Woods Hole Oceanographic Institution

Financial Statements
December 31, 2019 and 2018

Woods Hole Oceanographic Institution
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December 31, 2019 and 2018

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 statements of financial position as of December 31, 2019 and 2018 and the related statements of activities for the year ended December 31, 2019 and of cash flows for the years ended December 31, 2019 and 2018.

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.

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, 2019 and 2018 and the changes in its net assets for the year ended December 31, 2019 and its cash flows for the years ended December 31, 2019 and 2018 in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the financial statements, the Institution changed the manner in which it accounts for contributions received and contributions made in 2019. Our opinion is not modified with respect to this matter.

Other Matter

We previously audited the statement of financial position as of December 31, 2018, and the related statements of activities and of cash flows for the year then ended (the statement of activities is not presented herein), and in our report dated July 11, 2019, 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, 2018 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 15, 2020

Woods Hole Oceanographic Institution
Statements of Financial Position
December 31, 2019 and 2018

	2019	2018
Assets		
Cash and cash equivalents, unrestricted	$ 5,229,194	$ 6,724,602
Cash and cash equivalents, restricted	28,074,605	23,959,968
Reimbursable costs and fees		
Billed (net of allowance for doubtful accounts of $85,072 for 2019 and $84,500 for 2018)	7,129,764	3,996,652
Unbilled	13,374,454	11,363,834
Receivable for investments sold	20,704,828	20,353,422
Other receivables	818,745	1,965,029
Inventory	3,070,743	3,320,626
Deferred charges and prepaid expenses	1,335,155	1,554,387
Deposits with trustees for construction	33,106,718	34,407,701
Deferred fixed rate variance (Note 7)	-	1,520,599
Pledges receivable, net (Note 5)	7,630,900	2,035,652
Investments designated for retiree and active medical plans (Note 10)	11,650,933	10,037,698
Investments, pooled (Note 3)	413,323,721	397,183,502
Other assets	1,038,373	922,535
	546,488,133	519,346,207
Property, plant and equipment		
Land, buildings and improvements	180,063,680	177,246,269
Vessels and dock facilities	13,985,079	11,837,015
Laboratory and other equipment	46,229,774	42,375,067
Construction in process	4,291,925	2,147,229
	244,570,458	233,605,580
Accumulated depreciation	(153,606,256)	(145,679,973)
Net property, plant and equipment	90,964,202	87,925,607
Contributions receivable from remainder trusts, long-term, net (Note 6)	1,026,564	834,582
Total assets	$ 638,478,899	$ 608,106,396
Liabilities		
Line of credit (Note 8)	$ -	$ 7,000,000
Accounts payable and other liabilities (Note 8)	24,228,755	22,846,839
Accrued payroll and related liabilities	9,332,405	8,509,223
Deferred revenue and refundable advances	4,048,618	17,660,883
Deferred fixed rate variance (Note 7)	4,799,316	-
Accrued postretirement liability (Note 10)	31,173,664	28,609,419
Accrued pension liability (Note 9)	114,987,698	101,025,538
Bonds payable (Note 8)	83,723,699	85,390,159
Total liabilities	272,294,155	271,042,061
Net assets		
Without donor restrictions	(26,153,449)	(13,556,201)
With donor restrictions	392,338,193	350,620,536
Total net assets	366,184,744	337,064,335
Total liabilities and net assets	$ 638,478,899	$ 608,106,396

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

Woods Hole Oceanographic Institution
Statement of Activities
Years Ended December 31, 2019
(With Summarized Financial Information for the Year Ended December 31, 2018)

	Without Donor Restrictions	With Donor Restrictions	2019	2018
Revenues				
Sponsored research				
Government	$ 139,405,005	$ -	$ 139,405,005	$ 101,968,861
Ships and submersibles operations	28,384,458	-	28,384,458	29,198,276
Subcontracts and nongovernment	25,391,975	44,577,918	69,969,893	55,366,521
Sponsored research assets released to operations	25,517,893	(25,517,893)	-	-
Fixed price awards	259,871	-	259,871	689,947
Education				
Joint program income	5,193,032	-	5,193,032	4,696,516
Endowment income	-	8,911,895	8,911,895	8,849,705
Education funds released from restriction	9,571,003	(9,571,003)	-	-
Education fees	450,868	-	450,868	431,079
Contributions and gifts	11,169,530	8,944,449	20,113,979	15,043,397
Contributions in kind	411,130	-	411,130	284,059
Investment return designated for current operations	4,478,356	-	4,478,356	3,449,367
Releases from restrictions	-	(1,633,744)	(1,633,744)	(842,671)
Charter Income	1,971,180	-	1,971,180	1,470,529
Fees	1,290,927	-	1,290,927	669,547
Rental income	553,087	-	553,087	552,835
Communication and publications	277,705	-	277,705	241,456
Other	968,047	-	968,047	1,529,013
Total revenues	255,294,067	25,711,622	281,005,689	223,598,437
Expenses				
Research	176,447,987	-	176,447,987	142,642,524
Marine operations	13,866,886	-	13,866,886	11,908,291
Academic programs	12,148,866	-	12,148,866	10,991,971
Other Institution activities	9,221,315	-	9,221,315	8,193,687
Unsponsored research	14,645,681	-	14,645,681	22,002,853
Ships and submersibles	28,384,458	-	28,384,458	29,198,275
Total expenses	254,715,193	-	254,715,193	224,937,601
Change in net assets from operating activities	578,874	25,711,622	26,290,496	(1,339,164)
Nonoperating revenue and expenses				
Investment return greater than amounts designated for sponsored research, education and current operations	4,103,219	15,739,323	19,842,542	(22,637,078)
Return on investments for retiree and active medical plans	2,313,166	-	2,313,166	(941,856)
Net realized/unrealized (losses) gains on interest rate swap	(2,155,875)	-	(2,155,875)	416,902
Change in split interest agreements	28,185	265,582	293,767	(169,027)
Other nonoperating expenses	(69,876)	-	(69,876)	(69,876)
Donor reclassification to ship operations	25,132	1,130	26,262	(5,000)
(Loss)/Gain on sale of investment	(500,000)	-	(500,000)	1,300,000
Loss on refinancing of Series 2008 Bonds	-	-	-	(782,436)
Net periodic benefit cost	(245,533)	-	(245,533)	(5,402,186)
Pension and post-retirement related changes other than net periodic benefit costs (Note 9)	(16,674,540)	-	(16,674,540)	23,646,479
Change in net assets from nonoperating activities	(13,176,122)	16,006,035	2,829,913	(4,644,078)
Total change in net assets	(12,597,248)	41,717,657	29,120,409	(5,983,242)
Net assets at				
Beginning of year	(13,556,201)	350,620,536	337,064,335	343,047,577
End of year	$ (26,153,449)	$ 392,338,193	$ 366,184,744	$ 337,064,335

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

Woods Hole Oceanographic Institution
Statements of Cash Flows
Years Ended December 31, 2019 and 2018

	2019	2018
Cash flows from operating activities		
Total change in net assets	$ 29,120,409	$ (5,983,242)
Adjustments to reconcile total change in net assets to net cash used in operating activities		
Depreciation	10,743,913	9,944,870
Amortization	(546,460)	(256,226)
Change in split interest agreements	(293,767)	169,027
Allowance for uncollectible pledges	2,345	12,000
Discount on pledges	33,575	(55,207)
Net realized and unrealized (gain) loss on investments	(42,899,190)	3,049,802
Loss on refinance of Series 2008 Bonds	-	782,436
Loss (gain) on sale of investment	500,000	(1,300,000)
Unrealized loss/(gain) on interest swap	1,289,536	(1,401,445)
Pension related changes other than net periodic pension costs	16,674,540	(23,646,479)
Contributions to be used for long-term investment	(6,339,673)	(2,617,952)
Receipt of contributed securities	(1,192,513)	-
Liquidation of contributed securities	1,192,513	-
(Increase) decrease in assets		
Reimbursable costs and fees		
Billed	(3,133,112)	4,809,808
Unbilled	(2,010,620)	2,638,463
Other receivables	646,284	(1,355,856)
Pledges receivable	(5,631,168)	4,325,219
Inventory	249,883	(1,129,671)
Deferred charges and prepaid expenses	219,232	(552,163)
Other assets	(115,838)	277,469
Remainder trusts	(191,982)	95,873
Deferred fixed rate variance	1,520,599	3,377,628
Increase (decrease) in liabilities		
Accrued pension and postretirement liability	(148,135)	4,960,146
Accounts payable and other liabilities	(27,573)	(1,180,333)
Accrued payroll and related liabilities	823,182	812,510
Deferred revenue and refundable advances	(13,612,265)	4,846,949
Deferred fixed rate variance	4,799,316	-
Deferred financing costs	-	(644,296)
Net cash used in operating activities	(8,326,969)	(20,670)
Cash flows from investing activities		
Capital expenditures		
Additions to property and equipment	(13,368,788)	(13,057,355)
Bond Proceeds		
Transfer bond proceeds to trustee	-	(35,000,000)
Proceeds used for PP&E, net	1,300,983	592,299
Endowment and other		
Purchase of investments	(9,358,848)	(2,510,765)
Sale of investments	33,648,000	22,997,814
Receivable for investments sold	(351,406)	(215,303)
Purchase of investments designated for retiree and active medical plans	(499,614)	(3,349,759)
Proceeds from the sale of investments designated for retiree and active medical plans	1,199,546	4,267,601
Net cash provided by (used in) investing activities	12,569,873	(26,275,468)
Cash flows from financing activities		
Proceeds from issuance of new debt	-	86,306,214
Repayments under debt agreement	(1,120,000)	(51,315,730)
Borrowing under line of credit	1,000,000	18,000,000
Repayments under line of credit	(8,000,000)	(22,000,000)
Contributions to be used for long-term investment	6,339,673	2,617,952
Net cash (used in) provided by financing activities	(1,780,327)	33,608,436
Net increase in cash and cash equivalents	2,462,577	7,312,298
Cash and cash equivalents		
Beginning of year	31,091,222	23,778,924
End of year	$ 33,553,799	$ 31,091,222
Supplemental disclosures		
Cash paid for interest	$ 4,645,654	$ 4,549,338
Noncash activity		
Construction in process additions remaining in accounts payable	908,434	494,714
Contributed securities	1,192,513	-

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 system 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, 2018, 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:

Net Assets With Donor Restrictions

Donor-imposed restricted net assets are subject to donor-imposed stipulations that they be maintained by the Institution in perpetuity, or may or will be met by actions of the Institution and/or the passage of time. Generally, the donors of donor-restricted endowment funds 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. Assets in an endowment fund are donor restricted assets 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 revenues without donor restrictions.

Net Assets Without Donor Restrictions

Net assets without donor restrictions are not subject to donor-imposed stipulations. Revenues are reported as increases in net assets without donor restrictions unless use of the related assets is limited by donor-imposed restrictions with the exception of certain investment expenses which are required to be netted against investment return. Expenses are reported as decreases in net assets without donor restrictions. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in net assets without donor restrictions unless their use is restricted by explicit donor stipulations or law. Expirations of net assets with donor restrictions, that is, the donor-imposed stipulated purpose has been accomplished and/or the stipulated time period has elapsed, are reported as releases between the applicable classes of net assets. Amounts received for sponsored research are reflected in 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 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 support without donor restrictions. 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 net assets with donor restrictions and are released to net assets without donor restrictions when the purpose or restriction is met. Promises to give, subject to donor-imposed stipulations that the corpus be maintained in perpetuity, are recognized as increases in net assets with donor restrictions. Conditional promises to give are not recognized until 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 operating support without donor restrictions 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 net assets with donor restrictions if the terms of the gift require that they be added to the principal of a donor restricted endowment fund;
- As increases in net assets with donor restrictions 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 until they are appropriated for expenditure and/or the purpose restrictions are met; and
- As increases in net assets without donor restrictions 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). Endowment investment income, gains and losses, from endowment funds without donor restrictions, 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 recognizes 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 has elected to treat all short-term highly liquid investments, (i.e., cash equivalents), embedded in pooled investments, investments designated for retiree and active medical plans and split interest agreements as short-term investments.

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, 2019 and 2018 is $27,806,716 and $23,697,725, 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, 2019 and 2018 is $2,729,433 and $3,029,094 respectively 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, 2019 and 2018 is $267,889 and $262,243, 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.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the statements of financial position that sum to the total of the same such amounts presented in the statements of cash flows.

	2019	2018
Cash and cash equivalents, unrestricted	$ 5,229,194	$ 6,724,602
Cash and cash equivalents, restricted	28,074,605	23,959,968
Cash included in pooled investments	250,000	406,652
Total cash, cash equivalents and restricted cash in the statement of cash flows	$ 33,553,799	$ 31,091,222

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, 2019 and 2018 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 (pooled investments) trailing 36 month rolling average market value. This amounted to $20,350,000 and $20,136,000 for the years ended December 31, 2019 and 2018, respectively, and is classified in operating revenues (research, education, and operations). The Institution is subject to the Massachusetts Uniform Prudent Management of Institutional Funds Act (UPMIFA) and, thus, classifies amounts in its donor-restricted endowment funds as net assets with donor restrictions because those net assets are time restricted until the Board of Trustees appropriates such amounts for expenditure. Most of those net assets also are subject to purpose restrictions that must be met before reclassifying those net assets to net assets without donor restrictions. The Board of Trustees has interpreted UPMIFA as not requiring the maintenance of purchasing power of the original gift amount contributed to an endowment fund, unless a donor stipulates the contrary. As a result of this interpretation, when reviewing its donor-restricted endowment funds, The Institution considers a fund to be underwater if the fair value of the fund is less than the sum of (a) the original value of initial and subsequent gift amounts donated to the fund and (b) any accumulations to the fund that are required to be maintained in perpetuity in accordance with the direction of the applicable donor gift instrument. The Institution has interpreted UPMIFA to permit spending from underwater funds in accordance with the prudent measures required under the law. There were no underwater endowment funds at December 31, 2019 or 2018.

Deposits With Trustees for Construction
Deposits with trustees for construction consist principally of investments in United States Government obligations and have been deposited with trustees under certain loan agreements. These amounts are restricted for use on approved construction projects and facility improvements set forth under the Series 2019 Bond issue (see Note 8). At December 31, 2019 and 2018, $33,106,718 and $34,407,701 was available for these purposes.

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. Included in inventories are costs associated with the construction of engineered equipment under contracts totaling $1,094,108 and $1,491,685 for the years ended December 31, 2019 and 2018 respectively.

Contracts and Grants
Revenue earned on grants for research is recognized as related costs are incurred. Revenue on contracts is recognized as value is transferred to customers, which is comparable to when related costs are incurred for research and research and development contracts. For engineered equipment contracts, revenue is recognized at a point in time when the equipment is delivered.

The Institution received 83% and 88% of its sponsored research revenues from government agencies including 44% and 35% of its operating revenues directly from the National Science Foundation and 14% and 11% from the United States Navy in fiscal years 2019 and 2018, 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
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 2018, 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. The swap is carried at fair value and included in accounts payable and other liabilities in the statement of financial position.

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 $10,674,045 and $9,874,994 in 2019 and 2018, respectively, has been charged to operating activities. Depreciation on certain government-funded facilities (the Laboratory for Marine Science and the dock facility) amounting to $69,876 in 2019 and 2018 has been charged to nonoperating expenses as these assets were gifted by the Government.

Expenses
Expenses are recognized when incurred and charged to the functions to which they are directly related. Sponsored research includes general research, marine operations research and services and ship and submersible operation and usage. Academic programs costs are associated primarily with the Joint program. Unsponsored research includes internally funded research activities of the Institution. Other institutional activities include development, communications, marine operations support and other unsponsored activities.

Included in other institution activities are fund raising expenses totaling $3,459,451 and $3,112,695 for the years ended December 31, 2019 and 2018. Fund raising expenses totaled approximately 17% and 20% of revenue from contributions for the years ending December 31, 2019 and 2018 respectively. The calculation includes costs associated with the Institution's Development Office, (including direct support activities) and the Contributions and gifts total presented on the statement of activities (excluding Contributions in kind).

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
Certain prior year reported amounts have been reclassified to conform to current year presentation.

New Accounting Pronouncements
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, 2019. The Institution adopted this update on a modified retrospective basis and there were no changes to net assets or changes in net assets as a result of this adoption.

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 adopted this update on a retrospective transition method and there were no changes to net assets or changes in net assets as a result of this adoption.

In November 2016, the FASB issued ASU 2016-18 Statement of Cash Flows (Topic 230), 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 adopted this update on a retrospective transition method and there were no changes to net assets or changes in net assets as a result of this adoption.

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 adopted this update retrospectively and there were no changes to net assets or changes in net assets as a result of this adoption.

In June 2018, the FASB issued ASU 2018-08 Clarifying the Scope and Accounting Guidance for Contributions Received and Contributions Made (Topic 958). The FASB issued this update to clarify and improve the scope and accounting guidance for contributions received and made. The amendments of this update should assist entities in (1) evaluating whether transactions should be accounted for as contributions (nonreciprocal transactions) within the scope of Topic 958, Not-for-Profit Entities, or as exchange transactions subject to other guidance and (2) determining whether a contribution is conditional.

Effective January 1, 2019, the Institution has applied the guidance on a modified prospective basis to agreements that were not completed by or were entered into on or after that date. As a result of applying this guidance, there was a one-time increase of unbilled reimbursable costs and fees (receivable) of $3.6 million and a one-time decrease in deferred revenue of $17.3 million in the Statement of Financial Position. In addition, net assets released from restrictions increased by $16.6 million in the statement of activities.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments-Overall (subtopic 825-10). The amendments in this update 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, 2019. Adoption of this amendment requires a cumulative-effect adjustment to the balance sheet as of beginning of the fiscal year of adoption. The Institution has concluded the impact of this ASU to not be material.

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, 2020.

In August of 2019 the FASB issued ASU 2018-13 Fair Value Measurement (Topic) 820). The amendments in this Update as part of the disclosure framework project. The disclosure framework project's objective and primary focus are to improve the effectiveness of disclosures in the notes to financial statements by facilitating clear communication of the information required by generally accepted accounting principles (GAAP) that is most important to users of each entity's financial statements. The amendments in this Update for the Institution are effective for the year ended December 31, 2020.

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 "Multi-strategy 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 daily withdrawals with a notice of ten business days.

The Institution's endowment investment services provider has established a single investor fund, (with the Institution as the sole investor) WHOI Investment Holdings, LP, comprised 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:

	2019		2018	
	Cost	Market	Cost	Market
Assets				
Cash and short-term investments	$ 5,658,850	$ 5,658,850	$ 2,373,346	$ 2,373,346
Multi-strategy Investment Funds -Short-term Liquidity Funds	19,549,000	21,240,440	29,549,000	30,464,003
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	187,338,946	386,424,431	205,070,255	364,346,153
Total investments pooled	212,546,796	413,323,721	236,992,601	397,183,502
Investments designated for retiree and active medical plans				
Commingled funds	8,972,582	11,650,933	9,115,984	10,037,698
Total investments designated for retiree and active medical plans	8,972,582	11,650,933	9,115,984	10,037,698
Total assets at fair value	$ 221,519,378	$ 424,974,654	$ 246,108,585	$ 407,221,200

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

	Without Donor Restrictions	**With Donor Restrictions**	**Total 2019**
Dividend interest and other income	$ 36,246	$ 134,028	$ 170,274
Change in unrealized appreciation	8,545,329	31,476,939	40,022,268
Total return on investments	8,581,575	31,610,967	40,192,542
Investment return designated for			
Sponsored research	-	(6,959,749)	(6,959,749)
Education	-	(8,911,895)	(8,911,895)
Current operations	(4,478,356)	-	(4,478,356)
Total distributed to operations	(4,478,356)	(15,871,644)	(20,350,000)
Investment return in excess of amounts designated for sponsored research, education and current operations	$ 4,103,219	$ 15,739,323	$ 19,842,542

	Without Donor Restrictions	**With Donor Restrictions**	**Total 2018**
Dividend interest and other income	$ 3,805	$ 13,600	$ 17,405
Change in unrealized appreciation	(550,602)	(1,967,881)	(2,518,483)
Total return on investments	(546,797)	(1,954,281)	(2,501,078)
Investment return designated for			
Sponsored research	-	(7,836,928)	(7,836,928)
Education	-	(8,849,705)	(8,849,705)
Current operations	(3,449,367)	-	(3,449,367)
Total distributed to operations	(3,449,367)	(16,686,633)	(20,136,000)
Investment return in excess of amounts designated for sponsored research, education and current operations	$ (3,996,164)	$ (18,640,914)	$ (22,637,078)

Net realized and unrealized gains/(losses) attributable to investments designated for retiree and active medical plans were $2,313,166 and $941,856 for the years ended December 31, 2019 and 2018, 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, 2019 and 2018 for financial assets measured at fair value:

	2019				
	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 short-term investments	$ 5,658,850	$ -	$ -	$ -	$ 5,658,850
Multi-strategy Investment Funds - Short-term Liquidity Funds	-	-	-	21,240,440	21,240,440
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	-	-	-	386,424,431	386,424,431
Total pooled	5,658,850	-	-	407,664,871	413,323,721
Contributions receivable from remainder trust	-	-	1,026,564	-	1,026,564
Other assets	-	-	938,371	-	938,371
Investments designated for retiree and active medical plans - commingled funds	-	-	-	11,650,933	11,650,933
Total assets at fair value	$ 5,658,850	$ -	$ 1,964,935	$ 419,315,804	$ 426,939,589
Interest rate swap	$ -	$ 7,332,702	$ -	$ -	$ 7,332,702
Total liabilities at fair value	$ -	$ 7,332,702	$ -	$ -	$ 7,332,702

	2018				
	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 short-term investments	$ 2,373,346	$ -	$ -	$ -	$ 2,373,346
Multi-strategy Investment Funds - Short-term Liquidity Funds	-	-	-	30,464,003	30,464,003
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	-	-	-	364,346,153	364,346,153
Total pooled	2,373,346	-	-	394,810,156	397,183,502
Contributions receivable from remainder trust	-	-	834,582	-	834,582
Other assets	-	-	822,533	-	822,533
Investments designated for retiree and active medical plans - commingled funds	-	-	-	10,037,698	10,037,698
Total assets at fair value	$ 2,373,346	$ -	$ 1,657,115	$ 404,847,854	$ 408,878,315
Interest rate swap	$ -	$ 6,043,166	$ -	$ -	$ 6,043,166
Total liabilities at fair value	$ -	$ 6,043,166	$ -	$ -	$ 6,043,166

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, 2019 and 2018 that are classified within Level 3 of the fair value hierarchy defined above:

	2019 Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	
	Contributions Receivable From Remainder Trust	**Other Assets**
Balance January 1, 2019	$ 834,582	$ 822,533
Unrealized gains	191,982	115,838
Balance December 31, 2019	$ 1,026,564	$ 938,371

	2018 Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	
	Contributions Receivable From Remainder Trust	Other Assets
Balance January 1, 2018	$ 930,455	$ 289,952
Unrealized losses	(95,873)	(88,923)
Transfers	-	621,504
Balance December 31, 2018	$ 834,582	$ 822,533

Transfers in and out of Level 3 are driven by events and circumstances affecting terms, conditions, restrictions, and redemption policies of the underlying investments. In 2019, there were $0 transferred in or out of Level 3. In 2018, $621,504 was transferred out of Level 2 and into Level 3.

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, 2019.

Assets	**Fair Value**	**Redemption Terms**	**Redemption Restrictions**
Multi-strategy Investment Funds Short-term liquidity funds	$ 21,240,440	Monthly redemption terms	
Multi-strategy Investment Funds WHOI Investment Holdings, LP	386,424,431	Annual (year end), redemption terms	$13,324,919 designated as illiquid remaining lives up to 5 years
Investments designated for retiree and active medical plans - commingled funds	11,650,933	Daily redemption terms	
Total investments	$ 419,315,804		

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, 2018.

Assets	**Fair Value**	**Redemption Terms**	**Redemption Restrictions**
Multi-strategy Investment Funds Short-term liquidity funds	$ 30,464,003	Monthly redemption terms	
Multi-strategy Investment Funds WHOI Investment Holdings, LP	364,346,153	Annual (year end), redemption terms	$17,313,467 designated as illiquid remaining lives up to 6 years
Investments designated for retiree and active medical plans - commingled funds	10,037,698	Daily redemption terms	
Total investments	$ 404,847,854		

The Institution had unfunded commitments relating to endowment assets of $2,692,272 and $3,257,874 relating to private equity, venture capital and other limited partnerships as of December 31, 2019 and 2018, 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 2.40% to 3.51% at December 31, 2019 and 2018.

Pledges receivable consist of the following at December 31:

	2019	2018
Unconditional promises expected to be collected in		
Less than one year	$ 4,774,408	$ 1,038,324
One year to five years	3,097,335	1,202,251
Reserve for uncollectible pledges receivable	(159,345)	(157,000)
Unamortized discount	(81,498)	(47,923)
	$ 7,630,900	$ 2,035,652

The total amount of conditional pledges which are not recognized in the Institution's financial statements totals $15,684,076 at December 31, 2019.

6. Contribution Receivable From Remainder Trusts, Net and Other Split Interest Agreements

Contributions receivable from remainder trusts at December 31, 2019 and 2018 were $1,026,564 and $834,582, respectively. In addition, the Institution is the beneficiary for split interest agreements held in gift annuity and pooled income funds totaling $938,371 and $822,533 for the years ended December 31, 2019 and 2018 respectively. These amounts are presented in other assets. Included in accounts payable and other liabilities are net expected payouts of $523,449 and $525,200 for the years ended December 31, 2019 and 2018 respectively. Contribution revenue for split interest agreements totaled $20,325 and $0 for the years ended December 31, 2019 and 2018 respectively.

The receivable and other split interest agreements and related revenues 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. Discount rates used in these calculations ranged from 4.72% to 6.0%, at December 31, 2019 and 2018.

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, 2017	$ 4,898,227
2018 indirect costs	93,792,092
Amounts recovered	(97,169,720)
2018 change	(3,377,628)
Deferred fixed rate variance asset at December 31, 2018	1,520,599
2019 indirect costs	94,364,813
Amounts recovered	(100,684,728)
2019 change	(6,319,915)
Deferred fixed rate variance asset at December 31, 2019	$ (4,799,316)

As of December 31, 2019, the Institution has expended a cumulative amount less than recovered amounts of $4,799,316 which will be reflected as a deduction to future year recoveries. This amount has been reported as a liability 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, 2019 and 2018 includes bonds issued through MassDevelopment. Balances of outstanding bonds payable at December 31 consist of the following:

	2019	2018
MassDevelopment, Series 2018, Fixed Rate Revenue Bonds	$ 74,390,000	$ 75,510,000
Add: Series 2018 unamortized bond premium	9,942,200	10,510,137
Less: Series 2018 unamortized bond discount	(230,049)	(238,169)
Deferred financing costs	(378,452)	(391,809)
Bonds payable	$ 83,723,699	$ 85,390,159

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 resources with and without donor restrictions 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 revenues without donor restrictions. 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.

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 B (2008) obligations of outstanding principal and interest with the remaining amount held by trustees that will be drawn down to fund 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%. The Series 2019 Bonds contain no financial covenants. Interest expense on the Bonds totaled $1,926,845 and $2,315,050, net of amounts capitalized of $1,247,119 and $867,005 for the years ended December 31, 2019 and 2018 respectively.

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 September 30. The second line of credit, with a maximum capacity of $15,000,000, bears interest at the prevailing LIBOR rate plus .90% per annum and expires September 30, 2020. 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 $0 and $7,000,000 at December 31, 2019 and 2018, respectively.

The aggregate maturities due on the Series 2018 long-term debt at December 31, 2019 are as follows:

Fiscal Year	Principal Amount
2020	$ 1,170,000
2021	1,230,000
2022	1,290,000
2023	1,360,000
2024	1,425,000
Thereafter	67,915,000
	$ 74,390,000

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 \$866,339 and \$984,543 which is reflected as part of the net realized/unrealized (losses) gains on interest rate swap at December 31, 2019 and 2018, respectively.

The fair value of the interest rate swap at December 31, 2019 and 2018 is as follows:

	Fair Value	
	2019	**2018**
Statement of financial position location		
Accounts payable and other liabilities	$ 7,332,702	$ 6,043,166

The effect of the interest rate swap on the statement of activities for 2019 and 2018 is as follows:

	Amount of Loss Recognized in Statement of Activities	
	2019	**2018**
Location of loss recognized in statement of activities		
Nonoperating income and expenses		
Net realized/unrealized (losses) gains on interest rate swap	$ (2,155,875)	$ 416,902

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 \$8,518,019 and \$8,219,480 for the years ended December 31, 2019 and 2018, 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 2019	Qualified Plan Pension Benefits 2018
Change in benefit obligation		
Benefit obligation at beginning of year	$ 272,138,136	$ 309,322,429
Interest cost	11,655,591	11,432,302
Actuarial (gain) loss	36,557,828	(26,772,903)
Benefits paid	(12,724,548)	(8,435,000)
Settlements	-	(13,408,692)
Transfers from other plans	209,334	-
Benefit obligation at end of year	307,836,341	272,138,136
Change in plan assets		
Fair value of plan assets at beginning of year	171,112,598	194,622,032
Employer contributions	8,700,000	8,500,000
Actual return on plan assets	25,551,259	(10,165,742)
Benefits paid	(12,724,548)	(8,435,000)
Settlements	-	(13,408,692)
Transfers from other plans	209,334	-
Fair value of plan assets at end of year	192,848,643	171,112,598
Funded status	$ (114,987,698)	$ (101,025,538)
Amounts recognized in the statement of financial position consist of		
Accrued benefit liability	$ 114,987,698	$ 101,025,538
Net amount recognized	$ 114,987,698	$ 101,025,538
Amounts recognized in net assets without donor restrictions		
Net actuarial loss	$ 77,632,533	$ 62,684,921
Information for pension plans with accumulated benefit obligations in excess of plan assets		
Projected benefit obligation	$ 307,836,341	$ 272,138,136
Accumulated benefit obligation	297,157,077	262,643,370
Components of net periodic benefit cost		
Service cost	$ -	$ -
Interest cost	11,655,591	11,432,302
Expected return on plan assets	(10,370,996)	(10,603,334)
Amortization of net actuarial loss	6,429,953	9,391,993
Settlements		2,679,701
Net periodic benefit cost	$ 7,714,548	$ 12,900,662
Other changes in plan assets and benefit obligations recognized in unrestricted net assets		
Amortization of net actuarial loss	$ (6,429,953)	$ (9,391,993)
Net actuarial gain (loss)	21,377,565	(7,742,009)
Immediate recognition of loss due to settlements	-	(2,679,701)
Total recognized in nonoperating revenues (expenses)	$ 14,947,612	$ (19,813,703)

The Institution has reflected $8,700,000 and $8,500,000 for the years ended December 31, 2019 and 2018, 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 (income) expenses of $(985,452) and $4,400,662 for the years ended December 31, 2019 and 2018, respectively.

	Qualified Plan Pension Benefits	
	2019	**2018**
Weighted-average assumptions used to determine benefit obligations at December 31		
Discount rate	3.55 %	4.4 %
Rate of compensation increase	3.5 %	3.5 %
Weighted-average assumptions used to determine net periodic benefit cost for years ended December 31		
Discount rate	4.4 %	3.8 %
Expected long-term rate of return on plan assets	5.75 %	6.5 %
Rate of compensation increase	3.5 %	3.5 %

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 5.75% and 6.5% assumption as of December 31, 2019 and 2018.

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 net assets without donor restrictions into net periodic pension cost for the next fiscal year	
Amortization of net loss	$ 11,061,103

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:

	2019				
	Level 1	Level 2	Level 3	NAV as Practical Expedient	Total
Assets					
Cash and cash equivalents	$ 5,983,742	$ -	$ -	$ -	$ 5,983,742
Private equity, venture capital and other limited partnerships	-	-	-	25,693,117	25,693,117
Commingled funds	-	-	-	47,849,467	47,849,467
Exchange traded funds	18,636,786	-	-	-	18,636,786
Hedge funds	-	-	-	58,008,629	58,008,629
Mutual funds	30,638,107	-		-	30,638,107
Domestic common stock	5,668,538	-	-	-	5,668,538
Domestic fixed income	906,069	-	-	-	906,069
Total assets at fair value	$ 61,833,242	$ -	$ -	$ 131,551,213	$ 193,384,455

	2018				
	Level 1	Level 2	Level 3	NAV as Practical Expedient	Total
Assets					
Cash and cash equivalents	$ 5,991,970	$ -	$ -	$ -	$ 5,991,970
Private equity, venture capital and other limited partnerships	-	-	-	24,444,901	24,444,901
Commingled funds	-	-	-	45,627,573	45,627,573
Hedge funds	-	-	-	57,288,946	57,288,946
Mutual funds	17,277,760	-	-	-	17,277,760
Domestic common stock	6,437,668	-	-	-	6,437,668
Domestic fixed income	12,187,204	-	-	-	12,187,204
Total assets at fair value	$ 41,894,602	$ -	$ -	$ 127,361,420	$ 169,256,022

Included in plan assets are net investment related (payables)/receivables of $(535,812) and $1,856,576 as of December 31, 2019 and 2018, respectively. There were no transfers to or from Level 3 for the years ended December 31, 2019 and 2018.

Expected Contributions

The Institution anticipates contributing $13,020,000 to the Qualified Plan in 2020.

Estimated Future Benefit Payments

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

Years	Benefit Payments
2020	$ 20,713,135
2021	19,717,669
2022	20,076,420
2023	18,744,724
2024	18,338,981
2025–2029	83,968,177

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 periodic benefit income (cost) 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.

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 gains/(losses) of $2,313,166 and $(941,856) for the years ended December 31, 2019 and 2018, respectively, and are presented in the nonoperating section of the statement of activities, net of administrative fees of $76,699 and $78,341 for 2019 and 2018, respectively. Health care benefits for active employees funded from these investments totaled $0 for the years ended December 31, 2019 and 2018, respectively, and are also presented in the nonoperating section of the statement of activities.

	Other Postretirement Benefits	
	2019	2018
Change in benefit obligation		
Benefit obligation at beginning of year	$ 28,609,419	$ 33,620,893
Adjustment to reflect change from plan amendment		
Service cost	306,264	475,802
Interest cost	1,230,985	1,252,215
Benefits paid, net of participant contributions	(699,932)	(917,842)
Actuarial (gain) loss	1,726,928	(5,821,649)
Benefit obligation at end of year	31,173,664	28,609,419
Change in plan assets		
Fair value of plan assets at beginning of year	-	-
Employer contributions	699,932	917,842
Actual return on plan assets	-	-
Benefits paid, net of participant contributions	(699,932)	(917,842)
Fair value of plan assets at end of year	-	-
Funded status	$ (31,173,664)	$ (28,609,419)
Amounts recognized in the statement of financial position consist of		
Accrued benefit liability	$ 31,173,664	$ 28,609,419
Net amount recognized	$ 31,173,664	$ 28,609,419
Amounts recognized in net assets without donor restrictions		
Net prior service credit	$ -	$ -
Net actuarial loss	3,035,106	1,019,475
Net amount recognized	$ 3,035,106	$ 1,019,475
Components of net periodic benefit cost		
Service cost	$ 306,264	$ 475,802
Interest cost	1,230,985	1,252,215
Expected return on plan assets	-	-
Amortization of prior service credit	-	(610,186)
Amortization of net actuarial loss	-	359,495
Net periodic benefit cost	$ 1,537,249	$ 1,477,326
Other changes in plan assets and benefit obligations recognized in net assets without donor restrictions		
Amortization of prior service credit	$ -	$ 610,186
Amortization of net actuarial loss	-	(359,495)
Net actuarial loss (gain)	1,726,928	(5,821,649)
Total recognized in nonoperating expense (revenue)	$ 1,726,928	$ (5,570,958)

The Institution recognizes the net periodic benefit cost in the nonoperating section of the statement of activities. This amounted to $1,537,429 and $1,477,326 for the years ended December 31, 2019 and 2018, respectively.

	2019	2018
Weighted-average assumptions used to determine benefit obligations at December 31		
Discount rate	3.55 %	4.4 %
Weighted-average assumptions used to determine net periodic benefit cost for years ended December 31		
Discount rate	4.4 %	3.8 %
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.

	2019		2018	
	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	6.5 %	5.0 %	7.0 %	5.0%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	5.0 %	5.0 %	5.0 %	5.0 %
Year that the rate reaches the ultimate trend rate	2026	2019	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:

	2019		2018	
	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	$ 273,317	$ (214,576)	$ 348,224	$ (268,069)
Effect on year-end postretirement benefit obligation	5,120,113	(4,067,796)	4,219,683	(3,402,160)

Expected amounts amortized from net assets without donor restrictions into net periodic pension cost for the next fiscal year	
Amortization of net prior service cost	$ -
Amortization of net loss	-

Expected Contributions

The Institution provides contributions as expenses are incurred. The Institution expects contributions to the Retiree Medical Plan in 2019 to be equal to the expected benefit in 2020 of $1,255,036.

Estimated Future Benefit Payments

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

Years	Benefit Payments
2020	$ 1,255,036
2021	1,334,506
2022	1,366,583
2023	1,430,117
2024	1,467,242
2025–2029	7,525,001

11. Net Assets

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 net asset composition by type consisted of the following:

	2019		
	Without Donor Restrictions	With Donor Restrictions	Total
Endowment funds			
Perpetual in nature	$ -	$ 106,804,987	$ 106,804,987
Purpose restricted		240,718,767	240,718,767
Board designated funds	86,504,795	-	86,504,795
Endowment net assets	86,504,795	347,523,754	434,028,549
Purpose restricted - research	-	36,236,795	36,236,795
Purpose restricted - education	-	5,656,157	5,656,157
Time restricted and other	-	2,921,487	2,921,487
Pension and postretirement benefits	(134,510,429)	-	(134,510,429)
Undesignated	21,852,185	-	21,852,185
Total net assets	$ (26,153,449)	$ 392,338,193	$ 366,184,744

	2018		
	Without Donor Restrictions	**With Donor Restrictions**	**Total**
Endowment funds			
Perpetual in nature	$ -	$ 100,428,976	$ 100,428,976
Purpose restricted	-	224,699,740	224,699,740
Board designated funds	92,408,208	-	92,408,208
Endowment net assets	92,408,208	325,128,716	417,536,924
Purpose restricted - research	-	15,204,383	15,204,383
Purpose restricted - education	-	6,205,889	6,205,889
Time restricted and other	-	4,081,548	4,081,548
Pension and postretirement benefits	(119,597,259)	-	(119,597,259)
Undesignated	13,632,850	-	13,632,850
Total net assets	$ (13,556,201)	$ 350,620,536	$ 337,064,335

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

	2019		
	Without Donor Restrictions	**With Donor Restrictions**	**Total**
Net assets beginning of year	$ 92,408,208	$ 325,128,716	$ 417,536,924
Investment return			
Investment income, net of fees	36,246	134,028	170,274
Net apppreciation	8,545,329	31,476,939	40,022,268
Total investment return	8,581,575	31,610,967	40,192,542
New gifts	-	6,390,133	6,390,133
Appropriation of endowment assets for expenditure under spending policy	(4,478,356)	(15,871,644)	(20,350,000)
Additional appropriations, net	(10,034,817)	-	(10,034,817)
Change in split interest agreements	28,185	265,582	293,767
Net assets end of year	$ 86,504,795	$ 347,523,754	$ 434,028,549

	2018		
	Without Donor Restrictions	**With Donor Restrictions**	**Total**
Net assets beginning of year	$ 76,821,967	$ 360,887,997	$ 437,709,964
Investment return			
Investment income, net of fees	3,805	13,600	17,405
Net depreciation	(550,602)	(1,967,881)	(2,518,483)
Total investment return	(546,797)	(1,954,281)	(2,501,078)
New gifts	-	2,700,023	2,700,023
Appropriation of endowment assets for expenditure under spending policy	(3,449,367)	(16,686,633)	(20,136,000)
Additional appropriations, net	(66,958)	-	(66,958)
Removal of previously imposed restrictions	19,654,719	(19,654,719)	-
Change in split interest agreements	(5,356)	(163,671)	(169,027)
Net assets end of year	$ 92,408,208	$ 325,128,716	$ 417,536,924

12. Liquidity and Availability of Financial Assets

The Institution's financial assets available within one year of the balance sheet date for general expenditures are as follows:

Cash and cash equivalents	$ 5,229,194
Accounts receivable billed and unbilled	20,503,218
Receivable for investments sold	4,326,527
Other receivables	73,860
Pledges receivable	4,773,288
	$ 34,906,087

The Institution's endowment funds consist of donor-restricted and Board designated funds. Income from donor-restricted funds are restricted by purpose and are not available for general expenditure. The Institution defines general expenditures as any costs included in total expenses from operating activities. As described in Note 2 the Board designated endowment has a spending rate of 5% and $4,326,527 will be available for general use within the next twelve months.

The Institution's liquidity management policy is to structure its financial assets to be available as its general expenditures, liabilities and other obligations come due. In addition, the Institution invests cash in excess of daily liquidity needs in short-term investments. To manage liquidity needs the Institution has committed lines of credit in the amount of $45,000,000 (see Note 8). It is management's intent to extend and/or renew these lines of credit by September 30, 2020 into 2021. In addition, the Institution has Board designated funds in the amount of $86,468,453 which it could draw upon. At December 31, 2019, $18,722,935 of Board designated net assets are committed to fund certain research, education and other designated net assets. Both Board designated and donor-restricted endowment contain investments with lock-up provisions that would reduce the total investments that could be available. The Institution's endowment investments include a multi strategy short-term liquidity fund to provide for additional short-term liquidity needs. This fund totaled $21,240,440 at December 31, 2019 and allows for daily withdrawals (see Note 4 for redemption terms). Board designated funds are categorized as follows at December 31, 2019:

	2019	2018
Board designated for research	$ 29,034,985	$ 30,336,928
Board designated for research - Director discretionary	1,613,681	1,531,047
Board designated for general unsponsored progam support	55,062,491	59,782,842
Other	793,638	757,390
	$ 86,504,795	$ 92,408,207

During 2018, the Institution received approval from the Office of the Massachusetts Attorney General to redirect $19,654,719 of a donor-imposed restricted endowment fund for which the original intent of the gift was no longer applicable with the current portfolio of Institutional programs. The redirection of this fund is now classified as without donor restrictions within the Board designated endowment funds to be used for general scientific support.

13. 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 2016 with no findings or adjustments for unallowable costs. 2017 costs remain under review by DCAA, however, in April 2019 DCAA indicated during their exit conference that no findings or questioned costs have been identified to date. Last communication by the Institution to ONR was November 2019. The Institution is still waiting on a report from ONR. In November 2019 ONR requested DCAA review 2018 costs, that 2018 review is in progress by DCAA.

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.

14. Related Party Transactions

The Institution also has transactions such as professional services and other items with organizations where members of the Board of Trustees or Corporation are affiliated with the organizations. Total expenditures for these transactions were $4,452 and $9,902 for the years ended December 31, 2019 and 2018, respectively.

The Institution has loans due from various employees for education advances and computer purchases. The amounts outstanding are $613,450 and $646,900 at December 31, 2019 and 2018, respectively.

15. Schedule of Functional Expenses

The statement of activities presents expenses by functional programs without distinguishing program versus supporting service expenses (or facilities and administrative ("F&A") costs). F&A expenses totaled $64,448,149 for 2019 and have been allocated among the categories presented utilizing a modified total direct cost ("MTDC") basis. MTDC is a federal government prescribed methodology for allocating F&A costs. While facilities costs are allocated primarily on a square footage basis, administrative costs are allocated proportionally by the total of net direct costs per program plus the program's share of facilities costs. Net program direct costs include total direct costs per program reduced by certain costs such as equipment, subcontracts (by statute) and other cost attributes negotiated with the Institution's cognizant agency specific to the Institution which by nature would lead to a disproportional allocation of F&A costs. Functional expenses for the year ended December 31, 2019 and summarized information for 2018 are as follows:

	Research	Marine Operations	Academic Programs	Other Institution Activities	Unsponsored Research	Ships and Submersibles	2019 Total
Salaries	$ 38,152,984	$ 969,813	$ 2,586,499	$ 3,014,157	$ 1,818,504	$ 8,853,774	$ 55,395,731
Fringe Benefits	14,837,869	374,630	1,039,141	1,490,032	717,783	2,926,757	21,386,212
Equipment	9,957,185	293,996	594	719	381,077	433,678	11,067,249
Subcontracts	26,877,226	125,507	-	-	-	-	27,002,733
Supplies	6,950,495	210,824	53,473	110,538	184,046	1,024,926	8,534,302
Travel	3,230,519	103,807	124,469	179,282	252,890	685,410	4,576,377
Outside Services	3,549,938	156,405	38,754	467,735	176,146	281,569	4,670,547
Utilities	17	-	-	138	-	-	155
Interest	-	-	-	120,514	-	-	120,514
Professional Services	164,351	-	-	313,588	1,350	19,135	498,424
Repairs and Maintenance	1,591,012	24,119	6,701	58,937	32,548	1,920,754	3,634,071
Insurance	167,187	1,499	22,486	366,626	280	588,950	1,147,028
Other	19,267,175	9,308,348	5,976,267	716,440	10,912,156	3,669,945	49,850,331
Ships Fuel	15,367	11,675	346	-	-	2,355,982	2,383,370
Facilities and Administration	51,686,662	2,286,263	2,300,136	2,382,609	168,901	5,623,578	64,448,149
Total operating exepnses	176,447,987	13,866,886	12,148,866	9,221,315	14,645,681	28,384,458	254,715,193
Nonoperating expense	-	-	-	245,533	-	-	245,533
Total	$ 176,447,987	$ 13,866,886	$ 12,148,866	$ 9,466,848	$ 14,645,681	$ 28,384,458	$ 254,960,726

	Research	Marine Operations	Academic Programs	Other Institution Activities	Unsponsored Programs	Ships and Submersibles	2018 Total
Salaries	$ 33,347,703	$ 673,051	$ 2,172,751	$ 2,023,391	$ 3,973,378	$ 9,385,564	$ 51,575,837
Fringe Benefits	14,596,358	301,265	986,305	1,374,718	1,804,042	3,364,978	22,427,667
Equipment	8,164,404	952,573	18,746	15,282	442,273	164,586	9,757,865
Subcontracts	11,417,643	317,806	-	-	404	-	11,735,853
Supplies	8,500,668	112,325	47,558	72,076	348,172	1,178,941	10,259,740
Travel	3,287,383	50,327	149,779	223,963	247,634	538,527	4,497,613
Outside Services	2,323,081	562,672	56,090	514,773	98,467	480,592	4,035,675
Utilities	-	-	-	228	-	-	228
Interest	-	-	-	131,370	-	-	131,370
Professional Services	86,116	29,037	-	125,553	-	2,500	243,205
Repairs and Maintenance	1,303,588	1,666,185	9,498	134,114	41,992	2,997,530	6,152,908
Insurance	58,944	-	19,971	549,200	148,402	308,084	1,084,601
Other	14,272,284	4,946,113	5,469,932	885,410	12,476,152	2,250,665	40,300,557
Ships Fuel	637	97	-	-	-	3,071,845	3,072,579
Facilities and Administration	45,283,717	2,296,839	2,061,341	2,143,609	2,421,938	5,454,462	59,661,906
Total operating exepnses	142,642,524	11,908,291	10,991,971	8,193,687	22,002,853	29,198,275	224,937,601
Nonoperating expense	-	-	-	5,402,186	-	-	5,402,186
Total	$ 142,642,524	$ 11,908,291	$ 10,991,971	$ 13,595,873	$ 22,002,853	$ 29,198,275	$ 230,339,787

The category Facilities and Administration in the Schedule of Functional Expenses for the year ended December 31, 2019 includes costs associated with plant operations of $21,149,147, departmental administration of $11,238,514, sponsored program administration of $1,155,468, library costs of $1,273,721 and general administration of $23,809,105.

16. Subsequent Event

Management evaluated all events or transactions that occurred after December 31, 2019 through July 15, 2020, 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.

The outbreak of COVID-19 has caused domestic and global disruption in operations for not-for-profit research and educational institutions. In addition, COVID-19 has negatively impacted the financial markets and may continue to materially affect the returns on and value of the Institution's investments and/or endowment, as well as future research funding. The full impact of COVID-19 and the scope of any adverse impact on the Institution's finances and operations cannot be fully determined at this time.