

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

Basic Financial Statements,
Management's Discussion and Analysis and
Uniform Guidance Schedules
Together With Independent Auditors' Reports

December 31, 2021

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

Financial Statements
December 31, 2021

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Independent Auditors' Report

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

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, 2021, 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 respective financial position of the business-type activities of Bermuda Institute of Ocean Sciences (BIOS), Inc. as of December 31, 2021, and the respective 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 Bermuda Institute of Ocean Sciences (BIOS), Inc., 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.

Emphasis of Matter

As discussed in Note 1 of the financial statements, 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. 14, BIOS is considered a blended component unit of Arizona State University for financial reporting purposes.

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 Bermuda Institute of Ocean Sciences (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

Required 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.

Report on Supplementary 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 on pages 23 and 24 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*, 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 information is fairly stated, in all material respects, in relation to the financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated July 21, 2022 on our consideration of BIOS'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. 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 BIOS's 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 BIOS's internal control over financial reporting and compliance.

PKF O'Connor Davies, LLP

July 21, 2022

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

Management's Discussion and Analysis (Unaudited)
December 31, 2021

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, 2021. 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 better 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, 2021.

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.

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, 2021

Financial Overview

Net Position: Net position may serve over time as a useful indicator of a government's financial position. The following table reflects the condensed Statement of Net Position of BIOS for December 31, 2021 and 2020 showing assets exceeded liabilities by \$40M at December 31, 2021.

Condensed Summary of Net Position
December 31, 2021 and 2020

	2021	2020	Increase / (Decrease)
ASSETS			
Current Assets	\$ 8,436,524	\$ 7,356,088	\$ 1,080,436
Noncurrent Assets	24,536,123	25,196,975	(660,852)
Capital Assets, Net	15,171,949	17,043,269	(1,871,320)
Total Assets	48,144,596	49,596,332	(1,451,736)
LIABILITIES			
Current liabilities	7,027,399	4,560,655	2,466,744
Noncurrent long term obligations	869,445	6,359,213	(5,489,768)
Total Liabilities	7,896,844	10,919,868	(3,023,024)
NET POSITION			
Net Investment in Capital Assets	8,812,736	7,712,620	1,100,116
Restricted:			
Nonexpendable	10,169,141	10,142,641	26,500
Expendable	18,538,978	19,010,760	(471,782)
Unrestricted	2,726,897	1,810,443	916,454
Total Net Position	\$ 40,247,752	\$ 38,676,464	\$ 1,571,288

Assets: Total assets decreased by \$1.45M during the year ended December 31, 2021. Current Assets increased by nearly \$1.1M due to affiliation revenue receipts in 2021. Noncurrent Assets decreased by \$2.5M due to a reduction in long term receivables of (\$1.76M) and noncurrent capital asset disposals identified as no longer in use.

Liabilities: Current liabilities increased by \$2.5M. Noncurrent liabilities decreased by \$5.5M as its major long term debt instrument became due in 2022, reported as a current liability at year end 2021.

Net Position: The \$1.5M increase in net position improved by affiliation revenue.

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, 2021

Condensed Summary of Revenues, Expenses and Changes in Net Position
December 31, 2021 and 2020

	2021	2020	Increase / (Decrease)
OPERATING REVENUE			
Research grants and contracts	\$ 9,401,465	\$ 8,889,673	\$ 511,792
Tuition and fees	317,481	193,036	124,445
Auxiliary enterprises	463,478	397,437	66,041
Total Operating Revenue	10,182,424	9,480,146	702,278
OPERATING EXPENSES			
Instruction	667,162	431,345	235,817
Research	8,348,918	7,212,722	1,136,196
Institutional support	2,865,889	2,673,297	192,592
Operation and maintenance of plant	530,505	504,091	26,414
Auxiliary enterprises	215,484	241,452	(25,968)
Academic support	331,149	257,464	73,685
Depreciation	2,163,788	2,137,043	26,745
Total Operating Expenses	15,122,895	13,457,414	1,665,481
Operating Loss	(4,940,471)	(3,977,268)	(963,203)
NONOPERATING REVENUES (EXPENSES)			
Private gifts	1,960,861	12,546,106	(10,585,245)
Investment return	1,854,949	1,724,688	130,261
Other revenues	4,570	-	4,570
Affiliation and services revenue	3,200,000	-	3,200,000
Interest on debt	(412,360)	(459,363)	47,003
Loss on disposals	(96,261)	-	(96,261)
Insurance proceeds	-	261,057	(261,057)
Net Nonoperating Revenues	6,511,759	14,072,488	(7,560,729)
Change in Net Position	1,571,288	10,095,220	(8,523,932)
NET POSITION			
Beginning of year	38,676,464	28,581,244	10,095,220
End of year	\$ 40,247,752	\$ 38,676,464	\$ 1,571,288

Revenues: Total operating revenue increased by \$.7M from the previous year. The increase is largely due to increased research activity (6%) and the return of summer courses in 2021 after COVID related course cancellations in 2020 which increased both tuition and auxiliary revenues.

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

Management's Discussion and Analysis (Unaudited)
December 31, 2021

Expenses: Total operating expense increased by \$1.7M over prior year. Research expenditures increased by \$1.1M due to programmatic growth and relaxation of COVID travel restrictions internationally. \$860K is new spend on a major award renewal with additional collaborators and ship use postponed from 2020. Instructional expenses largely increased due to the return of the fall semester course in 2021.

Nonoperating expenses and revenues: Net nonoperating activity decreased by \$7.5M. \$10.6M is reduced private gifts contribution revenue offset by affiliation revenue receipts of \$3.2M over prior year.

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

Statement of Net Position
December 31, 2021

ASSETS

Current Assets

Cash and cash equivalents	\$ 4,948,923
Grants and accounts receivable	919,934
Contributions receivable	2,458,184
Inventory and prepaid expenses	<u>109,483</u>
Total Current Assets	<u>8,436,524</u>

Noncurrent Assets:

Endowment investments	20,241,572
Contributions receivable, net	4,294,551
Capital assets, net	<u>15,171,949</u>
Total Noncurrent Assets	<u>39,708,072</u>

\$ 48,144,596

LIABILITIES AND NET POSITION

Liabilities

Current Liabilities

Accounts payable and accrued expenses	\$ 723,174
Unearned revenue	814,457
Loans payable	<u>5,489,768</u>
Total Current Liabilities	<u>7,027,399</u>

Noncurrent Liabilities

Loans payable	<u>869,445</u>
Total Liabilities	<u>7,896,844</u>

Net Position

Net investment in capital assets	8,812,736
Restricted	
Nonexpendable	10,169,141
Expendable	18,538,978
Unrestricted	<u>2,726,897</u>
Total Net Position	<u>40,247,752</u>

\$ 48,144,596

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

Statement of Revenues, Expenses and Changes in Net Position
For the Year Ended December 31, 2021

OPERATING REVENUE

Research grants and contracts	\$ 9,401,465
Tuition and fees	317,481
Auxiliary enterprises	<u>463,478</u>
Total Operating Revenue	<u>10,182,424</u>

OPERATING EXPENSES

Instruction	667,162
Research	8,348,918
Institutional support	2,865,889
Operation and maintenance of plant	530,505
Auxiliary enterprises	215,484
Academic support	331,149
Depreciation	<u>2,163,788</u>
Total Operating Expenses	<u>15,122,895</u>

 Operating Loss (4,940,471)

NONOPERATING REVENUES (EXPENSES)

Contributions	1,960,861
Investment return	1,854,949
Other revenues	4,570
Affiliation and services revenue	3,200,000
Interest on debt	(412,360)
Loss on disposals	<u>(96,261)</u>
Net Nonoperating Revenues	<u>6,511,759</u>

 Change in Net Position 1,571,288

NET POSITION

Beginning of year	<u>38,676,464</u>
End of year	<u>\$ 40,247,752</u>

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

Statement of Cash Flows
For the Year Ended December 31, 2021

CASH FLOWS FROM OPERATING ACTIVITIES	
Tuition and fees	\$ 247,847
Grants and contracts	11,019,571
Sales and services of auxiliary enterprises	479,079
Payments of employees for salaries and benefits	(7,452,177)
Payments to suppliers	<u>(5,641,189)</u>
Net Cash from Operating Activities	<u>(1,346,869)</u>
CASH FLOWS FROM NON CAPITAL FINANCING ACTIVITIES	
Affiliation and services revenue	3,200,000
Donor gifts	<u>1,960,861</u>
Net Cash from Noncapital Financing Activities	<u>5,160,861</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	
Proceeds from sale of capital assets	5,200
Purchases of capital assets	(388,729)
Principal paid on capital debt	(2,971,436)
Interest paid on capital debt	<u>(417,066)</u>
Net Cash from Capital and Related Financing Activities	<u>(3,772,031)</u>
CASH FLOWS FROM INVESTING ACTIVITIES	
Investment income, net	<u>753,312</u>
Net Increase in Cash and Cash Equivalents	795,273
CASH AND CASH EQUIVALENTS	
Beginning of year	<u>4,153,650</u>
End of year	<u>\$ 4,948,923</u>
RECONCILIATION OF OPERATING LOSS TO NET CASH FROM OPERATING ACTIVITIES	
Operating loss	\$ (4,940,471)
Adjustments to reconcile net loss to net cash from operating activities	
Depreciation expense	2,163,788
Changes in assets and liabilities	
Grants and accounts receivable	(82,441)
Contributions receivable, net	1,502,225
Inventory and prepaid expenses	57,542
Accounts payable and accrued expenses	(196,020)
Unearned revenues	<u>148,508</u>
Net Cash from Operating Activities	<u>\$ (1,346,869)</u>

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

Notes to Financial Statements
December 31, 2021

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. 14, 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 Government 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, 2021

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.

Change in Basis of Accounting

In previous years, BIOS prepared its financial statements on the accrual basis of accounting in accordance with US GAAP applicable to Not-for-Profit entities, established by the Financial Accounting Standards Board (FASB). In 2021, BIOS adopted US GAAP applicable to government entities, established primarily by the Government Accounting Standards Board (GASB) as a result of the affiliation agreement with ASU discussed in Note 1. The change in basis of accounting did not result in an adjustment to beginning of the year Net Position.

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).

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

Notes to Financial Statements
December 31, 2021

2. Summary of Significant Accounting Policies (continued)

Foreign Currency

BIOS's functional currency is the U.S. dollar. There are no foreign currency transaction gains or losses from transacting in the Bermuda dollar because it is on par with the U.S. dollar.

Cash Equivalents

All highly liquid investments, with maturities of three months or less at the time of purchase are considered cash equivalents.

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.

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

Notes to Financial Statements
December 31, 2021

2. Summary of Significant Accounting Policies (continued)

Investment Valuation and Income Recognition (continued)

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. 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. Funds held in the U.S. bank accounts are insured by the Federal Deposit Insurance Corporation (FDIC) and, at times, such cash may be in excess of FDIC insurance limits. Funds held in Bermuda banks are insured by the Bermuda Deposit Insurance Corporation (BDIC) and, at times, such cash may be in excess of BDIC limits. At December 31, 2021 approximately \$4,526,000 of the cash in U.S. and Bermuda banks was uninsured. 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. BIOS also has a money market fund that is considered a cash equivalent with a balance \$5,080, which is not FDIC insured.

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, 2021

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
RV 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 2021 is not necessary.

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

Notes to Financial Statements
December 31, 2021

2. Summary of Significant Accounting Policies (continued)

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 2018.

Recently Adopted Accounting Standards

GASB Statement No. 87, *Leases*, as amended by GASB Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*, establishes a single model for lease accounting based on the concept that leases are a financing of a “right-to-use” underlying asset. As such, this Statement requires a lessee to recognize a lease liability and an intangible right-to-use lease asset. A lessor will be required to recognize a lease receivable and a deferred inflow of resources. The requirements of this Statement are effective for reporting periods beginning after June 15, 2021. BIOS will evaluate the impact this and other pronouncements may have on its financial statements and will implement them as applicable and when material.

Subsequent Events

Management evaluated subsequent events for disclosure and/or recognition in the financial statements through July 21, 2022, the date financial statements were available for issuance.

3. Concentrations of Financial Risk

Financial instruments that are exposed to concentrations of financial risk consist primarily of cash, managed investment funds and receivables. Management believes the diversification and quality of managed investment funds minimizes risk concentration regarding investments other than fluctuations in the financial markets in general. At December 31, 2021 grants and accounts receivable from one grantor totaled approximately \$527,000. At December 31, 2021, gross contributions receivable due from one donor totaled approximately \$6,674,000.

For the year ended December 31, 2021 research grants and contracts from one grantor totaled approximately 87% of research grants and contracts. For the year ended December 31, 2021 contributions from one donor totaled approximately 23% of contributions.

4. Related Party Transactions

As part of ASU and BIOS’s services and affiliation agreement, ASU paid BIOS \$3,200,000.

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

Notes to Financial Statements
December 31, 2021

5. Contributions Receivable

Contributions receivable at December 31, 2021 are expected to be collected as follows:

Amount expected to be collected in:

One year or less	\$ 2,458,184
Years two through five	4,615,759
	7,073,943

Less:

Discount (5% per annum) to present value	(321,208)
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\$ 6,752,735

6. Investments

BIOS investments consist of funds managed by independent fund managers. Following are the investments at December 31, 2021, grouped by the fair value hierarchy for those investments measured at fair value on a recurring basis:

	Level 2	Investment Valued Using NAV (*)	Total
Treasury Money Market Fund	\$ 2,412,513	\$ -	\$ 2,412,513
Global Multi-Asset Fund	-	17,829,059	17,829,059
	<u>\$ 2,412,513</u>	<u>\$ 17,829,059</u>	<u>\$ 20,241,572</u>

(*) As discussed in Note 2, investments that are measured using the practical expedient are not classified within the fair value hierarchy.

Information regarding investments valued at NAV using the practical expedient at December 31, 2021 is as follows:

	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Global Multi-Asset Fund - see "a" below	\$ 17,829,059	\$ -	Monthly	5 days

- a. The fund's investment objective is to provide a diversified investment solution for long-term nonprofit investors by allocating assets across a broad spectrum of asset classes. The fund will invest primarily in a diversified portfolio of equity and fixed income securities and will also invest in real assets and alternative investments, in a proportion that the investment manager considers optimal for a well-diversified portfolio. The fund will employ active and passive strategies and will be unconstrained by geography, strategy and market capitalization.

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

Notes to Financial Statements
December 31, 2021

7. Capital Assets

Capital assets activity for the year ended December 31, 2021 is comprised of the following:

	<u>Beginning Balance</u>	<u>Additions</u>	<u>Reductions</u>	<u>Ending Balance</u>
Non-depreciated capital assets				
Land and land improvements	\$ 486,850	\$ -	\$ -	\$ 486,850
Depreciable Capital Assets				
Buildings and improvements	18,451,889	33,161	(1,890,946)	16,594,104
Furniture, fixtures & equipment	8,123,387	223,209	(1,356,962)	6,989,634
RV Atlantic Explorer	<u>13,726,400</u>	<u>132,359</u>	<u>(69,140)</u>	<u>13,789,619</u>
	<u>40,301,676</u>	<u>388,729</u>	<u>(3,317,048)</u>	<u>37,373,357</u>
Total Capital Assets	<u>40,788,526</u>	<u>388,729</u>	<u>(3,317,048)</u>	<u>37,860,207</u>
Accumulated depreciation				
Buildings and improvements	10,670,383	416,997	(1,853,484)	9,233,896
Furniture, fixtures & equipment	5,346,664	583,953	(1,317,726)	4,612,891
RV Atlantic Explorer	<u>7,728,210</u>	<u>1,162,838</u>	<u>(49,577)</u>	<u>8,841,471</u>
Total Accumulated Depreciation	<u>23,745,257</u>	<u>2,163,788</u>	<u>(3,220,787)</u>	<u>22,688,258</u>
Capital assets, net	<u>\$ 17,043,269</u>	<u>\$ (1,775,059)</u>	<u>\$ (96,261)</u>	<u>\$ 15,171,949</u>

8. Loans Payable

Loans payable consist of the following at December 31, 2021:

Bank of N.T. Butterfield term loan, secured by mortgage on real property and research vessel, to refinance pre-existing debt and fund capital expenditures on the research facility. Payable in monthly installments of interest only (4.00%) through May 2021, then payable in monthly installments of \$45,416 plus interest, due May 2022.	\$ 5,432,088
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.	<u>927,125</u>
	<u>\$ 6,359,213</u>

Aggregate maturities of loans payable approximate \$5,490,000 in 2022, \$62,000 in 2023, \$67,000 in 2024, \$72,000 in 2025, \$78,000 in 2026 and \$590,000 thereafter. Interest expense totaled approximately \$412,000 for year ended December 31, 2021.

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

Notes to Financial Statements
December 31, 2021

9. Sponsored Projects

Approximately 55% of revenues in 2021 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, 2021, are summarized as follows:

	Personal Services and Benefits	Supplies and Services	Depreciation	Total
Instruction	\$ 362,814	\$ 304,348	\$ -	\$ 667,162
Research	4,050,904	4,298,014	-	8,348,918
Institutional support	2,122,397	743,492	-	2,865,889
Operation and maintenance of plant	314,853	215,652	-	530,505
Auxiliary enterprises	301,866	(86,382)	-	215,484
Academic support	297,585	33,564	-	331,149
Depreciation	-	-	2,163,788	2,163,788
Total Operating Expenses	<u>\$ 7,450,419</u>	<u>\$ 5,508,688</u>	<u>\$ 2,163,788</u>	<u>\$ 15,122,895</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, 2021 approximated \$217,000.

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.

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

Notes to Financial Statements
December 31, 2021

12. Endowment Funds (continued)

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 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.

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.

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 2021, 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.

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

Notes to Financial Statements
December 31, 2021

12. Endowment Funds (continued)

Activity Summary

The following summarizes activity in endowment funds for year ended December 31, 2021:

	Unrestricted	Expendable Restricted	Nonexpendable Restricted	Total
2021				
Balance at January 1, 2021	\$ 1,771,359	\$ 4,788,618	\$ 10,142,641	\$ 16,702,618
Contributions	-	-	26,500	26,500
Investment management fees	(12,442)	(56,907)	-	(69,349)
Capital appreciation	345,187	1,578,863	-	1,924,050
Appropriated for expenditure	(131,078)	(596,880)	-	(727,958)
Balance at December 31, 2021	\$ 1,973,026	\$ 5,713,694	\$ 10,169,141	\$ 17,855,861

13. Expendable Restricted Net Position

Expendable restrictions are available for the purposes listed below as of December 31, 2021:

Scientific research	\$ 14,461,499
Education	3,482,477
Laboratory building	305,000
Future periods and administrative	290,000
	\$ 18,538,978

Investment return from nonexpendable restrictions held and subject to BIOS spending policy and appropriation is available to support the indicated activities at December 31, 2021:

Scientific research	\$ 5,182,693
Education	3,508,477
Laboratory building	350,000
General operations	1,127,971
	\$ 10,169,141

Releases from expendable restricted net position consist of the following for the year ended December 31, 2021:

Scientific research	\$ 2,874,523
Education	823,495
Laboratory building	26,821
	\$ 3,724,839

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

Notes to Financial Statements
December 31, 2021

14. COVID-19

The full duration and extent of the COVID-19 pandemic, related business and travel restrictions and changes to behavior intended to reduce its spread are uncertain as of the date these financial statements were available for issuance, as the pandemic continues to evolve globally. Therefore, the full extent of any adverse impact on the results of operations, financial position and cash flows in 2022 and beyond cannot be reasonably estimated at this time.

The COVID-19 pandemic has resulted in volatility in the global financial markets. As a result, BIOS's investments may have incurred fluctuation in their fair value. Because the value of BIOS's investments has and will fluctuate in response to changing market conditions, the amount of losses, if any, that will be recognized in subsequent periods, cannot be determined.

* * * * *

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

Uniform Guidance Reports and Schedules

December 31, 2021

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

Schedule of Expenditures of Federal Awards
Year Ended December 31, 2021

<u>Federal Grantor/Pass-through Grantor/Program or Cluster Title</u>	<u>Federal Assistance Listing Number</u>	<u>Grant Number</u>	<u>Pass-Through Entity Identification Number</u>	<u>Passed Through to Subrecipients</u>	<u>Total Federal Expenditures</u>
Research and Development – Cluster:					
National Science Foundation:					
Geosciences					
Direct:					
Collaborative Research: In Situ Investigations and Historical Analysis of Eddy Impacts on coastal carbon chemistry and coral calcification	47.050	OCE-2123697		\$ -	\$ 29,906
Time Series Particle Flux Measurements in the Sargasso Sea	47.050	OCE-1829885		447,763	543,136
Collaborative Research: The Oleander project: High-Resolution observations of the dynamic ocean between New Jersey and Bermuda	47.050	OCE-1536517		-	66,111
The Panulirus Hydrographic Stations (Hydrostation S): Years 65-69	47.050	OCE-1633125		-	132,419
Operation of a Community Marine-Atmospheric Sampling Facility at Tudor Hill, Bermuda	47.050	OCE-1829686		-	104,948
Collaborative Research: Direct Characterization of Adaptive Nutrient Stress Responses in the Sargasso Sea using Protein Biomarkers and a Biogeochemical AUV	47.050	OCE-1657885		-	17,488
Collaborative Research: Biogeochemical and Physical Conditioning of Sub-Antarctic Mode Water in the Southern Ocean	47.050	OCE-1735783		-	204,266
Time Series Particle Flux Measurements in the Sargasso Sea	47.050	OCE-2122619		-	67,807
2021 Shipboard Scientific Support Equipment R/V Atlantic Explorer	47.050	OCE-2115202		-	95,583
2021 Oceanographic Instrumentation R/V Atlantic Explorer	47.050	OCE-2115198		-	10,362
Oceanographic Technical Services, Bermuda Institute of Ocean Sciences (BIOS), 2018-2022	47.050	OCE-1823636		-	572,185
Ship Operations R/V Atlantic Explorer	47.050	OCE-1822492		-	3,975,739
Ship Operations R/V Atlantic Explorer - COVID-19	47.050	OCE-1822492		-	199,234
Collaborative Research: Diel physiological rhythms in a tropical oceanic copepod	47.050	OCE-1829318		21,971	81,778
Collaborative Research: The Bermuda Atlantic Time-Series Study: Sustained Biogeochemical, Ecosystem, and Ocean Change Observations and Linkages in the North Atlantic (Years 31-35)	47.050	OCE-1756105		-	1,280,295
NSFGEO-NERC: Collaborative Research: Using Time-series Field Observations to Constrain an Ocean Iron Model	47.050	OCE-1829844		-	34,615
Collaborative Research: High-resolution glider observations enable reassessment of export production in oligotrophic Sargasso Sea	47.050	OCE-1851224		-	201,376
Quantifying the Drivers of Midwater Zooplankton Community Structure	47.050	OCE-1948162		13,590	175,248
Nitrous oxide reduction in oxygen minimum zones an understudied but critical loss term in ocean greenhouse gas cycling	47.050	OCE-2023430		-	50,569
REU Site: Collaborative Marine Research Experience at the Bermuda Institute for Ocean Sciences	47.050	OCE-2123697		-	154,201
Major improvements of the outdoor mesocosm facility at the Bermuda Institute of Ocean Sciences	47.050	OCE-2129274		-	54,164
Collaborative Research: Zooplankton mediation of particle formation in the Sargasso Sea	47.050	OCE-2023372		-	100,495
Total National Science Foundation				<u>483,324</u>	<u>8,151,925</u>

See independent auditors' report and notes to schedule of expenditures of federal awards

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

Schedule of Expenditures of Federal Awards
Year Ended December 31, 2021
(Continued)

<u>Federal Grantor/Pass-through Grantor/Program or Cluster Title</u>	<u>Federal Assistance Listing Number</u>	<u>Grant Number</u>	<u>Pass-Through Entity Identification Number</u>	<u>Passed Through to Subrecipients</u>	<u>Total Federal Expenditures</u>
Research and Development – Cluster (continued) :					
Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes					
Pass-through funds:					
University of Miami NOAA Cooperative Institutes - Surface Water CO2 Measurements from Ships	11.432	NA200AR4320472	S17-17	\$ -	\$ 84,302
Total National Oceanic and Atmospheric Administration, Department of Commerce				-	<u>84,302</u>
Department of Commerce, Integrated Ocean Observing System (IOOS)					
Pass-through funds:					
University of Maryland Center for Environmental Science The Alliance for Coastal Technologies (ACT) National Scale Efforts Towards Verification and Validation of Observing Technologies	11.012	NA16NOS0120017	SA07525796 PO54084	-	<u>26,318</u>
Total Integrated Ocean Observing System, Department of Commerce				-	<u>26,318</u>
National Aeronautics and Space Administration					
Science					
Direct:					
Impact of spatially and temporally varying thermal stress on reef functional diversity	43.001	80NSSC21K0603		-	29,742
Coral Reef Benthic Cover from Commercial High-Resolution Multispectral Satellite Imagery	43.001	80NSSC21K1159			56,764
Science					
Pass-through funds:					
Virginia Institute of Marine Science Zooplankton-Mediated Export Pathways: Quantifying Fecal Pellet Export and Active Transport by Diel and Ontogenetic Vertical Migration in the North Pacific and Atlantic Oceans	43.001	80NSSC17K0654	721102-712683	-	71,411
The Regents of The University of California, Santa Barbara Bermuda Bio-Optics Project: Data for MOD IS Algorithm Maintenance	43.001	80NSSC18K0736	KK1872	-	<u>32,441</u>
Total National Aeronautics and Space Administration				-	<u>190,358</u>
U.S. Department of State					
Public Diplomacy Programs					
Direct:					
A two-day work shadow opportunity and corresponding workshops to introduce participants to an array of emerging environmental technologies to gain a better understanding of how the ocean is changing	19.040	SUK56021GR3032		-	<u>6,090</u>
Total U.S. Department of State				-	<u>6,090</u>
Total Expenditures of Federal Awards				\$ 483,324	\$ 8,458,993

See independent auditors' report and notes to schedule of expenditures of federal awards

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

Notes to Schedule of Expenditures of Federal Awards
Year Ended December 31, 2021

1 Basis of Presentation

The accompanying Schedule of Expenditures of Federal Awards (the "Schedule") includes the federal award activity of Bermuda Institute of Ocean Sciences (BIOS), Inc., a blended component unit of Arizona State University under programs of the federal government for the year ended December 31, 2021. The information in this Schedule is presented in accordance with the 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"). Because the Schedule presents only a selected portion of the operations of BIOS, it is not intended to and does not present the financial position, changes in net position or cash flows of BIOS.

2. Summary of Significant Accounting Policies

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement. Pass-through entity identifying numbers are presented where available.

3. Indirect Cost Rate

BIOS has elected not to use the 10-percent de minimis indirect cost rate allowed under the Uniform Guidance.

Report 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

Independent Auditors' Report

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

We have audited, in accordance with the 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 Bermuda Institute of Ocean Sciences (BIOS), Inc. which comprise the statement of net position as of December 31, 2021, and the related statements of revenues, expenses and changes in net position and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated July 21, 2022.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered BIOS's internal control over financial reporting (internal control) as a basis to design 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 BIOS's internal control. Accordingly, we do not express an opinion on the effectiveness of BIOS'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 have not been identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether BIOS'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 entity'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 entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

PKF O'Connor Davies, LLP

July 21, 2022



Report on Compliance for Each Major Federal Program and Report on Internal Control Over Compliance Required by the Uniform Guidance

Independent Auditors' Report

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

Report on Compliance for Each Major Federal Program

Opinion on Each Major Federal Program

We have audited Bermuda Institute of Ocean Sciences (BIOS), Inc.'s compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of BIOS's major federal programs for the year ended December 31, 2021. BIOS's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

In our opinion, BIOS complied, in all material respects, with the types of 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, 2021.

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; 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 BIOS 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 BIOS'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 BIOS'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 BIOS'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 generally accepted auditing standards, *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 BIOS's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with generally accepted auditing standards, *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 BIOS'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 BIOS'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 BIOS'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 a 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.

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

PKF O'Connor Davies, LLP

July 21, 2022

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

Schedule of Findings and Questioned Costs
Year Ended December 31, 2021

Section I - Summary of Auditors' Results

Financial Statements

Type of report the auditor issued on whether the financial statements audited were prepared in accordance with U.S. GAAP:	Unmodified	
Internal control over financial reporting:		
Material weakness(es) identified?	___ yes	<u> X </u> no
Significant deficiency(ies) identified?	___ yes	<u> X </u> none reported
Noncompliance material to financial statements noted?	___ yes	<u> X </u> no

Federal Awards

Internal control over major federal programs:		
Material weakness(es) identified?	___ yes	<u> X </u> no
Significant deficiency(ies) identified?	___ yes	<u> X </u> none reported
Type of auditors' report issued on compliance for major federal programs:	Unmodified	
Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?	___ yes	<u> X </u> no

Identification of major program:

Bermuda Institute of Ocean Sciences (BIOS), Inc.'s major program is the research and development cluster. Accordingly, all grants and programs listed on the schedule of expenditures of federal awards are considered part of the research and development cluster. BIOS has no other federal programs.

Dollar threshold used to distinguish between Type A and Type B programs:	\$750,000
Auditee qualified as low-risk auditee?	<u> X </u> yes ___ no

Section II - Financial Statement Findings

During our audit, we noted no material findings for the year ended December 31, 2021.

Section III – Federal Award Findings and Questioned Costs

During our audit, we noted no material instances of non-compliance and none of the costs reported in the federal financially assisted programs are questioned or recommended to be disallowed.

Section IV – Prior Year Audit Findings

There were no prior year audit findings.