under ESPP	18
Stock-based compensation	83
Equity issuance	1,438
Sales to shareholders under DRPP	53
Balance, December 31, 2019	30,472
Sales to employees under ESPP	3
Stock-based compensation	46
Sales to shareholders under DRPP	68
Balance, December 31, 2020	30,589

6. REVENUE

The following table presents disaggregated revenue from continuing operations:

	 Year ended December 31, 2020											
In thousands	NGD		Other (NW Natural)		NW Natural		Other (NW Holdings)		NW Holdings			
Natural gas sales	\$ 710,422	\$	_	\$	710,422	\$	_	\$	710,422			
Gas storage revenue, net	_		9,759		9,759				9,759			
Asset management revenue, net	_		2,532		2,532		_		2,532			
Appliance retail center revenue			5,385		5,385		_		5,385			
Other revenue	 1,337		_		1,337		14,931		16,268			
Revenue from contracts with customers	711,759		17,676		729,435		14,931		744,366			
Alternative revenue	10,870		_		10,870		<u> </u>	374	10,870			
Leasing revenue	18,443		_		18,443		_		18,443			
Total operating revenues	\$ 741,072	\$	17,676	\$	758,748	\$	14,931	\$	773,679			

	Year ended December 31, 2019										
In thousands		NGD	Other NGD (NW Natural)			NW Natural		Other (NW Holdings)		NW Holdings	
Natural gas sales	\$	729,296	\$	_	\$	729,296	\$	_	\$	729,296	
Gas storage revenue, net				10,240		10,240		_		10,240	
Asset management revenue, net		_		3,705		3,705		_		3,705	
Appliance retail center revenue		_		5,471		5,471		_		5,471	
Other revenue		847				847		6,428		7,275	
Revenue from contracts with customers		730,143		19,416		749,559		6,428		755,987	
Alternative revenue		(20,984)				(20,984)				(20,984)	
Leasing revenue		11,369		_		11,369		-		11,369	
Total operating revenues	\$	720,528	\$	19,416	\$	739,944	\$	6,428	\$	746,372	

NW Natural's revenue represents substantially all of NW Holdings' revenue and is recognized for both registrants when the obligation to customers is satisfied and in the amount expected to be received in exchange for transferring goods or providing services. Revenue from contracts with customers contains one performance obligation that is generally satisfied over time, using the output method based on time elapsed, due to the continuous nature of the service provided. The transaction price is determined by a set price agreed upon in the contract or dependent on regulatory tariffs. Customer accounts are settled on a monthly basis or paid at time of sale and based on historical experience. It is probable that we will collect substantially all of the

consideration to which we are entitled. We evaluated the probability of collection in accordance with the current expected credit losses standard.

NW Holdings and NW Natural do not have any material contract assets, as net accounts receivable and accrued unbilled revenue balances are unconditional and only involve the passage of time until such balances are billed and collected. NW Holdings and NW Natural do not have any material contract liabilities.

Revenue taxes are included in operating revenues with an equal and offsetting expense recognized in operating expenses in the consolidated statements of comprehensive income. Revenue-based taxes are primarily franchise taxes, which are collected from NGD customers and remitted to taxing authorities.

Natural Gas Distribution

Natural Gas Sales

NW Natural's primary source of revenue is providing natural gas to customers in the NGD service territory, which includes residential, commercial, industrial and transportation customers. NGD revenue is generally recognized over time upon delivery of the gas commodity or service to the customer, and the amount of consideration received and recognized as revenue is dependent on the Oregon and Washington tariffs. Customer accounts are to be paid in full each month, and there is no right of return or warranty for services provided. Revenues include firm and interruptible sales and transportation services, franchise taxes recovered from the customer, late payment fees, service fees, and accruals for gas delivered but not yet billed (accrued unbilled revenue). The accrued unbilled revenue balance is based on estimates of deliveries during the period from the last meter reading and management judgment is required for a number of factors used in this calculation, including customer use and weather factors.

We applied the significant financing practical expedient and have not adjusted the consideration NW Natural expects to receive from NGD customers for the effects of a significant financing component as all payment arrangements are settled annually. Due to the election of the right to invoice practical expedient, we do not disclose the value of unsatisfied performance obligations.

Alternative Revenue

Weather normalization (WARM) and decoupling mechanisms are considered to be alternative revenue programs. Alternative revenue programs are considered to be contracts between NW Natural and its regulator and are excluded from revenue from contracts with customers.

Leasing Revenue

Leasing revenue primarily consists of revenues from NW Natural's North Mist Storage contract with Portland General Electric (PGE) in support of PGE's gasfired electric power generation facilities under an initial 30-year contract with options to extend, totaling up to an additional 50 years upon mutual agreement of
the parties. The facility is accounted for as a sales-type lease with regulatory accounting deferral treatment. The investment is included in rate base under an
established cost-of-service tariff schedule, with revenues recognized according to the tariff schedule and as such, profit upon commencement was deferred and
will be amortized over the lease term. Leasing revenue also contains rental revenue from small leases of property owned by NW Natural to third parties. The
majority of these transactions are accounted for as operating leases and the revenue is recognized over the term of the lease agreement. Lease revenue is
excluded from revenue from contracts with customers. See Note 7 for additional information.

NW Natural Other

Gas Storage Revenue

NW Natural's other revenue includes gas storage activity, which includes Interstate Storage Services used to store natural gas for customers. Gas storage revenue is generally recognized over time as the gas storage service is provided to the customer and the amount of consideration received and recognized as revenue is dependent on set rates defined per the storage agreements. Noncash consideration in the form of dekatherms of natural gas is received as consideration for providing gas injection services to gas storage customers. This noncash consideration is measured at fair value using the average spot rate. Customer accounts are generally paid in full each month, and there is no right of return or warranty for services provided. Revenues include firm and interruptible storage services, net of the profit sharing amount refunded to NGD customers.

Asset Management Revenue

Revenues include the optimization of third-party storage assets and pipeline capacity and are provided net of the profit sharing amount refunded to NGD customers. Certain asset management revenues received are recognized over time using a straight-line approach over the term of each contract, and the amount of consideration received and recognized as revenue is dependent on a variable pricing model. Variable revenues earned above guaranteed amounts are estimated and recognized at the end of each period using the most likely amount approach. Additionally, other asset management revenues may be based on a fixed rate. Generally, asset management accounts are settled on a monthly basis.

As of December 31, 2020, unrecognized revenue for the fixed component of the transaction price related to gas storage and asset management revenue was approximately \$88.4 million. Of this amount, approximately \$19.0 million will be recognized in 2021, \$19.4 million in 2022, \$17.8 million in 2023, \$14.0 million in 2024, and \$18.2 million thereafter. The amounts presented here are calculated using current contracted rates.

Appliance Retail Center Revenue

NW Natural owns and operates an appliance store that is open to the public, where customers can purchase natural gas home appliances. Revenue from the sale of appliances is recognized at the point in time in which the appliance is transferred to the third party responsible for delivery and installation services and when the customer has legal title to the appliance. It is required that the sale be paid for in full prior to transfer of legal title. The amount of consideration received and recognized as revenue varies with changes in marketing incentives and discounts offered to customers.

NW Holdings Other

NW Holdings' primary source of other revenue is providing water and wastewater services to customers. Water and wastewater service revenue is generally recognized over time upon delivery of the water commodity or service to the customer, and the amount of consideration received and recognized as revenue is dependent on the tariffs established in the state we operate. Customer accounts are to be paid in full each month, and there is no right of return or warranty for services provided.

We applied the significant financing practical expedient and have not adjusted the consideration we expect to receive from water distribution and wastewater collection customers for the effects of a significant financing component as all payment arrangements are settled annually. Due to the election of the right to invoice practical expedient, we do not disclose the value of unsatisfied performance obligations.

7. LEASES

Lease Revenue

Leasing revenue primarily consists of NW Natural's North Mist natural gas storage agreement with PGE which is billed under an OPUC-approved rate schedule and includes an initial 30-year term with options to extend, totaling up to an additional 50 years upon mutual agreement of the parties. Under U.S. GAAP, this agreement is classified as a sales-type lease and qualifies for regulatory accounting deferral treatment. The investment in the storage facility is included in rate base under a separately established cost-of-service tariff, with revenues recognized according to the tariff schedule. As such, the selling profit that was calculated upon commencement as part of the sale-type lease recognizion was deferred and will be amortized over the lease term. Billing rates under the cost-of-service tariff will be updated annually to reflect current information including depreciable asset levels, forecasted operating expenses, and the results of regulatory proceedings, as applicable, and revenue received under this agreement is recognized as operating revenue on the consolidated statements of comprehensive income. There are no variable payments or residual value guarantees. The lease does not contain an option to purchase the underlying assets.

NW Natural also maintains a sales-type lease for specialized compressor facilities to provide high pressure compressed natural gas (CNG) services. Lease payments are outlined in an OPUC-approved rate schedule over a 10-year term. There are no variable payments or residual value guarantees. The selling profit computed upon lease commencement was not significant.

Our lessor portfolio also contains small leases of property owned by NW Natural to third parties. These transactions are accounted for as operating leases and the revenue is recognized over the term of the lease agreement.

The components of lease revenue at NW Natural were as follows:

	Year ended December 31,								
In thousands	 2020								
Lease revenue									
Operating leases	\$ 88	\$	171						
Sales-type leases	18,355		11,198						
Total lease revenue	\$ 18,443	\$	11,369						

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Total future minimum lease payments to be received under non-cancelable leases at NW Natural at December 31, 2020 are as follows:

In thousands	Operating	Sales-Type	Total
2021	59	\$ 17,518	\$ 17,577
2022	55	17,026	17,081
2023	47	16,557	16,604
2024	47	15,867	15,914
2025	43	15,306	15,349
Thereafter	52	251,721	251,773
Total lease revenue	303	\$ 333,995	\$ 334,298
Less: imputed interest		189,501	
Total leases receivable		\$ 144,494	

The total leases receivable above is reported under the NGD segment and the short- and long-term portions are included within other current assets and assets under sales-type leases on the consolidated balance sheets, respectively. The total amount of unguaranteed residual assets was \$4.3 million and \$4.0 million at December 31, 2020 and 2019, respectively, and is included in assets under sales-type leases on the consolidated balance sheets. Additionally, under regulatory accounting, the revenues and expenses associated with these agreements are presented on the consolidated statements of comprehensive income such that their presentation aligns with similar regulated activities at NW Natural.

Additionally, future minimum lease payments of \$0.5 million for each of the years ending 2021 and 2022 are to be received under non-cancelable operating leases associated with non-utility property rentals. For each of the years ended December 31, 2020 and 2019, approximately \$0.5 million of lease revenue is presented in other income (expense), net on the consolidated statements of comprehensive income as it is non-operating income.

Lease Expense

Operating Leases

We have operating leases for land, buildings and equipment. Our primary lease is for NW Natural's operations center. Our leases have remaining lease terms of one year to 19 years. Many of our lease agreements include options to extend the lease, which we do not include in our minimum lease terms unless they are reasonably certain to be exercised. Short-term leases with a term of 12 months or less are not recorded on the balance sheet.

As most of our leases do not provide an implicit rate and are entered into by NW Natural, we use an estimated discount rate representing the rate we would have incurred to finance the funds necessary to purchase the leased asset and is based on information available at the lease commencement date in determining the present value of lease payments.

The components of lease expense, a portion of which is capitalized, were as follows:

	Year ended December 31, 2020									
In thousands		NW Natural		Other (NW Holdings)	NW Holdings					
Operating lease expense	\$	4,381	\$	125	\$	4,506				
Short-term lease expense	\$	1,010	\$	_	\$	1,010				
		Ye	ar end	ded December 31, 20	19					
In thousands		NW Natural		Other (NW Holdings)		NW Holdings				
Operating lease expense	\$	4,620	\$	191	\$	4,811				
Short-term lease expense	\$	1,146	\$		\$	1,146				

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Supplemental balance sheet information related to operating leases as of December 31, 2020 is as follows:

In thousands		NW Holdings		
Operating lease right of use assets	\$	77,328	\$ 118	\$ 77,446
Operating lease liabilities - current liabilities	\$	1,054	\$ 51	\$ 1,105
Operating lease liabilities - non-current liabilities		80,559	62	80,621
Total operating lease liabilities	\$	81,613	\$ 113	\$ 81,726

Supplemental balance sheet information related to operating leases as of December 31, 2019 is as follows:

In thousands	NW Natural	(NV	Otner / Holdings)	NW Holdings		
Operating lease right of use assets	\$ 2,760	\$	190	\$ 2,950		
Operating lease liabilities - current liabilities	\$ 1,979	\$	122	\$ 2,101		
Operating lease liabilities - non-current liabilities	772		69	841		
Total operating lease liabilities	\$ 2,751	\$	191	\$ 2,942		

The weighted-average remaining lease terms and weighted-average discount rates for the operating leases at NW Natural were as follows:

	2020	2019
Weighted-average remaining lease term (years)	19.2	1.0
Weighted-average discount rate	7.23 %	3.98 %

Commencement of Significant Lease

NW Natural commenced a 20-year operating lease agreement in March 2020 for a new corporate operations center in Portland, Oregon. Total estimated base rent payments over the life of the lease are approximately \$159.4 million. There is an option to extend the term of the lease for two additional periods of seven years.

There is a material timing difference between the minimum lease payments and expense recognition as calculated under operating lease accounting rules. OPUC issued an order allowing us to align our expense recognition with cash payments for ratemaking purposes. We recorded the difference between the minimum lease payments and the aggregate of the imputed interest on the finance lease obligation and amortization of the right-of-use asset as a regulatory asset on our balance sheet. The balance of the regulatory asset as of December 31, 2020 was \$4.2 million.

Maturities of operating lease liabilities at December 31, 2020 were as follows:

In thousands	 NW Natural	Otl (NW H	ner oldings)	NW Holdings
2021	\$ 6,760	\$	52	\$ 6,812
2022	6,849		67	6,916
2023	6,986		_	6,986
2024	7,150		_	7,150
2025	7,185		_	7,185
Thereafter	123,784		_	123,784
Total lease payments	158,714		119	158,833
Less: imputed interest	77,101		6	77,107
Total lease obligations	81,613		113	81,726
Less: current obligations	1,054		51	1,105
Long-term lease obligations	\$ 80,559	\$	62	\$ 80,621

As of December 31, 2020, finance lease liabilities with maturities of less than one year were \$0.7 million at NW Natural.

Cash Flow Information

Supplemental cash flow information related to leases was as follows:

	Year ended December 31, 2020					
In thousands	N'	W Natural		Other (NW Holdings)		NW Holdings
Cash paid for amounts included in the measurement of lease liabilities						
Operating cash flows from operating leases	\$	4,466	\$	131	\$	4,597
Finance cash flows from finance leases	\$	835	\$		\$	835
Right of use assets obtained in exchange for lease obligations						
Operating leases	\$	78,539	\$	51	\$	78,590
Finance leases	\$	1,386	\$	_	\$	1,386
	Year ended December 31, 2019					9
				Other		
In thousands	N۱	∧ Natural		(NW Holdings)		NW Holdings
Cash paid for amounts included in the measurement of lease liabilities	N	N Natural	-A-1	(NW Holdings)		NW Holdings
	<u>N\</u>	N Natural 4,447	\$	(NVV Holdings)	\$	NW Holdings 4,629
Cash paid for amounts included in the measurement of lease liabilities	\$ \$		\$		\$	
Cash paid for amounts included in the measurement of lease liabilities Operating cash flows from operating leases	\$	4,447	-		-	4,629
Cash paid for amounts included in the measurement of lease liabilities Operating cash flows from operating leases Finance cash flows from finance leases	\$	4,447	\$	182	-	4,629

Finance Leases

NW Natural also leases building storage spaces for use as a gas meter room in order to provide natural gas to multifamily or mixed use developments. These contracts are accounted for as finance leases and typically involve a one-time upfront payment with no remaining liability. The right of use asset for finance leases was \$1.8 million and \$0.5 million at December 31, 2020 and 2019, respectively.

8. STOCK-BASED COMPENSATION

Stock-based compensation plans are designed to promote stock ownership in NW Holdings by employees and officers of NW Holdings and its affiliates. These compensation plans include a Long Term Incentive Plan (LTIP), an ESPP, and a Restated SOP.

Long Term Incentive Plan

The LTIP is intended to provide a flexible, competitive compensation program for eligible officers and key employees. Under the LTIP, shares of NW Holdings common stock are authorized for equity incentive grants in the form of stock, restricted stock, restricted stock units, stock options, or performance shares. An aggregate of 1,100,000 shares were authorized for issuance as of December 31, 2020. Shares awarded under the LTIP may be purchased on the open market or issued as original shares.

Of the 1,100,000 shares of common stock authorized for LTIP awards at December 31, 2020, there were 435,758 shares available for issuance under any type of award. This assumes market, performance, and service-based grants currently outstanding are awarded at the target level. There were no outstanding grants of restricted stock or stock options under the LTIP at December 31, 2020 or 2019. The LTIP stock awards are compensatory awards for which compensation expense is based on the fair value of stock awards, with expense being recognized over the performance and vesting period of the outstanding awards. Forfeitures are recognized as they occur.

Performance Shares

LTIP performance shares incorporate a combination of market, performance, and service-based factors. The following table summarizes performance share expense information:

Dollars in thousands	Shares ⁽¹⁾	E	Expense During Award Year ⁽²⁾	7	Total Expense for Award
Estimated award:			7		
2018-2020 grant ⁽³⁾	31,600	\$	2,137	\$	2,137
Actual award:					
2017-2019 grant	41,537	\$	572	\$	1,971
2016-2018 grant	28,218	\$	598	\$	1,413

⁽¹⁾ In addition to common stock shares, a participant also receives a dividend equivalent cash payment equal to the number of shares of common stock received on the award payout multiplied by the aggregate cash dividends paid per share during the performance period.

- (2) Amount represents the expense recognized in the third year of the vesting period noted above. For the 2018-2020 grant, mutual understanding of the award's key terms was established in the third year of the vesting period, triggering full expense recognition in 2020.
- This represents the estimated number of shares to be awarded as of December 31, 2020 as certain performance share measures have been achieved. Amounts are subject to change with final payout amounts authorized by the Board of Directors in February 2021.

The aggregate number of performance shares granted and outstanding at the target and maximum levels were as follows:

Dollars in thousands	Performance Share Awards Outstanding			2020
Performance Period	Target	Target Maximum		
2018-20	31,825	63,650	\$	2,137
2019-21	_			
2020-22				
Total	31,825	63,650	\$	2,137

Performance share awards are based on the achievement of a three-year ROIC threshold that must be met and a cumulative EPS factor, which can be modified by a TSR factor relative to the performance of the Russell 2500 Utilities Index over the three-year performance period. The performance period allows for one of the performance factors to remain variable until the first quarter of the award period. As the performance factor will not be approved until the first quarter of 2021 and 2022, there is not a mutual understanding of the awards' key terms and conditions between NW Natural and the participants as of December 31, 2020, and therefore, no expense was recognized for the 2019-2021 and 2020-2022 performance period. NW Natural will calculate the grant date fair value and recognize expense once the final performance factor has been approved. If the target is achieved for the 2019-2021 and 2020-2022 awards, NW Holdings would grant for accounting purposes 35,170 and 31,830 shares in the first quarter of 2021 and 2022, respectively.

Compensation expense is recognized in accordance with accounting standards for stock-based compensation and calculated based on performance levels achieved and an estimated fair value using the Monte-Carlo method. Due to there not being a mutual understanding of the 2019-2021 and 2020-2022 awards' key terms and conditions as noted above, the grant date fair value has not yet been determined and no non-vested shares existed at December 31, 2020. The weighted-average grant date fair value of non-vested shares associated with the 2018-2020 awards was \$78.96 per share at December 31, 2020. The weighted-average grant date fair value of shares vested during the year was \$78.96 per share and there were no performance shares granted during the year and no unrecognized compensation expense for accounting purposes as of December 31, 2020.

Restricted Stock Units

In 2012, RSUs began being granted under the LTIP instead of stock options under the Restated SOP. Generally, the RSUs awarded are forfeitable and include a performance-based threshold as well as a vesting period of four years from the grant date. Upon vesting, the RSU holder is issued one share of common stock plus a cash payment equal to the total amount of dividends paid per share between the grant date and vesting date of that portion of the RSU. The fair value of an RSU is equal to the closing market price of NW Holdings' common stock on the grant date. During 2020, total RSU expense was \$2.0 million compared to \$1.8 million in 2019 and \$1.8 million in 2018. As of December 31, 2020, there was \$3.7 million of unrecognized compensation cost from grants of RSUs, which is expected to be recognized over a period extending through 2025.

Information regarding the RSU activity is summarized as follows:

	Number of RSUs	Weighted - Average Price Per RSU
Nonvested, December 31, 2017	84,522 \$	53.90
Granted	32,450	57.59
Vested	(32,689)	50.75
Forfeited	(1,603)	59.95
Nonvested, December 31, 2018	82,680	56.47
Granted	36,018	65.29
Vested	(35,778)	54.22
Forfeited	(3,187)	63.89
Nonvested, December 31, 2019	79,733	61.17
Granted	33,594	55.58
Vested	(29,273)	59.29
Forfeited	(1,590)	69.71
Nonvested, December 31, 2020	82,464 \$	59.40

Restated Stock Option Plan

The NW Natural Restated SOP was terminated for new option grants in 2012; however, options granted before the plan terminated remain outstanding until the earlier of their expiration, forfeiture, or exercise and are now exercisable for shares of NW Holdings common stock. Any new grants of stock options will be made under NW Holdings' LTIP, however, no option grants have been awarded since 2012 and all stock options were vested as of December 31, 2015.

Options under the Restated SOP were granted to officers and key employees designated by a committee of the Board of Directors. All options were granted at an option price equal to the closing market price on the date of grant and may be exercised for a period of up to 10 years and seven days from the date of grant. Option holders may exchange shares they have owned for at least six months, valued at the current market price, to purchase shares at the option price.

Information regarding the Restated SOP activity is summarized as follows:

	Option Shares	Weighted - Average Price Per Share	Intrinsic Value (In millions)
Balance outstanding and exercisable, December 31, 2017	91,688	\$ 44.43	\$ 1.4
Exercised	(35,450)	43.61	8.0
Forfeited	(300)	43.29	n/a
Balance outstanding and exercisable, December 31, 2018	55,938	44.96	0.9
Exercised	(45,000)	44.79	1.0
Forfeited	_		n/a
Balance outstanding and exercisable, December 31, 2019	10,938	45.67	0.3
Exercised	(1,500)	45.24	
Expired	_	_	n/a
Balance outstanding and exercisable, December 31, 2020	9,438	\$ 45.74	\$ _

The weighted-average remaining life of options exercisable and outstanding at December 31, 2020 was 0.17 years.

Employee Stock Purchase Plan

NW Holdings' ESPP allows employees of NW Holdings, NW Natural and certain designated subsidiaries to purchase common stock at 85% of the closing price on the trading day immediately preceding the initial offering date, which is set annually. For the 2020-2021 ESPP period, each eligible employee may purchase up to \$21,232 worth of stock through payroll deductions over a period defined by the Board of Directors, with shares issued at the end of the subscription period. **Stock-Based Compensation Expense**

Stock-based compensation expense is recognized as operations and maintenance expense or is capitalized as part of construction overhead at the entity at which the award recipient is employed. The following table summarizes the NW Holdings' financial statement impact, substantially all of which was recorded at NW Natural, of stock-based compensation under the LTIP, Restated SOP and ESPP:

In thousands	2020	2019	2018
Operations and maintenance expense, for stock-based compensation	\$ 3,525	\$ 2,172	\$ 2,489
Income tax benefit	(933)	(575)	(659)
Net stock-based compensation effect on net income (loss)	2,592	1,597	1,830
Amounts capitalized for stock-based compensation	\$ 841	\$ 430	\$ 531

9. DEBT

Short-Term Debt

The primary source of short-term liquidity for NW Holdings is cash balances, dividends from its operating subsidiaries, in particular NW Natural, available cash from a multi-year credit facility, and short-term credit facilities it may enter into from time to time.

The primary source of short-term liquidity for NW Natural is from the sale of commercial paper, its multi-year credit facilities, and short-term credit facilities it may enter into from time to time. In addition to issuing commercial paper or bank loans to meet working capital requirements, including seasonal requirements to finance gas purchases and accounts receivable, short-term debt may also be used to temporarily fund capital requirements. For NW Natural, commercial paper and bank loans are periodically refinanced through the sale of long-term debt or equity contributions from NW Holdings. NW Natural's commercial paper is sold through two commercial banks under an issuing and paying agency agreement and is supported by one or more unsecured revolving credit facilities. See "Credit Agreements" below.

At December 31, 2020 and 2019, NW Holdings had short-term debt outstanding of \$304.5 million and \$149.1 million, respectively. The weighted average interest rate of NW Holdings' short-term debt outstanding at December 31, 2020 and 2019 was 0.5% and 2.0%, respectively. At December 31, 2020 and 2019, NW Natural had \$231.5 million and \$125.1 million of commercial paper outstanding, respectively. The weighted average interest rate of commercial paper outstanding at December 31, 2020 and 2019 was 0.4% and 2.0%, respectively.

The carrying cost of commercial paper approximates fair value using Level 2 inputs. See Note 2 for a description of the fair value hierarchy. At December 31, 2020, NW Natural's commercial paper had a maximum remaining maturity of 166 days and an average remaining maturity of 47 days.

Credit Agreements

NW Holdings

In October 2018, NW Holdings entered into a \$100.0 million credit agreement, with a feature that allows it to request increases in the total commitment amount, up to a maximum of \$150.0 million. The maturity date of the agreement is October 2, 2023, with available extensions of commitments for two additional one-year periods, subject to lender approval.

The NW Holdings credit agreement permits the issuance of letters of credit in an aggregate amount of up to \$40.0 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. The credit agreement requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at December 31, 2020 and 2019.

The agreement also requires NW Holdings to maintain debt ratings (which are defined by a formula using NW Natural's credit ratings in the event NW Holdings does not have a credit rating) with Standard & Poor's (S&P) and Moody's Investors Service, Inc. (Moody's) and notify the lenders of any change in its senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Holdings' debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreements are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreements when ratings are changed. NW Holdings does not currently maintain ratings with S&P or Moody's.

There was \$73.0 million and \$24.0 million of outstanding balances under the NW Holdings agreement at December 31, 2020 and 2019, respectively. No letters of credit were issued or outstanding under the NW Holdings agreement at December 31, 2020 and 2019. NW Holdings had a \$1.0 million letter of credit issued and outstanding, separate from the aforementioned credit agreement, at December 31, 2019 for the purposes of facilitating the Suncadia acquisition. This letter of credit was extinguished upon the close of the transaction in February 2020.

NW Natura

In October 2018, NW Natural entered into a multi-year credit agreement for unsecured revolving loans totaling \$300.0 million, with a feature that allows NW Natural to request increases in the total commitment amount, up to a maximum of \$450.0 million. The maturity date of the agreement is October 2, 2023 with available extensions of commitments for two additional one-year periods, subject to lender approval. The credit agreement permits the issuance of letters of credit in an aggregate amount of up to \$60.0 million. The principal amount of borrowings under the credit agreement is due and payable on the maturity date. There were no outstanding balances under NW Natural's credit agreement and no letters of credit issued or outstanding at December 31, 2020 and 2019.

NW Natural's credit agreement require NW Natural to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Natural was in compliance with this covenant at December 31, 2020 and 2019.

The credit agreement also requires NW Natural to maintain credit ratings with S&P and Moody's and notify the lenders of any change in NW Natural's senior unsecured debt ratings or senior secured debt ratings, as applicable, by such rating agencies. A change in NW Natural's debt ratings by S&P or Moody's is not an event of default, nor is the maintenance of a specific minimum level of debt rating a condition of drawing upon the credit agreement. Rather, interest rates on any loans outstanding under the credit agreement are tied to debt ratings and therefore, a change in the debt rating would increase or decrease the cost of any loans under the credit agreement when ratings are changed.

Long-Term Debt

NW Holdings

At December 31, 2020 and 2019, NW Holdings had long-term debt outstanding of \$955.4 million and \$881.1 million, respectively; which included \$7.5 million and \$5.7 million of unamortized debt issuance costs at NW Natural, respectively. NW Holdings' long-term debt is primarily comprised of debt held at its wholly-owned subsidiaries NW Natural (shown below) and NWN Water. Long-term debt at NWN Water is primarily comprised of a two-year term loan agreement for \$35.0 million, due in 2021. NWN Water entered into this agreement in June 2019 and the loan carried an interest rate of 0.70% at December 31, 2020, which is based upon the one-month LIBOR rate. The loan is guaranteed by NW Holdings and requires NW Holdings to maintain a consolidated indebtedness to total capitalization ratio of 70% or less. Failure to comply with this covenant would entitle the lenders to terminate their lending commitments and accelerate the maturity of all amounts outstanding. NW Holdings was in compliance with this covenant at December 31, 2020, with a consolidated indebtedness to total capitalization ratio of 58.6%.

NW Natural

NW Natural's issuance of FMBs, which includes NW Natural's medium-term notes, under the Mortgage and Deed of Trust (Mortgage) is limited by eligible property, adjusted net earnings, and other provisions of the Mortgage. The Mortgage constitutes a first mortgage lien on substantially all of NW Natural's NGD property.

Maturities and Outstanding Long-Term Debt

Retirement of long-term debt for each of the annual periods through December 31, 2025 and thereafter are as follows:

In thousands	Long-term debt maturities
NW Natural	
2021	\$ 60,000
2022	
2023	90,000
2024	
2025	30,000
Thereafter	744,700
Total	\$ 924,700

The following table presents debt outstanding as of December 31:

In thousands	2020)	2019
NW Natural			
First Mortgage Bonds:			
5.370% Series due 2020	\$	_	\$ 75,000
9.050% Series due 2021		10,000	10,000
3.176% Series due 2021		50,000	50,000
3.542% Series due 2023		50,000	50,000
5.620% Series due 2023		40,000	40,000
7.720% Series due 2025		20,000	20,000
6.520% Series due 2025		10,000	10,000
7.050% Series due 2026		20,000	20,000
3.211% Series due 2026		35,000	35,000
7.000% Series due 2027		20,000	20,000
2.822% Series due 2027		25,000	25,000
6.650% Series due 2027		19,700	19,700
6.650% Series due 2028		10,000	10,000
3.141% Series due 2029		50,000	50,000
7.740% Series due 2030		20,000	20,000
7.850% Series due 2030		10,000	10,00
5.820% Series due 2032		30,000	30,000
5.660% Series due 2033		40,000	40,000
5.250% Series due 2035		10,000	10,000
4.000% Series due 2042		50,000	50,000
4.136% Series due 2046		40,000	40,000
3.685% Series due 2047		75,000	75,000
4.110% Series due 2048		50,000	50,000
3.869% Series due 2049		90,000	90,00
3.600% Series due 2050		150,000	_
Long-term debt, gross		924,700	849,70
Less: current maturities		60,000	75,000
Total long-term debt	S	864,700	\$ 774,700

First Mortgage Bonds

In March 2020, NW Natural issued \$150.0 million of FMBs with an interest rate of 3.600%, due in 2050.

Retirements of Long-Term Debt

In February 2020, NW Natural retired \$75.0 million of FMBs with an interest rate of 5.370%.

Fair Value of Long-Term Debt

NW Holdings' and NW Natural's outstanding debt does not trade in active markets. The fair value of debt is estimated using natural gas distribution companies with similar credit ratings, terms, and remaining maturities to NW Holdings' and NW Natural's debt that actively trade in public markets. Substantially all outstanding debt at NW Holdings is comprised of NW Natural debt. These valuations are based on Level 2 inputs as defined in the fair value hierarchy. See Note 2.

The following table provides an estimate of the fair value of NW Holdings' long-term debt, including current maturities of long-term debt, using market prices in effect on the valuation date:

	 December 3	nber 31,		
In thousands	2020	2019		
Gross long-term debt	\$ 962,905 \$	886,776		
Unamortized debt issuance costs	 (7,480)	(5,712)		
Carrying amount	\$ 955,425 \$	881,064		
Estimated fair value ⁽¹⁾	\$ 1,136,311 \$	957,268		
(1)Estimated fair value does not include unamortized debt issuence costs				

The following table provides an estimate of the fair value of NW Natural's long-term debt, including current maturities of long-term debt, using market prices in effect on the valuation date:

	 December 31,	
In thousands	2020	2019
Gross long-term debt	\$ 924,700 \$	849,700
Unamortized debt issuance costs	 (7,480)	(5,712)
Carrying amount	\$ 917,220 \$	843,988
Estimated fair value(1)	\$ 1,097,348 \$	919,835

⁽¹⁾ Estimated fair value does not include unamortized debt issuance costs.

10. PENSION AND OTHER POSTRETIREMENT BENEFIT COSTS

NW Natural maintains a qualified non-contributory defined benefit pension plan (Pension Plan), non-qualified supplemental pension plans for eligible executive officers and other key employees, and other postretirement employee benefit plans. NW Natural also has a qualified defined contribution plan (Retirement K Savings Plan) for all eligible employees. The Pension Plan and Retirement K Savings Plan have plan assets, which are held in qualified trusts to fund retirement benefits.

Effective January 1, 2007 and 2010, the Pension Plan and postretirement benefits for non-union employees and union employees, respectively, were closed to new participants.

Non-union and union employees hired or re-hired after December 31, 2006 and 2009, respectively, and employees of NW Natural subsidiaries are provided an enhanced Retirement K Savings Plan benefit.

The following table provides a reconciliation of the changes in NW Natural's benefit obligations and fair value of plan assets, as applicable, for NW Natural's pension and other postretirement benefit plans, excluding the Retirement K Savings Plan, and a summary of the funded status and amounts recognized in NW Holdings' and NW Natural's consolidated balance sheets as of December 31:

			Postretiremen	t Ben	efit Plans		
	Pension	Ben	efits		Other E	3enefi	its
In thousands	 2020		2019		2020		2019
Reconciliation of change in benefit obligation:							
Obligation at January 1	\$ 515,668	\$	455,568	\$	29,568	\$	28,172
Service cost	6,614		6,308		258		244
Interest cost	16,161		18,683		905		1,117
Net actuarial loss	52,777		58,269		145		1,809
Benefits paid	(25,073)		(23,160)		(1,837)		(1,774)
Obligation at December 31	\$ 566,147	\$	515,668	\$	29,039	\$	29,568
Reconciliation of change in plan assets:							
Fair value of plan assets at January 1	\$ 313,051	\$	257,797	\$	_	\$	_
Actual return on plan assets	54,600		65,104		_		_
Employer contributions	31,354		13,310		1,837		1,774
Benefits paid	(25,073)		(23,160)		(1,837)		(1,774)
Fair value of plan assets at December 31	\$ 373,932	\$	313,051	\$	_	\$	
Funded status at December 31	\$ (192,215)	\$	(202,617)	\$	(29,039)	\$	(29,568)

At December 31, 2020, the net liability (benefit obligations less market value of plan assets) for the Pension Plan decreased \$13.1 million compared to 2019. The decrease in the net pension liability is primarily due to the \$60.9 million increase in plan assets, partially offset by the \$47.8 million increase to the pension benefit obligation. The liability for non-qualified plans increased \$2.7 million, and the liability for other postretirement benefits decreased \$0.5 million in 2020.

NW Natural's Pension Plan had a projected benefit obligation of \$525.1 million and \$477.3 million at December 31, 2020 and 2019, respectively, and fair values of plan assets of \$373.9 million and \$313.1 million, respectively. The plan had an accumulated benefit obligation of \$480.0 million and \$434.9 million at December 31, 2020 and 2019, respectively.

The following table presents amounts realized through regulatory assets or in other comprehensive loss (income) for the years ended December 31:

					Regulato	ry A	ssets					Other Cor	npre	ehensive Los	s (Ir	ncome)
		Pens	sion Benefit	s			Other	Pos	tretirement	Ben	efits		Per	nsion Benefit	s	
In thousands	 2020		2019		2018		2020		2019		2018	2020		2019		2018
Net actuarial loss (gain)	\$ 16,170	\$	10,424	\$	14,261	\$	145	\$	1,809	\$	(327)	\$ 3,873	\$	3,595	\$	(677)
Amortization of:																
Prior service (cost) credit	_		(7)		(42)		468		468		468			_		_
Actuarial loss	(18,627)		(14,057)		(18,761)		(607)		(369)		(448)	(923)		(648)		(1,052)
Total	\$ (2,457)	\$	(3,640)	\$	(4,542)	\$	6	\$	1,908	\$	(307)	\$ 2,950	\$	2,947	\$	(1,729)

The following table presents amounts recognized in regulatory assets and accumulated other comprehensive loss (AOCL) at December 31:

				Regulato		AOCL					
		Pension	Ben	efits	Other Postreti	reme	nt Benefits		efits		
In thousands		2020		2019	2020		2019	-	2020		2019
Prior service cost (credit)	\$		\$		\$ (801)	\$	(1,270)	\$		\$	_
Net actuarial loss		164,446		166,903	 7,167		7,629		17,434		14,484
Total	\$	164,446	\$	166,903	\$ 6,366	\$	6,359	\$	17,434	\$	14,484

The following table presents amounts recognized by NW Holdings and NW Natural in AOCL and the changes in AOCL related to NW Natural's non-qualified employee benefit plans:

	Year ended I	December 31,
In thousands	2020	2019
Beginning balance	\$ (10,733)	\$ (7,188)
Amounts reclassified to AOCL	(3,873)	(3,611)
Amounts reclassified from AOCL:		
Amortization of actuarial losses	923	648
Reclassification of stranded tax effects ⁽¹⁾		(1,366)
Total reclassifications before tax	(2,950)	(4,329)
Tax expense	781	784
Total reclassifications for the period	(2,169)	(3,545)
Ending balance	\$ (12,902)	\$ (10,733)

(1) Reclassification of \$1.4 million of income tax effects resulting from the TCJA from accumulated other comprehensive loss to retained earnings was made pursuant to the adoption of ASU 2018-02. See Note 2.

In 2021, NW Natural will amortize an estimated \$20.8 million from regulatory assets to net periodic benefit costs, consisting of \$21.3 million of actuarial losses offset by \$0.5 million of prior service credits.

The assumed discount rates for NW Natural's Pension Plan and other postretirement benefit plans were determined independently based on the FTSE Above Median Curve (discount rate curve), which uses high quality corporate bonds rated AA- or higher by S&P or Aa3 or higher by Moody's. The discount rate curve was applied to match the estimated cash flows in each of the plans to reflect the timing and amount of expected future benefit payments for these plans.

The assumed expected long-term rate of return on plan assets for the Pension Plan was developed using a weighted-average of the expected returns for the target asset portfolio. In developing the expected long-term rate of return assumption, consideration was given to the historical performance of each asset class in which the plan's assets are invested and the target asset allocation for plan assets.

The investment strategy and policies for Pension Plan assets held in the retirement trust fund were approved by the NW Natural Retirement Committee, which is composed of senior management with the assistance of an outside investment consultant. The policies set forth the guidelines and objectives governing the investment of plan assets. Plan assets are invested for total return with appropriate consideration for liquidity, portfolio risk, and return expectations. All investments are expected to satisfy the prudent investments rule under the Employee Retirement Income Security Act of 1974. The approved asset classes may include cash and short-term investments, fixed income, common stock and convertible securities, absolute and real return strategies, and real estate. Plan assets may be invested in separately managed accounts or in commingled or mutual funds. Investment re-balancing takes place periodically as needed, or when significant cash flows occur, in order to maintain the allocation of assets within the stated target ranges. The retirement trust fund is not currently invested in NW Holdings or NW Natural securities.

The following table presents the Pension Plan asset target allocation at December 31, 2020:

Asset Category	Target Allocation
Long government/credit	20 %
U.S. large cap equity	18
Non-U.S. equity	18
Absolute return strategies	12
U.S. small/mid cap equity	10
Real estate funds	7
High yield bonds	5
Emerging markets equity	5
Emerging market debt	5

Non-qualified supplemental defined benefit plan obligations were \$41.0 million and \$38.3 million at December 31, 2020 and 2019, respectively. These plans are not subject to regulatory deferral, and the changes in actuarial gains and losses, prior service costs, and transition assets or obligations are recognized in AOCL, net of tax until they are amortized as a component of net periodic benefit cost. These are unfunded, non-qualified plans with no plan assets; however, a significant portion of the obligations is indirectly funded with company and trust-owned life insurance and other assets.

Other postretirement benefit plans are unfunded plans but are subject to regulatory deferral. The actuarial gains and losses, prior service costs, and transition assets or obligations for these plans are recognized as a regulatory asset.

Net periodic benefit costs consist of service costs, interest costs, the expected returns on plan assets, and the amortization of gains and losses and prior service costs. The gains and losses are the sum of the actuarial and asset gains and losses throughout the year and are amortized over the average remaining service period of active participants. The asset gains and losses are based in part on a market-related valuation of assets. The market-related valuation reflects differences between expected returns and actual investment returns with the differences recognized over a two-year period from the year in which they occur, thereby reducing year-to-year net periodic benefit cost volatility.

The service cost component of net periodic benefit cost for NW Natural pension and other postretirement benefit plans is recognized in operations and maintenance expense in the consolidated statements of comprehensive income. The other non-service cost components are recognized in other income (expense), net in the consolidated statements of comprehensive income. The following table provides the components of net periodic benefit cost for NW Natural's pension and other postretirement benefit plans for the years ended December 31:

		Per	sion Benefits			Other Postretirement Benefits							
In thousands	 2020		2019	2019			2020	2019		2018			
Service cost	\$ 6,614	\$	6,308	\$	7,185	\$	258	\$ 244	\$	282			
Interest cost	16,161		18,684		16,991		905	1,116		964			
Expected return on plan assets	(21,865)		(20,854)		(20,639)								
Amortization of prior service cost (credit)	_		7		43		(468)	(468)		(468)			
Amortization of net actuarial loss	19,550		14,704		19,813		607	368		448			
Net periodic benefit cost	20,460		18,849		23,393		1,302	1,260		1,226			
Amount allocated to construction	(2,798)		(2,493)		(2,764)		(98)	(86)		(98)			
Amount deferred to regulatory balancing account	_		_		(10,314)		_	_		_			
Net periodic benefit cost charged to expense	17,662	Die G	16,356		10,315		1,204	1,174		1,128			
Regulatory pension disallowance	_		10,500		_		_	_		_			
Amortization of regulatory balancing account	7,131		16,841	BH									
Net amount charged to expense	\$ 24,793	\$	43,697	\$	10,315	\$	1,204	\$ 1,174	\$	1,128			

Net periodic benefit costs are reduced by amounts capitalized to NGD plant. In addition, a certain amount of net periodic benefit costs were recorded to the regulatory balancing account, representing net periodic pension expense for the Pension Plan above the amount set in rates, as approved by the OPUC, from 2011 through October 31, 2018.

In March 2019, the OPUC issued an order concluding the NW Natural 2018 Oregon rate case. The order allowed for the application of certain deferred revenues and tax benefits from the TCJA to reduce NW Natural's pension regulatory balancing account. A corresponding total of \$12.5 million in pension expenses were recognized in operating and maintenance expense and other income (expense), net in the consolidated statements of comprehensive income in the first quarter of 2019, with offsetting benefits recorded within operating revenues and income taxes. The order also directed NW Natural to reduce the balancing account by an additional \$10.5 million, of which \$3.9 million was charged to operations and maintenance expense and \$6.6 million was charged to other income (expense), net in the consolidated statements of comprehensive income. Amortization of the remaining amount of the balancing account began in the second quarter of 2019 in accordance with the order.

Total amortization of the regulatory balancing account of \$7.1 million and \$16.8 million was recognized in 2020 and 2019, respectively, of which \$2.6 million and \$6.2 million was charged to operations and maintenance expense, respectively, and \$4.5 million and \$10.6 million was charged to other income (expense), net, respectively. Total deferrals of the regulatory balancing account were \$10.3 million in 2018, of which \$2.4 million was deferred from operations and maintenance expense and \$7.9 million was deferred from other income (expense), net.

The following table provides the assumptions used in measuring periodic benefit costs and benefit obligations for the years ended December 31:

	F	Pension Benefits		Other P	īts	
	2020	2019	2018	2020	2019	2018
Assumptions for net periodic benefit cost:						
Weighted-average discount rate	3.18 %	4.19 %	3.51 %	3.11 %	4.13 %	3.44 %
Rate of increase in compensation	3.50 %	3.25-3.50%	3.25-4.50%	n/a	n/a	n/a
Expected long-term rate of return	7.25 %	7.50 %	7.50 %	n/a	n/a	n/a
Assumptions for year-end funded status:						
Weighted-average discount rate	2.36 %	3.16 %	4.20 %	2.34 %	3.11 %	4.13 %
Rate of increase in compensation ⁽¹⁾	3.50-6.50%	3.50-6.50%	3.25-4.50%	n/a	n/a	n/a
Expected long-term rate of return	7.25 %	7.25 %	7.50 %	n/a	n/a	n/a

⁽¹⁾ Rate assumption is 6.50% in 2020 and 3.50% thereafter. The 2020 compensation increase assumption was a result of the 2019 execution of a new collective bargaining agreement with unionized members of NW Natural effective December 1, 2019.

The assumed annual increase in health care cost trend rates used in measuring other postretirement benefits as of December 31, 2020 was 6.25%. These trend rates apply to both medical and prescription drugs. Medical costs and prescription drugs are assumed to decrease gradually each year to a rate of 4.75% by 2026.

Assumed health care cost trend rates can have a significant effect on the amounts reported for the health care plans; however, other postretirement benefit plans have a cap on the amount of costs reimbursable by NW Natural.

Mortality assumptions are reviewed annually and are updated for material changes as necessary. In 2020, mortality rate assumptions were updated from Pri-2012 mortality tables using scale MP-2019 to Pri-2012 mortality tables using scale MP-2020, which partially offset increases of the projected benefit obligation.

The following table provides information regarding employer contributions and benefit payments for NW Natural's Pension Plan, non-qualified pension plans, and other postretirement benefit plans for the years ended December 31, and estimated future contributions and payments:

In thousands	Pen	sion Benefits	Other Benefits
Employer Contributions:			
2019	\$	13,310 \$	1,774
2020		31,362	1,837
2021 (estimated)		22,465	1,654
Benefit Payments:			
2018		21,918	1,674
2019		23,160	1,774
2020		25,073	1,837
Estimated Future Benefit Payments:			
2021		24,609	1,654
2022		25,299	1,664
2023		26,083	1,694
2024		26,807	1,690
2025		27,399	1,678
2026-2030		149,287	7,815

Employer Contributions to Company-Sponsored Defined Benefit Pension Plan

NW Natural makes contributions to its Pension Plan based on actuarial assumptions and estimates, tax regulations, and funding requirements under federal law. The Pension Protection Act of 2006 (the Act) established funding requirements for defined benefit plans. The Act establishes a 100% funding target over seven years for plan years beginning after December 31, 2008. In July 2012, President Obama signed the Moving Ahead for Progress in the 21st Century Act (MAP-21) into law, which changed several provisions affecting pension plans, including temporary funding relief and Pension Benefit Guaranty Corporation (PBGC) premium increases, which shifts the level of minimum required contributions from the short-term to the long-term as well as increasing the operational costs of running a pension plan. MAP-21 established a new minimum and maximum corridor for segment rates based on a 25-year average of bond yields, which resulted in lower minimum contributions requirements than those under previous regulations. MAP-21, as amended, provides for the current corridor to be in effect through 2020 and subsequently broaden on an annual basis from 2021 through 2024.

The Pension Plan was underfunded by \$151.2 million at December 31, 2020. NW Natural made cash contributions totaling \$29.0 million to its Pension Plan for 2020. During 2021, NW Natural expects to make contributions of approximately \$20.1 million to this plan.

Multiemployer Pension Plan

In addition to the NW Natural-sponsored Pension Plan presented above, prior to 2014 NW Natural contributed to a multiemployer pension plan for its NGD union employees known as the Western States Office and Professional Employees International Union Pension Fund (Western States Plan). That plan's employer identification number is 94-6076144. Effective December 22, 2013, NW Natural withdrew from the plan, which was a noncash transaction. Vested participants will receive all benefits accrued through the date of withdrawal. As the plan was underfunded at the time of withdrawal, NW Natural was assessed a withdrawal liability of \$8.3 million, plus interest, which requires NW Natural to pay \$0.6 million each year to the plan for 20 years beginning in July 2014. The cost of the withdrawal liability was deferred to a regulatory account on the balance sheet.

Payments were \$0.7 million for 2020, and as of December 31, 2020 the liability balance was \$6.1 million. Contributions to the plan were \$0.6 million for each of 2019 and 2018, which was approximately 5% to 6% of the total contributions to the plan by all employer participants in those years.

Defined Contribution Plan

NW Natural's Retirement K Savings Plan is a qualified defined contribution plan under Internal Revenue Code Sections 401(a) and 401(k). NW Natural contributions totaled \$8.3 million, \$7.0 million, and \$6.5 million for 2020, 2019, and 2018, respectively. The Retirement K Savings Plan includes an Employee Stock Ownership Plan.

Deferred Compensation Plans

NW Natural's supplemental deferred compensation plans for eligible officers and senior managers are non-qualified plans. These plans are designed to enhance the retirement savings of employees and to assist them in strengthening their financial security by providing an incentive to save and invest regularly.

Fair Value

Below is a description of the valuation methodologies used for assets measured at fair value. In cases where NW Natural's Pension Plan is invested through a collective trust fund or mutual fund, the fund's market value is utilized. Market values for investments directly owned are also utilized.

U.S. EQUITY. These are non-published net asset value (NAV) assets. The non-published NAV assets consist of commingled trusts where NAV is not published but the investment can be readily disposed of at NAV or market value. The underlying investments in this asset class includes investments primarily in U.S. common stocks.

INTERNATIONAL/GLOBAL EQUITY. These are Level 1 and non-published NAV assets. The Level 1 asset is a mutual fund, and the non-published NAV assets consist of commingled trusts where the NAV/unit price is not published, but the investment can be readily disposed of at the NAV/unit price. The mutual funds has a readily determinable fair value, including a published NAV, and the commingled trusts are valued at unit price. This asset class includes investments primarily in foreign equity common stocks.

LIABILITY HEDGING. These are non-published NAV assets. The non-published NAV assets consist of commingled trusts where NAV is not published but the investment can be readily disposed of at NAV or market value. The underlying investments in this asset class include long duration fixed income investments primarily in U.S. treasuries, U.S. government agencies, municipal securities, mortgage-backed securities, asset-backed securities, as well as U.S. and international investment-grade corporate bonds.

OPPORTUNISTIC. These are non-published NAV assets consisting of commingled trusts where the investments can be readily disposed of at unit price, and a hedge fund of funds where the valuation is not published. This hedge fund of funds is winding down. Based on recent dispositions, NW Natural believes the remaining investment is fairly valued. The hedge fund of funds is valued at the weighted average value of investments in various hedge funds, which in turn are valued at the closing price of the underlying securities. This asset class includes investments in emerging market debt, leveraged loans, REITs, high yield bonds, a commodities fund, and a hedge fund of funds.

ABSOLUTE RETURN STRATEGY. This is a non-published NAV asset consisting of a hedge fund of funds where the valuation is not published. This hedge fund of funds is winding down. Based on recent dispositions, NW Natural believes the remaining investment is fairly valued. The hedge fund of funds is valued at the weighted average value of investments in various hedge funds, which in turn are valued at the closing price of the underlying securities. This asset class primarily includes investments in common stocks and fixed income securities.

CASH AND CASH EQUIVALENTS. These are Level 1 and non-published NAV assets. The Level 1 assets consist of cash in U.S. dollars, which can be readily disposed of at face value. The non-published NAV assets represent mutual funds without published NAV's but the investment can be readily disposed of at the NAV. The mutual funds are valued at the NAV of the shares held by the plan at the valuation date.

The preceding valuation methods may produce a fair value calculation that is not indicative of net realizable value or reflective of future fair values. Although we believe these valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain investments could result in a different fair value measurement at the reporting date.

Investment securities are exposed to various financial risks including interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of NW Natural's investment securities will occur in the near term and such changes could materially affect NW Natural's investment account balances and the amounts reported as plan assets available for benefit payments.

The following tables present the fair value of NW Natural's Pension Plan assets, including outstanding receivables and liabilities, of NW Natural's retirement trust fund:

In thousands	 		December 31,	202	0		
Investments	Level 1	Level 2	Level 3		No	on-Published NAV ⁽¹⁾	Total
US equity	\$	\$	\$	_	\$	117,764	\$ 117,764
International / Global equity	39,114	_		_		78,092	117,206
Liability hedging	_	_		_		111,041	111,041
Opportunistic		_		_		25,625	25,625
Cash and cash equivalents	_	_		_		2,295	2,295
Total investments	\$ 39,114	\$ 	\$	_	\$	334,817	\$ 373,931
			December 31,	201	9		

			De	cerriber 51, 201	9											
						Non-Published										
Investments	Level 1	Level 2		Level 3		NAV ⁽¹⁾		Total								
US equity	\$ _	\$, –	\$	_	\$	95,604	\$	95,604								
International / Global equity	33,168	_				74,337		107,505								
Liability hedging	_	_		_		93,028		93,028								
Opportunistic	_	_		_		9,864		9,864								
Cash and cash equivalents	_	_				7,049		7,049								
Total investments	\$ 33,168	\$ _	\$	_	\$	279,882	\$	313,050								

	Dec	ember 31,	
	2020		2019
Receivables:			
Accrued interest and dividend income	\$ 6,4	29 \$	3,243
Total receivables	6,4	29	3,243
Liabilities:			
Due to broker for securities purchased	6,4	29	3,242
Total investment in retirement trust	\$ 373,9	31 \$	313,051

⁽¹⁾ The fair value for these investments is determined using Net Asset Value per share (NAV) as of December 31, as a practical expedient, and therefore they are not classified within the fair value hierarchy. These investments primarily consist of institutional investment products, for which the NAV is generally not publicly available.

11. INCOME TAX

The following table provides a reconciliation between income taxes calculated at the statutory federal tax rate and the provision for income taxes reflected in the NW Holdings and NW Natural statements of comprehensive income or loss for December 31:

			W Natural	atural								
Dollars in thousands		2020	2019			2018	2020			2019		2018
Income taxes at federal statutory rate	\$	19,185	\$	16,370	\$	19,222	\$	19,248	\$	17,438	\$	19,434
Increase (decrease):												
State income tax, net of federal		6,389		4,422		4,927		6,385		4,716		4,982
Differences required to be flowed-through by regulatory commissions		(3,960)		(5,772)		1,302		(3,960)		(5,772)		1,302
Deferred tax rate differential post-TCJA		_		_		(76)				_		(75)
Regulatory settlement		_		(1,129)						(1,129)		
Other, net		(532)		(1,249)		(1,184)		(578)		(1,188)		(1,184)
Total provision for income taxes	\$	21,082	\$	12,642	\$	24,191	\$	21,095	\$	14,065	\$	24,459
Effective tax rate		23.1 %		16.2 %		26.4 %		23.0 %		16.9 %		26.4 %

The NW Holdings and NW Natural effective income tax rates for 2020 compared to 2019 changed primarily as a result of higher pre-tax income, the Oregon Corporate Activity Tax effective January 1, 2020, and amortization of excess deferred income tax benefits as ordered by regulatory commissions. The NW Holdings and NW Natural effective income tax rates for 2019 compared to 2018 changed primarily as a result of lower pre-tax income and amortization of excess deferred income tax benefits as ordered by regulatory commissions.

The provision for current and deferred income taxes consists of the following at December 31:

	NW Holdings										
In thousands		2020		2019		2018		2020	2019		2018
Current											
Federal	\$	10,106	\$	5,530	\$	8,953	\$	11,092	\$ 6,755	\$	9,127
State		5,971		1,667		3,785		5,357	2,101		3,846
Total current income taxes		16,077		7,197		12,738		16,449	8,856		12,973
Deferred											
Federal		2,888		1,515		9,001		1,921	1,340		9,025
State		2,117		3,930		2,452		2,725	3,869		2,461
Total deferred income taxes		5,005		5,445		11,453		4,646	5,209		11,486
Income tax provision	\$	21,082	\$	12,642	\$	24,191	\$	21,095	\$ 14,065	\$	24,459

The following table summarizes the tax effect of significant items comprising NW Holdings and NW Natural's deferred income tax balances recorded at December 31:

		NW Holdings						Natural		
In thousands		2020		2019		2020		2019		
Deferred tax liabilities:										
Plant and property	\$	297,078	\$	269,886	\$	290,105	\$	281,044		
Leases receivable		39,396		40,133		39,396		40,133		
Pension and postretirement obligations		25,066		22,635		25,066		22,635		
Income tax regulatory asset		17,104		19,382		17,104		19,382		
Lease right of use assets		21,613		778		21,596		731		
Other		_		748		_		407		
Total deferred income tax liabilities	\$	400,257	\$	353,562	\$	393,267	\$	364,332		
Deferred income tax assets:										
Income tax regulatory liability	\$	52,590	\$	54,259	\$	52,366	\$	54,259		
Lease liabilities		21,622		775		21,606		728		
Other intangible assets		4,485		2,723		<u> </u>		_		
Net operating losses and credits carried forward		861		162		80		48		
Other		1,407				1,181				
Total deferred income tax assets	\$	80,965	\$	57,919	\$	75,233	\$	55,035		
Total net deferred income tax liabilities	\$	319,292	\$	295,643	\$	318,034	\$	309,297		

At December 31, 2020 and 2019, regulatory income tax assets of \$14.6 million and \$16.9 million, respectively, were recorded by NW Natural, a portion of which is recorded in current assets. These regulatory income tax assets primarily represent future rate recovery of deferred tax liabilities, resulting from differences in NGD plant financial statement and tax bases and NGD plant removal costs, which were previously flowed through for rate making purposes and to take into account the additional future taxes, which will be generated by that recovery. These deferred tax liabilities, and the associated regulatory income tax assets, are currently being recovered through customer rates. At December 31, 2020 and 2019, regulatory income tax assets of \$2.5 million and \$2.5 million, respectively, were recorded by NW Natural, representing future recovery of deferred tax liabilities resulting from the equity portion of AFUDC. At December 31, 2020, regulatory income tax assets of \$1.7 million were recorded by NW Natural, representing future recovery of Oregon Corporate Activity tax that was deferred between January 1, 2020 and October 31, 2020. In October 2020, the OPUC issued an order providing for recovery of deferred Oregon CAT as well as CAT incurred prospectively beginning November 1, 2020

At December 31, 2020 and 2019, deferred tax assets of \$52.4 million and \$54.3 million, respectively, were recorded by NW Natural representing the future income tax benefit associated with the excess deferred income tax regulatory liability recorded as a result of the lower federal corporate income tax rate provided for by the TCJA. At December 31, 2020 and 2019, regulatory liability balances representing the benefit of the change in deferred taxes as a result of the TCJA of \$197.8 million and \$205.0 million, respectively, were recorded by NW Natural.

NW Natural's natural gas utility rates include an allowance to provide for the recovery of the anticipated provision for income taxes incurred as a result of providing regulated services. As a result of the 21 percent federal corporate income tax rate enacted in 2017, NW Natural recorded an additional regulatory liability in 2018 and 2019 reflecting the deferral of the estimated rate benefit for customers. The deferral period for Oregon ended on October 31, 2018 coincident with new rates beginning November 1, 2018. The deferral period for Washington ended on October 31, 2019 coincident with new rates beginning November 1, 2019. At December 31, 2019, a regulatory liability of \$1.7 million was recorded to reflect this estimated revenue deferral. The liability has been completely amortized to customers' benefit as of December 31, 2020.

NW Holdings and NW Natural assess the available positive and negative evidence to estimate if sufficient taxable income will be generated to utilize their respective existing deferred tax assets. Based upon this assessment, NW Holdings and NW Natural determined that it is more likely than not that all of their respective deferred tax assets recorded as of December 31, 2020 will be realized.

The Company estimates it has net operating loss (NOL) carryforwards of \$0.3 million for federal taxes and \$11.5 million for state taxes at December 31, 2020. We anticipate fully utilizing these NOL carryforward balances before they begin to expire in 2030 for federal and 2023 for state. Oregon Energy Incentive Program (EIP) credits, California alternative minimum tax (AMT) credits and Idaho investment tax credits (ITC) of \$0.1 million are also available. The EIP credits expires in 2025. The AMT credits do not expire. The ITC credits expire in 2033.

Uncertain tax positions are accounted for in accordance with accounting standards that require an assessment of the anticipated settlement outcome of material uncertain tax positions taken in a prior year, or planned to be taken in the current year. Until such positions are sustained, the uncertain tax benefits resulting from such positions would not be recognized. No reserves for uncertain tax positions were recorded as of December 31, 2020, 2019, or 2018.

The federal income tax returns for tax years 2016 and earlier are closed by statute. The IRS Compliance Assurance Process (CAP) examination of the 2017 and 2018 tax years have been completed. There were no material changes to these returns as filed. The 2019 and 2020 tax years are currently under IRS CAP examination. Our 2021 CAP application has been filed. Under the CAP program, NW Holdings and NW Natural work with the IRS to identify and resolve material tax matters before the tax return is filed each year.

As of December 31, 2020, income tax years 2016 through 2019 remain open for examination by the State of California. Income tax years 2018 and 2019 are open for examination by the State of Idaho. The State of Oregon examined the Oregon corporate income tax returns for tax years 2015, 2016, and 2017. No material changes occurred as a result of this examination. Tax years 2018 and 2019 are open for examination by the State of Oregon.

U.S. Federal TCJA Matters

On December 22, 2017, the TCJA was enacted and permanently lowered the U.S. federal corporate income tax rate to 21% from the previous maximum rate of 35%, effective for the tax year beginning January 1, 2018. The TCJA included specific provisions related to regulated public utilities that provide for the continued deductibility of interest expense and the elimination of bonus tax depreciation for property both acquired and placed into service on or after January 1, 2018.

Under pre-TCJA law, business interest was generally deductible in the determination of taxable income. The TCJA imposed a new limitation on the deductibility of net business interest expense in excess of approximately 30 percent of adjusted taxable income. Taxpayers operating in the trade or business of a regulated utility are excluded from these new interest expense limitations. Final U.S. Treasury Regulations became effective in November of 2020 which provide a de minimis rule whereby if 90 percent or more of a taxpayer's adjusted asset basis is allocable to regulated utility activities, then all of the business interest expense of that taxpayer is deemed to be excepted business interest of the regulated utility activity and is thereby not limited under the TCJA. As a result of the de minimis rule, NW Holdings and NW Natural anticipate that business interest expense will not be limited under the TCJA.

The TCJA generally provides for immediate full expensing for qualified property both acquired and placed in service after September 27, 2017 and before January 1, 2023. This would generally provide for accelerated cost recovery for capital investments. However, the definition of qualified property excludes property used in the trade or business of a regulated utility. Final U.S. Treasury Regulations were published in September of 2019 which clarified that bonus tax depreciation would not be available for regulated utility activity assets both acquired and placed in service by NW Holdings or NW Natural on or after January 1, 2018. Final U.S. Treasury Regulations released in September of 2020 clarified that long production period property acquired before September 27, 2017 continues to qualify for bonus depreciation in the year placed in service consistent with pre-TCJA law.

NW Natural previously filed applications with the OPUC and WUTC to defer the NGD net income tax benefits resulting from the TCJA. In March 2019, the OPUC issued an order addressing the regulatory amortization of the income tax benefits from the TCJA that NW Natural deferred for Oregon customers in December of 2017. Under the order, NW Natural will provide the benefit of these TCJA income tax deferrals to Oregon customers through ongoing annual credits to customer base rates and as a one-time recovery of a portion of the pension balancing account regulatory asset balance. On an annualized basis, it is anticipated that the income tax benefits from the provision of these TCJA benefits to customers should approximate the reduction to pretax income that occurs as a result of the customer base rate credits and one-time recovery of a portion of the pension balancing account.

In October 2019, the WUTC issued an order addressing the regulatory amortization of the income tax benefits from the TCJA that NW Natural deferred for Washington customers in December of 2017. Under the order, NW Natural provided deferred income tax benefits from the TCJA to customers through base rate credits beginning November 1, 2019.

12. PROPERTY, PLANT, AND EQUIPMENT

The following table sets forth the major classifications of property, plant, and equipment and accumulated depreciation of continuing operations at December 31:

In thousands	2020		2019
NW Natural:			
NGD plant in service	\$ 3,548,5	43 \$	3,302,049
NGD work in progress	63,9	01	84,965
Less: Accumulated depreciation	1,055,8	09	1,017,931
NGD plant, net	2,556,€	35	2,369,083
Other plant in service	66,3	00	63,513
Other construction work in progress	5,0	32	5,548
Less: Accumulated depreciation	19,6	37	18,662
Other plant, net	51,€	95	50,399
Total property, plant, and equipment	\$ 2,608,3	30 \$	2,419,482
Other (NW Holdings):			
Other plant in service	\$ 50,2	63 \$	20,671
Less: Accumulated depreciation	3,6	23	1,254
Other plant, net	46,4	40	19,417
NW Holdings:			
Total property, plant, and equipment	\$ 2,654,7	70 \$	2,438,899
NW Natural and NW Holdings:			
Capital expenditures in accrued liabilities	\$ 25,	29 \$	32,502

Accumulated depreciation does not include the accumulated provision for asset removal costs of \$428.0 million and \$401.9 million at December 31, 2020 and 2019, respectively. These accrued asset removal costs are reflected on the balance sheet as regulatory liabilities. See Note 2.

NW Holdings

Other plant balances include long-lived assets associated with water operations and non-regulated activities not held by NW Natural or its subsidiaries.

NW Natura

Other plant balances include long-lived assets not related to NGD and long-lived assets that may be used to support NGD operations.

The weighted average depreciation rate for NGD assets was 3.0% in 2020, 2.9% in 2019, and 2.8% in 2018. The weighted average depreciation rate for assets not related to NGD was 1.8% in 2020, 1.8% in 2019, and 2.2% in 2018.

In May 2019, NW Natural placed its North Mist gas storage expansion facility into service and commenced storage services to the facility's single customer, PGE. Under U.S. GAAP, this agreement is classified as a sales-type lease and qualifies for regulatory accounting deferral treatment. Accordingly, the project was de-recognized from property, plant and equipment upon lease commencement and the investment balance is presented net of the current portion of scheduled billings within assets under sales-type leases on the consolidated balance sheets. A total of \$146.0 million was de-recognized from plant on the lease commencement date. The facility is included within rate base for ratemaking purposes. See Note 7 for information regarding leases, including North Mist.

13. GAS RESERVES

NW Natural has invested \$188 million through the gas reserves program in the Jonah Field located in Wyoming as of December 31, 2020. Gas reserves are stated at cost, net of regulatory amortization, with the associated deferred tax benefits recorded as liabilities in the consolidated balance sheets. The investment in gas reserves provides long-term price protection for NGD customers through the original agreement with Encana Oil & Gas (USA) Inc. under which NW Natural invested \$178 million and the amended agreement with Jonah Energy LLC under which an additional \$10 million was invested.

NW Natural entered into the original agreements with Encana in 2011 under which NW Natural holds working interests in certain sections of the Jonah Field. Gas produced in these sections is sold at prevailing market prices, and revenues from such sales, net of associated operating and production costs and amortization, are credited to the NGD cost of gas. The cost of gas, including a carrying cost for the rate base investment, is included in the annual Oregon PGA filing, which allows NW Natural to recover these costs through customer rates. The investment under the original agreement, less accumulated amortization and deferred taxes, earns a rate of return.

In March 2014, NW Natural amended the original gas reserves agreement in order to facilitate Encana's proposed sale of its interest in the Jonah field to Jonah Energy. Under the amendment, NW Natural ended the drilling program with Encana, but increased its working interests in its assigned sections of the Jonah field. NW Natural also retained the right to invest in new wells with Jonah Energy. Under the amended agreement there is still the option to invest in additional wells on a well-by-well basis with drilling costs and resulting gas volumes shared at NW Natural's amended proportionate working interest for each well in which it invests. NW Natural elected to participate in some of the additional wells drilled in 2014, but has not participated in additional wells since 2014. However, there may be the opportunity to participate in more wells in the future.

Gas produced from the additional wells is included in the Oregon PGA at a fixed rate of \$0.4725 per therm, which approximates the 10-year hedge rate plus financing costs at the inception of the investment.

Gas reserves acted to hedge the cost of gas for approximately 5%, 5% and 6% of NGD gas supplies for the years ended December 31, 2020, 2019, and 2018, respectively.

The following table outlines NW Natural's net gas reserves investment at December 31:

In thousands	 2020		2019
Gas reserves, current	\$ 11,409	\$	15,278
Gas reserves, non-current	175,898		172,029
Less: Accumulated amortization	141,414	100	123,635
Total gas reserves ⁽¹⁾	45,893		63,672
Less: Deferred taxes on gas reserves	10,572		15,515
Net investment in gas reserves	\$ 35,321	\$	48,157

¹¹⁾ The net investment in additional wells included in total gas reserves was \$3.0 million and \$3.8 million at December 31, 2020 and 2019, respectively.

NW Natural's investment is included in NW Holdings' and NW Natural's consolidated balance sheets under gas reserves with the maximum loss exposure limited to the investment balance.

14. INVESTMENTS

Investments include financial investments in life insurance policies, and equity method investments in certain partnerships and limited liability companies. The following table summarizes other investments at December 31:

		NW F	loldings	NW Natural						
In thousands		2020		2019		2020		2019		
Investments in life insurance policies	\$	49,241	\$	49,837	\$	49,241	\$	49,837		
Investments in gas pipeline		_		13,472		- I				
Other		18		24		_		_		
Total other investments	\$	49,259	\$	63,333	\$	49,241	\$	49,837		

Investment in Life Insurance Policies

NW Natural has invested in key person life insurance contracts to provide an indirect funding vehicle for certain long-term employee and director benefit plan liabilities. The amount in the above table is reported at cash surrender value, net of policy loans.

Investments in Gas Pipeline

On August 6, 2020, NWN Energy completed the sale of 100% of its interest in Trail West Holdings, LLC (TWH) to an unrelated third party for a purchase price of \$14.0 million, \$7.0 million of which was paid upon closing the transaction, and \$7.0 million is to be paid upon the one-year anniversary of the close date. The completion of the sale resulted in an after-tax gain of approximately \$0.5 million.

TWH was a variable interest entity reported under equity method accounting through its sale. The investment in TWH did not meet the criteria to be classified as held for sale or discontinued operations. The investment balance in TWH was \$13.4 million at December 31, 2019.

15. BUSINESS COMBINATIONS

2020 Business Combinations

During the year ended December 31, 2020, NWN Water and its subsidiaries completed two significant acquisitions qualifying as business combinations. The aggregate fair value of the preliminary cash consideration transferred for these acquisitions was \$38.1 million, most of which was preliminarily allocated to property, plant and equipment and goodwill. These transactions align with NW Holdings' water sector strategy as it continues to expand its water services territories in the Pacific Northwest and beyond and included:

- Suncadia Water Company, LLC and Suncadia Environmental Company, LLC which were acquired by NWN Water of Washington on January 31, 2020, and
- T&W Water Service Company which was acquired by NWN Water of Texas on March 2, 2020.

As each of these acquisitions met the criteria of a business combination, a preliminary allocation of the consideration to the acquired net assets based on their estimated fair value as of the acquisition date was performed. The allocation for each of these business combinations is considered preliminary as of December 31, 2020, as facts and circumstances that existed as of the acquisition date may be discovered as we continue to integrate these businesses. In accordance with U.S. GAAP, the fair value determination involves management judgment in determining the significant estimates and assumptions used and was made using existing regulatory conditions for net assets associated with Suncadia Water Company, LLC and T&W Water Service Company. This allocation is considered preliminary as of December 31, 2020, as facts and circumstances that existed as of the acquisition date may be discovered as we continue to integrate the acquired businesses. As a result, subsequent adjustments to the preliminary valuation of tangible assets, contract assets and liabilities, tax positions, and goodwill may be required. Subsequent adjustments are not expected to be significant, and any such adjustments are expected to be completed within the one-year measurement period for all acquisitions described above.

Total preliminary goodwill of \$18.2 million was recognized from the acquisitions described above. No intangible assets aside from goodwill were acquired. The goodwill recognized is attributable to the regulated water utility service territories, experienced workforces, and the strategic benefits from both the water and wastewater utilities expected from growth in their service territories. The total amount of goodwill that is expected to be deductible for income tax purposes is approximately \$16.5 million. The acquisition costs associated with each business combination were expensed as incurred. The results of these business combinations were not material to the consolidated financial results of NW Holdings for the year ended December 31, 2020.

Other Business Combinations

During the year ended December 31, 2020, NWN Water completed three additional acquisitions, comprised of four water systems and one wastewater system, which qualified as business combinations. The aggregate fair value of the preliminary consideration transferred for these acquisitions was approximately \$1.5 million. These business combinations were not significant to NW Holdings' results of operations.

2019 Business Combinations

Sunrive

On May 31, 2019, NWN Water of Oregon, a wholly-owned indirect subsidiary of NW Holdings, completed the acquisition of Sunriver Water LLC and Sunriver Environmental LLC (collectively referred to as Sunriver), a privately-owned water utility and wastewater treatment company located in Sunriver, Oregon that serves approximately 9,400 connections. The acquisition-date fair value of the total consideration transferred, after closing adjustments, was approximately \$55.0 million in cash consideration. The transaction aligns with NW Holdings' water sector strategy as it continues to expand its water utility service territory in the Pacific Northwest and begins to pursue wastewater investment opportunities.

The Sunriver acquisition met the criteria of a business combination, and as such a preliminary allocation of the consideration to the acquired assets based on their estimated fair value as of the acquisition date was performed. In accordance with U.S. GAAP, the fair value determination was made using existing regulatory conditions for assets associated with Sunriver Water LLC as well as existing market conditions and standard valuation approaches for assets associated with Sunriver Environmental LLC in order to allocate value as determined by an independent third party assessor for certain assets, which involved the use of management judgment in determining the significant estimates and assumptions used by the assessor, with the remaining difference from the consideration transferred being recorded as goodwill. The acquisition costs were expensed as incurred.

Final goodwill of \$41.1 million was recognized from this acquisition. The goodwill recognized is attributable to Sunriver's regulated water utility service territory, experienced workforce, and the strategic benefits for both the water utility and wastewater services expected from growth in its service territory. No intangible assets aside from goodwill were acquired. The total amount of goodwill that is expected to be deductible for income tax purposes is approximately \$50.0 million.

The final purchase price for the acquisition has been allocated to the net assets acquired as of the acquisition date and is as follows:

In thousands	May 31, 2020	
Current assets	\$ 2	222
Property, plant and equipment	12,8	366
Goodwill	41,0	054
Deferred tax assets		828
Current liabilities		(22)
Total net assets acquired	\$ 54,9	948

The amount of Sunriver revenues included in NW Holdings' consolidated statements of comprehensive income was \$6.6 million for the year ended December 31, 2020. Earnings included in NW Holdings' consolidated statements of comprehensive income was \$1.6 million for the year ended December 31, 2020.

Other Business Combinations

During 2019, NWN Water completed three additional acquisitions qualifying as business combinations. The aggregate fair value of the preliminary consideration transferred for these acquisitions was approximately \$2.0 million. These business combinations were not significant to NW Holdings' results of operations.

Goodwill

NW Holdings allocates goodwill to reporting units based on the expected benefit from the business combination. We perform an annual impairment assessment of goodwill at the reporting unit level, or more frequently if events and circumstances indicate that goodwill might be impaired. An impairment loss is recognized if the carrying value of a reporting unit's goodwill exceeds its fair value.

As a result of all acquisitions completed, total goodwill was \$69.2 million as of December 31, 2020 and \$49.9 million as of December 31, 2019. The increase in the goodwill balance was primarily due to additions associated with our acquisitions in the water sector. All of our goodwill is related to water and wastewater acquisitions and is included in the other category for segment reporting purposes. The annual impairment assessment of goodwill occurs in the fourth quarter of each year. There have been no impairments recognized to date.

16. DERIVATIVE INSTRUMENTS

NW Natural enters into financial derivative contracts to hedge a portion of the NGD segment's natural gas sales requirements. These contracts include swaps, options, and combinations of option contracts. These derivative financial instruments are primarily used to manage commodity price variability. A small portion of NW Natural's derivative hedging strategy involves foreign currency forward contracts.

NW Natural enters into these financial derivatives, up to prescribed limits, primarily to hedge price variability related to term physical gas supply contracts as well as to hedge spot purchases of natural gas. The foreign currency forward contracts are used to hedge the fluctuation in foreign currency exchange rates for pipeline demand charges paid in Canadian dollars.

In the normal course of business, NW Natural also enters into indexed-price physical forward natural gas commodity purchase contracts and options to meet the requirements of NGD customers. These contracts qualify for regulatory deferral accounting treatment.

NW Natural also enters into exchange contracts related to the third-party asset management of its gas portfolio, some of which are derivatives that do not qualify for hedge accounting or only partial regulatory deferral, but are subject to NW Natural's regulatory sharing agreement. These derivatives are recognized in operating revenues, net of amounts shared with NGD customers.

Notional Amounts

The following table presents the absolute notional amounts related to open positions on NW Natural derivative instruments:

	At Decemb						
In thousands	2020						
Natural gas (in therms):							
Financial	784,400		651,540				
Physical	457,593		512,849				
Foreign exchange	\$ 5,896	\$	6,650				

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Purchased Gas Adjustment (PGA)

Derivatives entered into by NW Natural for the procurement or hedging of natural gas for future gas years generally receive regulatory deferral accounting treatment. In general, commodity hedging for the current gas year is completed prior to the start of the gas year, and hedge prices are reflected in the weighted-average cost of gas in the PGA filling. Rates and hedging approaches may vary between states due to different rate structures and mechanisms. In addition, as required with the Washington PGA filling, NW Natural incorporated and began implementing risk-responsive hedging strategies for its Washington gas supplies. Hedge contracts entered into after the start of the PGA period are subject to the PGA incentive sharing mechanism in Oregon. NW Natural entered the 2020-21 and 2019-20 gas years with forecasted sales volumes hedged at 53% and 52% in financial swap and option contracts, and 17% and 19% in physical gas supplies, respectively. Hedge contracts entered into prior to the PGA filling, in September 2020, were included in the PGA for the 2020-21 gas year. Hedge contracts entered into after the PGA filling, and related to subsequent gas years, may be included in future PGA fillings and qualify for regulatory deferral.

Unrealized and Realized Gain/Loss

The following table reflects the income statement presentation for the unrealized gains and losses from NW Natural's derivative instruments, which also represents all derivative instruments at NW Holdings:

	December 31, 2020					Decembe	r 31, 2019	
In thousands		Natural gas commodity Foreign exchange				Natural gas commodity	F	oreign exchange
Benefit (expense) to cost of gas	\$	7,342	\$	312	\$	9,863	\$	102
Operating revenues (expense)		(1,212)		_		(568)		_
Amounts deferred to regulatory accounts on balance sheet		(6,306)		(312)		(9,376)		(102)
Total gain (loss) in pre-tax earnings	\$	(176)	\$		\$	(81)	\$	

Unrealized Gain/Loss

Outstanding derivative instruments related to regulated NGD operations are deferred in accordance with regulatory accounting standards. The cost of foreign currency forward and natural gas derivative contracts are recognized immediately in the cost of gas; however, costs above or below the amount embedded in the current year PGA are subject to a regulatory deferral tariff and therefore, are recorded as a regulatory asset or liability.

Realized Gain/Loss

NW Natural realized net gains of \$2.3 million and \$17.9 million for the years ended December 31, 2020 and 2019, respectively, from the settlement of natural gas financial derivative contracts. Realized gains and losses offset the higher or lower cost of gas purchased, resulting in no incremental amounts to collect or refund to customers.

Credit Risk Management of Financial Derivatives Instruments

No collateral was posted with or by NW Natural counterparties as of December 31, 2020 or 2019. NW Natural attempts to minimize the potential exposure to collateral calls by diversifying counterparties and using credit limits to manage liquidity risk. Counterparties generally allow a certain credit limit threshold before requiring NW Natural to post collateral against unrealized loss positions. Given NW Natural's counterparty credit limits and portfolio diversification, it was not subject to collateral calls in 2020 or 2019. The collateral call exposure is set forth under credit support agreements, which generally contain credit limits. NW Natural could also be subject to collateral call exposure where it has agreed to provide adequate assurance, which is not specific as to the amount of credit limit allowed, but could potentially require additional collateral in the event of a material adverse change.

Based upon current commodity financial swap and option contracts outstanding, which reflect unrealized gains of \$13.1 million at December 31, 2020, we have estimated the level of collateral demands, with and without potential adequate assurance calls, using current gas prices and various credit downgrade rating scenarios for NW Natural as follows:

			Credit Rating Downgrade Scenarios						
In thousands	(Cur Ratings	rent) A+/A3	BBB+/Baa1		BBB/Baa2		BBB-/Baa3	Speculative	
With Adequate Assurance Calls	\$	- \$		\$	_	\$	_ s		51
Without Adequate Assurance Calls	\$	- \$	_	\$	_	\$	- \$;	51

NW Natural's financial derivative instruments are subject to master netting arrangements; however, they are presented on a gross basis in the consolidated balance sheets. NW Natural and its counterparties have the ability to set-off obligations to each other under specified circumstances. Such circumstances may include a defaulting party, a credit change due to a merger affecting either party, or any other termination event.

If netted by counterparty, NW Natural's physical and financial derivative position would result in an asset of \$14.1 million and a liability of \$1.3 million as of December 31, 2020, and an asset of \$9.4 million and a liability of \$1.9 million as of December 31, 2019.

NW Natural is exposed to derivative credit and liquidity risk primarily through securing fixed price natural gas commodity swaps with financial counterparties. NW Natural utilizes master netting arrangements through International Swaps and Derivatives Association contracts to minimize this risk along with collateral support agreements with counterparties based on their credit ratings. In certain cases, NW Natural requires guarantees or letters of credit from counterparties to meet its minimum credit requirement standards.

NW Natural's financial derivatives policy requires counterparties to have an investment-grade credit rating at the time the derivative instrument is entered into, and specifies limits on the contract amount and duration based on each counterparty's credit rating. NW Natural does not speculate with derivatives. Derivatives are used to hedge exposure above risk tolerance limits. Increases in market risk created by the use of derivatives is offset by the exposures they modify.

We actively monitor NW Natural's derivative credit exposure and place counterparties on hold for trading purposes or require other forms of credit assurance, such as letters of credit, cash collateral, or guarantees as circumstances warrant. The ongoing assessment of counterparty credit risk includes consideration of credit ratings, credit default swap spreads, bond market credit spreads, financial condition, government actions, and market news. A Monte Carlo simulation model is used to estimate the change in credit and liquidity risk from the volatility of natural gas prices. The results of the model are used to establish trading limits. NW Natural's outstanding financial derivatives at December 31, 2020 mature by October 31, 2022.

We could become materially exposed to credit risk with one or more of our counterparties if natural gas prices experience a significant increase. If a counterparty were to become insolvent or fail to perform on its obligations, we could suffer a material loss; however, we would expect such a loss to be eligible for regulatory deferral and rate recovery, subject to a prudence review. All of our existing counterparties currently have investment-grade credit ratings.

Fair Value

In accordance with fair value accounting, NW natural includes non-performance risk in calculating fair value adjustments. This includes a credit risk adjustment based on the credit spreads of NW Natural counterparties when in an unrealized gain position, or on NW Natural's own credit spread when it is in an unrealized loss position. The inputs in our valuation models include natural gas futures, volatility, credit default swap spreads, and interest rates. Additionally, the assessment of non-performance risk is generally derived from the credit default swap market and from bond market credit spreads. The impact of the credit risk adjustments for all outstanding derivatives was immaterial to the fair value calculation at December 31, 2020. As of December 31, 2020 and 2019, the net fair value was an asset of \$12.8 million and \$7.5 million, respectively, using significant other observable, or Level 2, inputs. No Level 3 inputs were used in our derivative valuations during the years ended December 31, 2020 and 2019.

17. COMMITMENTS AND CONTINGENCIES

Gas Purchase and Pipeline Capacity Purchase and Release Commitments

NW Natural has signed agreements providing for the reservation of firm pipeline capacity under which it is required to make fixed monthly payments for contracted capacity. The pricing component of the monthly payment is established, subject to change, by U.S. or Canadian regulatory bodies, or is established directly with private counterparties, as applicable. In addition, NW Natural has entered into long-term agreements to release firm pipeline capacity. NW Natural also enters into short-term and long-term gas purchase agreements.

The aggregate amounts of these agreements were as follows at December 31, 2020:

In thousands	Gas Purchase Agreements	Pipeline Capacity Purchase Agreements	Pipeline Capacity Release Agreements		
2021	\$ 83,475	\$ 77,748	\$	7,892	
2022		80,646		7,182	
2023		78,503		3,632	
2024	_	73,472		3,632	
2025		71,313		3,027	
Thereafter	_	516,291		_	
Total	83,475	897,973	CHANN	25,365	
Less: Amount representing interest	25	89,303		162	
Total at present value	\$ 83,450	\$ 808,670	\$	25,203	

Total fixed charges under capacity purchase agreements were \$81.8 million for 2020, \$82.2 million for 2019, and \$82.6 million for 2018, of which \$4.8 million, \$4.3 million, and \$4.3 million, respectively, related to capacity releases. In addition, per-unit charges are required to be paid based on the actual quantities shipped under the agreements. In certain take-or-pay purchase commitments, annual deficiencies may be offset by prepayments subject to recovery over a longer term if future purchases exceed the minimum annual requirements.

Leases

Refer to Note 7 for a discussion of lease commitments and contingencies.

Environmental Matters

Refer to Note 18 for a discussion of environmental commitments and contingencies.

18. ENVIRONMENTAL MATTERS

NW Natural owns, or previously owned, properties that may require environmental remediation or action. The range of loss for environmental liabilities is estimated based on current remediation technology, enacted laws and regulations, industry experience gained at similar sites, and an assessment of the probable level of involvement and financial condition of other potentially responsible parties (PRPs). When amounts are prudently expended related to site remediation of those sites described herein, NW Natural has recovery mechanisms in place to collect 96.7% of remediation costs allocable to Oregon customers and 3.3% of costs allocable to Washington customers.

These sites are subject to the remediation process prescribed by the Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (ODEQ). The process begins with a remedial investigation (RI) to determine the nature and extent of contamination and then a risk assessment (RA) to establish whether the contamination at the site poses unacceptable risks to humans and the environment. Next, a feasibility study (FS) or an engineering evaluation/cost analysis (EE/CA) evaluates various remedial alternatives. It is at this point in the process when NW Natural is able to estimate a range of remediation costs and record a reasonable potential remediation liability, or make an adjustment to the existing liability. From this study, the regulatory agency selects a remedy and issues a Record of Decision (ROD). After a ROD is issued, NW Natural would seek to negotiate a consent decree or consent judgment for designing and implementing the remedy. NW Natural would have the ability to further refine estimates of remediation liabilities at that time.

Remediation may include treatment of contaminated media such as sediment, soil and groundwater, removal and disposal of media, institutional controls such as legal restrictions on future property use, or natural recovery. Following construction of the remedy, the EPA and ODEQ also have requirements for ongoing maintenance, monitoring and other post-remediation care that may continue for many years. Where appropriate and reasonably known, NW Natural will provide for these costs in the remediation liabilities described below.

Due to the numerous uncertainties surrounding the course of environmental remediation and the preliminary nature of several site investigations, in some cases, NW Natural may not be able to reasonably estimate the high end of the range of possible loss. In those cases, the nature of the possible loss has been disclosed, as has the fact that the high end of the range cannot be reasonably estimated where a range of potential loss is available. Unless there is an estimate within the range of possible losses that is more likely than other cost estimates within that range, NW Natural records the liability at the low end of this range. It is likely changes in these estimates and ranges will occur throughout the remediation process for each of these sites due to the continued evaluation and clarification concerning responsibility, the complexity of environmental laws and regulations and the determination by regulators of remediation alternatives. In addition to remediation costs, NW Natural could also be subject to Natural Resource Damages (NRD) claims. NW Natural will assess the likelihood and probability of each claim and recognize a liability if deemed appropriate. Refer to "Other Portland Harbor" below.

Environmental Sites

The following table summarizes information regarding liabilities related to environmental sites, which are recorded in other current liabilities and other noncurrent liabilities in NW Natural's balance sheet at December 31:

	Current Liabilities					nt Lia	bilities
In thousands	 2020		2019	2020			2019
Portland Harbor site:		No.					
Gasco/Siltronic Sediments	\$ 7,596	\$	11,632	\$	43,725	\$	46,082
Other Portland Harbor	1,942		2,543		7,020		6,920
Gasco/Siltronic Upland site	14,887		14,203		40,250		43,616
Central Service Center site							_
Front Street site	3,816		10,847		1,107		_
Oregon Steel Mills					179		179
Total	\$ 28,241	\$	39,225	\$	92,281	\$	96,797

Portland Harbor Site

The Portland Harbor is an EPA listed Superfund site that is approximately 10 miles long on the Willamette River and is adjacent to NW Natural's Gasco uplands site. NW Natural is one of over one hundred PRPs, each jointly and severally liable, at the Superfund site. In January 2017, the EPA issued its Record of Decision, which selects the remedy for the clean-up of the Portland Harbor site (Portland Harbor ROD). The Portland Harbor ROD estimates the present value total cost at approximately \$1.05 billion with an accuracy between -30% and +50% of actual costs.

NW Natural's potential liability is a portion of the costs of the remedy for the entire Portland Harbor Superfund site. The cost of that remedy is expected to be allocated among more than one hundred PRPs. NW Natural is participating in a non-binding allocation process with the other PRPs in an effort to resolve its potential liability. The Portland Harbor ROD does not provide any additional clarification around allocation of costs among PRPs; accordingly, NW Natural has not modified any of the recorded liabilities at this time as a result of the issuance of the Portland Harbor ROD.

NW Natural manages its liability related to the Superfund site as two distinct remediation projects, the Gasco/Siltronic Sediments and Other Portland Harbor projects.

GASCO/SILTRONIC SEDIMENTS. In 2009, NW Natural and Siltronic Corporation entered into a separate Administrative Order on Consent with the EPA to evaluate and design specific remedies for sediments adjacent to the Gasco uplands and Siltronic uplands sites. NW Natural submitted a draft EE/CA to the EPA in May 2012 to provide the estimated cost of potential remedial alternatives for this site. In March 2020, NW Natural and the EPA amended the Administrative Order on Consent to include additional remedial design activities downstream of the Gasco sediments site and in the navigation channel. Siltronic Corporation is not a party to the amended order. At this time, the estimated costs for the various sediment remedy alternatives in the draft EE/CA for the additional studies and design work needed before the cleanup can occur, and for regulatory oversight throughout the cleanup range from \$51.3 million to \$350 million. NW Natural has recorded a liability of \$51.3 million for the Gasco sediment clean-up, which reflects the low end of the range. At this time, we believe sediments at the Gasco sediments site represent the largest portion of NW Natural's liability related to the Portland Harbor site discussed above.

OTHER PORTLAND HARBOR. While we believe liabilities associated with the Gasco/Siltronic sediments site represent NW Natural's largest exposure, there are other potential exposures associated with the Portland Harbor ROD, including NRD costs and harborwide remedial design and cleanup costs (including downstream petroleum contamination), for which allocations among the PRPs have not yet been determined.

NW Natural and other parties have signed a cooperative agreement with the Portland Harbor Natural Resource Trustee council to participate in a phased NRD assessment to estimate liabilities to support an early restoration-based settlement of NRD claims. One member of this Trustee council, the Yakama Nation, withdrew from the council in 2009, and in 2017, filed suit against NW Natural and 29 other parties seeking remedial costs and NRD assessment costs associated with the Portland Harbor site, set forth in the complaint. The complaint seeks recovery of alleged costs totaling \$0.3 million in connection with the selection of a remedial action for the Portland Harbor site as well as declaratory judgment for unspecified future remedial action costs and for costs to assess the injury, loss or destruction of natural resources resulting from the release of hazardous substances at and from the Portland Harbor site. The Yakama Nation has filed two amended complaints addressing certain pleading defects and dismissing the State of Oregon. On the motion of NW Natural and certain other defendants the federal court has stayed the case pending the outcome of the non-binding allocation proceeding discussed above. NW Natural has recorded a liability for NRD claims which is at the low end of the range of the potential liability; the high end of the range cannot be reasonably estimated at this time. The NRD liability is not included in the aforementioned range of costs provided in the Portland Harbor ROD.

Gasco Uplands Site

A predecessor of NW Natural, Portland Gas and Coke Company, owned a former gas manufacturing plant that was closed in 1958 (Gasco site) and is adjacent to the Portland Harbor site described above. The Gasco site has been under investigation by NW Natural for environmental contamination under the ODEQ Voluntary Cleanup Program (VCP). It is not included in the range of remedial costs for the Portland Harbor site noted above. The Gasco site is managed in two parts, the uplands portion and the groundwater source control action.

NW Natural submitted a revised Remedial Investigation Report for the uplands to ODEQ in May 2007. In March 2015, ODEQ approved Remedial Assessment (RA) for this site, enabling commencement of work on the FS in 2016. NW Natural has recognized a liability for the remediation of the uplands portion of the site which is at the low end of the range of potential liability; the high end of the range cannot be reasonably estimated at this time.

In October 2016, ODEQ and NW Natural agreed to amend their VCP agreement to incorporate a portion of the Siltronic property adjacent to the Gasco site formerly owned by Portland Gas & Coke between 1939 and 1960 into the Gasco RA and FS, excluding the uplands for Siltronic. Previously, NW Natural was conducting an investigation of manufactured gas plant constituents on the entire Siltronic uplands for ODEQ. Siltronic will be working with ODEQ directly on environmental impacts to the remainder of its property.

In September 2013, NW Natural completed construction of a groundwater source control system, including a water treatment station, at the Gasco site. NW Natural has estimated the cost associated with the ongoing operation of the system and has recognized a liability which is at the low end of the range of potential cost. NW Natural cannot estimate the high end of the range at this time due to the uncertainty associated with the duration of running the water treatment station, which is highly dependent on the remedy determined for both the upland portion as well as the final remedy for Gasco sediment exposure.

Other Sites

In addition to those sites above, NW Natural has environmental exposures at three other sites: Central Service Center, Front Street and Oregon Steel Mills. NW Natural may have exposure at other sites that have not been identified at this time. Due to the uncertainty of the design of remediation, regulation, timing of the remediation and in the case of the Oregon Steel Mills site, pending litigation, liabilities for each of these sites have been recognized at their respective low end of the range of potential liability; the high end of the range could not be reasonably estimated at this time.

CENTRAL SERVICE CENTER SITE. The investigative phase to characterize the existing site has been completed and determined by the Oregon Department of Environmental Quality (DEQ) to be sufficient to allow for the issuance of a Conditional No Further Action (cNFA). NW Natural is now conducting ongoing environmental monitoring activities through 2024 in order to meet the conditions which were included within the cNFA.

FRONT STREET SITE. The Front Street site was the former location of a gas manufacturing plant NW Natural operated (the former Portland Gas Manufacturing site, or PGM). At ODEQ's request, NW Natural conducted a sediment and source control investigation and provided findings to ODEQ. In December 2015, an FS on the former Portland Gas Manufacturing site was completed.

In July 2017, ODEQ issued the PGM ROD. The ROD specifies the selected remedy, which requires a combination of dredging, capping, treatment, and natural recovery. In addition, the selected remedy also requires institutional controls and long-term inspection and maintenance. In September 2020, NW Natural revised its estimate of the remaining cost to construct the remedy to be approximately \$7.1 million. Further, NW Natural has recognized an additional liability of \$4.9 million for munitions and design costs, regulatory and permitting issues, and post-construction work. Construction of the remedy began in early July 2020 and was completed in October 2020.

OREGON STEEL MILLS SITE, Refer to "Legal Proceedings," below.

Environmental Cost Deferral and Recovery

NW Natural has authorizations in Oregon and Washington to defer costs related to remediation of properties that are owned or were previously owned by NW Natural. In Oregon, a Site Remediation and Recovery Mechanism (SRRM) is currently in place to recover prudently incurred costs allocable to Oregon customers, subject to an earnings test. On October 21, 2019 the WUTC authorized an Environmental Cost Recovery Mechanism (ECRM) for recovery of prudently incurred costs allocable to Washington customers beginning November 1, 2019.

The following table presents information regarding the total regulatory asset deferred as of December 31:

In thousands	2	020	2019
Deferred costs and interest ⁽¹⁾	\$	44,516 \$	36,673
Accrued site liabilities ⁽²⁾		120,352	135,662
Insurance proceeds and interest		(69,253)	(79,949)
Total regulatory asset deferral ⁽¹⁾	\$	95,615 \$	92,386
Current regulatory assets ⁽³⁾	\$	4,992 \$	4,762
Long-term regulatory assets ⁽³⁾	\$	90,623 \$	87,624

- (1) Includes pre-review and post-review deferred costs, amounts currently in amortization, and interest, net of amounts collected from customers. In Oregon, NW Natural earns a carrying charge on cash amounts paid, whereas amounts accrued but not yet paid do not earn a carrying charge until expended. NW Natural also accrues a carrying charge on insurance proceeds for amounts owed to customers. In Washington, neither the cash paid nor insurance proceeds accrue a carrying charge.
- carrying charge on insurance proceeds for amounts owed to customers. In Washington, neither the cash paid nor insurance proceeds accrue a carrying charge.

 Excludes 3.3% of the Front Street site liability, or \$0.2 million in 2020 and \$0.4 million in 2019, as the OPUC only allows recovery of 96.7% of costs for those sites allocable to Oregon, including those that historically served only Oregon customers.
- (3) Environmental costs relate to specific sites approved for regulatory deferral by the OPUC and WUTC. In Oregon, NW Natural earns a carrying charge on cash amounts paid, whereas amounts accrued but not yet paid do not earn a carrying charge until expended. It also accrues a carrying charge on insurance proceeds for amounts owed to customers. In Washington, neither the cash paid nor insurance proceeds received accrue a carrying charge. Current environmental costs represent remediation costs management expects to collect from customers in the next 12 months. Amounts included in this estimate are still subject to a prudence and earnings test review by the OPUC and do not include the \$5.0 million tariff rider. The amounts allocable to Oregon are recoverable through NGD rates, subject to an earnings test. See "Oregon SRRM" below.

Oregon SRRM

Collections From Oregon Customers

Under the SRRM collection process, there are three types of deferred environmental remediation expense:

- Pre-review This class of costs represents remediation spend that has not yet been deemed prudent by the OPUC. Carrying costs on these remediation
 expenses are recorded at NW Natural's authorized cost of capital. NW Natural anticipates the prudence review for annual costs and approval of the
 earnings test prescribed by the OPUC to occur by the third quarter of the following year.
- Post-review This class of costs represents remediation spend that has been deemed prudent and allowed after applying the earnings test, but is not yet
 included in amortization. NW Natural earns a carrying cost on these amounts at a rate equal to the five-year treasury rate plus 100 basis points.
- Amortization This class of costs represents amounts included in current customer rates for collection and is generally calculated as one-fifth of the post-review deferred balance. NW Natural earns a carrying cost equal to the amortization rate determined annually by the OPUC, which approximates a short-term borrowing rate.

In addition to the collection amount noted above, an order issued by the OPUC provides for the annual collection of \$5.0 million from Oregon customers through a tariff rider. As NW Natural collects amounts from customers, it recognizes these collections as revenue and separately amortizes an equal and offsetting amount of its deferred regulatory asset balance through the environmental remediation operating expense line shown separately in the operating expense section of the income statement.

NW Natural received total environmental insurance proceeds of approximately \$150 million as a result of settlements from litigation that was dismissed in July 2014. Under a 2015 OPUC order which established the SRRM, one-third of the Oregon allocated proceeds were applied to costs deferred through 2012 with the remaining two-thirds applied to costs at a rate of \$5.0 million per year plus interest over the following 20 years. NW Natural accrues interest on the Oregon allocated insurance proceeds in the customer's favor at a rate equal to the five-year treasury rate plus 100 basis points. As of December 31, 2020, NW Natural has applied \$83.2 million of insurance proceeds to prudently incurred remediation costs allocated to Oregon.

Environmental Earnings Test

To the extent NW Natural earns at or below its authorized Return on Equity (ROE) as defined by the SRRM, remediation expenses and interest in excess of the \$5.0 million tariff rider and \$5.0 million insurance proceeds are recoverable through the SRRM. To the extent NW Natural earns more than its authorized ROE in a year, it is required to cover environmental expenses and interest on expenses greater than the \$10.0 million with those earnings that exceed its authorized ROE.

Washington ECRM

Washington Deferral

On October 21, 2019, the WUTC issued an order (WUTC Order) establishing the ECRM which allows for recovery of past deferred and future prudently incurred environmental remediation costs allocable to Washington customers through application of insurance proceeds and collections from customers. Environmental remediation expenses relating to sites that previously served both Oregon and Washington customers are allocated between states with Washington customers receiving 3.3% percent of the costs and insurance proceeds.

As a result of the WUTC Order, in the fourth quarter of 2019, approximately \$3.0 million of prudently incurred costs deferred from the initial deferral authorization in February 2011 through November 2018 were fully offset with insurance proceeds. In addition, approximately \$1.5 million of disallowed deferred environmental remediation expenses incurred prior to the deferral authorization were charged to environmental remediation expense.

Insurance proceeds will be fully applied to costs incurred between December 2018 and June 2019 once deemed prudent in future rate proceedings. Remaining insurance proceeds will be amortized over a 10.5 year period ending December 31, 2029. On an annual basis, NW Natural will file for a prudence determination and a request to amortize costs to the extent that remediation expenses exceed the insurance amortization. After insurance proceeds are fully amortized, if in a particular year the request to collect deferred amounts exceeds one percent of Washington normalized revenues, then the excess will be collected over three years with interest.

Legal Proceedings

NW Holdings is not currently party to any direct claims or litigation, though in the future it may be subject to claims and litigation arising in the ordinary course of business

NW Natural is subject to claims and litigation arising in the ordinary course of business, including the matters discussed above. Although the final outcome of any of these legal proceedings cannot be predicted with certainty, including the matter described below, NW Natural and NW Holdings do not expect that the ultimate disposition of any of these matters will have a material effect on financial condition, results of operations, or cash flows.

Oregon Steel Mills Site

In 2004, NW Natural was served with a third-party complaint by the Port of Portland (the Port) in a Multnomah County Circuit Court case, Oregon Steel Mills, Inc. v. The Port of Portland. The Port alleges that in the 1940s and 1950s petroleum wastes generated by NW Natural's predecessor, Portland Gas & Coke Company, and 10 other third-party defendants, were disposed of in a waste oil disposal facility operated by the United States or Shaver Transportation Company on property then owned by the Port and now owned by Evraz Oregon Steel Mills. The complaint seeks contribution for unspecified past remedial action costs incurred by the Port regarding the former waste oil disposal facility as well as a declaratory judgment allocating liability for future remedial action costs. No date has been set for trial. In August 2017, the case was stayed pending the outcome of the Portland Harbor allocation process or other mediation. Although the final outcome of this proceeding cannot be predicted with certainty, NW Natural and NW Holdings do not expect the ultimate disposition of this matter will have a material effect on NW Natural's or NW Holdings' financial condition, results of operations, or cash flows.

For additional information regarding other commitments and contingencies, see Note 17.

19. DISCONTINUED OPERATIONS

NW Holdings

On June 20, 2018, NWN Gas Storage, then a wholly-owned subsidiary of NW Natural, entered into a Purchase and Sale Agreement (the Agreement) that provided for the sale by NWN Gas Storage of all of the membership interests in Gill Ranch. Gill Ranch owns a 75% interest in the natural gas storage facility located near Fresno, California known as the Gill Ranch Gas Storage Facility.

On December 4, 2020, NWN Gas Storage closed the sale of all of the membership interests in Gill Ranch and received payment of the initial cash purchase price of \$13.5 million less the \$1.0 million deposit previously paid. Furthermore, additional payments to NWN Gas Storage may be made subject to a maximum amount of \$15.0 million in the aggregate (subject to a working capital adjustment) based on the economic performance of Gill Ranch for each full gas storage year (April 1 of one year through March 31 of the following year) occurring after the closing and the remaining portion of the 2020-2021 gas storage year and will continue until such time as the maximum amount has been paid. The fair value of this arrangement at the closing date was zero based on a discounted cash flow forecast. Subsequent changes in the fair value will be recorded in earnings. The completion of the sale resulted in an after-tax gain of \$5.9 million.

The following table presents the operating results of Gill Ranch and is presented net of tax on NW Holdings' consolidated statements of comprehensive income:

	NW Holdings Discontinued Operations						
In thousands, except per share data		2020	2019		2018		
Revenues	\$	10,193	\$ 5,3	01	\$	3,579	
Expenses							
Operations and maintenance		7,931	8,5	87		5,771	
General taxes		198	2	19		479	
Depreciation and amortization		391	4	23		430	
Other expenses and interest		848	9	31		609	
Total expenses		9,368	10,1	60		7,289	
Income (loss) from discontinued operations		825	(4,8	59)		(3,710)	
Gain on sale of discontinued operations		8,027				_	
Income (loss) from discontinued operations before income tax		8,852	(4,8	59)		(3,710)	
Income tax expense (benefit) ⁽¹⁾		2,344	(1,2	83)		(968)	
Income (loss) from discontinued operations, net of tax	\$	6,508	\$ (3,5	76)	\$	(2,742)	

⁽¹⁾ Includes income tax expense of \$2.1 million related to the sale of Gill Ranch for the year ended December 31, 2020.

As a result of the disposition of the membership interests of Gill Ranch, there were no assets or liabilities classified as held for sale at December 31, 2020. The assets and liabilities of the discontinued operations classified as held for sale in the consolidated balance sheet at December 31, 2019 include the following:

		ngs Discontinued perations
In thousands		2019
Assets:		
Accounts receivable	5	333
Inventories		695
Other current assets		457
Property, plant, and equipment, net		13,284
Operating lease right of use asset		118
Other non-current assets		247
Total discontinued operations assets - current assets ⁽¹⁾	\$	15,134
Liabilities:		
Accounts payable	\$	1,250
Other current liabilities		848
Operating lease liabilities		116
Other non-current liabilities		11,495
Total discontinued operations liabilities - current liabilities (1)	\$	13,709

⁽¹⁾ The total assets and liabilities of Gill Ranch were classified as current because it was probable that the sale would be completed within one year.

NW Natural

As part of the holding company reorganization in October 2018, NWN Energy, NWN Gas Storage, Gill Ranch, NNG Financial, NWN Water, and NW Holdings, which were direct and indirect subsidiaries of NW Natural prior to the reorganization, are no longer subsidiaries of NW Natural. See Note 1 for additional information. As a result, NW Natural's financial statements reflect amounts related to these entities as discontinued operations for all periods presented. The expenses included in the results of discontinued operations are the direct operating expenses incurred by the entities that may be reasonably segregated from the costs of NW Natural's continuing operations.

The following table presents the operating results prior to the holding company reorganization effective October 1, 2018 of NWN Energy, NWN Gas Storage, Gill Ranch, NNG Financial, NWN Water, and NW Holdings, which were historically reported within the gas storage segment and other, and is presented net of tax on NW Natural's consolidated statements of comprehensive income:

	NW Natural Discontinued Operations
n thousands, except per share data	2018
Revenues	\$ 3,01
Expenses	
Operations and maintenance	4,15
General taxes	44
Depreciation and amortization	42
Other expenses and interest	34
Total expenses	5,36
Loss from discontinued operations before income tax	(2,34
Income tax benefit	(62
Loss from discontinued operations, net of tax	\$ (1,72

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF NORTHWEST NATURAL HOLDING COMPANY

NORTHWEST NATURAL HOLDING COMPANY

CONDENSED STATEMENTS OF COMPREHENSIVE INCOME (PARENT COMPANY ONLY)

In thousands	Year ended December 31, 2020	Year ended December 31, 2019	Inception through December 31, 2018
Operating expenses:			
Operations and maintenance	\$ 771	\$ 2,747	\$ 838
Total operating expenses	771	2,747	838
Loss from operations	(771)	(2,747)	(838)
Earnings from investment in subsidiaries, net of tax	78,450	64,328	36,469
Other income (expense), net	57	(22)	36
Interest expense, net	1,557	726	53
Income before income taxes	76,179	60,833	35,614
Income tax benefit	(602)	(902)	(225)
Net income	\$ 76,781	\$ 61,735	\$ 35,839

See Notes to Condensed Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONDENSED BALANCE SHEETS (PARENT COMPANY ONLY)

Assets: Cash and cash equivalents Receivables from affiliates 11,267 Receivables from affiliates 11,38 Receivables from affiliates 11,4738 Receivables from affiliates 12,22 Receivables from affiliates 13,228 Receivables from affiliates 13,245 Receivables from affiliates 13,245 Receivables from affiliates 13,245 Receivables from affiliates 14,240 Receivables from affiliates 12,400 Receivables from affiliates 12,912 Receivables f		As of December 31,						
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Total equity 892,290 867,389			Contract of the second of the					
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	Total liabilities and equity			895,862				

See Notes to Condensed Financial Statements

NORTHWEST NATURAL HOLDING COMPANY

CONDENSED STATEMENTS OF CASH FLOWS (PARENT COMPANY ONLY)

In thousands	ear ended cember 31, 2020	Year ended December 31, 2019	Inception through December 31, 2018
Operating activities:			
Net income	\$ 76,781	\$ 61,735	\$ 35,839
Adjustments to reconcile net income to cash used in operations:			
Equity in earnings of subsidiaries, net of tax	(78,450)	(64,328)	(36,469)
Cash dividends received from subsidiaries	55,387	53,439	_
Deferred income taxes	20	(198)	7
Other	65	66	15
Changes in assets and liabilities:			
Receivables, net	(12,788)	846	(585)
Income and other taxes	(7,451)	4,325	(9,034)
Accounts payable	8,809	(5,177)	9,304
Interest accrued	77	(32)	32
Other, net	(364)	(346)	(44)
Cash provided by (used in) operating activities	 42,086	50,330	(935)
Investing activities:			
Contributions to subsidiaries	(47,194)	(157,591)	(1,804)
Return of capital from subsidiaries	19,000	35,000	_
Cash used in investing activities	(28,194)	(122,591)	(1,804)
Financing activities:			
Proceeds from stock options exercised	68	2,015	_
Proceeds from common stock issued	_	92,956	_
Changes in other short-term debt, net	49,000	24,000	_
Cash dividend payments on common stock	(55,420)	(53,339)	(12,923)
Capital contributions	_	_	20,000
Other	3,608	2,737	(327)
Cash (used in) provided by financing activities	 (2,744)	68,369	6,750
Increase (decrease) in cash and cash equivalents	11,148	(3,892)	4,011
Cash and cash equivalents, beginning of period	119	4,011	_
Cash and cash equivalents, end of period	\$ 11,267	\$ 119	\$ 4,011

See Notes to Condensed Financial Statements

NOTES TO CONDENSED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION

NW Holdings is an energy services holding company that conducts substantially all of its business operations through its subsidiaries, particularly NW Natural. These condensed financial statements and related footnotes have been prepared in accordance with Rule 12-04, Schedule I of Regulation S-X. These financial statements, in which NW Holdings' subsidiaries have been included using the equity method, should be read in conjunction with the consolidated financial statements and notes thereto of NW Holdings included in Item 8 of this Form 10-K.

Equity earnings of subsidiaries including earnings from NW Natural were \$78.5 million, \$64.3 million, and \$36.5 million for the years ended December 31, 2020, 2019, and 2018 respectively.

There were \$74.4 million and \$88.4 million of cash dividends paid to NW Holdings from wholly-owned subsidiaries for the years ended December 31, 2020 and 2019, respectively, and none for the year ended December 31, 2018.

Condensed Statements of Cash Flows Correction

During 2020, NW Holdings identified that activities related to dividends received from subsidiaries had been reported as cash flows from financing activities and should have been presented as operating and investing activities. NW Holdings corrected the previously presented cash flows for dividends received from subsidiaries and in doing so, the statements of cash flows for the year ended December 31, 2019 was adjusted to decrease net cash flows used from financing activities by \$88.4 million, with a corresponding increase in net cash flows provided by operating and used in investing activities of \$53.4 million and \$35.0 million, respectively. NW Holdings has evaluated the effect of the misstatement, both qualitatively and quantitatively, and concluded that it did not have a material impact on, nor require amendment of, any previously filed condensed financial statements.

2. DEBT

For information concerning	a NW Holdings' debt obligations	see Note 9 to the consolidated fina	ncial statements included in Item	8 of this report
FOI INIOTHIAUON CONCERNING	a invv molulitus uebi obligations.	SEE NOTE S TO THE CONSOURATED III IA	iliciai statements iliciaded ili item	o or uno report.

NORTHWEST NATURAL HOLDING COMPANY

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

COLUMN A	COLUMN B		C	COLU	MN C		COLUMN D	COLUMN E
				Addi	tions		Deductions	
In thousands (year ended December 31)	Balance at beginn of period	ning	Charged to costs expenses	and	Ch	arged to other accounts	Net write-offs	Balance at end of period
2020								
Reserves deducted in balance sheet from assets to which they apply:								
Allowance for uncollectible accounts	\$ 6	73	\$ 8	890	\$	2,333	\$ 677	\$ 3,219
2019								
Reserves deducted in balance sheet from assets to which they apply:								
Allowance for uncollectible accounts	\$ 9	77	\$	450	\$	_	\$ 754	\$ 673
2018								
Reserves deducted in balance sheet from assets to which they apply:								
Allowance for uncollectible accounts	\$ 9	56	\$ (680	\$		\$ 659	\$ 977

NORTHWEST NATURAL GAS COMPANY

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

COLUMN A	co	LUMN B		COLU	MN	С		COLUMN D		COLUMN E
				Addi	tions			Deductions		
In thousands (year ended December 31)	Balance at beginning of period		Charged to costs and expenses		Charged to other accounts		Net write-offs		Balance at end period	
2020					ME		No.			
Reserves deducted in balance sheet from assets to which they apply:										
Allowance for uncollectible accounts	\$	672	\$	779	\$	2,333	\$	677	\$	3,107
2019										
Reserves deducted in balance sheet from assets to which they apply:										
Allowance for uncollectible accounts	\$	975	\$	450	\$		\$	753	\$	672
2018										CONTRACTOR OF STREET
Reserves deducted in balance sheet from assets to which they apply:										
Allowance for uncollectible accounts	\$	956	\$	678	\$		\$	659	\$	975

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

NW Holdings and NW Natural management, under the supervision and with the participation of the Chief Executive Officer and Chief Financial Officer, completed an evaluation of the effectiveness of the design and operation of disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the Exchange Act)). Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer of each registrant have concluded that, as of the end of the period covered by this report, disclosure controls and procedures were effective to ensure that information required to be disclosed by each such registrant and included in reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission (SEC) rules and forms and that such information is accumulated and communicated to management of each registrant, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control Over Financial Reporting

NW Holdings and NW Natural management are responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in the Exchange Act Rule 13a-15(f). There have been no changes in internal control over financial reporting that occurred during the quarter ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting for NW Holdings and NW Natural.

The statements contained in Exhibit 31.1, Exhibit 31.2, Exhibit 31.3, and Exhibit 31.4 should be considered in light of, and read together with, the information set forth in this Item 9(a).

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The "Information Concerning Nominees and Continuing Directors", "Delinquent Section 16(a) Reports" and "Corporate Governance" contained in NW Holdings' definitive Proxy Statement for the 2021 Annual Meeting of Shareholders is hereby incorporated by reference.

		EXECUTIVE OFFICERS
Name	Age at Dec. 31, 2020	Positions held during last five years ⁽¹⁾
David H. Anderson*	59	President and Chief Executive Officer ⁽²⁾ (2016-); Chief Operating Officer and President (2015-2016); Executive Vice President and Chief Operating Officer (2014-2015); Executive Vice President Operations and Regulation (2013-2014); Senior Vice President and Chief Financial Officer (2004-2013).
Frank H. Burkhartsmeyer*	56	Senior Vice President and Chief Financial Officer ⁽²⁾ (2017-); President and Chief Executive Officer of Renewables, Avangrid Renewables (2015-2017); Senior Vice President of Finance, Iberdrola Renewables Holdings, Inc. (2012-2015).
James R. Downing	51	Vice President and Chief Information Officer (2017-); Chief Information Officer, WorleyParsons (America's Division) (2016-2017); Executive Service Delivery Manager for SAP, British Petroleum (2011-2015).
Shawn M. Filippi*	48	Vice President, Chief Compliance Officer and Corporate Secretary ⁽²⁾ (2016-); Vice President an Corporate Secretary (2015-2016); Senior Legal Counsel (2011-2014); Assistant Corporate Secretary (2010-2014).
Kimberly A. Heiting	51	Senior Vice President, Operations and Chief Marketing Officer (2018-); Senior Vice President, Communications and Chief Marketing Officer (2018); Vice President, Communications and Chie Marketing Officer (2015-2018); Chief Marketing & Communications Officer (2013-2014); Chief Corporate Communications Officer (2011-2013).
Jon G. Huddleston	58	Vice President, Engineering and Utility Operations (2018-); Senior Director, Utility Operations (2014-2018); Director, Utility Operations (2013-2014); Process Director (2007-2013).
Justin B. Palfreyman	42	Vice President, Strategy and Business Development (2017-); President NW Natural Water (2018-); Vice President, Business Development (2016-2017); Director, Power, Energy and Infrastructure Group, Lazard, Freres & Co. (2009-2016).
Melinda B. Rogers	55	Vice President, Chief Human Resources and Diversity Officer (2018-); Senior Director of Human Resources (2018); Senior Manager, Organizational Effectiveness and Talent Acquisition (2015-2017); Senior Associate, Point B (2014-2015); Director, Executive Development Center, Willamette University (2011-2015).
MardiLyn Saathoff*	64	Senior Vice President, Regulation and General Counsel ⁽²⁾ (2016-); Senior Vice President and General Counsel (2015-2016); Vice President, Legal, Risk and Compliance (2013-2015); Deput General Counsel (2010-2013); Chief Governance Officer and Corporate Secretary (2008-2014).
David A. Weber	61	Vice President, Gas Supply and Utility Support Services (2019-); President and Chief Executive Officer, NW Natural Gas Storage, LLC and Gill Ranch Storage, LLC (2011-).
Kathryn M. Williams	45	Vice President, Public Affairs and Sustainability (2019-); Government and Community Affairs Director (2018-2019); State Affairs Manager, Port of Portland (2015-2018); Business and Rail Relations Manager, Port of Portland (2007-2015).
Brody J. Wilson*	41	Vice President, Chief Accounting Officer, Controller and Treasurer ⁽²⁾ (2017-); Chief Financial Officer (Interim), Treasurer, Chief Accounting Officer and Controller (2016-2017); Chief Accounting Officer, Controller and Assistant Treasurer (2016); Controller (2013-2015); Acting Controller (2013); Accounting Director (2012-2013).

DIRECTOR (NORTHWEST NATURAL GAS COMPANY ONLY)**				
Age at Name Dec. 31, 2020 Positions held during last five years ⁽¹⁾				
Steven E. Wynne**	68	Executive Vice President, Moda, Inc., a privately-held healthcare insurance company (2012-); Director, FLIR Systems, Inc. (1999-), Director, JELD-WEN Holding Inc. (2012-); Director, Pendleton Woolen Mills, Inc. (2013-); Director, Lone Rock Resources, Inc. (2016-); Director, Citifyd Inc. (2013-2019); Trustee, Willamette University (1999-); Trustee, Portland Center Stage (2012-2019); Executive Vice President, JELD-WEN, Inc. (2011-2012); President and Chief Executive Officer, SBI International, Ltd. (2004-2007); Partner, Ater Wynne LLP (2001-2002; 2003-2004); President and Chief Executive Officer, Adidas (1995-2000).		
		Mr. Wynne's senior management experience with a variety of companies, board service on a number of public and private companies and longstanding legal practice in the areas of corporate finance, securities and mergers and acquisitions qualify him to provide insight and guidance in the areas of corporate governance, strategic planning, enterprise risk management, finance and operations.		

Each executive officer serves successive annual terms; present terms end at the 2021 annual meeting. There are no family relationships among our executive officers, directors or any person chosen to become one of our officers or directors. NW Holdings and NW Natural have adopted a Code of Ethics (Code) applicable to all employees, officers, and directors that is available on our website at www.nwnaturalholdings.com. We intend to disclose on our website at www.nwnaturalholdings.com any amendments to the Code or waivers of the Code for executive officers and directors.

^{*} Executive Officer of Northwest Natural Holding Company and Northwest Natural Gas Company.

** Director of Northwest Natural Gas Company only All other directors of Northwest Natural Gas Company are also directors of Northwest Natural Holding Company, and information regarding all directors concurrently serving on the Board of Directors of Northwest Natural Holding Company will be incorporated by reference to our definitive Proxy Statement for the 2021 Annual Meeting of Shareholders.

Unless otherwise specified, all positions held at Northwest Natural Gas Company.
 Position held at Northwest Natural Holding Company (beginning March 2018) and Northwest Natural Gas Company.

ITEM 11. EXECUTIVE COMPENSATION

stock options at December 31, 2020.

The information concerning "Executive Compensation", "Report of the Organization and Executive Compensation Committee", and "Compensation Committee Interlocks and Insider Participation" contained in NW Holdings' definitive Proxy Statement for the 2021 Annual Meeting of Shareholders is hereby incorporated by reference. Information related to Executive Officers as of December 31, 2020 is reflected in Part III. Item 10, above.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

As of February 16, 2021, NW Holdings owned 100% of the outstanding common stock of NW Natural.

The following table sets forth information regarding compensation plans under which equity securities of NW Holdings are authorized for issuance as of December 31, 2020 (see Note 8 to the Consolidated Financial Statements):

	(a)		(b)	(c)
Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	0	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders:				
Long Term Incentive Plan (LTIP) (1)(2)	181,289		n/a	435,758
Restated Stock Option Plan	9,438	\$	45.74	
Employee Stock Purchase Plan	50,839	\$	37.78	153,084
Equity compensation plans not approved by security holders:				
Executive Deferred Compensation Plan (EDCP)(3)	953		n/a	n/a
Directors Deferred Compensation Plan (DDCP)(3)	41,215		n/a	n/a
Deferred Compensation Plan for Directors and Executives (DCP)(4)	213,721		n/a	n/a
Total	497,455			588,842

- Awards may be granted under the LTIP as Performance Share Awards, Restricted Stock Units, or stock options. Shares issued pursuant to Performance Share Awards and Restricted Stock Units under the LTIP do not include an exercise price, but are payable when the award criteria are satisfied. The number of shares shown in column (a) include 82,464 Restricted Stock Units and 98,825 Performance Share Awards, reflecting the number of shares to be issued as performance share awards under outstanding Performance Share Awards if target performance levels are achieved. If the maximum awards were paid pursuant to the Performance Share Awards outstanding at December 31, 2020, the number of shares shown in column (a) would increase by 98,825 shares, reflecting the maximum share award of 200% of target, and the number of shares shown in column (c) would decrease by the same amount of shares. No stock options or other types of award have been issued under the LTIP.
 The number of shares shown in column (c) includes shares that are available for future issuance under the LTIP as Restricted Stock Units, Performance Share Awards, or
- (3) Prior to January 1, 2005, deferred amounts were credited, at the participant's election, to either a "cash account" or a "stock account." If deferred amounts were credited to stock accounts, such accounts were credited with a number of shares of NW Natural (now NW Holdings) common stock based on the purchase price of the common stock on the next purchase date under our Dividend Reinvestment and Direct Stock Purchase Plan, and such accounts were credited with additional shares based on the deemed reinvestment of dividends. Cash accounts are credited quarterly with interest at a rate equal to Moody's Average Corporate Bond Yield plus two percentage points, subject to a 6% minimum rate. At the election of the participant, deferred balances in the stock accounts are payable after termination of Board service or employment in a lump sum, in installments over a period not to exceed 10 years in the case of the DDCP, or 15 years in the case of the EDCP, or in a combination of lump sum and installments. Amounts credited to stock accounts are payable solely in shares of common stock and cash for fractional shares, and amounts in the above table represent the aggregate number of shares credited to participant's stock accounts. We have contributed common stock to the trustee of the Umbrella Trusts such that the Umbrella Trusts hold approximately the number of shares of common stock equal to the number of shares credited to all participants' stock accounts.
- Effective January 1, 2005, the EDCP and DDCP were closed to new participants and replaced with the DCP. The DCP continues the basic provisions of the EDCP and DDCP under which deferred amounts are credited to either a "cash account" or a "stock account." Stock accounts represent a right to receive shares of NW Holdings common stock on a deferred basis, and such accounts are credited with additional shares based on the deemed reinvestment of dividends. Effective January 1, 2007, cash accounts are credited quarterly with interest at a rate equal to Moody's Average Corporate Bond Yield. Our obligation to pay deferred compensation in accordance with the terms of the DCP will generally become due on retirement, death, or other termination of service, and will be paid in a lump sum or in installments of five, 10, or 15 years as elected by the participant in accordance with the terms of the DCP. Amounts credited to stock accounts are payable solely in shares of common stock and cash for fractional shares, and amounts in the above table represent the aggregate number of shares credited to participants' stock accounts. We have contributed common stock to the trustee of the Supplemental Trust such that this trust holds approximately the number of common shares equal to the number of shares credited to all participants' stock accounts. The right of each participant in the DCP is that of a general, unsecured creditor of NW Natural.

The information captioned "Beneficial Ownership of Common Stock by Directors and Executive Officers" and "Security Ownership of Common Stock of Certain Beneficial Owners" contained in NW Holdings' definitive Proxy Statement for the 2021 Annual Meeting of Shareholders is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information captioned "Transactions with Related Persons" and "Corporate Governance" in NW Holdings' definitive Proxy Statement for the 2021 Annual Meeting of Shareholders is hereby incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

NW Holdings

The information captioned "2020 and 2019 Audit Firm Fees" in NW Holdings' definitive Proxy Statement for the 2021 Annual Meeting of Shareholders is hereby incorporated by reference.

NW Natural

The following table shows the fees and expenses of NW Natural, paid or accrued for the integrated audits of the consolidated financial statements and other services provided by NW Natural's independent registered public accounting firm, PricewaterhouseCoopers LLP, for fiscal years 2020 and 2019:

In thousands	2020		2019
Audit Fees	\$ 1	,273	\$ 1,222
Audit-Related Fees		31	31
Tax Fees		22	22
All Other Fees		3	3
Total	\$ 1	,329	\$ 1,278

AUDIT FEES. This category includes fees and expenses for services rendered for the integrated audit of the consolidated financial statements included in the Annual Report on Form 10-K and the review of the quarterly financial statements included in the Quarterly Reports on Form 10-Q. The integrated audit includes the review of our internal control over financial reporting in compliance with Section 404 of the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act). In addition, amounts include fees for services routinely provided by the auditor in connection with regulatory filings, including issuance of consents and comfort letters relating to the registration of Company securities and assistance with the review of documents filed with the SEC.

AUDIT-RELATED FEES. This category includes fees for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and internal control over financial reporting, including fees and expenses related to consultations for financial accounting and reporting, in addition to fees for EPA assurance letters.

TAX FEES. This category includes fees for tax compliance, and review services rendered for NW Natural's income tax returns.

ALL OTHER FEES. This category relates to services other than those described above. The amount reflects payments for accounting research tools in each of 2020 and 2019.

PRE-APPROVAL POLICY FOR AUDIT AND NON-AUDIT SERVICES. The Audit Committee of NW Natural approved or ratified 100 percent of 2020 and 2019 services for audit, audit-related, tax services and all other fees, including audit services relating to compliance with Section 404 of the Sarbanes-Oxley Act. The chair of the Audit Committee of NW Natural is authorized to pre-approve non-audit services between meetings of the Audit Committee and must report such approvals at the next Audit Committee meeting.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

- (a) The following documents are filed as part of this report:
 - 1. A list of all Financial Statements and Supplemental Schedules is incorporated by reference to Item 8.
 - 2. List of Exhibits filed:

Reference is made to the Exhibit Index commencing on page 148.

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ITEM 16. FORM 10-K SUMMARY	
None.	
C-17-1-18-18-18-18-18-18-18-18-18-18-18-18-1	146

NORTHWEST NATURAL HOLDING COMPANY NORTHWEST NATURAL GAS COMPANY

Exhibit Index to Annual Report on Form 10-K For the Fiscal Year Ended December 31, 2020

Exhibit N	Number Docu	ment
<u>*3a.</u>	Amended and Restated Articles of Incorporation dated October 1, 2018, File No. 1-38681).	of Northwest Natural Holding Company (incorporated by reference to Exhibit 3.1 to the Form 8-K
<u>3b.</u>	Amended and Restated Articles of Incorporation	of Northwest Natural Gas Company.
<u>*3c.</u>	Amended and Restated Bylaws of Northwest Nat 2020, File No. 1-38681).	ural Holding Company (incorporated by reference to Exhibit 3.1 to the Form 8-K filed April 7,
<u>*3d.</u>	Amended and Restated Bylaws of Northwest Nat File No. 1-15973).	ural Gas Company (incorporated by reference to Exhibit 3.2 to the Form 8-K filed April 7, 2020,
*4a.	(to whom Deutsche Bank Trust Company Americ copies of Supplemental Indentures Nos. 1 throug April 1, 1956, February 1, 1959, July 1, 1961, Jan 1975, July 1, 1981, June 1, 1985 and November No. 15 to the Mortgage and Deed of Trust, dated 17 and 18 to the Mortgage and Deed of Trust, da	It Natural Gas Company, dated as of July 1, 1946 (Mortgage and Deed of Trust), to Bankers Trust as is the successor), Trustee (incorporated by reference to Exhibit 7(j) in File No. 2-6494); and h 14 to the Mortgage and Deed of Trust, dated respectively, as of June 1, 1949, March 1, 1954, wary 1, 1964, March 1, 1966, December 1, 1969, April 1, 1971, January 1, 1975, December 1, 1, 1985 (incorporated by reference to Exhibit 4(d) in File No. 33-1929); Supplemental Indenture as of July 1, 1986 (filed as Exhibit 4(c) in File No. 33-24168); Supplemental Indentures Nos. 16, ted, respectively, as of November 1, 1988, October 1, 1989 and July 1, 1990 (incorporated by upplemental Indenture No. 19 to the Mortgage and Deed of Trust, dated as of June 1, 1991 do. 33-64014).
<u>*4b.</u>	Supplemental Indenture No. 20 to the Mortgage 10-K for year ended December 31, 1993, File No.	and Deed of Trust, dated as of June 1, 1993 (incorporated by reference to Exhibit 4a.(1) to Form 0-00994).
<u>*4c.</u>	Supplemental Indenture No. 21 to the Mortgage 8-K dated October 26, 2012, File No. 1-15973).	and Deed of Trust, dated as of October 15, 2012 (incorporated by reference to Exhibit 4.1 to Form
<u>*4d.</u>	Supplemental Indenture No. 22 to the Mortgage Form 10-Q for the guarter ended September 30,	and Deed of Trust, dated as of November 1, 2016 (incorporated by reference to Exhibit 4.1 to 2016, File No. 1-15973),
<u>*4e.</u>	Supplemental Indenture No. 23 to the Mortgage Form 8-K dated September 10, 2018, File No. 1-	and Deed of Trust, dated as of September 1, 2018 (incorporated by reference to Exhibit 4(a) to 15973).
*4f.		ween Northwest Natural Gas Company and Bankers Trust Company (to whom Deutsche Bank relating to Northwest Natural Gas Company's Unsecured Debt Securities (incorporated by
<u>*4g.</u>	Bank, N.A. as administrative agent and Bank of A	tmong Northwest Natural Holding Company and the lenders party thereto, with JPMorgan Chase tmerica, N.A., U.S. Bank National Association, and Wells Fargo Bank, National Association, as to Exhibit 4.1 to Form 8-K dated October 3, 2018, File No. 1-38681).
<u>*4h.</u>	Bank, N.A. as administrative agent and Bank of A	among Northwest Natural Gas Company and the lenders party thereto, with JPMorgan Chase merica, N.A., U.S. Bank National Association, and Wells Fargo Bank, National Association, as to Exhibit 4.1 to Form 8-K dated October 3, 2018, File No. 1-15973).
<u>*4i.</u>		nong NW Natural Water Company, LLC, Northwest Natural Holding Company, the lenders party agent (incorporated by reference to Exhibit 4.1 to the Form 10-Q for the quarter ended June 30,

<u>*4j.</u>	Credit Agreement, dated as of March 23, 2020, among Northwest Natural Gas Company, the lenders party thereto, and U.S. Bank National Association, as administrative agent (incorporated by reference to Exhibit 4.1 to the Form 8-K filed March 25, 2020, File No. 1-15973).
<u>*4k.</u>	Description of securities registered under Section 12 of the Exchange Act of 1934 (incorporated by reference to Exhibit 4j to Form 10-K for the year ended December 31, 2019, File No. 1-38681).
<u>*10</u>	Purchase and Sale Agreement dated June 20, 2018, between NW Natural Gas Storage LLC and SENSA Holdings LLC (incorporated by reference to Exhibit 10 to Form 10-Q for the guarter ended June 30, 2018, File No. 1-15973).
<u>*10.1</u>	Fifth Amendment to Purchase and Sale Agreement, dated April 29, 2020, between NW Natural Gas Storage, LLC and SENSA Holdings LLC, amending the Purchase and Sale Agreement, dated June 20, 2018, as amended (incorporated by reference to Exhibit 10.2 to the Form 10-Q for the quarter ended March 31, 2020, File No. 1-38681).
<u>*10.2</u>	Tenth Amendment to Purchase and Sale Agreement, dated December 4, 2020, between NW Natural Gas Storage LLC and SENSA Holdings LLC, amending the Purchase and Sale Agreement, dated June 20, 2018, as amended (incorporated by reference to Exhibit 10.1 to the Form 8-K filed December 7, 2020, File No. 1-38681).
<u>21</u>	Subsidiaries of Northwest Natural Holding Company,
<u>23a.</u>	Consent of PricewaterhouseCoopers LLP - NW Holdings.
23b.	Consent of PricewaterhouseCoopers LLP - NW Natural.
31.1	Certification of Principal Executive Officer of Northwest Natural Gas Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer of Northwest Natural Gas Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.3	Certification of Principal Executive Officer of Northwest Natural Holding Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
31.4	Certification of Principal Financial Officer of Northwest Natural Holding Company Pursuant to Rule 13a-14(a)/15d-14(a), Section 302 of the Sarbanes-Oxley Act of 2002.
**32.1	Certification of Principal Executive Officer and Principal Financial Officer of Northwest Natural Gas Company Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
**32.2	Certification of Principal Executive Officer and Principal Financial Officer of Northwest Natural Holding Company Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.	The following materials formatted in Inline Extensible Business Reporting Language (Inline XBRL): (i) Consolidated Statements of Income; (ii) Consolidated Balance Sheets; (iii) Consolidated Statements of Cash Flows; and (iv) Related notes.
104.	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2020, formatted in Inline XBRL and contained in Exhibit 101.
Executive	Compensation Plans and Arrangements:
<u>*10a.</u>	Executive Supplemental Retirement Income Plan, 2018 Restatement (incorporated herein by reference to Exhibit 10.6 to the Form 8-K dated October 1, 2018, File No. 1-38681)

<u>*10b.</u>	Supplemental Executive Retirement Plan of Northwest Natural Gas Company, 2018 Restatement, as amended July 25, 2019 (incorporated by reference to Exhibit 10.1 to the Form 10-Q for the quarter ended June 30, 2019, File No, 1-15973).
<u>*10c.</u>	Northwest Natural Gas Company Supplemental Trust, effective January 1, 2005, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.9 to the Form 8-K dated October 1, 2018, File No. 1-38681).
<u>*10d.</u>	Northwest Natural Gas Company Umbrella Trust for Directors, effective January 1, 1991, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.11 to the Form 8-K dated October 1, 2018, File No. 1-38681),
<u>*10e.</u>	Northwest Natural Gas Company Umbrella Trust for Executives, effective January 1, 1988, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.10 to the Form 8-K dated October 1, 2018, File No. 1-38681).
<u>*10f.</u>	Restated Stock Option Plan, as amended effective December 14, 2006 (incorporated by reference to Exhibit 10c to Form 10-K for 2006, File No. 1-15973).
<u>*10g.</u>	Form of Restated Stock Option Plan Agreement (incorporated by reference to Exhibit 10h to Form 10-K for 2009, File No. 1-15973).
<u>*10h.</u>	Executive Deferred Compensation Plan, effective as of January 1, 1987, restated as of October 1, 2018 (incorporated by reference to Exhibit 10,4 to the Form 8-K dated October 1, 2018, File No. 1-38681).
<u>*10i.</u>	Directors Deferred Compensation Plan, effective June 1, 1981, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.5 to the Form 8-K dated October 1, 2018, File No. 1-38681).
<u>*10j.</u>	<u>Deferred Compensation Plan for Directors and Executives, effective January 1, 2005, restated as of October 1, 2018 (incorporated by reference to Exhibit 10.3 to the Form 8-K dated October 1, 2018, File No. 1-38681).</u>
<u>*10k.</u>	Form of Indemnity Agreement as entered into between Northwest Natural Gas Company and each director and certain executive officers (incorporated by reference to Exhibit 10I to Form 10-K for 2018, File No. 1-38681).
<u>*10I.</u>	Form of Indemnity Agreement as entered into between Northwest Natural Holding Company and each director and certain executive officers (incorporated by reference to Exhibit 10m to Form 10-K for 2018, File No. 1-38681).
<u>*10m.</u>	Non-Employee Directors Stock Compensation Plan, as amended effective December 15, 2005 (incorporated by reference to Exhibit 10.2 to Form 8-K dated December 16, 2005, File No. 1-15973).
<u>*10n.</u>	Executive Annual Incentive Plan, effective January 1, 2020 (incorporated by reference to Exhibit 10o to Form 10-K for 2019, File No. 1-15973).
<u>10o.</u>	Executive Annual Incentive Plan, effective January 1, 2021.
<u>*10p.</u>	Form of Change in Control Severance Agreement between Northwest Natural Gas Company and each executive officer, as amended and restated as of March 1, 2020 (incorporated by reference to Exhibit 10g to Form 10-K for 2019, File No. 1-15973).
<u>*10q.</u>	Northwest Natural Gas Company Long Term Incentive Plan, as amended and restated effective May 24, 2012 (incorporated by reference to Exhibit 10r to Form 10-K for 2012, File No. 1-15973).
<u>*10r.</u>	Northwest Natural Gas Company Long Term Incentive Plan, as amended and restated effective May 25, 2017 (incorporated by reference to Exhibit 10s to Form 10-K for 2017, File No. 1-15973).
<u>*10s.</u>	Northwest Natural Holding Company Long Term Incentive Plan, as amended and restated as of October 1, 2018 (incorporated by reference to Exhibit 10.1 to the Form 8-K dated October 1, 2018, File No. 1-38681).

<u>*10t.</u>	Form of Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2018-2020) (incorporated by reference to Exhibit 10y to Form 10-K for 2017, File No. 1-15973).
<u>*10u.</u>	Form of Performance Share Long Term Incentive Award Agreement under Long Term Incentive Plan (2019-2021) (incorporated by reference to Exhibit 10z to Form 10-K for 2018, File No. 1-38681).
<u>*10v.</u>	Form of Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2020-2022) (incorporated by reference to Exhibit 10x to Form 10-K for 2019, File No. 1-38681).
<u>10w.</u>	Form of Performance Share Long Term Incentive Agreement under Long Term Incentive Plan (2021-2023).
<u>*10x.</u>	Form of Consent dated December 14, 2006 entered into by each executive officer with respect to amendments to the Executive Supplemental Retirement Income Plan, the Supplemental Executive Retirement Plan and certain change in control severance agreements (incorporated by reference to Exhibit 10.1 to Form 8-K dated December 19, 2006, File No. 1-15973).
<u>*10y.</u>	Consent to Amendment of Deferred Compensation Plan for Directors and Executives, dated February 28, 2008 entered into by each executive officer (incorporated by reference to Exhibit 10bb to Form 10-K for 2007, File No. 1-15973).
<u>10z.</u>	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2021).
<u>*10aa.</u>	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2020) (incorporated by reference to Exhibit 10aa to Form 10-K for 2019, File No. 1-38681).
<u>*10bb.</u>	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2019) (incorporated by reference to Exhibit 10cc to Form 10-K for 2018, File No. 1-38681).
<u>*10cc.</u>	Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2018) (incorporated by reference to Exhibit 10bb to Form 10-K for 2017, File No. 1-15973).
<u>*10dd.</u>	Corrected Form of Restricted Stock Unit Award Agreement under Long Term Incentive Plan (2017) (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended March 31, 2017, File No. 1-15973).
<u>*10ee.</u>	Severance Agreement between Northwest Natural Gas Company and an executive officer, dated August 1, 2016 (incorporated by reference to Exhibit 10.1 to Form 8-K dated July 29, 2016, File No. 1-15973).
<u>*10ff.</u>	Form of Restricted Stock Unit Award Agreement between Northwest Natural Gas Company and an executive officer dated as of July 27, 2016 (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended June 30, 2016, File No. 1-15973).
<u>*10gg.</u>	Form of Severance Agreement between Northwest Natural Gas Company and an executive officer, dated May 17, 2017 (incorporated by reference to Exhibit 10.1 to Form 8-K dated April 24, 2017, File No. 1-15973).
<u>*10hh.</u>	Form of Special Restricted Stock Unit Agreement between Northwest Natural Gas Company and an executive officer, dated May 17, 2017 (incorporated by reference to Exhibit 10.2 to Form 8-K dated April 24, 2017, File No. 1-15973).
<u>*10ii.</u>	Form of Special Retention Restricted Stock Unit Agreement between Northwest Natural Gas Company and an executive officer, dated September 30, 2016 (incorporated by reference to Exhibit 10qq to Form 10-K for 2017, File No. 1-15973),
<u>*10jj.</u>	Cash Retention Agreement between Northwest Natural Gas Company and an executive officer, dated as of March 1, 2018 (incorporated by reference to Exhibit 10ss to Form 10-K for 2017, File No. 1-15973).
<u>*10kk.</u>	Annual Incentive Plan for NW Natural Gas Storage, LLC, as amended effective January 1, 2020 (incorporated by reference to Exhibit 10ll to Form 10-K for 2019, File No. 1-38681).
<u>10II.</u>	Annual Incentive Plan for NW Natural Gas Storage, LLC, as amended effective January 1, 2021,

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*10mm. Long Term Incentive Plan for NW Natural Gas Storage, LLC, as amended effective January 1, 2016 (incorporated by reference to Exhibit 10pp to Form 10-K for 2016, File No. 1-15973).
*Incorporated by reference as indicated **Pursuant to Item 601(b)(32)(ii) of Regulation S-K, this certificate is not being "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.
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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, each registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized. The signature for each undersigned company shall be deemed to relate only to matters having reference to such company and its subsidiaries.

NORTHWEST NATURAL HOLDING COMPANY

By: /s/ David H. Anderson David H. Anderson President and Chief Executive Officer Date: February 26, 2021

NORTHWEST NATURAL GAS COMPANY

By: /s/ David H. Anderson David H. Anderson President and Chief Executive Officer

Date: February 26, 2021

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated. The signatures of each of the undersigned shall be deemed to relate only to matters having reference to the below named company and its subsidiaries.

NORTHWEST NATURAL HOLDING COMPANY

Signature	Title	Date
/s/ David H. Anderson David H. Anderson President and Chief Executive Officer	Principal Executive Officer and Director	February 26, 2021
/s/ Frank H. Burkhartsmeyer Frank H. Burkhartsmeyer Senior Vice President and Chief Financial Officer	Principal Financial Officer	February 26, 2021
/s/ Brody J. Wilson Brody J. Wilson Vice President, Treasurer, Chief Accounting Officer and Controller	Principal Accounting Officer	February 26, 2021
/s/ Timothy P. Boyle Timothy P. Boyle	Director)
/s/ John D. Carter John D. Carter	Director)))
/s/ Monica Enand Monica Enand	Director	,)))
/s/ C. Scott Gibson C. Scott Gibson	Director)))
/s/ Tod R. Hamachek Tod R. Hamachek	Director))) February 26, 2021
/s/ Karen Lee Karen Lee /s/ Dave McCurdy	Director	February 26, 2021)))
Dave McCurdy /s/ Nathan I. Partain	Director)))
Nathan I. Partain /s/ Jane L. Peverett	Director)))
Jane L. Peverett /s/ Kenneth Thrasher Kenneth Thrasher	Director)))
/s/ Malia H. Wasson Malia H. Wasson	Director)))
/s/ Charles A. Wilhorte Charles A. Wilhorte	Director)))
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NORTHWEST NATURAL GAS COMPANY

Signature	Title	Date
/s/ David H. Anderson David H. Anderson President and Chief Executive Officer	Principal Executive Officer and Director	February 26, 2021
/s/ Frank H. Burkhartsmeyer Frank H. Burkhartsmeyer Senior Vice President and Chief Financial Officer	Principal Financial Officer	February 26, 2021
/s/ Brody J. Wilson Brody J. Wilson	Principal Accounting Officer	February 26, 2021
Vice President, Treasurer, Chief Accounting Officer and Controller /s/ Timothy P. Boyle Timothy P. Boyle	Director)
/s/ John D. Carter John D. Carter	Director)
/s/ Monica Enand Monica Enand	Director))
/s/ C. Scott Gibson C. Scott Gibson	Director)))
/s/ Tod R. Hamachek Tod R. Hamachek	Director)
/s/ Karen Lee Karen Lee	Director))
/s/ Dave McCurdy Dave McCurdy	Director	February 26, 2021))
/s/ Nathan I. Partain Nathan I. Partain	Director)))
Jane L. Peverett Jane L. Peverett	Director Director)))
/s/ Kenneth Thrasher Kenneth Thrasher /s/ Malia H. Wasson	Director)))
Malia H. Wasson /s/ Charles A. Wilhoite	Director	,))
Charles A. Wilhoite /s/ Steven E. Wynne	Director)))
Steven E. Wynne)

AMENDED AND RESTATED ARTICLES OF INCORPORATION OF NORTHWEST NATURAL GAS COMPANY

These Amended and Restated Articles of Incorporation of Northwest Natural Gas Company (Restated Articles of Incorporation) supersede its theretofore existing articles of incorporation and all amendments thereto.

ARTICLE I

The name of this corporation is NORTHWEST NATURAL GAS COMPANY, and its duration shall be perpetual.

ARTICLE II

The purposes of the corporation are to engage in any lawful activity for which corporations may be organized under the Oregon Business Corporation Act.

ARTICLE III

- A The aggregate number of shares of capital stock which the corporation shall have authority to issue is 103,500,001 shares, divided into 3,500,000 shares of Preferred Stock, issuable in series as hereinafter provided, 100,000,000 shares of Common Stock, and one share of Limited Voting Junior Preferred Stock, \$1 par value (the "Junior Preferred Stock").
- A statement of the preferences, limitations and relative rights of each class of capital stock of the corporation, namely, the Preferred Stock, the Common Stock, and the Junior Preferred Stock, of the variations in the relative rights and preferences as between series of the Preferred Stock, insofar as the same are fixed by these Restated Articles of Incorporation, and of the authority vested in the board of directors of the corporation to establish series of Preferred Stock and to fix and determine the variations in the relative rights and preferences as between series insofar as the same are not fixed by these Restated Articles of Incorporation, is as follows:

Preferred Stock

1. The shares of the Preferred Stock may be divided into and issued in series. Each series shall be so designated as to distinguish the shares thereof from the shares of all other series of the Preferred Stock and all other classes of capital stock of the corporation. To the extent that these Restated Articles of Incorporation shall not have established series of the Preferred Stock and fixed and determined the variations in the relative rights and preferences as between series, the board of directors shall have authority, and is hereby expressly vested with authority, to divide the Preferred Stock into series and, within the limitations set forth in these Restated Articles of Incorporation and such limitations as may be provided by law, to fix and determine the relative rights and preferences of any series of the Preferred Stock so established. Such action by the board of directors shall be expressed in a resolution or resolutions adopted by it prior to the issuance of shares of each series, which resolution or resolutions shall also set forth the distinguishing designation of the particular series of the Preferred Stock established thereby. Without limiting the generality of the foregoing, authority is hereby expressly vested in the board of directors so to fix and determine with respect to any series of the Preferred Stock:

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- (a) The rate of dividend and the relative preference of each series in the payment of dividends;
- (b) The price at which and the terms and conditions on which shares may be redeemed;
- (c) The amount payable upon shares in the event of voluntary and involuntary liquidation and the relative preference of each series on liquidation;
- (d) Sinking fund provisions, if any, for the redemption or purchase of shares;
- (e) The terms and conditions, if any, on which shares may be converted if the shares of any series are issued with the privilege of conversion; and
- (f) Any other relative right or preference as permitted by law.

All shares of the Preferred Stock of the same series shall be identical except that shares of the same series issued at different times may vary as to the dates from which dividends thereon shall be cumulative; and all shares of the Preferred Stock, irrespective of series, shall constitute one and the same class of stock and shall be identical except as to the designation thereof, the date or dates from which dividends on shares thereof shall be cumulative, and the relative rights and preferences set forth above in clauses (a) through (f) of this subdivision, as to which there may be variations between different series. Except as otherwise may be provided by law or by the resolutions establishing any series of Preferred Stock in accordance with the foregoing provisions of this subdivision, whenever the written consent, affirmative vote, or other action on the part of the holders of the Preferred Stock may be required for any purpose, such consent, vote or other action shall be taken by the holders of the Preferred Stock as a single class irrespective of series and not by different series.

2. The holders of shares of the Preferred Stock of each series shall be entitled to receive dividends, when and as declared by the board of directors, out of any funds legally available for the payment of dividends, at the annual rate fixed and determined with respect to each series either by these Restated Articles of Incorporation or in accordance with subdivision III. B. 1., and no more, payable quarterly on the 15th day of February, May, August and November in each year or on such other date or dates as the board of directors shall determine in the resolutions establishing such series. Such dividends shall be cumulative in the case of shares of each series either from the date of issuance of shares of such series or from the first day of the current dividend period within which shares of such series shall be issued, as the board of directors shall determine, so that if dividends on all outstanding shares of each particular series of the Preferred Stock, at the annual dividend rates fixed and determined either by these Restated Articles of Incorporation or in accordance with subdivision III. B. 1., shall not have been paid or declared and set apart for payment for all past dividend periods and for the then current dividend periods, the deficiency shall be fully paid or dividends equal thereto declared and set apart for payment at said rates before any dividends on the Common Stock shall be paid or declared and set apart for payment. No interest, or sum of money in lieu of interest, shall be payable in respect of any dividend payment or payments which may be in arrears.

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- 3. In the event of any dissolution, liquidation or winding up of the corporation, before any distribution or payment shall be made to the holders of the Common Stock, the holders of the Preferred Stock of each series then outstanding shall be entitled to be paid out of the net assets of the corporation available for distribution to its shareholders the respective amounts per share fixed and determined with respect to each series either by these Restated Articles of Incorporation or in accordance with subdivision III. B. 1., and no more. If upon dissolution, liquidation or winding up of the corporation, whether voluntary or involuntary, the net assets of the corporation available for distribution to its shareholders shall be insufficient to pay the holders of all outstanding shares of Preferred Stock of all series the full amounts to which they shall be respectively entitled as aforesaid, the net assets of the corporation so available for distribution shall be distributed to the holders of Preferred Stock in accordance with the relative preferences of each series of Preferred Stock established either by these Restated Articles of Incorporation or in accordance with subdivision III. B. 1. For the purposes of this subdivision, any dissolution, liquidation or winding up which may arise out of or result from the condemnation or purchase of all or a major portion of the properties of the corporation by (i) the United States Government or any authority, agency or instrumentality thereof (ii) a State of the United States or any political subdivision, authority, agency or instrumentality thereof, or (iii) a district, cooperative or other association or entity not organized for profit, shall be deemed to be an involuntary dissolution, liquidation or winding up; and a consolidation, merger or amalgamation of the corporation with or into any other corporation or corporations shall not be deemed to be a dissolution, liquidation or winding up of the corporation, whether voluntary or involuntary.
- 4. The holders of shares of the Preferred Stock shall have no right to vote in the election of directors or for any other purpose, except as may be otherwise provided by law or by resolutions establishing any series of Preferred Stock in accordance with subdivision III. B. 1. Holders of Preferred Stock shall be entitled to notice of each meeting of shareholders at which they shall have any right to vote, but shall not be entitled to notice of any other meeting of shareholders.

Common Stock

- 5. Subject to the limitations set forth in subdivision III. B. 2. (and subject to the rights of any class of stock hereafter authorized), dividends may be paid upon the Common Stock when and as declared by the board of directors of the corporation out of any funds legally available for the payment of dividends.
- 6. Subject to the limitations set forth in subdivision III. B. 3. (and subject to the rights of any other class of stock hereafter authorized), upon any dissolution, liquidation or winding up of the corporation, whether voluntary or involuntary, the net assets of the corporation shall be distributed ratably to the holders of the Common Stock.
- 7. Except as may be otherwise provided by law or by the resolutions establishing any series of Preferred Stock in accordance with subdivision III. B. 1., the holders of the Common Stock shall have the exclusive right to vote for the election of directors and for all other purposes. In the election of directors of the corporation, every holder of record of any share or shares of the Common Stock of the corporation shall have the right to cast as many votes for one candidate as shall equal the number of such shares multiplied by the number of directors to