

Woods Hole Oceanographic Institution

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

December 31, 2022

EIN #042105850

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 | <u>478,814,607</u> | <u>474,784,430</u> |
| 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.

Woods Hole Oceanographic Institution
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

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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 | <u>\$ 12,548,499</u> | <u>\$ 50,958,381</u> | <u>\$ 63,506,880</u> |
| Total return on investments | <u>12,548,499</u> | <u>50,958,381</u> | <u>63,506,880</u> |
| Investment return designated for | | | |
| Sponsored research | - | (7,512,534) | (7,512,534) |
| Education | - | (9,211,971) | (9,211,971) |
| Current operations | <u>(4,131,495)</u> | <u>-</u> | <u>(4,131,495)</u> |
| Total distributed to operations | <u>(4,131,495)</u> | <u>(16,724,505)</u> | <u>(20,856,000)</u> |
| Investment return in excess of amounts designated for sponsored research, education and current operations | <u>\$ 8,417,004</u> | <u>\$ 34,233,876</u> | <u>\$ 42,650,880</u> |

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 | <u>\$ 3,976,402</u> | <u>\$ -</u> | <u>\$ 1,766,743</u> | <u>\$ 451,351,817</u> | <u>\$ 457,094,962</u> |
| Total liabilities at fair value | <u>\$ -</u> | <u>\$ -</u> | <u>\$ -</u> | <u>\$ -</u> | <u>\$ -</u> |

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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 | |
| | 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 | <u>29,467</u> | <u>27,655</u> |
| Balance at December 31, 2021 | <u>\$ 1,069,997</u> | <u>\$ 1,057,618</u> |

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 | <u>9,396,946</u> | Daily redemption terms | |
| Total investments | <u>\$ 451,351,817</u> | | |

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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 | <u>(2,352,304)</u> | <u>(251,214)</u> |
| | <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 | <u>\$ (1,445,663)</u> |
| 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 | <u>\$ 78,371,087</u> | <u>\$ 80,202,348</u> |

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:

| Fiscal year | Principal Amount |
|--------------------|-------------------------|
| 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:

| | <u>Fair Value</u> | |
|---|-------------------|--------------|
| | <u>2022</u> | <u>2021</u> |
| 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 | | | | Total |
|--|----------------------|----------------|----------------|-----------------------------------|-----------------------|
| | Level 1 | Level 2 | Level 3 | NAV as Practical Expedient | |
| 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 | | | | Total |
|--|----------------------|----------------|----------------|-----------------------------------|-----------------------|
| | Level 1 | Level 2 | Level 3 | NAV as Practical Expedient | |
| 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:

| Years | Benefit Payments |
|-----------|------------------|
| 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

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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 | <u>(8,944,607)</u> | <u>(3,659,845)</u> |
| 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 | <u>(1,229,951)</u> | <u>(1,121,552)</u> |
| 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 | <u>\$ 20,521,433</u> | <u>\$ 29,510,451</u> |
| 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 | <u>(8,298,064)</u> | <u>646,543</u> |
| 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 | <u>(8,944,607)</u> | <u>(3,659,845)</u> |
| 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:

| Years | Benefit Payments |
|--------------|-------------------------|
| 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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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 | <u>\$ 70,415,581</u> | <u>\$ 478,814,607</u> | <u>\$ 549,230,188</u> |
| 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 | <u>\$ 26,614,167</u> | <u>\$ 474,784,430</u> | <u>\$ 501,398,597</u> |

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> |

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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.

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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.

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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> |

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

| | 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) Cooperative Institutes | 11.432 | 12,152,898 | | | | 12,152,898 | 3,201,380 |
| National Oceanic and Atmospheric Administration (NOAA) 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

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 |
|--|---------------------------|------------|--------------|--|------------------------------------|--------------------|--------------------------|
| 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.

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 |
|--|---------------------------|-----------|-------------------|--|------------------------------------|--------------------|--------------------------|
| 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 | |
| <i>Subtotal Department of Defense</i> | | | <u>33,002,093</u> | | | <u>41,327,723</u> | <u>854,208</u> |
| 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 | |
| <i>Subtotal Department of Interior</i> | | | <u>2,372,099</u> | | | <u>2,563,022</u> | <u>-</u> |

The accompanying notes are an integral part of this schedule.

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 |
|---|---------------------------|------------------|------------------|---|------------------------------------|--------------------|--------------------------|
| 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 Commission | B84551 | 1 | |
| Geosciences | 47.050 | | 5,336 | University of Miami | 0000474642 | 5,336 | |

The accompanying notes are an integral part of this schedule.

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 |
|---|---------------------------|--------------------|------------------|---|------------------------------------|--------------------|--------------------------|
| 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 University | 22F GG00939304 | 6,518 | |
| Geosciences | 47.050 | | 157,562 | University of Oregon | 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 University | PUR00389297 | 29,330 | |
| Geosciences | 47.050 | | 4,605 | University of California San Diego | 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 University | Credit Card | 6,796 | |
| Geosciences | 47.050 | | 17,258 | University of California San Diego | 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> | | <u>124,859,860</u> | <u>5,132,879</u> | | | <u>129,992,739</u> | <u>26,350,939</u> |
| International Trade Commission | | | | | | | |
| GlobalX21001 | 61.RD | | 1,149 | Composite Energy Technologies | MC3746 | 1,149 | |
| <i>Subtotal International Trade Commission</i> | | | <u>1,149</u> | | | <u>1,149</u> | |
| Environmental Protection Agency | | | | | | | |
| Southeast New England Coastal Watershed Restoration Program | 66.129 | | 32,856 | Restore America's Estuaries | SNEPWW 1912 WHOI | 32,856 | 10,337 |
| Southeast New England Coastal Watershed Restoration Program | 66.129 | | 92 | Cape Cod Commission | SNEPWW18 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> | | <u>221,656</u> | <u>58,250</u> | | | <u>279,906</u> | <u>51,766</u> |

The accompanying notes are an integral part of this schedule.

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 |
|---|---------------------------|-----------------------|----------------------|--|------------------------------------|-----------------------|--------------------------|
| 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 | 433,267 | | | | 433,267 | |
| <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 | 102,260 | | | | 102,260 | |
| <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.