

**Bermuda Institute of  
Ocean Sciences (BIOS), Inc.  
(A Blended Component Unit of Arizona State University)**

Basic Financial Statements,  
Management's Discussion and Analysis

December 31, 2022

## **Independent Auditors' Report**

**The Board of Trustees  
Bermuda Institute of Ocean Sciences (BIOS), Inc.**

### **Report on the Audit of the Financial Statements**

#### ***Opinions***

We have audited the accompanying financial statements of the business-type activities of Bermuda Institute of Ocean Sciences (BIOS), Inc. (a nonprofit organization), a blended component unit of Arizona State University, as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise Bermuda Institute of Ocean Sciences (BIOS), Inc.'s basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of Bermuda Institute of Ocean Sciences (BIOS), Inc. as of December 31, 2022, and the changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### ***Basis for Opinions***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America ("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 BIOS, 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 opinions.

#### ***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 BIOS, Inc.'s ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

***Auditor's 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 opinions. 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 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 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 BIOS'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 BIOS'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.

***Other Matters***

***Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*PKF O'Connor Davies, LLP*

June 12, 2023

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Management's Discussion and Analysis (Unaudited)  
December 31, 2022

**Introduction Overview of the Financial Statements and Financial Analysis**

This section of the Bermuda Institute of Ocean Sciences (BIOS) Inc. annual financial report presents management's discussion and analysis of the financial performance of BIOS for the fiscal year December 31, 2022. The discussion and analysis has been prepared by management and should be read in conjunction with the accompanying financial statements and footnotes.

**Reporting Entity**

Bermuda Institute of Ocean Sciences (BIOS), Inc., is a US nonprofit marine science research and education institute located in St. George's, Bermuda. BIOS research programs investigate the role of the ocean in global climate, health of coral reefs and international collaborative efforts beyond Bermuda waters. Bermuda's unique location allows researchers to access deep ocean, furthering our understanding of the biological, chemical and physical processes that underpin the ocean's role in regulating the Earth's climate. BIOS owns and operates the R/V Atlantic Explorer which is equipped with navigation, laboratory, technical systems and equipment that is instrumental in servicing sponsored research.

Education is a key aspect of BIOS's mission, directly linking our scientific research to hands-on learning opportunities for international and local students. BIOS offers education programs from the grade school level to university and internship opportunities. Educator workshops and visiting groups also complement our educational offerings.

In 2021 BIOS became a blended component unit of Arizona State University.

**Introduction to the Financial Statements**

BIOS's financial statements include the following:

**Statement of Net Position:** The Statement of Net Position includes all assets and liabilities. Assets and liabilities are reported on an accrual basis as of December 31, 2022.

This statement is presented with three major categories: assets, liabilities and net position. The assets are classified between current and noncurrent. The current assets include cash and cash equivalents, short term investments, accounts receivable, inventory and prepaid expenses. The noncurrent assets include capital assets, long-term investments, and net receivables due in excess of a year.

Liabilities are also classified between current and noncurrent. Current liabilities include accounts payable, loans payable within one year and unearned revenues. Noncurrent liabilities include long term debt payable after one year.

Net position consists of net investment in capital assets, restricted expendable and nonexpendable and unrestricted net position.

**Statement of Revenues, Expenses and Changes in Net Position:** The Statement of Revenues, Expenses, and Changes in Net Position presents the revenues earned and expenses incurred during the year on an accrual basis.

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Management's Discussion and Analysis (Unaudited)  
December 31, 2022

**Financial Overview**

**Net Position:** Net position may serve over time as a useful indicator of an entity's financial position. The following table reflects the condensed Statement of Net Position of BIOS for December 31, 2022 and 2021 showing assets exceeded liabilities by \$38.6M at December 31, 2022.

**Condensed Summary of Net Position**  
**December 31, 2022 and 2021**

	<b>2022</b>	<b>2021</b>	<b>Increase / (Decrease)</b>
<b>ASSETS</b>			
Current Assets	\$ 7,350,392	\$ 8,436,524	\$ (1,086,132)
Noncurrent Assets	18,643,129	24,536,123	(5,892,994)
Capital Assets, Net	15,031,504	15,171,949	(140,445)
Total Assets	41,025,025	48,144,596	(7,119,571)
<b>LIABILITIES</b>			
Current Liabilities	1,627,313	7,027,399	(5,400,086)
Noncurrent long term obligations	807,287	869,445	(62,158)
Total Liabilities	2,434,600	7,896,844	(5,462,244)
<b>NET POSITION</b>			
Net Investment in Capital Assets	14,162,060	8,812,736	5,349,324
Restricted:			
Nonexpendable	10,194,641	10,169,141	25,500
Expendable	14,481,920	18,538,978	(4,057,058)
Unrestricted	(248,196)	2,726,897	(2,975,093)
Total Net Position	\$ 38,590,425	\$ 40,247,752	\$ (1,657,327)

**Assets:** Total assets decreased by \$7.1M during the year ended December 31, 2022. Current assets decreased \$1.1M between years while noncurrent assets decreased by nearly \$5.9M. The decreases are primarily due to the liquidation of the credit facility of \$5.5M in December 2022 and a \$1.4M reduction in total outstanding receivables at year end.

**Liabilities:** Current liabilities decreased by nearly \$5.4M due to liquidation of the credit facility. Noncurrent liabilities decreased by \$0.1M relating to debt servicing on the sole remaining debt instrument with a major local utility.

**Net Position:** The \$1.6M decrease in net position is due to unrealized losses on investments due to market performance.

**Change in Net Position:** The following table compares the revenues and expenses for the current and previous year.

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Management's Discussion and Analysis (Unaudited)  
December 31, 2022

**Condensed Summary of Revenues, Expenses and Changes in Net Position**  
**Years Ended December 31, 2022 and 2021**

	<b>2022</b>	<b>2021</b>	<b>Increase / (Decrease)</b>
<b>OPERATING REVENUE</b>			
Research grants and contracts	\$ 11,470,578	\$ 9,401,465	\$ 2,069,113
Tuition and fees	457,024	317,481	139,543
Auxiliary enterprises	490,828	463,478	27,350
Total Operating Revenue	12,418,430	10,182,424	2,236,006
<b>OPERATING EXPENSES</b>			
Instruction	976,162	667,162	309,000
Research	10,594,041	8,348,918	2,245,123
Institutional support	2,755,077	2,865,889	(110,812)
Operation and maintenance of plant	753,913	530,505	223,408
Auxiliary enterprises	176,461	215,484	(39,023)
Academic support	403,393	331,149	72,244
Depreciation	2,079,731	2,163,788	(84,057)
Total Operating Expenses	17,738,778	15,122,895	2,615,883
Operating Loss	(5,320,348)	(4,940,471)	(379,877)
<b>NONOPERATING REVENUES (EXPENSES)</b>			
Private gifts	2,541,071	1,960,861	580,210
Investment (loss) return	(2,979,180)	1,854,949	(4,834,129)
Other (loss) revenues	(1,003)	4,570	(5,573)
Affiliation services revenue	4,381,514	3,200,000	1,181,514
Interest on debt	(279,381)	(412,360)	132,979
Loss on disposals	-	(96,261)	96,261
Net Nonoperating Revenues	3,663,021	6,511,759	(2,848,738)
Change in Net Position	(1,657,327)	1,571,288	(3,228,615)
<b>NET POSITION</b>			
Beginning of year	40,247,752	38,676,464	1,571,288
End of year	\$ 38,590,425	\$ 40,247,752	\$ (1,657,327)

**Revenues:** Total operating revenue increased by \$2.2M, or 22% to over \$12.4M in 2022 with the most significant increase occurring in Research grants and contract revenues. In Q1 2022, the R/V Atlantic Explorer underwent major shipyard maintenance, increasing research revenues by over \$2.2M. Tuition and auxiliary enterprise revenues also improved with a 21% increase due to the addition of a new summer course.

**Bermuda Institute of Ocean Sciences (BIOS), Inc.  
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Management's Discussion and Analysis (Unaudited)  
December 31, 2022

**Expenses:** Total operating expenses increased by \$2.6M or 17%. Research expenditures increased by \$2.2M primarily related to bi-annual shipyard expenditures for the R/V Atlantic Explorer. Instruction and operation and maintenance of plant expenses increased as operations began to normalize from the impacts from the COVID-19 pandemic.

**Nonoperating expenses and revenues:** Total nonoperating activity decreased by \$2.8M. Unrealized losses on investments of \$3.0M were partially offset with other nonoperating activities.



**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Statement of Net Position  
December 31, 2022

**ASSETS**

Current Assets

Cash and cash equivalents	\$ 3,135,470
Grants and accounts receivable	1,729,395
Contributions receivable	2,379,659
Inventory and prepaid expenses	<u>105,868</u>
Total Current Assets	<u>7,350,392</u>

Noncurrent Assets:

Endowment cash	14,064,701
Investments	2,448,808
Contributions receivable, net	2,129,620
Capital assets, net	<u>15,031,504</u>
Total Noncurrent Assets	<u>33,674,633</u>

\$ 41,025,025

**LIABILITIES AND NET POSITION**

Liabilities

Current Liabilities

Accounts payable and accrued expenses	\$ 986,897
Unearned revenue	578,259
Loans payable	<u>62,157</u>
Total Current Liabilities	1,627,313

Noncurrent Liabilities

Loans payable	<u>807,287</u>
Total Liabilities	<u>2,434,600</u>

Net Position

Net investment in capital assets	14,162,060
Restricted	
Nonexpendable	10,194,641
Expendable	14,481,920
Unrestricted	<u>(248,196)</u>
Total Net Position	<u>38,590,425</u>

\$ 41,025,025

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Statement of Revenues, Expenses and Changes in Net Position  
Year Ended December 31, 2022

**OPERATING REVENUE**

Research grants and contracts	\$ 11,470,578
Tuition and fees	457,024
Auxiliary enterprises	490,828
Total Operating Revenue	<u>12,418,430</u>

**OPERATING EXPENSES**

Instruction	976,162
Research	10,594,041
Institutional support	2,755,077
Operation and maintenance of plant	753,913
Auxiliary enterprises	176,461
Academic support	403,393
Depreciation	2,079,731
Total Operating Expenses	<u>17,738,778</u>

    Operating Loss (5,320,348)

**NONOPERATING REVENUES (EXPENSES)**

Contributions	2,541,071
Investment loss	(2,979,180)
Other losses	(1,003)
Affiliation services revenue	4,381,514
Interest on debt	(279,381)
Net Nonoperating Revenues	<u>3,663,021</u>

    Change in Net Position (1,657,327)

**NET POSITION**

Beginning of year	<u>40,247,752</u>
End of year	<u>\$ 38,590,425</u>

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Statement of Cash Flows  
Year Ended December 31, 2022

**CASH FLOWS FROM OPERATING ACTIVITIES**

Tuition and fees	\$ 455,181
Research grants and contracts	12,792,091
Sales and services of auxiliary enterprises	394,599
Payments of employees for salaries and benefits	(7,975,959)
Payments to suppliers	<u>(7,439,512)</u>
Net Cash from Operating Activities	<u>(1,773,600)</u>

**CASH FLOWS FROM NON CAPITAL FINANCING ACTIVITIES**

Affiliation services revenue	4,381,514
Contributions	<u>2,541,071</u>
Net Cash from Noncapital Financing Activities	<u>6,922,585</u>

**CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES**

Purchases of capital assets	(1,939,286)
Principal paid on capital debt	(5,489,768)
Interest paid on capital debt	<u>(282,268)</u>
Net Cash from Capital and Related Financing Activities	<u>(7,711,322)</u>

**CASH FLOWS FROM INVESTING ACTIVITIES**

Proceeds from sales of investments	<u>14,813,585</u>
Net Increase in Cash and Cash Equivalents	12,251,248

**CASH EQUIVALENTS AND ENDOWMENT CASH**

Beginning of year	<u>4,948,923</u>
End of year	<u>\$ 17,200,171</u>

**RECONCILIATION OF OPERATING LOSS TO  
NET CASH FROM OPERATING ACTIVITIES**

Operating loss	\$ (5,320,348)
Adjustments to reconcile net loss to net cash from operating activities	
Depreciation expense	2,079,731
Changes in assets and liabilities	
Grants and accounts receivable	(809,461)
Contributions receivable, net	2,243,456
Inventory and prepaid expenses	3,614
Accounts payable and accrued expenses	265,606
Unearned revenues	<u>(236,198)</u>
Net Cash from Operating Activities	<u>\$ (1,773,600)</u>

See notes to financial statements

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Notes to Financial Statements  
December 31, 2022

**1. Organization**

Bermuda Institute of Ocean Sciences (BIOS), Inc., formerly The Bermuda Biological Station for Research, Inc., founded in 1903, was incorporated in the State of New York in 1926 as a U.S. not-for-profit research organization. BIOS is exempt from U.S. income taxes pursuant to Sections 501(c)(3) and 509(a) of the Internal Revenue Code. BIOS is also a Bermuda Registered Charity (Reg #116).

On October 26, 2021, BIOS and Arizona State University (“ASU”), a related party, executed a services and affiliation agreement. Based on the terms of the agreement and in accordance with Government Accounting Standards Board (GASB) Statement No. 80, BIOS is considered a blended component unit of Arizona State University for financial reporting purposes. Accordingly, the financial statements of BIOS are included in Arizona State University’s Annual Comprehensive Financial Report.

BIOS’s mission is to seek and share fundamental knowledge of the oceans through state-of-the-art scientific research, world-class field expeditions, and comprehensive educational experiences.

The research conducted at BIOS is relevant to the waters surrounding Bermuda, as well as the global Earth system, and is multidisciplinary, spanning the biological, chemical, geological, and physical sciences. BIOS researchers are active partners in regional and international research collaborations that are working to address some of the most pressing issues of our time including climate change, marine conservation, ecosystem health, and natural-disaster risk assessment.

**2. Summary of Significant Accounting Policies**

***Basis of Presentation***

The financial statements of BIOS are presented under the economic resources measurement focus and prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America (US GAAP) applicable to government entities, established primarily by the Governmental Accounting Standards Board (GASB).

GASB establishes standards for external financial reporting and requires that resources be classified for accounting and reporting purposes into the following net position categories.

- *Net investment in capital assets:* Capital assets, net of accumulated depreciation, and outstanding principal balances of debt attributable to the acquisition, construction, or improvement of those assets.
- *Restricted:*
  - Nonexpendable* – Net position subject to externally imposed stipulations that must be maintained permanently by BIOS.
  - Expendable* – Net position whose use by BIOS is subject to externally imposed stipulations that can be fulfilled by actions of BIOS pursuant to the stipulations or that expire by the passage of time.

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Notes to Financial Statements  
December 31, 2022

**2. Summary of Significant Accounting Policies (continued)**

***Basis of Presentation (continued)***

- *Unrestricted:*  
Net position not subject to externally imposed stipulations that may be designated for specific purposes by action of management or the Board of Trustees, or may otherwise be limited by contractual agreements with outside parties.

When an expense is incurred that can be paid using either restricted or unrestricted resources, BIOS's policy is to first apply the expense towards restricted resources, and then towards unrestricted resources.

***Use of Estimates***

The presentation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

***Contributions***

Contributions, including unconditional promises to give, are recognized as revenue in the period received or pledged. BIOS reports gifts as restricted support if they are received with donor stipulations that limit the use of the donated assets, or if they are restricted as support for future periods. When donor restrictions expire, that is, when a stipulated time restriction ends or purpose restriction is accomplished, expendable restricted net position is reclassified to unrestricted net position. Contributions of assets other than cash are recorded at their estimated fair value and are recorded as an increase in unrestricted net position unless the donor places restrictions on their use. Contributions due after one year are reported at their net present value. Amortization of the discount is recorded annually as additional contribution revenue over the anticipated collection period of the pledge.

***Operating Expenses***

Expenses are categorized as operating or nonoperating per GASB. BIOS reports operating expenses by functional category (instruction, research, etc.) in the statement of revenues, expenses, and changes in net position and displays expenses by their natural classification (personal services and benefits, supplies and services and depreciation).

***Foreign Currency***

BIOS's reporting currency is United States dollars ("USD") and the functional currency is Bermuda dollars ("BMD"). There are no foreign currency transaction gains or losses from transacting in BMD because the transactions denominated in BMD are translated to USD at par as the BMD is pegged to the USD at the exchange rate of one BMD to one USD.

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Notes to Financial Statements  
December 31, 2022

**2. Summary of Significant Accounting Policies (continued)**

***Cash Equivalents and Endowment Cash***

All highly liquid investments, with maturities of three months or less at the time of purchase are considered cash equivalents. Endowment cash represents the liquidated proceeds of the BIOS endowment fund at year end due to the BIOS appointment of a new investment manager. The following is a reconciliation of cash equivalents and endowment cash reported on the statement of cash flows at December 31, 2022:

Cash equivalents	\$ 3,135,470
Endowment cash	<u>14,064,701</u>
	<u><u>17,200,171</u></u>

***Allowance for Uncollectible Receivables***

An allowance for uncollectible receivables is estimated based on a combination of write-off history, aging analysis and any specific known troubled accounts. Management believes all receivables are fully collectible, therefore, no allowance for doubtful accounts is recognized at year-end.

***Inventory***

Inventory is reported at the lower of cost or net realizable value (first in, first out) and consists of glider batteries, gift shop merchandise, cafeteria, laboratory and SCUBA supplies held for resale. Glider batteries are unit stores expensed at the time of deployment in glider missions.

***Fair Value Measurements***

BIOS follows the provisions of GASB Statement No. 72, "*Fair Value Measurement and Application*", which defines fair value and establishes a fair value hierarchy organized into three levels based upon the input assumptions used in pricing assets. Level 1 inputs have the highest reliability and are related to assets with unadjusted quoted prices in active markets. Level 2 inputs relate to assets with other than quoted prices in active markets which may include quoted prices for similar assets or liabilities or other inputs which can be corroborated by observable market data. Level 3 inputs are unobservable inputs and are used to the extent that observable inputs do not exist.

Pursuant to US GAAP guidance, alternative investments where fair value is measured using the Net Asset Value ("NAV") per share as a practical expedient are not categorized within the fair value hierarchy.

***Investment Valuation and Income Recognition***

Investments are carried at fair value. The fair value of alternative investments has been estimated using the NAV as reported by the management of the respective alternative investment. US GAAP provides for the use of NAV as a "Practical Expedient" for estimating fair value of alternative investments. NAV reported by each alternative investment fund is used as a practical expedient to estimate the fair value of BIOS's interest therein. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis and dividends are recorded on the ex-dividend date.

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
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Notes to Financial Statements  
December 31, 2022

**2. Summary of Significant Accounting Policies (continued)**

***Investment Valuation and Income Recognition (continued)***

Realized and unrealized gains and losses are included in the determination of the change in net position.

Alternative investments consist of non-traditional, not readily marketable investments. The underlying investments of such funds, whether invested in stock or other securities, are generally not currently traded in a public market and typically are subject to restrictions on resale. Values determined by investment managers and general partners of underlying securities that are thinly traded or not traded in an active market may be based on historical cost, appraisals, a review of the investees' financial results, financial condition and prospects, together with comparisons to similar companies for which quoted market prices are available or other estimates that require varying degrees of judgment.

Because of the inherent uncertainty of valuations, the estimated fair values may differ significantly from the values that would have been used had a ready market for such investments existed or had such investments been liquidated, and those differences could be material.

***Risk Disclosure***

**Interest Rate Risk** - Interest rate risk is the risk that BIOS will incur losses in fair value caused by changing interest rates. BIOS has a formal investment policy that considers investment maturities as a means of managing its exposure to fair value losses arising from changing interest rates.

**Custodial Credit Risk** - Custodial credit risk is the risk that in the event of a bank failure, BIOS's deposits may not be returned to it. GASB Statement No. 40, "*Deposit and Investment Risk Disclosures – an amendment of GASB Statement No. 3*", directs that deposits be disclosed as exposed to custodial credit risk if they are not covered by depository insurance and the deposits are either uncollateralized, collateralized by securities held by the pledging financial institution or collateralized by securities held by the pledging financial institution's trust department but not in BIOS's name. Deposits held at financial institutions insured by the Federal Deposit Insurance Corporation ("FDIC") are insured up to \$250,000. BMD dollar deposits by charities held at financial institutions insured by the Bermuda Deposit Insurance Corporation ("BDIC") are insured up to \$25,000. Investment holdings at financial institutions insured by the Securities Investor Protection Corporation ("SIPC") are insured up to \$500,000 (\$250,000 for cash holdings). As of December 31, 2022, BIOS's uninsured cash, cash equivalents and endowment cash balances on deposit totaled approximately \$16,892,000. As of December 31, 2022, BIOS's uninsured investment holdings totaled approximately \$1,949,000. BIOS does not have a deposit policy for custodial credit risk, but has not experienced any losses in such accounts, and management believes it is not exposed to any significant risks related to these accounts.

**Credit Risk** - Credit risk is the risk that an issuer or other counterparty will not fulfill its specific obligation even without the entity's complete failure. BIOS does not have a formal credit risk policy.

**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Notes to Financial Statements  
December 31, 2022

**2. Summary of Significant Accounting Policies (continued)**

***Research Grants and Contracts Revenue Recognition***

Grants to BIOS are either reimbursement of costs limited by the maximums stated in the grant or are fixed price contracts. Support under grants for reimbursement of costs is recognized in the same period and in an amount equivalent to the aggregate of the incurred underlying costs. Revenue from fixed price grants is recognized proportionately over the life of the grant, as defined in the contract.

***Tuition and fees***

Tuition and fees are recognized over the period the tuition and other services are provided. Prepayments are recorded as unearned revenue.

***Capital Assets***

Purchases of capital assets are recorded at cost. Gifts or contributions of capital assets are recognized at fair value at the time received. Capital assets are depreciated using the straight-line method over the estimated useful lives of the assets. When items are disposed, the cost and accumulated depreciation are eliminated from the records of account, and a gain or loss is reported in current income. Repair and maintenance charges that do not increase the lives of the assets are expensed as incurred.

Capital Assets of BIOS are depreciated over the following useful lives:

	<u>Useful Lives</u>
Buildings and improvements	20-40 years
Furniture, fixtures and equipment	5-15 years
R/V Atlantic Explorer	25 years

***Asset Recoverability***

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying value amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized in the amount by which of the carrying amount of the asset exceeds the fair value of the asset. Management has concluded that an impairment charge for 2022 is not necessary.

***Accounting for Uncertainty in Income Taxes***

BIOS recognizes the effect of income tax positions only when they are more likely than not to be sustained. Management has determined that BIOS had no uncertain income tax positions that require financial statement recognition or disclosure. BIOS is no longer subject to examination by the applicable taxing jurisdictions for periods prior to 2019.



**Bermuda Institute of Ocean Sciences (BIOS), Inc.**  
**(A Blended Component Unit of Arizona State University)**

Notes to Financial Statements  
December 31, 2022

**2. Summary of Significant Accounting Policies (continued)**

***Recently Adopted Accounting Standards***

In June 2017, the GASB Statement No. 87, “Leases”, which established a single model for lease accounting based on the concept that leases are a financing of a “right-of-use” underlying asset. This statement requires a lessee to recognize a lease liability and an intangible right-of-use lease asset and a lessor to recognize a lease receivable and a deferred inflow of resources/ The requirements of GASB Statement No. 87 are effective for BIOS’s fiscal year ended December 31, 2022. BIOS has completed its evaluation of the financial impact of GASB Statement No. 87 and determined that the implementation of this standard was not necessary as it did not have a material impact on its financial statements.

***Subsequent Events***

Management has evaluated subsequent events for disclosure and/or recognition in the financial statements through June 12, 2023, the date financial statements were available for issuance.

**3. Concentrations of Financial Risk**

Financial instruments that potentially subject BIOS to concentrations of credit and market risk consist principally of cash, cash equivalents, and endowment cash on deposits with financial institutions, investments held at financial institutions, and receivables.

The investment portfolio is diversified by type of investment and industry concentrations so that no individual investment, investment advisor, investment manager or group of investments represents a significant concentration risk.

At December 31, 2022 grants and accounts receivable from one grantor totaled approximately \$1,047,000. At December 31, 2022, gross contributions receivable due from one donor totaled approximately \$4,466,000.

For the year ended December 31, 2022 research grants and contracts from one grantor totaled approximately 77% of research grants and contracts. For the year ended December 31, 2022 contributions from two donors totaled approximately 39% of contributions.

**4. Related Party Transactions**

As part of ASU and BIOS’s services and affiliation agreement, ASU paid BIOS \$4,381,514.

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**5. Contributions Receivable**

Contributions receivable at December 31, 2022 are expected to be collected as follows:

Amount expected to be collected in:

One year or less	\$ 2,379,659
Year two	2,236,101
	4,615,760

Less:

Discount (5% per annum) to present value	(106,481)
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\$ 4,509,279

**6. Investments**

BIOS investments consist of a fund managed by an independent fund manager. At December 31, 2022, BIOS had investments of \$2,448,808 in a treasury money market fund valued at level 2.

**7. Capital Assets**

Capital assets activity for the year ended December 31, 2022 is comprised of the following:

	Beginning Balance	Additions	Ending Balance
Non-depreciated capital assets			
Land and land improvements	\$ 486,850	\$ -	\$ 486,850
Depreciable Capital Assets			
Buildings and improvements	16,594,104	35,903	16,630,007
Furniture, fixtures & equipment	6,989,634	460,156	7,449,790
R/V Atlantic Explorer	13,789,619	1,443,227	15,232,846
	<u>37,373,357</u>	<u>1,939,286</u>	<u>39,312,643</u>
Total Capital Assets	<u>37,860,207</u>	<u>1,939,286</u>	<u>39,799,493</u>
Accumulated depreciation			
Buildings and improvements	9,233,896	414,832	9,648,728
Furniture, fixtures & equipment	4,612,891	557,084	5,169,975
R/V Atlantic Explorer	8,841,471	1,107,815	9,949,286
Total Accumulated Depreciation	<u>22,688,258</u>	<u>2,079,731</u>	<u>24,767,989</u>
Capital assets, net	<u>\$15,171,949</u>	<u>\$ (140,445)</u>	<u>\$ 15,031,504</u>

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**8. Loans Payable**

Loans payable consist of the following at December 31, 2022:

Loan payable (unsecured) to Air Care Limited pursuant to the Energy Performance Contract, payable in monthly installments of \$10,438, including interest at 7.5%, due March, 2032.

\$ 869,444

Aggregate maturities of loans payable approximate \$62,000 in 2023, \$67,000 in 2024, \$72,000 in 2025, \$78,000 in 2026, \$84,000 in 2027 and \$507,000 thereafter. Interest expense totaled approximately \$279,000 for year ended December 31, 2022.

**9. Sponsored Projects**

Approximately 59% of revenues in 2022 are awards for sponsored projects (governments and other sources). The awards generally provide for recovery of both direct and indirect costs. The indirect costs covered by the awards are determined as a negotiated or agreed-upon percentage of direct costs with certain exclusions.

**10. Operating Expenses by Natural Classification**

Operating expenses by functional and natural classification for the year ended December 31, 2022, are summarized as follows:

	Personal Services and Benefits	Supplies and Services	Depreciation	Total
Instruction	\$ 504,800	\$ 471,362	\$ -	\$ 976,162
Research	4,308,979	6,285,062	-	10,594,041
Institutional support	2,054,600	700,477	-	2,755,077
Operation and maintenance of plant	303,929	449,984	-	753,913
Auxiliary enterprises	429,581	(253,120)	-	176,461
Academic support	367,289	36,104	-	403,393
Depreciation	-	-	2,079,731	2,079,731
Total Operating Expenses	<u>\$7,969,178</u>	<u>\$ 7,689,869</u>	<u>\$2,079,731</u>	<u>\$ 17,738,778</u>

**11. Pension Plan**

BIOS maintains a contributory pension plan for employees ages 23 and over who have worked at least 720 hours in any calendar year. Participation in the plan is mandatory for Bermudians and spouses of Bermudians until they are 65 years old. The plan is voluntary for all other employees. Each participating employee may contribute to the plan up to a maximum of 10% of their gross salary. Mandatory participants must contribute 5%. BIOS matches the employee contribution of 5% of gross salary in accordance with the plan documents and the Bermuda Occupational Pensions Act 1998. Pension expense for the year ended December 31, 2022 approximated \$235,000.

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**12. Endowment Funds**

Donor-restricted funds whose purpose is to provide long-term support for BIOS and its charitable programs are endowment funds. Net position of endowment funds are classified as restricted or unrestricted as determined by the directions of donors, where applicable, and the provisions of the laws of the State of New York. Absent donor stipulations to the contrary, the provisions of New York State law do not impose restrictions on the use of income or capital appreciation derived from the original gift.

BIOS adheres to the New York State Uniform Prudent Management of Institutional Funds Act (NYPMIFA). NYPMIFA includes provisions that differ from previous law, including the elimination of the historic dollar value rule with respect to endowment spending, establishment of new standards governing the expenditure and modification of restrictions on endowment funds, and revision of the prudence standard for the management and investment of endowment funds.

***Interpretation of Law***

BIOS interprets NYPMIFA as requiring the preservation of the fair value of the original gift as of the date of the gift absent explicit donor stipulations to the contrary. As a result of this interpretation, BIOS classifies as nonexpendable restricted (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts donated to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the nonexpendable restricted endowment fund that is not classified in nonexpendable restricted is classified as expendable restricted until those amounts are appropriated for expenditure.

***Investment Philosophy***

The Fund has a long-term investment horizon and the trustees believe that asset allocation is the major determinant of investment performance. The asset allocation plan is based on a number of factors, including – projected spending needs, maintenance of sufficient liquidity to meet spending payments, and return objectives and risk tolerances. The asset allocation plan provides for diversification of assets to maximize the investment return and manage the endowment investments consistent with market conditions. Investments are made through recognized third-party providers of multimanager strategies.

In December 2022, BIOS and Arizona State University Foundation (“ASUF”) executed an Investment Services Agreement appointing ASUF as investment administrator. At yearend, BIOS liquidated its endowment assets to facilitate their transfer to ASUF.

***Investment Return Objectives***

BIOS has adopted investment and spending policies for the BIOS endowment fund (the Fund) with the core objective to provide a reliable source of long-term financial support. It is the desire of the trustees that the Fund achieves a balance of growth and stability and thereby, over the long term, earns a competitive rate available in the capital markets at the risk level prescribed for the Fund.

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**12. Endowment Funds (continued)**

**Spending Policy**

It is BIOS policy to annually distribute up to 5% of a three-year moving average of the Fund's market value as of June 30 of each year. In 2022, the full 5% was eligible for distribution to support the operations of BIOS.

Cumulative investment returns in excess of the spending rate that are not donor-restricted are board designated endowment funds. Restricted endowment earnings represent cumulative investment returns which must be spent in accordance with the donors' intent. Permanently restricted endowments must be maintained in perpetuity.

**Activity Summary**

The following summarizes activity in endowment funds for year ended December 31, 2022:

	<u>Unrestricted</u>	<u>Expendable Restricted</u>	<u>Nonexpendable Restricted</u>	<u>Total</u>
Balance at January 1, 2022	\$ 1,973,026	\$ 5,713,394	\$ 10,169,141	\$ 17,855,561
Contributions	-	-	25,500	25,500
Investment management fees	(10,720)	(49,128)	-	(59,848)
Capital depreciation	(529,672)	(2,426,294)	-	(2,955,966)
Appropriated for expenditure	<u>(139,228)</u>	<u>(635,817)</u>	<u>-</u>	<u>(775,045)</u>
Balance at December 31, 2022	<u>\$ 1,293,406</u>	<u>\$ 2,602,155</u>	<u>\$ 10,194,641</u>	<u>\$ 14,090,202</u>

**13. Expendable Restricted Net Position**

Expendable restrictions are available for the purposes listed below as of December 31, 2022:

Scientific research	\$ 11,690,072
Education	2,335,871
Laboratory building	165,977
Future periods and administrative	<u>290,000</u>
	<u>\$ 14,481,920</u>

Investment return from nonexpendable restrictions held and subject to BIOS spending policy and appropriation is available to support the indicated activities at December 31, 2022:

Scientific research	\$ 5,183,193
Education	3,533,477
Laboratory building	350,000
General operations	<u>1,127,971</u>
	<u>\$ 10,194,641</u>

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**13. Expendable Restricted Net Position (continued)**

Releases from expendable restricted net position consist of the following for the year ended December 31, 2022:

Scientific research	\$ 2,976,297
Education	887,049
Laboratory building	<u>28,485</u>
	<u>\$ 3,891,831</u>

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