

Woods Hole Oceanographic Institution

**Report on Federal Awards in Accordance with the
Uniform Guidance**

December 31, 2022

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Woods Hole Oceanographic Institution

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Report of Independent Auditors

To the Board of Trustees of
Woods Hole Oceanographic Institution

Report on the Audit of the Financial Statements

Opinion

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, 2022 and 2021, and the related statements of activities for the year ended December 31, 2022, and of cash flows for the years ended December 31, 2022 and 2021, including the related notes (collectively referred to as the “financial statements”).

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Institution as of December 31, 2022 and 2021, and the changes in its net assets for the year ended December 31, 2022 and its cash flows for the years ended December 31, 2022 and 2021 in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors’ Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Institution and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Other Matter

We previously audited the statement of financial position as of December 31, 2021, 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 19, 2022, we expressed an unmodified opinion on those financial statements. In our opinion, the information set forth in the accompanying summarized financial information for the year then ended is consistent, in all material respects, with the audited financial statements from which it has been derived.

Responsibilities of Management 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, and for 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.



In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Institution's ability to continue as a going concern for one year after the date the financial statements are issued.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS and *Government Auditing Standards*, will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with US GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Institution's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Supplemental Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards for the year ended December 31, 2022 is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing



procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures, in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the financial statements taken as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated July 14, 2023 on our consideration of the Institution's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters for the year ended December 31, 2022. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Institution's internal control over financial reporting and compliance.

PricewaterhouseCoopers LLP

Boston, Massachusetts

July 14, 2023

Woods Hole Oceanographic Institution
Statements of Financial Position
December 31, 2022 and 2021

	2022	2021
Assets		
Cash and cash equivalents, unrestricted	\$ 15,296,998	\$ 8,493,578
Cash and cash equivalents, restricted	30,074,299	25,941,450
Billed accounts receivable (net of allowance for doubtful accounts of \$92,504 for 2022 and \$75,014 for 2021)	8,105,213	6,089,322
Unbilled accounts receivable	20,410,413	26,733,356
Receivable for investments sold	22,245,556	21,247,016
Other receivables	877,956	797,178
Inventory	3,267,226	3,593,840
Deferred charges and prepaid expenses	5,794,419	5,086,180
Deposits with trustees for construction	1,573,237	1,871,813
Pledges receivable, net (Note 5)	39,009,603	14,840,619
Right of use asset	224,553	314,302
Investments designated for retiree and active medical plans (Note 3 & 10)	9,396,946	12,268,952
Investments, pooled (Note 3)	442,922,825	491,770,749
Other assets	4,051,380	4,162,144
	<u>603,250,624</u>	<u>623,210,499</u>
Property, plant and equipment		
Land, buildings and improvements	226,291,720	213,603,601
Vessels and dock facilities	26,246,608	15,784,863
Laboratory and other equipment	52,265,248	49,099,733
Construction in process	3,103,312	9,245,308
	<u>307,906,888</u>	<u>287,733,505</u>
Accumulated depreciation	<u>(187,298,611)</u>	<u>(173,968,089)</u>
Net property, plant and equipment	<u>120,608,277</u>	<u>113,765,416</u>
Contributions receivable from remainder trusts, long-term, net (Note 6)	<u>823,813</u>	<u>1,069,997</u>
Total assets	<u>\$ 724,682,714</u>	<u>\$ 738,045,912</u>
Liabilities		
Accounts payable and other liabilities (Note 8)	\$ 20,590,535	\$ 25,343,840
Accrued payroll and related liabilities	12,998,172	12,540,774
Deferred revenue and refundable advances	1,501,124	2,728,876
Deferred fixed rate variance (Note 7)	4,203,722	4,801,072
Right of use liability	224,553	314,302
Accrued postretirement liability (Note 10)	20,521,433	29,510,451
Accrued pension liability (Note 9)	37,041,900	81,205,652
Bonds payable (Note 8)	78,371,087	80,202,348
Total liabilities	<u>175,452,526</u>	<u>236,647,315</u>
Net assets		
Without donor restrictions	70,415,581	26,614,167
With donor restrictions	478,814,607	474,784,430
Total net assets	<u>549,230,188</u>	<u>501,398,597</u>
Total liabilities and net assets	<u>\$ 724,682,714</u>	<u>\$ 738,045,912</u>

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

Woods Hole Oceanographic Institution
Statements of Activities
Years Ended December 31, 2022 and 2021
With Summarized Financial Information for the Year Ended December 31, 2021

	Without Donor Restrictions	With Donor Restrictions	2022	2021
Revenues				
Sponsored research				
Government	\$ 159,260,338		\$ 159,260,338	\$ 182,339,376
Ships and submersibles operations	37,450,506		37,450,506	25,301,839
Subcontracts and nongovernment	29,558,457	45,511,892	75,070,349	58,792,642
Sponsored research assets released to operations	30,264,494	(30,264,494)	-	-
Fixed price awards	380,001		380,001	78,606
Education				
Joint program income	7,510,039		7,510,039	7,031,247
Endowment income		9,373,398	9,373,398	9,211,971
Education funds released from restriction	9,817,377	(9,817,377)	-	-
Education fees	297,046		297,046	122,591
Contributions and gifts	8,390,636	67,781,533	76,172,169	25,833,881
Contributions in kind	217,656		217,656	450,347
Investment return designated for current operations	4,246,132		4,246,132	4,131,495
Releases from restrictions		(13,328,349)	(13,328,349)	(8,909,517)
Fees	1,939,441		1,939,441	1,579,728
Rental income	566,402		566,402	556,203
Communication and publications	471,083		471,083	463,226
Other	2,797,825		2,797,825	440,595
Total revenues	<u>293,167,433</u>	<u>69,256,603</u>	<u>362,424,036</u>	<u>307,424,230</u>
Expenses				
Research	206,434,133		206,434,133	199,839,274
Marine operations	9,746,380		9,746,380	33,379,574
Academic programs	14,869,166		14,869,166	14,989,780
Other Institution activities	19,237,348		19,237,348	10,192,998
Un-sponsored research	5,317,696		5,317,696	10,226,195
Ships and submersibles	37,450,507		37,450,507	25,301,839
Total expenses	<u>293,055,230</u>	<u>-</u>	<u>293,055,230</u>	<u>293,929,660</u>
Change in net assets from operating activities	<u>112,203</u>	<u>69,256,603</u>	<u>69,368,806</u>	<u>13,494,570</u>
Nonoperating revenue and expenses				
Investment return greater than amounts designated for sponsored research, education and current operations	(15,789,131)	(64,866,347)	(80,655,478)	42,650,880
Return on investments for retiree and active medical plans	(2,872,006)		(2,872,006)	877,245
Net realized/unrealized gain on interest rate swap	3,617,331		3,617,331	857,135
Change in split interest agreements	(39,767)	(360,079)	(399,846)	187,556
Other nonoperating expenses	(51,936)		(51,936)	(51,935)
Investment in Plant	6,597,222		6,597,222	-
Gain/(loss) on sale of investment			-	219,749
Net periodic benefit cost	(2,275,884)		(2,275,884)	4,123,954
Pension and post-retirement related changes other than net periodic benefit costs (Note 9)	54,503,382		54,503,382	25,370,268
Change in net assets from nonoperating activities	<u>43,689,211</u>	<u>(65,226,426)</u>	<u>(21,537,215)</u>	<u>74,234,852</u>
Total change in net assets	<u>43,801,414</u>	<u>4,030,177</u>	<u>47,831,591</u>	<u>87,729,422</u>
Net assets at				
Beginning of year	<u>26,614,167</u>	<u>474,784,430</u>	<u>501,398,597</u>	<u>413,669,175</u>
End of year	<u>\$ 70,415,581</u>	<u>\$ 478,814,607</u>	<u>\$ 549,230,188</u>	<u>\$ 501,398,597</u>

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

Woods Hole Oceanographic Institution

Statements of Cash Flows

Years Ended December 31, 2022 and 2021

	2022	2021
Cash flows from operating activities		
Total change in net assets	\$ 47,831,591	\$ 87,729,422
Adjustments to reconcile total change in net assets to net cash used in operating activities		
Depreciation	13,330,522	10,871,562
Amortization	(541,261)	(552,143)
Change in split interest agreements	399,847	(187,556)
Allowance for uncollectible pledges	1,655,770	448,230
Discount on pledges	2,101,090	145,983
Donation of Plant	(9,500,000)	-
Net realized and unrealized (gain) on investments	62,771,054	(64,708,466)
Unrealized loss on interest swap	(6,489,981)	(2,137,285)
Pension related changes other than net periodic pension costs	(54,503,382)	(25,370,268)
Contributions to be used for long-term investment	(8,193,487)	(776,545)
Receipt of contributed securities	(2,354,463)	(242,395)
Liquidation of contributed securities	2,354,463	242,395
(Increase) decrease in assets		
Reimbursable costs and fees		
Billed	(2,015,891)	874,668
Unbilled	6,322,943	1,548,265
Other receivables	(80,778)	(237,377)
Pledges receivable	(27,925,844)	(5,362,235)
Inventory	326,615	(1,014,084)
Deferred charges and prepaid expenses	(708,239)	(674,719)
Other assets	110,764	(104,331)
Remainder trusts	246,184	(29,467)
Increase (decrease) in liabilities		
Accrued pension and postretirement liability	1,350,612	(4,885,912)
Accounts payable and other liabilities	852,122	(3,529,984)
Accrued payroll and related liabilities	457,400	1,160,045
Deferred revenue and refundable advances	(1,227,751)	(648,484)
Deferred fixed rate variance	(597,349)	3,355,409
Net cash provided by/(used by) in operating activities	<u>25,972,551</u>	<u>(4,085,272)</u>
Cash flows from investing activities		
Capital expenditures		
Additions to property and equipment	(10,188,677)	(19,998,147)
Bond Proceeds		
Proceeds used for PP&E, net	298,573	14,069,572
Endowment and other		
Purchase of investments	(32,065,173)	(684,725)
Sale of investments	22,244,000	21,247,000
Receivable for investments sold	(998,540)	(390,977)
Proceeds from the sale of investments designated for retiree and active medical plans	(1,229,951)	1,121,552
Net cash (used in) provided by investing activities	<u>(21,939,768)</u>	<u>15,364,275</u>
Cash flows from financing activities		
Repayments under debt agreement	(1,290,000)	(1,230,000)
Borrowing under line of credit	-	2,000,000
Repayments under line of credit	-	(2,000,000)
Contributions to be used for long-term investment	8,193,487	776,545
Net cash provided by (used in) financing activities	<u>6,903,487</u>	<u>(453,455)</u>
Net increase in cash and cash equivalents	10,936,270	10,825,548
Cash and cash equivalents		
Beginning of year	<u>34,435,028</u>	<u>23,609,480</u>
End of year	<u>\$ 45,371,297</u>	<u>\$ 34,435,028</u>
Supplemental disclosures		
Cash paid for interest	\$ 4,371,298	\$ 4,910,397
Noncash activity		
Construction in process additions remaining in accounts payable	484,706	1,285,418
Contributed securities	2,354,463	242,395
Donation of plant	9,500,000	-

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

Woods Hole Oceanographic Institution

Notes to Financial Statements

December 31, 2022 and 2021

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, 2021, 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.

Woods Hole Oceanographic Institution

Notes to Financial Statements

December 31, 2022 and 2021

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.

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Notes to Financial Statements

December 31, 2022 and 2021

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, 2022 and 2021, respectively, are 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. Interest earned on unspent funds from federal agencies is remitted to the federal government. Restricted cash also includes Board designated cash and is detailed in the table below:

	2022	2021
US Navy & Other Government Advances	\$ 29,122,976	\$ 22,907,253
Massachusetts Radiation Control	271,720	271,638
Board designated cash	<u>679,603</u>	<u>2,762,559</u>
Total cash, cash equivalents and restricted cash in the statement of cash flows	<u>\$ 30,074,299</u>	<u>\$ 25,941,450</u>

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.

	2022	2021
Cash and cash equivalents, unrestricted	\$ 15,296,998	\$ 8,493,578
Cash and cash equivalents, restricted	<u>30,074,299</u>	<u>25,941,450</u>
Total cash, cash equivalents and restricted cash in the statement of cash flows	<u>\$ 45,371,297</u>	<u>\$ 34,435,028</u>

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

Woods Hole Oceanographic Institution

Notes to Financial Statements

December 31, 2022 and 2021

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, 2022 and 2021 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 \$21,247,000 and \$20,856,000 for the years ended December 31, 2022 and 2021, 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

Woods Hole Oceanographic Institution

Notes to Financial Statements

December 31, 2022 and 2021

gift instrument. The Institution has interpreted UPMIFA to permit spending from underwater funds in accordance with the prudent measures required under the law. From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the level that the donor requires the Institution to retain as a fund of perpetual duration. Deficiencies of this nature exist in 4 donor-restricted endowment funds, which together have an original gift value of \$10,891,777, a current fair value of \$10,567,338, and a deficiency of \$324,439 as of December 31, 2022. These deficiencies resulted from unfavorable market fluctuations that occurred shortly after the investment of new contributions for donor-restricted endowment funds and continued appropriation for certain programs that was deemed prudent by the Board of Trustees. There were no underwater endowment funds at December 31, 2021.

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 2018 Bond issue (see Note 8). At December 31, 2022 and 2021, \$1,573,237 and \$1,871,813 was available for these purposes.

Other Assets

Other assets consist of investments held by various split-interest agreements, donated property, and, cash equivalents with a maturity date greater than ninety days.

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 \$50,448 and \$1,609,767 for the years ended December 31, 2022 and 2021, 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 85% and 87% of its sponsored research revenues from government agencies including 49% and 45% of its operating revenues directly from the National Science Foundation and 13% and 21% from the United States Navy in fiscal years 2022 and 2021, 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.

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

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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 ("SWAP") 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. On October 28, 2022 the Institution terminated this SWAP agreement. Final payment of \$2,085,000 was paid in full with final settlement on this date.

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 \$13,260,646 and \$10,801,686 in 2022 and 2021, respectively, has been charged to operating activities. Depreciation on certain government-funded facilities (the Laboratory for Marine Science and the dock facility) amounting to \$51,936 and \$51,935 in 2022 and 2021, respectively, has been charged to nonoperating expenses as these assets were gifted by the Government.

Leases

The Institution leases portions of certain buildings to others under arrangements that are classified as operating leases. The term of these two agreements does not exceed five years. Income under these agreements totaled \$325,573 and \$339,816 for the years ended December 31, 2022 and 2021, respectively. Operating leases are included in right of use assets and lease liabilities in the Institution's statement of financial position at December 31, 2022 and 2021.

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 \$4,493,293 and \$4,391,269 for the years ended December 31, 2022 and 2021. Fund raising expenses totaled approximately 7% and 18% of revenue from contributions for the years ending December 31, 2022 and 2021. 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.

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New Accounting Pronouncements

In November 2018, the FASB issued ASU 2018-18 Collaborative Arrangements (Topic 808). This guidance was issued to clarify the interaction between Topic 808 Collaborative Arrangements and Topic 606 Revenue from Contracts with Customers. The amendment is effective for fiscal year 2022 and the Institution has adopted this standard without a material impact on the financial statements.

In September 2020 The FASB issued ASU No. 2020-07 Not-for-Profit Entities (Topic 958) Presentation and Disclosures by Not-for-Profit Entities for Contributed Nonfinancial Assets. The guidance was issued to improve transparency of contributed nonfinancial assets for not-for-profit entities through enhancements to presentation and disclosure. The amendment is effective for fiscal year 2022 and the Institution has adopted this standard without a material impact on the financial statements.

In June 2016, The FASB issued ASU No.2016-13 Financial Instruments-Credit Losses (Subtopic) Measurement of Credit Losses on Financial Instruments. The amendments in this Update for the Institution are effective for the year ended December 31, 2023.

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.

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

	Market	
	2022	2021
Assets		
Cash and short-term investments	\$ 967,954	\$ 865,208
Multi-strategy Investment Funds -Short-term Liquidity Funds	23,844,212	22,894,698
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	418,110,659	468,010,843
Total investments pooled	<u>442,922,825</u>	<u>491,770,749</u>
Investments designated for retiree and active medical plans		
Commingled funds	<u>9,396,946</u>	<u>12,268,952</u>
Total investments designated for retiree and active medical plans	<u>9,396,946</u>	<u>12,268,952</u>
Total assets at fair value	<u>\$ 452,319,771</u>	<u>\$ 504,039,701</u>

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

	Without Donor Restrictions	With Donor Restrictions	Total 2022
Change in unrealized depreciation	\$ (11,542,999)	\$ (47,865,479)	\$ (59,408,478)
Total return on investments	<u>(11,542,999)</u>	<u>(47,865,479)</u>	<u>(59,408,478)</u>
Investment return designated for			
Sponsored research	-	(7,627,470)	(7,627,470)
Education	-	(9,373,398)	(9,373,398)
Current operations	<u>(4,246,132)</u>	<u>-</u>	<u>(4,246,132)</u>
Total distributed to operations	<u>(4,246,132)</u>	<u>(17,000,868)</u>	<u>(21,247,000)</u>
Investment return in excess of amounts designated for sponsored research, education and current operations	<u>\$ (15,789,131)</u>	<u>\$ (64,866,347)</u>	<u>\$ (80,655,478)</u>

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	Without Donor Restrictions	With Donor Restrictions	Total 2021
Change in unrealized appreciation	\$ 12,548,499	\$ 50,958,381	\$ 63,506,880
Total return on investments	12,548,499	50,958,381	63,506,880
Investment return designated for			
Sponsored research	-	(7,512,534)	(7,512,534)
Education	-	(9,211,971)	(9,211,971)
Current operations	(4,131,495)	-	(4,131,495)
Total distributed to operations	(4,131,495)	(16,724,505)	(20,856,000)
Investment return in excess of amounts designated for sponsored research, education and current operations	\$ 8,417,004	\$ 34,233,876	\$ 42,650,880

Net realized and unrealized (losses)/gains attributable to investments designated for retiree and active medical plans were \$(2,872,006) and \$877,245 for the years ended December 31, 2022 and 2021, 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.

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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, 2022 and 2021 for financial assets and liabilities measured at fair value:

	2022				
	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	\$ 967,954	\$ -	\$ -	\$ -	\$ 967,954
Multi-strategy Investment Funds - Short-term Liquidity Funds	-	-	-	23,844,212	23,844,212
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	-	-	-	418,110,659	418,110,659
Total pooled	967,954	-	-	441,954,871	442,922,825
Contributions receivable from remainder trust	-	-	823,813	-	823,813
Other assets	3,008,448	-	942,930	-	3,951,378
Investments designated for retiree and active medical plans - commingled funds	-	-	-	9,396,946	9,396,946
Total assets at fair value	\$ 3,976,402	\$ -	\$ 1,766,743	\$ 451,351,817	\$ 457,094,962
Total liabilities at fair value	\$ -	\$ -	\$ -	\$ -	\$ -

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	2021				
	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	\$ 865,208	\$ -	\$ -	\$ -	\$ 865,208
Multi-strategy Investment Funds - Short-term Liquidity Funds	-	-	-	22,894,698	22,894,698
Multi-strategy Investment Funds - WHOI Investment Holdings, LP	-	-	-	468,010,843	468,010,843
Total pooled	865,208	-	-	490,905,541	491,770,749
Contributions receivable from remainder trust	-	-	1,069,997	-	1,069,997
Other assets	3,004,524	-	1,057,618	-	4,062,142
Investments designated for retiree and active medical plans - commingled funds	-	-	-	12,268,952	12,268,952
Total assets at fair value	<u>\$ 3,869,732</u>	<u>\$ -</u>	<u>\$ 2,127,615</u>	<u>\$ 503,174,493</u>	<u>\$ 509,171,840</u>
Interest rate swap	<u>\$ -</u>	<u>\$ 6,489,981</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 6,489,981</u>
Total liabilities at fair value	<u>\$ -</u>	<u>\$ 6,489,981</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 6,489,981</u>

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, 2022 and 2021 that are classified within Level 3 of the fair value hierarchy defined above:

	2022	
	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	
	Contributions Receivable From Remainder Trust	
		Other Assets
Balance at January 1, 2022	\$ 1,069,997	\$ 1,057,618
Settlements	-	-
New gifts	-	118,000
Unrealized gains	(246,184)	(232,688)
Balance at December 31, 2022	<u>\$ 823,813</u>	<u>\$ 942,930</u>

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	2021	
	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	
	Contributions Receivable From Remainder	
	Trust	Other Assets
Balance at January 1, 2021	\$ 1,040,530	\$ 957,811
Settlements	-	(27,848)
New Gifts	-	100,000
Unrealized gains	29,467	27,655
Balance at December 31, 2021	\$ 1,069,997	\$ 1,057,618

The change in unrealized (loss)/gain related to Level 3 assets held as of December 31, 2022 and 2021 was \$(399,846) and \$187,556, respectively. These amounts are included in the line item "Changes in split interest agreements" in the statement of activities.

Contributions from Remainder Trusts and split interest agreements (included in the category "Other Assets") have stated interest rates and mortality estimates applied for discounting the future cash flows to the Institution for these arrangements. Interest rates and discount rates associated with establishing or recording these agreements are set at the date of gift and the current interest rate environment may be considerably different which affects the fair value calculation. Mortality (the expected length of time until the Institution received the settlement), is also an estimate impacting the fair value calculation. Actual results differing from these estimates in conjunction with deviations in interest rates directly impact the amount of gain or loss recorded in the Changes in split interest agreements in the statement of activities.

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, 2022.

Assets	Fair Value	Redemption Terms	Redemption Restrictions
Multi-strategy Investment Funds			
Short-term liquidity funds	\$ 23,844,212	Monthly redemption terms	
Multi-strategy Investment Funds		Annual (year end), redemption terms	\$5,973,636 designated as illiquid remaining lives up to 5 years
WHOI Investment Holdings, LP	418,110,659		
Investments designated for retiree and active medical plans - commingled funds	9,396,946	Daily redemption terms	
Total investments	\$ 451,351,817		

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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, 2021.

Assets	Fair Value	Redemption Terms	Redemption Restrictions
Multi-strategy Investment Funds			
Short-term liquidity funds	\$ 22,894,698	Monthly redemption terms	
Multi-strategy Investment Funds		Annual (year end), redemption	\$10,423,789 designated as illiquid
WHOI Investment Holdings, LP	468,010,843	terms	remaining lives up to 5 years
Investments designated for retiree and active medical plans - commingled funds	12,268,952	Daily redemption terms	
Total investments	<u>\$ 503,174,493</u>		

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 5.26% to 2.14% at December 31, 2022 and 2021.

Pledges receivable consist of the following at December 31:

	2022	2021
Unconditional promises expected to be collected in		
Less than one year	\$ 16,521,279	\$ 7,608,654
One year to five years	27,444,645	8,431,426
Reserve for uncollectible pledges receivable	(2,604,017)	(948,247)
Unamortized discount	(2,352,304)	(251,214)
	<u>\$ 39,009,603</u>	<u>\$ 14,840,619</u>

The total amount of conditional pledges which are not recognized in the Institution's financial statements were \$6,695,784 and \$6,731,066 for the years ended December 31, 2022 and 2021.

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

Contributions receivable from remainder trusts at December 31, 2022 and 2021 were \$823,813 and \$1,069,997, respectively. In addition, the Institution is the beneficiary for split interest agreements held in gift annuity and pooled income funds totaling \$942,930 and \$1,057,618 for the years ended December 31, 2022 and 2021, respectively. These amounts are presented in other assets. Included in accounts payable and other liabilities are net expected payouts of \$571,236 and \$530,619 for the years ended December 31, 2022 and 2021, respectively. Contribution revenue for split interest agreements totaled \$0 for the years ended December 31, 2022 and 2021.

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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 4.74% to 4.72%, at December 31, 2022 and 2021.

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 liability at December 31, 2020	\$ (1,445,663)
2021 indirect costs	113,343,914
Amounts recovered	<u>(116,699,323)</u>
2021 change	<u>(3,355,409)</u>
Deferred fixed rate variance liability at December 31, 2021	<u>(4,801,072)</u>
2022 indirect costs	102,022,519
Amounts recovered	<u>(101,425,169)</u>
2022 change	<u>597,350</u>
Deferred fixed rate variance liability at December 31, 2022	<u>\$ (4,203,722)</u>

As of December 31, 2022, the Institution has expended a cumulative amount less than recovered amounts of \$4,203,722 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.

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

Indebtedness at December 31, 2022 and 2021 includes bonds issued through MassDevelopment. Balances of outstanding bonds payable at December 31 consist of the following:

	2022	2021
MassDevelopment, Series 2018, Fixed Rate Revenue Bond:\$	70,700,000	\$ 71,990,000
Add: Series 2018 unamortized bond premium	8,215,160	8,777,897
Less: Series 2018 unamortized bond discount	(205,692)	(213,811)
Deferred financing costs	(338,381)	(351,738)
	<u>\$ 78,371,087</u>	<u>\$ 80,202,348</u>
Bonds payable		

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 \$3,004,513 and \$2,517,640, net of amounts capitalized of \$0 and \$533,865 for the years ended December 31, 2022 and 2021, 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,

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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 Institution entered into a second line of credit with a new bank in 2022 upon the expiration of the former credit line. This new line of credit allows for borrowing with a maximum capacity of \$15,000,000 and bears interest at the current WSF Prime Rate minus 1%. The current Prime Rate is 3.25%. The agreement requires the Institution to open a deposit account and maintain a \$3,000,000 balance. The loan must be repaid in full for a minimum of thirty consecutive days annually. The Institution had no outstanding borrowings on the lines of credit at either December 31, 2022 or 2021, respectively.

The aggregate maturities due on the Series 2018 long-term debt at December 31, 2022 are as follows:

	Principal Amount
Fiscal year	
2023	\$ 1,360,000
2024	1,425,000
2025	1,500,000
2026	1,575,000
2027	1,660,000
Thereafter	63,180,000
	<u>\$ 70,700,000</u>

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 Institution terminated this SWAP on October 28, 2022 with a final payment of \$2,085,000.

The fair value of the interest rate swap at December 31, 2022 and 2021 is as follows:

	Fair Value	
	2022	2021
Statement of financial position location		
Accounts payable and other liabilities	\$ -	\$ 6,489,981

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The effect of the interest rate swap on the statement of activities for 2022 and 2021 is as follows:

	Amount of Loss Recognized in Statement of Activities	
	2022	2021
Location of loss recognized in statement of activities		
Nonoperating income and expenses		
Net realized/unrealized (loss) / gain on interest rate swap	\$ (804,649)	\$ 857,135

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 \$8,626,581 and \$8,065,867 for the years ended December 31, 2022 and 2021, 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.

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	Qualified Plan Pension Benefits	
	2022	2021
Change in benefit obligation		
Benefit obligation at beginning of year	\$ 302,724,290	\$ 328,727,200
Interest cost	10,207,523	9,497,794
Actuarial (gain)/loss	(75,801,408)	(7,565,873)
Benefits paid	(9,570,614)	(9,120,350)
Settlements	(13,912,386)	(18,814,481)
Transfers from other plans	333,197	-
Benefit obligation at end of year	<u>213,980,602</u>	<u>302,724,290</u>
Change in plan assets		
Fair value of plan assets at beginning of year	221,518,638	220,764,909
Employer contributions	3,300,000	14,200,000
Actual return on plan assets	(24,730,133)	14,488,560
Benefits paid	(9,570,614)	(9,120,350)
Settlements	(13,912,386)	(18,814,481)
Transfers from other plans	333,197	-
Fair value of plan assets at end of year	<u>176,938,702</u>	<u>221,518,638</u>
Funded status	<u>\$ (37,041,900)</u>	<u>\$ (81,205,652)</u>
Amounts recognized in the statement of financial position consist of		
Accrued benefit liability	<u>\$ 37,041,900</u>	<u>\$ 81,205,652</u>
Net amount recognized	<u>\$ 37,041,900</u>	<u>\$ 81,205,652</u>
Amounts recognized in net assets without donor restrictions		
Net actuarial loss	<u>\$ (242,242)</u>	<u>\$ 46,038,957</u>
Information for pension plans with accumulated benefit obligations in excess of plan assets		
Projected benefit obligation	\$ 213,980,602	\$ 302,724,290
Accumulated benefit obligation	<u>208,947,939</u>	<u>294,688,669</u>
	<u>\$ 422,928,541</u>	<u>\$ 597,412,959</u>
Components of net periodic benefit cost		
Service cost	\$ -	\$ -
Interest cost	10,207,523	9,497,794
Expected return on plan assets	(8,782,696)	(9,859,777)
Amortization of net actuarial loss	3,270,196	9,394,760
Settlements	-	-
Net periodic benefit cost	<u>\$ 4,695,023</u>	<u>\$ 9,032,777</u>
Other changes in plan assets and benefit obligations recognized in unrestricted net assets		
Amortization of net actuarial loss	\$ (3,270,196)	\$ (9,394,760)
Net actuarial gain/(loss)	(42,288,579)	(12,194,656)
Immediate recognition of loss due to settlements	<u>(722,424)</u>	<u>(2,775,614)</u>
Total recognized in nonoperating revenues (expenses)	<u>\$ (46,281,199)</u>	<u>\$ (24,365,030)</u>

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The Institution has reflected \$3,300,000 and \$14,200,000 for the years ended December 31, 2022 and 2021, 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 expenses (income) of \$2,117,447 and \$(2,391,609) for the years ended December 31, 2022 and 2021, respectively.

	Qualified Plan Pension Benefits	
	2022	2021
Weighted-average assumptions used to determine benefit obligations at December 31		
Discount rate	5.60 %	3.05 %
Rate of compensation increase	8.50 %	3.50 %
Weighted-average assumptions used to determine net periodic benefit cost for years ended December 31		
Discount rate	5.60 %	3.45 %
Expected long-term rate of return on plan assets	7.50 %	5.75 %
Rate of compensation increase	8.50 %	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 7.50% and 5.75% assumption as of December 31, 2022 and 2021, 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.

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**Expected amounts amortized from net assets without donor
restrictions into net periodic pension cost for the next fiscal year**

Amortization of net loss \$ 3,270,196

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, (as described in Note 4).

2022					
	Level 1	Level 2	Level 3	NAV as Practical Expedient	Total
Assets					
Cash and cash equivalents	\$ 7,516,486				\$ 7,516,486
Private equity, venture capital and other limited partnerships				64,447,958	64,447,958
Commingled funds				24,846,663	24,846,663
Exchange traded funds	7,238,193				7,238,193
Hedge funds				51,136,091	51,136,091
Mutual funds	13,708,209				13,708,209
Domestic common stock	6,079,104				6,079,104
Total assets at fair value	\$ 34,541,992	\$ -	\$ -	\$ 140,430,712	\$ 174,972,704

2021					
	Level 1	Level 2	Level 3	NAV as Practical Expedient	Total
Assets					
Cash and cash equivalents	\$ 9,083,058				\$ 9,083,058
Private equity, venture capital and other limited partnerships				62,242,024	62,242,024
Commingled funds				34,590,794	34,590,794
Exchange traded funds	17,016,984				17,016,984
Hedge funds				65,200,714	65,200,714
Mutual funds	26,153,110				26,153,110
Domestic common stock	7,230,269				7,230,269
Total assets at fair value	\$ 59,483,421	\$ -	\$ -	\$ 162,033,532	\$ 221,516,953

Included in plan assets are net investment related (payables)/receivables of \$1,965,998 and \$1,685 as of December 31, 2022 and 2021, respectively. There were no transfers to or from Level 3 for the years ended December 31, 2022 and 2021.

The following unfunded commitments and redemption terms within the retirement trust are detailed below:

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	2022			
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Private equity, venture capital and other limited partnerships	\$ 64,447,958	\$ 33,082,589	Restricted from Redemption	Restricted from Redemption
Commingled funds	24,846,663	-	Daily-Triennially	Business Day-90 Calendar Days
Hedge funds	51,136,091	1,341,271	Monthly-Triennially	17 Business Days - 4 Months
Total	<u>\$ 140,430,712</u>	<u>\$ 34,423,860</u>		

	2021			
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Private equity, venture capital and other limited partnerships	\$ 62,242,024	\$ 36,820,870	Restricted from Redemption	Restricted from Redemption
Commingled funds	34,590,794	-	Daily-Triennially	Business Day-90 Calendar Days
Hedge funds	65,200,714	979,500	Monthly-Triennially	17 Business Days - 4 Months
Total	<u>\$ 162,033,532</u>	<u>\$ 37,800,370</u>		

Expected Contributions

The Institution anticipates contributing \$3,900,000 to the Qualified Plan in 2023.

Estimated Future Benefit Payments

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

	Benefit Payments
Years	
2023	\$ 16,446,880
2024	16,339,179
2025	16,416,600
2026	17,044,840
2027	15,977,210
2028–2032	74,173,133

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

Woods Hole Oceanographic Institution

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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 (\$2,839,989) and \$975,827 for the years ended December 31, 2022 and 2021, respectively, and are presented in the nonoperating section of the statement of activities, net of administrative fees of \$32,017 and \$98,582 for 2022 and 2021, respectively. Health care benefits for active employees funded from these investments totaled \$0 for the years ended December 31, 2022 and 2021, and are also presented in the nonoperating section of the statement of activities.

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	Other Postretirement Benefits	
	2022	2021
Change in benefit obligation		
Benefit obligation at beginning of year	\$ 29,510,451	\$ 33,009,992
Service cost	304,679	359,594
Interest cost	880,861	922,262
Benefits paid, net of participant contributions	(1,229,951)	(1,121,552)
Actuarial (gain)/loss	(8,944,607)	(3,659,845)
Benefit obligation at end of year	<u>20,521,433</u>	<u>29,510,451</u>
Change in plan assets		
Fair value of plan assets at beginning of year	-	-
Employer contributions	1,229,951	1,121,552
Actual return on plan assets	-	-
Benefits paid, net of participant contributions	(1,229,951)	(1,121,552)
Fair value of plan assets at end of year	<u>-</u>	<u>-</u>
Funded status	<u>\$ (20,521,433)</u>	<u>\$ (29,510,451)</u>
Amounts recognized in the statement of financial position consist of		
Accrued benefit liability	\$ 20,521,433	\$ 29,510,451
Net amount recognized	<u>\$ 20,521,433</u>	<u>\$ 29,510,451</u>
Amounts recognized in net assets without donor restrictions		
Net prior service credit	\$ -	\$ -
Net actuarial (gain)/loss	(8,298,064)	646,543
Net amount recognized	<u>\$ (8,298,064)</u>	<u>\$ 646,543</u>
Components of net periodic benefit cost		
Service cost	\$ 304,679	\$ 359,594
Interest cost	880,861	922,262
Expected return on plan assets	-	-
Amortization of prior service credit	-	-
Amortization of net actuarial loss	-	121,007
Net periodic benefit cost	<u>\$ 1,185,540</u>	<u>\$ 1,402,863</u>
Other changes in plan assets and benefit obligations recognized in net assets without donor restrictions		
Amortization of prior service credit	\$ -	\$ -
Amortization of net actuarial loss	-	(121,007)
Net actuarial (gain)/loss	(8,944,607)	(3,659,845)
Total recognized in nonoperating expense (revenue)	<u>\$ (8,944,607)</u>	<u>\$ (3,780,852)</u>

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The Institution recognizes the net periodic benefit cost in the nonoperating section of the statement of activities. This amounted to \$880,861 and \$1,043,269 for the years ended December 31, 2022 and 2021, respectively.

	2022	2021
Weighted-average assumptions used to determine benefit obligations at December 31		
Discount rate	5.60 %	3.05 %
Weighted-average assumptions used to determine net periodic benefit cost for years ended December 31		
Discount rate	3.05 %	2.85 %
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.

	2022		2021	
	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 %	5.5 %	6.5 %	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	2032	2026	2026	2026

Expected Contributions

The Institution provides contributions as expenses are incurred. The Institution expects contributions to the Retiree Medical Plan in 2022 to be equal to the expected benefit in 2023 of \$1,222,473.

Estimated Future Benefit Payments

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

	Benefit Payments
Years	
2023	\$ 1,222,473
2024	1,267,390
2025	1,290,845
2026	1,320,951
2027	1,350,466
2028–2032	6,888,903

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Notes to Financial Statements

December 31, 2022 and 2021

11. Net Assets

The Institution's endowment consists of 161 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:

	2022		
	Without Donor Restrictions	With Donor Restrictions	Total
Endowment funds			
Perpetual in nature	\$ -	117,473,774	\$ 117,473,774
Purpose restricted	-	262,149,677	262,149,677
Board designated funds	85,544,932	-	85,544,932
Endowment net assets	85,544,932	379,623,451	465,168,383
Purpose restricted - research	-	60,121,087	60,121,087
Purpose restricted - education	-	3,435,081	3,435,081
Time restricted and other	-	34,134,987	34,134,987
Pension and postretirement benefits	(48,166,748)	-	(48,166,748)
Undesignated	33,037,397	1,500,000	34,537,397
Total net assets	\$ 70,415,581	\$ 478,814,607	\$ 549,230,188

	2021		
	Without Donor Restrictions	With Donor Restrictions	Total
Endowment funds			
Perpetual in nature	\$ -	\$ 109,269,734	\$ 109,269,734
Purpose restricted	-	302,373,594	302,373,594
Board designated funds	101,374,438	-	101,374,438
Endowment net assets	101,374,438	411,643,328	513,017,766
Purpose restricted - research	-	44,873,690	44,873,690
Purpose restricted - education	-	3,779,424	3,779,424
Time restricted and other	-	14,487,988	14,487,988
Pension and postretirement benefits	(98,447,152)	-	(98,447,152)
Undesignated	23,686,881	-	23,686,881
Total net assets	\$ 26,614,167	\$ 474,784,430	\$ 501,398,597

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

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	2022		
	Without Donor Restrictions	With Donor Restrictions	Total
Net assets beginning of year	<u>\$ 101,374,438</u>	<u>\$ 411,643,327</u>	<u>\$ 513,017,766</u>
Investment return			
Net depreciation	<u>(11,542,999)</u>	<u>(47,865,479)</u>	<u>(59,408,478)</u>
Total investment return	<u>(11,542,999)</u>	<u>(47,865,479)</u>	<u>(59,408,478)</u>
New gifts	(608)	33,206,550	33,205,942
Appropriation of endowment assets for expenditure under spending policy	(4,246,132)	(17,000,868)	(21,247,000)
Additional appropriations, net	-	-	-
Change in split interest agreements	<u>(39,767)</u>	<u>(360,079)</u>	<u>(399,846)</u>
Net assets end of year	<u>\$ 85,544,932</u>	<u>\$ 379,623,451</u>	<u>\$ 465,168,383</u>

	2021		
	Without Donor Restrictions	With Donor Restrictions	Total
Net assets beginning of year	<u>\$ 92,913,790</u>	<u>\$ 376,444,055</u>	<u>\$ 469,357,845</u>
Investment return			
Net appreciation	<u>12,548,499</u>	<u>50,958,381</u>	<u>63,506,880</u>
Total investment return	<u>12,548,499</u>	<u>50,958,381</u>	<u>63,506,880</u>
New gifts	-	821,485	821,485
Appropriation of endowment assets for expenditure under spending policy	(4,131,495)	(16,724,505)	(20,856,000)
Additional appropriations, net	-	-	-
Change in split interest agreements	<u>43,645</u>	<u>143,911</u>	<u>187,556</u>
Net assets end of year	<u>\$ 101,374,438</u>	<u>\$ 411,643,327</u>	<u>\$ 513,017,766</u>

Woods Hole Oceanographic Institution
Notes to Financial Statements
December 31, 2022 and 2021

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:

	2022	2021
Cash and cash equivalents	\$ 15,296,998	\$ 8,493,578
Accounts receivable billed and unbilled	28,515,626	32,822,678
Receivable for investments sold	4,395,044	4,246,132
Pledges receivable	16,521,279	7,608,655
	<u>\$ 64,728,947</u>	<u>\$ 53,171,043</u>

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 5% 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, 2023. In addition, the Institution has Board designated funds in the amount of \$85,544,932 which it could draw upon. At December 31, 2022, \$27,482,411 of 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 \$23,844,212 at December 31, 2022 and allows for daily withdrawals (see Note 4 for redemption terms). Board designated funds are categorized as follows at December 31, 2022:

	2022	2021
Board designated for research	\$ 28,739,725	\$ 34,091,030
Board designated for research - Director discretionary	1,591,254	1,886,812
Board designated for general unsponsored program support	54,409,780	64,552,656
Other	804,173	843,940
	<u>\$ 85,544,932</u>	<u>\$ 101,374,438</u>

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 2020 with no findings or adjustments for unallowable costs.

Woods Hole Oceanographic Institution

Notes to Financial Statements

December 31, 2022 and 2021

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 \$0 for the years ended December 31, 2022 and 2021.

The Institution has loans due from various employees for education advances and computer purchases. The amounts outstanding are \$713,080 and \$596,336 at December 31, 2022 and 2021, respectively.

Woods Hole Oceanographic Institution
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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 \$70,756,455 for 2022 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, 2022 and 2021 are as follows:

	Research	Marine Operations	Academic Programs	Other Institution Activities	Un-sponsored Research	Ships and Submersibles	2022 Total
Salaries	\$ 44,164,661	\$ 734,182	\$ 2,912,978	\$ 3,261,701	\$ 1,331,577	\$ 11,726,722	\$ 64,131,821
Fringe benefits	12,770,870	199,079	885,436	1,275,350	393,183	3,154,875	18,678,793
Equipment	19,378,482	963,942	9,195	104	834,707	1,302,859	22,489,289
Subcontracts	37,459,806	14,870	-	-	4,936	-	37,479,612
Supplies	8,953,266	149,419	77,224	83,092	140,601	2,152,245	11,555,847
Travel	3,343,578	78,230	122,710	186,377	82,890	763,316	4,577,101
Outside services	2,692,425	36,948	56,103	685,292	44,962	393,939	3,909,669
Interest	-	-	-	125	-	-	125
Professional services	339,013	-	-	371,775	-	47,024	757,812
Repairs and maintenance	1,091,296	738,435	-	60,447	960	1,689,389	3,580,527
Insurance	155,015	1,118	34,662	404,819	5,473	596,569	1,197,656
Other	20,790,940	3,762,925	8,343,805	8,222,915	4,901,581	3,999,723	50,021,889
Ship overhaul	-	57,630	-	-	-	-	57,630
Ships fuel	22,068	31,777	758	-	1,866	3,804,536	3,861,005
Facilities and administration	55,272,713	2,977,825	2,426,295	4,685,351	(2,425,040)	7,819,311	70,756,455
Total operating expenses	206,434,133	9,746,380	14,869,166	19,237,348	5,317,696	37,450,507	293,055,230
Nonoperating expense				(2,275,884)			(2,275,884)
	<u>\$ 206,434,133</u>	<u>\$ 9,746,380</u>	<u>\$ 14,869,166</u>	<u>\$ 16,961,464</u>	<u>\$ 5,317,696</u>	<u>\$ 37,450,507</u>	<u>\$ 290,779,346</u>

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	Research	Marine Operations	Academic Programs	Other Institution Activities	Un-sponsored Research	Ships and Submersibles	2021 Total
Salaries	\$ 41,809,733	\$ 2,673,108	\$ 2,857,369	\$ 3,263,510	\$ 1,557,678	\$ 8,638,802	\$ 60,800,200
Fringe benefits	19,025,807	1,141,280	1,375,053	1,885,147	711,325	3,572,499	27,711,111
Equipment	14,004,721	2,307,797	413	295	282,148	119,245	16,714,619
Subcontracts	40,133,501	16,292	-	-	2,000	-	40,151,793
Supplies	8,315,211	1,104,553	56,480	102,528	189,349	1,731,980	11,500,101
Travel	1,592,725	412,233	36,132	47,278	26,043	473,475	2,587,886
Outside services	2,283,161	401,642	26,427	365,594	40,278	281,670	3,398,772
Interest	-	-	-	5,313	-	-	5,313
Professional services	146,786	81,073	-	287,275	-	-	515,134
Repairs and maintenance	1,396,404	17,973	-	105,053	4,490	1,155,850	2,679,770
Insurance	161,234	1,000	29,377	416,210	46,383	497,461	1,151,665
Other	17,965,669	2,701,001	7,771,363	783,118	8,024,870	1,998,272	39,244,293
Ship overhaul	-	16,223,171	-	-	-	-	16,223,171
Ships fuel	20,470	622,754	565	-	-	617,266	1,261,055
Facilities and administration	52,983,852	5,675,697	2,836,601	2,931,677	(658,369)	6,215,319	69,984,777
Total operating expenses	199,839,274	33,379,574	14,989,780	10,192,998	10,226,195	25,301,839	293,929,660
Nonoperating expense	-	-	-	4,123,954	-	-	4,123,954
	<u>\$ 199,839,274</u>	<u>\$ 33,379,574</u>	<u>\$ 14,989,780</u>	<u>\$ 14,316,952</u>	<u>\$ 10,226,195</u>	<u>\$ 25,301,839</u>	<u>\$ 298,053,614</u>

The category Facilities and Administration in the Schedule of Functional Expenses for the year ended December 31, 2022 includes costs associated with plant operations of \$24,694,606, departmental administration of \$13,236,876, sponsored program administration of \$2,156,246, library costs of \$1,241,152 and general administration of \$30,019,367. The category Facilities and Administration in the Schedule of Functional Expenses for the year ended December 31, 2021 includes costs associated with plant operations of \$23,560,006, departmental administration of \$13,430,504, sponsored program administration of \$1,435,365, library costs of \$1,337,041 and general administration of \$31,063,490.

16. Subsequent Event

Management evaluated all events or transactions that occurred after December 31, 2022 through July 14, 2023, the date these financial statements were issued. Subsequent to year end, the Institution committed to invest a total of \$4,000,000 in an investment fund beginning in 2023 through 2026.

Woods Hole Oceanographic Institution

Schedule of Expenditures of Federal Awards

Year Ended December 31, 2022

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Assistance Listing Number	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Total Expenditures	Passed to Sub-Recipients
Research and Development Cluster							
Department of Agriculture (USDA)							
United States Department of Agriculture (USDA)							
Grants For Agricultural Research, Special Research Grants	10.200		12,866	University of Rhode Island	0008364/02152021	12,866	
<i>Subtotal Department of Agriculture</i>		-	12,866			12,866	-
Department of Commerce							
National Oceanic and Atmospheric Administration (NOAA)							
Ocean Exploration	11.011	793,658				793,658	157,417
Integrated Ocean Observing System (IOOS)	11.012	234,642				234,642	201,790
Integrated Ocean Observing System (IOOS)	11.012		2,529	University of Maine	510062527	2,529	
Integrated Ocean Observing System (IOOS)	11.012		8,660	Alaska Ocean Observing System	H240062	8,660	
Integrated Ocean Observing System (IOOS)	11.012		62,061	University of Delaware	UDR0000083	62,061	
Integrated Ocean Observing System (IOOS)	11.012		11,009	Monterey Bay Aquarium Research Institute	2111131	11,009	
Integrated Ocean Observing System (IOOS)	11.012		193,440	Northeastern Regional Association of Coastal Ocean Observing	N21A013022	193,440	
Integrated Ocean Observing System (IOOS)	11.012		46,166	Northeastern Regional Association of Coastal Ocean Observing	N21A013021	46,166	
Integrated Ocean Observing System (IOOS)	11.012		27,053	Northeastern Regional Association of Coastal Ocean Observing	A008009	27,053	
Integrated Ocean Observing System (IOOS)	11.012		(79)	Rutgers University	Agreement 6169	(79)	
Integrated Ocean Observing System (IOOS)	11.012		98,186	Ocean Observing	N21A013020	98,186	
Integrated Ocean Observing System (IOOS)	11.012		13,592	Alaska Ocean Observing System	H3022	13,592	
Integrated Ocean Observing System (IOOS)	11.012		12,801	University of California San Diego	KR704815	12,801	
Integrated Ocean Observing System (IOOS)	11.012		6,991	University of Maine	5100625628	6,991	
Broad Agency Announcement	11.015		316	Maine Center for Coastal Fisheries	Agreement	316	
Ocean Acidification Program (OAP)	11.017	43,366				43,366	
NOAA Small Business Innovation Research (SBIR) Program	11.021		13,469	Coastal Ocean Vision Inc	3135	13,469	
NOAA Small Business Innovation Research (SBIR) Program	11.021		47,099	Maritime Applied Physics Corporation	202165-001	47,099	
Cooperative Institute (Inter-Agency Funded Activities)	11.405	126,229				126,229	
Cooperative Institute (Inter-Agency Funded Activities)	11.405		439,892	University of Rhode Island	0009802 112822WHOI	439,892	
Sea Grant Support	11.417	1,684,889				1,684,889	343,793
Sea Grant Support	11.417		7,816	State University of New York	8079431158304	7,816	7,816
Sea Grant Support	11.417		22,276	University of Maine	UMS1231	22,276	
Sea Grant Support	11.417		13,573	University of California Santa Barbara	KK2243	13,573	
Sea Grant Support	11.417		7,142	University of Southern California	SCON00004140	7,142	
Sea Grant Support	11.417		8,479	College Program	36449	8,479	8,479
Sea Grant Support	11.417		97,698	Massachusetts Institute of Technology	S4610	97,698	28,228
Sea Grant Support	11.417		134,226	University of Connecticut	368912	134,226	82,218
Coastal Zone Management Administration Awards	11.419		34,373	University of Oregon	290550C	34,373	
Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	11.427	78,977				78,977	
Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	11.427		6,633	Marine Biological Laboratory	PO0054493	6,633	
Climate and Atmospheric Research	11.431	712,529				712,529	2,524
National Oceanic and Atmospheric Administration (NOAA)	11.432	12,152,898				12,152,898	3,201,380
Cooperative Institutes	11.432						
National Oceanic and Atmospheric Administration (NOAA)	11.432						
Cooperative Institutes	11.432		1,492,939	University of Rhode Island	0007525 102212019WHOI	1,492,939	99,563
Unallied Science Program	11.472		63,730	Pacific States Marine Fisheries Commission	22096G	63,730	
Unallied Science Program	11.472		6,515	North Pacific Research Board	2212	6,515	
Center for Sponsored Coastal Ocean Research_Coastal Ocean Program	11.478	1,228,351				1,228,351	251,735
Center for Sponsored Coastal Ocean Research_Coastal Ocean Program	11.478		7,270	USGS	MC2091	7,270	
Center for Sponsored Coastal Ocean Research_Coastal Ocean Program	11.478		84,352	Virginia Institute of Marine Science	722374712684	84,352	
Center for Sponsored Coastal Ocean Research_Coastal Ocean Program	11.478		22,189	University of Rhode Island	000846002042021	22,189	
Center for Sponsored Coastal Ocean Research_Coastal Ocean Program	11.478		110,973	University of California San Diego	704101	110,973	
MC2954	11.RD	944				944	
VS5403	11.RD	1,148				1,148	
<i>Subtotal Department of Commerce</i>		17,057,631	3,103,369			20,161,000	4,384,943

The accompanying notes are an integral part of this schedule.

Woods Hole Oceanographic Institution

Schedule of Expenditures of Federal Awards

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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Assistance Listing Number	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Total Expenditures	Passed to Sub-Recipients
Department of Defense							
Department of the Navy, Office of the Chief of Naval Research							
Basic and Applied Scientific Research	12.300	19,013,000				19,013,000	827,016
Basic and Applied Scientific Research	12.300		247,602	University of Texas at Austin	2022C00535	247,602	
Basic and Applied Scientific Research	12.300		107,276	Oregon State University	N0372AA	107,276	
Basic and Applied Scientific Research	12.300		39,729	University of California San Diego	10300137	39,729	
Basic and Applied Scientific Research	12.300		9,061	University of Washington	UWSC10595	9,061	
Basic and Applied Scientific Research	12.300		314,063	University of California San Diego	703459	314,063	
Basic and Applied Scientific Research	12.300		41,591	Carnegie Mellon University	1140217443508	41,591	
Basic and Applied Scientific Research	12.300		2,059	University of Washington	UWSC14299	2,059	
Basic and Applied Scientific Research	12.300		46,555	University of California San Diego	70412	46,555	
Basic and Applied Scientific Research	12.300		518,517	University of California San Diego	KR704989	518,517	
Basic and Applied Scientific Research	12.300		11,687	University of California San Diego	705601	11,687	
Basic and Applied Scientific Research	12.300		9,180	Northeastern University	59868278050	9,180	
Basic and Applied Scientific Research	12.300		66,816	University of St Andrews	Agreement 18390	66,816	
Basic and Applied Scientific Research	12.300		196,421	University of Rhode Island	0814200008676	196,421	-
Basic and Applied Scientific Research	12.300		1,579	University of California San Diego	92198889	1,579	
Basic and Applied Scientific Research	12.300		131	University of California San Diego	PUR00299328	131	
Basic and Applied Scientific Research	12.300		5,512	University of Massachusetts Dartmouth	D001179632	5,512	
N0001417C7006	12.RD	133,762				133,762	
N0001418C2036	12.RD	208,292				208,292	
N0001419C2016	12.RD	622,686				622,686	
N0001420C2053	12.RD	3,721,140				3,721,140	21,809
N0001421C2028	12.RD	1,627,153				1,627,153	
N6133121D0004	12.RD	94,451				94,451	
N6660414D0344	12.RD	(15,296)				(15,296)	
N6660418DC828	12.RD	7,148,915				7,148,915	
HQ08451990004	12.RD		30,945	Huntington Ingalls Industries	PO00070334	30,945	
SPE8EJ21D0025	12.RD		49	Huntington Ingalls Industries	PO00068024	49	
SPE8EJ21D0020	12.RD		347,619	ADS Inc	1204105	347,619	
N000142212295	12.RD		10,943	University of Rhode Island	0000187778	10,943	
N0001422C2006	12.RD		285,915	University of California San Diego (SCRIPPS)	PUR00462909	285,915	
N0001422P2001	12.RD		1,515	Creare Inc	123237	1,515	
N6660418F3022	12.RD		4,951	Serco Inc	MC0152	4,951	
N0002413D6400	12.RD		38,261	The Johns Hopkins University	175369	38,261	
N0002417D6421	12.RD		103	University of Texas at Austin	2021A30201	103	
N0002417D6421	12.RD		19,450	University of Texas at Austin	2022C01193	19,450	
N0002417D6421	12.RD		58,350	University of Texas at Austin	2022C01284	58,350	
N0002418C6300	12.RD		83	Applied Physical Sciences Corp	APS1813	83	
N0002418D6401	12.RD		205,400	Pennsylvania State University	S2207	205,400	
N00024D6421	12.RD		147	University of Texas at Austin	2021C00500	147	
N0003022C2001	12.RD		413	L3Harris Technologies	BC00546	413	
N0017804D4066	12.RD		9,902	Serco Inc	MC0152	9,902	
N6523618C8009	12.RD		36,152	General Dynamics Mission Systems Inc	19SC0050	36,152	
N6600120C4005	12.RD		571,120	Applied Physical Sciences Corp	APS2004	571,120	
N6600120C4006	12.RD		50,052	Raytheon BBN Technologies Corp	BBN90126	50,052	
N666042199999	12.RD		2,297	Composite Energy Technologies	VISA3746	2,297	
N6833517C0553	12.RD		140,346	Heat Light and Sound Research Inc	Agreement	140,346	
N6833521C0346	12.RD		1,027	Composite Energy Technologies	VISA3746	1,027	
N6833521C0346	12.RD		1,271	Composite Energy Technologies	MC3746	1,271	
N6833521C0346	12.RD		1,149	Composite Energy Technologies	VISA3746	1,149	

The accompanying notes are an integral part of this schedule.

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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Assistance Listing Number	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Total Expenditures	Passed to Sub-Recipients
N6833521C3046	12.RD		1,454	Composite Energy Technologies	VISA3746	1,454	
N6133122P0035	12.RD		2,542	Del Research	AE1009	2,542	
SPE8EJ21D0020	12.RD		2,847	ADS Inc	1245387	2,847	
SPE8EJ21D0020	12.RD		24,648	ADS Inc	1206043	24,648	
SPE8EL22F10EZ	12.RD		7,697	ADS Inc	1168830	7,697	
SPE8EJ21D0020	12.RD		53,289	Hydroid Inc	00033116	53,289	
SPE8EJ21D0025	12.RD		32,080	W.S. Darley and Company	154850	32,080	
Defense POW/MIA Accounting Agency (DPAA)							
Past Conflict Accounting	12.740		159,931	University of California San Diego	704542	159,931	
US Army							
W912HQ20C0076	12.RD		148,772	University of St Andrews	18390	148,772	
US Army Corps of Engineers (USACE)							
Basic, Applied, and Advanced Research in Science and Engineering	12.630	145,223				145,223	
Basic, Applied, and Advanced Research in Science and Engineering	12.630	141,327				141,327	
Basic, Applied, and Advanced Research in Science and Engineering	12.630	2,843				2,843	
Basic, Applied, and Advanced Research in Science and Engineering	12.630		3,069	Woods Hole Group	22FINO2329	3,069	
Basic, Applied, and Advanced Research in Science and Engineering	12.630		76,697	Mississippi State University	19100036137301	76,697	
W912HQ19C0040	12.RD	136,186				136,186	5,383
Defense Advanced Research Projects Agency (DARPA)							
HR001122C0115	12.RD	22,411				22,411	
HR001117D0001	12.RD		20,027	The Johns Hopkins University	173053	20,027	
HR001120C0100	12.RD		84,731	Applied Physical Sciences Corporation	210023454	84,731	
HR001120C0100	12.RD		28,882	Applied Physical Sciences Corporation	220024659	28,882	
HR001120C0100	12.RD		4,820	Applied Physical Sciences Corporation	220025217	4,820	
HR001122C0021	12.RD		3,420,736	Northrop Grumman Systems Corporation	5300036186	3,420,736	
US Air Force							
FA807518D0002	12.RD		460	Huntington Ingalls Industries	6301	460	
FA807518D0002	12.RD		109,361	Alion Science and Technology Corporation	SUB1151615	109,361	
FA807518D0002	12.RD		360	Alion Science and Technology Corporation	PUR1165104	360	
FA807518D0002	12.RD		151,204	Alion Science and Technology Corporation	P000028842	151,204	
FA807518D0002	12.RD		556,784	Alion Science and Technology Corporation	SCF1159040	556,784	
Subtotal Department of Defense		33,002,093	8,325,630			41,327,723	854,208
Department of Interior							
Bureau of Ocean Energy Management							
Bureau of Ocean Energy Management (BOEM) Environmental Studies Program (ESP)	15.423	285,063				285,063	
Bureau of Ocean Energy Management (BOEM) Environmental Studies Program (ESP)	15.423		86,172	University of Alaska Fairbanks	UA 22-0029 PO553784	86,172	
Bureau of Ocean Energy Management (BOEM) Environmental Studies Program (ESP)	15.423		49,417	University of Rhode Island	0008759 02112021	49,417	
Bureau of Safety and Environmental Enforcement							
140M0118P0043	15.RD		5,248	Southern California Coastal Water Research Project	17993	5,248	
140M0121D0003	15.RD		49,804	HDR Inc.	1000300002066	49,804	
National Park Service							
Natural Resource Stewardship	15.944	11,621				11,621	
US Geological Survey							
U.S. Geological Survey_Research and Data Collection	15.808	1,883,437				1,883,437	
U.S. Geological Survey_Research and Data Collection	15.808		282	University of Oxford	R44467	282	
140G0220D0001	15.RD	187,175				187,175	
Visa 2937	15.RD	(72)				(72)	
Visa 2937	15.RD	2,403				2,403	
Visa 4827	15.RD	2,472				2,472	
Subtotal Department of Interior		2,372,099	190,923			2,563,022	-

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Woods Hole Oceanographic Institution

Schedule of Expenditures of Federal Awards

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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Assistance Listing Number	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Total Expenditures	Passed to Sub-Recipients
National Aeronautics and Space Administration							
Science	43.001	7,017,431				7,017,431	1,278,321
Science	43.001		43,567	Ball Corporation	22MES0003	43,567	
Science	43.001		54,716	New Mexico Tech	PO020052	54,716	
Science	43.001		755	University of Washington	UWSC10145	755	
Science	43.001		57,804	University of Colorado	1560578	57,804	
Science	43.001		3,280	Georgia Institute of Technology	AWD 103070 G1	3,280	
Science	43.001		9,496	University of North Carolina at Chapel Hill	5122918	9,496	
Science	43.001		25,999	University of Maine	UMS1295	25,999	
Science	43.001		81,827	Jet Propulsion Laboratory	1670515	81,827	
Science	43.001		6,007	Rice University	X03061872	6,007	
Science	43.001		29,530	The Johns Hopkins University	172026	29,530	
Science	43.001		(530)	Skidmore College	321751	(530)	
Science	43.001		440,592	University of Washington	57415	440,592	
Science	43.001		17,940	Pennsylvania State University	S002941-NASA	17,940	
Science	43.001		132,539	University Corporation for Atmospheric Research	SUBAWD3046	132,539	
Science	43.001		34,399	Massachusetts Institute of Technology	S5043 PO453237	34,399	
Science	43.001		19,085	University of Washington	UWSC13898	19,085	
Science	43.001		2,152	Massachusetts Institute of Technology	S4786 PO28358	2,152	
Science	43.001		54,938	Atmospheric and Environmental Research Inc.	P2375 001	54,938	
Science	43.001		123,425	The Johns Hopkins University	155890	123,425	
Science	43.001		51,111	University of Utah	1006613301WHOI	51,111	
Science	43.001		35,746	Bowdoin College	2017003	35,746	
Science	43.001		73,364	Colorado State University	G0367101	73,364	
Science	43.001		62,878	San Diego State University	D905304 SA0059665A 7806	62,878	
Science	43.001		11,102	Jet Propulsion Laboratory	1658837	11,102	
Science	43.001		12,707	Jet Propulsion Laboratory	1619027	12,707	
<i>Subtotal National Aeronautics and Space Administration</i>		<u>7,017,431</u>	<u>1,384,429</u>			<u>8,401,860</u>	<u>1,278,321</u>
National Science Foundation							
Engineering	47.041	337,053				337,053	
Mathematical and Physical Sciences	47.049	47,764				47,764	
Geosciences	47.050	119,184,718				119,184,718	25,976,824
Geosciences	47.050		20,335	Florida Atlantic University	WR K236	20,335	
Geosciences	47.050		192,308	Monterey Bay Aquarium Research Institute	PO2110497	192,308	
Geosciences	47.050		4,506	San Jose State University Foundation	F020694	4,506	
Geosciences	47.050		13,804	University of Washington	BPO60801	13,804	
Geosciences	47.050		243,521	University of the Virgin Islands	203108 04	243,521	
Geosciences	47.050		5,294	Lehigh University	PU060912	5,294	
Geosciences	47.050		2,324,336	Monterey Bay Aquarium Research Institute	Agreement 2010988	2,324,336	
Geosciences	47.050		22,120	University of Hawaii	Subaward MA1394	22,120	
Geosciences	47.050		73,933	University of Hawaii	Subaward MA1407	73,933	
Geosciences	47.050		6,900	Stanford University	PO62911427	6,900	
Geosciences	47.050		385,689	University of California San Diego	SUB128951830	385,689	
Geosciences	47.050		13,190	Lehigh University	PU061992	13,190	
Geosciences	47.050		3,012	University of California Santa Cruz	A210234S001	3,012	
Geosciences	47.050		8,719	University of Washington	62040	8,719	
Geosciences	47.050		3,309	Barnard College	0002169	3,309	
Geosciences	47.050		78,931	Bermuda Institute of Ocean Sciences	212285	78,931	
Geosciences	47.050		7,942	University of Wisconsin	MSN0282246	7,942	
Geosciences	47.050		100,293	University of Georgia	00002638	100,293	
Geosciences	47.050		7,942	Pennsylvania State University	4100171650	7,942	
Geosciences	47.050		2,317	University of Maryland	SA07523110	2,317	
Geosciences	47.050		4,279	University of Connecticut	323346	4,279	
Geosciences	47.050		13,033	University of Texas at Austin	2022A13459	13,033	
Geosciences	47.050		128	University of Rhode Island	0000183840	128	
Geosciences	47.050		9,011	Stanford University	CK2314543	9,011	
Geosciences	47.050		1	Florida Fish and Wildlife Conservation			
Geosciences	47.050		5,336	Commission	B84551	1	
Geosciences	47.050			University of Miami	0000474642	5,336	

The accompanying notes are an integral part of this schedule.

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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Assistance Listing Number	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Total Expenditures	Passed to Sub-Recipients
Geosciences	47.050		76,337	University of California San Diego	KR704776	76,337	
Geosciences	47.050		147,267	University of California San Diego	KR704949	147,267	
Geosciences	47.050		44,486	Columbia University	22E GG00939304	44,486	
Geosciences	47.050		6,518	Columbia University Lamont Doherty Earth Observatory of Columbia	22F GG00939304	6,518	
Geosciences	47.050		157,562	University	2GG015488	157,562	
Geosciences	47.050		13,713	University of Oregon	222000 06252	13,713	
Geosciences	47.050		92,694	University of Southern California	87584150	92,694	
Geosciences	47.050		2,284	University of Georgia	E1307625	2,284	
Geosciences	47.050		6,334	Bermuda Institute of Ocean Sciences	208162WHOI	6,334	
Geosciences	47.050		20,114	University of Rhode Island	0007337	20,114	
Geosciences	47.050		571	University of Georgia	E1278655	571	
Geosciences	47.050		15,669	University of Rhode Island	0000146806	15,669	
Geosciences	47.050		3,519	Western Washington University	B238852	3,519	
Geosciences	47.050		29,330	University of California San Diego Lamont Doherty Earth Observatory of Columbia	PUR00389297	29,330	
Geosciences	47.050		4,605	University	22B GG00939304	4,605	
Geosciences	47.050		38,254	Columbia University	22C GG00939304	38,254	
Geosciences	47.050		38,134	Columbia University	22D GG00939304	38,134	
Geosciences	47.050		6,796	Woodwell Climate Research Center Lamont Doherty Earth Observatory of Columbia	Credit Card	6,796	
Geosciences	47.050		17,258	University	22 GG009393	17,258	
Geosciences	47.050		171,000	University of California San Diego	99779473	171,000	
Geosciences	47.050		54,122	University of California San Diego	131259736	54,122	
Geosciences	47.050		12,400	Bermuda Institute of Ocean Sciences	182285	12,400	
Geosciences	47.050		4,633	University of New Mexico	189952	4,633	
Computer and Information Science and Engineering	47.070	151,687				151,687	
Biological Sciences	47.074	1,097,836				1,097,836	
Biological Sciences	47.074		84,912	Rutgers University	IOS 1923297	84,912	
Biological Sciences	47.074		932	University of North Carolina at Chapel Hill	Y21MTS0252	932	
Biological Sciences	47.074		21,379	Marine Biological Laboratory	53522	21,379	
Biological Sciences	47.074		1,825	Harvard University	CC3483	1,825	
Social, Behavioral, and Economic Sciences	47.075	31,630				31,630	12,710
Education and Human Resources	47.076	80,233				80,233	32,717
Polar Programs	47.078	2,951,440				2,951,440	
Polar Programs	47.078		181,412	Rutgers University	1897	181,412	
Polar Programs	47.078		70,007	University of Georgia	00002688	70,007	
Polar Programs	47.078		27,795	University of Washington	UWSC13593	27,795	
Polar Programs	47.078		14,126	University of Washington	UWSC13728	14,126	
Polar Programs	47.078		55,102	University of Massachusetts Dartmouth	36087	55,102	
Office of International Science and Engineering	47.079	8,341				8,341	
Office of International Science and Engineering	47.079		41,375	University of South Alabama	A170170S003	41,375	
Office of International Science and Engineering	47.079		22,730	Bigelow Laboratory for Ocean Sciences	22 002	22,730	
Office of International Science and Engineering	47.079		36,801	University of Texas at Austin	SUB00000012	36,801	
Integrative Activities	47.083	813,970				813,970	328,688
Integrative Activities	47.083		60,694	University of Cincinnati	SUB013204002	60,694	
NSF Technology, Innovation and Partnerships	47.084	155,188				155,188	
<i>Subtotal National Science Foundation</i>		124,859,860	5,132,879			129,992,739	26,350,939
International Trade Commission							
GlobalX21001	61.RD		1,149	Composite Energy Technologies	MC3746	1,149	
<i>Subtotal International Trade Commission</i>			1,149			1,149	
Environmental Protection Agency							
Southeast New England Coastal Watershed Restoration Program	66.129		32,856	Restore America's Estuaries	SNEPWG 1912 WHOI	32,856	10,337
Southeast New England Coastal Watershed Restoration Program	66.129		92	Cape Cod Commission	SNEPWG18 9 CCC	92	
Science to Achieve Results (STAR) Research Program	66.509	221,656	-			221,656	41,429
Office of Research and Development Consolidated Research/Training/Fellowships	66.511	-	25,302	Triple Ring Technologies	EPA011	25,302	
<i>Subtotal Environmental Protection Agency</i>		221,656	58,250			279,906	51,766

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Department of Energy							
Office of Science Financial Assistance Program	81.049	90,010				90,010	
Office of Science Financial Assistance Program	81.049		248,790	3Newable LLC	Agreement	248,790	
Renewable Energy Research and Development	81.087	299,525				299,525	84,051
Renewable Energy Research and Development	81.087		60	Duke University	323000017	60	
Renewable Energy Research and Development	81.087		5,308	Worcester Polytechnic Institute	10637GR	5,308	
Advanced Research Projects Agency - Energy	81.135	491,715				491,715	334,009
Advanced Research Projects Agency - Energy	81.135		108,364	University of Alaska Southeast	UAF 190029	108,364	
Advanced Research Projects Agency - Energy	81.135		8,644	Fearless Fund	Subaward	8,644	
Advanced Research Projects Agency - Energy	81.135		5,711	University of California Santa Barbara	KK2304	5,711	
DEAC0205CH11231	81.RD		17,443	University of Washington	BPO47547661981	17,443	
DEAR0000912	81.RD		182,506	Marine Biological Laboratory	53718	182,506	
DEEE0008930	81.RD		201,815	Development Authority	154677 PO 000015877	201,815	38,500
<i>Subtotal Department Of Energy</i>		<u>881,250</u>	<u>778,641</u>			<u>1,659,891</u>	<u>456,560</u>
Department of Health And Human Services							
National Institutes Of Health							
Environmental Health	93.113	680,038				680,038	4,804
Environmental Health	93.113		459,487	University of California Davis	A222213S001	459,487	
Environmental Health	93.113		57,004	European Molecular Biology Laboratory	WHOI333801	57,004	
Environmental Health	93.113		3,918	University of Mississippi	1904038	3,918	
Environmental Health	93.113		42,410	Florida Gulf Coast University	17056 NIH WHOI01	42,410	
Human Genome Research	93.172		4,630	European Molecular Biology Laboratory	WHOI312501	4,630	
Biomedical Research and Research Training	93.859	<u>433,267</u>				<u>433,267</u>	
<i>Subtotal Department of Health and Human Services</i>		<u>1,113,305</u>	<u>567,449</u>			<u>1,680,754</u>	<u>4,804</u>
Department of Homeland Security							
Centers for Homeland Security	97.061		428,923	University of Alaska Anchorage	PO P0485593	428,923	
<i>Subtotal Department of Homeland Security</i>		<u>-</u>	<u>428,923</u>			<u>428,923</u>	<u>-</u>
Total Research & Development Cluster		<u>186,525,325</u>	<u>19,984,508</u>			<u>206,509,833</u>	<u>33,381,541</u>
Economic Development Cluster							
Department of Commerce							
Economic Development Administration(EDA)							
Economic Adjustment Assistance	11.307	<u>102,260</u>				<u>102,260</u>	
<i>Subtotal Department of Commerce</i>		<u>102,260</u>	<u>-</u>			<u>102,260</u>	<u>-</u>
Total Economic Development Cluster		<u>102,260</u>	<u>-</u>			<u>102,260</u>	<u>-</u>
Total Federal Award Expenditures		<u>\$ 186,627,585</u>	<u>\$ 19,984,508</u>			<u>\$ 206,612,093</u>	<u>\$ 33,381,541</u>

The accompanying notes are an integral part of this schedule.

Woods Hole Oceanographic Institution

Notes to Schedule of Expenditures of Federal Awards

Year Ended December 31, 2022

1. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying Schedule of Expenditures of Federal Awards (the "Schedule") has been prepared using the accrual basis of accounting and in accordance with Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance). The purpose of the Schedule is to present a summary of those activities of the Woods Hole Oceanographic Institution (the "Institution") for the year ended December 31, 2022 which have been financed by the U.S. Government (federal awards). For purposes of the Schedule, federal awards include all federal assistance entered into directly between the federal government and the Institution and federal funds awarded to the Institution by a prime recipient. Because the Schedule presents only a selected portion of the activities of the Institution, it is not intended to and does not present the financial position, changes in net assets, or cash flows of the Institution. Negative amounts represent adjustments to amounts reported in prior years in the normal course of business. Full Assistance Listing Numbers and pass-through entity identification numbers are presented when available.

2. Fringe Benefits and Indirect Costs

The Institution recovers fringe benefits and indirect costs associated with federal award programs pursuant to fixed rates with carryforward provisions negotiated annually with the Office of Naval Research (ONR). The Defense Contract Audit Agency (DCAA) has completed an audit of the rates used by the Institution through the fiscal year ended December 31, 2020. The 2022 Indirect Cost recovery rates, which are fixed with carryforward provisions, include the impact of prior year settlements. The Institution applies its predetermined approved facilities and administrative rate when charging indirect costs to federal awards rather than the 10% de minimis cost rate as described in Section 200.414 of the Uniform Guidance.

**Part II – Reports on Internal Control and Compliance
and Other Matters**



Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

To the Board of Trustees of
Woods Hole Oceanographic Institution

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of Woods Hole Oceanographic Institution (the "Institution"), which comprise the statement of financial position as of December 31, 2022, and the related statements of activities and of cash flows for the year then ended, including the related notes (collectively referred to as the "financial statements"), and have issued our report thereon dated July 14, 2023.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Institution's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Institution's internal control. Accordingly, we do not express an opinion on the effectiveness of the Institution's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Institution's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Institution's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Institution's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

PricewaterhouseCoopers LLP

Boston, Massachusetts
July 14, 2023



Report of Independent Auditors on Compliance for Each Major Program and on Internal Control Over Compliance Required by Uniform Guidance

To the Board of Trustees of
Woods Hole Oceanographic Institution

Report on Compliance for Each Major Federal Program

Opinion on Each Major Federal Program

We have audited Woods Hole Oceanographic Institution's (the "Institution") compliance with the types of compliance requirements identified as subject to audit in the OMB *Compliance Supplement* that could have a direct and material effect on each of the Institution's major federal programs for the year ended December 31, 2022. The Institution's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

In our opinion, the Institution complied, in all material respects, with the compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2022.

Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America (US GAAS); the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditors' Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of the Institution and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of the Institution's compliance with the compliance requirements referred to above.

Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules and provisions of contracts or grant agreements applicable to the Institution's federal programs.



Auditors' Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on the Institution's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material, if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about the Institution's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with US GAAS, *Government Auditing Standards*, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the Institution's compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of the Institution's internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of the Institution's internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Report on Internal Control Over Compliance

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.



Our consideration of internal control over compliance was for the limited purpose described in the Auditors' Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

PricewaterhouseCoopers LLP

Boston, Massachusetts
August 1, 2023

Part III – Audit Findings

Woods Hole Oceanographic Institution

Schedule of Findings and Questioned Costs

Year Ended December 31, 2022

Section I – Summary of Auditor’s Results

Financial Statements

Type of auditor’s report issued:	Unmodified
Internal control over financial reporting:	
• Material weakness(es) identified?	No
• Significant deficiency(ies) identified that are not considered to be material weaknesses?	None reported
• Noncompliance material to financial statements noted?	No

Federal Awards

Internal control over major programs:	
• Material weakness(es) identified?	No
• Significant deficiency(ies) identified that are not considered to be material weaknesses?	None Reported
Type of auditor’s report issued on compliance for major programs:	Unmodified
Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)	No

Identification of major programs: Assistance Listing Number(s)

Name of Federal Program or Cluster

Various	Research and Development Cluster
Dollar threshold used to distinguish between Type A and Type B programs:	\$ 3,000,000
Auditee qualified as a low-risk auditee?	Yes

Section II – Financial Statement Findings

None noted.

Section III - Federal Financial Assistance Findings and Questioned Costs

There are no federal financial assistance findings or questioned costs to report on.

Woods Hole Oceanographic Institution
Summary Schedule of Prior Year Findings and Status
Year Ended December 31, 2022

There are no findings from prior years that are required to be updated in this report.