Woods Hole Oceanographic Institution

Financial Statements
December 31, 2017
(with summarized financial information as of and for the year ended December 31, 2016)

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Report of Independent Auditors

To the Board of Trustees of
Woods Hole Oceanographic Institution

We have audited the accompanying financial statements of Woods Hole Oceanographic Institution (the "Institution"), which comprise the statement of financial position as of December 31, 2017 and the related statements of activities and of cash flows for the year then ended.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Institution's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institution's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Woods Hole Oceanographic Institution as of December 31, 2017 and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We previously audited the statement of financial position as of December 31, 2016, and the related statements of activities and of cash flows for the year then ended (not presented herein), and in our report dated July 14, 2017, we expressed an unmodified opinion on those financial statements. In our opinion, the information set forth in the accompanying summarized financial information as of December 31, 2016 and for the year then ended is consistent, in all material respects, with the audited financial statements from which it has been derived.

PricewaterhouseCoopers LLP

Boston, Massachusetts
July 12, 2018

Woods Hole Oceanographic Institution
Statements of Financial Position
December 31, 2017
(with summarized financial information as of December 31, 2016)

	2017	2016
Assets		
Cash and cash equivalents, unrestricted	$ 12,094,856	$ 8,363,630
Cash and cash equivalents, restricted	11,684,068	12,856,314
Reimbursable costs and fees		
Billed (net of allowance for doubtful accounts of $92,441 for 2017 and $79,071 for 2016)	8,806,460	12,678,058
Unbilled	14,002,297	13,173,681
Receivable for investments sold	20,138,119	19,913,875
Other receivables	609,173	1,177,752
Pledges receivable, net (Note 5)	6,317,664	3,044,822
Inventory	2,190,955	1,960,834
Deferred charges and prepaid expenses	1,002,224	355,150
Investments, pooled (Note 3)	417,571,845	395,972,700
Investments designated for retiree and active medical plans (Note 10)	11,897,396	11,201,346
Deferred fixed rate variance (Note 7)	4,898,227	2,893,538
Supplemental retirement (Note 9)	-	10,918,509
Other assets	1,700,004	880,572
	512,913,288	495,390,781
Property, plant and equipment		
Land, buildings and improvements	177,800,480	172,436,080
Vessels and dock facilities	10,504,348	9,219,274
Laboratory and other equipment	41,819,917	40,701,301
Construction in process	2,314,927	2,290,484
	232,439,672	224,647,139
Accumulated depreciation	(147,413,024)	(139,785,894)
Net property, plant and equipment	85,026,648	84,861,245
Contributions receivable from remainder trusts, long-term, net (Note 6)	930,455	807,878
Total assets	$ 598,870,391	$ 581,059,904
Liabilities		
Line of credit (Note 8)	$ 11,000,000	$ 13,000,000
Accounts payable and other liabilities (Note 8)	25,473,116	20,812,408
Accrued payroll and related liabilities	7,696,713	7,150,179
Accrued supplemental retirement benefits (Note 9)	-	10,918,509
Accrued pension liability (Note 9)	114,700,397	114,741,998
Accrued postretirement liability (Note 10)	33,620,893	33,988,547
Deferred revenue and refundable advances	12,813,934	12,580,510
Bonds payable (Note 8)	50,517,761	52,336,160
Total liabilities	$ 255,822,814	$ 265,528,311

	Unrestricted	Temporarily Restricted	Permanently Restricted	2017	2016
Net assets					
Undesignated and plant	$ 13,651,493	$ -	$ -	$ 13,651,493	$ 13,691,510
Pension and postretirement benefits	(136,423,894)	-	-	(136,423,894)	(137,529,199)
Designated	5,065,547	14,398,458	-	19,464,005	14,976,242
Pledges and other	-	3,181,028	657,531	3,838,559	5,065,718
Education	-	4,807,450	-	4,807,450	3,440,747
Endowment and similar funds	76,821,967	263,121,390	97,766,607	437,709,964	415,886,575
Total net assets	$ (40,884,887)	$ 285,508,326	$ 98,424,138	$ 343,047,577	$ 315,531,593
Total liabilities and net assets				$ 598,870,391	$ 581,059,904

The accompanying notes are an integral part of these financial statements.

Woods Hole Oceanographic Institution
Statements of Activities
Year Ended December 31, 2017
(with summarized financial information for the year ended December 31, 2016)

	Unrestricted Operating	Unrestricted Sponsored Research	Temporarily Restricted	Permanently Restricted	2017	2016
Revenues						
Fees	$ 1,267,993	$ -	$ -	$ -	$ 1,267,993	$ 1,181,511
Sponsored research						
Government	-	85,142,995	-	-	85,142,995	102,633,348
Subcontract and nongovernment	-	54,422,749	7,801,136	-	62,223,885	64,589,608
Ships and subs operations	-	29,020,161	-	-	29,020,161	24,999,026
Sponsored research assets released to operations	174,313,777	(168,585,905)	(5,727,872)	-	-	-
Fixed price awards	744,996	-	-	-	744,996	1,075,766
Education						
Joint program income	4,080,671	-	-	-	4,080,671	4,688,581
Endowment income	-	-	8,626,732	-	8,626,732	8,354,940
Education funds released from restriction	7,723,206	-	(7,723,206)	-	-	-
Investment return designated for current operations	3,484,132	-	-	-	3,484,132	3,852,576
Contributions and gifts	18,751,337	-	1,029,557	729,226	20,510,120	19,144,659
Releases from restrictions		-	(375,000)	-	(375,000)	(270,000)
Contributions in kind	2,823,247	-	-	-	2,823,247	1,580,611
Rental income	545,503	-	-	-	545,503	544,611
Communication and publications	234,754	-	-	-	234,754	221,558
Other	4,303,394	-	-	-	4,303,394	2,304,676
Charter Income	4,965,883	-	-	-	4,965,883	1,665,744
Total revenues	223,238,893	-	3,631,347	729,226	227,599,466	236,567,215
Expenses						
Sponsored research						
Government	85,142,995	-	-	-	85,142,995	102,633,348
Subcontracts and nongovernment	60,150,621	-	-	-	60,150,621	62,989,091
Ships and subs operations	29,020,161	-	-	-	29,020,161	24,999,026
Education	10,289,971	-	-	-	10,289,971	11,360,636
Rental expenses	290,208	-	-	-	290,208	316,566
Communication, Publications and Development	4,671,747	-	-	-	4,671,747	4,100,093
Unsponsored programs	29,672,568	-	-	-	29,672,568	24,736,010
Other expenses	1,170,597	-	-	-	1,170,597	1,207,555
Total expenses	220,408,868	-	-	-	220,408,868	232,342,325
Change in net assets from operating activities	2,830,025	-	3,631,347	729,226	7,190,598	4,224,890
Nonoperating revenue and expenses						
Investment return greater than amounts designated for sponsored research, education and current operations	3,632,151	-	16,062,306	-	19,694,457	3,852,322
Return on investments for retiree and active medical plans	1,680,496	-	-	-	1,680,496	864,581
Active medical expenses	-		-	-	-	(1,500,000)
Net realized/unrealized (losses) gains on interest rate swap	(474,338)	-	-	-	(474,338)	(297,438)
Change in split interest agreements	(34,507)	-	45,471	115,856	126,820	206,830
Other nonoperating expenses	(111,909)	-	-	-	(111,909)	(111,909)
Donor reclassification to ship operations	-		(15,000)	-	(15,000)	-
Gain on termination of Supplemental Employee Retirement Plan	11,420,679	-	-	-	11,420,679	-
Net periodic benefit cost	(4,664,409)	-	-	-	(4,664,409)	(5,281,306)
Pension and post-retirement related changes other than net periodic benefit costs (Note 9)	(7,331,410)	-	-	-	(7,331,410)	(9,266,440)
Change in net assets from nonoperating activities	4,116,753	-	16,092,777	115,856	20,325,386	(11,533,360)
Total change in net assets	6,946,778	-	19,724,124	845,082	27,515,984	(7,308,470)
Net assets at						
Beginning of year	(47,831,665)	-	265,784,202	97,579,056	315,531,593	322,840,063
End of year	$ (40,884,887)	$ -	$ 285,508,326	$ 98,424,138	$ 343,047,577	$ 315,531,593

The accompanying notes are an integral part of these financial statements.

Woods Hole Oceanographic Institution
Statements of Cash Flows
Year Ended December 31, 2017
(with summarized financial information for the year ended December 31, 2016)

	2017	2016
Cash flows from operating activities		
Total change in net assets	$ 27,515,984	$ (7,308,470)
Adjustments to reconcile total change in net assets		
to net cash used in operating activities		
Depreciation and amortization	9,546,721	9,561,917
Change in split interest agreements	(126,820)	(206,830)
Allowance for uncollectible pledges	(14,963)	(7,651)
Discount on pledges	(64,649)	(11,009)
Net realized and unrealized gain on investments	(41,648,830)	(24,421,554)
Unrealized gain on interest swap	(804,378)	(1,202,846)
Pension related changes other than net periodic pension costs	7,331,410	9,266,440
Contributions to be used for long-term investment	(2,387,981)	(2,413,579)
Receipt of contributed securities	(289,270)	(59,431)
Liquidation of contributed securities	289,270	59,431
(Increase) decrease in assets		
Restricted cash	1,172,246	3,445,986
Reimbursable costs and fees		
Billed	3,871,598	(3,387,702)
Unbilled	(828,616)	(425,874)
Other receivables	568,579	(372,033)
Pledges receivable	(3,193,230)	(246,407)
Inventory	(230,121)	(144,136)
Deferred charges and prepaid expenses	(647,074)	473,988
Other assets	(819,432)	310,452
Remainder trusts	(122,577)	(68,312)
Supplemental retirement	10,918,509	(1,105,170)
Deferred fixed rate variance	(2,004,689)	(2,720,283)
Increase (decrease) in liabilities		
Accrued pension and postretirement liability	(7,740,665)	4,262,397
Accounts payable and other liabilities	6,815,990	1,601,622
Accrued payroll and related liabilities	546,483	662,487
Deferred revenue and refundable advances	233,424	(4,961,459)
Accrued supplemental retirement benefits	(10,918,459)	1,105,170
Deferred financing costs	10,530	10,530
Net cash used in operating activities	(3,021,010)	(18,302,326)
Cash flows from investing activities		
Capital expenditures		
Additions to property and equipment	(10,936,207)	(8,425,060)
Endowment and other		
Purchase of investments	(11,280,763)	(5,430,173)
Sale of investments	29,649,952	24,594,714
Receivable for investments sold	(224,244)	(3,282,428)
Purchase of investments designated for retiree and active medical plans	(5,551,747)	(8,261,785)
Proceeds from the sale of investments designated for retiree and active medical plans	6,536,193	11,138,754
Net cash provided by investing activities	8,193,184	10,334,022
Cash flows from financing activities		
Repayments under debt agreement	(1,828,929)	(1,753,929)
Borrowing under line of credit	18,000,000	17,000,000
Repayments under line of credit	(20,000,000)	(20,000,000)
Contributions to be used for long-term investment	2,387,981	15,047,132
Net cash (used in) provided by financing activities	(1,440,948)	10,293,203
Net increase (decrease) in cash and cash equivalents	3,731,226	2,324,899
Cash and cash equivalents		
Beginning of year	8,363,630	6,038,731
End of year	$ 12,094,856	$ 8,363,630
Supplemental disclosures		
Cash paid for interest	$ 4,087,857	$ 4,522,248
Noncash activity		
Construction in process additions remaining in accounts payable	708,240	1,932,324
Contributed securities	289,270	59,431

The accompanying notes are an integral part of these financial statements.

1. Background

Woods Hole Oceanographic Institution (the "Institution") is a private, independent not-for-profit research and educational institution located in Woods Hole, Massachusetts. Founded in 1930, the Institution is dedicated to advancing knowledge of the ocean and its interaction with the Earth through a sustained commitment to excellence in science, engineering, and education and to the application of this knowledge to problems facing society.

The Institution is a qualified tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code as it is organized and operated for education and scientific purposes.

2. Summary of Significant Accounting Policies

Basis of Presentation
The accompanying financial statements have been prepared on the accrual basis and in accordance with accounting principles generally accepted in the United States of America.

The financial statements include certain prior-year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the Institution's audited financial statements for the year ended December 31, 2016, from which the summarized information was derived.

Net assets, revenues, and realized and unrealized gains and losses are classified based on the existence or absence of donor-imposed restrictions and legal restrictions imposed under Massachusetts State law. Accordingly, net assets and changes therein are classified as follows:

Permanently Restricted Net Assets
Permanently restricted net assets are subject to donor-imposed stipulations that they be maintained permanently by the Institution. Generally the donors of these assets permit the Institution to use all or part of the income earned and capital appreciation, if any, on related investments for general or specific purposes.

Temporarily Restricted Net Assets
Temporarily restricted net assets are subject to donor-imposed stipulations that may or will be met by actions of the Institution and/or the passage of time. Unspent gains on permanent endowment are classified as temporarily restricted until the Institution appropriates and spends such sums in accordance with the terms of the underlying endowment funds and in accordance with Massachusetts law, at which time they will be released to unrestricted revenues.

Unrestricted Net Assets
Unrestricted net assets are not subject to donor-imposed stipulations. Revenues are reported as increases in unrestricted net assets unless use of the related assets is limited by donor-imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in unrestricted net assets unless their use is restricted by explicit donor stipulations or law. Expirations of temporary restrictions on net assets, that is, the donor-imposed stipulated purpose has been accomplished and/or the stipulated time period has elapsed, are reported as reclassifications between the applicable classes of net assets. Amounts received for sponsored research (under exchange transactions) are reflected in unrestricted sponsored research revenue and released to operations when spent for the appropriate purpose, or as deferred revenue if expenditures have yet to be incurred.

Contributions

Contributions, including unconditional promises to give, are recognized as revenues in the period received. Contributions subject to donor-imposed stipulations that are met in the same reporting period are reported as unrestricted support. Promises to give that are scheduled to be received after the balance sheet date or are subject to donor-imposed stipulations are shown as increases in temporarily restricted net assets and are reclassified to unrestricted net assets when the purpose or restriction is met. Promises to give, subject to donor-imposed stipulations that the corpus be maintained permanently, are recognized as increases in permanently restricted net assets. Conditional promises to give are not recognized until they become unconditional, that is, when the conditions on which they depend are substantially met. Contributions other than cash are generally recorded at market value on the date of the gift (or an estimate of fair value); although certain noncash gifts, for which a readily determinable market value cannot be established, are recorded at a nominal value until such time as the value becomes known. Contributed securities are sold immediately upon receipt. Contributions to be received after one year are discounted at the appropriate rate commensurate with risk. Amortization of such discount is recorded as additional contribution revenue in accordance with restrictions imposed by the donor on the original contribution, as applicable. Amounts receivable for contributions are reflected net of an applicable reserve for collectability.

The Institution reports contributions in the form of land, buildings, or equipment as unrestricted operating support at fair market value when received.

Dividends, interest and net gains on investments of endowment and similar funds are reported as follows:

- As increases in permanently restricted net assets if the terms of the gift require that they be added to the principal of a permanent endowment fund;
- As increases in temporarily restricted net assets if the terms of the gift or relevant state law impose restrictions on the current use of the income or net realized and unrealized gains; and
- As increases in unrestricted net assets in all other cases.

Operations

The statement of activities reports the Institution’s operating and nonoperating activities. Operating revenues and expenses consist of those activities attributable to the Institution’s current annual research or educational programs, all gifts received, charter income, and a component of endowment income appropriated for operations (Note 3). Unrestricted endowment investment income, gains and losses over the amount appropriated under the Institution’s spending plan are reported as nonoperating revenue (expense) as investment return (less than) in excess of amounts designated for sponsored research, education and current operations.

Nonoperating revenues (expenses) also include the change in value of split interest agreements, realized/unrealized (losses) gains on interest rate swaps, and the net periodic pension income (cost) on the noncontributory defined benefit pension plan that is not reimbursed through negotiated fixed rate agreements with the federal government. Additionally, nonoperating activities include redesignation of donor gifts, depreciation on certain government-funded facilities and pension related changes other than net periodic pension costs.

As a result of an amendment to the postretirement health plan, in 2012 and forward, the Institution recognized the return on investments designated for retiree and active medical plan expenses, and actual active and retiree medical expenses as nonoperating activities when these expenses are funded by withdrawals from the postretirement plan (Note 10).

Cash and Cash Equivalents
Cash and cash equivalents consist of cash, money market accounts, certificates of deposit and overnight repurchase agreements with initial maturities of three months or less when purchased which are stated at cost, which approximates market value.

The Institution invests its cash and cash equivalents in money market funds at a financial institution which fully insures the balances held.

Included in restricted cash at December 31, 2017 and 2016 is $11,424,675 and $12,598,557, respectively, representing advances received from the United States Navy, other U.S. Government and state agencies as well as contributions from donors who have restricted money for specific research initiatives. Also included in restricted cash at December 31, 2017 and 2016 is approximately $2,000,000 of board designated cash. Interest earned on unspent funds from federal agencies is remitted to the federal government.

Also included in restricted cash at December 31, 2017 and 2016 is $259,393 and $257,757, respectively, representing cash restricted by the Massachusetts Radiation Control Program and Department of Environmental Protection. Interest earned on unspent funds is reinvested within the restricted cash account.

Investments
Investment securities are carried at market value and determined as follows: securities traded on a national securities exchange are valued at the last reported sales price on the last business day of the year; securities traded in the over-the-counter market and listed securities for which no sales prices were reported on that day are valued at closing bid prices. The value of publicly traded securities or mutual funds are based upon quoted market prices and net asset values. Other investments, such as private equity funds, venture capital funds and hedge funds for which no such quotations or valuations are readily available, are carried at fair value as estimated by management using values provided by external investment managers. The Institution reviews and evaluates the valuations provided by investment managers and believes that these valuations are a reasonable estimate of fair value as of December 31, 2017 and 2016 but are subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for the investments existed and such differences could be material.

Purchases and sales of investment securities are recorded on a trade date basis. Realized gains and losses are computed on a specific identification method. Investment income, net of investment expenses, is distributed on the unit method.

The Institution makes investments in funds that make direct investments in public securities, over the counter securities, and other securities which may or may not have readily available market prices. The Institution follows authoritative guidance under generally accepted accounting principles for estimating the fair value of investments in those funds that have calculated net asset value per share in accordance with the specialized accounting guidance for investment companies. Accordingly, the Institution uses the net asset value, (NAV) without further adjustment as a practical expedient to determine the fair value of these funds which (a) do not have a readily determinable fair value and (b) either have the attributes of an investment company or prepare their financial statements consistent with the measurement principles of an investment company. These values are reviewed and approved by the Institution.

Investment Income Unitization

The Institution's investments are pooled in an endowment fund and the investments and allocation of income are tracked on a unitized basis. The Institution distributes to operations for each individual fund an amount of investment income earned by each of the fund's proportionate share of investments based on a total return policy.

The Board of Trustees has appropriated all of the income and a specified percentage of the net appreciation (depreciation) to operations as prudent considering the Institution's long- and short-term needs, present and anticipated financial requirements, expected total return on its investments, price level trends, and general economic conditions. Under the Institution's current endowment spending policy, which is within the guidelines specified under state law, the Institution's annual operating budget should not exceed 5.0% of the Fund's trailing 36 month rolling average market value. This amounted to $19,912,000 and $19,230,996 for the years ended December 31, 2017 and 2016, respectively, and is classified in operating revenues (research, education, and operations).

Other Assets

Other assets consist primarily of investments held by various split-interest agreements and donated property.

Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is determined using the first-in, first-out method.

Contracts and Grants

Revenues earned on contracts and grants for research are recognized as related costs are incurred.

The Institution received approximately 85% and 87% of its sponsored research revenues from government agencies including 33% and 30% of its operating revenues directly from the National Science Foundation and 14% and 18% from the United States Navy in fiscal years 2017 and 2016, respectively. Although applications for research funding to federal agencies historically have been funded, authorizations are subject to annual Congressional appropriations and payment.

Joint Program Revenue

The Institution operates a joint graduate program in Oceanography with another institution under a memorandum of agreement. Tuition is charged to students per semester at agreed upon rates.

Charter Income

Revenues earned from vessel charters are based upon negotiated day rates with customers or a fixed day rate that approximates fair value for certain parties to the lease.

Other Income

The Institution received insurance proceeds totaling $3,899,980 from the loss of a submersible vessel in 2017. The revenue recognized was $3,419,001 and $480,979 for the years ended December 31, 2017 and 2016 respectively. Also included in other income is membership, royalty and other ancillary income.

Deferred Financing Costs

Costs incurred in connection with the placement of the MassDevelopment, Revenue Bonds, Woods Hole Oceanographic Institution Issue, Series B (2008) (the “Series B Bonds”), have been deferred and are being amortized over the term of the obligation on a straight line basis, which approximates the effective interest method. The unamortized portion of the deferred financing costs are included in the offset to long-term debt on the statement of financial position.

Interest Rate Swap

The Institution entered into an interest rate swap agreement on the MassDevelopment, Variable Rate Revenue Bonds, Woods Hole Oceanographic Institution Issue Series A Bonds in order to convert a portion of the variable rate debt to fixed rate, thereby economically hedging against changes in the cash flow requirements of the Institution’s variable rate debt obligations. The Series A bonds were retired on January 2, 2009.

Net payments or receipts (difference between variable and fixed rate) under the swap agreement along with the change in fair value of the swap are recorded in nonoperating activities as net realized/unrealized (losses) gains on interest swap.

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation is provided on a straight-line basis at annual rates of 12 to 39 years on buildings and improvements, 10 to 15 years on vessels and dock facilities and 5 to 10 years on laboratory and other equipment. Depreciation expense on property, plant, and equipment purchased by the Institution in the amounts of $9,434,812 and $9,450,008 in 2017 and 2016, respectively, has been charged to operating activities. Depreciation on certain government-funded facilities (the Laboratory for Marine Science and the dock facility) amounting to $111,909 in 2017 and 2016 has been charged to nonoperating expenses as these assets were gifted by the Government.

Use of Estimates

The preparation of the financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. Actual results could differ from those estimates.

Reclassification of Prior Year Presentation

Certain prior year amounts within unrestricted net assets have been reclassified to conform to current year presentation. This change has no impact on total unrestricted net assets.

New Accounting Pronouncements

As of December 31, 2016, the Institution adopted ASU 2015-02 Consolidations: Amendments to the Consolidation Analysis, which discusses the consolidation of limited partnerships and similar legal entities. On January 12, 2017, the FASB issued final guidance that clarifies the model used by not-for-profit (NFP) entities to evaluate the consolidation of investments in limited partnerships. Under the new guidance, if a limited partner has control, consolidation is required unless the investment is part of a portfolio for which the NFP "portfolio-wide" fair value option has been elected. In that situation, the limited partner can instead report its interest at fair value. The Institution has elected the "portfolio-wide" fair value option for all of its investments, as a result, the Institution is no longer required to consolidate its investment in WHOI Investment Holdings LP. The impact of this adoption was to deconsolidate this investment and report its net interest within the Investments, pooled line on the Statement of Financial Position. The guidance requires this to be applied retrospectively to the earliest period affected by the adoption and was therefore applied to the year ended December 31, 2015. There were no changes to net assets or changes in net assets as a result of this adoption.

In July of 2016, the FASB issued ASU 2015-11 (Subtopic 30) Simplifying the Measurement of Inventory. The amendments address the measurement of inventory at the lower of cost or net realizable value. The amendments in this Update for the Institution are effective for the year ended December 31, 2017. The guidance requires this to be applied retrospectively to the earliest period affected by the adoption and has therefore been applied to both the years ended December 31, 2017 and 2016. There were no changes to net assets or changes in net assets as a result of this adoption.

In January of 2016, the FASB issued ASU 2016-01 (Subtopic 825-10) Financial Instruments-Overall. The amendments address certain aspects of recognition, measurement, presentation and disclosure of financial instruments. The amendments in this Update for the Institution are effective for the year ended December 31, 2020 with early adoption permitted for certain aspects of the update. The Institution has adopted the elimination of the requirement to disclose the fair value of debt for the year ended December 31, 2016.

In February of 2016, the FASB issued ASU 2016-02 Leases (Topic 842). The amendments in this update increase comparability and transparency among organizations by recognizing most lease assets and liabilities on the balance sheet and disclosing key information about leasing arrangements. The amendments in this Update for the Institution are effective for the year ended December 31, 2019. The Institution is evaluating the impact that the ASU may have on its financial statements.

In August 2016, the FASB issued ASU 2016-15, Statements of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments. The amendments in this update decrease diversity in practice in how certain cash receipts and payments as presented and classified in the statements of cash flow. ASU 2016-15 is effective for the Institution's year ending December 31, 2019. The Institution is currently assessing the impact of this pronouncement.

In March 2017, the FASB issued ASU 2017-07 Compensation-Retirements Benefits (Topic) 715), Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Cost. The amendments in this update improve the presentation of net periodic pension costs and net periodic postretirement benefit costs. ASU 2017-07 is effective for the Institution's year ending December 31, 2019. The Institution is currently assessing the impact from this pronouncement on the Institution's financial statements.

In November of 2016, the FASB issued ASU 2016-18 Statement of Cash Flows (Topic 815), Restricted Cash. The amendments in this Update clarify the classification and presentation of changes of restricted cash in the statement of cash flows. ASU 2016-18 is effective for the Institution's year ending December 31, 2019. The Institution is currently assessing the impact of this pronouncement.

In May of 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers; a principals-based standard to recognize revenue from customer contracts. The FASB and the International Accounting Standards Board (IFRS) completed a joint effort to develop a common revenue standard to improve comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets. ASU 2014-09 is effective for the Institution's year ending December 31, 2018. The Institution has concluded there is no material impact from this pronouncement on the Institution's financial statements.

In August 2016, the FASB issued ASU 2016-14, Not-for-Profit Entities (Topic 958), Presentation of Financial Statements of Not-for-Profit Entities. This update is the result of the FASB's efforts in the first of two phases of its project. The project is designed to improve the current net asset classification requirements and the information presented in the financial statements and notes of not-for-profit entities. The main provisions of this Update require a not-for-profit entity to present on the face of the statements two classes of net assets; report investment return net of external and direct internal investment expenses, and enhanced liquidity and expense disclosures. ASU 2016-14 is effective for the Institution's year ending December 31, 2018.

In March 2016, the FASB issued ASU 2016-06 Derivatives and Hedging (Topic 815), Contingent Put and Call Options in Debt Instruments. The amendments in this Update clarify the requirements for assessing whether contingent call (put) options that can accelerate the payment of principal on debt instruments are clearly and closely related to their debt hosts. ASU 2016-06 is effective for the Institution's year ending December 31, 2018. The Institution has concluded there is no material impact from this pronouncement on the Institution's financial statements.

3. Investments

The Institution has retained and outsourced services for manager selection, risk management and asset allocation of endowment assets to a third party. The assets transferred for investment under this arrangement, titled "Multistrategy Investment Fund", represent holdings in the following classifications; Equity, Long/Short Equity, Real Assets, Commodities/Resources Credit/Special Situations, Absolute return, Fixed Income and Hedges/Opportunistic. These assets represent a concentrated investment in one investment manager. A consequence of this concentration is that the performance may be more favorably or unfavorably affected by the performance of the individual manager. The Institution invests in two separate sub-funds within the Multi-strategy Investment Fund. One sub-fund allows for annual withdrawals while the other allows for monthly withdrawals.

Beginning January 1, 2015, the Institution's endowment investment services provider established a single investor fund, (with the Institution as the sole investor) WHOI Investment Holdings, LP, comprising of the currently managed Multi-strategy funds and the transfer of remaining legacy endowment private investments which had been managed separately. The transfers of the Institution's investments into the sole investor fund was completed during 2015. Capital calls, distributions and reporting related to the previously separately managed legacy portfolio will be managed by the Institution's investment service provider. WHOI Investment Holdings, LP continues to hold the same two separate sub-funds within the Multi-strategy Investment Fund as described above which now also include the transferred legacy private investments.

The following table presents the classification and carrying value of investments at December 31:

	2017		2016	
	Cost	Market	Cost	Market
Assets				
Cash and cash equivalents	$ 1,054,186	$ 1,054,186	$ 3,787,887	$ 3,787,887
Multi-strategy Investment Funds -Short-term Liquidity Funds	29,629,000	30,076,039	29,329,000	29,550,123
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	224,589,810	386,441,620	240,525,298	362,634,690
Total investments pooled	255,272,996	417,571,845	273,642,185	395,972,700
Investments designated for retiree and active medical plans				
Commingled funds	9,661,621	11,897,396	9,729,991	11,201,346
Total investments designated for retiree and active medical plans	9,661,621	11,897,396	9,729,991	11,201,346
Total assets at fair value	$ 264,934,617	$ 429,469,241	$ 283,372,176	$ 407,174,046

The following schedule summarizes the investment return and its classification in the statement of activities:

	Unrestricted	Temporarily Restricted	Total 2017	Total 2016
Dividend interest and other income	$ 7,237	$ 31,613	$ 38,850	$ 18,275
Investment management costs	(593,807)	(2,259,476)	(2,853,283)	(2,810,741)
Change in unrealized appreciation	7,702,853	34,718,037	42,420,890	25,875,784
Total return on investments	7,116,283	32,490,174	39,606,457	23,083,318
Investment return designated for				
Sponsored research	-	(7,801,136)	(7,801,136)	(7,023,480)
Education	-	(8,626,732)	(8,626,732)	(8,354,940)
Current operations	(3,484,132)	-	(3,484,132)	(3,852,576)
Total distributed to operations	(3,484,132)	(16,427,868)	(19,912,000)	(19,230,996)
Investment return in excess of amounts designated for sponsored research, education and current operations	$ 3,632,151	$ 16,062,306	$ 19,694,457	$ 3,852,322

Realized and unrealized gains/(loss) attributable to Investments designated for retiree and active medical plans were $1,680,496 and 864,581 for the years ended December 31, 2017 and 2016, respectively.

Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investments, it is at least reasonably possible that changes in the value of investment securities will occur in the near term and that such changes could materially affect the market values and the amounts reported in the statement of financial position.

4. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (also referred to as “exit price”). Therefore, a fair value measurement should be determined based on the assumptions that market participants would use in pricing the asset or liability. In determining fair value, the use of various valuation approaches, including market, income and cost approaches, is permitted.

Fair Value Hierarchy
A fair value hierarchy has been established based on whether the inputs to valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the reporting entity’s assumptions about the inputs market participants would use. The fair value hierarchy requires the reporting entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

The hierarchy is described below:

Level 1 Valuations using quoted prices in active markets for identical assets or liabilities. Valuations of these products do not require a significant degree of judgment. Level 1 assets and liabilities primarily include debt and equity securities that are traded in an active exchange market.

Level 2 Valuations using observable inputs other than Level 1 prices such as quoted prices in active markets for similar assets or liabilities; quoted prices for identical or similar assets or liabilities in markets that are not active; broker or dealer quotations; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 Valuations using unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Level 3 includes assets and liabilities whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques.

Inputs broadly refer to the assumptions that market participants use to make valuation decisions, including assumptions about risk. As described in Note 2, the Institution generally uses the net asset value per share of the investment (or its equivalent) reported by the investee fund manager as the primary input to its valuation; however adjustments to the reported amount may be made based on various factors.

Investments that are valued using the “practical expedient” or net asset value per share “NAV” are excluded from the fair value leveling hierarchy. Investments include private equity, venture capital, other limited partnerships and multi strategy funds.

The following tables summarize fair value measurements at December 31, 2017 and 2016 for financial assets measured at fair value:

2017	Quoted Prices in Active Markets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3	NAV as Practical Expedient (NAV)	Total Fair Value
Assets					
Cash and cash equivalents	$ 1,054,186	$ -	$ -	$ -	$ 1,054,186
Multi-strategy Investment Funds - Short-term Liquidity Funds	-	-	-	30,076,039	30,076,039
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	-	-	-	386,441,620	386,441,620
Total pooled	1,054,186	-	-	416,517,659	417,571,845
Contributions receivable from remainder trust	-	-	930,455	-	930,455
Other assets	-	810,000	289,952	-	1,099,952
Investments designated for retiree and active medical plans - Commingled Funds	-	-	-	11,897,396	11,897,396
Total assets at fair value	$ 1,054,186	$ 810,000	$ 1,220,407	$ 428,415,055	$ 431,499,648
Interest rate swap	$ -	$ 7,444,611	$ -	$ -	$ 7,444,611
Total liabilities at fair value	$ -	$ 7,444,611	$ -	$ -	$ 7,444,611

2016	Quoted Prices in Active Markets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3	NAV as Practical Expedient (NAV)	Total Fair Value
Assets					
Cash and cash equivalents	$ 3,787,887	$ -	$ -	$ -	$ 3,787,887
Multi-strategy Investment Funds - Short-term Liquidity Funds	-	-	-	29,550,123	29,550,123
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	-	-	-	362,634,690	362,634,690
Total pooled	3,787,887	-	-	392,184,813	395,972,700
Contributions receivable from remainder trust	-	-	807,878	-	807,878
Other assets	-	-	280,570	-	280,570
Investments designated for retiree and active medical plans - Commingled Funds	-	-	-	11,201,346	11,201,346
Total assets at fair value	$ 3,787,887	$ -	$ 1,088,448	$ 403,386,159	$ 408,262,494
Interest rate swap	$ -	$ 8,248,989	$ -	$ -	$ 8,248,989
Total liabilities at fair value	$ -	$ 8,248,989	$ -	$ -	$ 8,248,989

The Institution has adopted a policy that defines near-term liquidity as those investments allowing liquidity within 90 days of the reporting period.

The following table presents the assets and liability carried at fair value as of December 31, 2017 and 2016 that are classified within Level 3 of the fair value hierarchy defined above:

	2017 Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	
	Contributions Receivable From Remainder Trust	**Other Assets**
Balance January 1, 2017	$ 807,878	$ 280,570
Unrealized gains(losses)	122,577	9,382
Balance December 1, 2017	$ 930,455	$ 289,952

	2016			
	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)			
	Contributions Receivable From Remainder Trust		**Other Assets**	
Balance January 1, 2016	$	739,566	$	591,022
Unrealized gains(losses)		68,312		(310,452)
Balance December 1, 2016	$	807,878	$	280,570

Transfers in and out of Level 3 are driven by events and circumstances affecting terms, conditions, restrictions, and redemption policies of the underlying investments.

The fair market value of the investments described in the table below are based on net asset value per share of the investments as of December 31, 2017.

Assets		Fair Value	Redemption Terms	Redemption Restrictions
Multi-strategy Investment Funds Short-term liquidity funds	$	30,076,039	Monthly redemption terms	
Multi-strategy Investment Funds WHOI Investment Holdings, LP		386,441,620	Annual (year end), redemption terms	$22,770,026 designated as illiquid remaining lives up to 7 years
Investments designated for retiree and active medical plans - Commingled Funds		11,897,396	Daily redemption terms	
Total investments	$	428,415,055		

The fair market value of the investments described in the table below are based on net asset value per share of the investments as of December 31, 2016.

Assets		Fair Value	Redemption Terms	Redemption Restrictions
Multi-strategy Investment Funds Short-term liquidity funds	$	29,550,123	Monthly redemption terms	
Multi-strategy Investment Funds WHOI Investment Holdings, LP		362,634,690	Annual (year end), redemption terms	$28,626,908 designated as illiquid remaining lives up to 8 years
Investments designated for retiree and active medical plans - Commingled Funds		11,201,346	Daily redemption terms	
Total investments	$	403,386,159		

The Institution had unfunded commitments relating to endowment assets of approximately $3,959,579 and $4,184,489 relating to private equity, venture capital and other limited partnerships as of December 31, 2017 and 2016, respectively.

5. Pledges Receivable, Net

Pledges that are expected to be collected within one year are recorded at their net realizable value. Pledges that are expected to be collected in future years are recorded at the present value of estimated future cash flows. Discount rates used to calculate the present value of pledges receivable ranged from 2.78% to 3.21% at December 31, 2017 and were 2.76% to 2.95% at December 31, 2016.

Pledges receivable consist of the following at December 31:

	2017	2016
Unconditional promises expected to be collected in		
Less than one year	$ 5,507,794	$ 1,208,139
One year to five years	1,058,000	2,164,425
Reserve for uncollectible pledges receivable	(145,000)	(209,649)
Unamortized discount	(103,130)	(118,093)
	$ 6,317,664	$ 3,044,822

6. Contribution Receivable from Remainder Trusts, Net and Charitable Remainder Trust Receivable

Contributions receivable from remainder trusts at December 31, 2017 and 2016 were $930,455 and $807,878, respectively.

The receivable and related revenue are measured at the present value of estimated future cash flows to be received, net of expected payouts, and recorded in the appropriate net asset category based on donor stipulation. During the term of these agreements, changes in the value are recognized based on amortization of discounts and changes in actuarial assumptions. For the years ended December 31, 2017 and 2016, discount rates ranging from 4.72% to 6.0% were used in these calculations.

7. Deferred Fixed Rate Variance

The Institution receives funding or reimbursement from federal government agencies for sponsored research under government grants and contracts. Revenue is recognized as related costs are incurred. The Institution has negotiated fixed rates with the federal government for the recovery of certain fringe benefits and indirect costs on these grants and contracts. Such recoveries are subject to carryforward provisions that provide for adjustments to be included in the negotiation of future fixed rates. The deferred fixed rate variance accounts represent the cumulative amount owed to or due from the federal government. The Institution's rates are negotiated with the Office of Naval Research (ONR), the Institution's cognizant agency.

The composition of the deferred fixed rate variance is as follows:

Deferred fixed rate variance asset at December 31, 2015	$ 173,255
2016 indirect costs	89,553,578
Amounts recovered	(86,825,222)
Adjustment	(8,073)
2016 change	2,720,283
Deferred fixed rate variance asset at December 31, 2016	2,893,538
2017 indirect costs	89,448,948
Amounts recovered	(87,444,259)
2017 change	2,004,689
Deferred fixed rate variance asset at December 31, 2017	$ 4,898,227

As of December 31, 2017, the Institution has expended a cumulative amount more than recovered amounts of $4,898,227 which will be reflected as an addition to future year recoveries. This amount has been reported as an asset of the Institution. Included in the Institution's rate agreements with their cognizant agency is a provision requiring full liquidation of any deferred rate variance generated in a specific year two years into the future as part of that year's rate calculation.

8. Line of Credit, Bonds Payable and Interest Rate Swap

Indebtedness at December 31, 2017 and 2016 includes bonds issued through MassDevelopment. Balances of outstanding bonds payable at December 31 consist of the following:

	2017	**2016**
MassDevelopment, Series B, Fixed Rate Revenue Bonds	$ 51,265,000	$ 53,130,000
Less: Series B unamortized bond discount	(595,173)	(631,245)
Deferred financing costs	(152,066)	(162,595)
Bonds payable	$ 50,517,761	$ 52,336,160

In fiscal 2004, proceeds were received from the offering of the $54,850,000 MassDevelopment, Variable Rate Revenue Bonds, Woods Hole Oceanographic Institution Issue, Series A (2004), (the "Series A Bonds"), which were used to repay the MassDevelopment B Pool loans and for campus construction completed in December 2007. The bonds contain certain restrictive covenants including limitations on obtaining additional debt, filings of annual financial statements and limitations on the creation of liens. In addition, the Institution agrees that, subject to any governmental restrictions, its fiduciary obligations and limitations imposed by law, it will maintain unrestricted and temporarily restricted resources at a market value equal to at least 75% of all outstanding indebtedness.

On December 1, 2008, the Institution issued $65,000,000 MassDevelopment, Fixed Rate Revenue Bonds, Woods Hole Oceanographic Institution Issue, Series B (2008), (the “Series B Bonds”). The proceeds were used for major maintenance and renovation projects throughout the Institution and were used to retire the Series A Bonds. The Series B Bonds mature in 2034 and bear fixed interest rates from 4.0% to 5.5% payable on June 1 and December 1 beginning in 2009. The Series B Bonds are collateralized by the Institution’s unrestricted revenues. The Institution incurred costs of $268,500 associated with the issue which have been capitalized and are being amortized over the life of the bonds. Debt covenants are consistent with the requirements under the Series A bond agreement as long as the interest rate swap agreement is in effect.

The Institution maintains two uncollateralized lines of credit with two separate banks. The lines of credit in the aggregate allow for a maximum borrowing capacity of $45,000,000. One agreement, with a maximum capacity of $30,000,000, bears interest at 1% below the Wall Street Journal Prime Rate, contains no expiration date but is subject to annual reviews on or about June 30. The second line of credit, with a maximum capacity of $15,000,000, bears interest at the prevailing LIBOR rate plus .75% per annum and expires September 30, 2018. The agreement requires the loan to be repaid in full for a minimum of thirty consecutive days annually. The Institution had outstanding borrowing on lines of credit of $11,000,000 and $13,000,000 at December 31, 2017 and 2016, respectively.

The aggregate maturities due on the Series B long-term debt at December 31, 2017 are as follows:

Fiscal Year	**Principal Amount**
2018	$ 1,960,000
2019	2,065,000
2020	2,160,000
2021	2,265,000
2022	2,380,000
Thereafter	40,435,000
	$ 51,265,000

In June 2004, the Institution entered into an interest rate swap agreement on the Series A Bonds (subsequently refinanced to Series B Bonds) in order to convert a portion of the variable rate debt to fixed rate, thereby economically hedging against changes in the cash flow requirements of the Institution’s variable rate debt obligations. The term of the swap is through June 1, 2034 and effectively locked in a fixed rate of 3.79% per annum. The agreement has a notional amount of $45,725,000. Interest expense in association with the swap agreement totaled $1,278,716 and $1,500,284 which is reflected as part of the net realized/unrealized losses on interest rate swap at December 31, 2017 and 2016, respectively.

The fair value of the interest rate swap at December 31, 2017 and 2016 is as follows:

	Fair Value	
	2017	**2016**
Statement of financial position location		
Accounts payable and other liabilities	$ 7,444,611	$ 8,248,989

The effect of the interest rate swap on the statement of activities for 2017 and 2016 is as follows:

	Amount of Loss Recognized in Statement of Activities	
	2017	**2016**
Location of loss recognized in statement of activities		
Nonoperating income and expenses		
Net realized/unrealized loss on interest rate swap	$ (474,338)	$ (297,438)

9. Retirement Plans

The Institution maintains a noncontributory defined benefit pension plan covering certain employees of the Institution (Qualified Plan), and a supplemental benefit plan for certain other employees. Pension benefits are earned based on years of service and compensation received. The Institution's policy is to fund at least the minimum required by the Employee Retirement Income Security Act of 1974.

The Institution sponsors a 403(b) Defined Contribution Plan (DC Plan). Contributions for the defined contribution plan totaled $7,928,991 and $7,866,512 for the years ended December 31, 2017 and 2016, respectively. Effective January 1, 2010, no new participants were allowed to enter the Qualified Plan but were eligible to participate in the DC Plan. The Qualified Plan was placed under a soft freeze for current participants with all future retirement benefits being earned through the new DC Plan and prior benefits adjusted for future salary increases.

	Qualified Plan Pension Benefits	
	2017	**2016**
Change in benefit obligation		
Benefit obligation at beginning of year	$ 284,054,045	$ 276,816,119
Interest cost	12,020,775	12,563,009
Actuarial (gain) loss	28,874,845	9,868,137
Benefits paid	(7,979,063)	(7,669,507)
Settlements	(7,870,861)	(7,971,054)
Transfers from other plans	222,688	447,341
Benefit obligation at end of year	309,322,429	284,054,045
Change in plan assets		
Fair value of plan assets at beginning of year	169,312,047	173,745,307
Employer contributions	18,320,629	6,000,000
Actual return on plan assets	22,616,592	4,759,960
Benefits paid	(7,979,063)	(7,669,507)
Settlements	(7,870,861)	(7,971,054)
Transfers from other plans	222,688	447,341
Fair value of plan assets at end of year	194,622,032	169,312,047
Funded status	$ (114,700,397)	$ (114,741,998)
Amounts recognized in the statement of financial position consist of		
Accrued benefit liability	$ 114,700,397	$ 114,741,998
Net amount recognized	$ 114,700,397	$ 114,741,998
Amounts recognized in unrestricted net assets		
Net actuarial loss	$ 82,498,624	$ 72,418,557
Information for pension plans with accumulated benefit obligations in excess of plan assets		
Projected benefit obligation	$ 309,322,429	$ 284,054,045
Accumulated benefit obligation	298,099,467	273,987,112
Components of net periodic benefit cost		
Service cost	$ -	$ -
Interest cost	12,020,775	12,563,009
Expected return on plan assets	(9,075,046)	(10,023,501)
Amortization of net actuarial (gain) loss	6,991,414	6,091,603
Net periodic benefit cost	$ 9,937,143	$ 8,631,111
Other changes in plan assets and benefit obligations recognized in unrestricted net assets		
Amortization of net actuarial gain (loss)	$ (6,991,414)	$ (6,091,603)
Net actuarial (gain) loss	15,333,299	15,131,678
Total recognized in nonoperating revenues and expenses	$ 8,341,885	$ 9,040,075

The Institution has reflected $6,900,000 and $6,000,000 for the years ended December 31, 2017 and 2016, respectively, in the operating section of the statement of activities which represents employer contributions reimbursed through the employee benefit fixed rate as negotiated with the United States Government. Any difference between the employer contributions and the net periodic benefit cost is recorded in the nonoperating section of the statement of activities. This difference amounted to $3,037,143 and $2,631,111 for the years ended December 31, 2017 and 2016, respectively.

	Qualified Plan Pension Benefits	
	2017	**2016**
Weighted-average assumptions used to determine benefit obligations at December 31		
Discount rate	3.80 %	4.40 %
Rate of compensation increase	3.50	3.50
Weighted-average assumptions used to determine net periodic benefit cost for years ended December 31		
Discount rate	4.40 %	4.70 %
Expected long-term rate of return on plan assets	6.00	6.50
Rate of compensation increase	3.50	3.50

To develop the expected long-term rate of return on assets assumption, the Institution considered the current level of expected returns on risk-free investments (primarily government bonds), the historical level of the risk premium associated with the other asset classes in which the portfolio is invested and the expectations for future returns of each asset class. The expected return for each asset class was then weighted based on the target asset allocation to develop the expected long-term rate of return on assets assumption for the portfolio, net of expenses expected to be paid. This resulted in a 6.0% and 6.5% assumption as of December 31, 2017 and 2016 respectively.

Plan Assets

The long-term investment objectives of the Plan are to (1) achieve an average real total return assessed over rolling five year periods, that is consistent with the Plan's actuarial assumptions; (2) generate acceptable long-term returns, as determined by measurement against the Fund's benchmarks and (3) generate acceptable long-term returns without compromising the liquidity and stability required to support the Plan's annual payments to the Plan's beneficiaries.

The Institution has retained and outsourced services for manager selection, risk management and asset allocation of the Plan's assets to a third party to assist with implementing the Plan's investment policy. In addition, Target Allocations for asset classes have been revised to include two broad categories; (1) Growth and Excess Return Portfolio, (2) Fixed Income/Liability Hedging Portfolio. These categories have been assigned a 60% and 40% Target Allocation, respectively.

Expected amounts amortized from unrestricted net assets into net periodic pension cost for the next fiscal year	
Amortization of net loss	$ 10,290,462

Fair Value Disclosures

The following fair value hierarchy table's present information about the Qualified Plan's financial assets measured at fair value on a recurring basis:

	2017				
	Level 1	Level 2	Level 3	NAV as Practical Expedient	Total
Assets					
Cash and cash equivalents	$ 16,817,970	$ -	$ -	$ -	$ 16,817,970
Private equity, venture capital and other limited partnerships	-	-	-	19,887,222	19,887,222
Commingled funds	-	-	-	72,062,140	72,062,140
Hedge funds	-	-	-	54,614,664	54,614,664
Mutual funds	11,266,609	-	-	-	11,266,609
Domestic common stock	8,846,735	-	-	-	8,846,735
Domestic fixed income	10,688,137	-	-	-	10,688,137
Total assets at fair value	$ 47,619,451	$ -	$ -	$ 146,564,026	$ 194,183,477

	2016				
	Level 1	Level 2	Level 3	NAV as Practical Expedient	Total
Assets					
Cash and cash equivalents	$ 6,880,885	$ -	$ -	$ -	$ 6,880,885
Private equity, venture capital and other limited partnerships	-	-	-	17,307,383	17,307,383
Commingled funds	-	-	-	48,953,037	48,953,037
Hedge funds	-	-	-	64,636,880	64,636,880
Mutual funds	12,834,143	-	-	-	12,834,143
Domestic fixed income	17,645,227	-	-	-	17,645,227
Total assets at fair value	$ 37,360,255	$ -	$ -	$ 130,897,300	$ 168,257,555

Included in plan assets are net investment related receivables/(payables) of $438,555 and 1,054,492 as of December 31, 2017 and 2016, respectively.

Expected Contributions

The Institution anticipates contributing $8,700,000 to the Qualified Plan in 2018.

Estimated Future Benefit Payments

The following benefit payments, which reflect expected future service are expected to be paid as follows:

Years	Benefit Payments
2018	$ 20,388,362
2019	20,566,609
2020	20,467,289
2021	20,445,215
2022	18,806,688
2023–2027	88,504,763

Amortization of Gains and Losses
Amortization of the net gain or loss resulting from experience different from that assumed and from changes in assumptions (excluding asset gains and losses not yet reflected in market-related value) is included as a component of Net Period Benefit Costs/(Income) for the year. If, as of the beginning of the year, that net gain or loss exceeds 10% of the greater of the projected benefit obligation and the market-related value of plan assets, the amortization is that excess divided by the average remaining service period until 25 years of service of participating employees expected to receive benefits under the plan.

Supplemental Retirement Plan
In December 2017 the supplemental retirement plan and “Rabbi” Trust were terminated as there were no longer any participants eligible for benefits under the Plan. The accrued supplemental retirement obligation, funded through the Institution’s fringe benefit pool and rate agreement was matched by a “Rabbi” Trust and recorded as an asset on the balance sheet. However, the Institution was obligated to use the funds only for the supplemental retirement or similar benefits by the Institution’s cognizant agency, the Office of Naval Research (ONR). During December 2017 the “Rabbi” Trust was terminated and the assets reverted to the Institution. The corresponding gain of $11,420,679 is recorded in the nonoperating section of the statements of activities. The Institution then used these assets to fund additional contributions to the Qualified Plan totaling $11,420,679. The return of trust assets to the Institution and subsequent funding of the Qualified Plan was approved by ONR. In 2016 trust assets were invested in Money Market, Bond and S&P 500 Index Funds. These assets were Level I investments within the fair value hierarchy table.

The following table summarizes changes to the corresponding asset and liability of the Supplemental Plan:

	2017	2016
Change in nonreturnable funding "Rabbi" Trust		
Nonreturnable funding at beginning of year	$ 10,918,509	$ 9,813,339
Investment return	502,170	1,149,736
Benefits paid	-	(44,566)
Assets reverted to Institution upon termination	(11,420,679)	-
Nonreturnable funding "Rabbi" Trust at end of year	$ -	$ 10,918,509

10. Other Postretirement Benefits

In addition to providing retirement plan benefits, the Institution provides certain health care benefits for retired employees and their spouses. Substantially all of the Institution’s employees may become eligible for the benefits if they reach normal retirement age (as defined) or elect early retirement after having met certain time in service criteria.

Effective January 1, 2012 the Trust agreement which had been funding the Plan was amended to include active employees. Accordingly, assets of the Plan were then decoupled and recorded on the Institution’s Statement of Financial Position as “Investments designated for retiree and active medical plans” along with a corresponding increase to the accrued postretirement liability. Actual returns from investments designated for retiree and active medical plans totaled $1,680,496 and $864,581 for the years ended December 31, 2017 and 2016, respectively, and are presented in the nonoperating section of the Statement of Activities, net of administrative fees of $112,021 and $114,407 for 2017 and 2016, respectively. Health care benefits for active employees funded from these investments totaled $0 and $1,500,000 for the years ended December 31, 2017 and 2016, respectively, and are also presented in the nonoperating section of the Statement of Activities.

	Other Postretirement Benefits 2017	Other Postretirement Benefits 2016
Change in benefit obligation		
Benefit obligation at beginning of year	$ 33,988,547	$ 32,130,896
Adjustment to reflect change from plan amendment	-	-
Service cost	518,147	490,948
Interest cost	1,463,875	1,479,651
Benefits paid, net of participant contributions	(1,045,356)	(1,018,909)
Actuarial (gain) loss	(1,304,320)	6,044
Clarifying amendment and burial benefit	-	899,917
Benefit obligation at end of year	33,620,893	33,988,547
Change in plan assets		
Fair value of plan assets at beginning of year	-	-
Employer contributions	1,045,356	1,018,909
Actual return on plan assets	-	-
Benefits paid, net of participant contributions	(1,045,356)	(1,018,909)
Fair value of plan assets at end of year	-	-
Funded status	$ (33,620,893)	$ (33,988,547)
Amounts recognized in the statement of financial position consist of		
Accrued benefit liability	$ 33,620,893	$ 33,988,547
Net amount recognized	$ 33,620,893	$ 33,988,547
Amounts recognized in unrestricted net assets		
Net prior service credit	$ (610,186)	$ (1,423,763)
Net actuarial loss	6,967,327	8,791,379
Net amount recognized	$ 6,357,141	$ 7,367,616
Components of net periodic benefit cost		
Service cost	$ 518,147	$ 490,948
Interest cost	1,463,875	1,479,651
Expected return on plan assets	-	-
Amortization of prior service credit	(813,577)	(813,577)
Amortization of net actuarial (gain) loss	519,732	593,256
Clarifying amendment and burial benefit	-	899,917
Net periodic benefit cost	$ 1,688,177	$ 2,650,195
Other changes in plan assets and benefit obligations recognized in unrestricted net assets		
Amortization of prior service credit	$ 813,577	$ 813,577
Amortization of net actuarial gain (loss)	(519,732)	(593,256)
Net actuarial (gain) loss	(1,304,320)	6,044
Total recognized in nonoperating expense	$ (1,010,475)	$ 226,365

The Institution recognizes the net periodic benefit cost in the nonoperating section of the statement of activities. This amounted to $1,688,177 and $2,650,195 for the years ended December 31, 2017 and 2016, respectively.

	2017	2016
Weighted-average assumptions used to determine benefit obligations at December 31		
Discount rate	3.8 %	4.4 %
Weighted-average assumptions used to determine net periodic benefit cost for years ended December 31		
Discount rate	4.4 %	4.7 %
Expected long-term rate of return on plan assets	N/A	N/A

The plan does not provide prescription drug benefits for post-65 retirees; therefore, there is no anticipated Medicare employer subsidy.

	2017		2016	
	Pre-65	Post-65	Pre-65	Post-65
Assumed health care cost trend rates at December 31,				
Health care cost trend rate assumed for next year	7.0%	5.0%	7.5%	5.3%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	5.0%	5.0%	5.5%	5.5%
Year that the rate reaches the ultimate trend rate	2023	2018	2023	2018

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plan. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

	2017		2016	
	One-Percentage-Point Increase in Trend	One-Percentage-Point Decrease in Trend	One-Percentage-Point Increase in Trend	One-Percentage-Point Decrease in Trend
Effect on total of service cost and interest cost components	$ 416,749	$ (320,527)	$ 378,541	$ (312,631)
Effect on year-end postretirement benefit obligation	5,451,248	(4,330,311)	5,829,378	(4,624,456)

Plan Assets

Due to the change in the Trust agreement, there were no plan assets at December 31, 2017 and 2016.

Expected amounts amortized from unrestricted net assets into net periodic pension cost for the next fiscal year	
Amortization of net prior service cost	$ (813,577)
Amortization of net loss	519,732

Expected Contributions

The Institution provides contributions as expenses are incurred. The Institution expects contributions to the Retiree Medical Plan in 2018 to be equal to the expected benefit in 2018 of $1,355,740.

Estimated Future Benefit Payments

The following benefit payments, which reflect expected future service are expected to be paid as follows:

Years	Benefit Payments
2018	$ 1,335,740
2019	1,377,706
2020	1,429,537
2021	1,509,155
2022	1,545,782
2023–2027	8,200,786

11. Endowment

The Institution's endowment consists of 149 individual funds established for a variety of purposes. The endowment includes both donor-restricted endowment funds and funds designed by the Board of Trustees to function as endowments. Net assets associated with endowment funds, including funds designated by the Board of Trustees to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

At December 31, the endowment net asset composition by type of fund consisted of the following:

	2017			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor restricted endowment funds	$ -	$ 263,121,390	$ 97,766,607	$ 360,887,997
Board designated funds	76,821,967	-	-	76,821,967
Total funds	$ 76,821,967	$ 263,121,390	$ 97,766,607	$ 437,709,964

	2016			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor restricted endowment funds	$ -	$ 246,996,495	$ 96,017,769	$ 343,014,264
Board designated funds	72,872,311	-	-	72,872,311
Total funds	$ 72,872,311	$ 246,996,495	$ 96,017,769	$ 415,886,575

Changes in endowment net assets for the year ended December 31, consisted of the following:

	2017			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Net assets beginning of year	$ 72,872,311	$ 246,996,495	$ 96,017,769	$ 415,886,575
Investment return				
Investment income, net of fees	(586,570)	(2,227,863)	-	(2,814,433)
Net appreciation	7,702,853	34,718,037	-	42,420,890
Total investment return	7,116,283	32,490,174	-	39,606,457
New gifts		17,118	1,632,982	1,650,100
Appropriation of endowment assets for expenditure under spending policy	(3,484,132)	(16,427,868)	-	(19,912,000)
Additional appropriations, net	352,012	-	-	352,012
Transfers to endowment	-	-	-	-
Change in split interest agreements	(34,507)	45,471	115,856	126,820
Net assets end of year	$ 76,821,967	$ 263,121,390	$ 97,766,607	$ 437,709,964

	2016			
	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Net assets beginning of year	$ 81,675,960	$ 242,405,125	$ 84,130,630	$ 408,211,715
Investment return				
Investment income, net of fees	(598,203)	(2,194,263)	-	(2,792,466)
Net appreciation	3,896,503	21,979,281	-	25,875,784
Total investment return	3,298,300	19,785,018	-	23,083,318
New gifts	5,000	14,791	1,683,579	1,703,370
Appropriation of endowment assets for expenditure under spending policy	(3,852,576)	(15,378,420)	-	(19,230,996)
Additional appropriations, net	(8,244,393)	-	-	(8,244,393)
Transfers to endowment	-	-	10,156,731	10,156,731
Change in split interest agreements	(9,980)	169,981	46,829	206,830
Net assets end of year	$ 72,872,311	$ 246,996,495	$ 96,017,769	$ 415,886,575

12. Commitments and Contingencies

The Defense Contract Audit Agency (DCAA) is responsible for auditing indirect charges to grants and contracts on behalf of the ONR. The Institution and the ONR have settled the years through 2014 with no findings or adjustments for unallowable costs. The current indirect cost recovery rates, which are fixed, include the impact of prior year settlements. The DCAA issued an audit report on the completed audit of indirect costs for the years ended December 31, 2012 through 2014 on April 6, 2017. The years 2015 and 2016 costs are under review by DCAA for low risk memo consideration. Any adjustments will be recorded in the years they become known.

The Institution is a defendant in legal proceedings incidental to the nature of its operations. The Institution believes that the outcome of these proceedings will not materially affect its financial position.

13. Related Party Transactions

The Institution's subcontracts to subgrantee organizations in which an individual associated with the subgrantee organization is also a member of the Institution's Board of Trustees or Corporation totaled $22,548 and $112,720 for the years ended December 31, 2017 and 2016, respectively. These subcontracts may include federal pass-through awards. The Institution also has other transactions such as legal services and other items with organizations where members of the Board of Trustees or Corporation are affiliated with the organizations. Total expenditures for these legal, publication, research and student transactions were approximately $499,860 and $106,610 for the years ended December 31, 2017 and 2016, respectively.

The Institution has loans due from various employees for education advances and computer purchases. The amounts outstanding are $641,362 and $654,762 at December 31, 2017 and 2016, respectively.

14. Subsequent Events

Management evaluated all events or transactions that occurred after December 31, 2017 through July 12, 2018, the date these financial statements were issued and has concluded that there were no such events or transactions that require adjustment to the audited financial statements or disclosure in the notes to the audited financial statements except for the following.

On May 9, 2018 the Institution issued $75,510,000 MassDevelopment, Fixed Rate Revenue Bonds, Woods Hole Oceanographic Series 2018. The Institution received proceeds of $86,306,214 net of issuance costs of $644,296, which included underwriter's discount, legal, consulting and Issuer costs. Of this amount $50,660,224 was used to retire the Series 2008 obligations of outstanding principal and interest with the remaining amount to be used for future maintenance and renovation projects throughout the Institution along with the building of new facilities. The Bonds mature in 2048 and bear a fixed interest rates ranging from 4.0% to 5%. Debt covenants are consistent with the requirements under the Series B Bonds as long as the Series A interest rate swap agreement is in effect.