

HRSD Commission Meeting Agenda  
9:00 a.m. – February 25, 2025

In-person for Commissioners and essential staff at  
1434 Air Rail Avenue, Virginia Beach, VA 23455  
Virginia Initiative Conference Room – 1<sup>st</sup> Floor

Reservations are required to receive a link to the virtual meeting, address the Commission, submit written comments to be read into the minutes or to request accommodations to attend the meeting in-person.

Reservations must be submitted by noon one business day prior to the meeting. Instructions to submit your reservation request are available on the website: <https://www.hrsd.com/meeting-minutes>

<u>No.</u>	<u>Topic</u>	<u>Resource</u>
	Call to Order	Chair
1.	<a href="#">Awards and Recognition</a>	Bernas
2.	<a href="#">Public Comments Not Related to the Agenda</a>	Secretary
3.	<a href="#">Consent Agenda</a>	Bernas
4.	<a href="#">Nansemond Treatment Plant Administration Building Replacement Initial Appropriation – Non-Regulatory and Contract Award (&gt;\$200,000)</a>	Husselbee
5.	<a href="#">Treatment Plant Dewatering Centrifuge Equipment Rehabilitation New CIP and Initial Appropriation – Non-Regulatory</a>	Bott
6.	<a href="#">Solids System Improvements for Army Base MHI Offline Additional Appropriation – Non-Regulatory (&gt;\$1,000,000)</a>	Husselbee
7.	<a href="#">Nansemond Recharge Wells Off Site (GN016382) and Nansemond Recharge Well Integration (GN016383) Alternative Project Delivery</a>	Zuravnsky
8.	<a href="#">Atlantic Treatment Plant Biosolids Management Update</a>	Wilson/Mitchell
9.	<a href="#">New Business</a>	Bernas
10.	<a href="#">Unfinished Business</a>	Bernas
11.	<a href="#">Commissioner Comments</a>	
12.	<a href="#">Informational Items</a>	Bernas

Next Regular Commission Meeting: March 25, 2025 in Virginia Beach, Virginia

AGENDA ITEM 1. – February 25, 2025

**Subject:** Awards and Recognition

**Recommended Action:** No action is required.

**Brief:** HRSD is pleased to announce the following:

**a. Promotion Announcement**

1. Ms. Angela Kilgore was recently promoted to Pretreatment & Pollution Prevention (P3) Manager. Angela was hired in 2013 as Water Quality Assistant and was then quickly promoted to Technician in 2014. She continued her career advancement moving into a Specialist role in 2017 and then Supervising Specialist in 2020. Angela holds a bachelor's degree in environmental studies with a minor in biology from Virginia Commonwealth University. She is an active participant in Virginia Water Environment Association (VWEA) and has served as the chair for the Industrial Waste and Pretreatment Committee for the past two years. She is also an alumnus of the Water Leadership Institute and the VWEA Leadership Academy. Angela will be leading the Administrative Section in P3 and working closely with Kevin Heitzhaus until his retirement at the end of the month.
2. Mrs. Coleen Moody was recently promoted to Director of Enterprise Application Services in the Information Technology Division (ITD). Coleen has had 19 years of service working for HRSD. She was hired in 2006 as a Senior Systems Analyst and in 2017 was promoted to Systems Analysis Manager overseeing Information Technology's Senior Systems Analysts performing IT project management for the enterprise. Coleen holds a Bachelor of Science in Management Information Systems from the University of South Florida and a Master of Business Administration from Old Dominion University. She is a certified Project Management Professional.
3. Mr. Siva Velappan was recently promoted to Programming Development Manager in the Information Technology Division. Siva has 19 years of experience in the technology field. He began his career working with HRSD as a consultant and joined HRSD in 2007 as a Senior Programmer Analyst. Over the past 17 years, he's worked at HRSD in the roles of Senior Programmer Analyst for CC&B, then promoted to an Enterprise Architect working on ERP and enterprise system integrations. Siva holds a Bachelor of Science Degree in Information Technology from Anna University, Madras India.

**b. New Employee Introduction**

1. Mr. John Sidwa was recently hired as the Emergency and Security Manager in the Safety and Security Department. John is licensed in Homeland Security with 25 years of experience. He holds a master's degree in Emergency and Disaster Management and a bachelor's degree in Homeland Security from American Public University. He recently worked for the United States Navy as the Armed Watch Standing Program Manager and Anti-Terrorism Officer and has experience in Emergency and Disaster Management, Physical Security and Force Protection. John will be leading, managing, and coordinating with HRSD, as the Emergency and Security Manager.

2. Mr. William Wasley was recently hired as a Database Administrator in the Information Technology Division. Will has 10 years of experience with database administration and management with Oracle Databases, mostly in the healthcare space. Will holds a bachelor of administration in Sociology from George Mason University and a master's in information technology from University of Maryland Global Campus. He holds certifications in Oracle Database Administration and the Microsoft Azure cloud platforms.

**c. Awards**

1. **ACEC Grand Award** - The American Council of Engineering Companies (ACEC) Virginia presented CDM Smith and HRSD an ACEC Grand Award for HRSD's Climate Change Planning Study. The award was presented in Richmond on February 6, 2025. The Hampton Roads region is among the most vulnerable in the United States to the impacts of flooding, which are projected to increase in severity due to climate change. HRSD's Climate Change Study evaluated the flood exposure of 136 HRSD facilities and performed cost benefit evaluations of potential flood mitigation concepts. The study's results are communicated through a dynamic dashboard visualization tool. The results are being used to appropriately schedule and program flood risk mitigation projects in HRSD's Capital Improvement Project (CIP).



2. **National Environmental Achievement Awards (NEAA)** – Each year, NACWA recognizes individuals and NACWA member agencies that have made outstanding contributions to environmental protection and the clean water community with NEAA awards in categories of Research and Technology, Public Information and Education, Watershed Collaboration, and Workforce Development. HRSD was pleased to receive 2025 NEAA Awards as follows:
- (a) **Public Information & Education: Educational Program** for the Boater Education and Pump-Out Internship Program
  - (b) **Watershed Collaboration** for the Eastern Shore Transmission Sewer Force Main & Pump Stations
  - (c) **Workforce Development** for the LIFE Conference



AGENDA ITEM 2. – February 25, 2025

**Subject:** Public Comments Not Related to Agenda



## AGENDA ITEM 3. – February 25, 2025

**Subject:** Consent Agenda**Recommended Action:** Approve the Consent Agenda.**Brief:** The items listed below are presented on the following pages for Commission action.

- a. Approval of Minutes - The draft minutes of the previous Commission and Budget Work Session Meetings were distributed electronically prior to the meeting.
- b. Regulatory Capital Improvement Project – Additional Appropriation <\$10,000,000
  1. [Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III](#) \$1,416,677
- c. Contract Awards/Purchase Orders (>\$200,000)
  1. [inDENSE™ Gravimetric Selection Technology for Army Base Treatment Plant](#) \$394,000
  2. [Polydyne Polymer Blanket Purchase Agreement](#) \$10,950,667
- d. Task Orders (>\$200,000)
  1. [Nansemond Treatment Plant Elevator Replacement](#) \$284,500
  2. [North Shore Galvanic Cathodic Protection Rehabilitation](#) \$255,757
  3. [The Orchards Pump Station and Sections 1 & 2 Collection System](#) \$298,300
  4. [Treatment Plant Fire Suppression System Upgrades](#) \$1,032,434

# CONSENT AGENDA ITEM 3.b.1. – February 25, 2025

**Subject:** Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III  
Additional Appropriation – Regulatory Required Capital Improvement Project  
(<\$10,000,000) and Contract Change Order (>25% of original contract value)

## **Recommended Actions:**

- a. Appropriate additional funding in the amount of \$1,416,677.
- b. Approve a change order to the contract with Bridgeman Civil, Inc. in the amount of \$1,323,679.

## **CIP Project: VP016700**

## **Regulatory Requirement:** Rehab Action Plan Phase 2 (12/31/2025 Completion)

Budget	\$4,222,901
Previous Expenditures and Encumbrances	(\$3,915,899)
Available Balance	\$307,002
Proposed Change Order No. 1 to Bridgeman Civil	(\$1,323,679)
Proposed Contingency	(\$400,000)
Project Shortage/Requested Additional Funding	(\$1,416,677)
Revised Total Project Authorized Funding	\$5,639,578

<b>Contract Status with Change Orders:</b>	<b>Amount</b>	<b>Cumulative % of Contract</b>
Original Contract with Bridgeman Civil	\$3,068,860	
Total Value of Previous Change Orders	\$0	0%
Requested Change Order	\$1,323,679	
Total Value of All Change Orders	\$1,323,679	43%
Revised Contract Value	\$4,392,539	
Time (Additional Calendar Days)		245

**Project Description:** This project will rehabilitate and/or replace approximately 2,100 linear feet of 18-inch diameter cast iron pipe starting at the existing force main near the Luxembourg Pump Station at Versailles Avenue and Norway Place extending east to the first valve on Pershing Avenue near Tidewater Drive. The project is located in the Lafayette Residence Park neighborhood which is listed on the National Historic Register. The attached [map](#) depicts the project location.

**Project Justification:** The 1952 cast iron pipe material is similar to other portions of the interceptor system in which HRSD has experienced multiple failures due to the tendency of cast iron to lose integrity with age.

**Change Order Description and Analysis of Cost:** The original design of the new force main specified open-cut installation which would be challenging due to limited available utility corridors, mature trees and home structures dating back to the early 1900s. Homes along the corridor have small driveways leading to significant on-street parking. Prior to starting construction, the Contractor ordered a Miss Utility ticket and confirmed the limited available corridors for installation of the 18-inch force main. Norfolk utilities and residential services would prevent the contractor from setting a trench box. The contractor suggested force main installation via horizontal directional drill (HDD) in lieu of

open-cut to avoid conflicts with the utilities and reduce neighborhood impacts. There will be two HDDs, one performed along Lasalle Avenue and the other along Fontainebleau Crescent. The design engineer agrees with the proposed approach, has reviewed the estimated costs, and recommends approval.

**Funding Description:** The negotiated change order exceeds the current balance available for the CIP project. A \$400,000 contingency is also being requested to accommodate any unforeseen conditions.

<b><u>Schedule:</u></b>	Construction	August 2024
	Project Completion	September 2025





**VP016700**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- ★ CIP Interceptor Point
- ☆ CIP Pump Station Point
- CIP Interceptor Line
- CIP Abandonment
- CIP Project Area
- HRSD Interceptor Force Main
- HRSD Interceptor Gravity Main
- HRSD Treatment Plant
- HRSD Pressure Reducing Station
- HRSD Pump Station

0 115 230 460 690 920 Feet

## VP016700

Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III

N  
W  
E  
S

CIP Location

CONSENT AGENDA ITEM 3.c.1. – February 25, 2025

**Subject:** inDENSE™ Gravimetric Selection Technology for Army Base Treatment Plant  
Purchase Order (>\$200,000)

**Recommended Action:** Award a contract to World Water Works, Inc. (WWW) in the amount of \$394,000.

**Regulatory Requirement:** None

**Type of Procurement:** Sole Source

**Contract Description:** This contract is for the purchase of inDENSE™ equipment for the Army Base Treatment Plant. The system includes eight hydrocyclones, polypropylene underflow and overflow storage tanks, instrumentation, hydrocyclone feed pumps, and underflow return pumps. inDENSE™ is a gravimetric selection technology that provides a method for retaining densified biomass while wasting the light fraction of the mixed liquor. Biomass densification leads to improved settling characteristics, particularly during periods of filamentous bacteria predominance, which minimizes biomass loss and subsequent treatment disruption, especially during wet and cold weather events.

inDENSE™ is a technology that was developed/patented and is owned jointly by HRSD and DCWater. The exclusive licensee for this technology in the US is World Water Works.

Installation of the inDENSE™ equipment will be performed by a combination of HRSD staff and on call contractors. Engineering design will be performed by HRSD staff.

**Analysis of Cost:** The cost is consistent with other inDENSE™ installations, which is information that is privy to HRSD as the licensor of the technology. Per the license agreements for the inDENSE™ family of technologies, this package of equipment is being provided to HRSD with no royalty fees included.

This work is in accordance with the Commission Adopted Procurement Policy.

CONSENT AGENDA ITEM 3.c.2. – February 25, 2025

**Subject:** Polydyne Polymer Blanket Purchase Agreement  
Contract Award (>\$200,000)

**Recommended Action:** Award a contract to Polydyne Inc. in the amount of \$2,190,133 for one year with four renewable years at an estimated cumulative value of \$10,950,667.

**Regulatory Requirement:** None

**HRSD Estimate:** \$2,821,504

**Contract Description:** This contract is an agreement to furnish and deliver various Mannich emulsion, and dry polymers for multiple treatment plant applications, including thickening, dewatering, and flocculation. This is a continuous use contract developed and utilized in accordance with the [Polymer Evaluation Policy](#).

The Polymer Evaluation Policy establishes procedures for the procurement of polymer products from suitable suppliers. It is an organized approach for competitive evaluation and purchase of polymers which, based on process performance, are determined to be most cost effective for a particular application. Suppliers have an ongoing opportunity to maintain their competitiveness and performance of their products. In addition, HRSD has the flexibility and responsibility to investigate new polymer products or re-evaluate existing products routinely to improve performance and generate cost savings.

**Analysis of Cost:** The HRSD Estimate is based on current estimated annual usage and the FY26 budget projections for Polydyne polymer. This is an estimated use contract with an approximate 22 percent cost savings.

This work is in accordance with the Commission Adopted Procurement Policy.



## **HRSD TREATMENT DEPARTMENT POLYMER EVALUATION POLICY**

**SUBJECT:** Testing, Evaluation, Selection and Purchase of Polymer Products

**DATE:** June 4, 1993; **Revisions:** October 2001; June 2003; January 2024

### **OBJECTIVE**

The objective of this policy is to establish procedures for the procurement of polymer products for use at the treatment plants.

This policy provides an organized approach for competitive evaluation and purchase of those polymers which, based on performance, are determined to be most cost effective for a particular application by:

1. Defining the responsibilities of Treatment Process Engineer (TPE) and Supplier.
2. Defining the terms used in this policy.
3. Outlining the evaluation and procurement procedures for continuous and intermittent polymer purchase.
4. Summarizing pricing policies and criteria for selection.

### **TREATMENT PROCESS ENGINEER RESPONSIBILITY**

The TPE has the flexibility and responsibility to investigate new polymer products or re-evaluate existing products routinely. In evaluating and making purchases of polymer the TPE is acting as an extension of the HRSD Chief of Procurement. The TPE has a responsibility to:

1. Evaluate the performance of polymers in current use and contact the suppliers when deterioration in performance is noted.
2. Contact other suppliers, if the current supplier is unable to satisfactorily improve process performance.
3. Consider new polymer products.
4. Ensure that evaluations and testing are non-biased.
5. Ensure documentation and procurement procedures are in accordance with this policy.
6. Ensure evaluation and purchases are conducted in accordance with this policy.
7. Ensure the confidentiality of the challenging supplier's written pricing.
8. Establish an agreed upon testing schedule with challenging supplier.
9. Ensure testing is conducted within the agreed upon testing schedule.
10. Provide the supplier with the most recent version of the Polymer Policy.

### **SUPPLIER RESPONSIBILITY**

Suppliers, whose products are being used, have an ongoing responsibility to maintain their

competitiveness by:

1. Ensuring that HRSD facilities are utilizing their most cost-effective product for any particular application.
2. Reviewing product prices on a routine basis. Suppliers may lower their price at any time regardless of the contract period. Supplier increases in polymer product prices will only be evaluated on an annual basis under the existing contract terms and conditions.
3. Evaluating the use of other polymers manufactured by their company, for improved process performance or cost- effectiveness.
4. Evaluating whether their polymers are being properly used and making recommendations concerning polymer use.
5. Ensuring their product is compatible with HRSD equipment and environment.
6. Ensuring the product delivered to HRSD is the same composition as that evaluated and approved by HRSD.
7. HRSD should be notified of changes in quality or chemical composition of the product. The existing polymer supplier may evaluate and test other polymers at any time, but the TPE must approve a change in product. Substitution of polymer product without written authorization of the TPE may result in termination of all HRSD polymer contracts with the existing supplier.
8. Providing a Certificate of Analysis with each shipment of polymer. The Certificate of Analysis shall provide a content breakdown of the following information, where applicable:
  - Molecular weight
  - Viscosity
  - Density (gr/m. or lb./ft<sup>3</sup>)
  - Charge
  - Active content and particle size
9. Provide written notification to the Procurement Office of any change in polymer price.

## **DEFINITION OF TERMS**

**BENCH SCALE TESTING** - Screening tests that provide indication of a polymer's effectiveness. These tests may include, but are not limited to: jar tests, capillary suction tests, filtration tests, and specific resistance tests.

**CHALLENGING SUPPLIER** - Supplier, whose product is not being used for a specific plant unit process application and who wishes to compete against the

existing supplier.

CONTINUOUS APPLICATION - Continuous, day to day, application of polymer to a unit process necessary to obtain acceptable unit process performance. Normally continuous applications are used for solids unit processes such as thickening or dewatering

EXISTING SUPPLIER - Supplier whose product is **currently** being used for a specific plant unit process application.

INTERMITTENT APPLICATION - Polymer used or applied only periodically to a unit process to control a temporary upset condition. Normally intermittent applications apply to secondary clarifier flocculation.

NEW UNIT PROCESS - Polymer required for newly installed unit process equipment at a plant where there is no current supplier supplying polymer.

MULTIPLE SUPPLIER TESTING - Testing more than one polymer product within a single test period. This is permitted only for 'New Unit Processes' polymer applications.

## **PURCHASE OF CONTINUOUS APPLICATION POLYMERS**

### **Initiation of Polymer Evaluation:**

TPE or Supplier may initiate an evaluation of polymers as follows:

1. Existing suppliers may evaluate and propose different products from their company at any time mutually convenient to the supplier and the plant.
2. Challenging suppliers may request an evaluation of their polymer products by submitting a request through either the TPE or Procurement Office, provided they have not conducted a "one-day" polymer test for the particular application within the past **two** years. Suppliers will be tested one at a time based on the order of their bench test.

It is strongly recommended that requests be submitted on company letterhead and signed by an authorized company representative. The letter must include the following information:

- Polymer product name and number
- HRSD plant name
- Minimum order requirements
- Delivery lead time
- Standard packaging
- MSDS sheet
- Technical Data Sheet
- Certificate of analysis
- Certificate of insurance



3. The TPE may initiate an evaluation of polymers at any time there is a sustained deterioration in polymer performance (% T.S., % recovery or polymer dosage). Challenging suppliers may be requested to test their products, regardless of whether they have conducted a "one day" test within the last two years.

If TPE notes deterioration in the existing supplier's product performance, the existing supplier should be contacted and given the opportunity to correct the problem, prior to contacting a challenging supplier. The Procurement Office should be contacted if there are significant problems.

4. For "new unit process" installations, the TPE will initiate a request for evaluation of polymers. By appointment with the TPE, suppliers will be invited to conduct bench scale testing.

A "one day" test will be conducted for those products determined by the TPE to appear competitive. Based on results of the "one day test", no more than three suppliers will be asked to conduct further testing. Documentation of all participating suppliers, description and evaluation of bench scale testing, and evaluation of the "one day" test results will be forwarded to the Treatment Chief and the Procurement Office before full scale testing is conducted.

5. Additional requirements may be imposed on a polymer supplier where testing is deemed impractical or costly or demonstrated problems with a particular type of polymer has occurred within HRSD. Such cases require the approval of a Treatment Chief and notification to the Procurement Office.
6. Except for "new unit process" installations, multiple supplier testing is not allowed.

### **Initial Screening of Polymer: Bench Testing**

1. Suppliers should bench test their polymer product(s) to determine which product provides cost effective results. The plant should provide the supplier with samples and space to run the tests. The supplier should submit a recommendation supported by results of the bench test to the TPE.
2. The TPE should review the bench test data, and if a product appears competitive, a "one day" test should be arranged. If deemed desirable, more than one product from the same supplier may be tested for each application.
4. **Prior** to the "one day" test, the challenging supplier must submit the price of the polymer(s) to be tested in writing to the Procurement Office in accordance with the **Price Policy section** (page 9). In addition, the plant will collect and save a sample of the polymer for future reference. Once this information has been received, no further testing by the existing supplier can occur until after all evaluations of the challenging supplier's product(s) are

completed.

5. Testing will be arranged at a time mutually agreeable to the supplier and the plant. Testing should be completed within sixty (60) days of the challenging supplier's price submittal to procurement, unless there are extenuating circumstances. In such cases a Treatment Chief must approve the delay and the Procurement Office notified. It is recommended the challenger wait until testing dates have been established before submitting a written price to the Procurement Office.

#### **“One Day” Testing:**

1. A “one day” preliminary polymer test will be conducted to determine the suitability for further testing.
  - a. Suppliers will supply polymer for the one-day test at no cost to HRSD.
  - b. The challenging supplier can only test the polymer product as submitted in writing to the TPE and Procurement Office. Suppliers cannot substitute alternative products during the “one day” testing. An alternative product is one with a different brand name, product number or different chemical analysis than the sample taken prior to the one-day test.
  - c. The challenging supplier, by participating in the “one day” test, may not initiate another polymer evaluation for that unit process in that facility for a period of **two** years, unless requested by the TPE.
2. The TPE is responsible for documenting the results of the one-day testing and making a recommendation on whether to proceed with full scale testing. This documentation should specify the product (type and manufacturer), date tested, % feed and cake total solids, % recovery, estimated cost/recovered ton or estimated cost/million gallons (MG). Compatibility with existing storage and feed equipment and other pertinent factors relevant to the recommendation to continue or cease testing should be documented.

A copy of the memo documenting the “one day” test results and recommended full-scale testing should be forwarded to the Procurement Office with a copy to the appropriate Chief of Treatment for inclusion in the Treatment Department's files.
3. If the documented results of the “one day” test show that the product appears competitive, the TPE should arrange a full-scale evaluation of the polymer.

#### **Full Scale Testing:**

1. The full-scale test shall consist of a minimum of ten (10) days of testing for

the challenging polymer, unless the TPE determines that the product adversely affects process performance. ONLY the product used during the "one-day" test shall be tested. Suppliers **cannot** substitute polymer products.

2. Polymer for this evaluation must be purchased through standard procurement procedures. A requisition must be submitted to the Procurement Office and should clearly indicate the polymer is "for trial evaluation". A copy of documentation from the "one day" testing should be attached to the requisition.

Existing polymer Blanket Agreements may not be utilized, even if the polymer is currently used at another HRSD facility. The Procurement Office should be contacted immediately if the requisition needs to be expedited. Supplier's lead time should be considered when establishing test dates.

4. The supplier may be required by the plant to supply storage tanks, mixing or other equipment necessary to conduct the test at no cost to HRSD. The TPE may eliminate from consideration those polymers, which require special handling equipment or modifications to existing equipment that cannot be accommodated by the plant without the expenditure of labor and/or money beyond normal operating conditions. Supplier furnished equipment may be used by Challenging Suppliers during testing.
5. Prior to and during testing, the TPE should ensure that equipment to be used in the test is functioning properly and that there are no conditions at the plant that would adversely affect test results.

Enclosed are sample "Guidelines for Polymer Testing" that may be a helpful checklist. Regardless, the challenging supplier is responsible for verifying that test conditions and equipment are acceptable.

6. The supplier should monitor the testing to verify that all polymers and other related variables are within normal operating parameters. If the supplier has any concerns, these should be communicated to the TPE or individual designated to supervise the test not later than two days after completion of testing. Suppliers cannot directly request other treatment plant personnel to make process changes, unless otherwise specified.
7. It is desirable to conduct the test alternating days between the existing and the trial polymer, to ensure changing characteristics do not affect results.
  - It is recommended using: 5 days existing/10 days challenging/ 5 days existing to evaluate the results.
  - New unit process equipment process testing should use 5 days supplier #1, 5 days supplier #2, and 5 days supplier #3.

This cycle should be repeated so that two complete cycles are achieved for each supplier. Other rotations may be used at the plant's discretion but

should be patterned to provide accurate and valid results.

8. If the polymer trial is discontinued due to an operational or maintenance problem caused by the polymer, HRSD will return the remaining polymer and the supplier will reimburse HRSD for the entire cost of the polymer. The TPE shall document any such operational or maintenance problems.

### **Evaluation:**

1. Based on the results from the full-scale test, the TPE will perform an evaluation that compares the performance **and** cost/recovered ton or cost/MG of the existing polymer to that of the challenging polymer. Other factors affecting plant operations can also be considered.

The TPE shall prepare a memo summarizing the full-scale test data and a cost evaluation. Raw data obtained during the test period shall also be attached. This memo shall be submitted to the appropriate Chief of Treatment with the Procurement Office receiving a final copy of any evaluation. An **example evaluation** is included (*page 12*).

2. The following data should be considered in the evaluation:

- Liquid sludge feed rate (gpm)
- Solids loading rate (lbs/hour)
- Percent feed total solids
- Percent volatile solids
- Percent thickened or dewatered sludge total solids
- Percent solids recovery
- Dosage (lb./ton or lb./MG)
- Fuel use/dry ton

Whenever there is a significant difference in cake solids, the evaluation should also consider the cost impact of cake solids on downstream unit processes, such as incineration or composting or land application as follows:

- a. Incineration - Cost of additional fuel associated with lower cake solids. Plants should utilize the attached plant graphs as a standard estimate of fuel usage versus cake solids.
- b. Composting or Hauling to Another Plant - Haul cost for transportation associated with the wetter cake solids. If hauling is through a contractor, the haul cost per wet ton will be used. If hauling is by an HRSD vehicle, obtain the current vehicle cost per mile from the Automotive Manager.
- c. Land Application - Application cost per wet ton for the additional wet tons applied with lower cake solids.

Documentation concerning the data used to assess these downstream costs

should be attached with other evaluation documentation.

3. The cost evaluations involving existing polymer applications will consider the price of the challenging suppliers product as submitted prior to the "one day test" and the price of the existing suppliers polymer in effect thirty (30) days prior to the submission of the challenging suppliers price.
4. Cost evaluations involving different polymers from an existing supplier are evaluated using the price provided by the supplier at the time of the TPE's cost evaluation.
5. Polymer cost evaluations will be made based on the unit cost per recovered ton or per MG as follows:

$$\frac{\text{polymer dosage(lb/ton)} \times \text{polymer cost (\$/lb)}}{\% \text{ recovery}} = \text{polymer cost (\$/recovered ton)}$$

Or

$$\text{polymer dosage(lb/MG)} \times \text{polymer cost (\$/lb)} = \text{polymer cost (\$/MG)}$$

6. Cost evaluations should also include capital costs of any equipment that must be purchased to accommodate the proposed polymer. New equipment capital costs are annualized over a 3-year life, at an interest rate established by the Finance Manager and at current projected usage. The supplier may supply tanks and equipment free of charge, with the understanding that challenging vendor(s) may use this equipment for testing of their polymer(s). Supplier furnished equipment must provide reliable operation. Excessive maintenance on supplier furnished equipment is cause for termination of the test and/or contract with the supplier.

$$\text{Capital Cost of Equipment (\$/ton)} = \frac{\text{Annual Cost}}{\text{Annual tons dewatered cake}}$$

Or

$$\text{Capital Cost of Equipment (\$/MG)} = \frac{\text{Annual Cost}}{\text{Total million gallons/yr.}}$$

7. In order to change polymer products, the cost evaluation must show that:
  - a. The overall cost of handling solids will not increase.
  - b. The product proposed by the challenging supplier will provide an overall solids handling cost savings (polymer + downstream processing - incineration, land application, etc.) that is at least 10% of the current polymer cost alone.

8. When products from an existing supplier are compared, the 10% cost criteria does not apply. An existing suppliers product that meets the desired performance criteria and provides any cost savings as determined by the TPE is justification for changing products.

## **PRICE POLICY**

1. For continuous application polymers, suppliers must submit unit cost of polymer prior to conducting any “one day” preliminary testing. During a polymer test, the polymer price for the existing supplier will be based on the price in effect thirty (30) days prior to the price submission by the challenging supplier.
2. Prices must be submitted by the supplier to the Procurement Office on company letterhead and signed by an authorized company representative. The price letter must include:
  - Polymer product name and number
  - HRSD plant name
  - Minimum order requirements
  - Delivery lead time
  - Standard packaging
  - MSDS sheet
  - Technical Data Sheet
  - Certificate of analysis
  - Certificate of insurance
3. Prices may not be raised for one year after a new contract is awarded. They may be reduced at any time to maintain the competitiveness of the product.
4. Prices submitted for any particular product will apply to all HRSD facilities using that product.
5. It is recognized that biosolids characteristics and polymer prices are variable, and that it can be difficult to convincingly determine which polymer produces the most cost-effective operation, when results are very similar. Accordingly, HRSD’s intent is generally not to select a polymer product from a different vendor unless the overall solids handling costs (including polymer + subsequent downstream processing costs) are at least 10% less than the current polymer costs.
6. HRSD will maintain the confidentiality of written prices submitted for testing by the Challenging Supplier to the Procurement Office. However, HRSD **cannot** maintain the confidentiality of prices verbally quoted to plant personnel. Suppliers are encouraged to reveal exact pricing only in their written submittal to the Procurement Office.



## **PURCHASE OF INTERMITTENT APPLICATION POLYMERS**

Treatment Process Engineers are periodically required to use polymers to improve settling characteristics in the primary or secondary clarifiers. The TPE may evaluate these intermittent application polymers as necessary to meet the required performance criteria or to improve cost effectiveness.

### **Initiation of Polymer Evaluation:**

The TPE or supplier may initiate an evaluation of polymers as follows:

1. Existing suppliers may evaluate different products from their company as plant conditions warrant.
2. Challenging suppliers may request their polymer products be evaluated during the next application period, provided they have not conducted a polymer test for this particular application within the past **two years**.
3. The TPE may request suppliers evaluation of polymers at any time, **regardless** of whether a particular supplier has tested within the last two years. If the TPE notes deterioration in the existing suppliers product performance, they should contact the supplier and provide them the opportunity to correct the problem prior to contacting other suppliers.

### **Initial Screening of Polymer:**

1. Initial screening may be performed by the supplier or the TPE using bench scale testing to estimate full-scale performance.
2. The TPE should review the bench test data and document the results of these bench scale tests. The plant may arrange for a full-scale test of product(s) that appear competitive and meet performance criteria.

### **Testing:**

1. The test should be of duration that the TPE feels provide sufficient information to document the dosage for a cost evaluation.
2. Polymer for the full scale testing may be purchased on a routine or an emergency basis during upset conditions. A requisition **MUST** be submitted to the Procurement Office in either case and should be notified if the procurement is required immediately.

### **Evaluation:**

1. The TPE will perform an evaluation that summarizes the performance and evaluates the cost of polymer(s) reviewed in a full-scale test. The TPE shall prepare a memo summarizing the full-scale test data and the cost

evaluation. Raw data obtained during the test period shall also be attached.

This memo shall be submitted to the Procurement Office with a copy to the appropriate Chief of Treatment. A requisition should be submitted to the Procurement Office along with a final copy of any evaluation if the challenging suppliers polymer is selected.

2. The cost evaluation will be based on cost per million gallons (MG). Cost evaluations involving two different suppliers products will consider the price of the challenging suppliers product as submitted prior to the full scale test and the price of the existing suppliers in effect at the time of the full scale test.

Cost evaluations should also include capital costs of any equipment that must be purchased to accommodate the proposed polymer. New equipment capital costs are annualized over a 3-year life, at the interest rate established by the Finance Manager and at the current usage. The supplier may supply tanks and equipment with the understanding that the challenging supplier may use this equipment for testing.

3. Only polymers that meet desired performance criteria can be considered.
4. If the cost analysis shows that product proposed by the challenging supplier can provide a cost savings of at least 10% and meet the required performance criteria, then that polymer product will be purchased. Otherwise, the existing suppliers polymer product will continue to be used, provided it also met the performance criteria.
5. If the existing suppliers product does not meet the required performance, the lowest cost polymer that meets the performance criteria will be used.
6. When products from an existing supplier are compared, the 10% cost criteria does not apply. An existing suppliers product that meets the desired performance criteria and provides any cost savings as determined by the TPE is justification for changing products.

**Continued...**

## EXAMPLE POLYMER EVALUATION

### **CURRENT POLYMER PERFORMANCE**

Biosolids Production:	20 dt/d
Land Application Costs:	\$15/wt
Polymer Dose:	20#/dt
Polymer Cost:	\$1.65/lb
Dewatered cake solids:	19%TS
% Recovery:	95%

### **CURRENT COSTS:**

1. Polymer Cost/day =  
 $20\text{dt/d} \times 20\text{\#/dt} \times \$1.65/\text{lb} \div .95 = \$695/\text{day}$
2. Land Application Costs=  
 $20\text{ dt/d} \times \$15/\text{wt} \div .19 = \$1579/\text{day}$
3. Total cost =  $\$695 + \$1579 = \$2274$

### **CHALLENGING SUPPLIER**

Polymer Dose:	19#/dt
Polymer Cost:	\$1.60/lb
Dewatered cake solids:	20 %TS
% Recovery:	99%

### **CHALLENGING SUPPLIER COSTS:**

1. Polymer Cost/day =  
 $20\text{dt/d} \times 19\text{\#/dt} \times \$1.60/\text{lb} \div .99 = \$614/\text{day}$
2. Land Application Costs =  
 $20\text{ dt/d} \times \$15/\text{wt} \div .2 = \$1500/\text{day}$
3. Total cost =  $\$614 + \$1500 = \$2114$

### **COST DIFFERENCE:**

Challenging Supplier	=	\$2114
Current Supplier	=	<u>\$2274</u>
Difference	=	\$160

**RESULT:** The savings identified as \$160 is less than 10% of \$2274 and therefore a change in polymers is not justified.

# CONSENT AGENDA ITEM 3.d.1. – February 25, 2025

**Subject:** Nansemond Treatment Plant Elevator Replacement  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Otis Elevator Company in the amount of \$284,500.

**Regulatory Requirement:** None

<b>Task Order Summary:</b>	<b>Amount</b>
Total Value of Previous Task Orders	\$47,752
Requested Task Order	\$284,500
Total Value of All Task Orders	\$332,252

**Task Order Description:** This task order is to furnish and install a replacement elevator for the Solids Handling building at the Nansemond Treatment Plant (NTP) originally installed in 1996. The new replacement elevator will be a Gen3® Mod Control System with digital closed-loop microprocessor-based control system, specifically designed to meet the particular needs of modernizing traction elevators.

In accordance with the Otis Elevator preventive maintenance and inspection contract, replacement of an elevator may be required at HRSD's approval if replacement parts are no longer available and/or it is not feasible to modify or replace components on the existing elevator. The new elevator will be incorporated into the existing annual preventive maintenance and inspection schedule.

**Analysis of Cost:** The cost for this task order is found to be fair and reasonable based on similar purchases, including a general discount on Otis Elevator list price.

This work is in accordance with the Commission Adopted Procurement Policy.

# CONSENT AGENDA ITEM 3.d.2. – February 25, 2025

**Subject:** North Shore Galvanic Cathodic Protection Rehabilitation  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Bridgeman Civil, Inc. in the amount of \$255,757.

**CIP Project:** GN018600

**Regulatory Requirement:** Rehab Action Plan Phase 2 (5/5/2025 Completion)

Budget	\$2,323,860
Previous Expenditures and Encumbrances	(\$239,985)
Available Balance	\$2,083,875

<b>Task Order Summary:</b>	<b>Amount</b>
Total Value of Previous Task Orders	\$20,630,988
Requested Task Order	\$255,757
Total Value of All Task Orders	\$20,886,745

**Project Description:** This project will renew eleven (11) Cathodic Protection (CP) systems in the Interceptor system currently protecting force mains with a high consequence of failure. The Interceptor force main CP systems requiring renewal consists of NF-015, NF-170, NF-172, NF-197, NF-204, NF-205, NF-215, NF-216, NF-217, NF-223, NF-961.

**Project Justification:** The identified cathodic protection systems are no longer providing an adequate level of protection for force mains located in highly corrosive soils, which increases the potential for future failures due to external corrosion. The CP system renewals associated with NF-172, NF-204, and NF-205 are part of the Rehab Action Plan Phase 2 projects.

**Task Order Description:** This task order will provide all labor, equipment, and traffic control required to perform exploratory excavation and cathodic protection system rehabilitation on the Powhatan Creek Force Main (NF-204).

**Analysis of Cost:** The cost for this task order is based on the pre-negotiated rates under the Annual Sewer Repair and Condition Assessment Services Agreement.

This work is in accordance with the Commission Adopted Procurement Policy.

<b><u>Schedule:</u></b>	PER	February 2023
	Design	March 2024
	Bid	December 2024
	Construction	March 2025
	Project Completion	September 2025

# CONSENT AGENDA ITEM 3.d.3. – February 25, 2025

**Subject:** The Orchards Pump Station and Sections 1 & 2 Collection System  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with Whitman, Requardt, and Associates (WR&A) in the amount of \$298,300.

**CIP Project:** N/A

**Regulatory Requirement:** None

Budget	\$298,300
Previous Expenditures and Encumbrances	( <u>\$0</u> )
Available Balance	\$298,300

**Project Description:** The Orchards is a mixed-use development with approximately 834 Equivalent Residential Units (ERUs) proposed within King William County. As such, a new pump station and gravity collection system will need to be constructed to serve this development. This infrastructure will be privately funded, designed, and constructed to HRSD standards prior to HRSD's ownership of the assets. WR&A will provide Construction Administration/Construction Inspection (CA/CI) services throughout construction.

**Project Justification:** This task order will allow WR&A staff to act as an extension to HRSD Operations staff and provide HRSD with the proper CA/CI services throughout the construction of the pump station and the first two sections of the collection system. A new task order will be needed for future sections of the sewer collection system.

**Task Order Description:** This task order is for CA/CI services throughout the construction of the privately funded, designed, and constructed Orchards pump station and the first two sections of the sewer collection system, prior to HRSD taking ownership.

**Analysis of Cost:** The cost for this task order is based on previously negotiated hourly rates; fees will be billed on actual work completed. The scope and estimated cost are reasonable.

<b><u>Schedule:</u></b>	Construction	March 2025
	Project Completion	March 2026



# CONSENT AGENDA ITEM 3.d.4. – February 25, 2025

**Subject:** Treatment Plant Fire Suppression System Upgrades  
Task Order (>\$200,000)

**Recommended Action:** Approve a task order with HDR in the amount of \$1,032,434.

**CIP Project:** GN020200

**Regulatory Requirement:** None

Budget	\$1,800,000
Previous Expenditures and Encumbrances	(\$92,986)
Available Balance	<u>\$1,707,014</u>

<b>Task Order Summary:</b>	<b>Amount</b>
Total Value of Previous Task Orders	\$92,986
Requested Task Order	\$1,032,434
Total Value of All Task Orders	\$1,125,420

**Project Description:** This project will develop conceptual designs, cost estimates, and design documents to address the existing fire suppression systems at the York River Treatment Plant (YRTP), Army Base Treatment Plant (ABTP), Nansemond Treatment Plant (NTP), and Virginia Initiative Plant (VIP) methanol facilities. Currently, the fire suppression system at these plants utilize an Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF) that contains per and polyfluoroalkyl substances (PFAS). Refilling the existing extinguishers with AR-AFFF will no longer be permitted due to the environmental and health concerns associated with PFAS. The new or upgraded systems will utilize non-PFAS fluorine free foam for fire suppression.

**Project Justification:** The current methanol fire suppression systems use AR-AFFF which contains PFAS. AR-AFFF foam is being phased out due to the Federal Forever Chemical Regulation Accountability Act of 2024. If any of these fire suppression systems are discharged, the existing system cannot be re-charged. In the past, some of these fire suppression systems have experienced false alarms and equipment malfunctions causing activation of the AR-AFFF. This item was reviewed by the HRSD QST on September 11, 2023 and it was agreed to be an out of cycle CIP.

**Task Order Description:** This task order will provide design documents for new fire suppression systems that utilize a non-PFAS fluorine free foam to extinguish fires at YRTP, ABTP, NTP and VIP.

**Analysis of Cost:** The cost is based on contracted prices for general engineering services.

**Schedule:** PER December 2024  
Design April 2025

## AGENDA ITEM 4. – February 25, 2025

**Subject:** Nansemond Treatment Plant Administration Building Replacement  
Initial Appropriation – Non-Regulatory and Contract Award (>\$200,000)

**Recommended Actions:**

- a. Appropriate initial project funding in the amount of \$220,333.
- b. Award a contract to VIA Design Architectural, PC in the amount of \$220,333.

**CIP Project:** NP015100

**Regulatory Requirement:** None

**Type of Procurement:** Competitive Negotiation

A Public Notice was issued on October 8, 2024. Six firms submitted proposals on November 26, 2024, and all firms were determined to be responsive and deemed fully qualified, responsible, and suitable to the Professional Services Selection Committee (Committee) and to the requirements in the Request for Proposals. Three firms were short-listed, interviewed, and technically ranked as listed below:

<b>Proposers</b>	<b>Technical Points</b>	<b>Recommended Selection Ranking</b>
AECOM	79	3
CDM Smith, Inc.	82	2
VIA Designs Architectural	90	1

The Committee recommends award to VIA Design Architectural, PC (VIA Design) whose professional qualifications and proposed services best serve the interest of HRSD.

**Project Description:** The purpose of this project is to replace the current outdated administration building at the Nansemond Treatment Plant (NTP) with a new facility which will consolidate all administrative, shop, locker and staff facilities into one facility, while accounting for additional spacing needs, such as appropriate lab space for the expanding SWIFT Program at the NTP. The initial cost estimate for this project is \$17M to provide an approximate 20,000 SF usable building space.

**Project Justification:** The Nansemond Treatment Plant staff is currently located in two separate buildings on site, as well as, Electrical and Instrumentation (E&I) and Condition Assessment staff. HRSD recently approved an Internal Hauling Operation Program, and the future staffing will be based out of the Nansemond Treatment Plant.

**Contract Description:** This contract is for Schematic Design Services from VIA Design. HRSD and VIA Design have negotiated a contract price for this initial phase of work and approval is recommended.

**Analysis of Cost:** The cost for this project will be defined as part of the Schematic Design effort. Estimating costs for previous administration buildings has been very challenging prior to completing the initial scoping of the work and to build consensus with staff. Once this phase of the work is completed, a Class 5 cost estimate for the project can be completed.

<b><u>Schedule:</u></b>	PER	March 2025
	Design	October 2025
	Bid	November 2026
	Construction	March 2027
	Project Completion	November 2028

## AGENDA ITEM 5. – February 25, 2025

**Subject:** Treatment Plant Dewatering Centrifuge Equipment Rehabilitation  
New CIP and Initial Appropriation – Non-Regulatory

**Recommended Actions:**

- a. Approve a new CIP project.
- b. Appropriate total project funding in the amount of \$1,250,000.

**CIP Project:** GN021300

**Regulatory Requirement:** None

**Project Description:** This project will allow for the refurbishment of dewatering centrifuge equipment previously procured by HRSD as salvage equipment or via intergovernmental agreement. In FY 2024, several used DS706 centrifuges were purchased from salvage auction (DCWATER) and acquired by trade (Denver Metro) from operational funds. Several of these machines are being allocated for existing capital projects as follows: (note that these machines will be refurbished as part of their respective two CIPs.)

GN016700 Treatment Plant Solids Handling Replacement Phase II  
James River TP - 2 x DS706

GN017400 Treatment Plant Dewatering Replacement Phase III  
VIP - 2 x DS706

The remaining centrifuges that have been purchased/procured are currently being stored at the Atlantic Treatment Plant and would be refurbished and placed at HRSD facilities that currently operate DS706 centrifuges as shelf spares. Centrifuges require routine off-site repair and refurbishment that can take from three to 12 months in duration. HRSD's design approach for dewatering facilities is to install units to meet maximum monthly operational throughput plus a single redundant unit; when a centrifuge is off-site for rehabilitation, the plant lacks redundancy and may lack needed processing capacity if a mechanical failure occurs in an operating unit. After the completion of this project, these ready shelf spares would allow the facilities to rely on their full design redundancies during periodic rehabilitation of existing installed equipment.

**Project Justification:** This project allows HRSD's Condition Assessment Superintendent to obtain a quote for rehabilitation of eight on-hand centrifuges to serve as shelf spare and replacement equipment for installed units at Atlantic (AT), James River (JR), Nansemond (NP), Williamsburg (WB), and York River (YR) Treatment Plants (TP) and at the completion of GN017400, the Virginia Initiative Plant (VIP). Once refurbished and brought into the normal cycle of refurbishment of our current machines, we anticipate the service life of the refurbished machines to be greater than 15 years. Similarly, the current DS706 machines installed at WB, JR, YR, NP, AT (and VIP, at the completion of GN017400) are viable if we have suitable backup equipment. Without this insertion of new machines/parts etc., we would need to program the replacement of these machines with new equipment within five to 10 years. With suitable backup equipment and the ability to maintain design redundancy, the existing DS706s have an expected service life of greater than 15 years.

**Analysis of Cost:** Expected cost for centrifuge rehabilitation is \$125,000 but varies based on condition of the centrifuge components (pillow block, gearboxes, fight and tiles, feed zone liners, accelerators etc.) and compatibility of purchased centrifuges with existing HRSD equipment (e.g. electric motor specifications). The estimate for this CIP reflects the uncertainty due to lack of specific quotes/scopes for rehabilitation of each machine.

**Schedule:**      Project Completion                  June 2026

## AGENDA ITEM 6. – February 25, 2025

**Subject:** Solids System Improvements for Army Base MHI Offline  
Additional Appropriation – Non-Regulatory ( $\geq$ \$1,000,000)

**Recommended Action:** Appropriate additional funding in the amount of \$1,085,780.

**CIP Project:** GN017900

**Regulatory Requirement:** None

Budget	\$6,063,933
Previous Expenditures and Encumbrances	(\$5,935,743)
Available Balance	\$128,190
Proposed Change Order No. 2 to MEB General Contractors, Inc.	(\$945,680)
Proposed Task Order to HDR Engineering, Inc.	(\$68,290)
Proposed Contingency	(\$200,000)
Project Shortage/Requested Additional Funding	(\$1,085,780)
Revised Total Project Authorized Funding	\$7,149,713

Contract Status with Change Orders:	Amount	Cumulative % of Contract
Original Contract with MEB General Contractors, Inc.	\$4,273,000	
Total Value of Previous Change Orders	\$72,238	2%
Requested Change Order	\$945,680	
Total Value of All Change Orders	\$1,017,918	24%
Revised Contract Value	\$5,290,918	

Time (Additional Calendar Days)		300
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Contract Status with Task Orders:	Amount
Original Contract with HDR Engineering, Inc.	\$650,830
Total Value of Previous Task Orders	\$939,675
Requested Task Order	\$68,290
Total Value of All Task Orders	\$1,007,965
Revised Contract Value	\$1,658,795
Engineering Services as % of Construction	31.4%

**Project Description:** This project will install thickened liquid solids load out facilities at the Army Base Treatment Plant (ABTP) and thickened liquid solids load in facilities at the Atlantic Treatment Plant (ATP) and the Virginia Initiative Plant (VIP). Completed facilities will leverage existing solids handling capacity at the receiving plants to remove solids handling facilities at the ABTP from operation including dewatering and multiple hearth incinerator (MHI) operations.

**Project Justification:** The project is projected to reduce net annual operating expenses for ABTP solids management by approximately \$100,000 per year. Removing ABTP solids handling systems from operation will reduce baseline operational staffing requirements at the ABTP by four Plant Operators, one Maintenance Operator, and one Maintenance Operator Assistant; reduce electrical energy requirements at the ABTP by 27% and reduce net carbon emissions associated with ABTP solids management (inclusive of contract hauling of thickened liquid sludge) by 2,880 tons CO<sub>2</sub>/year



(35% of current ABTP net annual emissions). Removing the ABTP MHI from operation mitigates regulatory risk of CAA129 MACT standards non-compliance.

**Analysis of Cost:** The cost for this change order is based on material costs and construction hourly rates that are in line with other projects. HRSD staff independently reached out to suppliers prior to the development of this change order and found similar pricing on the tank cover. HRSD and the Engineer have reviewed the fee and believe it is reasonable for the scope of work.

**Funding Description:** Substantial completion was recorded as of October 9, 2024. The project has been successful in trucking solids from ABTP to ATP and VIP. Since the trucking operation began, HRSD has received some odor complaints from neighbors at the ABTP. After evaluation, it was determined that odors from the TWAS Storage Tank are dispersing. Covering the TWAS Tank and treating the air in the existing Odor Control Station (OCS) A should mitigate these nuisance odors. The additional work includes design and installation for new aluminum covers for the TWAS tank, handrail around the tank, ductwork and connection to OCS A, epoxy coating, and temporary tank for continued operation during construction. A change order was negotiated with MEB to complete the additional work and a task order was negotiated with HDR to provide contract administration services. The cost of the additional work exceeds the current balance available for this project. A \$200,000 contingency is also being requested to accommodate any unforeseen conditions. At this time, the project team assumes that OCS A can handle the additional air flow from the TWAS Tank. If, through evaluation, the Engineer determines that the assumption is false, additional appropriation may be needed to develop a solution to treat the air. The cover manufacturer has communicated a six to nine-month lead time and the project team advises to move forward with the cover purchase immediately to limit the amount of time that the tank remains uncovered.

<b><u>Schedule:</u></b>	Construction	August 2022
	Project Completion	February 2026

## AGENDA ITEM 7. – February 25, 2025

**Subject:** Nansemond Recharge Wells Off Site (GN016382) and Nansemond Recharge Well Integration (GN016383)  
Alternative Project Delivery

**Recommended Action:** Approve the Construction Management project delivery method for Nansemond Recharge Wells Off Site and Nansemond Recharge Well Integration projects.

**CIP Projects:** GN016382, GN016383

**Regulatory Requirement:** Integrated Plan – SWIFT

**Nansemond Recharge Wells Off Site (GN016382)**

Budget	\$60,616,800
Previous Expenditures and Encumbrances	(\$483,197)
Available Balance	<u>\$60,133,603</u>

**Nansemond Recharge Well Integration (GN016383)**

Budget	\$72,931,000
Previous Expenditures and Encumbrances	(\$1,170,565)
Available Balance	<u>\$71,760,435</u>

**Project Description:** Nansemond Recharge Wells Off Site (GN016382): This project will provide for the design and construction of recharge wells and monitoring wells and services for the development, logging, testing, and conditioning of wells associated with SWIFT at the Nansemond Treatment Plant (NTP). The scope does not include well-site development, or the mechanical equipment associated with the conveyance of SWIFT water up to and into the wells. The well locations are outside the boundary of NTP property.

Nansemond Recharge Well Integration (GN016383): This project will design and construct the process mechanical elements, mechanical, civil/site, structural/architectural, electrical, and instrumentation and control for the infrastructure required to convey SWIFT Water from the Nansemond SWIFT facility to the off-site managed aquifer recharge wells and monitoring wells. A section of the backflush and SWIFT Water piping will be constructed from the NTP boundary to the traffic circle at the College Drive/Armstead Road intersection under a separate project, Boat Harbor Treatment Plant (BHTP) Transmission Force Main Section 2 project. The remaining off-site SWIFT Water and backflush piping will be constructed under this project.

These projects were initially appropriated in FY 2025. Since then, preliminary engineering reports (PER) have been developed advancing the understanding of the costs associated with constructing these facilities. These costs were used to develop the proposed FY 2026 appropriation resulting in a notable increase when compared to the FY 2025 appropriation.

Acquisition of property and easements for these projects is being managed separately under GN016346. Properties and easements for three properties have been acquired. Acquisition of property and easements for the remaining five sites is under negotiation. The attached [map](#) depicts the project location.

**Project Justification:** The Nansemond Recharge Wells Off Site and Nansemond Recharge Well Integration projects are required to provide the infrastructure for managed aquifer recharge using SWIFT Water from Nansemond Treatment Plant, which is needed to reduce nutrients entering the Chesapeake Bay, augment the groundwater supply, reduce the rate of groundwater subsidence, protect groundwater from saltwater intrusion, and support Virginia's economy. The monitoring wells are required by permit.

These projects will be delivered together as one contract using the Construction Management project delivery method.

Per HRSD's Procurement Policy, the competitive sealed bid process is the preferred method of construction procurement that reflects the Design-Bid-Build project delivery method. However, this project delivery method will not meet all of the critical needs for implementing these projects.

Due to several factors, including schedule constraints related to the coordination of dependent capital projects, financial risk, and project complexity, an alternative delivery approach utilizing a two-step Construction Management procurement is recommended for the delivery of this project.

The competitive best-value Construction Management delivery method provides HRSD with the following benefits by:

- Allowing the designer and contractor flexibility to optimize construction sequencing across multiple project sites to minimize schedule delays;
- Encourages greater collaboration which will benefit these complex projects as compared to the competitive sealed bid process;
- Creates potential for phased work packages as properties are acquired;
- Allows well drilling contracting firm's ability to plan work up to a year in advance;
- Increases potential for interest from the well drilling community.

Staff will provide a briefing during the meeting.

<b><u>Schedule:</u></b>	Begin RFQ/RFP process	March 2025
	Selection of firm	June 2025
	30% design begins	June 2025
	Guaranteed Maximum Price (GMP)	April 2026
	Construction Completion	August 2028





● Off Site Recharge Well Locations \*

● On Site Recharge Well Locations

\* Parcels under negotiation are not shown

Nansmond Recharge Wells Off Site (GN016382)  
Nansmond Well Integration (GN016383)

## PROJECT LOCATION MAP



February 2025

AGENDA ITEM 8. – February 25, 2025

**Subject:** Atlantic Treatment Plant Biosolids Management  
Update

**Recommended Action:** No action is required.

**Brief:** Staff will provide a briefing on biosolids management at the Atlantic Treatment Plant, including Spring 2025 solids hauling season activities and approach for routine solids management thereafter.

AGENDA ITEM 9. – February 25, 2025

**Subject:** New Business

AGENDA ITEM 10. – February 25, 2025

**Subject:** Unfinished Business

AGENDA ITEM 11. – February 25, 2025

**Subject:** Commissioner Comments



AGENDA ITEM 12. – February 25, 2025

**Subject:** Informational Items

**Recommended Action:** No action is required.

**Brief:** The following items listed below are presented for information.

- a. Management Reports
  - (1) [General Manager](#)
  - (2) [Communications](#)
  - (3) [Engineering](#)
  - (4) [Finance](#)
  - (5) [Information Technology](#)
  - (6) [Operations](#)
  - (7) [Talent Management](#)
  - (8) [Water Quality](#)
  - (9) [Report of Internal Audit Activities](#)
- b. [Strategic Measures Summary](#)

February 12, 2025

Re: General Manager's Report



## Environmental Responsibility

The EPA released the Draft Sewage Sludge Risk Assessment for PFOA and PFOS related to potential risks on January 14<sup>th</sup>. Staff will present the impacts and our short-term land application strategy at the February Commission meeting.

As part of the Nansemond SWIFT off-site wells project, staff presented the TCC Foundation an offer for the easements and land needed on January 12, 2025.

**Treatment Compliance and System Operations:** Multiple events were reported this month. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report.

- From Fiscal Year (FY) 2025 to date, there have been three Permit Exceedances out of 32,974 Total Possible Exceedances.
- Pounds of Pollutants Removed in FY 2025 to date: 120.5 million pounds.

**Water Quality:** No civil penalties were issued in January.



## Financial Stewardship

During the week of January 27<sup>th</sup>, there was an Executive Order freezing all federal grants and loans. Thankfully, it was rescinded a few days later. HRSD has used \$573 million in WIFIA loans to date and is planning to draw on \$397 million in the next eighteen months. In light of the uncertainty, staff are developing contingency plans if this happens again. NACWA asked me to speak to Politico about the impacts, and [the story](#) ran with my quotes on February 3.

The key bill HRSD continues to track is SB962/HB2482. This bill will require between 8% and 12.5% of labor hours be performed by apprentices. I have spoken to a few of our largest contractors, and they said costs will go up because there is so much work around the country that they will leave Virginia and work elsewhere. We are working through our associations on this issue.

Revenues remain strong as water consumption remains above budget projections. Expenses remain controlled and under budget even as inflation remains higher than the Federal Reserve's target.

Staff met with the City of Virginia Beach, the Navy and a confidential company looking to lease one of our sites. The meeting went well, and our site is one of the finalists for consideration.



## **Talent**

Staff developed a new calendar year-end employee statement that shows both compensation and the value of their benefits. This will help employees see the total value at the end of each year.

Staffing levels remain high and turnover with and without retirements remains on par to last fiscal year. Our Talent Management division continues to actively recruit for vacancies.

HRSD hired our first Emergency and Security Manager, John Sidwa. Mr. Sidwa will be responsible for both our emergency and hurricane plans as well as securing our facilities, which will be more important with SWIFT producing drinking quality water to replenish the Potomac aquifer.



## **Community Engagement**

The go-live for the new portal, billing and payments successfully went live on January 27. There were a few hiccups along the way, but overall, the implementation went well. This is a testament to the significant hours our Customer Care and IT staff put in to test this very complex system before it was deployed.

Staff along with AECOM did an amazing job at SWIFT Industry Day. There were over 300 attendees, and the event was a great success.

Brantley Bissette, Community Educator, and I managed a table at the Virginia Resilience Reception held in Richmond on January 14. The room was filled with resilience-related entities and a handful of legislators attended.

As part of the NACWA Winter conference, I was a panelist on two panels: Alternative Revenue Streams/Cost Avoidance, and Subsidized Federal Financing. The key point on the subsidized funding is that our ratepayers will have 8.5% lower monthly bills for the next five years and the savings adds up to \$390 million. Surprisingly, a number of utilities do not take advantage of these programs.



## Innovation

Engineering is happy to report that through remote sensing of continuous vibration monitoring they were able to uncover seven locations with concerns that were proactively addressed before failing.

While we cannot provide any details, our cyber security team continues to actively protect the organization from a number of threat actors. The national trend of increasing attacks on the water/wastewater sector is alarming.

The innovation ecosystem concept continues to gain traction. I met with the following people/entities in the last month.

- Ember – Private Equity focused on water/climate solutions
- Aqualateral – Family office focused on water/climate solutions
- S2G Ventures – Venture Capital focused on water/climate solutions
- Ferguson
- Sands Anderson
- RISE Resilience
- Virginia Israel Advisory Board
- Isle Utilities

**I look forward to seeing you in Virginia Beach at 9:00 a.m. on Tuesday, February 25, 2025.**

Respectfully submitted,

Jay Bernas, P.E.  
General Manager

TO: General Manager

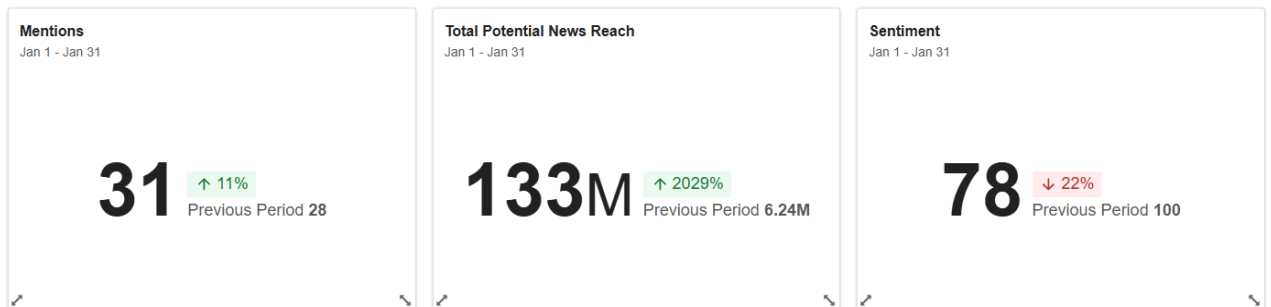
FROM: Chief Communications Officer

SUBJECT: Monthly Report for January 2025

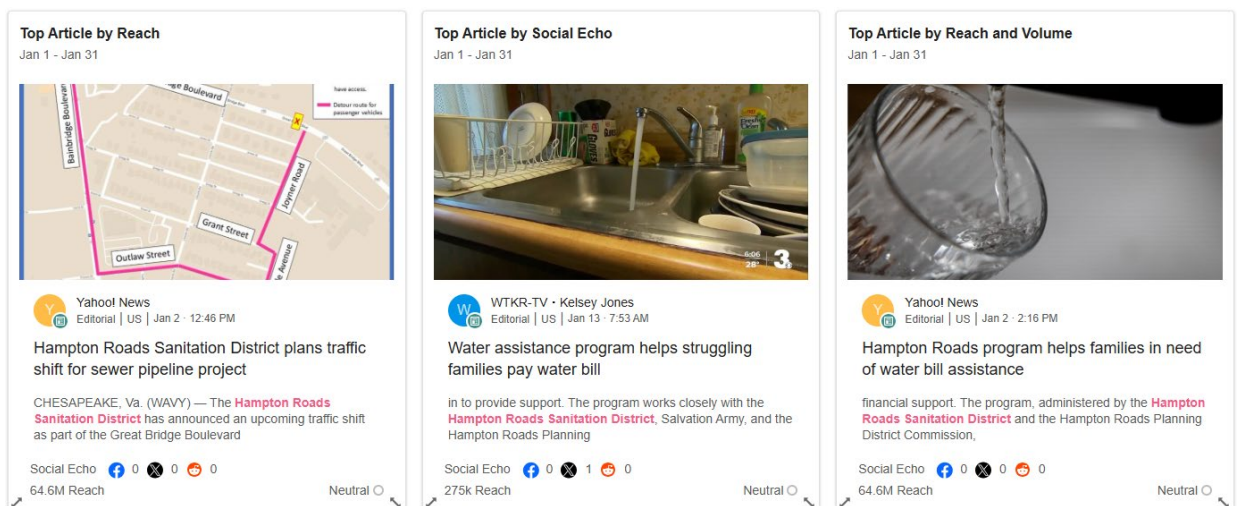
DATE: February 12, 2025

A. Publicity and Promotion

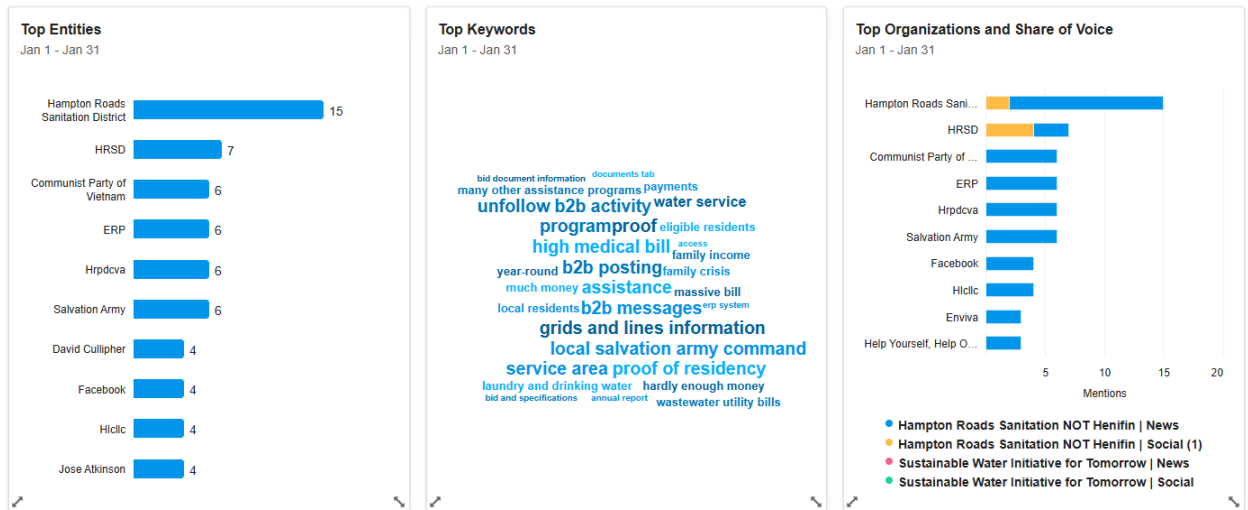
1. HRSD and Sustainable Water Initiative For Tomorrow (SWIFT) were mentioned or featured in nine stories this month. Topics included:
  - a. Detour on Great Bridge Boulevard for sewer pipeline work
  - b. Hampton Roads program helps families in need of water bill assistance (story was featured across several local media outlets)
  - c. Story in a Polish publication, Inzyniera.com (Engineering) about the Boat Harbor Transmission Force Main
2. Analysis of Media Coverage
  - a. Key results for January



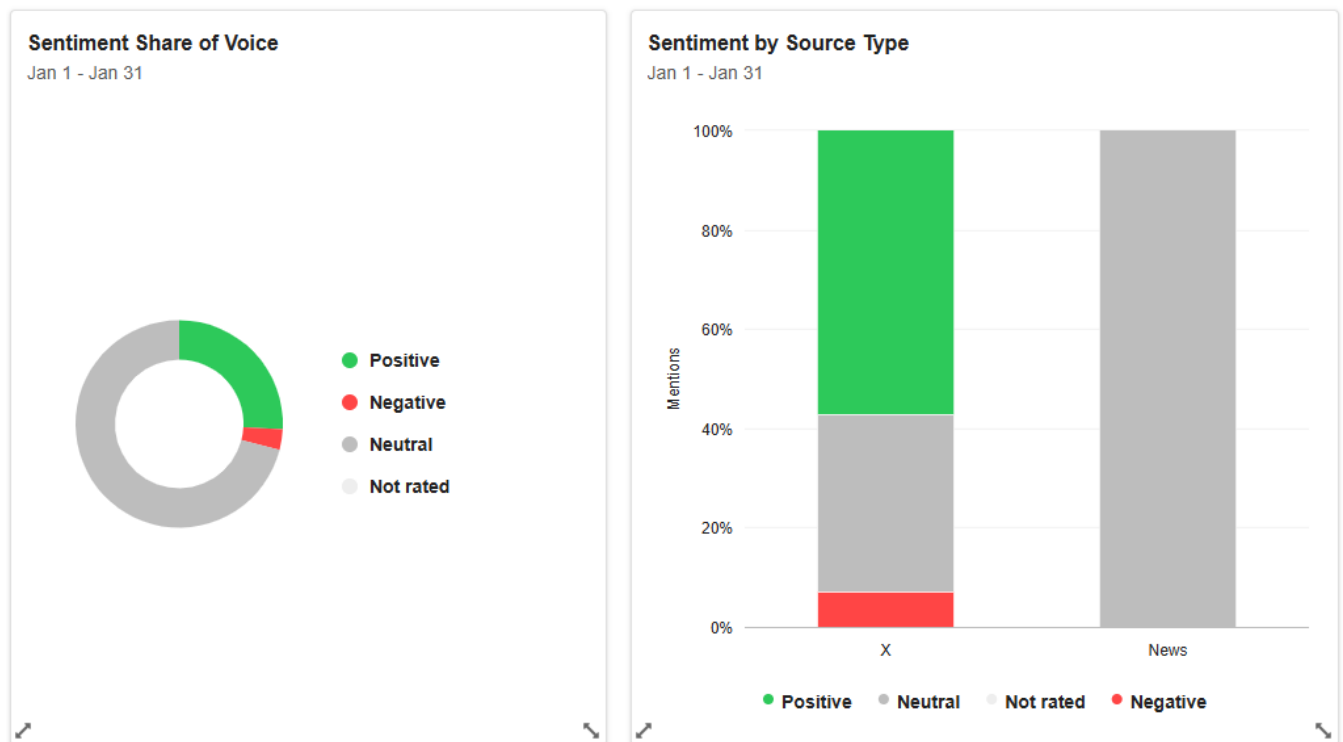
b. Top performing news content



### c. Top entities and keywords

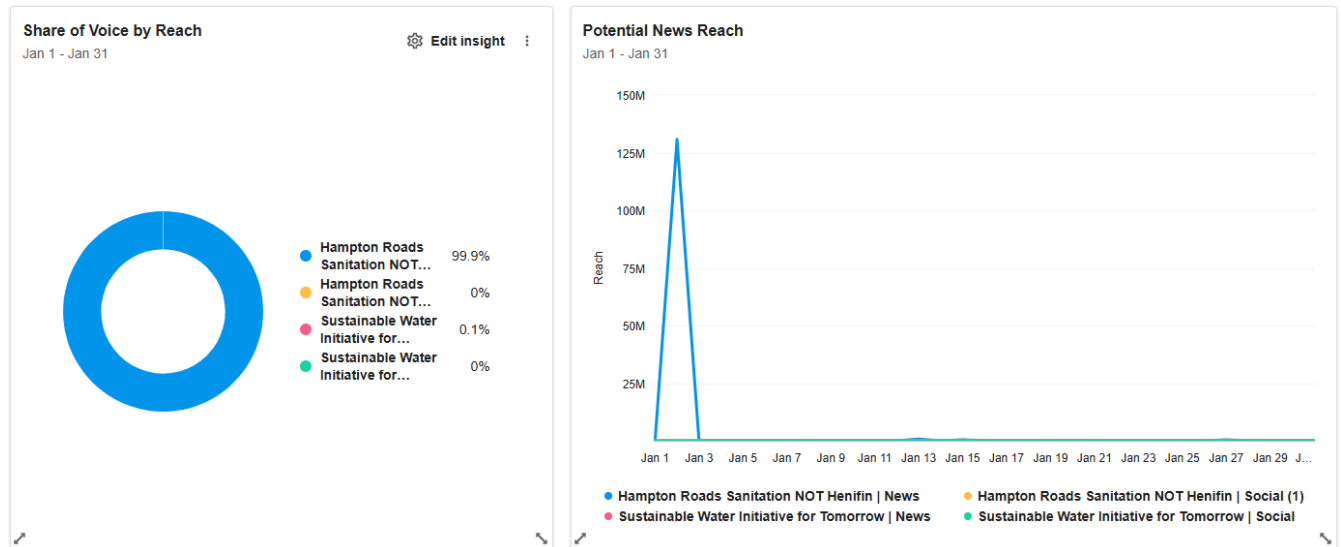


### d. How favorable is the content?

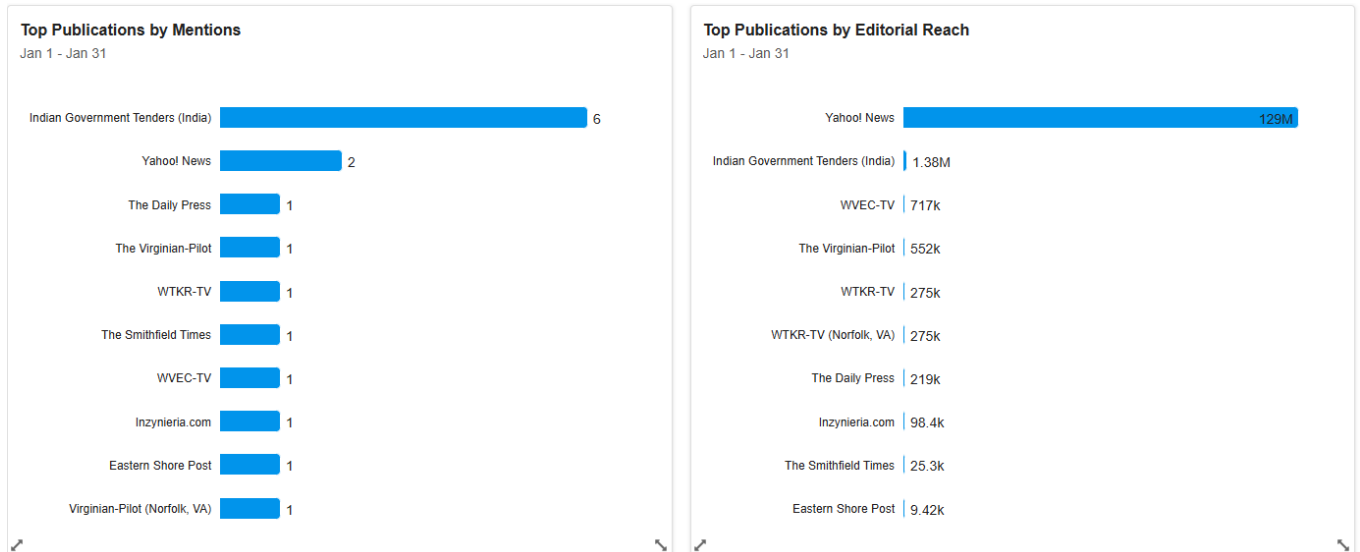


(Negative/unfavorable content attributed to tweet expressing frustration with new HRSD payment portal)

e. What is the potential reach?



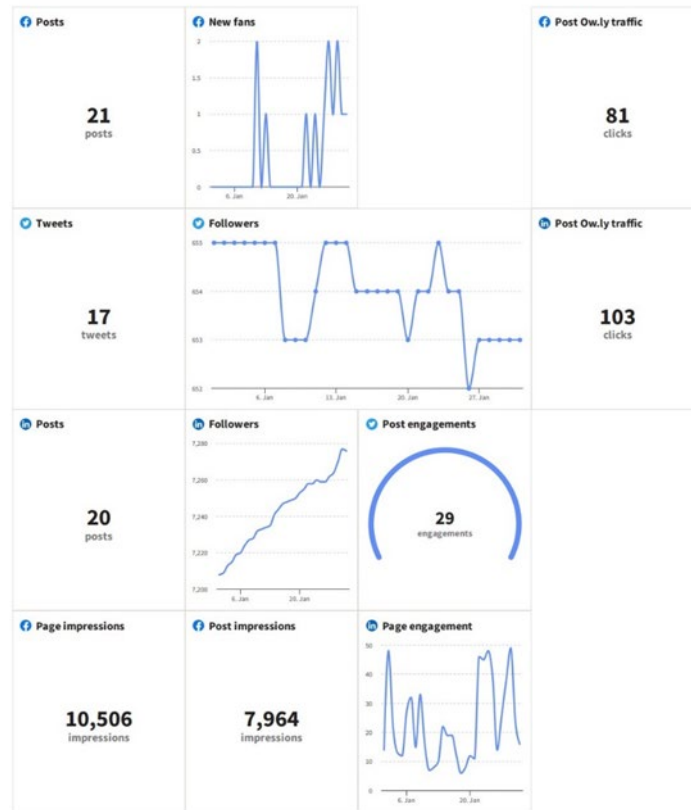
f. Top publishers



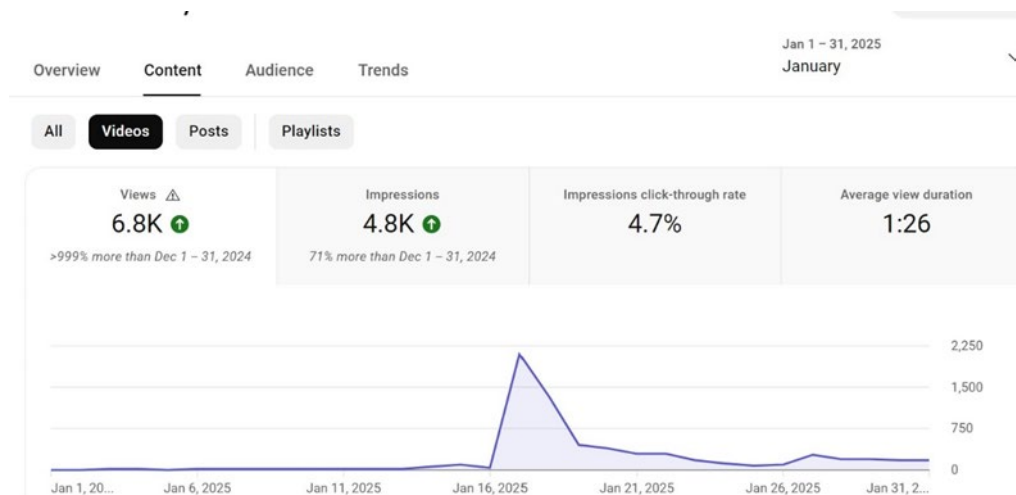
## Community Engagement

### B. Social Media and Online Engagement

#### 1. Metrics – Facebook, X and LinkedIn



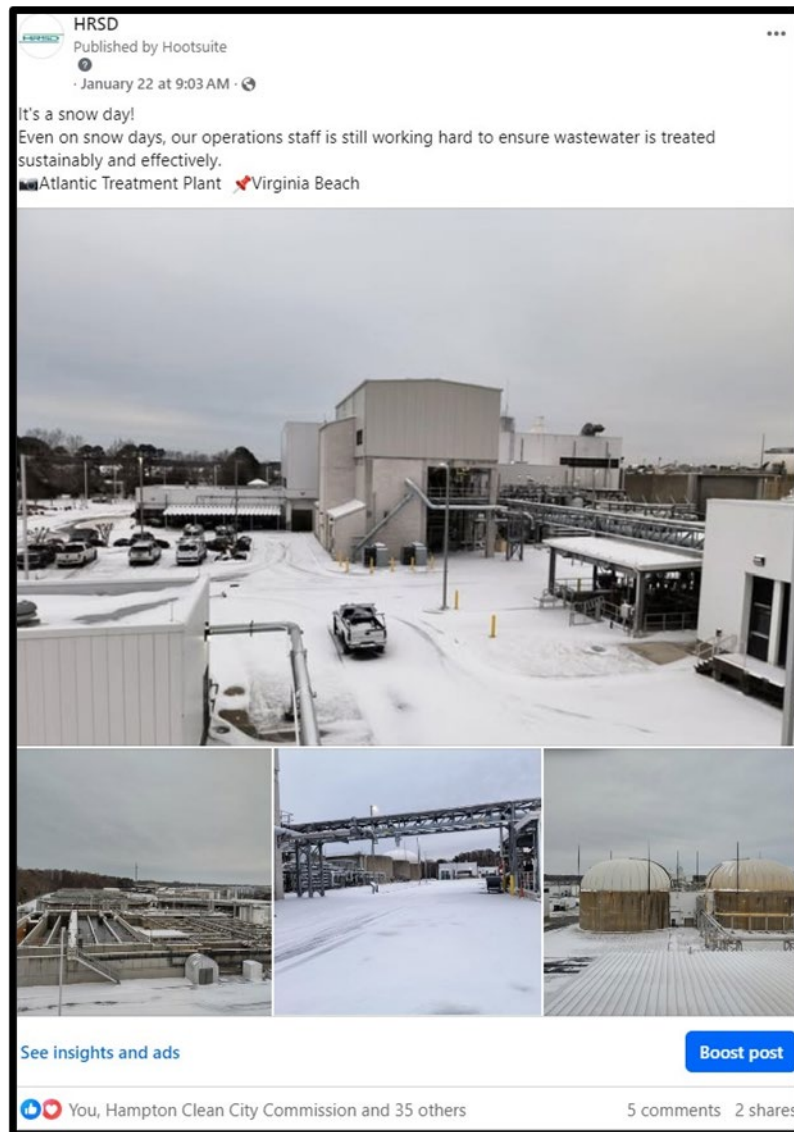
## 2. YouTube



## 3. Top posts on Facebook, Twitter, and YouTube

### a. Top Facebook post





b. Top LinkedIn Post



c. Top X Post



d. Top YouTube Videos (based on views in the month)

- (1) [My Account Portal Introduction](#)
- (2) [SWIFT Research Center: What is the Potomac Aquifer](#)
- (3) [2024 SWIFT Industry Day](#)
- (4) [My Account Portal Introduction](#)
- (5) [The Wastewater Treatment Process](#)

4. Website and Social Media Impressions and Visits

a. Facebook:

- (1) 10,506 page impressions
- (2) 7,964 post impressions reaching 7,961 users.
- (3) Facebook Engagement of 244 (218 reactions, 10 shares, and 16 comments)

b. X: 5.38% engagement rate

c. HRSD.com/SWIFTVA.com: 1,115 page visits

d. LinkedIn Impressions:

- (1) 23,000 page impressions

- (2) 19,623 post impressions
- e. YouTube: 6,788 views
- f. Next Door unique impressions: 65,314 post impressions from 12 targeted neighborhood postings and two regionwide posting shared with 1,388,585 neighbors
- g. Blog Posts (2):
  - (1) [Fluoro Ski Wax - A Slippery Slope for Environmental and Public Health](#)
  - (2) [Made From: 100% Cotton and 713 Gallons of Water](#)
- h. Construction Project Page Visits – 1450 total visits (not including direct visits from home page, broken down as follows:
  - (1) 967 visits to individual pages
  - (2) 483 to the status page

C. Education and Outreach Activity Highlights

Chief Communications Officer (CCO) and staff provided a preliminary tour to the staff of the National Academy of Sciences ahead of the fellows' upcoming visit in February. Community Outreach and Education Specialists coordinated and participated in six different outreach events this month. Community partners included Virginia Living Museum, Virginia Wesleyan University and Saint Pius X Catholic School (Norfolk, VA). Division staff also supported SWIFT Industry Day by staffing a Communications booth and the SWIFT Water® Bar.

Project notices were distributed to 498 customers for 16 different projects across the service area this month. The department distributed and posted 13 construction notices/notices to neighbors and four traffic advisories to the HRSD.com Newsroom.

D. Internal Communications

CCO participated in the following internal meetings and events:

1. SWIFT Community Commitment Plan Steering Committee meeting.
2. Customer experience portal demonstration.
3. HRSD.com web redesign planning meeting.
4. Engineers Week Planning meetings.
5. Atlantic Treatment Plant (ATP) monthly communications check-in meeting.
6. SWIFT Industry Day 2025 planning meetings.

7. ATP Odor taskforce check-in meeting.
8. Bi-weekly General Manager (GM) briefings.
9. Discharge Monitoring Report (DMR), SWIFT Quality Steering Team (QST), and HRSD QST meetings.
10. Check-in meetings with Deputy General Manager (DGM).
11. CCO conducted biweekly Communications department status meetings and weekly one-on-one check-in meetings.
12. Staff participated in 26 project progress and/or construction meetings along with additional communication planning meetings with various project managers, plant staff and external stakeholders.

Respectfully,

*Leila Rice, APR*

Chief Communications Officer

TO: General Manager

FROM: Chief Engineer

SUBJECT: Monthly Engineering Report for January 2025

DATE: February 11, 2025



## Environmental Responsibility

HRSD owns and maintains numerous above and below ground storage tanks. These tanks are used to store fuels, lubricants and numerous types of chemicals used in various treatment processes. HRSD has 57 permitted sites and more than 100 tanks that require regular inspections and regulatory approvals. The Virginia Department of Environmental Quality (VDEQ) recently conducted inspections at the VIP Treatment Plant and five (5) pump stations. One pump station site (Elbow Road PRS) was noted with a violation that is under review and appears to be related to a failed sensor. This sensor will be repaired and the documentation related to the repair will be provided to the VDEQ.

HRSD closely monitors the condition of sewer pipes located near drinking water sources. A sewage spill in these areas can be highly detrimental to the public and has a high level of regulatory concern. HRSD has recently increased the area that is under this closer scrutiny. As a result, additional pipe segments must be regularly assessed. One of these pipe segments is included under the Sewer Rehabilitation Phase 2 effort. A new impressed current cathodic protection system has been designed and will be installed in the coming months. This system will help to ensure a long life of this asset and limit the potential for future spills.



## Financial Stewardship

Capital Improvement Program (CIP) spending for the sixth month of FY2025 was below the planned spending target. This reduction in monthly invoices can be attributed to end of the year delays and holiday schedules.

CIP Spending (\$M):

	Current Period	FYTD
Actual	27.68	303.01
Plan	67.90	380.00

HRSD has formed a new committee known as the Construction Cost Estimate Users Group. This group is made up of Engineering Firms that do work for HRSD. The purpose of this group is to share information and promote continuous improvement of procedures and improved results when estimating costs for Capital Improvement projects. The agenda for these meetings will include the following topics:

- Review of HRSD Internal Assessment (SC&H Audit)
- Review of Recent HRSD Bid Results
- Review of Bid Results from Other Local Entities

- Upcoming Projects (HRSD or others) to be Bid
- Update on HRSD Construction Cost Database
- Review of proposed HRSD Cost Estimating Guidelines & Procedures

The first meeting was held on January 31<sup>st</sup> and subsequent meetings will be held monthly. Significant discussions were held during the first meeting on ways to improve the cost estimating process and be better aligned with market conditions.



## Talent

Training and continuous learning are critical to the success of the Engineering Division. Each year our target is to provide each staff member with 40 hours of training. We have completed half of the fiscal year and staff has completed 14 hours per employee of training. We will work to increase the hours of training for staff in the remaining six months remaining in the fiscal year. This metric has extra importance since we have added many new staff members in the past year.

Recruitment is still an important goal for the Engineering Division. We currently have one open position (Coatings Inspector) but expect to have additional openings in the coming months due to planned retirements. We will be working closely with Talent Management to find qualified candidates for these open positions and to look to future needs as we consider future staffing needs and potential workforce dynamics.



## Community Engagement

The SWIFT Program hosted its sixth annual HRSD SWIFT Industry Day in Newport News on January 23, 2025. Despite the less-than-ideal weather, we had a large and enthusiastic turnout. The event was facilitated by HRSD's SWIFT Program Management Team, AECOM. It featured panel discussions on the SWIFT Program, HRSD procurement and operational procedures, as well as available opportunities on each project. Breakout rooms were available for attendees to review specific SWIFT projects. Each of HRSD's Project Teaming Partners had the opportunity to discuss their projects and outline the various vendors, suppliers and specialty subcontractor needs. The following metrics were used to evaluate the success of the event:

Total Registered	465 attendees
Total Attended	315 individuals
Firms Represented	164 firms
On-Site Registration	15 individuals
First-Time Attendees	168 individuals
Returning Attendees	147 individuals
SWaM Attendees	33 individuals
Mentor Protégé Forms	4 responses

One of the goals of the SWIFT Program is to engage Small, Woman and Minority Owned (SWaM) Businesses. One challenge in this effort is to find experienced firms to assist in this work. Due to the complexities of competing and delivering complex CIP projects, many SWaM firms struggle to engage successfully. Through HRSD's Mentor Protégé Program, we have fostered lasting relationships between our larger, more experienced firms and SWaM firms interested in learning how to successfully compete and deliver in this highly competitive environment. Currently, eleven (11)

SWaM firms are partnered with our larger firms. We are excited to expand this initiative and see the results of these relationships.



## Innovation

A recent effort to continuously monitor vibration in critical plant equipment has resulted in determining problems prior to failure. A remote sensing and reporting system is now in place to look for excessive vibrations before failure occurs. This month we were able to uncover seven (7) locations where excessive vibrations were determined and proactively address the concern. Finding these issues before a catastrophic failure lets the staff address the problem in a proactive way. The remote sensing system has shown remarkable results in saving money and possible critical system failures.

The Engineering Division has embraced the use of Virtual Design for many of our larger and more complex projects. This technology is being used as part of the design for the Nansemond SWIFT Facility. The design effort has reached the 30% completion level, and the Project Team is using Virtual Design to provide HRSD staff to conduct a virtual walk-through of the Ozone, UV, and Pre-Treatment Processes. This tool allows staff to get a “real world feel” of how the new systems will look and perform. Changes can be made early in the design stage which limits cost and schedule impacts. This technology will also be used with some of the regulators to allow their staff to better understand the project and hopefully limit their concerns and issues with the proposed work. Virtual Design is becoming a more commonly used tool in project design and the technology continues to improve as more users adopt this proactive system of visualization.

*Bruce W. Husselbee*

Bruce W. Husselbee, PhD, P.E., BCEE, DBIA



TO: General Manager/CEO

FROM: Deputy General Manager and Chief Financial Officer

SUBJECT: Monthly Report for January 2025

DATE: February 12, 2025



## Financial Stewardship

Staff spent a considerable amount of time reacting to the Presidential Executive Orders that might have halted or delayed the Water Infrastructure Finance & Innovation Act (WIFIA) program reimbursement of Sustainable Water Initiative For Tomorrow (SWIFT) construction costs. Staff are working with Bank of America to renew our line of credit that expires in July. This will be one of the methods we use to manage any short-term funding disruptions.

In connection with the summer of 2025 planned drawdown of \$268 million WIFIA Tranche 3 loan funds, staff are considering the use of interim financing strategies to reduce total debt service costs. Such options may include a capital market issuance of a short-term (e.g., one-year) bond anticipation note or other capital market instruments such as variable rate demand bonds. The use of such strategies will be market dependent.

Work on the Ches-Eliz Water Quality Improvement Fund (WQIF) grant continues. Staff submitted all invoices for review and received approval for full funding for Part A for \$78 million. We anticipate receiving those funds in early February.

Staff successfully launched our new Customer Engagement My Account Portal on Monday, January 27, 2025. Communications were issued notifying customers of the launch to encourage registration.

Since the portal launch, 44,253 customers successfully registered with 9,065 new AutoPay enrollments and 5,457 new paperless (e-bill) enrollments. Registered customers are now able to navigate their accounts to view or pay their bill, review their payment or billing history, register for AutoPay or Go Paperless in addition to viewing their current usage and history. Non-registered customers can also make one-time payments within minutes. The next phase of the customer engagement portal will incorporate the return of Help to Others (H2O) donations and enhanced features such as high usage notifications and water savings suggestions.

The Debt Solutions team is making in-person visits to large commercial past due accounts resulting in approximately \$119,000 in payments. Staff also estimate its outbound calling efforts generated approximately \$460,000 in payments following contact.

Customer call and email volumes were low at the beginning of January due to winter weather and coming out of the holiday season, however, once the first phase of the customer engagement portal went live on January 24, 2025, calls almost reached 6,000 that week.

Staff emailed 2,643 after-call surveys, receiving 206 responses and an overall 86.83 percent favorable score. 2,020 outbound text reminders of past due balances were sent, resulting in 1,267 (63 percent) payments made.



A. Interim Financial Report

1. Operating Budget for the Period Ended January 31, 2025.

	Amended Budget	Current YTD	Current YTD as % of Budget (58% Budget to Date)	Prior YTD as % of Prior Year Budget
<b>Operating Revenues</b>				
Wastewater	\$ 442,031,000	\$ 268,067,835	61%	60%
Surcharge	1,400,000	974,492	70%	52%
Indirect Discharge	3,970,000	2,531,675	64%	58%
Fees	3,172,000	2,395,215	76%	75%
Municipal Assistance	837,000	424,277	51%	95%
Miscellaneous	1,982,000	738,530	37%	102%
Total Operating Revenue	453,392,000	275,132,024	61%	60%
<b>Non Operating Revenues</b>				
Facility Charge	6,170,000	3,907,525	63%	69%
Interest Income	7,300,000	15,053,233	206%	279%
Build America Bond Subsidy	-	-	0%	51%
Other	330,000	467,361	142%	26%
Total Non Operating Revenue	13,800,000	19,428,119	141%	117%
<b>Total Revenues</b>	467,192,000	294,560,143	63%	62%
Transfers from Reserves	19,475,990	11,360,994	58%	58%
<b>Total Revenues and Transfers</b>	\$ 486,667,990	\$ 305,921,137	63%	62%
<b>Operating Expenses</b>				
Personal Services	\$ 80,140,274	\$ 44,605,472	56%	58%
Fringe Benefits	30,767,169	15,666,077	51%	57%
Materials & Supplies	15,245,514	8,324,870	55%	45%
Transportation	2,382,779	1,054,954	44%	47%
Utilities	16,643,039	8,679,786	52%	58%
Chemical Purchases	16,974,110	8,341,276	49%	49%
Contractual Services	57,868,703	22,625,629	39%	39%
Major Repairs	16,778,801	3,519,062	21%	28%
Capital Assets	2,361,019	198,225	8%	22%
Miscellaneous Expense	4,171,177	2,753,526	66%	46%
<b>Total Operating Expenses</b>	243,332,585	115,768,877	48%	49%
<b>Debt Service and Transfers</b>				
Debt Service	87,700,000	55,479,206	63%	63%
Transfer to CIP	155,635,405	90,787,320	58%	58%
Transfer to Risk management	-	-	0%	58%
Total Debt Service and Transfers	243,335,405	146,266,526	60%	60%
<b>Total Expenses and Transfers</b>	\$ 486,667,990	\$ 262,035,403	54%	54%

## 2. Notes to Interim Financial Report

The Interim Financial Report summarizes the results of HRSD's operations on a basis of accounting that differs from generally accepted accounting principles. Revenues are recorded on an accrual basis, whereby they are recognized when billed, and expenses are generally recorded on a cash basis. No provision is made for non-cash items such as depreciation and bad debt expense.

This interim report does not reflect financial activity for capital projects contained in HRSD's Capital Improvement Project (CIP).

Transfers represent certain budgetary policy designations as follows:

- a. Transfer to CIP: represents the current period's cash and investments that are designated to partially fund HRSD's capital improvement program.
- b. Transfers to Reserves: represents the current period's cash and investments that have been set aside to meet HRSD's cash and investments policy objectives.

## 3. Reserves and Capital Resources (Cash and Investments Activity) for the Period Ended January 31, 2025.

### HRSD - RESERVE AND CAPITAL ACTIVITY

January 31, 2025

	General Reserve			Capital		
	General	Debt Service	Risk Mgmt Reserve	Paygo	SNAP	CIP Proceeds
	Unrestricted	Restricted	Unrestricted	Unrestricted	Restricted	Restricted
<b>Beginning - July 1, 2024</b>	<b>\$ 240,258,497</b>	<b>\$ 22,307,000</b>	<b>\$ 4,799,555</b>	<b>\$ 37,468,922</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Current Year Sources of Funds</b>						
<b>Current Receipts</b>	288,656,584					-
Line of Credit						-
VRA Draws						27,986,602
WIFIA Draws						174,567,512
Grants						26,179,683
Series 2024B					268,087,870	
Series 2024B Interest					5,989,663	
Transfers In			-	90,787,320		
<b>Sources of Funds</b>	<b>288,656,584</b>	<b>-</b>	<b>-</b>	<b>90,787,320</b>	<b>274,077,533</b>	<b>228,733,797</b>
<b>Total Funds Available</b>	<b>\$ 528,915,081</b>	<b>\$ 22,307,000</b>	<b>\$ 4,799,555</b>	<b>\$ 128,256,242</b>	<b>\$ 274,077,533</b>	<b>\$ 228,733,797</b>
<b>Current Year Uses of Funds</b>						
Cash Disbursements	176,654,729			57,477,701	71,514,867	228,733,797
Transfers Out	90,787,320					
<b>Uses of Funds</b>	<b>267,442,049</b>	<b>-</b>	<b>-</b>	<b>57,477,701</b>	<b>71,514,867</b>	<b>228,733,797</b>
<b>End of Period - January 31, 2025</b>	<b>\$ 261,473,032</b>	<b>\$ 22,307,000</b>	<b>\$ 4,799,555</b>	<b>\$ 70,778,541</b>	<b>\$ 202,562,666</b>	<b>\$ -</b>
Unrestricted Funds	<b>\$ 337,051,128</b>					

4. Capital Improvements Budget and Activity Summary for Active Projects for the Period Ended January 31, 2025.

HRSD - PROJECT ANALYSIS

January 31, 2025

Classification/ Treatment Service Area	Appropriated Funds	Expenditures prior to 7/1/2024	Expenditures Year to Date FY2025	Total Project Expenditures	Encumbrances	Available
Administration	126,148,101	32,741,525	5,357,054	38,098,579	75,070,384	12,979,138
Army Base	178,442,597	126,238,488	243,448	126,481,936	9,757,274	42,203,387
Atlantic	205,135,158	17,798,654	10,242,952	28,041,606	42,558,680	134,534,872
Boat Harbor	512,142,360	183,558,580	52,815,859	236,374,439	219,496,142	56,271,779
Ches-Eliz	29,678,787	5,844,306	177,942	6,022,248	9,595,559	14,060,980
Eastern Shore	63,812,749	41,487,070	2,675,059	44,162,129	2,942,889	16,707,731
James River	365,141,716	185,970,412	46,177,105	232,147,517	96,373,503	36,620,696
Middle Peninsula	89,030,822	21,437,085	1,912,586	23,349,671	4,600,439	61,080,712
Nansemond	524,414,566	210,086,668	68,738,941	278,825,609	189,125,036	56,463,921
Surry	57,978,543	45,155,705	727,502	45,883,207	6,560,142	5,535,194
VIP	290,288,975	66,659,267	25,072,758	91,732,025	119,340,050	79,216,900
Williamsburg	87,334,019	22,399,476	686,043	23,085,519	6,110,165	58,138,335
York River	100,005,557	40,083,206	13,320,961	53,404,167	28,688,575	17,912,815
General	1,506,568,277	336,602,844	90,329,905	426,932,749	789,423,933	290,211,595
	\$ 4,136,122,227	\$ 1,336,063,286	\$ 318,478,115	\$ 1,654,541,401	\$ 1,599,642,771	\$ 881,938,055

5. Active Capital Grants

Active Capital Grants Activities								
Grant Name	Funder	Project	CIP#	Application Submitted	Amount Requested	HRSD Award Amount	Reimbursement Received to Date	
American Rescue Plan Act	VDEQ	James River Treatment Plant Advanced Nutrient Reduction Improvements	JR013400	10/7/2022	\$ 50,000,000	\$ 36,124,859	\$ 19,437,911	
American Rescue Plan Act	VDEQ	Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Phase II	NP013820	10/7/2022	\$ 50,000,000	\$ 31,693,207	\$ 31,693,207	
American Rescue Plan Act	VDEQ	Eastern Shore Infrastructure Improvements - TFM Phase I (Accomac)	ES010100	11/28/2022	\$ 8,367,000	\$ 4,183,500	\$ 4,133,500	
Community Flood Preparedness Fund	VDCR	Onancock Treatment Plant Administrative Building Design	ES010300	10/30/2024	\$ 374,400	\$ -	\$ -	
Community Flood Preparedness Fund	VDCR	Dozier's Corner Pump Station Replacement	AT015400	12/4/2024	\$ 6,265,669	\$ -	\$ -	
Community Flood Preparedness Fund	VDCR	Army Base Treatment Plant Generator Controls Replacement	AB012100	1/22/2025	\$ 5,473,498	\$ -	\$ -	
FHWA Recreational Trails Program	VDCR	Flax Mill Creek Trail at James River Treatment Plant (FCT 42230)	GN016344	6/1/2021	\$ 300,000	\$ 303,725	\$ 270,000	
FY24 Community Projects Funding (Kiggans) / Congressionally Directed Spending (Kaine, Warner) / EPA	Congress	Eastern Shore Wastewater Improvements, Chincoteague	ES010500	3/7/2023	\$ 9,677,112	\$ 1,250,000	\$ -	
FY25 Community Projects Funding (Kiggans) / Congressionally Directed Spending (Kaine, Warner)	Congress	Onancock Treatment Plant Solids Handling Improvements	ES010800	3/21/2024	\$ 6,624,248	\$ -	\$ -	
Water Quality Improvement Fund, Conveyance	VDEQ	Eastern Shore TFM Phase 1 and Nassawadox Treatment Plant Conveyance	ES010100 ES010900	5/2/2022	\$ 4,900,000	\$ 4,936,538	\$ 4,936,538	
Water Quality Improvement Fund, Conveyance	VDEQ	Chesapeake-Elizabeth Treatment Plant Conveyance	Multiple	2/7/2023	\$ 100,647,746	\$ 95,976,774	\$ -	
Water Quality Improvement Fund, Nutrient Reduction	VDEQ	James River SWIFT - Advanced Nutrient Reduction Improvements	JR013400	3/23/2023	\$ 344,741,547	\$ -	\$ -	
Water Quality Improvement Fund, Nutrient Reduction	VDEQ	Boat Harbor Pump Station and Conveyance	BH015700 BH015710 BH015720 BH015730	3/4/2024	\$ 311,286,392	\$ -	\$ -	
Water Quality Improvement Fund, Nutrient Reduction	VDEQ	Nansemond Treatment Plant Advanced Nutrient Reduction Improvements Phase II	NP013820 GN016380	3/4/2024	\$ 127,657,505	\$ -	\$ -	
					\$ 1,026,315,117	\$ 174,468,603	\$ 60,471,156	

## 6. Debt Management Overview

### HRSD - Debt Outstanding (\$000's)

January 31, 2025

	Dec 2024	Jan 2025				
	Principal Balance	Payments	Draws	Principal Capitalized Interest	Balance	Interest Payments
<b>Fixed Rate</b>	\$ 1,625,234	\$ (48)	\$ 30,533	\$ 517	\$ 1,656,236	\$ (4,784)
<b>Variable Rate</b>	50,000	-	-		50,000	(125)
<b>Line of Credit</b>	100,000	-	-		100,000	(348)
<b>Total</b>	<u>\$ 1,775,234</u>	<u>\$ (48)</u>	<u>\$ 30,533</u>	<u>\$ 517</u>	<u>\$ 1,806,236</u>	<u>\$ (5,257)</u>

### HRSD- Series 2016VR Bond Analysis

January 31, 2025

	SIFMA Index	HRSD Series 2016VR	Deviation to SIFMA
Maximum	4.71%	4.95%	0.24%
Average	1.43%	0.97%	-0.46%
Minimum	0.01%	0.01%	0.00%
As of 01/31/25	2.25%	2.10%	-0.15%

Since October 20, 2011 HRSD has averaged 97 basis points on Variable Rate Debt

### Subsidised Debt Activity

Source	Funder	Loan Amount	Current Drawn Total	% Remain	Initial Draw Date - Projected
WIFIA Tranche 1	EPA	\$ 225,865,648	\$ 225,865,648	0%	Closed Out
WIFIA Tranche 2	EPA	\$ 476,581,587	\$ 347,472,424	27%	Ongoing
WIFIA Tranche 3	EPA	\$ 346,069,223	\$ -	100%	July 2025
Clean Water Program 2024	DEQ	\$ 80,000,000	\$ 27,829,208	65%	March 2024

## 7. Financial Performance Metrics for the Period Ended January 31, 2025.

### HRSD - UNRESTRICTED CASH

*Can be used for any purpose since it is not earmarked for a specific use and is extremely liquid*

		Days Cash on Hand	Adjusted Days Cash on Hand
<b>Total Unrestricted Cash</b>	<b>\$ 337,051,128</b>		<b>506</b>
Risk Management Reserve	(4,799,555)	(8)	498
Capital (PAYGO only)	(70,778,541)	(106)	392
<b>Adjusted Days Cash on Hand</b>	<b>\$ 261,473,032</b>		<b>392</b>

Risk Management Reserve as a % of Projected Claims Cost is 25% YTD compared to 25% Policy Minimum

Adjusted Days Cash on Hand Policy Minimum is 270-365 days.

### HRSD - SOURCES OF FUNDS

January 31, 2025

Primary Source	Beginning Market Value	YTD	YTD	YTD	Ending Market Value	Allocation of	Credit Quality	Current Mo Avg Yield
	July 1, 2024	Contributions	Withdrawals	Income Earned	January 31, 2025	Funds		
BOA Corp Disbursement Account	31,786,393	665,150,524	649,037,070	687,629	48,587,476	18.1%	N/A	0.55%
VIP Stable NAV Liquidity Pool	178,789,050	100,000,000	65,000,000	6,156,700	219,945,750	81.9%	AAAm	4.52%
<b>Total Primary Source</b>	<b>\$ 210,575,443</b>	<b>\$ 765,150,524</b>	<b>\$ 714,037,070</b>	<b>\$ 6,844,329</b>	<b>\$ 268,533,226</b>	<b>100.0%</b>		

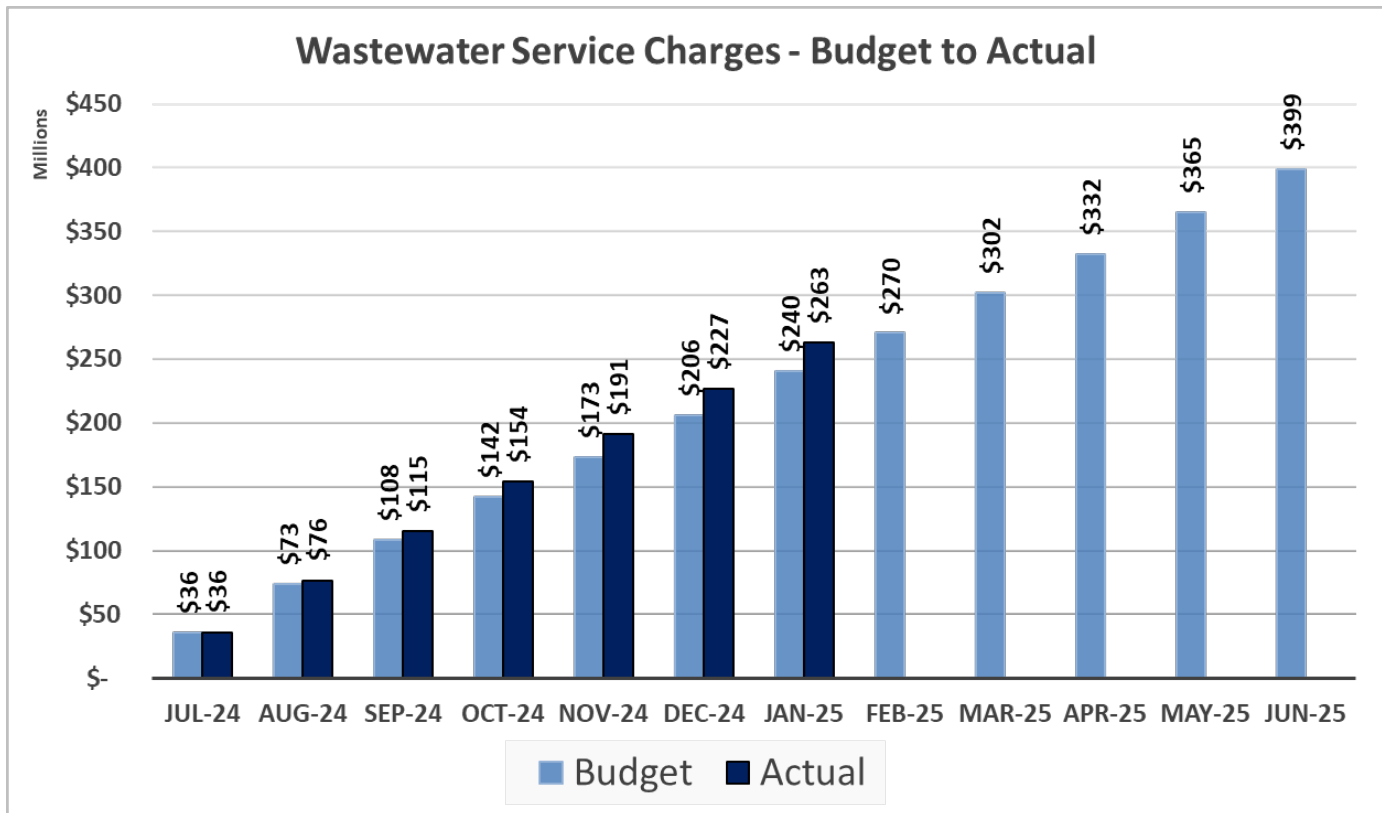
VIP Stable NAV Liquidity Pool performed 0.03% above to the Va Local Government Investment Pool's (the market benchmark) in the month of January 2025.

Secondary Source	Beginning Market Value	YTD	YTD	YTD	Ending Market Value	LTD	Yield to Maturity at Market
	July 1, 2024	Contributions	Withdrawals	Income Earned & Realized G/L	January 31, 2025	Ending Cost Mkt Adj	
VIP 1-3 Year High Quality Bond Fund	65,915,924	-	7,836	1,678,239	67,972,618	68,976,529 (1,003,911)	4.22%
<b>Total Secondary Source</b>	<b>\$ 65,915,924</b>	<b>\$ -</b>	<b>\$ 7,836</b>	<b>\$ 1,678,239</b>	<b>\$ 67,972,618</b>	<b>\$ 68,976,529 (1,003,911)</b>	

VIP 1-3 Year High Quality Bond Fund performed 0.01% below ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) in January 2025.

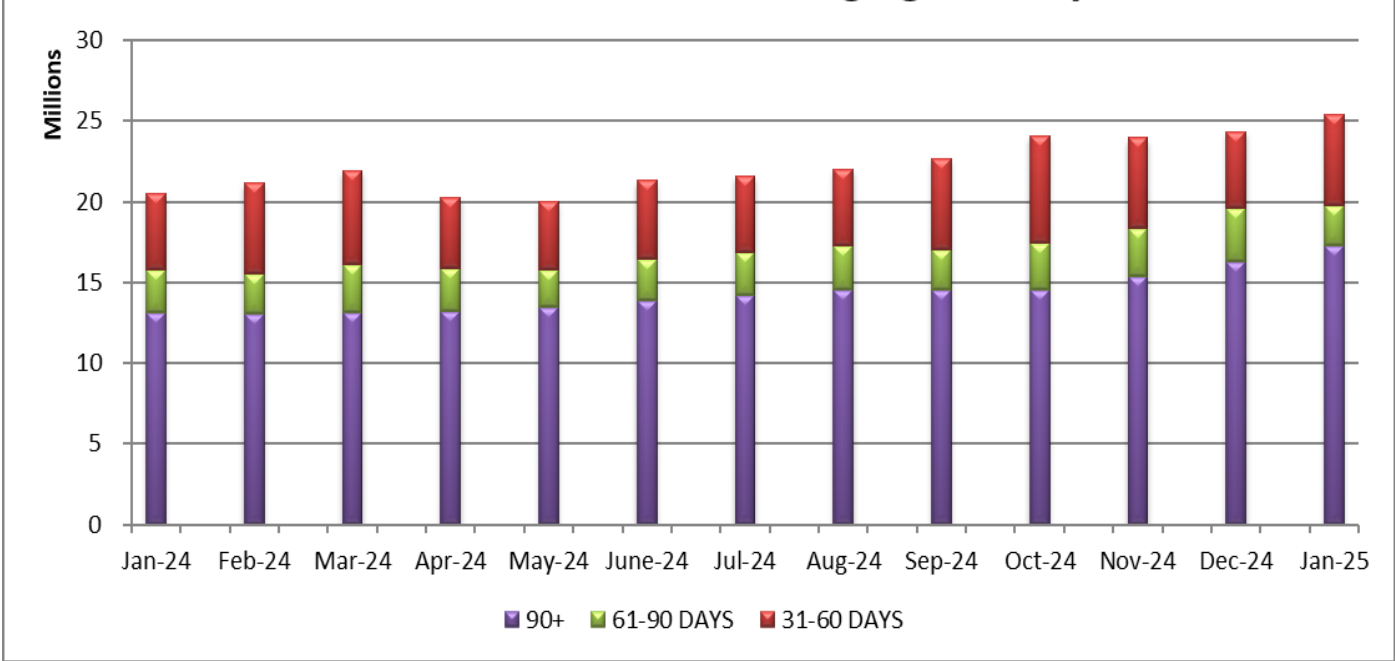
	Total	Fund Alloc
<b>Total Primary Source</b>	<b>\$ 268,533,226</b>	<b>79.8%</b>
<b>Total Secondary Source</b>	<b>67,972,618</b>	<b>20.2%</b>
<b>TOTAL SOURCES</b>	<b>\$ 336,505,844</b>	<b>100.0%</b>

8. Summary of Billed Consumption



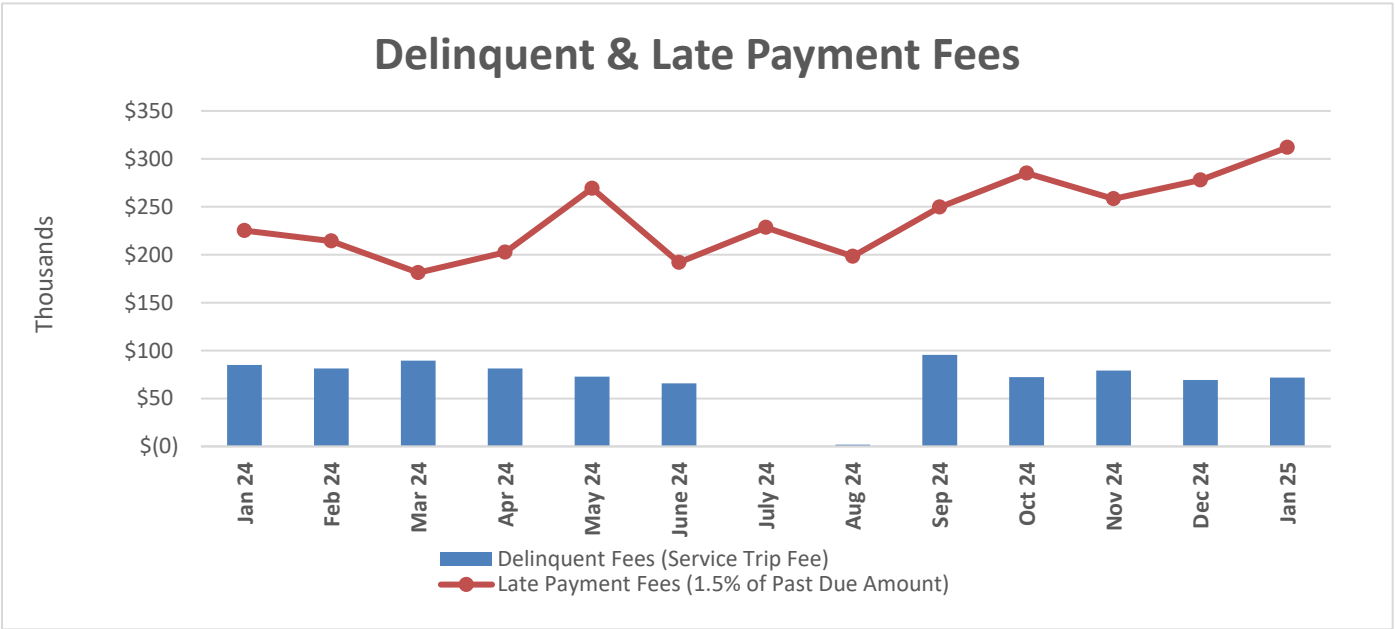
Summary of Billed Consumption (,000s ccf)							
			<u>% Difference</u>		<u>% Difference</u>		<u>% Difference</u>
	<i>FY2025</i>			<i>Cumulative</i>			
	<i>Cumulative</i>	<i>FY2025</i>		<i>FY2024</i>	<i>From</i>	<i>Cumulative 3</i>	<i>From 3 Year</i>
<i>Month</i>	<i>Budget</i>	<i>Cumulative</i>	<i>From</i>	<i>Actual</i>	<i>FY2024</i>	<i>Year Average</i>	<i>Average</i>
	<i>Estimate</i>	<i>Actual</i>	<i>Budget</i>				
July	4,678	4,630	-1.0%	4,504	2.8%	4,721	-1.9%
Aug	9,644	9,518	-1.3%	9,432	0.9%	9,534	-0.2%
Sept	14,196	14,223	0.2%	13,965	1.9%	14,173	0.4%
Oct	18,663	18,870	1.1%	18,854	0.1%	18,861	0.0%
Nov	22,756	23,421	2.9%	23,004	1.8%	22,911	2.2%
Dec	27,109	27,666	2.1%	27,127	2.0%	27,267	1.5%
Jan	31,641	32,016	1.2%	31,819	0.6%	31,784	0.7%
Feb	35,568	-	N/A	36,182	N/A	35,990	N/A
March	39,770	-	N/A	39,826	N/A	39,954	N/A
Apr	43,694	-	N/A	44,054	N/A	44,119	N/A
May	48,027	-	N/A	48,760	N/A	48,383	N/A
June	52,500	-	N/A	53,206	N/A	52,999	N/A

# HRSD Accounts Receivable Aging +30 Days

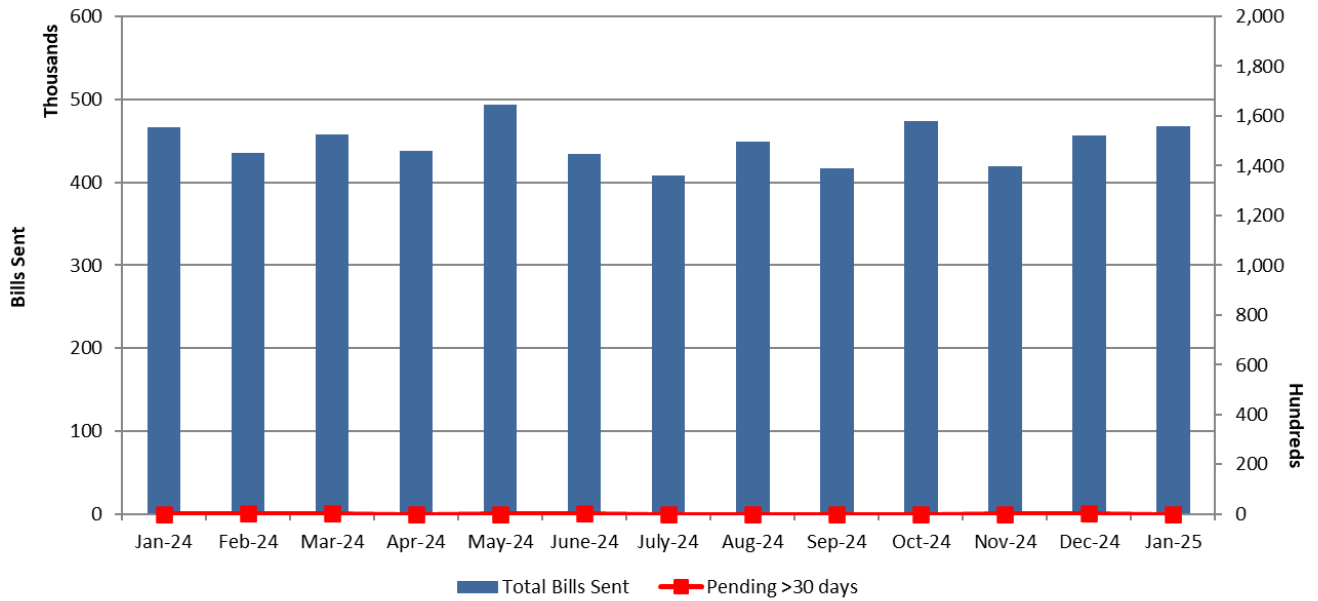


## B. Customer Care Center

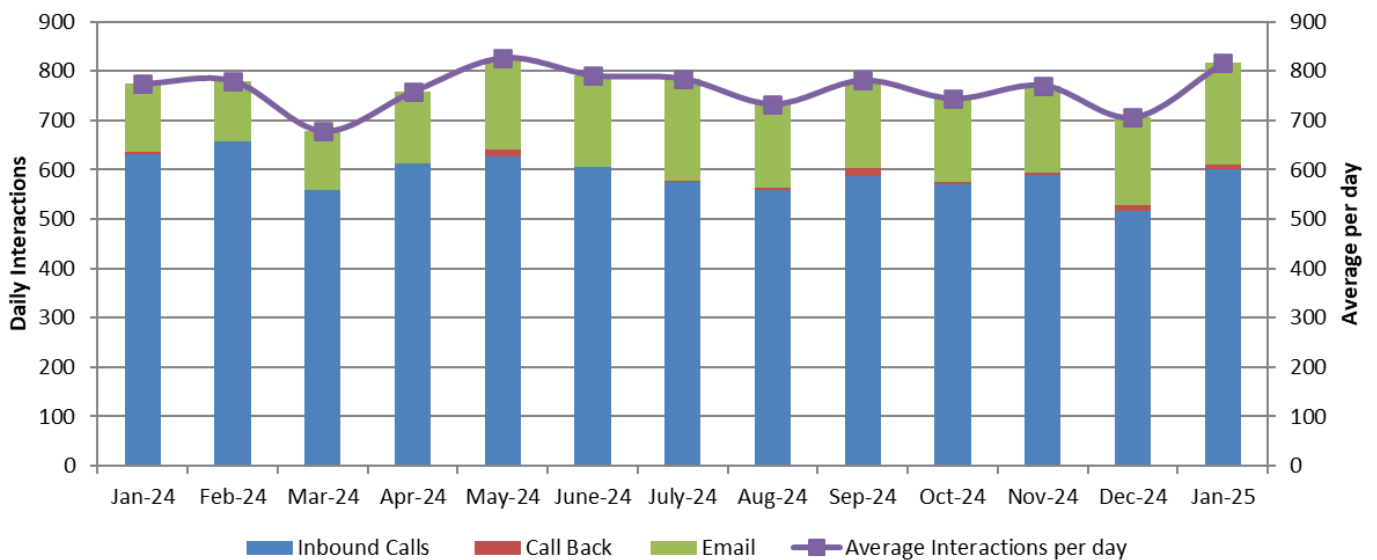
### 1. Accounts Receivable Overview



## Billing Summary

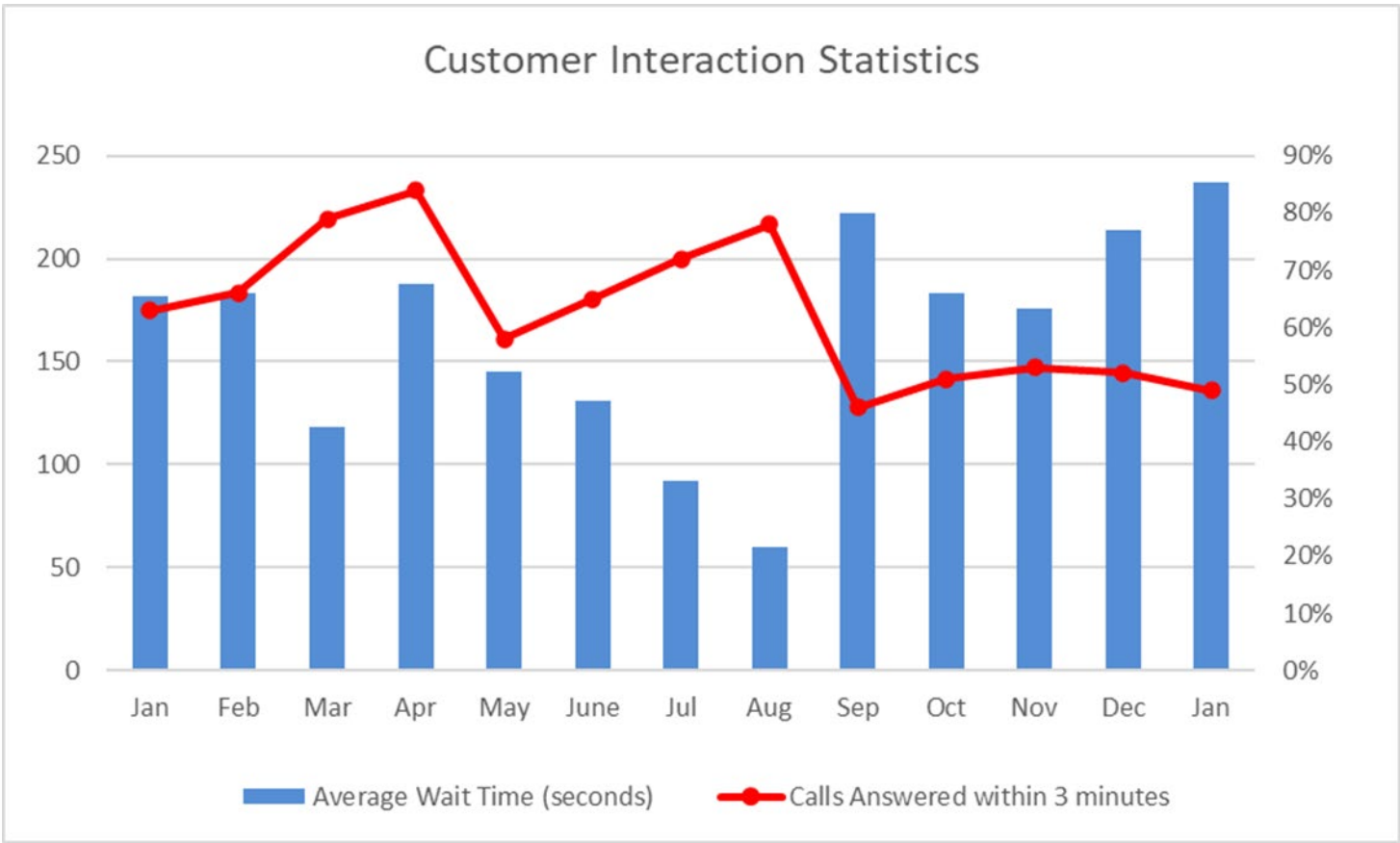


## Call Center Interactions (per day)

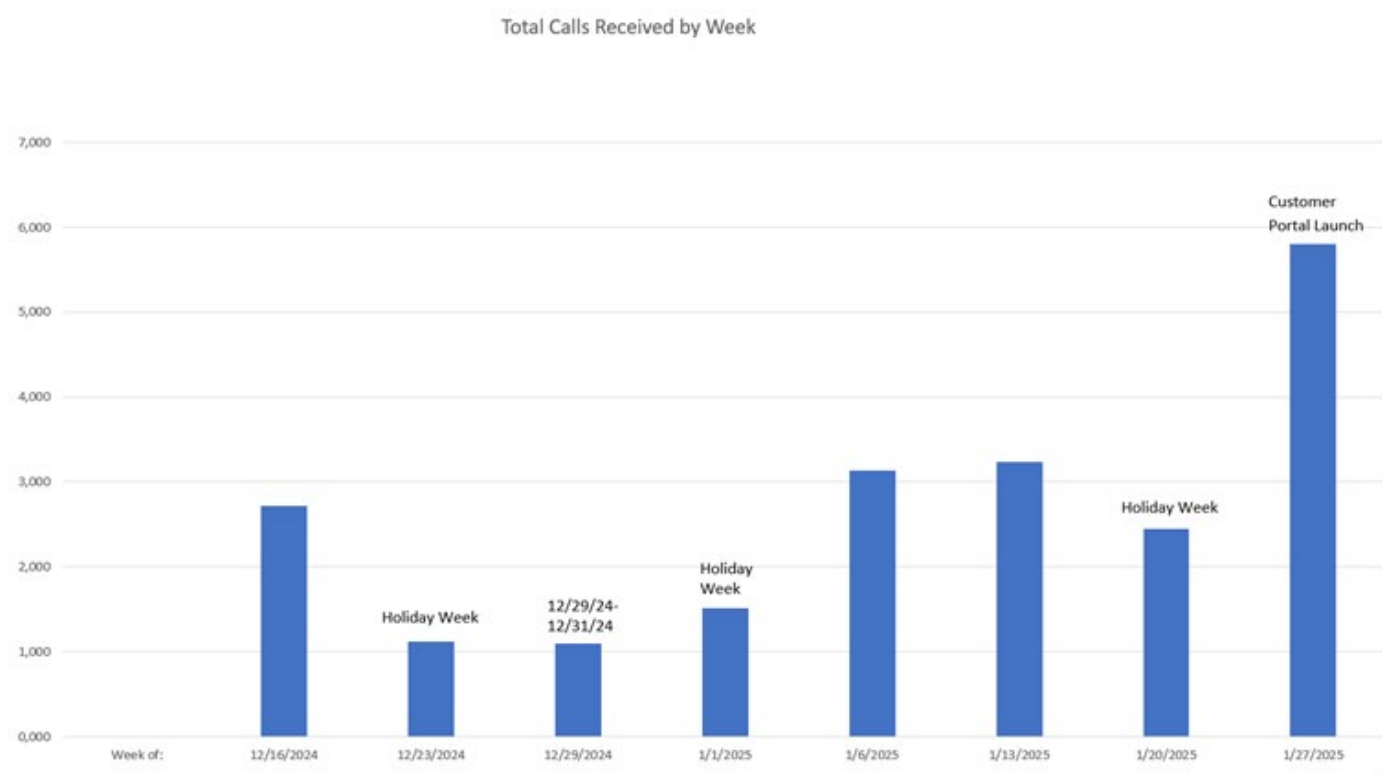




2. Customer Care Center Statistics



Customer Interaction Statistics	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Calls Answered within 3 minutes	63%	66%	79%	84%	58%	65%	72%	78%	46%	51%	53%	52%	49%
Average Wait Time (seconds)	182	183	118	188	145	131	92	60	222	183	176	214	237
Calls Abandoned	13%	12%	10%	8%	15%	11%	9%	6%	18%	16%	16%	19%	21%



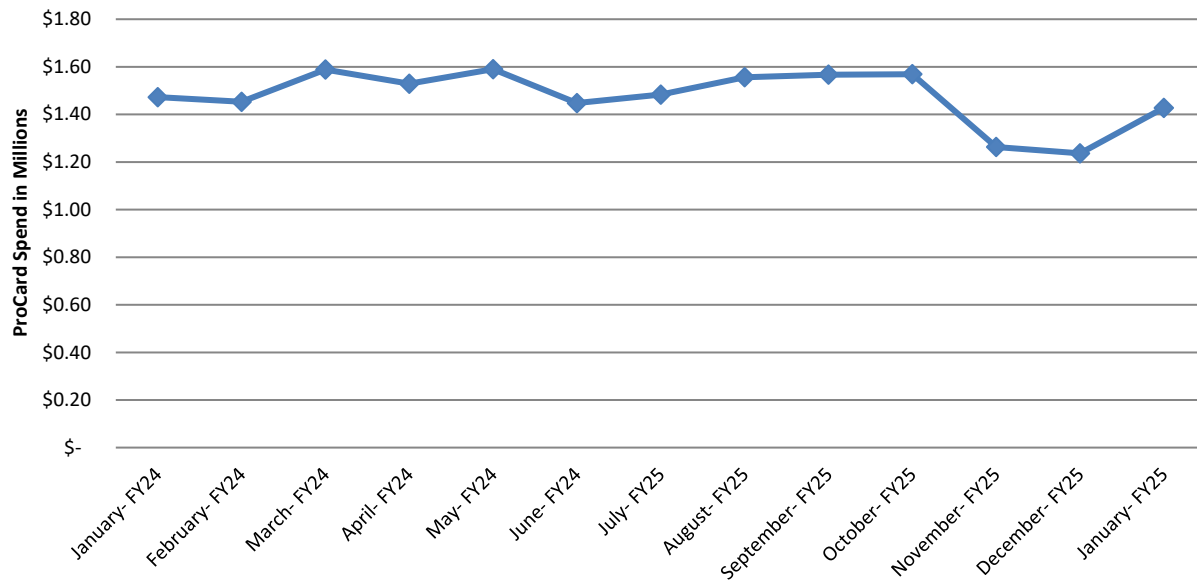
### C. Procurement Statistics

Savings	Current Period	FYTD
Competitive Savings <sup>1</sup>	\$349,946	\$1,325,961
Negotiated Savings <sup>2</sup>	\$4,000	\$14,338
Salvage Revenues	\$4,224	\$214,378
Corporate VISA Card - Estimated Rebate	\$21,270	\$150,523

<sup>1</sup> Competitive savings are those savings obtained through the informal/formal bidding process. All bids received (except for the lowest responsive/responsible bid) added together and averaged. The average cost is subtracted from the apparent low responsive/responsible bidder.

<sup>2</sup> Negotiated savings are savings obtained during a Request for Proposal process, or if all bids received exceed the budgeted amount, or if only one bid is received.

### ProCard Spend FY25



Respectfully,

*Steven G. de Mik*

Steven G. de Mik  
Deputy General Manager/Chief Financial Officer

Attachments: [Quarterly Performance Report, 2<sup>nd</sup> Quarter FY 2025](#)  
[Retiree Health Plan Investment Performance Review](#)

**Hampton Roads Sanitation District**  
**Qtrly Performance Report**  
**For the Quarter Ending December 31, 2024**

## Total Portfolio Summary

Operating Strategies	December 31, 2024	September 30, 2024
Primary Source	\$ 266,057,260	\$ 238,278,041
Secondary Source	67,710,123	67,753,845
	<u>\$ 333,767,383</u>	<u>\$ 306,031,886</u>

### Primary Source Summary

The Primary Source Portfolio consists of BAML Corp Disbursement Account \$46.95m and VaCo/VML VIP Stable NAV Liquidity Pool \$219.10m. BAML Corp Disbursement Account returned 0.55% for the quarter ending December 31, 2024. VIP LIQ Pool Fund 30 Day Avg Net Yield was 4.67% as of December 31, 2024. VIP Stable NAV Liquidity Pool performed 0.05% above to the Va Local Government Investment Pool's (the market benchmark) in the month of December 2024. VaCo/VML VIP Stable NAV Liquidity Pool's weighted average credit rating was A-1 for the quarter.

### Secondary Source Summary

The Secondary Source Portfolio consists of VaCo/VML VIP 1-3 Year High Quality Bond Fund. VIP 1-3 Year High Quality Bond Fund's Yield to Maturity at Market was 4.26% in December, which was 0.02% below the ICE BofA ML 1-3 yr AAA-AA Corp/Gov Index (the market benchmark) performance. The weighted average credit rating for VaCo/VML VIP 1-3 Year High Quality Bond Fund's portfolio was AA for the quarter.

Retirement Health Plan Trust	December 31, 2024	September 30, 2024
Investment Assets	78,798,369	79,999,099
Liquidity Assets	50,759	50,180
Combined Assets	<u>\$ 78,849,128</u>	<u>\$ 80,049,279</u>

### Retiree Health Plan Trust Summary

The Retiree Health Plan Trust portfolio returned -1.5% (investment assets) for the quarter ended December 31, 2024, on par with the -1.5% return of the Blended Benchmark. Fixed-income markets traded lower during the quarter on the back of the Fed's ongoing policy actions. Short term Treasury yields fell while longer term yields rose, leading to a slight steepening in the yield curve. The yield on the bellwether 10-year Treasury advanced by 0.84% during the quarter, closing the year at a yield of 4.58%. The inverse relationship between prices and yields resulted in the Bloomberg US Aggregate Bond Index posting a -3.1% loss for the quarter. US equity results were modestly higher for the quarter. Markets also saw a return to the narrowly focused technology and communication services company exuberance which has dominated domestic performance in recent years. The S&P 500 Index rose 2.4% for the quarter with the small-cap Russell 2000 Index managing just a 0.3% rise. The rotation away from large cap growth stocks during the third quarter seemed to reverse as the Russell 1000 Growth Index once again outpaced the Russell 1000 Value Index by a large margin. Strength in the US Dollar during the quarter led to relative weakness in international markets. Many of the major currencies depreciated relative to the US Dollar as the year came to a close. Latin America saw the most significant decline during the period while the Pacific region was the only region to post positive LCL returns. The AI trade that has taken shape for much of the past two years continued in 2024 with the communication services and information technology sectors each posting gains of more than 35% for the year. This phenomenon contributed to narrow market leadership particularly within the large-cap segment of the market.

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# Hampton Roads Sanitation District Retiree Health Plan

Investment Performance Review  
Period Ending December 31, 2024

MARINER

## **4th Quarter 2024 Market Environment**

## **The Economy**

- The US Federal Reserve (the Fed) continued to loosen its policy stance during the quarter with two fed funds rate cuts totaling 0.50%, bringing the year-end rate to a range of 4.25%-4.50%. While the Fed conveyed a degree of confidence that the fight against inflation is progressing in its December press release, Fed Chairman Jerome Powell signaled in his post-meeting press conference that the pace and timing of future rate cuts is unclear. The Fed's December "Dot Plot" now projects only two quarter-point rate cuts in 2025, down from four anticipated cuts in September's plot.
- Growth in the US labor market continued during the fourth quarter. US payrolls grew by 256,000 in December, up from the previous month's total of 212,000, and well above the 155,000 projected. If strength in the labor market continues, this data could support a slower pace Fed action in the form of policy rate reductions in 2025.

## **Equity (Domestic and International)**

- US equity results were modestly higher for the quarter. Markets also saw a return to the narrowly focused technology and communication services company exuberance which has dominated domestic performance in recent years. The S&P 500 Index rose 2.4% for the quarter with the small-cap Russell 2000 Index managing just a 0.3% rise. The rotation away from large cap growth stocks during the third quarter seemed to reverse as the Russell 1000 Growth Index once again outpaced the Russell 1000 Value Index by a large margin.
- Large-cap equity benchmarks continue to represent a heavy concentration among a limited number of stocks. As of quarter end, the weight of the top 10 stocks in the S&P 500 Index exceeded 35%.
- Most international stocks faltered during the fourth quarter and US Dollar (USD) denominated results were further exacerbated by a strengthening USD. The USD performance of international stocks fell short of local currency (LCL) returns in most regions for the quarter, albeit to varying degrees.

## **Fixed Income**

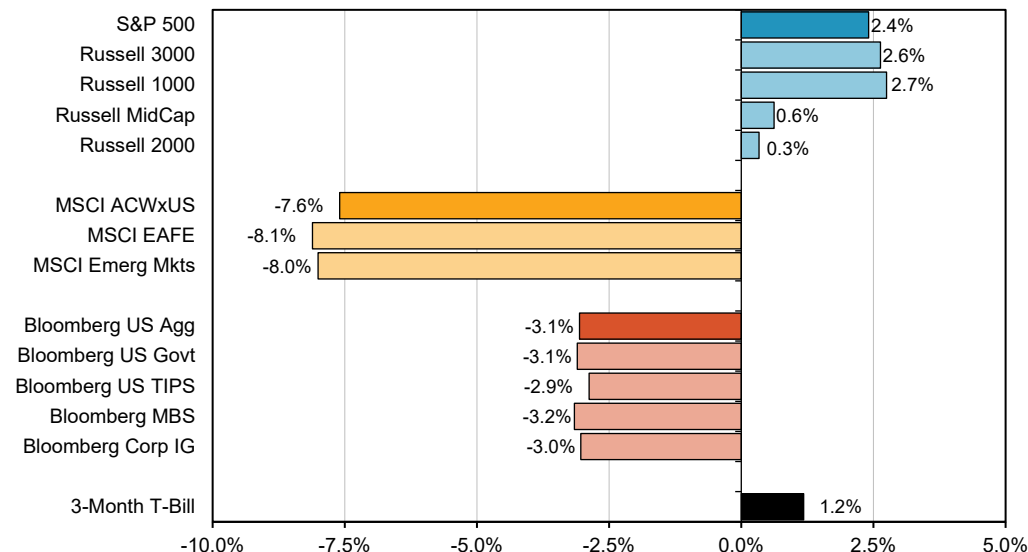
- Fixed-income markets traded lower during the quarter on the back of the Fed's ongoing policy actions. Short term Treasury yields fell while longer term yields rose, leading to a slight steepening in the yield curve. The yield on the bellwether 10-year Treasury advanced by 0.84% during the quarter, closing the year at a yield of 4.58%. The inverse relationship between prices and yields resulted in the Bloomberg US Aggregate Bond Index posting a -3.1% loss for the quarter.
- High-yield bonds outpaced the Bloomberg US Aggregate Bond Index for the quarter, largely due to higher coupons, a shorter duration profile, and a small narrowing of the option-adjusted spread (OAS) for the Bloomberg US High-Yield Index.
- Global bonds fell during the quarter, with the Bloomberg Global Aggregate ex-US returning -6.8% in USD terms. Like international equity results, global bond performance was dragged down by a strengthening USD during the quarter.

## **Market Themes**

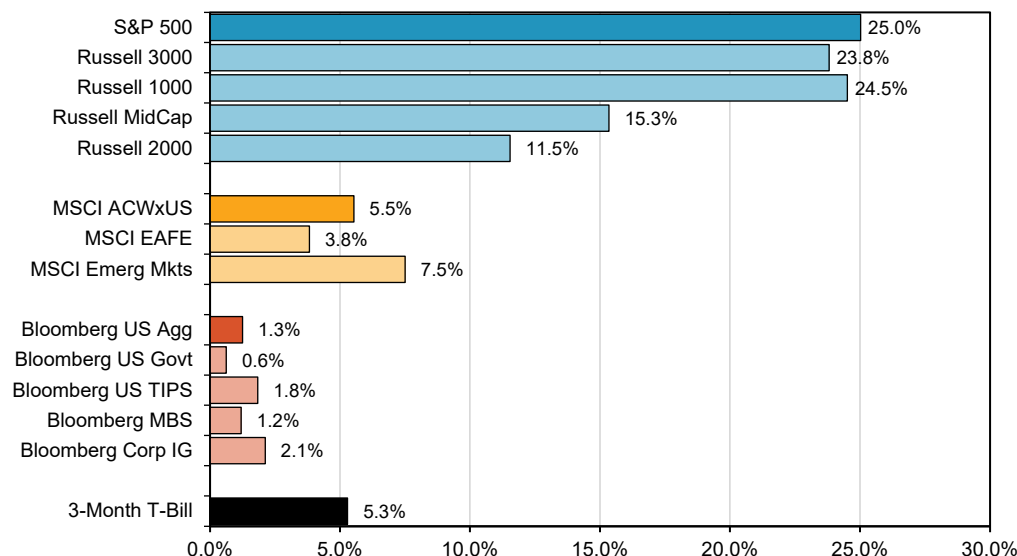
- Strength in the US Dollar during the quarter led to relative weakness in international markets. Many of the major currencies depreciated relative to the US Dollar as the year came to a close. Latin America saw the most significant decline during the period while the Pacific region was the only region to post positive LCL returns.
- The AI trade that has taken shape for much of the past two years continued in 2024 with the communication services and information technology sectors each posting gains of more than 35% for the year. This phenomenon contributed to narrow market leadership particularly within the large-cap segment of the market. The concentration in the large-cap indexes helped the S&P 500 post its second straight year of greater than a 20% return, further widening the performance gap between large and smaller capitalization benchmarks.
- Ongoing military conflicts in Ukraine and the Middle East, coupled with global economic uncertainty, continue to act as headwinds for international market results, further complicated by an advancing USD.
- The results of the most recent US presidential election appeared to please domestic equity markets in anticipation of the new administration supporting loosened regulations and pro-growth policies. As we move into the new year, equity markets will need to digest the anticipated effects of proposed tax legislation changes, a new view on foreign policy, and potential trade tariffs by the new administration.

- Domestic equity markets continued to climb higher during the quarter. Large-cap stocks returned to the forefront, outpacing small-cap stocks. The S&P 500 rose 2.4% during the quarter versus a muted gain of 0.3% for the Russell 2000 Index. The broad capitalization Russell 3000 Index, which benefited from strength in mid- and large-cap names, returned 2.6% for the quarter.
- International developed market equities reversed course and soured during the fourth quarter with the USD performance of the broad benchmarks each trading lower than (LCL) currency performance. The broad MSCI ACWI ex US Index delivered a disappointing -7.6% for the quarter but was down less than both the MSCI EAFE and MSCI EM indexes. The broad index was aided by Canada, which is not included in the EAFE or EM indexes. International developed market (DM) equities narrowly fell behind emerging market (EM) equities, returning -8.1% and -8.0%, respectively for the quarter. Negative performance for the international indexes was broad-based and not localized to any specific region.
- Broad market fixed-income benchmarks displayed a poor finish to the year as many of the core indexes succumbed to a steepening of the yield curve and the prospect of fewer rate cuts in 2025. The Bloomberg US Aggregate Index returned -3.1% for the quarter. The TIPS market, which is not part of the Aggregate Index, was also negative, posting a return of -2.9% for the quarter. While the performance differentials were small, the Mortgage-Backed Securities Index lagged other domestic bond market segments with a benchmark return of -3.2% for the quarter.
- Domestic equity indexes finished the year by adding to their already strong returns over the trailing one-year period. The S&P 500 Index gained 25.0% for the year and the Russell 1000 Index returned 24.5%. The weakest performing capitalization range of domestic equities for the year was the small-cap Russell 2000 Index, which still managed a double-digit climb over the last 12 months, returning a solid 11.5%.
- Domestic bond indexes' results were mixed throughout the year but still managed to deliver positive annual results. While the performance spread was narrow, investment-grade corporate bonds led bond index results for the year, returning a muted 2.1%. The government bond index lagged for the year, but was also positive, posting a return of 0.6%.
- International equity markets also delivered positive results for the trailing one-year period. The MSCI EM Index was the best international performer, returning 7.5%, while the MSCI EAFE and MSCI ACWI ex US indexes posted returns of 3.8% and 5.5%, respectively.

### Quarter Performance



### 1-Year Performance

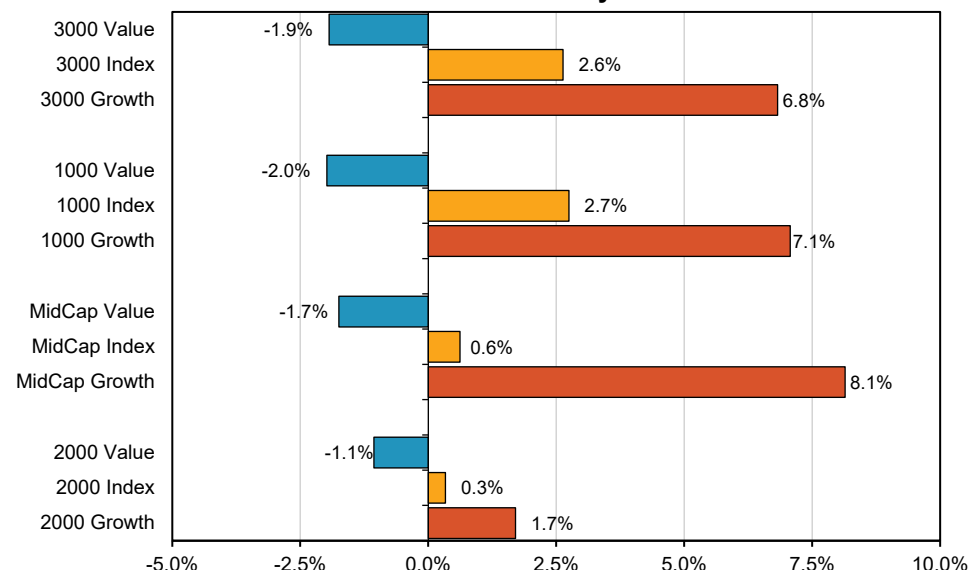


Source: Investment Metrics

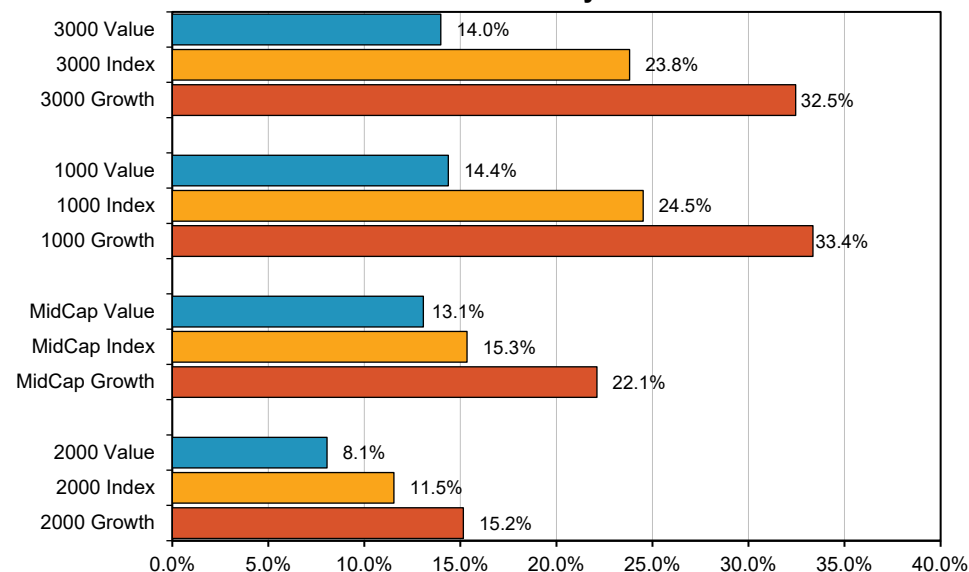


- Domestic equity benchmarks exhibited a return to their long-run trend of growth style companies vastly outperforming value during the fourth quarter. This theme was relatively consistent across the capitalization spectrum with growth benchmarks dominating performance results while value benchmarks each posted negative returns for the quarter.
- The broadest disparity between growth and value was visible in the mid-cap index. The Russell Mid Cap Value Index return of -1.7% trailed the Russell Mid Cap Growth Index return of 8.1%, a performance span of nearly 10%. The Russell Mid Cap Growth Index was also the best performing segment of the equity market during the quarter. Conversely, the worst performing segment of the market was large cap value which returned a disappointing -2.0% during the fourth quarter.
- This quarter's ascension of the growth indexes widened their performance gaps relative to the value indexes for the trailing year. The Russell 1000 Growth Index amassed a staggering 33.4% for the year, leading the way among style and market capitalization index performance. Much of the year's strong performance has been attributable to the emergence of the "Magnificent 7" stocks (Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia, and Tesla) which have dominated the large-cap core and growth indexes and the headlines over the past several years. The 10 largest stocks in the Russell 1000 Index have contributed more than 50% of the index's total performance over the trailing 12-month period. The weakest performing index for the year was the Russell 2000 Value Index, which still climbed 8.1%.
- The strength of growth sectors is also evident in the trailing one-year period with the chart on the right showing growth benchmarks at all capitalization ranges outpacing their value counterparts. The performance gap between the Russell 1000 Growth Index and the Russell 1000 Value Index was nearly 20% and the gaps for mid- and small-cap indexes were narrower, but still wide.

**Quarter Performance - Russell Style Series**



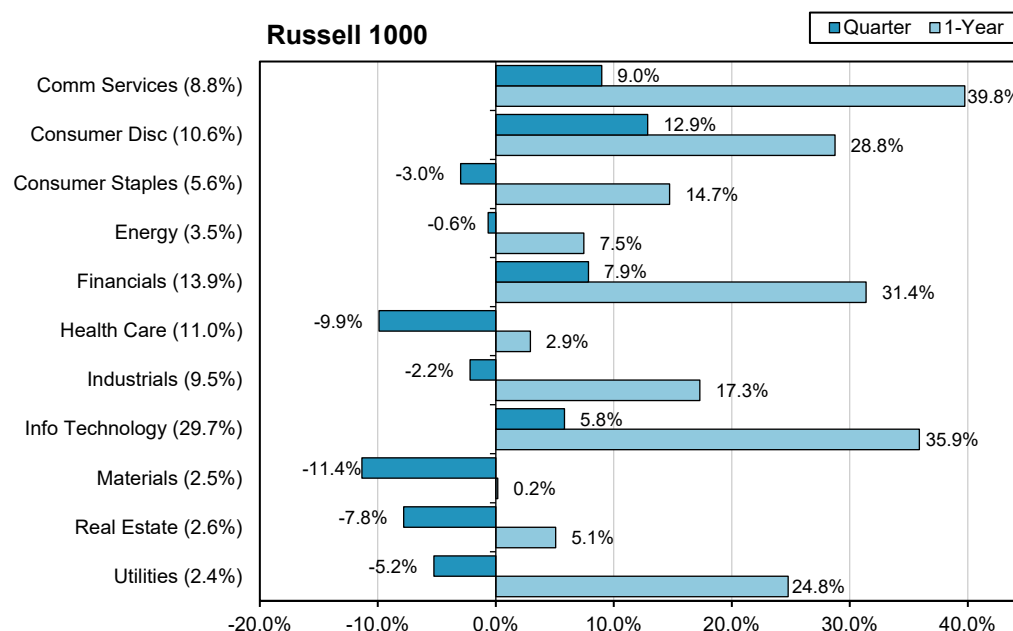
**1-Year Performance - Russell Style Series**



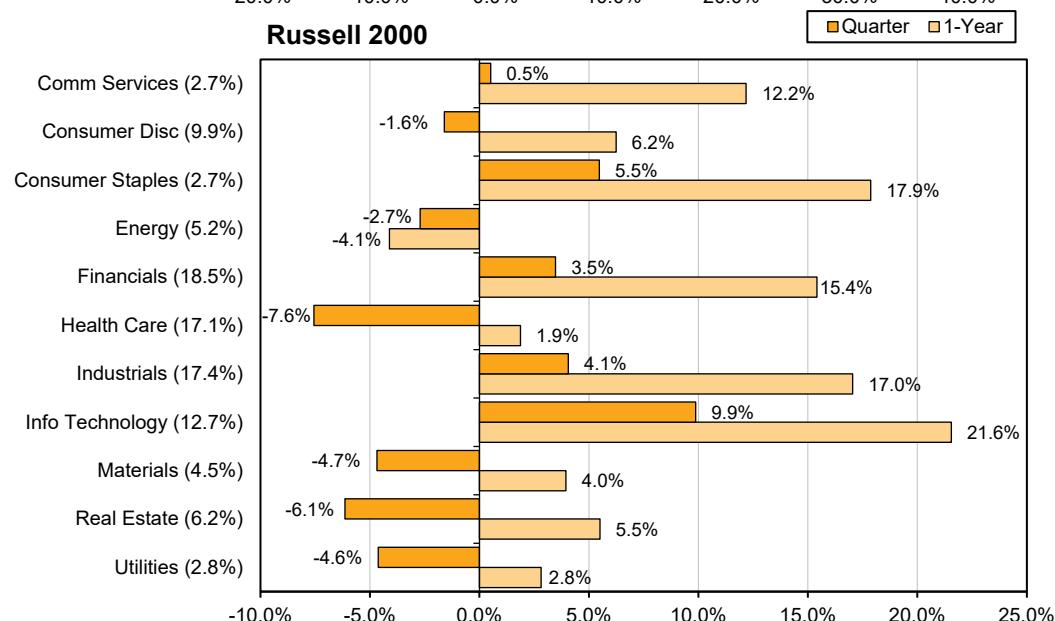
Source: Investment Metrics

- Economic sector performance delivered mixed results in the fourth quarter as just four of the 11 economic sectors moved higher in the large-cap index. While performance during the year could be characterized by broader participation in the domestic equity markets, this was not the case during the fourth quarter as only the communication services, consumer discretionary, financials, and information technology sectors managed to post positive returns. Within the large cap index, consumer discretionary stocks led the way, collectively returning 12.9% for the quarter while the materials sector struggled, falling -11.4% during the period.
- Full year results during 2024 showcased strong performance across the economic sector classifications. Communication services narrowly outpaced information technology for the year, posting returns of 39.8% and 35.9%, respectively, with financials coming in third with a return of 31.4%. While all sectors posted positive returns for the year, the broad index's strong performance during 2024 was largely driven by three of the five most heavily weighted index sectors.
- Similar to the large cap benchmark, just five of the 11 small-cap economic sectors gained value during the quarter. Communication services, consumer staples, financials, industrials, and information technology led the way with information technology as the best performing sector during the quarter. Health care faltered as the worst-performing sector with a return of -7.6% during the quarter, followed closely by real estate, which finished the quarter with a return of -6.1%.
- Despite their struggles during the most recent quarter, small-cap stocks delivered strong results for the year. Ten small-cap sectors advanced higher during the trailing one-year period, making energy the lone negative performer over the period. The sector's -2.7% return during the fourth quarter pushed the sector's performance to -4.1% for the trailing year. Information technology (up 21.6%) was the only sector to cross the 20% return threshold, but four others also amassed double digit positive returns for the calendar year.

**Russell 1000**



**Russell 2000**



Source: Morningstar Direct  
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of December 31, 2024

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.6%	7.6%	30.7%	Information Technology
NVIDIA Corp	5.8%	10.6%	171.2%	Information Technology
Microsoft Corp	5.8%	-1.8%	12.9%	Information Technology
Amazon.com Inc	3.8%	17.7%	44.4%	Consumer Discretionary
Meta Platforms Inc Class A	2.4%	2.4%	66.0%	Communication Services
Tesla Inc	2.1%	54.4%	62.5%	Consumer Discretionary
Alphabet Inc Class A	2.1%	14.3%	36.0%	Communication Services
Broadcom Inc	2.0%	34.7%	110.4%	Information Technology
Alphabet Inc Class C	1.7%	14.0%	35.6%	Communication Services
Berkshire Hathaway Inc Class B	1.5%	-1.5%	27.1%	Financials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Astera Labs Inc	0.0%	152.8%	N/A	Information Technology
AppLovin Corp Ordinary Shares	0.2%	148.1%	712.6%	Information Technology
Trump Media & Technology Group	0.0%	112.2%	N/A	Communication Services
Palantir Technologies Inc Ordinary	0.3%	103.3%	340.5%	Information Technology
SoFi Technologies Inc Ordinary Shares	0.0%	95.9%	54.8%	Financials
Amer Sports Inc	0.0%	75.3%	N/A	Consumer Discretionary
MicroStrategy Inc	0.1%	71.8%	358.5%	Information Technology
United Airlines Holdings Inc	0.1%	70.2%	135.3%	Industrials
New Fortress Energy Inc	0.0%	66.3%	-59.3%	Utilities
Twilio Inc Class A	0.0%	65.7%	42.5%	Information Technology

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Capri Holdings Ltd	0.0%	-50.4%	-58.1%	Consumer Discretionary
Celanese Corp Class A	0.0%	-48.8%	-54.6%	Materials
Rocket Companies Inc Ordinary	0.0%	-41.3%	-22.2%	Financials
Enphase Energy Inc	0.0%	-39.2%	-48.0%	Information Technology
Moderna Inc	0.0%	-37.8%	-58.2%	Health Care
Acadia Healthcare Co Inc	0.0%	-37.5%	-49.0%	Health Care
Viking Therapeutics Inc	0.0%	-36.4%	116.2%	Health Care
10x Genomics Inc Ordinary	0.0%	-36.4%	-74.3%	Health Care
Monolithic Power Systems Inc	0.1%	-35.9%	-5.6%	Information Technology
The AES Corp	0.0%	-35.1%	-30.3%	Utilities

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
FTAI Aviation Ltd	0.5%	8.6%	214.7%	Industrials
Sprouts Farmers Market Inc	0.5%	15.1%	164.1%	Consumer Staples
Insmed Inc	0.4%	-5.4%	122.8%	Health Care
Vaxcyte Inc Ordinary Shares	0.4%	-28.4%	30.4%	Health Care
Credo Technology Group Holding Ltd	0.4%	118.2%	245.2%	Information Technology
Applied Industrial Technologies Inc	0.3%	7.5%	39.7%	Industrials
Mueller Industries Inc	0.3%	7.4%	70.5%	Industrials
Rocket Lab USA Inc	0.3%	161.8%	360.6%	Industrials
Fluor Corp	0.3%	3.4%	25.9%	Industrials
IonQ Inc Class A	0.3%	377.9%	237.1%	Information Technology

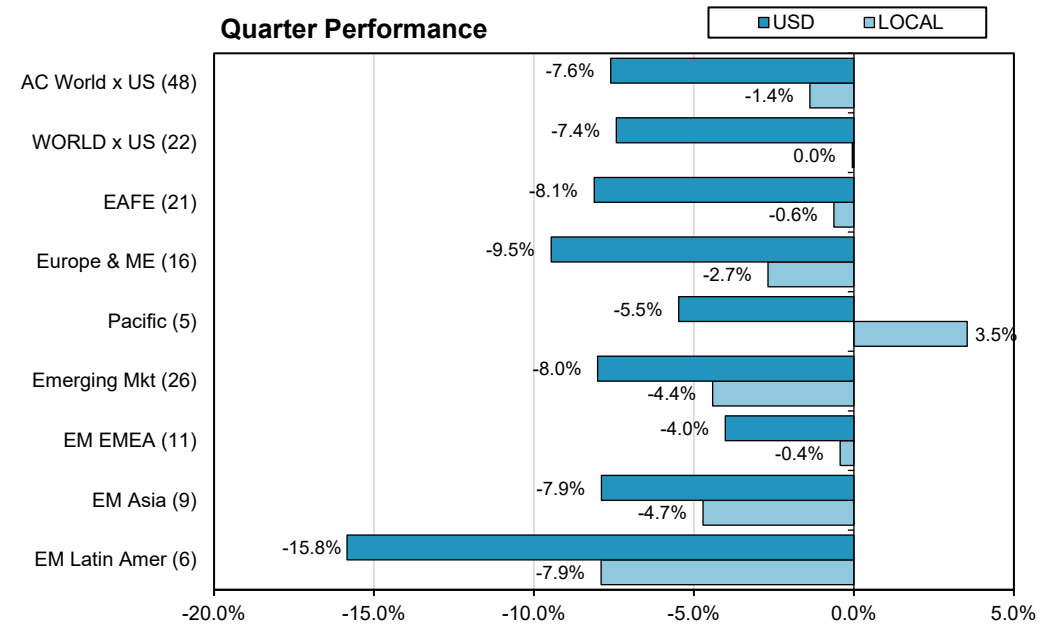
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Rigetti Computing Inc	0.1%	1848.7%	1449.4%	Information Technology
D-Wave Quantum Inc.	0.0%	754.6%	854.4%	Information Technology
Scholar Rock Holding Corp	0.1%	439.6%	129.9%	Health Care
IonQ Inc Class A	0.3%	377.9%	237.1%	Information Technology
SoundHound AI Inc Ordinary Shares	0.2%	325.8%	835.8%	Information Technology
Kodiak Sciences Inc	0.0%	281.2%	227.3%	Health Care
The RealReal Inc	0.0%	248.1%	443.8%	Consumer Discretionary
SES AI Corp	0.0%	242.3%	19.7%	Industrials
Poseida Therapeutics Inc Ordinary	0.0%	235.7%	185.7%	Health Care
Archer Aviation Inc Class A	0.1%	221.8%	58.8%	Industrials

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Q32 Bio Inc	0.0%	-92.3%	0.0%	Health Care
Cassava Sciences Inc	0.0%	-92.0%	-89.5%	Health Care
Applied Therapeutics Inc	0.0%	-89.9%	-74.4%	Health Care
Perspective Therapeutics Inc	0.0%	-76.1%	-20.6%	Health Care
Keros Therapeutics Inc	0.0%	-72.7%	-60.2%	Health Care
Bioage Labs Inc	0.0%	-72.2%	N/A	Health Care
Inovio Pharmaceuticals Inc	0.0%	-68.3%	-70.1%	Health Care
PACS Group Inc	0.0%	-67.2%	N/A	Health Care
Shattuck Labs Inc Ordinary Shares	0.0%	-65.3%	-83.0%	Health Care
Sunnova Energy International Inc	0.0%	-64.8%	-77.5%	Utilities

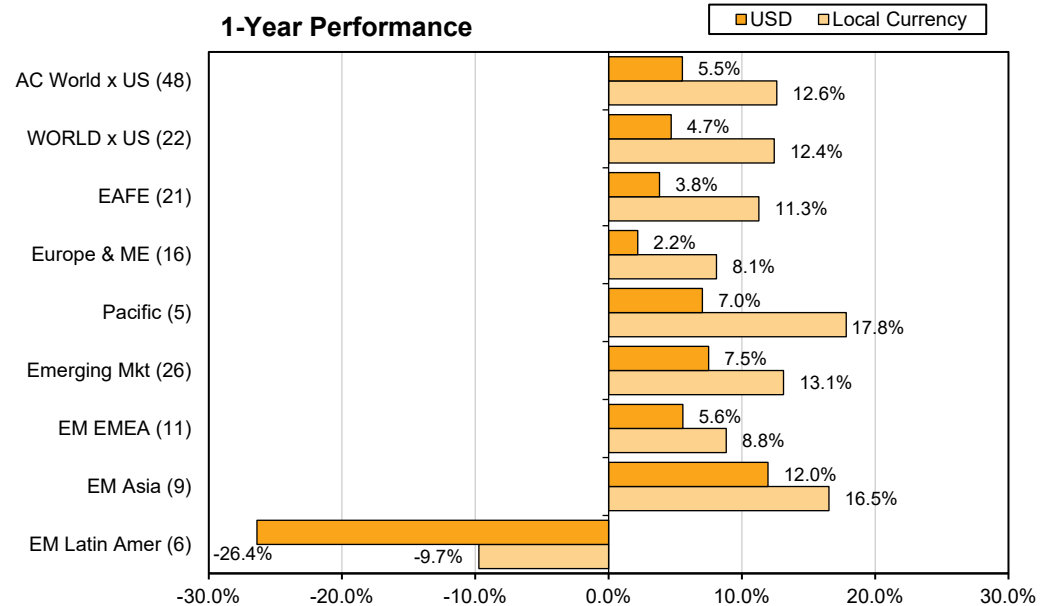
Source: Morningstar Direct

- Results in USD terms among the headline international equity indexes were sharply lower during the quarter. The strengthening USD relative to many major currencies during the quarter was a substantial headwind for the USD performance of non-US regional benchmarks' returns. The developed-market MSCI EAFE Index returned a muted -0.6% in LCL terms but fell -8.1% in USD terms. The MSCI ACWI ex-US Index pulled back -7.6% in USD and -1.4% in LCL terms for the quarter.
- Latin America continued to lag other regions during the quarter in USD terms, posting an outsized loss of -15.8%. Weakening currencies in the region put added pressure on realized performance for US investors. The MSCI Pacific benchmark was the only regional benchmark to deliver positive performance in LCL terms with a return of 3.5%, but USD strength led to a -5.5% decline in USD terms for the quarter. Regional LCL currency performance was disparate for the quarter, with some regional indexes remaining relatively flat over the final three months of the year.
- Full year results by country show Taiwan and Malaysia as the biggest winners during the year in USD terms. These two countries advanced 34.4% and 20.8%, respectively. China was not far behind with the largest economy in the emerging market world climbing 19.4% in USD terms for the year despite declining 7.7% during the fourth quarter. Much of the broad-based MSCI Emerging Market Index's returns are attributable to the health of the dominant Chinese economy, which came under pressure during the year due to troubles in the manufacturing and commercial property sectors.
- Much like domestic markets, trailing one-year results for international developed and emerging markets benchmarks were strongly positive. Higher LCL versus USD returns for most international benchmarks demonstrate the USD's relative strength over the trailing one-year period, which represents a drag on results for US investors.
- Most broad and regional indexes were positive for the trailing 12 months in both USD and LCL terms. The exception to these positive results is the EM Latin America index, where negative LCL performance was exacerbated by the region's currency weakness, which led to a more severe -26.4% return in USD terms. The MSCI Pacific Index led the way with a return of 17.8% in LCL terms for the trailing year, but US investor returns were dampened to just 7.0% in USD terms.

**Quarter Performance**



**1-Year Performance**



Source: MSCI Global Index Monitor (Returns are Net)

**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of December 31, 2024

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.8%	-4.7%	11.2%
Consumer Discretionary	11.3%	-4.3%	1.4%
Consumer Staples	8.3%	-12.6%	-7.9%
Energy	3.5%	-8.3%	-10.5%
Financials	21.9%	-2.3%	20.9%
Health Care	12.4%	-14.1%	-1.5%
Industrials	17.8%	-6.4%	9.6%
Information Technology	8.8%	-7.2%	3.8%
Materials	6.1%	-17.8%	-12.9%
Real Estate	2.0%	-13.4%	-3.9%
Utilities	3.2%	-12.8%	-4.1%
<b>Total</b>	<b>100.0%</b>	<b>-8.1%</b>	<b>3.8%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.9%	-6.8%	12.4%
Consumer Discretionary	11.2%	-8.1%	4.6%
Consumer Staples	7.0%	-12.4%	-7.8%
Energy	5.0%	-7.9%	-3.5%
Financials	23.7%	-2.8%	17.5%
Health Care	8.8%	-13.9%	-1.4%
Industrials	14.0%	-7.1%	7.5%
Information Technology	13.5%	-1.8%	13.3%
Materials	6.3%	-17.2%	-12.6%
Real Estate	1.8%	-11.5%	-1.7%
Utilities	3.0%	-12.8%	-2.0%
<b>Total</b>	<b>100.0%</b>	<b>-7.6%</b>	<b>5.5%</b>

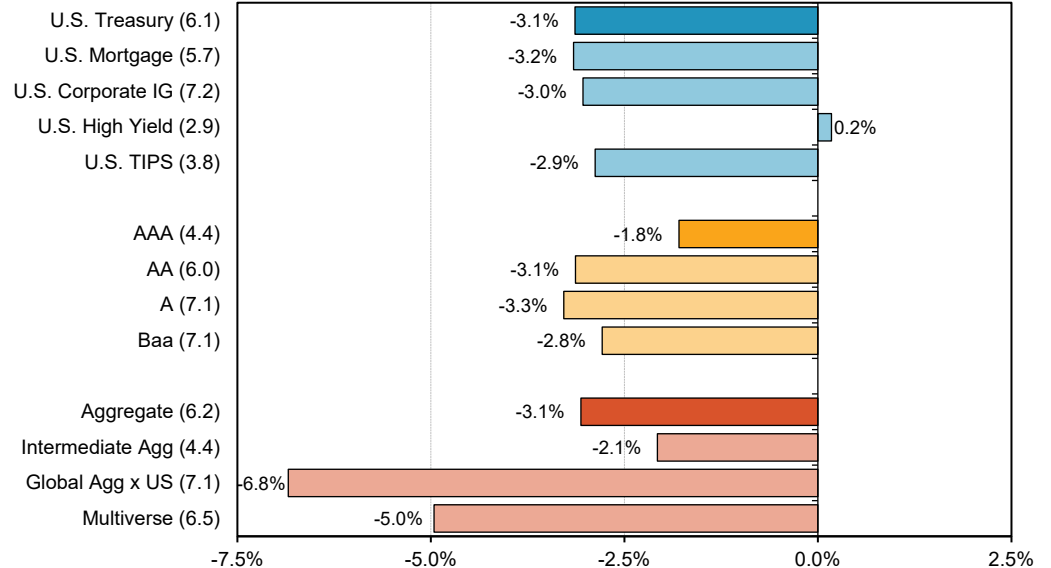
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	9.4%	-8.1%	15.9%
Consumer Discretionary	13.1%	-14.5%	11.8%
Consumer Staples	4.8%	-13.9%	-11.1%
Energy	4.6%	-14.5%	-5.9%
Financials	23.7%	-5.0%	11.0%
Health Care	3.5%	-11.7%	-0.9%
Industrials	6.6%	-10.9%	0.6%
Information Technology	24.3%	1.1%	20.4%
Materials	5.7%	-18.6%	-19.6%
Real Estate	1.7%	-6.5%	3.8%
Utilities	2.7%	-14.1%	3.3%
<b>Total</b>	<b>100.0%</b>	<b>-8.0%</b>	<b>7.5%</b>

Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1- Year Return
Japan	23.2%	14.5%	-3.6%	8.3%
United Kingdom	14.9%	9.3%	-6.8%	7.5%
France	11.1%	6.9%	-10.3%	-5.3%
Switzerland	9.6%	6.0%	-11.3%	-2.0%
Germany	9.2%	5.8%	-5.7%	10.2%
Australia	7.4%	4.6%	-11.4%	1.2%
Netherlands	4.6%	2.9%	-12.4%	1.4%
Sweden	3.6%	2.2%	-14.0%	-3.7%
Denmark	2.9%	1.8%	-21.5%	-12.9%
Italy	2.8%	1.7%	-6.7%	11.3%
Spain	2.8%	1.7%	-9.2%	9.8%
Hong Kong	2.0%	1.2%	-9.8%	0.1%
Singapore	1.7%	1.0%	3.2%	32.3%
Belgium	1.0%	0.6%	-8.3%	8.5%
Finland	1.0%	0.6%	-13.1%	-7.3%
Israel	1.0%	0.6%	14.1%	38.3%
Norway	0.6%	0.4%	-5.4%	-4.3%
Ireland	0.3%	0.2%	-12.6%	14.0%
New Zealand	0.2%	0.1%	-6.0%	-1.5%
Austria	0.2%	0.1%	1.1%	18.3%
Portugal	0.2%	0.1%	-22.7%	-25.2%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>62.3%</b>	<b>-8.1%</b>	<b>3.8%</b>
Canada		8.1%	-1.8%	11.9%
<b>Total Developed Countries</b>		<b>70.4%</b>	<b>-7.4%</b>	<b>4.7%</b>
China		8.2%	-7.7%	19.4%
Taiwan		5.8%	3.3%	34.4%
India		5.8%	-11.3%	11.2%
Korea		2.7%	-19.2%	-23.4%
Saudi Arabia		1.2%	-1.5%	0.6%
Brazil		1.2%	-19.4%	-29.8%
South Africa		0.9%	-12.1%	6.7%
Mexico		0.5%	-10.6%	-27.1%
Malaysia		0.5%	-6.9%	20.8%
Indonesia		0.4%	-15.6%	-13.0%
Thailand		0.4%	-10.1%	1.3%
United Arab Emirates		0.4%	9.0%	19.6%
Qatar		0.3%	-0.2%	6.1%
Poland		0.2%	-11.5%	-6.7%
Kuwait		0.2%	1.2%	10.5%
Turkey		0.2%	-3.2%	17.8%
Philippines		0.2%	-13.9%	-0.7%
Greece		0.1%	-6.2%	8.9%
Chile		0.1%	-6.8%	-7.5%
Peru		0.1%	-9.1%	15.8%
Hungary		0.1%	-2.3%	14.0%
Czech Republic		0.0%	0.9%	4.0%
Colombia		0.0%	-0.2%	7.9%
Egypt		0.0%	-9.0%	-31.2%
<b>Total Emerging Countries</b>		<b>29.7%</b>	<b>-8.0%</b>	<b>7.5%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>-7.6%</b>	<b>5.5%</b>

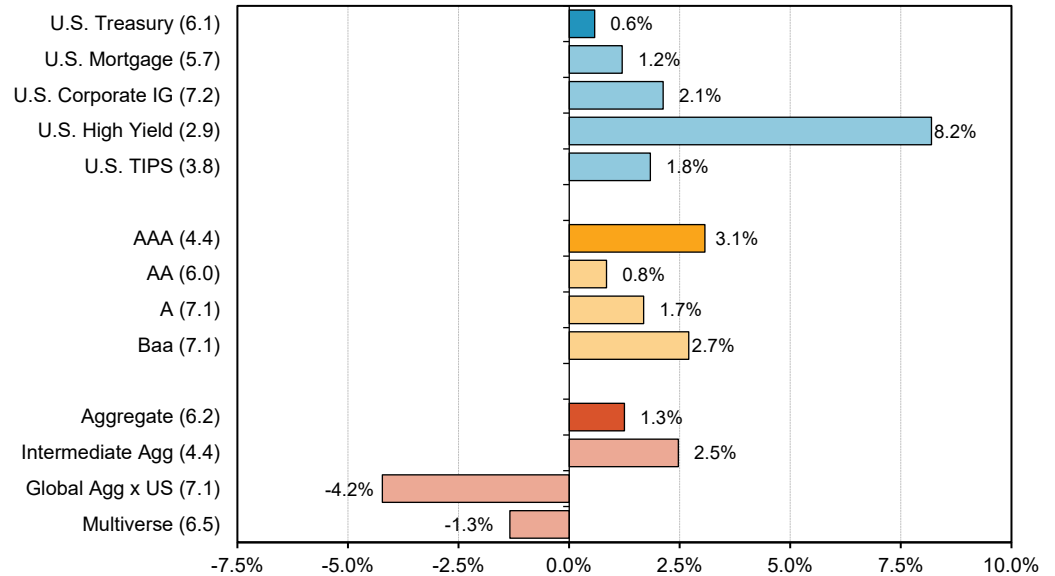
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)  
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

- Domestic fixed-income markets declined during the fourth quarter despite two additional 0.25% rate cuts by the Fed. Although the Fed's action moved short-term rates lower, longer-term yields advanced during the quarter, leading to a modest steepening of the Treasury Yield Curve. The Fed's target range is now set at 4.25%-4.50% at year-end, down a full percentage point, including the first 0.50% cut in September of 2024.
- While the Fed's first rate cut in September was initially celebrated by fixed income investors and boosted the levels of the indexes during the third quarter, many of the core indexes fell during the fourth quarter as longer-term yields advanced and worked against the Fed's short-term rate declines. Performance across the investment-grade index's segments declined with the Treasury, Mortgage-Backed and Corporate IG indexes falling in a tight range around -3.0%. Higher quality issues performed better, as BBB issues fell by -2.8%, while AAA issues fell a smaller -1.8% due in large part to their lower duration (4.4 vs. 7.1 years).
- High Yield bonds outperformed investment grade issues as longer-term yields climbed. This was primarily due to the high-yield benchmark's lower duration and higher coupon income. Despite their lower credit quality, below-investment grade issues returned just 0.2% for the quarter, but still outpaced all other broad-based investment-grade fixed income indexes.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index posted a return of 1.3%. The benchmark's sub-components also posted positive performance over the trailing 12 months with the Bloomberg US Corporate Investment Grade Index rising 2.1% and the US Mortgage Index returning 1.2%. US TIPS, which are excluded from the Bloomberg US Aggregate Bond Index, returned 1.8% for the trailing year.
- Results were mixed across credit qualities of investment grade issues. The performance of AAA issues was aided by their lower duration and returned 3.1% while AA issues returned only 0.8% for the year. High yield bonds were also the best performing segment of the market for the year, returning an outsized 8.2%, more than double any other segment of the domestic fixed income market. Results in high yield were spurred by stable credit spreads and higher coupon income.
- The Bloomberg Global Aggregate ex-US Index finished both the quarter and the year significantly weaker than its domestic benchmark counterpart. Strength in the USD was a primary driver in the international index's weak -6.8% fourth quarter performance and its -4.2% return for the calendar year.

#### Quarter Performance



#### 1-Year Performance

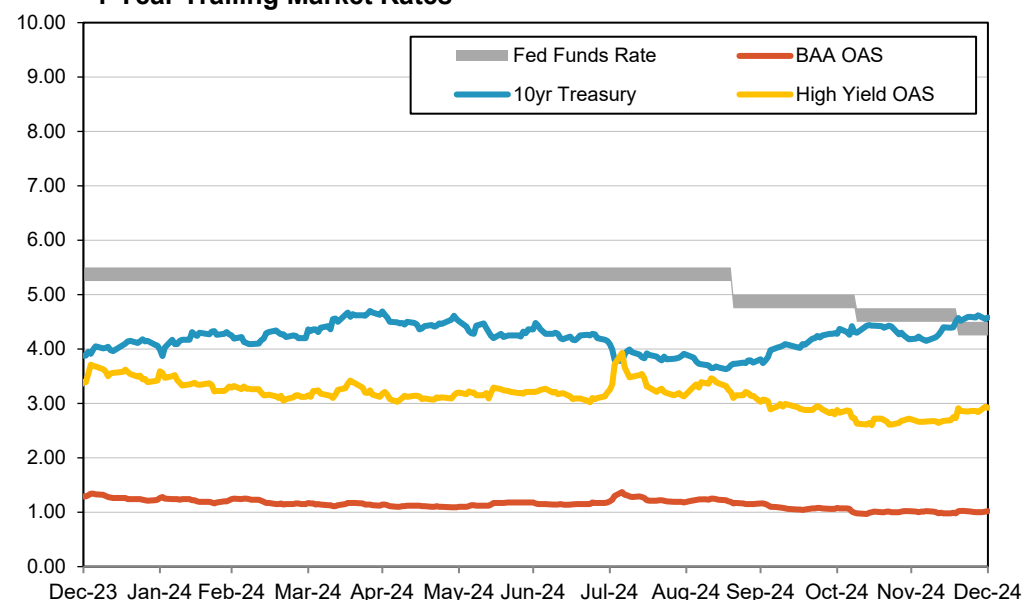


Source: Bloomberg

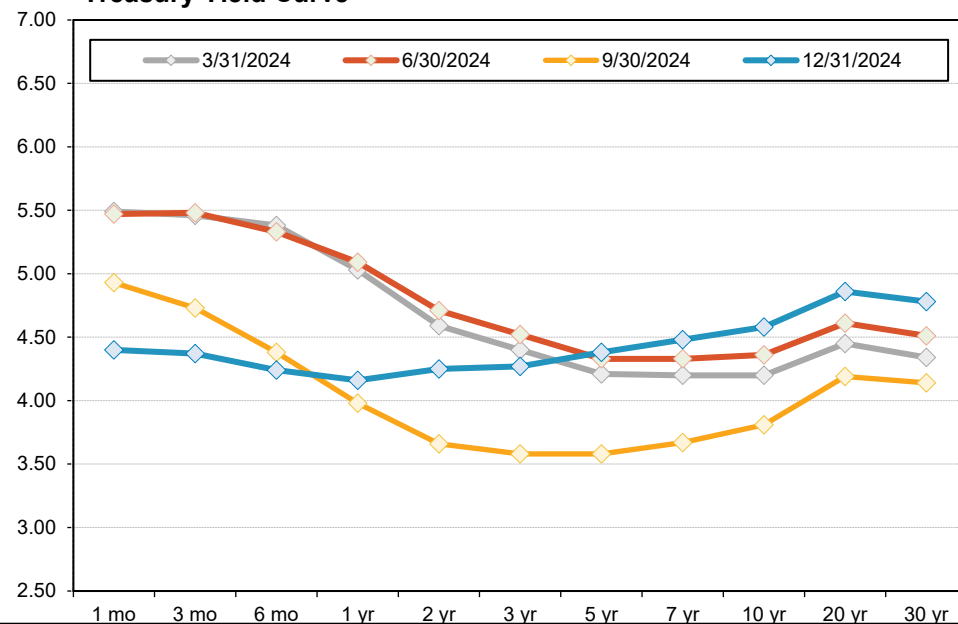


- The gray band across the graph illustrates the fed funds target rate range over the last 12 months. During the fourth quarter, the Federal Open Market Committee (FOMC) cut its policy rates by 0.50% with two successive 0.25% cuts in November and December. The target policy range now stands at 4.25-4.50%, a level not seen since January of 2023. With inflation declining and unemployment remaining largely stable, the Fed has pivoted from its restrictive monetary policy stance. The most recent FOMC press release continued to emphasize economic data-dependent outcomes while placing greater emphasis on the second part of the committee's dual mandate: full employment. The CME FedWatch tool, which forecasts rates based on fed fund futures pricing, showed a greater than 90% probability of no rate decrease at the FOMC January meeting at the time of this writing. Fed officials and market participants continue to express concern that leaving rates at their current elevated levels for an extended period could tip the US economy into a recession.
- The yield on the US 10-year Treasury (blue line of the top chart) rose 0.84% during the quarter. The bellwether benchmark rate opened the quarter at a yield of 3.74% and finished December at a yield of 4.58%, which is its highest level since May 2024.
- The red line in the top chart shows the option-adjusted spread (OAS) for BAA-rated corporate bonds. This measure quantifies the additional yield premium investors require to purchase and hold non-US Treasury issues with the lowest investment grade rating. During the quarter, the yield spread experienced a slight decline, beginning October at 1.13% and finishing December at 1.02%. High-yield OAS spreads (represented by the yellow line in the top chart) also remained relatively stable, despite a sharp spike in early August spurred by an unwinding of the yen carry trade. The high-yield OAS fell by 0.11% over the quarter from 3.03% to 2.92%. The spread measure's relative stability over the trailing year results from steady economic growth, stable monetary policy, and falling inflation readings.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. For the first time since November 2022, the quarter-end yield on the 30-year Treasury was higher than the one-month Treasury. Furthermore, the spread between the two-year yield and the 10-year yield continued to widen during the quarter, growing from 0.15% in October to 0.30% at year end. The yield curve had been inverted for much of the last two years. This 2-10-year yield curve inversion is a common heuristic used to foretell a pending recession.

**1-Year Trailing Market Rates**



**Treasury Yield Curve**



Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

[CME FedWatch Tool - CME Group](#)

[Effective Federal Funds Rate - FEDERAL RESERVE BANK of NEW YORK \(newyorkfed.org\)](#)

[ICE BofA US High Yield Index Option-Adjusted Spread \(BAMLH0A0HYM2\) | FRED | St. Louis Fed \(stlouisfed.org\)](#)

[When will the Federal Reserve start cutting interest rates? | J.P. Morgan Asset Management \(jpmorgan.com\)](#)

[U.S. Department of the Treasury](#)

[China's Economy Limpers Into 2024 – WSJ Support Site - Global Index Lens: Index Returns – MSCI](#)

[Federal Reserve issues FOMC statement](#)

[The Fed - Meeting calendars and information \(federalreserve.gov\)](#)

[The Federal Reserve's latest dot plot, explained – and what it says about interest rates | Bankrate](#)

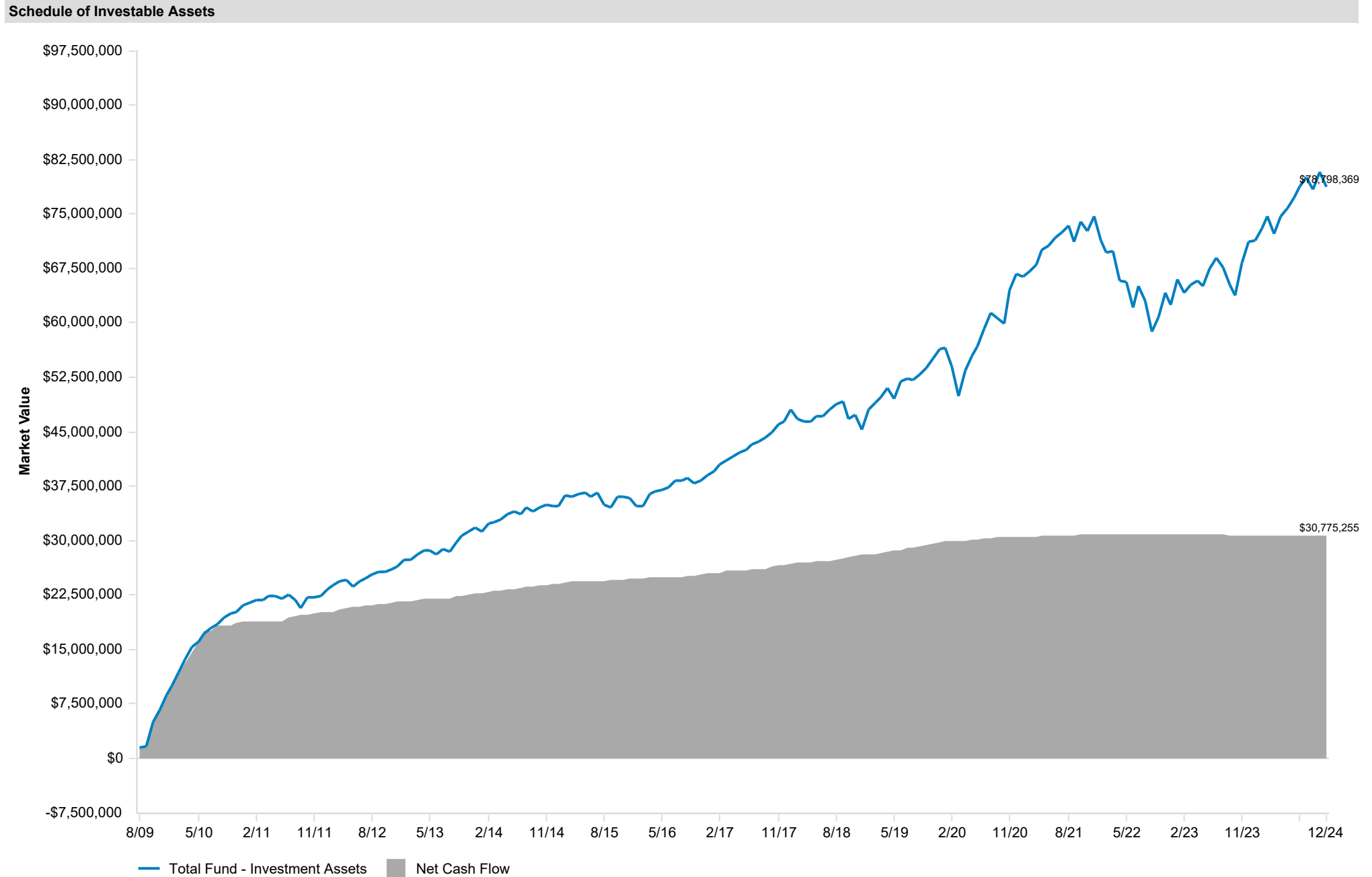
[Why Chinese banks are now vanishing \(economist.com\)](#)

[Fed rate cut: Here's what changed in the central bank's statement \(cnbc.com\)](#)

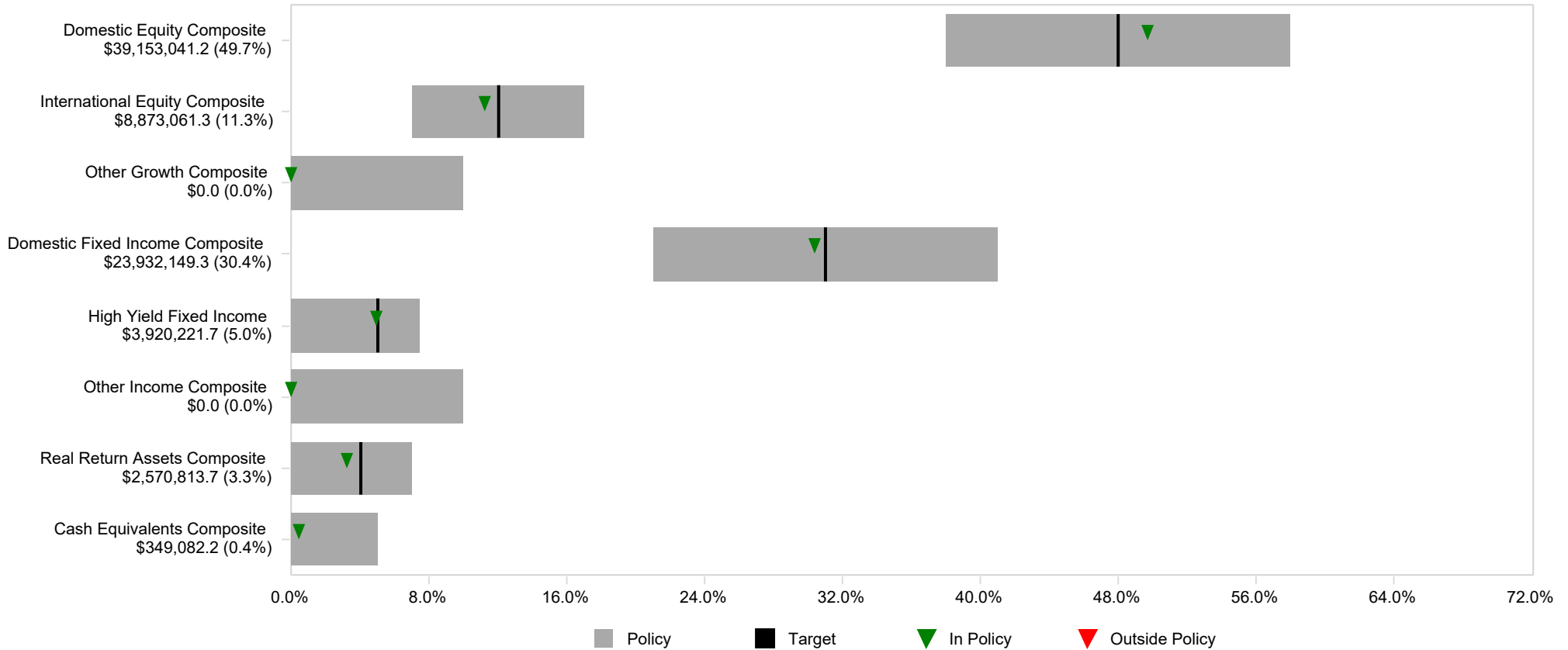
[10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity \(T10Y2Y\) | FRED | St. Louis Fed \(stlouisfed.org\)](#)

[The Fed's dot plot shows only two rate cuts in 2025, fewer than previously projected](#)





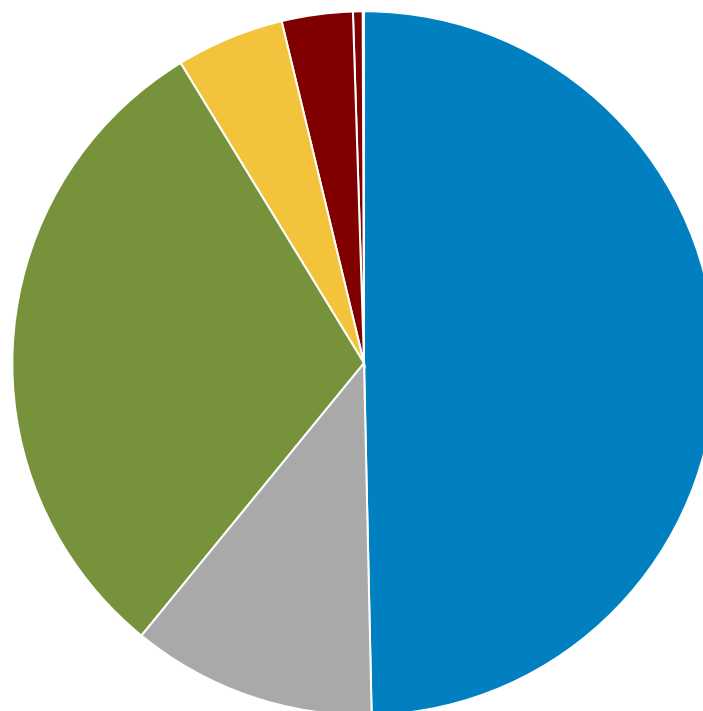
**Executive Summary**



**Asset Allocation Compliance**

	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)
<b>Total Fund - Investment Assets</b>	<b>78,798,369</b>	<b>100.0</b>	<b>100.0</b>	<b>N/A</b>	<b>N/A</b>
Domestic Equity Composite	39,153,041	49.7	48.0	38.0	58.0
International Equity Composite	8,873,061	11.3	12.0	7.0	17.0
Other Growth Composite	-	0.0	0.0	0.0	10.0
Domestic Fixed Income Composite	23,932,149	30.4	31.0	21.0	41.0
High Yield Fixed Income	3,920,222	5.0	5.0	0.0	7.5
Other Income Composite	-	0.0	0.0	0.0	10.0
Real Return Assets Composite	2,570,814	3.3	4.0	0.0	7.0
Cash Equivalents Composite	349,082	0.4	0.0	0.0	5.0

Dec-2024 : \$78,849,129

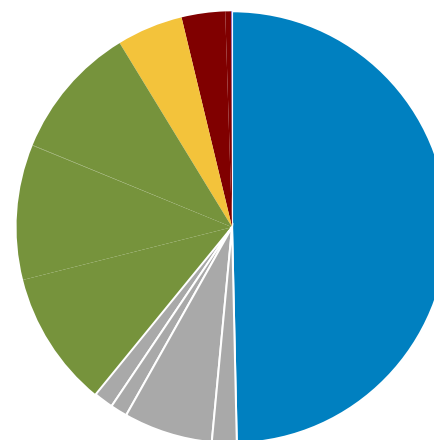
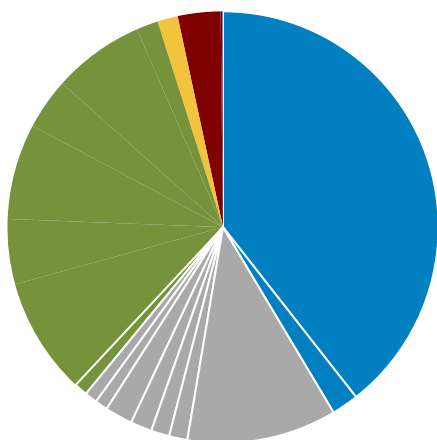


Allocation

	Market Value	Allocation
Domestic Equity Composite	39,153,041	49.7
International Equity Composite	8,873,061	11.3
Domestic Fixed Income Composite	23,932,149	30.4
High Yield Fixed Income	3,920,222	5.0
Real Return Assets Composite	2,570,814	3.3
Cash Equivalents Composite	349,082	0.4
Total Fund - Liquidity Assets	50,759	0.1

Sep-2024 : \$80,049,279

Dec-2024 : \$78,849,129



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Vanguard Total Stock Market ETF (VTI)	31,554,391	39.4	■ Vanguard Total Stock Market ETF (VTI)	39,153,041	49.7
■ Jensen Quality Growth Fund (JENYX)	1,603,814	2.0	■ Jensen Quality Growth Fund (JENYX)	-	0.0
■ Dodge & Cox International Stock I (DODFX)	-	0.0	■ Dodge & Cox International Stock I (DODFX)	1,458,164	1.8
■ Vanguard Total International Stock ETF (VXUS)	8,990,832	11.2	■ Vanguard Total International Stock ETF (VXUS)	5,261,801	6.7
■ J. O. Hambro International Select (JOHIX)	1,101,777	1.4	■ J. O. Hambro International Select (JOHIX)	-	0.0
■ Harding Loevner International Equity (HLMIX)	1,100,555	1.4	■ Harding Loevner International Equity (HLMIX)	1,002,052	1.3
■ Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	1,283,759	1.6	■ Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	1,151,044	1.5
■ Vanguard FTSE Developed Markets ETF (VEA)	1,656,755	2.1	■ Vanguard FTSE Developed Markets ETF (VEA)	-	0.0
■ Vanguard FTSE All-World ex-US Small-Cap ETF (VSS)	765,837	1.0	■ Vanguard FTSE All-World ex-US Small-Cap ETF (VSS)	-	0.0
■ Hartford Schrodgers Emerging Markets (SEMTX)	753,756	0.9	■ Hartford Schrodgers Emerging Markets (SEMTX)	-	0.0
■ iShares MSCI Emerging Markets ex China ETF (EMXC)	796,752	1.0	■ iShares MSCI Emerging Markets ex China ETF (EMXC)	-	0.0
■ Baird Core Plus (BCOIX)	7,020,147	8.8	■ Baird Core Plus (BCOIX)	8,020,900	10.2
■ DoubleLine Core Fixed Income (DBLFX)	3,896,056	4.9	■ DoubleLine Core Fixed Income (DBLFX)	7,955,453	10.1
■ PGIM Total Return Bond (PTRQX)	5,731,714	7.2	■ PGIM Total Return Bond (PTRQX)	21,478	0.0
■ Voya Intermediate Bond (IIBZX)	3,068,114	3.8	■ Voya Intermediate Bond (IIBZX)	9,932	0.0
■ iShares Core US Aggregate Bond ETF (AGG)	5,486,201	6.9	■ iShares Core US Aggregate Bond ETF (AGG)	7,924,385	10.1
■ iShares Intermediate-Term Corporate Bond ETF (IGIB)	1,302,012	1.6	■ iShares Intermediate-Term Corporate Bond ETF (IGIB)	-	0.0
■ BBH Limited Duration (BBBIX)	213	0.0	■ BBH Limited Duration (BBBIX)	1	0.0
■ MainStay MacKay High Yield Corp Bond Fund (MHYSX)	1,226,321	1.5	■ MainStay MacKay High Yield Corp Bond Fund (MHYSX)	3,920,222	5.0
■ Boyd Watterson GSA Fund	2,566,497	3.2	■ Boyd Watterson GSA Fund	2,570,814	3.3
■ First American Gov't Obligation - Z- (FGZXX)	93,597	0.1	■ First American Gov't Obligation - Z- (FGZXX)	349,082	0.4
■ Liquidity Assets - First American Gov't Obligation - Z (FGZXX)	50,180	0.1	■ Liquidity Assets - First American Gov't Obligation - Z (FGZXX)	50,759	0.1

**Financial Reconciliation**  
**Total Fund - Combined Assets**  
**1 Quarter Ending December 31, 2024**

Financial Reconciliation Quarter to Date								
	Market Value 10/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2024
<b>Total Fund - Combined Assets</b>	<b>80,049,279</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-8,059</b>	<b>-5,036</b>	<b>-1,187,055</b>	<b>78,849,129</b>
<b>Total Fund - Investment Assets</b>	<b>79,999,099</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-8,059</b>	<b>-5,033</b>	<b>-1,187,638</b>	<b>78,798,369</b>
<b>Total Equity Composite</b>	<b>49,608,228</b>	<b>-1,089,701</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-492,425</b>	<b>48,026,103</b>
<b>Domestic Equity Composite</b>	<b>33,158,204</b>	<b>5,297,615</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>697,222</b>	<b>39,153,041</b>
Vanguard Total Stock Market ETF (VTI)	31,554,391	6,902,555	-	-	-	-	696,095	39,153,041
Jensen Quality Growth Fund (JENYX)	1,603,814	-1,604,940	-	-	-	-	1,126	-
<b>International Equity Composite</b>	<b>16,450,024</b>	<b>-6,387,316</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-1,189,647</b>	<b>8,873,061</b>
Dodge & Cox International Stock I (DODFX)	-	1,500,000	-	-	-	-	-41,836	1,458,164
Vanguard Total International Stock ETF (VXUS)	8,990,832	-3,121,139	-	-	-	-	-607,893	5,261,801
J. O. Hambro International Select (JOHIX)	1,101,777	-1,019,045	-	-	-	-	-82,732	-
Harding Loevner International Equity (HLMIX)	1,100,555	-	-	-	-	-	-98,503	1,002,052
Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	1,283,759	-	-	-	-	-	-132,715	1,151,044
Vanguard FTSE Developed Markets ETF (VEA)	1,656,755	-1,549,238	-	-	-	-	-107,517	-
Vanguard FTSE All-World ex-US Small-Cap ETF (VSS)	765,837	-718,065	-	-	-	-	-47,772	-
Hartford Schrodgers Emerging Markets (SEMTX)	753,756	-721,039	-	-	-	-	-32,717	-
iShares MSCI Emerging Markets ex China ETF (EMXC)	796,752	-758,791	-	-	-	-	-37,962	-
<b>Total Fixed Income Composite</b>	<b>27,730,777</b>	<b>831,363</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-709,769</b>	<b>27,852,371</b>
<b>Domestic Fixed Income Composite</b>	<b>27,730,777</b>	<b>-1,868,637</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-1,929,990</b>	<b>23,932,149</b>
Baird Core Plus (BCOIX)	7,020,147	1,200,000	-	-	-	-	-199,247	8,020,900
DoubleLine Core Fixed Income (DBLFX)	3,896,056	4,200,000	-	-	-	-	-140,603	7,955,453
PGIM Total Return Bond (PTRQX)	5,731,714	-5,628,634	-	-	-	-	-81,602	21,478
Voya Intermediate Bond (IIBZX)	3,068,114	-2,999,594	-	-	-	-	-58,587	9,932
iShares Core US Aggregate Bond ETF (AGG)	5,486,201	2,638,942	-	-	-	-	-200,758	7,924,385
iShares Intermediate-Term Corporate Bond ETF (IGIB)	1,302,012	-1,279,138	-	-	-	-	-22,874	-
BBH Limited Duration (BBBIX)	213	-214	-	-	-	-	2	1
<b>High Yield Fixed Income</b>	<b>-</b>	<b>2,700,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,220,222</b>	<b>3,920,222</b>
MainStay MacKay High Yield Corp Bond Fund (MHYSX)	1,226,321	2,700,000	-	-	-	-	-6,099	3,920,222
<b>Real Return Assets Composite</b>	<b>2,566,497</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-8,059</b>	<b>-</b>	<b>12,376</b>	<b>2,570,814</b>
Boyd Watterson GSA Fund	2,566,497	-	-	-	-8,059	-	12,376	2,570,814
<b>Cash Equivalents Composite</b>	<b>93,597</b>	<b>258,338</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-5,033</b>	<b>2,180</b>	<b>349,082</b>
First American Government Obligation - Z- (FGZXX)	93,597	258,338	-	-	-	-5,033	2,180	349,082
<b>Total Fund - Liquidity Assets</b>	<b>50,180</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-3</b>	<b>582</b>	<b>50,759</b>
First American Government Obligation - Z (FGZXX)	50,180	-	-	-	-	-3	582	50,759

**Financial Reconciliation**  
**Total Fund - Combined Assets**  
Year To Date Ending December 31, 2024

Financial Reconciliation Year to Date								
	Market Value 01/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2024
<b>Total Fund - Combined Assets</b>	<b>71,304,208</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-32,842</b>	<b>-18,967</b>	<b>7,596,730</b>	<b>78,849,129</b>
<b>Total Fund - Investment Assets</b>	<b>71,255,923</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-32,842</b>	<b>-18,955</b>	<b>7,594,243</b>	<b>78,798,369</b>
<b>Domestic Equity Composite</b>	<b>27,773,763</b>	<b>5,090,712</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6,288,566</b>	<b>39,153,041</b>
Vanguard Total Stock Market ETF (VTI)	26,353,956	6,695,652	-	-	-	-	6,103,434	39,153,041
Jensen Quality Growth Fund (JENYX)	1,419,807	-1,604,940	-	-	-	-	185,133	-
<b>International Equity Composite</b>	<b>14,728,697</b>	<b>-6,566,201</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>710,564</b>	<b>8,873,061</b>
Dodge & Cox International Stock I (DODFX)	-	1,500,000	-	-	-	-	-41,836	1,458,164
Vanguard Total International Stock ETF (VXUS)	8,049,253	-3,257,140	-	-	-	-	469,688	5,261,801
J. O. Hambro International Select (JOHIX)	1,014,668	-1,019,045	-	-	-	-	4,377	-
Harding Loevner International Equity (HLMIX)	989,927	-	-	-	-	-	12,125	1,002,052
Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	1,094,288	-	-	-	-	-	56,755	1,151,044
Vanguard FTSE Developed Markets ETF (VEA)	1,502,719	-1,577,209	-	-	-	-	74,491	-
Vanguard FTSE All-World ex-US Small-Cap ETF (VSS)	699,382	-726,575	-	-	-	-	27,192	-
Hartford Schroders Emerging Markets (SEMTX)	656,024	-721,039	-	-	-	-	65,015	-
iShares MSCI Emerging Markets ex China ETF (EMXC)	722,436	-765,192	-	-	-	-	42,757	-
<b>Total Fixed Income Composite</b>	<b>25,647,988</b>	<b>1,501,141</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>703,241</b>	<b>27,852,371</b>
<b>Domestic Fixed Income Composite</b>	<b>25,647,988</b>	<b>-1,198,859</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-516,980</b>	<b>23,932,149</b>
Baird Core Plus (BCOIX)	6,663,899	1,200,000	-	-	-	-	157,001	8,020,900
DoubleLine Core Fixed Income (DBLFX)	2,886,763	5,035,000	-	-	-	-	33,690	7,955,453
PGIM Total Return Bond (PTRQX)	5,415,104	-5,628,634	-	-	-	-	235,009	21,478
Voya Intermediate Bond (IIBZX)	2,898,133	-2,999,594	-	-	-	-	111,393	9,932
iShares Core US Aggregate Bond ETF (AGG)	5,376,770	2,509,852	-	-	-	-	37,764	7,924,385
iShares Intermediate-Term Corporate Bond ETF (IGIB)	1,260,324	-1,315,263	-	-	-	-	54,939	-
BBH Limited Duration (BBBIX)	208	-219	-	-	-	-	12	1
<b>High Yield Fixed Income</b>	<b>-</b>	<b>2,700,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,220,222</b>	<b>3,920,222</b>
MainStay MacKay High Yield Corp Bond Fund (MHYSX)	1,146,788	2,700,000	-	-	-	-	73,434	3,920,222
<b>Real Return Assets Composite</b>	<b>2,733,350</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-32,842</b>	<b>-</b>	<b>-129,695</b>	<b>2,570,814</b>
Boyd Watterson GSA Fund	2,733,350	-	-	-	-32,842	-	-129,695	2,570,814
<b>Cash Equivalents Composite</b>	<b>372,124</b>	<b>-25,653</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-18,955</b>	<b>21,566</b>	<b>349,082</b>
First American Government Obligation - Z- (FGZXX)	372,124	-25,653	-	-	-	-18,955	21,566	349,082
<b>Total Fund - Liquidity Assets</b>	<b>48,285</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-12</b>	<b>2,486</b>	<b>50,759</b>
First American Government Obligation - Z (FGZXX)	48,285	-	-	-	-	-12	2,486	50,759

**Financial Reconciliation**  
**Total Fund - Combined Assets**  
July 1, 2024 To December 31, 2024

Financial Reconciliation Fiscal Year to Date								
	Market Value 07/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2024
<b>Total Fund - Combined Assets</b>	<b>75,815,859</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-16,104</b>	<b>-9,862</b>	<b>3,059,236</b>	<b>78,849,129</b>
<b>Total Fund - Investment Assets</b>	<b>75,766,318</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-16,104</b>	<b>-9,856</b>	<b>3,058,012</b>	<b>78,798,369</b>
<b>Domestic Equity Composite</b>	<b>31,325,592</b>	<b>5,191,864</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,635,585</b>	<b>39,153,041</b>
Vanguard Total Stock Market ETF (VTI)	29,824,775	6,796,804	-	-	-	-	2,531,463	39,153,041
Jensen Quality Growth Fund (JENYX)	1,500,817	-1,604,940	-	-	-	-	104,122	-
<b>International Equity Composite</b>	<b>15,464,691</b>	<b>-6,433,063</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-158,566</b>	<b>8,873,061</b>
Dodge & Cox International Stock I (DODFX)	-	1,500,000	-	-	-	-	-41,836	1,458,164
Vanguard Total International Stock ETF (VXUS)	8,374,223	-3,158,954	-	-	-	-	46,532	5,261,801
J. O. Hambro International Select (JOHIX)	1,051,438	-1,019,045	-	-	-	-	-32,392	-
Harding Loevner International Equity (HLMIX)	1,005,568	-	-	-	-	-	-3,515	1,002,052
Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	1,280,444	-	-	-	-	-	-129,401	1,151,044
Vanguard FTSE Developed Markets ETF (VEA)	1,550,404	-1,553,768	-	-	-	-	3,364	-
Vanguard FTSE All-World ex-US Small-Cap ETF (VSS)	714,339	-721,466	-	-	-	-	7,126	-
Hartford Schroders Emerging Markets (SEMTX)	716,425	-721,039	-	-	-	-	4,614	-
iShares MSCI Emerging Markets ex China ETF (EMXC)	771,850	-758,791	-	-	-	-	-13,059	-
<b>Total Fixed Income Composite</b>	<b>25,608,062</b>	<b>1,602,748</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>641,560</b>	<b>27,852,371</b>
<b>Domestic Fixed Income Composite</b>	<b>25,608,062</b>	<b>-1,097,252</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-578,661</b>	<b>23,932,149</b>
Baird Core Plus (BCOIX)	6,671,897	1,200,000	-	-	-	-	149,002	8,020,900
DoubleLine Core Fixed Income (DBLFX)	2,889,310	5,035,000	-	-	-	-	31,143	7,955,453
PGIM Total Return Bond (PTRQX)	5,447,983	-5,628,634	-	-	-	-	202,130	21,478
Voya Intermediate Bond (IIBZX)	2,915,023	-2,999,594	-	-	-	-	94,504	9,932
iShares Core US Aggregate Bond ETF (AGG)	5,258,670	2,589,288	-	-	-	-	76,427	7,924,385
iShares Intermediate-Term Corporate Bond ETF (IGIB)	1,242,389	-1,293,095	-	-	-	-	50,707	-
BBH Limited Duration (BBBIX)	211	-216	-	-	-	-	7	1
<b>High Yield Fixed Income</b>	<b>-</b>	<b>2,700,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,220,222</b>	<b>3,920,222</b>
MainStay MacKay High Yield Corp Bond Fund (MHYSX)	1,182,579	2,700,000	-	-	-	-	37,643	3,920,222
<b>Real Return Assets Composite</b>	<b>2,656,138</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-16,104</b>	<b>-</b>	<b>-69,220</b>	<b>2,570,814</b>
Boyd Watterson GSA Fund	2,656,138	-	-	-	-16,104	-	-69,220	2,570,814
<b>Cash Equivalents Composite</b>	<b>711,835</b>	<b>-361,549</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-9,856</b>	<b>8,652</b>	<b>349,082</b>
First American Government Obligation - Z- (FGZXX)	711,835	-361,549	-	-	-	-9,856	8,652	349,082
<b>Total Fund - Liquidity Assets</b>	<b>49,541</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-6</b>	<b>1,224</b>	<b>50,759</b>
First American Government Obligation - Z (FGZXX)	49,541	-	-	-	-	-6	1,224	50,759

# Asset Allocation & Performance

## Total Fund

As of December 31, 2024

	Allocation		Performance(%)																
	Market Value \$	%	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR		Inception	Inception Date	
Total Fund - Combined Assets	78,849,129	100.0																	
Total Fund - Investment Assets (Net of Fees)	78,798,369	99.9	-1.49	(74)	10.61	(55)	10.61	(55)	1.86	(81)	6.57	(68)	6.66	(66)	6.94	(54)	7.79	(72)	Sep-2009
Blended Benchmark			-1.81		10.63		10.63		2.46		6.30		6.46		6.47		7.54		
All Public Plans-Total Fund Median			-0.95		10.94		10.94		2.71		6.96		7.01		7.03		8.13		
Population			320		312		312		298		286		269		242		182		
Total Equity Composite	48,026,103	60.9	-1.04		16.47		16.47		-		-		-		-		23.25	Oct-2023	
Domestic Equity Composite	39,153,041	49.7	2.37		23.04		23.04		-		-		-		-		29.28	Oct-2023	
Vanguard Total Stock Market ETF (VTI)	39,153,041	49.7	2.56	(17)	23.66	(28)	23.66	(28)	7.85	(31)	13.79	(25)	13.10	(21)	12.49	(18)	20.36	(26)	Apr-2020
Russell 3000 Index			2.63		23.81		23.81		8.01		13.86		13.16		12.55		20.45		
All Cap Blend Median			0.82		17.75		17.75		5.82		11.27		10.75		10.40		18.85		
Population			2,912		2,848		2,848		2,707		2,578		2,439		2,202		2,579		
International Equity Composite	8,873,061	11.3	-8.57		3.29		3.29		-		-		-		-		11.11	Oct-2023	
Dodge & Cox International Stock I (DODFX)	1,458,164	1.8	-		-		-		-		-		-		-		-3.41	(86)	Dec-2024
MSCI EAFE Value Index (Net)			-7.12		5.68		5.68		5.88		5.09		3.45		4.31		-1.79		
Foreign Large Value Median			-7.35		4.49		4.49		3.43		4.61		3.31		4.39		-2.51		
Population			416		415		415		396		372		358		324		420		
Vanguard Total International Stock ETF (VXUS)	5,261,801	6.7	-7.44	(48)	5.04	(40)	5.04	(40)	0.63	(45)	4.28	(48)	3.63	(49)	5.07	(45)	10.82	(47)	Apr-2020
MSCI AC World ex USA (Net)			-7.60		5.53		5.53		0.82		4.10		3.53		4.80		10.33		
Foreign Median			-7.51		4.19		4.19		0.22		4.19		3.58		4.93		10.64		
Population			1,973		1,954		1,954		1,868		1,778		1,679		1,464		1,783		
Harding Loevner International Equity (HLMIX)	1,002,052	1.3	-8.95	(85)	1.22	(80)	1.22	(80)	-2.42	(77)	3.94	(57)	3.90	(40)	5.81	(24)	5.49	(74)	Jul-2020
MSCI AC World ex USA (Net)			-7.60		5.53		5.53		0.82		4.10		3.53		4.80		7.31		
Foreign Median			-7.51		4.19		4.19		0.22		4.19		3.58		4.93		7.38		
Population			1,973		1,954		1,954		1,868		1,778		1,679		1,464		1,803		
Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	1,151,044	1.5	-10.34	(98)	5.19	(38)	5.19	(38)	4.53	(4)	8.27	(2)	8.62	(1)	-		11.54	(8)	Sep-2023
MSCI AC World ex USA (Net)			-7.60		5.53		5.53		0.82		4.10		3.53		4.80		9.00		
Foreign Large Blend Median			-7.54		4.30		4.30		0.67		4.35		3.72		4.92		7.78		
Population			806		800		800		761		739		691		590		796		
Total Fixed Income Composite	27,852,371	35.3	-2.52		2.82		2.82		-		-		-		-		7.91	Oct-2023	
Domestic Fixed Income Composite	23,932,149	30.4	-2.67		2.67		2.67		-		-		-		-		7.78	Oct-2023	

See the disclosure page at the end of the report. Parenthesized number represents pertinent peer group ranking: 1-100, best to worst.  
Peer Group data is provided by Investment Metrics.



# Asset Allocation & Performance

## Total Fund

As of December 31, 2024

	Allocation		Performance(%)									
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date	
Baird Core Plus (BCOIX)	8,020,900	10.2	-2.67 (14)	2.54 (10)	2.54 (10)	-1.52 (10)	0.56 (9)	1.72 (5)	2.15 (3)	2.31 (3)	May-2014	
Blmbg. U.S. Aggregate Index			-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	1.56		
Intermediate Core Bond Median			-3.07	1.48	1.48	-2.46	-0.26	0.94	1.31	1.50		
Population			577	572	572	534	507	477	434	428		
DoubleLine Core Fixed Income (DBLFX)	7,955,453	10.1	-2.55 (20)	3.04 (20)	3.04 (20)	-1.47 (18)	0.14 (46)	1.20 (50)	1.77 (37)	1.16 (49)	Sep-2017	
Blmbg. U.S. Aggregate Index			-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	0.91		
Intermediate Core-Plus Bond Median			-2.89	2.18	2.18	-2.28	0.08	1.20	1.60	1.15		
Population			691	683	683	642	595	570	504	561		
PGIM Total Return Bond (PTRQX)	21,478	0.0	-2.91 (51)	2.77 (28)	2.77 (28)	-1.94 (35)	0.15 (46)	1.54 (28)	2.22 (15)	1.57 (24)	Sep-2017	
Blmbg. U.S. Aggregate Index			-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	0.91		
Intermediate Core-Plus Bond Median			-2.89	2.18	2.18	-2.28	0.08	1.20	1.60	1.15		
Population			691	683	683	642	595	570	504	561		
Voya Intermediate Bond (IIBZX)	9,932	0.0	-3.31 (80)	2.36 (41)	2.36 (41)	-2.01 (40)	0.16 (45)	1.46 (33)	1.97 (25)	0.16 (45)	Jan-2020	
Blmbg. U.S. Aggregate Index			-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	-0.33		
Intermediate Core-Plus Bond Median			-2.89	2.18	2.18	-2.28	0.08	1.20	1.60	0.08		
Population			691	683	683	642	595	570	504	595		
iShares Core US Aggregate Bond ETF (AGG)	7,924,385	10.1	-3.11 (60)	1.30 (62)	1.30 (62)	-2.39 (43)	-0.36 (60)	0.93 (51)	1.30 (51)	1.86 (59)	Feb-2023	
Blmbg. U.S. Aggregate Index			-3.06	1.25	1.25	-2.41	-0.33	0.97	1.35	1.89		
Intermediate Core Bond Median			-3.07	1.48	1.48	-2.46	-0.26	0.94	1.31	1.93		
Population			577	572	572	534	507	477	434	557		
BBH Limited Duration (BBBIX)	1	0.0	0.76 (4)	6.12 (10)	6.12 (10)	4.23 (1)	3.37 (3)	3.33 (3)	2.89 (5)	6.49 (3)	Feb-2023	
Blmbg. U.S. Treasury: 1-3 Year			-0.10	4.03	4.03	1.43	1.36	1.71	1.38	3.95		
Short-Term Bond Median			0.04	4.88	4.88	1.68	1.78	2.07	1.87	4.71		
Population			605	597	597	576	556	527	489	589		
High Yield Fixed Income	3,920,222	5.0	-	-	-	-	-	-	-	0.64	Nov-2024	
MainStay MacKay High Yield Corp Bond Fund (MHYSX)	3,920,222	5.0	0.20 (51)	7.14 (64)	7.14 (64)	3.41 (25)	4.17 (26)	4.58 (20)	5.26 (11)	3.55 (27)	Jun-2021	
ICE BofA U.S. High Yield Index			0.16	8.20	8.20	2.91	4.04	4.53	5.08	3.28		
High Yield Bond Median			0.20	7.63	7.63	2.58	3.55	3.96	4.38	2.84		
Population			720	714	714	678	647	632	596	665		
Real Return Assets Composite	2,570,814	3.3	0.48	-4.76	-4.76	-	-	-	-	-5.28	Oct-2023	
Boyd Watterson GSA Fund	2,570,814	3.3	0.48 (81)	-4.76 (94)	-4.76 (94)	-0.98 (24)	2.14 (78)	-	-	2.65 (77)	Jul-2019	
NCREIF Office Total Return			-	-	-	-	-	-	-	-		
IM U.S. Open End Private Real Estate (SA+CF) Median			1.30	-1.13	-1.13	-2.22	3.07	4.47	6.17	3.43		
Population			17	17	17	15	14	14	13	14		

See the disclosure page at the end of the report. Parenthesized number represents pertinent peer group ranking: 1-100, best to worst.  
Peer Group data is provided by Investment Metrics.

# Asset Allocation & Performance

## Total Fund

As of December 31, 2024

	Allocation		Performance(%)									
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date	
Cash Equivalents Composite	349,082	0.4	1.22	5.29	5.29	-	-	-	-	5.32	Oct-2023	
First American Government Obligation - Z- (FGZXX)	349,082	0.4	1.22 (1)	5.29 (1)	5.29 (1)	3.90 (11)	2.40 (11)	2.26 (11)	1.67 (10)	1.59 (7)	Jan-2004	
ICE BofAML 3 Month U.S. T-Bill			1.17	5.25	5.25	3.89	2.46	2.35	1.77	1.64		
Money Market-Taxable Median			1.13	5.00	5.00	3.71	2.27	2.09	1.51	1.42		
Population			618	590	590	554	510	480	392	233		

See the disclosure page at the end of the report. Parenthesized number represents pertinent peer group ranking: 1-100, best to worst.  
Peer Group data is provided by Investment Metrics.

# Asset Allocation & Performance

## Total Fund

As of December 31, 2024

	Allocation		Performance(%)									
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date	
Total Fund - Liquidity Assets	50,759	0.1	1.16	5.15	5.15	3.86	2.37	2.23	1.66	1.08	Sep-2009	
First American Government Obligation - Z (FGZXX)	50,759	0.1	1.16 (23)	5.15 (22)	5.15 (22)	3.86 (23)	2.38 (20)	2.24 (17)	1.66 (13)	1.59 (8)	Jan-2004	
ICE BofAML 3 Month U.S. T-Bill			1.17	5.25	5.25	3.89	2.46	2.35	1.77	1.64		
Money Market-Taxable Median			1.13	5.00	5.00	3.71	2.27	2.09	1.51	1.42		
Population			618	590	590	554	510	480	392	233		

See the disclosure page at the end of the report. Parenthesized number represents pertinent peer group ranking: 1-100, best to worst.  
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# Comparative Performance

## Total Fund

As of December 31, 2024

### Comparative Performance Fiscal Year Returns

	Performance(%)									
	FYTD	Jun-2024	Jun-2023	Jun-2022	Jun-2021	Jun-2020	Jun-2019	Jun-2018	Jun-2017	Jun-2016
<b>Total Fund - Investment Assets (Net of Fees)</b>	<b>4.01 (72)</b>	<b>12.46 (33)</b>	<b>8.54 (56)</b>	<b>-13.53 (82)</b>	<b>25.23 (68)</b>	<b>6.60 (8)</b>	<b>6.63 (38)</b>	<b>8.10 (53)</b>	<b>10.71 (69)</b>	<b>2.03 (17)</b>
Blended Benchmark	4.27	12.30	9.67	-13.45	23.22	5.56	7.34	7.06	9.70	1.34
All Public Plans-Total Fund Median	4.40	11.42	8.75	-10.89	26.66	3.46	6.34	8.14	11.72	0.55
Population	318	1,117	1,174	1,198	1,296	1,289	1,134	958	932	887
<b>Total Equity Composite</b>	<b>5.26</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Domestic Equity Composite</b>	<b>8.73</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Vanguard Total Stock Market ETF (VTI)	8.89 (27)	23.18 (32)	18.96 (27)	-14.24 (59)	44.32 (48)	6.44 (26)	9.02 (31)	14.83 (32)	18.49 (48)	2.12 (25)
Russell 3000 Index	9.03	23.12	18.95	-13.87	44.16	6.53	8.98	14.78	18.51	2.14
All Cap Blend Median	7.85	17.64	16.56	-13.21	43.72	0.62	5.54	13.72	18.33	-1.28
Population	2,877	2,879	2,941	2,928	2,934	3,000	3,089	3,161	3,180	3,038
<b>International Equity Composite</b>	<b>-2.47</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Dodge & Cox International Stock I (DODFX)	-	-	-	-	-	-	-	-	-	-
MSCI EAFE Value Index (Net)	1.14	13.75	17.40	-11.95	33.50	-14.48	-2.10	4.25	25.01	-15.43
Foreign Large Value Median	0.08	11.07	17.35	-13.73	35.49	-10.38	-3.02	3.92	20.62	-11.67
Population	415	428	456	452	457	465	470	481	484	465
Vanguard Total International Stock ETF (VXUS)	-0.21 (40)	11.05 (40)	12.37 (78)	-18.89 (43)	36.55 (41)	-4.05 (52)	0.63 (37)	7.08 (46)	20.07 (42)	-9.11 (47)
MSCI AC World ex USA (Net)	-0.15	11.62	12.72	-19.42	35.72	-4.80	1.29	7.28	20.45	-10.24
Foreign Median	-0.73	10.38	15.82	-19.89	34.97	-3.70	-0.57	6.74	19.32	-9.47
Population	1,967	2,001	2,120	2,146	2,182	2,222	2,246	2,290	2,276	2,129
Harding Loevner International Equity (HLMIX)	-0.35 (43)	5.24 (88)	16.84 (43)	-22.60 (68)	34.10 (56)	2.46 (25)	0.69 (37)	10.33 (23)	19.17 (53)	-3.13 (12)
MSCI AC World ex USA (Net)	-0.15	11.62	12.72	-19.42	35.72	-4.80	1.29	7.28	20.45	-10.24
Foreign Median	-0.73	10.38	15.82	-19.89	34.97	-3.70	-0.57	6.74	19.32	-9.47
Population	1,967	2,001	2,120	2,146	2,182	2,222	2,246	2,290	2,276	2,129
Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	-10.11 (100)	29.38 (1)	12.18 (88)	-11.50 (4)	26.93 (90)	8.64 (1)	9.85 (1)	14.28 (2)	-	-
MSCI AC World ex USA (Net)	-0.15	11.62	12.72	-19.42	35.72	-4.80	1.29	7.28	20.45	-10.24
Foreign Large Blend Median	-1.04	10.77	16.24	-19.06	33.58	-4.24	0.18	6.37	19.14	-9.88
Population	803	828	860	885	914	937	938	961	949	885
<b>Total Fixed Income Composite</b>	<b>2.57</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Domestic Fixed Income Composite</b>	<b>2.41</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

See the disclosure page at the end of the report. Parenthesized number represents pertinent peer group ranking: 1-100, best to worst.  
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# Comparative Performance

## Total Fund

As of December 31, 2024

	Performance(%)									
	FYTD	Jun-2024	Jun-2023	Jun-2022	Jun-2021	Jun-2020	Jun-2019	Jun-2018	Jun-2017	Jun-2016
Baird Core Plus (BCOIX)	2.41 (11)	4.32 (7)	0.48 (5)	-11.03 (62)	1.78 (22)	8.83 (28)	8.39 (6)	-0.16 (22)	1.65 (9)	6.03 (12)
Blmbg. U.S. Aggregate Index	1.98	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00
Intermediate Core Bond Median	1.92	2.88	-0.99	-10.78	0.80	8.25	7.52	-0.60	0.06	5.29
Population	575	574	583	573	568	576	578	604	619	607
DoubleLine Core Fixed Income (DBLFX)	2.95 (8)	3.47 (60)	-0.09 (37)	-10.18 (17)	3.33 (37)	3.78 (91)	7.04 (72)	0.64 (16)	1.78 (47)	4.89 (39)
Blmbg. U.S. Aggregate Index	1.98	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00
Intermediate Core-Plus Bond Median	2.17	3.74	-0.45	-11.47	2.72	7.31	7.60	-0.31	1.66	4.50
Population	690	703	715	690	700	705	709	685	673	634
PGIM Total Return Bond (PTRQX)	2.15 (52)	5.10 (13)	0.71 (16)	-12.53 (83)	2.70 (51)	6.90 (60)	9.22 (4)	0.59 (16)	2.39 (28)	6.56 (3)
Blmbg. U.S. Aggregate Index	1.98	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00
Intermediate Core-Plus Bond Median	2.17	3.74	-0.45	-11.47	2.72	7.31	7.60	-0.31	1.66	4.50
Population	690	703	715	690	700	705	709	685	673	634
Voya Intermediate Bond (IIBZX)	1.77 (80)	4.88 (15)	-0.28 (43)	-11.54 (54)	2.48 (58)	7.50 (47)	8.56 (12)	-0.13 (41)	1.85 (44)	5.96 (11)
Blmbg. U.S. Aggregate Index	1.98	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00
Intermediate Core-Plus Bond Median	2.17	3.74	-0.45	-11.47	2.72	7.31	7.60	-0.31	1.66	4.50
Population	690	703	715	690	700	705	709	685	673	634
iShares Core US Aggregate Bond ETF (AGG)	2.02 (36)	2.52 (71)	-0.93 (46)	-10.29 (26)	-0.37 (81)	8.64 (35)	7.84 (26)	-0.47 (39)	-0.36 (67)	5.93 (17)
Blmbg. U.S. Aggregate Index	1.98	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00
Intermediate Core Bond Median	1.92	2.88	-0.99	-10.78	0.80	8.25	7.52	-0.60	0.06	5.29
Population	575	574	583	573	568	576	578	604	619	607
BBH Limited Duration (BBBIX)	3.17 (37)	7.56 (5)	4.56 (2)	-2.21 (3)	3.40 (24)	2.17 (79)	3.96 (69)	2.08 (6)	3.09 (11)	0.66 (86)
Blmbg. U.S. Treasury: 1-3 Year	2.81	4.51	0.15	-3.51	0.05	4.14	4.02	0.01	-0.11	1.31
Short-Term Bond Median	3.04	5.73	1.35	-5.00	2.01	3.41	4.29	0.29	1.10	1.67
Population	604	602	635	641	661	670	658	662	681	664
<b>High Yield Fixed Income</b>	-	-	-	-	-	-	-	-	-	-
MainStay MacKay High Yield Corp Bond Fund (MHYSX)	3.90 (87)	9.69 (54)	8.89 (29)	-9.73 (18)	14.29 (57)	-0.20 (27)	6.88 (36)	3.17 (20)	11.07 (50)	3.12 (5)
ICE BofA U.S. High Yield Index	5.44	10.45	8.87	-12.66	15.62	-1.10	7.58	2.53	12.75	1.71
High Yield Bond Median	4.69	9.76	8.30	-12.40	14.67	-1.46	6.46	2.04	11.06	0.15
Population	716	729	772	766	793	817	832	835	875	831

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# Comparative Performance

## Total Fund

As of December 31, 2024

	Performance(%)									
	FYTD	Jun-2024	Jun-2023	Jun-2022	Jun-2021	Jun-2020	Jun-2019	Jun-2018	Jun-2017	Jun-2016
<b>Real Return Assets Composite</b>	<b>-3.21</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Boyd Watterson GSA Fund	-2.60 (100)	-4.58 (15)	1.43 (13)	5.58 (96)	9.11 (46)	6.33 (7)	-	-	-	-
NCREIF Office Total Return	-	-14.41	-14.53	5.85	3.25	3.97	6.79	6.55	5.57	9.31
IM U.S. Open End Private Real Estate (SA+CF) Median	1.35	-8.60	-9.74	28.87	9.01	2.75	7.54	8.65	8.23	12.48
Population	17	32	33	31	29	30	32	34	36	38
<b>Cash Equivalents Composite</b>	<b>2.52</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
First American Government Obligation - Z- (FGZXX)	2.52 (3)	5.41 (3)	3.64 (28)	0.16 (20)	0.03 (11)	1.28 (17)	2.13 (13)	1.18 (15)	0.42 (11)	0.10 (16)
ICE BofAML 3 Month U.S. T-Bill	2.55	5.40	3.59	0.17	0.09	1.63	2.31	1.36	0.49	0.19
Money Market-Taxable Median	2.40	5.16	3.50	0.11	0.01	1.09	1.89	0.92	0.15	0.02
Population	611	582	584	578	566	583	593	601	619	560
<b>Total Fund - Liquidity Assets</b>	<b>2.47</b>	<b>5.32</b>	<b>3.64</b>	<b>0.16</b>	<b>0.03</b>	<b>1.24</b>	<b>2.14</b>	<b>1.18</b>	<b>0.42</b>	<b>0.10</b>
First American Government Obligation - Z (FGZXX)	2.47 (22)	5.32 (22)	3.64 (28)	0.16 (20)	0.03 (11)	1.28 (17)	2.13 (13)	1.18 (15)	0.42 (11)	0.10 (16)
ICE BofAML 3 Month U.S. T-Bill	2.55	5.40	3.59	0.17	0.09	1.63	2.31	1.36	0.49	0.19
Money Market-Taxable Median	2.40	5.16	3.50	0.11	0.01	1.09	1.89	0.92	0.15	0.02
Population	611	582	584	578	566	583	593	601	619	560

See the disclosure page at the end of the report. Parenthesized number represents pertinent peer group ranking: 1-100, best to worst.  
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Hampton Roads Sanitation District

Fee Analysis

As of December 31, 2024

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Median Peer Annual Fee (%)	Fee Schedule
<b>Total Fund - Combined Assets</b>		<b>78,849,129</b>	<b>159,627</b>		
<b>Total Fund - Investment Assets</b>	<b>0.20</b>	<b>78,798,369</b>	<b>159,535</b>		
<b>Total Equity Composite</b>	<b>0.09</b>	<b>48,026,103</b>	<b>41,976</b>		
<b>Domestic Equity Composite</b>	<b>0.03</b>	<b>39,153,041</b>	<b>11,746</b>		
Vanguard Total Stock Market ETF (VTI)	0.03	39,153,041	11,746		0.03 % of Assets
<b>International Equity Composite</b>	<b>0.34</b>	<b>8,873,061</b>	<b>30,230</b>		
Dodge & Cox International Stock I (DODFX)	0.62	1,458,164	9,041	0.98	0.62 % of Assets
Vanguard Total International Stock ETF (VXUS)	0.08	5,261,801	4,209		0.08 % of Assets
Harding Loevner International Equity (HLMIX)	0.81	1,002,052	8,117		0.81 % of Assets
Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	0.77	1,151,044	8,863	0.92	0.77 % of Assets
Total Fixed Income Composite	0.30	27,852,371	83,511	0.58	
<b>Domestic Fixed Income Composite</b>	<b>0.26</b>	<b>23,932,149</b>	<b>61,558</b>		
Baird Core Plus (BCOIX)	0.30	8,020,900	24,063	0.58	0.30 % of Assets
DoubleLine Core Fixed Income (DBLFX)	0.44	7,955,453	35,004	0.76	0.44 % of Assets
PGIM Total Return Bond (PTRQX)	0.39	21,478	84	0.76	0.39 % of Assets
Voya Intermediate Bond (IIBZX)	0.30	9,932	30	0.76	0.30 % of Assets
iShares Core US Aggregate Bond ETF (AGG)	0.03	7,924,385	2,377	0.58	0.03 % of Assets
BBH Limited Duration (BBBIX)	0.00	1	-	0.65	0.27 % of Assets
High Yield Fixed Income	0.56	3,920,222	21,953		
MainStay MacKay High Yield Corp Bond Fund (MHYSX)	0.56	3,920,222	21,953	0.91	0.56 % of Assets
<b>Real Return Assets Composite</b>	<b>1.30</b>	<b>2,570,814</b>	<b>33,421</b>		
Boyd Watterson GSA Fund	1.30	2,570,814	33,421		1.30 % of Assets
<b>Cash Equivalents Composite</b>	<b>0.18</b>	<b>349,082</b>	<b>628</b>		
First American Government Obligation - Z- (FGZXX)	0.18	349,082	628		0.18 % of Assets
<b>Total Fund - Liquidity Assets</b>	<b>0.18</b>	<b>50,759</b>	<b>91</b>		
First American Government Obligation - Z (FGZXX)	0.18	50,759	91		0.18 % of Assets

See the disclosure page at the end of the report.

Fee information on this page is an illustrative estimate of management fees based on current reported portfolio values. Fee estimates do not reflect actual calculation methodologies or applicable carried interest.

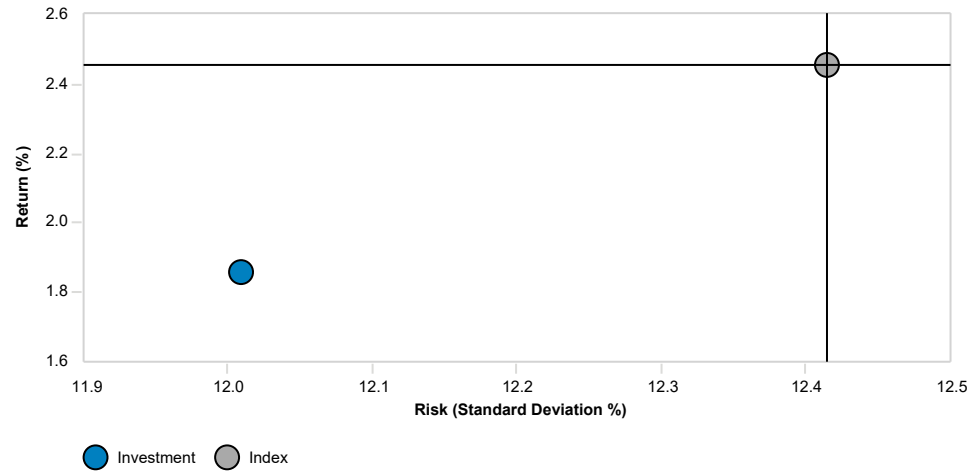
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.86	12.01	-0.11	95.36	7	98.27	5
Index	2.46	12.41	-0.05	100.00	7	100.00	5

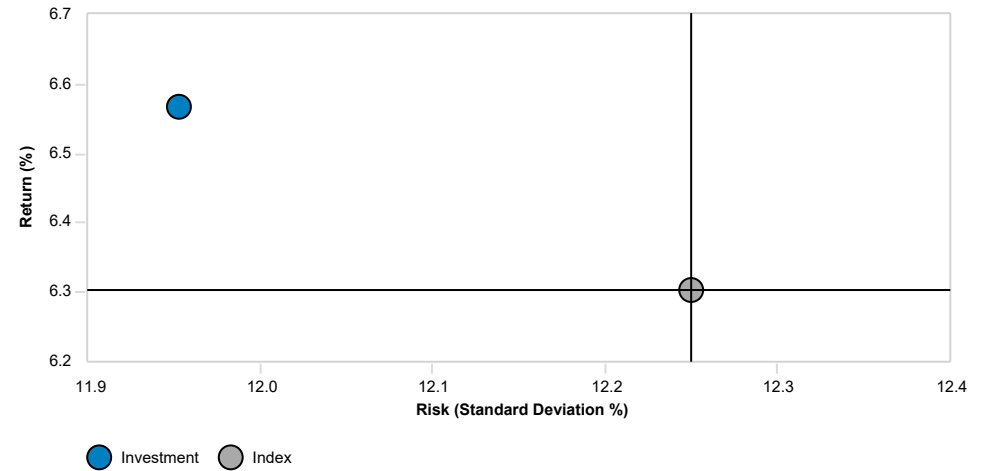
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.57	11.95	0.39	99.46	13	97.71	7
Index	6.30	12.25	0.36	100.00	13	100.00	7

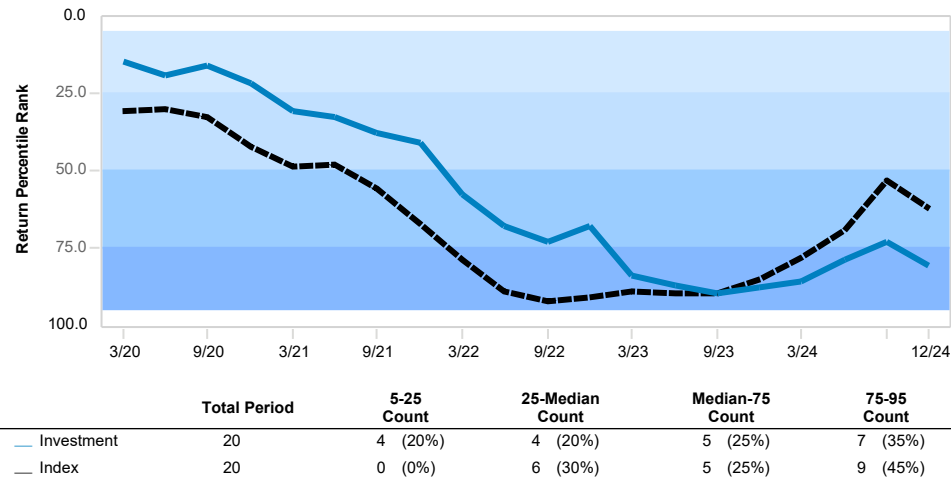
### Risk and Return 3 Years



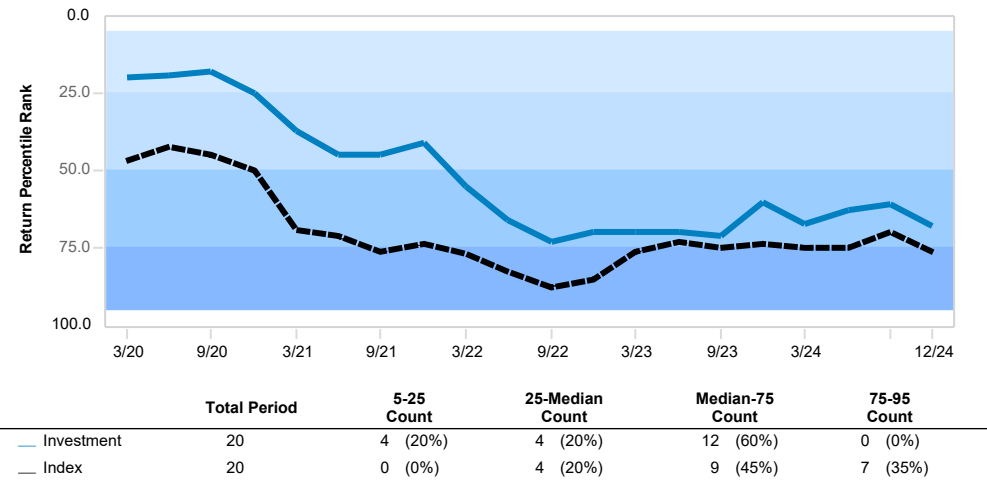
### Risk and Return 5 Years



### 3 Year Rolling Percentile Rank All Public Plans-Total Fund

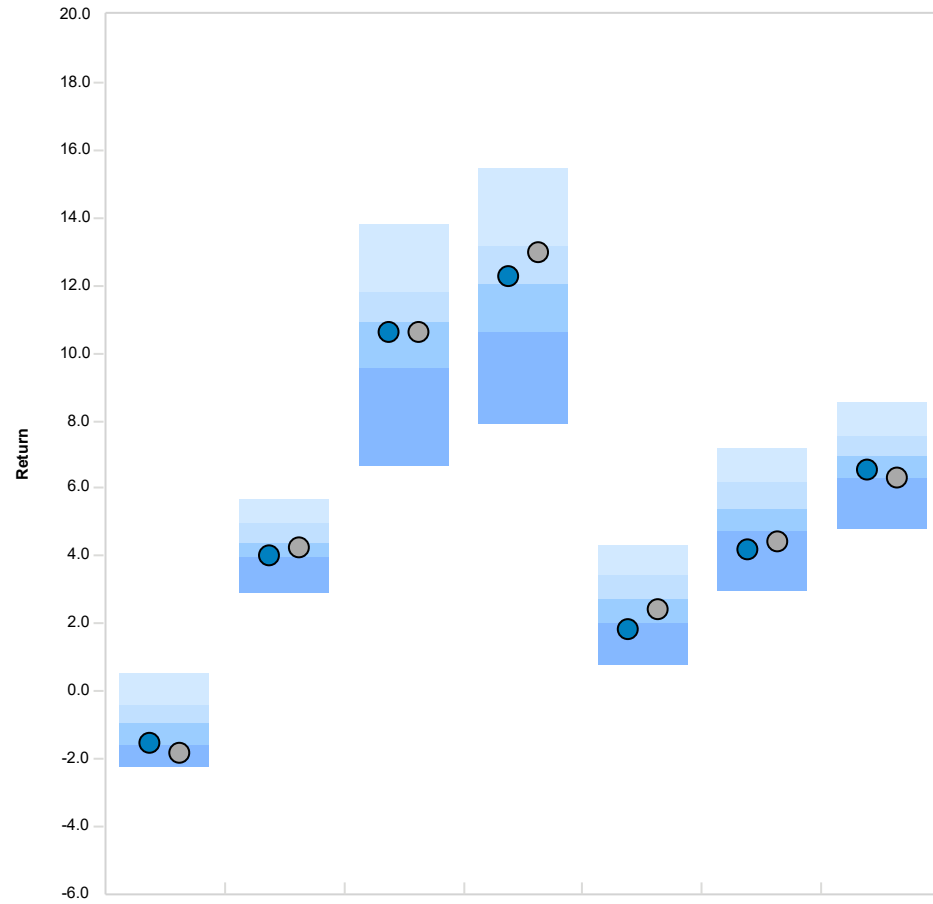


### 5 Year Rolling Percentile Rank All Public Plans-Total Fund

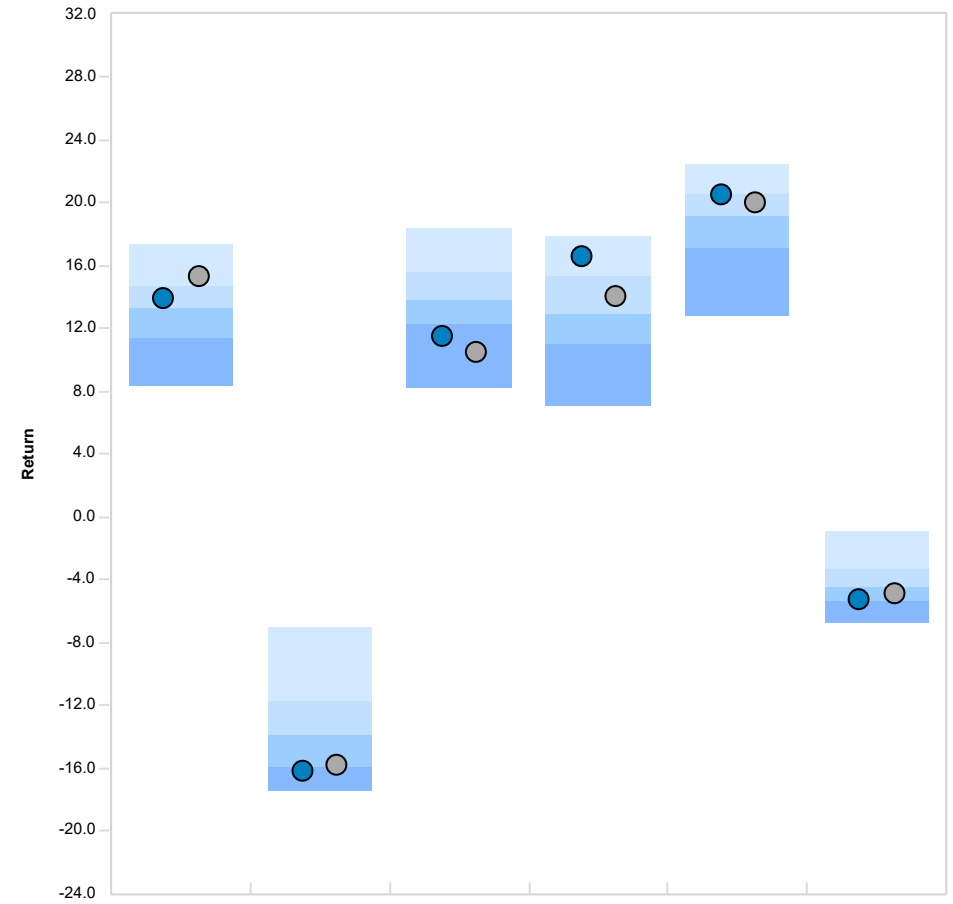




**Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund**



**Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	5.59 (42)	1.57 (18)	4.70 (59)	9.22 (27)	-3.18 (63)	3.19 (56)
Index	6.20 (11)	1.49 (23)	4.53 (64)	9.49 (21)	-3.32 (74)	3.43 (41)
Median	5.44	1.16	4.88	8.16	-2.95	3.28

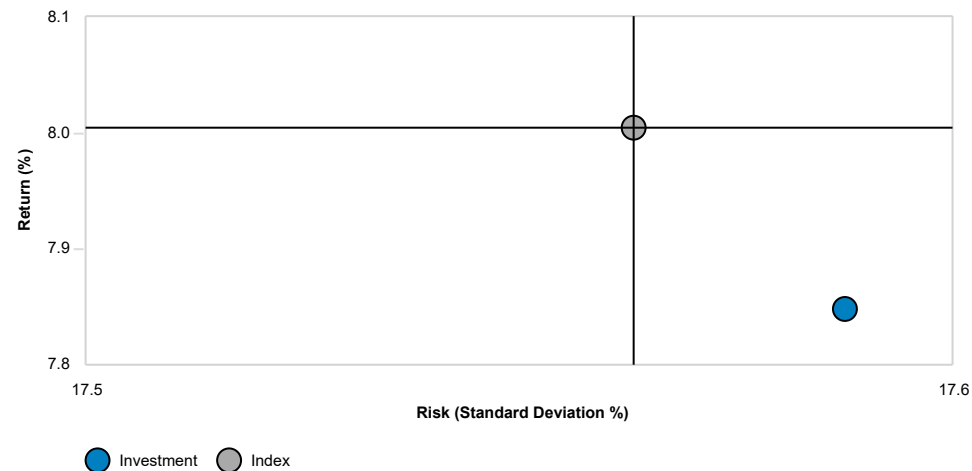
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.85	17.59	0.30	99.87	8	100.48	4
Index	8.01	17.56	0.31	100.00	8	100.00	4

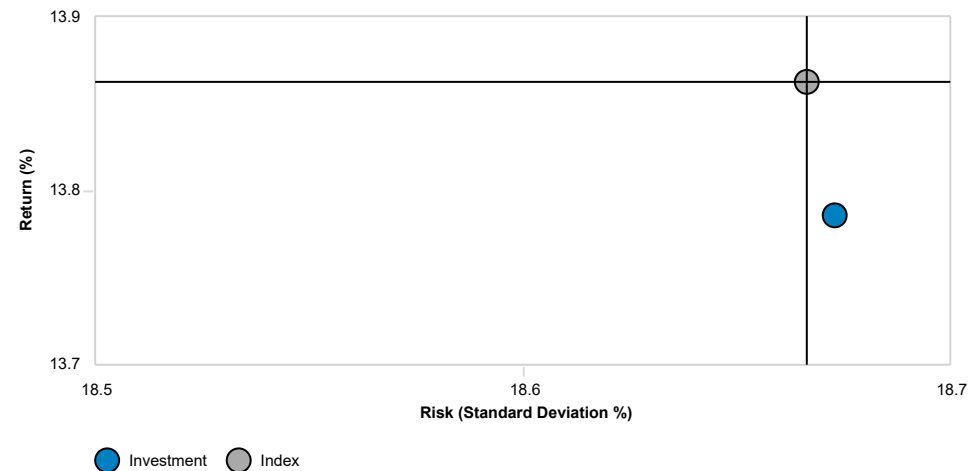
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.79	18.67	0.66	99.83	14	100.04	6
Index	13.86	18.67	0.66	100.00	14	100.00	6

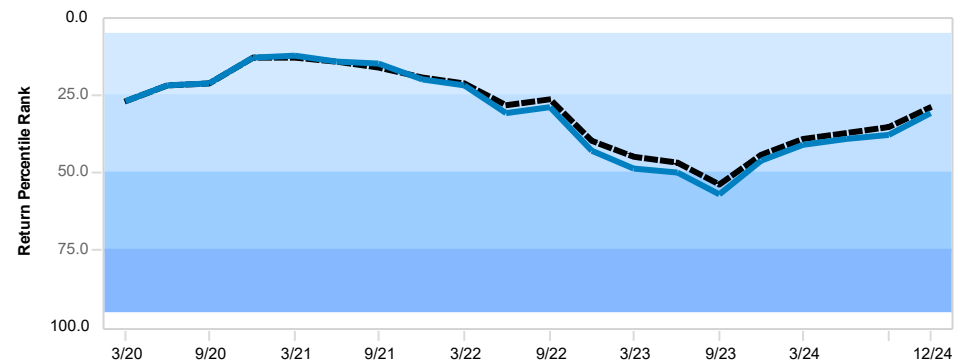
### Risk and Return 3 Years



### Risk and Return 5 Years

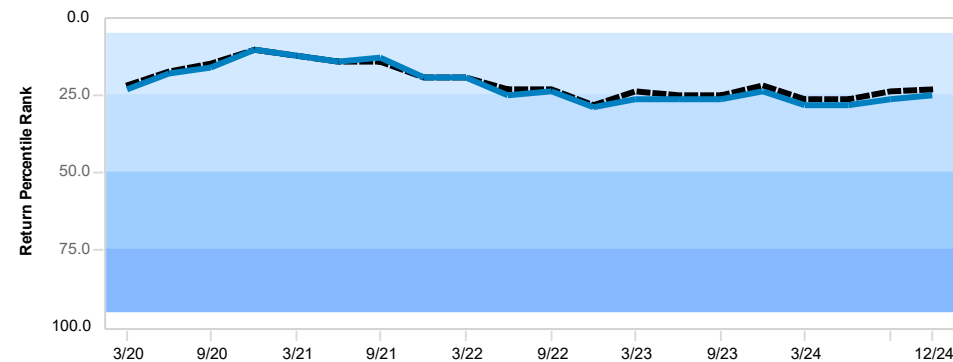


### 3 Year Rolling Percentile Rank All Cap Blend



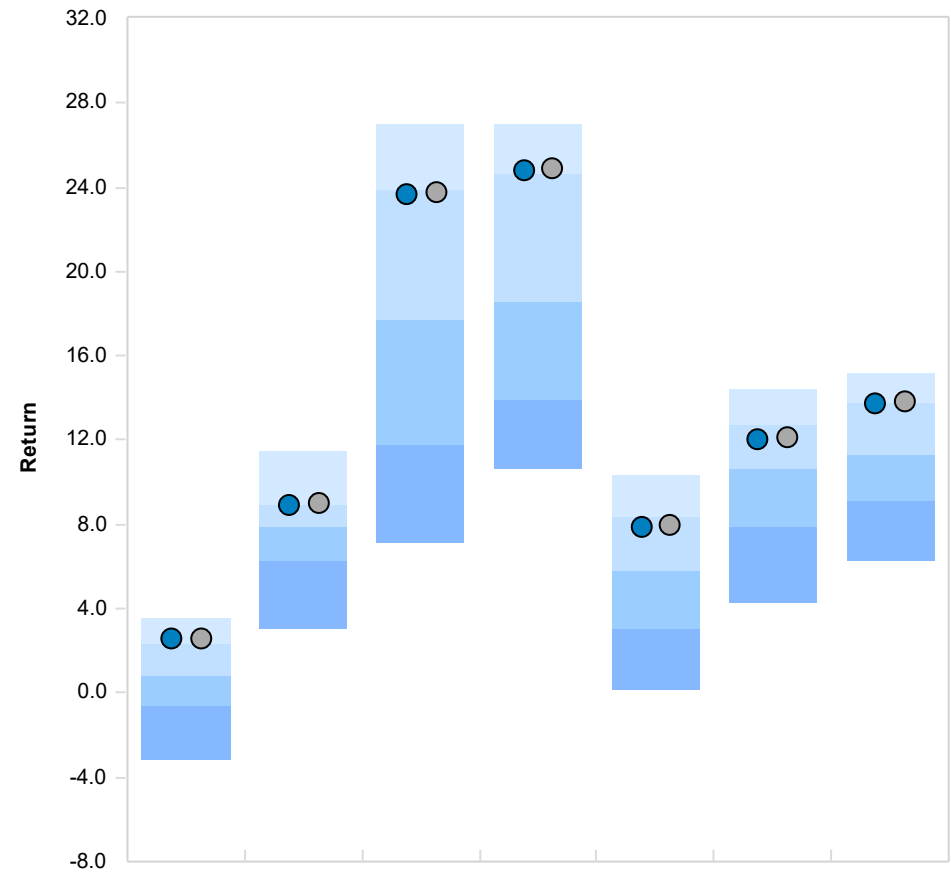
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	8 (40%)	11 (55%)	1 (5%)	0 (0%)
Index	20	8 (40%)	11 (55%)	1 (5%)	0 (0%)

### 5 Year Rolling Percentile Rank All Cap Blend

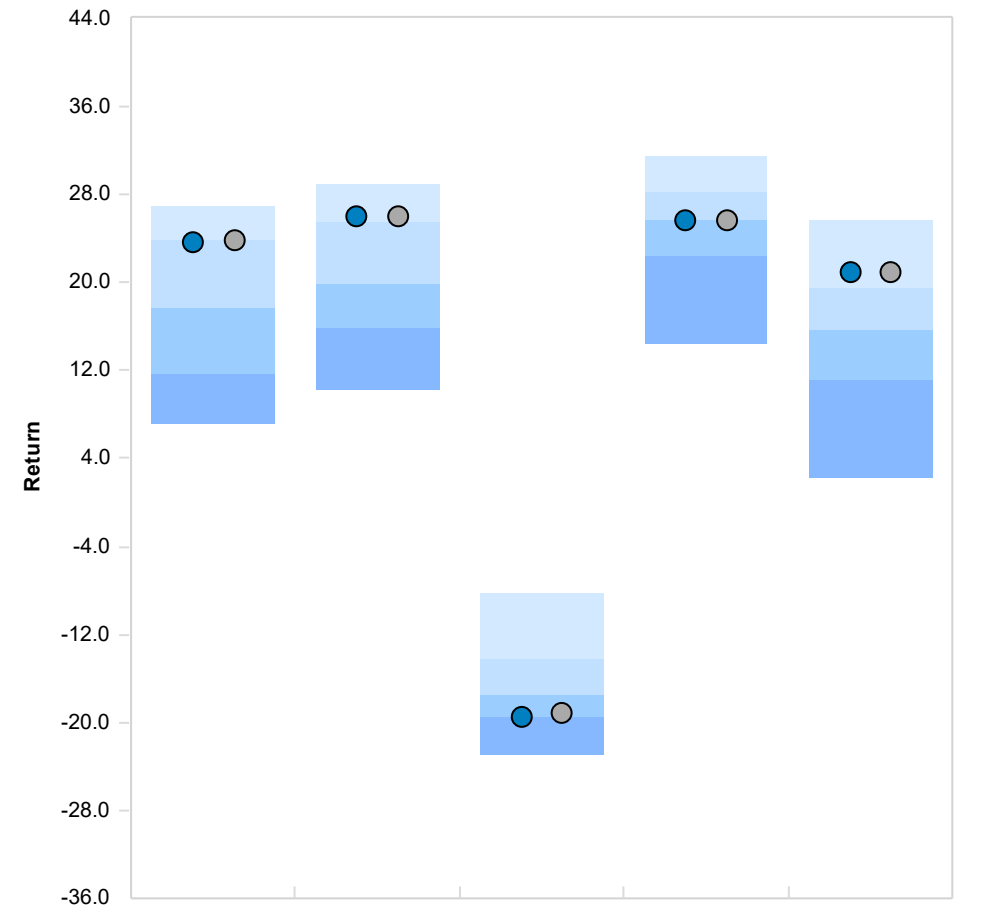


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	13 (65%)	7 (35%)	0 (0%)	0 (0%)
Index	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)

**Peer Group Analysis - All Cap Blend**



**Peer Group Analysis - All Cap Blend**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	6.18 (55)	3.29 (30)	9.94 (46)	12.15 (38)	-3.29 (41)	8.42 (24)
Index	6.23 (54)	3.22 (31)	10.02 (44)	12.07 (41)	-3.25 (38)	8.39 (25)
Median	6.45	0.56	9.73	11.76	-3.48	6.41

**Fund Information As of 12/31/2024**

Fund Name : Vanguard Total Stock Market ETF  
Fund Family : Vanguard  
Ticker : VTI  
Inception Date : 05/24/2001  
Fund Assets : \$1,777,876 Million  
Portfolio Turnover : 2%

Portfolio Assets : \$456,412 Million  
Portfolio Manager : Louie,M/Nejman,W/O'Reilly,G  
PM Tenure : 30 Years  
Fund Style : Large Blend  
Style Benchmark : Russell 1000 Index

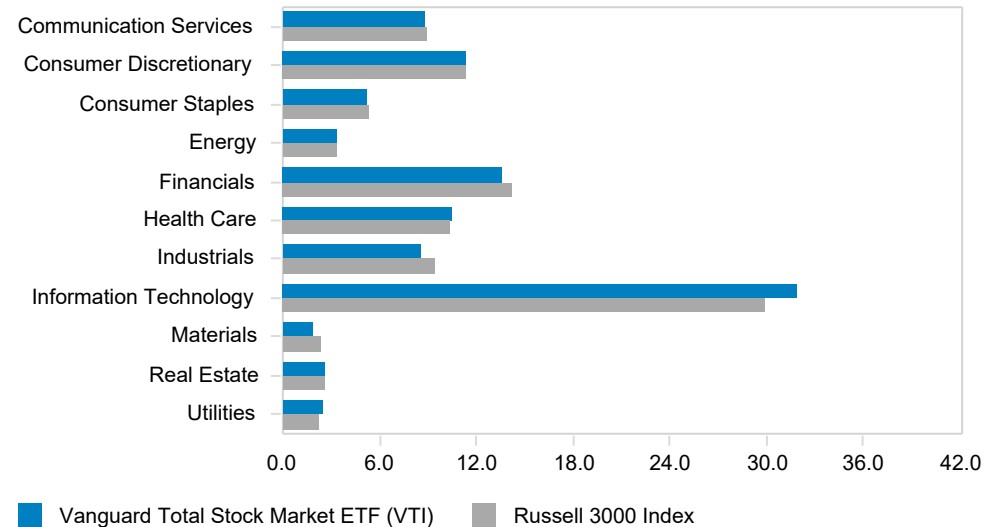
**Portfolio Characteristics As of 12/31/2024**

	Portfolio	Benchmark
Total Securities	3,612	2,973
Avg. Market Cap	-	-
Price/Earnings (P/E)	21.33	26.20
Price/Book (P/B)	3.90	4.71
Dividend Yield	1.41	1.29
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.00	1.00

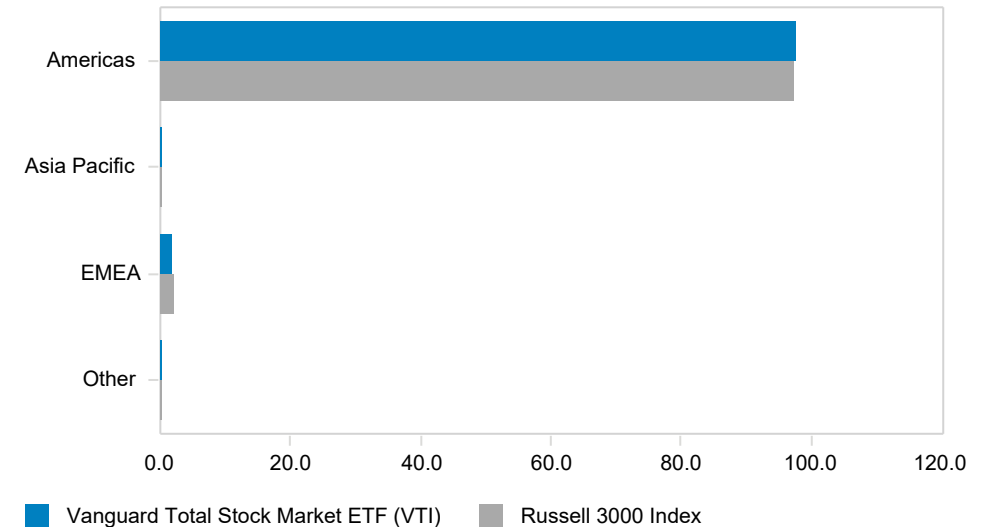
**Top Ten Securities As of 12/31/2024**

Apple Inc	6.7 %
Microsoft Corp	5.5 %
NVIDIA Corp	5.5 %
Amazon.com Inc	3.7 %
Meta Platforms Inc Class A	2.2 %
Alphabet Inc Class A	1.9 %
Tesla Inc	1.9 %
Broadcom Inc	1.9 %
Alphabet Inc Class C	1.6 %
Berkshire Hathaway Inc Class B	1.4 %
Total	32.4 %

**Sector Weights As of 12/31/2024**



**Region (%) As of 12/31/2024**



Statistics provided by Morningstar. Most recent available data shown.

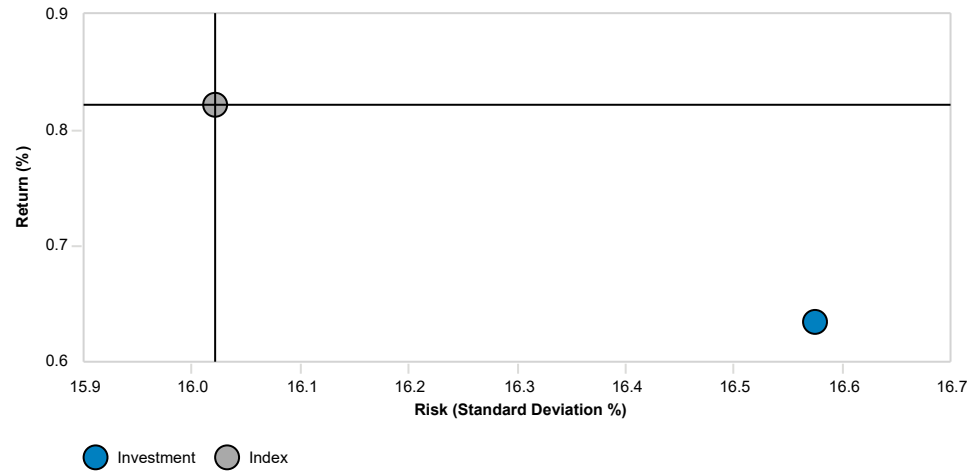
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.63	16.58	-0.11	104.71	7	105.66	5
Index	0.82	16.02	-0.11	100.00	7	100.00	5

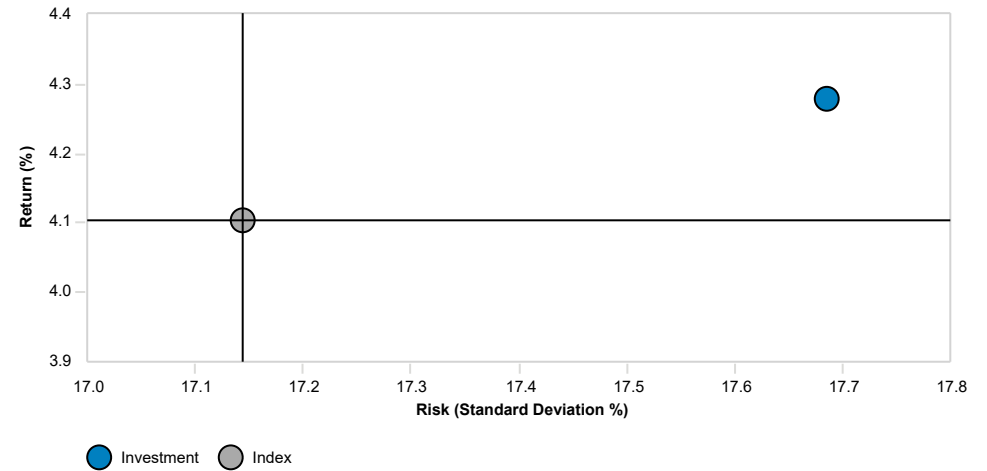
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.28	17.69	0.19	103.86	13	103.59	7
Index	4.10	17.14	0.18	100.00	13	100.00	7

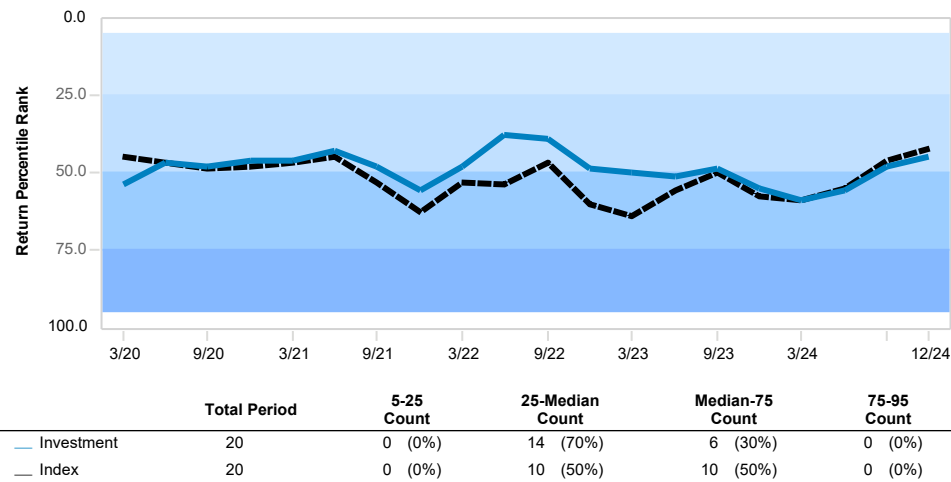
### Risk and Return 3 Years



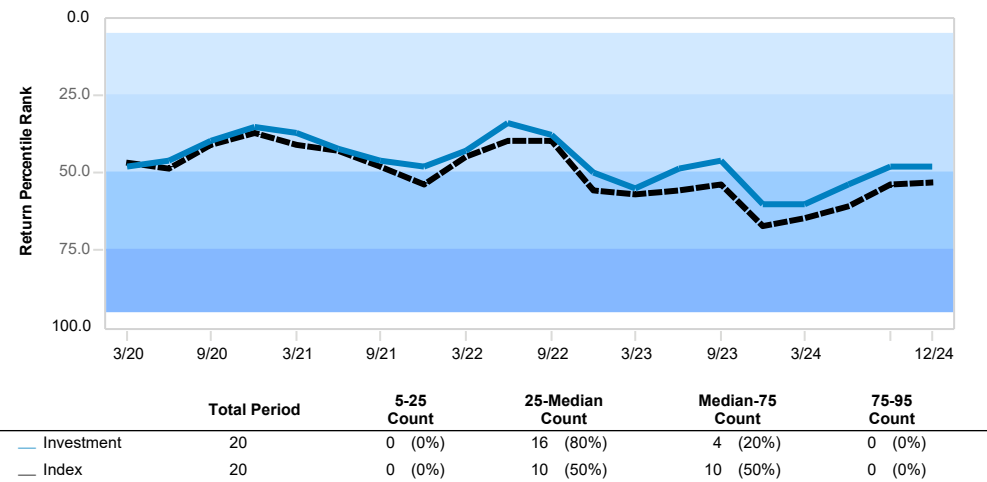
### Risk and Return 5 Years



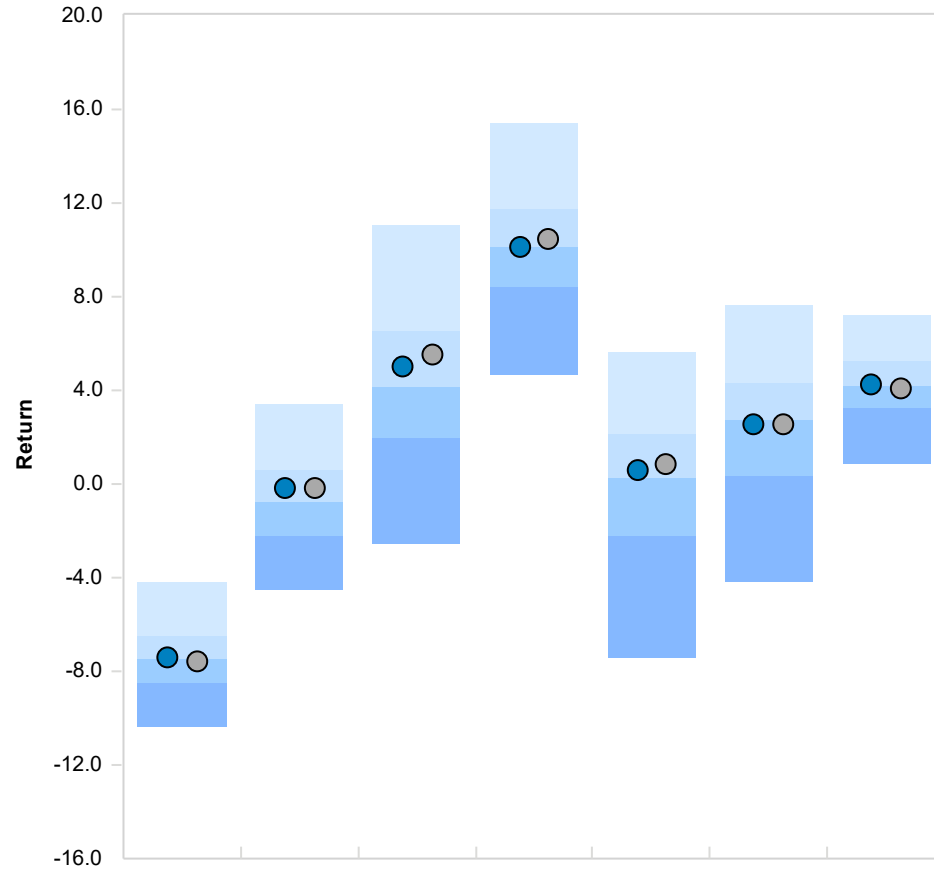
### 3 Year Rolling Percentile Rank Foreign



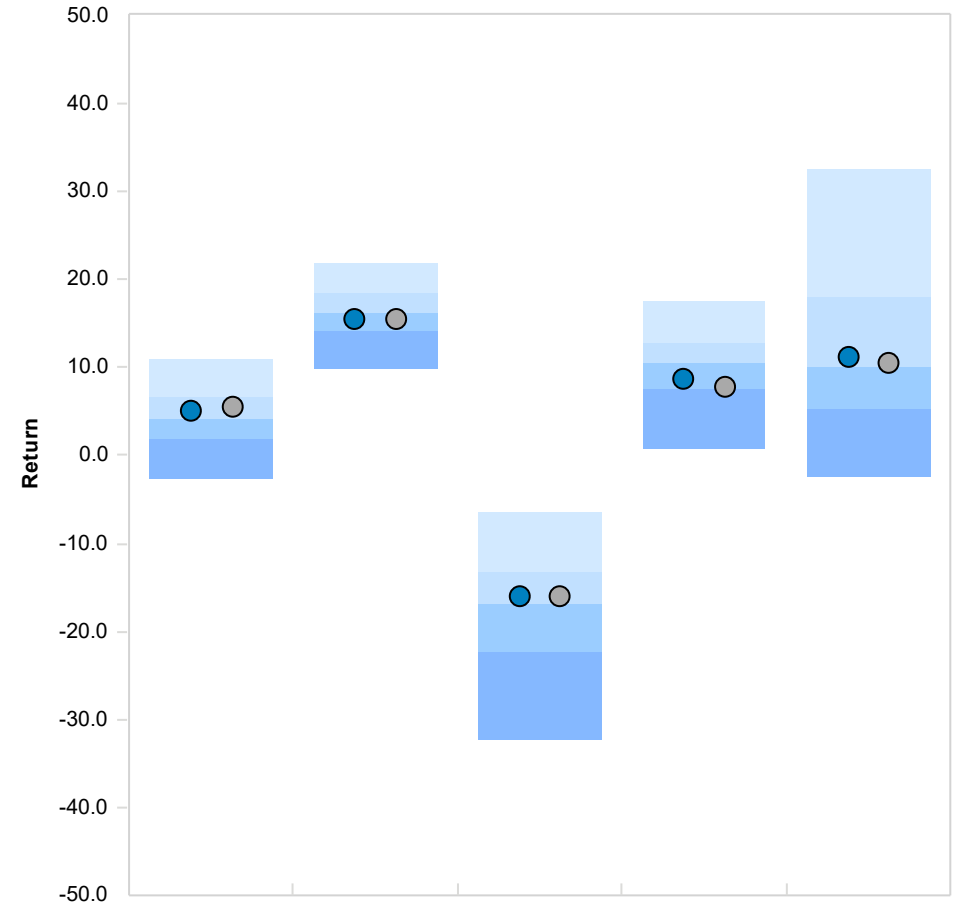
### 5 Year Rolling Percentile Rank Foreign



**Peer Group Analysis - Foreign**



**Peer Group Analysis - Foreign**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	7.82 (41)	0.80 (30)	4.42 (63)	9.90 (59)	-4.01 (35)	2.64 (53)
Index	8.06 (35)	0.96 (26)	4.69 (57)	9.75 (62)	-3.77 (31)	2.44 (59)
Median	7.25	-0.09	4.92	10.27	-4.76	2.71

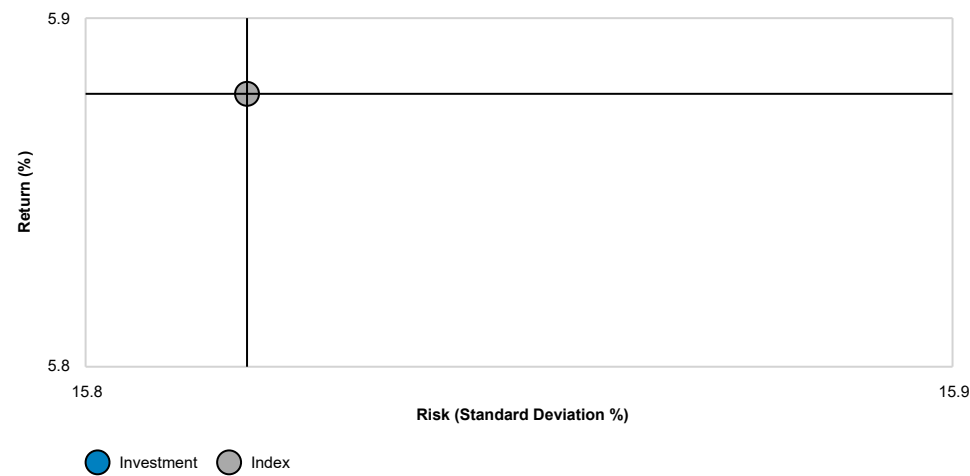
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	5.88	15.82	0.20	100.00	9	100.00	3

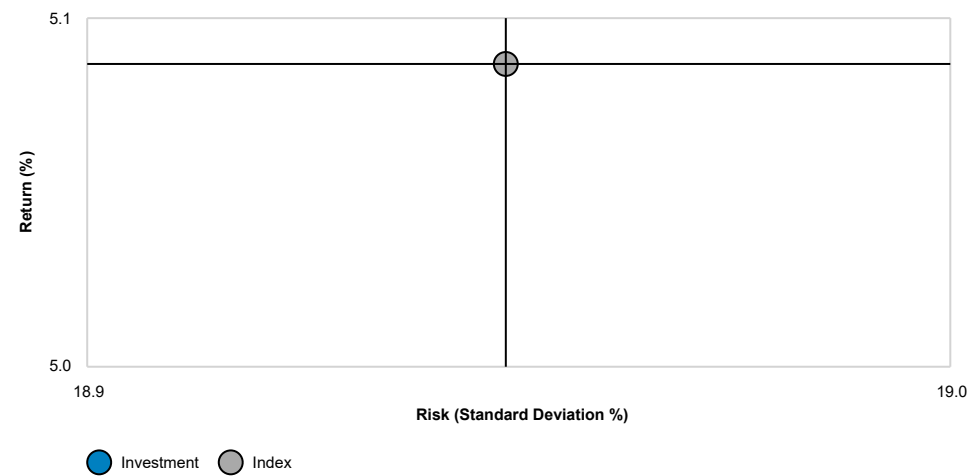
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	5.09	18.95	0.23	100.00	15	100.00	5

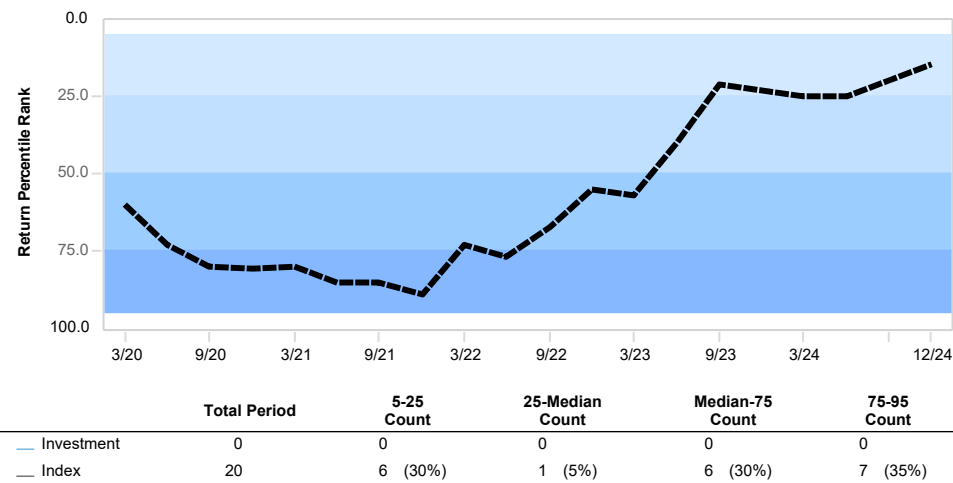
Risk and Return 3 Years



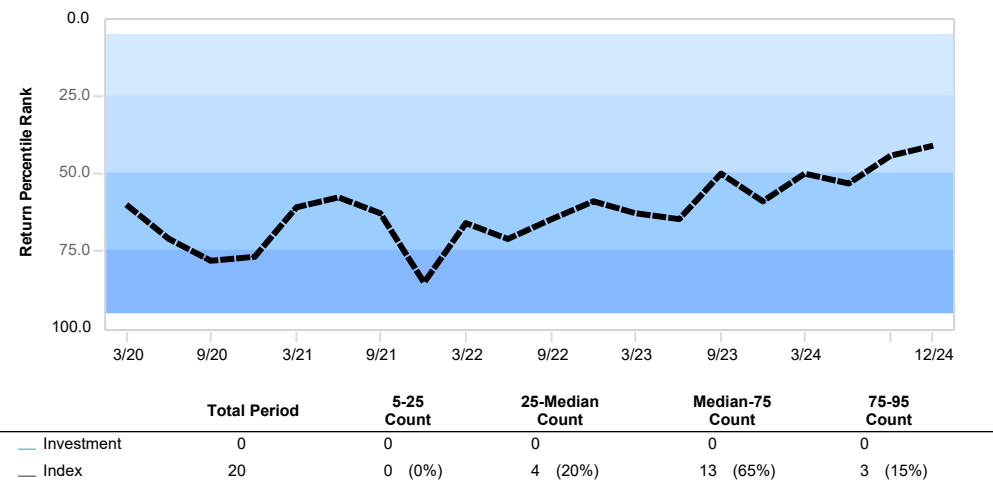
Risk and Return 5 Years



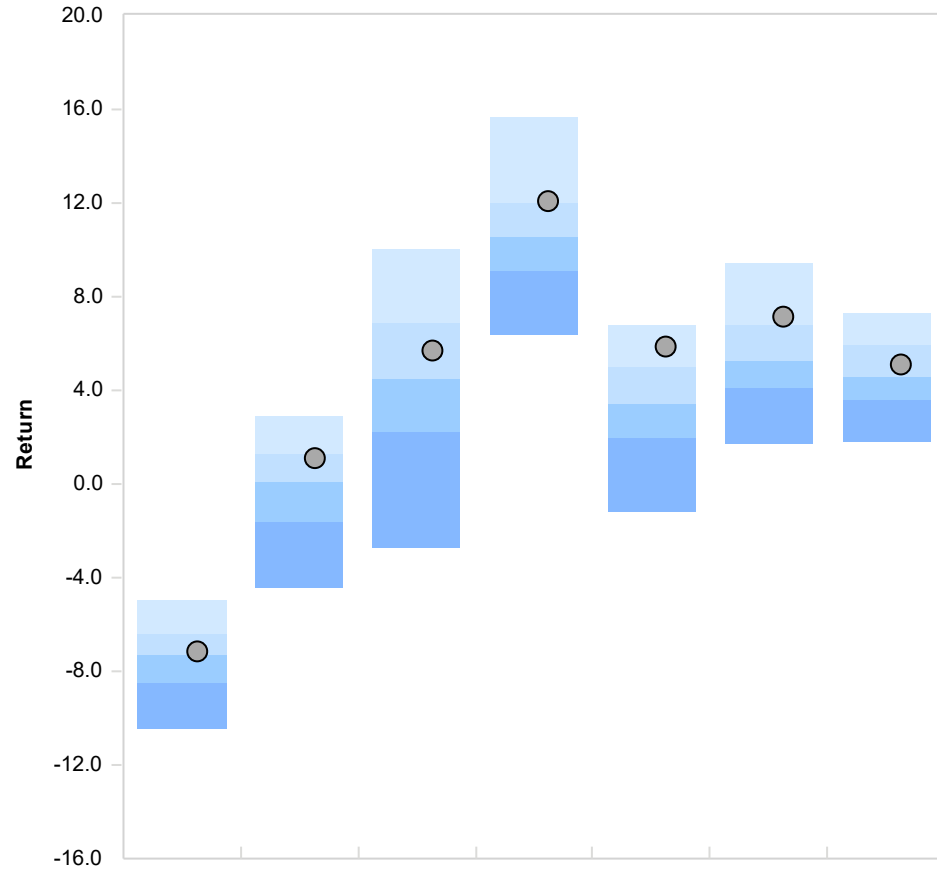
3 Year Rolling Percentile Rank Foreign Large Value



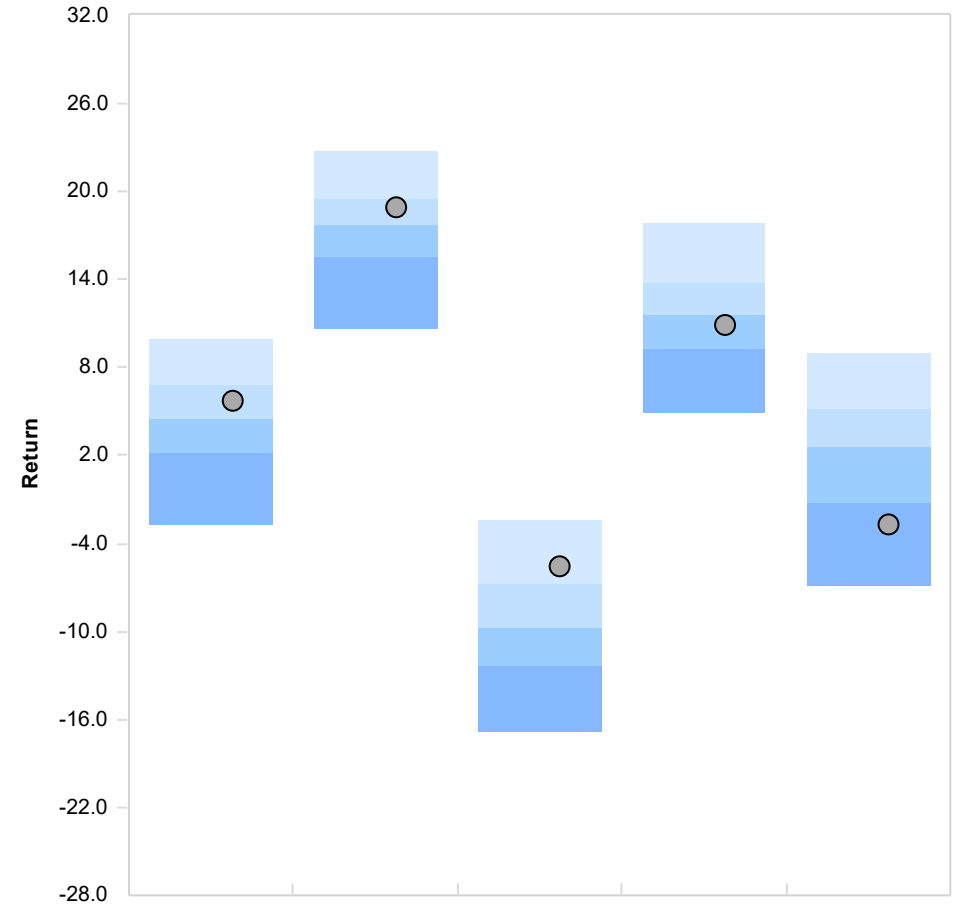
5 Year Rolling Percentile Rank Foreign Large Value



**Peer Group Analysis - Foreign Large Value**



**Peer Group Analysis - Foreign Large Value**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	N/A	N/A	N/A	N/A	N/A	N/A
Index	8.89 (27)	0.01 (49)	4.48 (49)	8.22 (57)	0.59 (6)	3.15 (41)
Median	7.84	-0.04	4.45	8.51	-2.11	2.93



**Fund Information As of 12/31/2024**

Fund Name : Dodge & Cox International Stock I  
Fund Family : Dodge & Cox  
Ticker : DODFX  
Inception Date : 05/01/2001  
Fund Assets : \$47,161 Million  
Portfolio Turnover : 14%

Portfolio Assets : \$37,319 Million  
Portfolio Manager : Team Managed  
PM Tenure : 20 Years 11 Months  
Fund Style : Foreign Large Value  
Style Benchmark : MSCI AC World ex USA Value (Net)

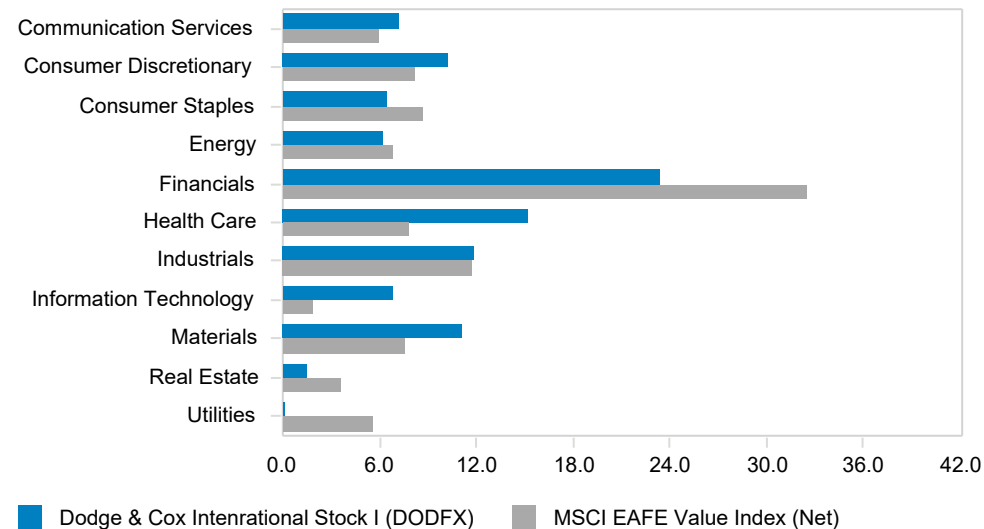
**Portfolio Characteristics As of 12/31/2024**

	Portfolio	Benchmark
Total Securities	116	445
Avg. Market Cap	-	-
Price/Earnings (P/E)	10.94	11.99
Price/Book (P/B)	1.27	1.67
Dividend Yield	3.61	4.53
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta	N/A	1.00

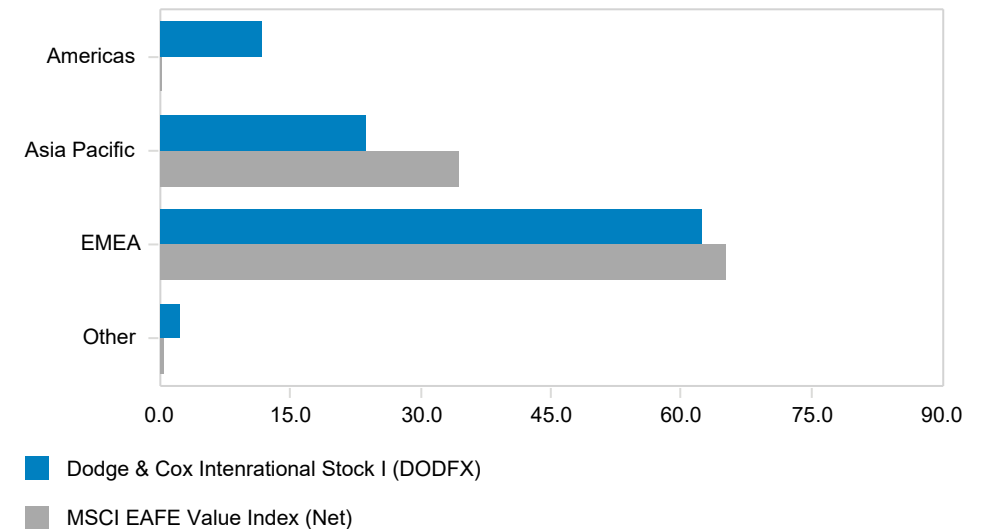
**Top Ten Securities As of 12/31/2024**

Johnson Controls International	3.4 %
Holcim Ltd	3.1 %
Sanofi SA	3.1 %
BNP Paribas Act. Cat.A	2.9 %
UBS Group AG	2.8 %
Banco Santander SA	2.7 %
Novartis AG Registered Shares	2.7 %
Taiwan Semiconductor Manufacturing	2.5 %
Barclays PLC	2.5 %
GSK PLC	2.4 %
Total	28.2 %

**Sector Weights As of 12/31/2024**



**Region (%) As of 12/31/2024**



Statistics provided by Morningstar. Most recent available data shown.

**Mutual Fund Holdings Analysis**  
**Vanguard Total International Stock ETF (VXUS)**  
December 31, 2024

**Fund Information As of 12/31/2024**

Fund Name : Vanguard Total International Stock ETF  
Fund Family : Vanguard  
Ticker : VXUS  
Inception Date : 01/26/2011  
Fund Assets : \$431,861 Million  
Portfolio Turnover : 3%

Portfolio Assets : \$74,828 Million  
Portfolio Manager : Franquin,C/Perre,M  
PM Tenure : 16 Years 4 Months  
Fund Style : Foreign Large Blend  
Style Benchmark : MSCI AC World ex USA Index (Net)

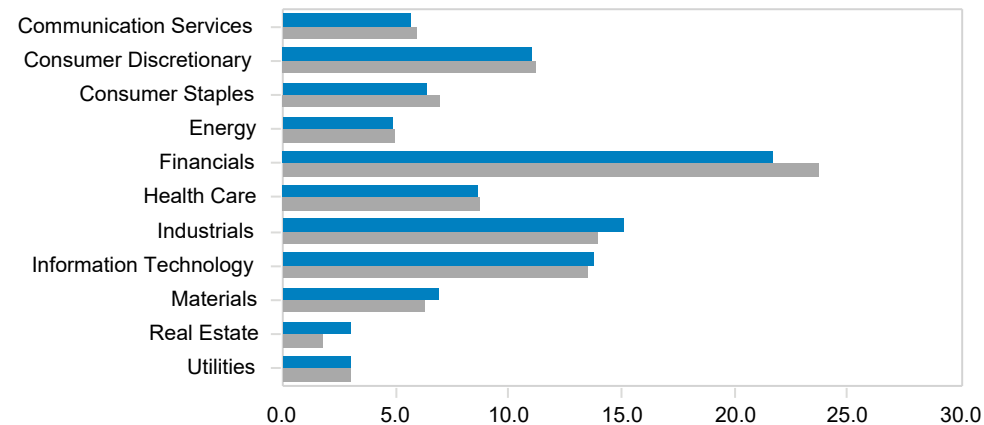
**Portfolio Characteristics As of 12/31/2024**

	Portfolio	Benchmark
Total Securities	8,574	2,058
Avg. Market Cap	-	-
Price/Earnings (P/E)	13.13	15.83
Price/Book (P/B)	1.61	2.53
Dividend Yield	3.24	2.98
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.02	1.00

**Top Ten Securities As of 12/31/2024**

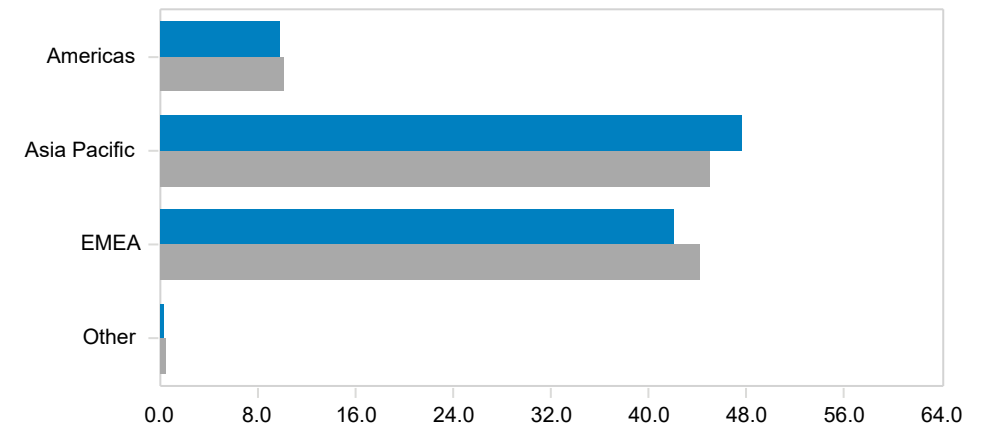
Taiwan Semiconductor Manufacturing	2.5 %
Tencent Holdings Ltd	1.1 %
ASML Holding NV	0.9 %
SAP SE	0.9 %
Novo Nordisk AS Class B	0.9 %
Toyota Motor Corp	0.7 %
Nestle SA	0.7 %
AstraZeneca PLC	0.6 %
Novartis AG Registered Shares	0.6 %
Roche Holding AG	0.6 %
Total	9.4 %

**Sector Weights As of 12/31/2024**



■ Vanguard Total International Stock ETF (VXUS)  
■ MSCI AC World ex USA (Net)

**Region (%) As of 12/31/2024**



■ Vanguard Total International Stock ETF (VXUS)  
■ MSCI AC World ex USA (Net)

Statistics provided by Morningstar. Most recent available data shown.

As of December 31, 2024

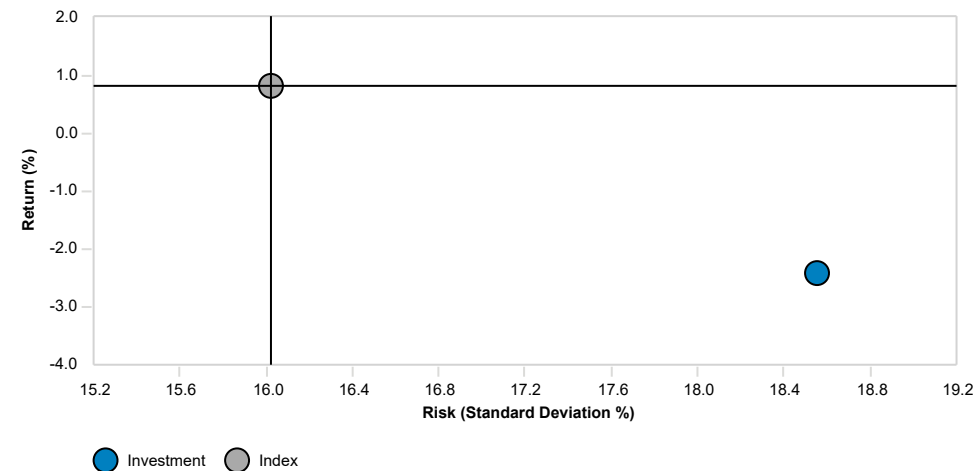
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-2.42	18.55	-0.25	111.48	6	126.00	6
Index	0.82	16.02	-0.11	100.00	7	100.00	5

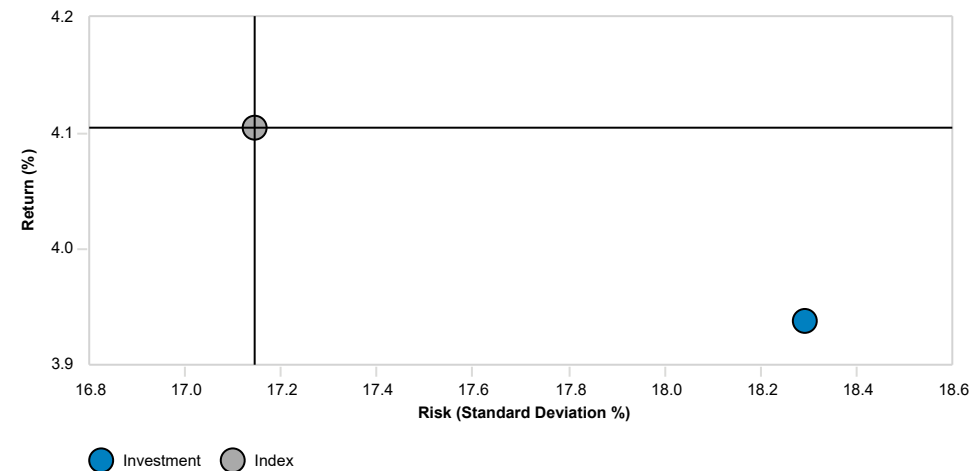
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.94	18.29	0.17	106.79	12	108.51	8
Index	4.10	17.14	0.18	100.00	13	100.00	7

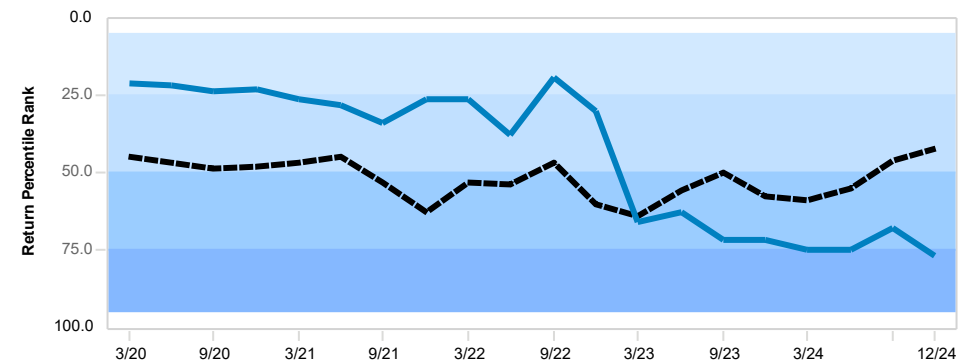
### Risk and Return 3 Years



### Risk and Return 5 Years

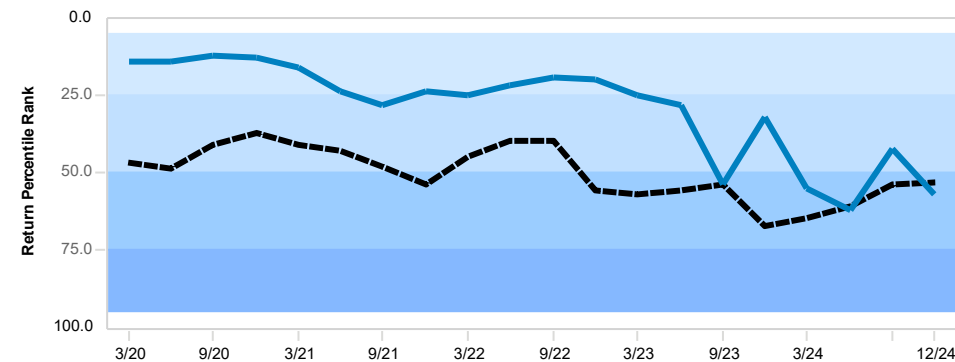


### 3 Year Rolling Percentile Rank Foreign



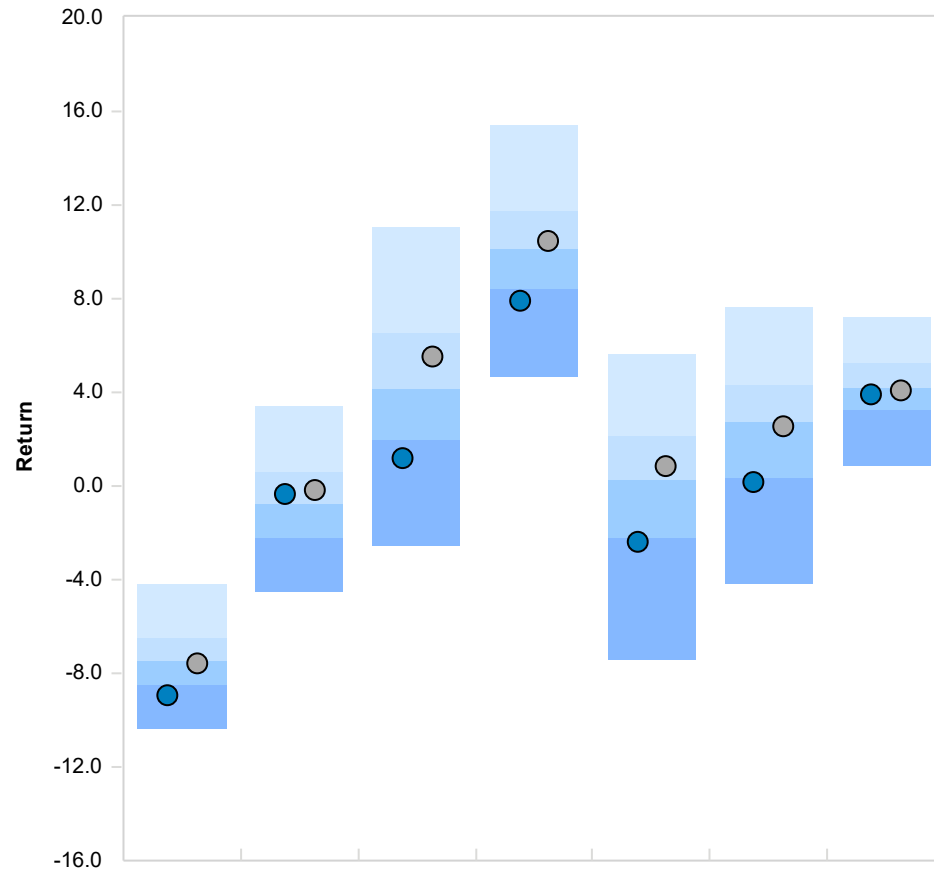
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	7 (35%)	7 (35%)	1 (5%)
Index	20	0 (0%)	10 (50%)	10 (50%)	0 (0%)

### 5 Year Rolling Percentile Rank Foreign

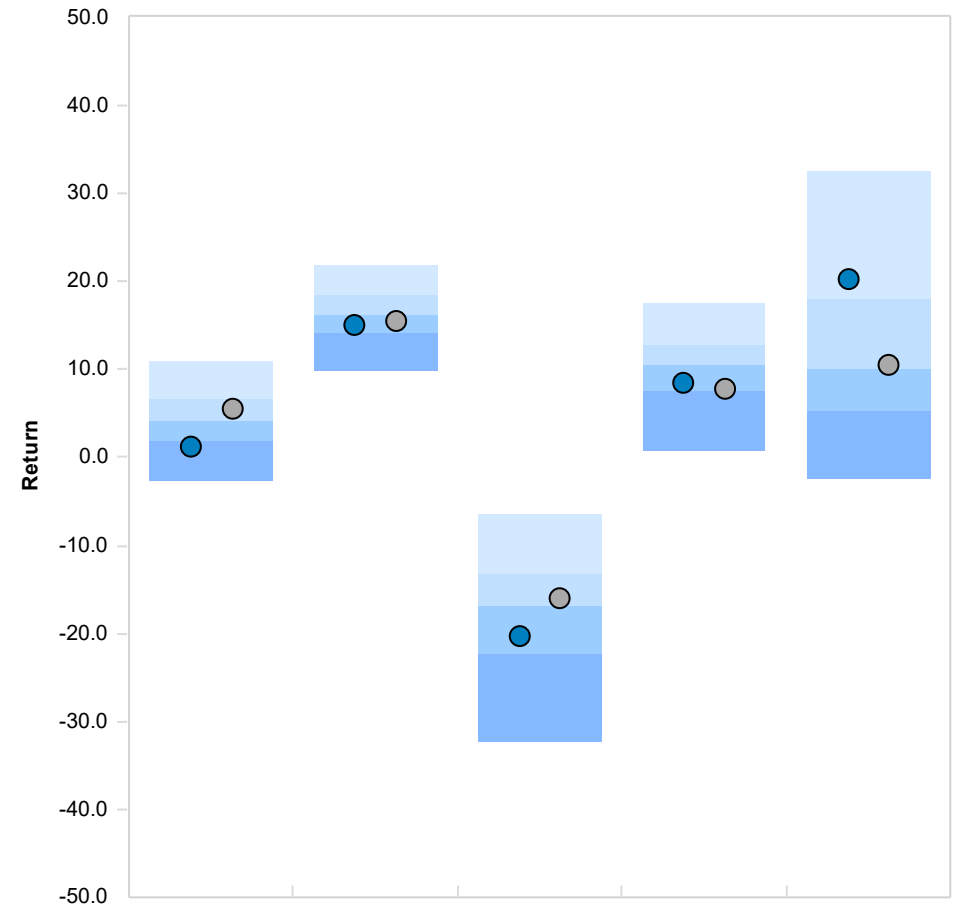


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	12 (60%)	4 (20%)	4 (20%)	0 (0%)
Index	20	0 (0%)	10 (50%)	10 (50%)	0 (0%)

**Peer Group Analysis - Foreign**



**Peer Group Analysis - Foreign**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	9.45 (15)	-0.04 (48)	1.62 (91)	12.14 (17)	-7.61 (84)	3.05 (37)
Index	8.06 (35)	0.96 (26)	4.69 (57)	9.75 (62)	-3.77 (31)	2.44 (59)
Median	7.25	-0.09	4.92	10.27	-4.76	2.71

**Fund Information As of 12/31/2024**

Fund Name : Harding Loevner International Eq Instl  
Fund Family : Harding Loevner  
Ticker : HLMIX  
Inception Date : 05/11/1994  
Fund Assets : \$12,054 Million  
Portfolio Turnover : 22%

Portfolio Assets : \$9,503 Million  
Portfolio Manager : Team Managed  
PM Tenure : 20 Years 2 Months  
Fund Style : Foreign Large Blend  
Style Benchmark : MSCI AC World ex USA Index (Net)

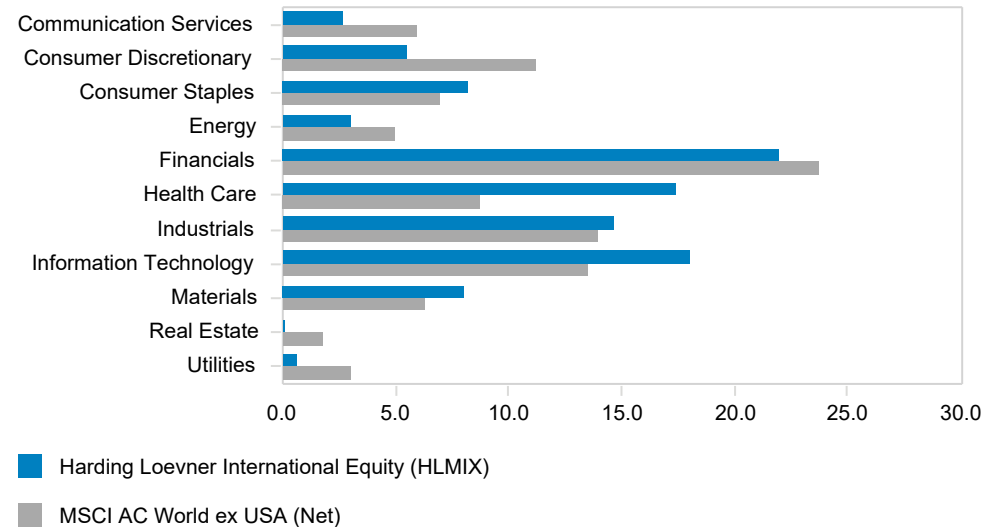
**Portfolio Characteristics As of 12/31/2024**

	Portfolio	Benchmark
Total Securities	100	2,058
Avg. Market Cap	-	-
Price/Earnings (P/E)	14.81	15.83
Price/Book (P/B)	2.21	2.53
Dividend Yield	2.95	2.98
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	1.02	1.00

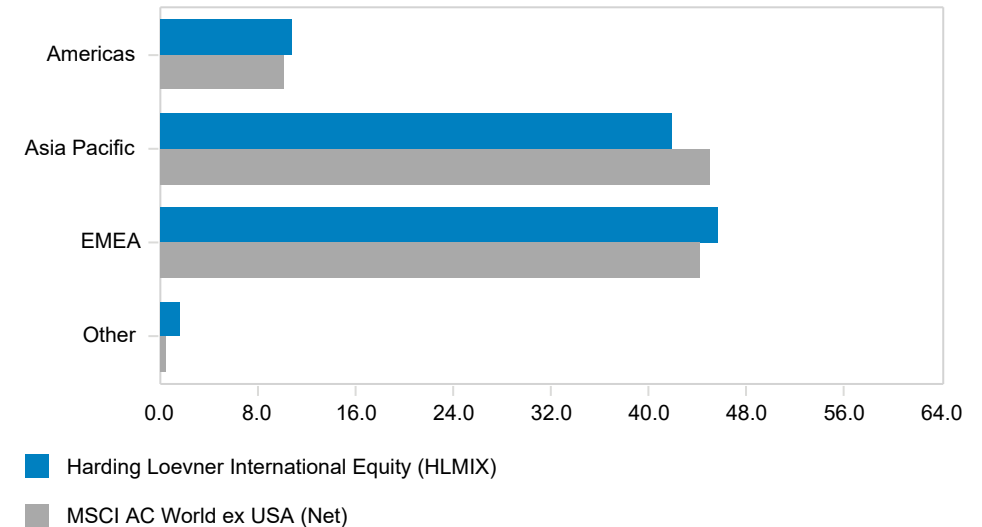
**Top Ten Securities As of 12/31/2024**

Taiwan Semiconductor Manufacturing	3.9 %
DBS Group Holdings Ltd	3.9 %
HDFC Bank Ltd ADR	3.3 %
Chugai Pharmaceutical Co Ltd	3.1 %
Manulife Financial Corp	3.1 %
Allianz SE	3.1 %
Haleon PLC	3.0 %
Shell PLC	3.0 %
Schneider Electric SE	2.9 %
Sony Group Corp	2.8 %
Total	32.1 %

**Sector Weights As of 12/31/2024**



**Region (%) As of 11/30/2024**



Statistics provided by Morningstar. Most recent available data shown.

**Holdings Based Analysis**  
**Harding Loevner International Equity (HLMIX)**  
As of December 31, 2024

Portfolio Characteristics (Benchmark: MSCI AC World ex USA (Net))		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	124,542,357,786	107,605,769,118
Median Mkt. Cap (\$)	42,774,139,717	9,818,212,462
Price/Earnings ratio	13.51	15.83
Price/Book ratio	2.95	2.53
5 Yr. EPS Growth Rate (%)	10.52	12.03
Current Yield (%)	1.63	2.98
Beta (5 Years, Monthly)	1.02	1.00
Number of Stocks	59	2,058

Top Ten Equity Holdings (Benchmark: MSCI AC World ex USA (Net))				
	Portfolio Wt	Benchmark Wt	Active Wt	Qtr Rtrn
Taiwan Semiconductor DR	4.32	3.12	1.20	14.08
DBS Group Holdings Ltd	4.14	0.25	3.89	14.57
HDFC Bank Limited	3.43	0.45	2.98	2.08
Allianz SE	3.23	0.46	2.77	-4.55
Chugai Pharmaceutical Co Ltd	3.21	0.12	3.09	-8.10
Manulife Financial Corp	3.17	0.21	2.96	4.85
Haleon plc	3.03	0.14	2.89	-11.03
Schneider Electric S E	2.99	0.53	2.46	-6.42
Shell Plc	2.94	0.74	2.20	-7.98
Sony Group Corporation	2.91	0.52	2.39	11.58

Ten Best Performers (Benchmark: MSCI AC World ex USA (Net))				
	Portfolio Wt	Benchmark Wt	Active Wt	Quarterly Rtrn
DBS Group Holdings Ltd	4.14	0.25	3.89	14.57
Taiwan Semiconductor DR	4.32	3.12	1.20	14.08
Sony Group Corporation	2.91	0.52	2.39	11.58
Daifuku Co Ltd	0.97	0.03	0.94	9.55
SAP AG	1.28	0.99	0.29	7.47
Manulife Financial Corp	3.17	0.21	2.96	4.85
Disco Corp	1.34	0.10	1.24	3.74
HDFC Bank Limited	3.43	0.45	2.98	2.08
Komatsu Ltd	1.39	0.09	1.30	1.44
Credicorp Ltd	1.25	0.05	1.20	1.30

Ten Worst Performers (Benchmark: MSCI AC World ex USA (Net))				
	Portfolio Wt	Benchmark Wt	Active Wt	Quarterly Rtrn
Shimano Inc	0.70	0.04	0.66	-31.00
Unicharm Corporation	0.29	0.04	0.25	-31.00
LOreal SA	1.91	0.33	1.58	-22.74
BHP Group Ltd	1.60	0.48	1.12	-21.38
ZTO Express (Cayman) Inc	1.09	0.03	1.06	-21.07
Atlas Copco AB (publ)	1.75	0.16	1.59	-20.83
Novonesis A/S	0.80	0.08	0.72	-20.61
Symrise AG	1.27	0.05	1.22	-20.54
Ambev	1.00	0.03	0.97	-19.74
Samsung Electronics Co Ltd	2.47	0.10	2.37	-19.26

Buy and Hold Sector Attribution (Benchmark: MSCI AC World ex USA (Net))								Portfolio Comparison	
	Allocation		Performance		Stock	Attribution		Harding Loevner International Equity (HLMIX)	
	Portfolio	Benchmark	Portfolio	Benchmark		Sector	Total		
Communication Services	2.6	5.7	-9.15	-6.51	-0.07	-0.03	-0.10	<b>Market Capitalization (%)</b>	
Consumer Discretionary	6.3	11.1	-8.70	-8.04	-0.07	0.05	-0.02		Greater than 25000M 79.32
Consumer Staples	12.9	7.2	-15.32	-12.42	-0.40	-0.26	-0.65		16000M To 25000M 9.16
Energy	3.0	5.1	-7.98	-7.14	-0.02	-0.01	-0.03		12000M To 16000M 5.39
Financials	22.9	23.0	-1.54	-2.76	0.27	-0.01	0.26		8000M To 12000M 5.16
Health Care	15.0	9.2	-9.63	-13.94	0.67	-0.37	0.30		5000M To 8000M 0.97
Industrials	15.0	13.9	-10.97	-7.04	-0.59	0.01	-0.59		
Information Technology	12.9	13.0	-3.74	-1.72	-0.25	-0.01	-0.26		
Materials	8.8	6.8	-17.85	-17.15	-0.06	-0.19	-0.26		
Real Estate	0.0	1.8	0.00	-11.49	0.00	0.07	0.07		
Utilities	0.6	3.2	-11.03	-12.65	0.01	0.13	0.14		
Total	100.0	100.0	-8.65	-7.51	-0.53	-0.61	-1.14		

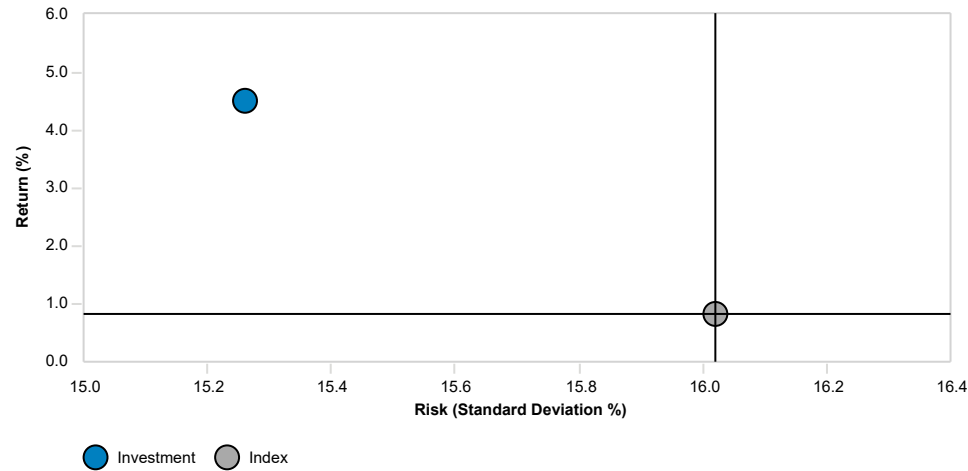
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.53	15.26	0.12	99.60	7	83.14	5
Index	0.82	16.02	-0.11	100.00	7	100.00	5

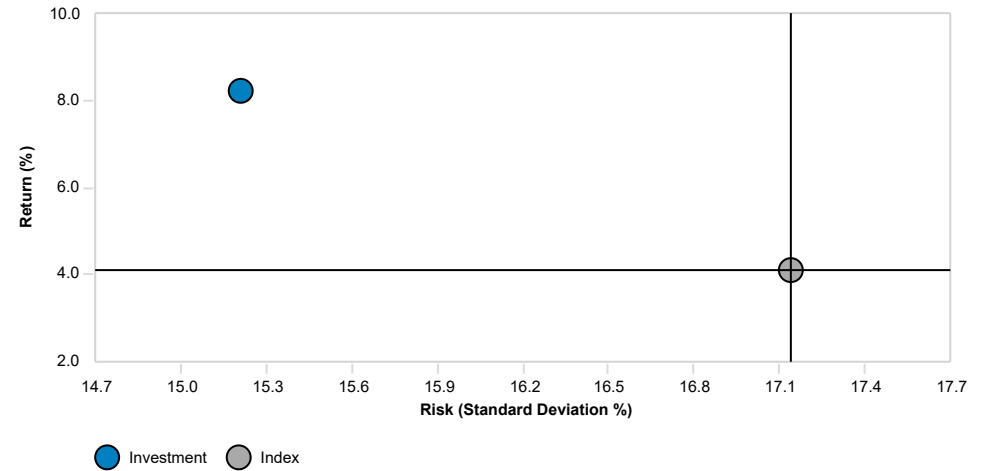
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.27	15.21	0.44	97.87	13	79.85	7
Index	4.10	17.14	0.18	100.00	13	100.00	7

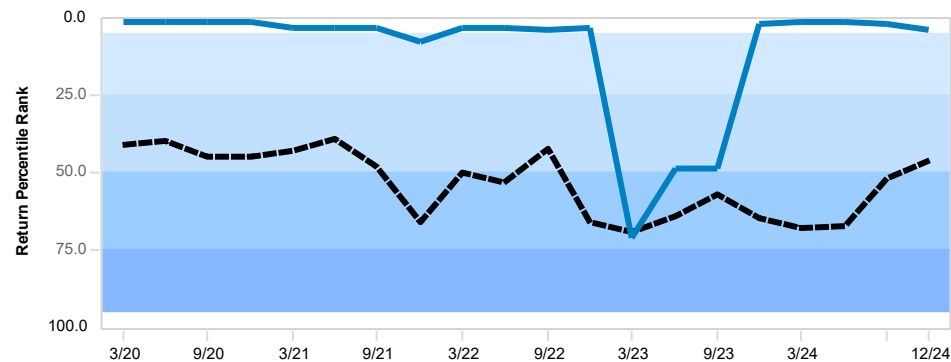
### Risk and Return 3 Years



### Risk and Return 5 Years

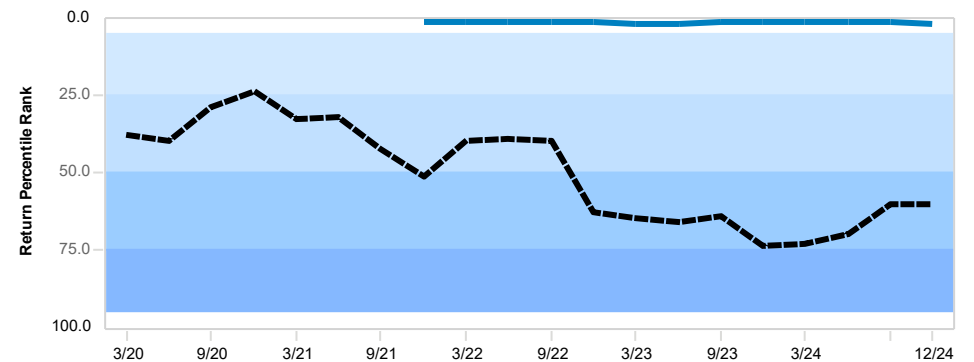


### 3 Year Rolling Percentile Rank Foreign Large Blend



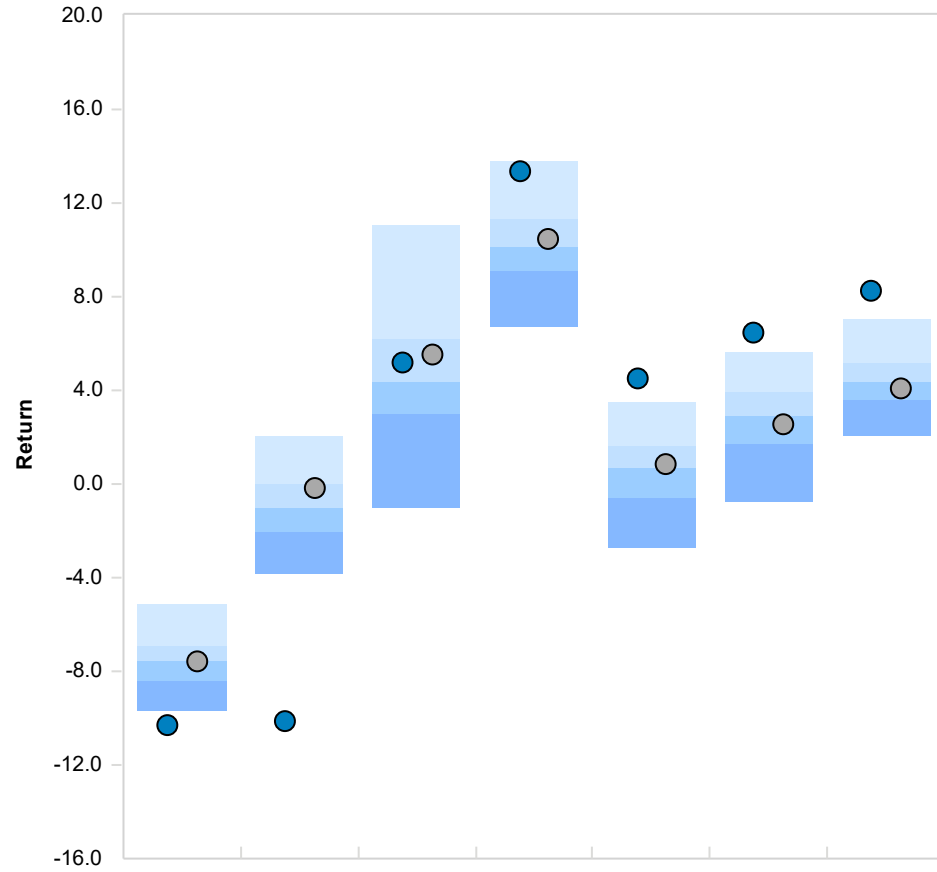
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	17 (85%)	2 (10%)	1 (5%)	0 (0%)
Index	20	0 (0%)	10 (50%)	10 (50%)	0 (0%)

### 5 Year Rolling Percentile Rank Foreign Large Blend

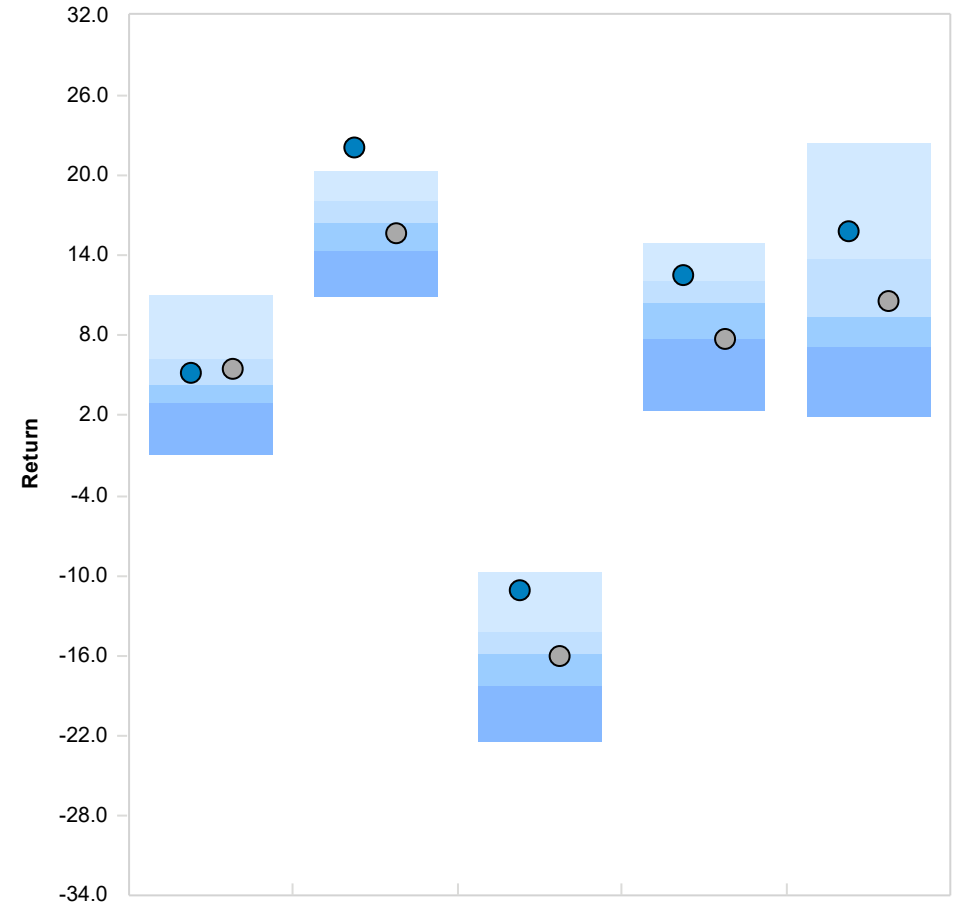


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	13	13 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	1 (5%)	9 (45%)	10 (50%)	0 (0%)

**Peer Group Analysis - Foreign Large Blend**



**Peer Group Analysis - Foreign Large Blend**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	0.26 (100)	2.98 (3)	13.63 (1)	12.53 (3)	-1.74 (4)	6.38 (1)
Index	8.06 (27)	0.96 (29)	4.69 (66)	9.75 (60)	-3.77 (21)	2.44 (70)
Median	7.14	0.07	5.31	10.04	-4.75	2.90



**Fund Information As of 12/31/2024**

Fund Name : Goldman Sachs GQG Ptnrs Intl Opps Instl  
Fund Family : Goldman Sachs  
Ticker : GSIMX  
Inception Date : 12/15/2016  
Fund Assets : \$44,437 Million  
Portfolio Turnover : 88%

Portfolio Assets : \$27,605 Million  
Portfolio Manager : Team Managed  
PM Tenure : 8 Years  
Fund Style : Foreign Large Growth  
Style Benchmark : MSCI AC World ex USA Growth (Net)

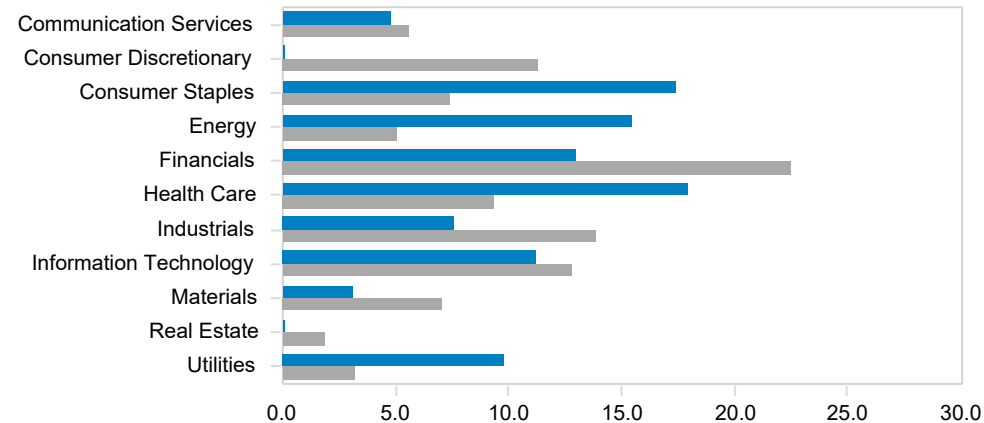
**Portfolio Characteristics As of 09/30/2024**

	Portfolio	Benchmark
Total Securities	76	2,094
Avg. Market Cap	-	-
Price/Earnings (P/E)	14.28	15.60
Price/Book (P/B)	2.55	2.66
Dividend Yield	3.79	2.90
Annual EPS	N/A	N/A
5 Yr EPS	N/A	N/A
3 Yr EPS Growth	N/A	N/A
Beta (5 Years, Monthly)	0.78	1.00

**Top Ten Securities As of 09/30/2024**

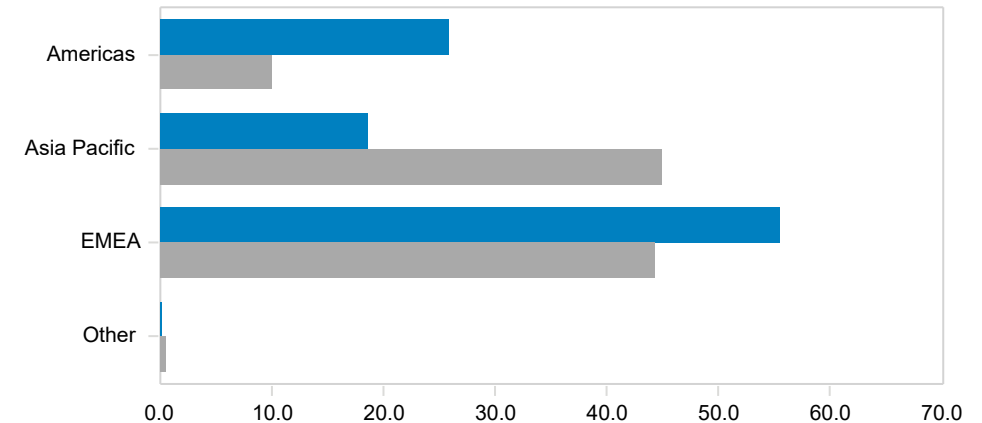
Novo Nordisk AS Class B	6.7 %
Goldman Sachs FS Government Instl	5.4 %
Philip Morris International Inc	5.0 %
AstraZeneca PLC	5.0 %
SAP SE	4.8 %
TotalEnergies SE	3.7 %
Novartis AG Registered Shares	3.1 %
Enbridge Inc	3.0 %
Glencore PLC	2.6 %
Nestle SA	2.5 %
Total	41.8 %

**Sector Weights As of 09/30/2024**



■ Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)  
■ MSCI AC World ex USA (Net)

**Region (%) As of 10/31/2024**



■ Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)  
■ MSCI AC World ex USA (Net)

Statistics provided by Morningstar. Most recent available data shown.

**Holdings Based Analysis**  
**Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)**  
As of December 31, 2024

Portfolio Characteristics (Benchmark: MSCI AC World ex USA (Net))		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$)	262,772,847,514	107,605,769,118
Median Mkt. Cap (\$)	80,294,122,750	9,818,212,462
Price/Earnings ratio	12.45	15.83
Price/Book ratio	3.20	2.53
5 Yr. EPS Growth Rate (%)	18.41	12.03
Current Yield (%)	2.42	2.98
Beta (5 Years, Monthly)	0.78	1.00
Number of Stocks	64	2,058

Top Ten Equity Holdings (Benchmark: MSCI AC World ex USA (Net))				
	Portfolio Wt	Benchmark Wt	Active Wt	Qtr Rtrn
SAP SE	5.91	0.99	4.92	6.98
Philip Morris International Inc	5.88	0.00	5.88	0.23
Novo Nordisk A/S	5.72	1.08	4.64	-26.33
Astrazeneca PLC	4.84	0.79	4.05	-15.84
TotalEnergies SE	3.66	0.46	3.20	-15.80
Enbridge Inc	3.61	0.36	3.25	6.09
Taiwan Semiconductor ORD	3.54	3.12	0.42	8.84
Novartis AG	3.05	0.75	2.30	-12.90
Procter & Gamble Co (The)	2.52	0.00	2.52	-2.64
ICICI Bank Ltd	2.45	0.30	2.15	0.03

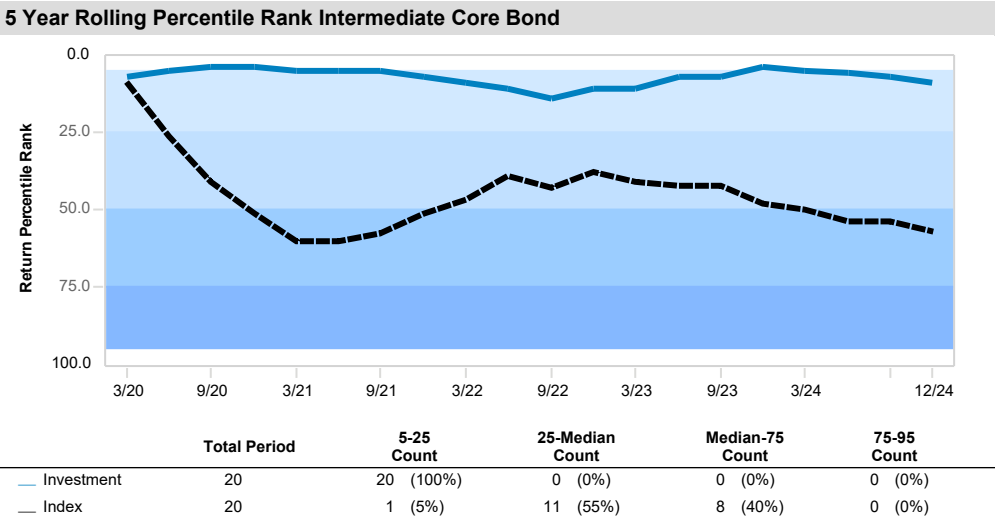
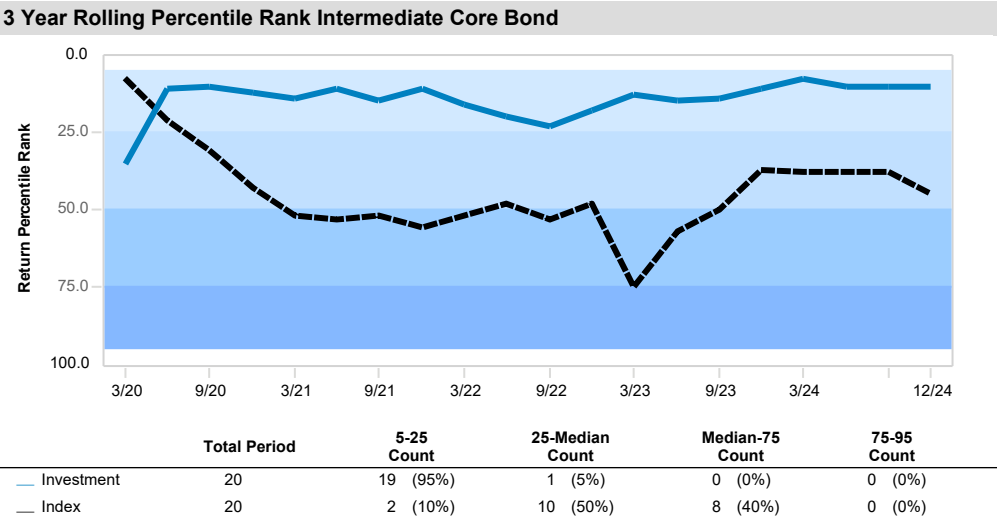
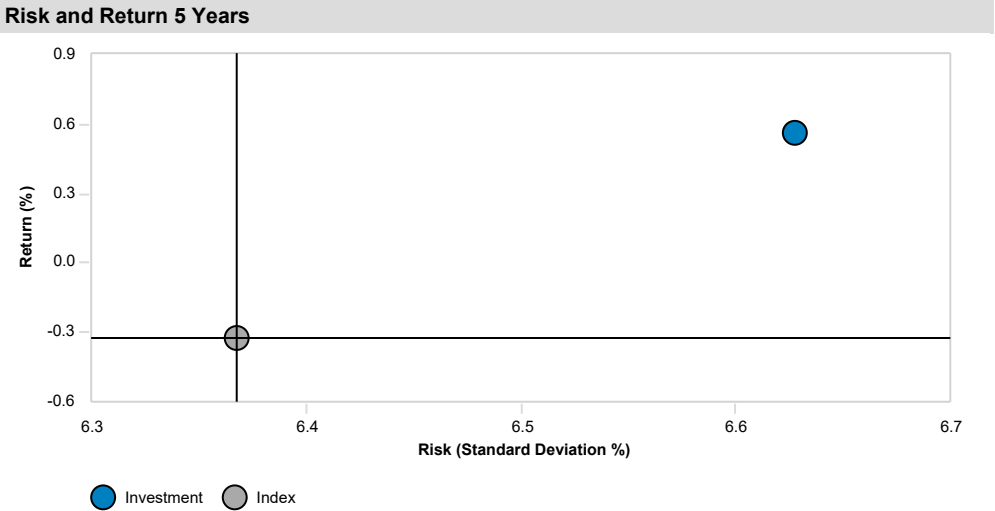
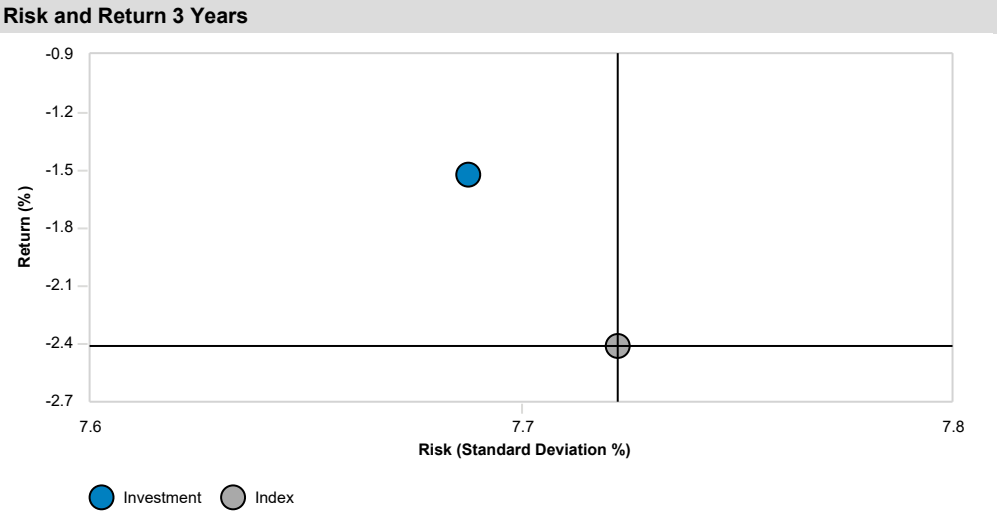
Ten Best Performers (Benchmark: MSCI AC World ex USA (Net))				
	Portfolio Wt	Benchmark Wt	Active Wt	Quarterly Rtrn
Ind & Comm Bank of China	0.32	0.18	0.14	12.28
NVIDIA Corporation	2.09	0.00	2.09	10.59
Taiwan Semiconductor ORD	3.54	3.12	0.42	8.84
Airbus SE	1.61	0.37	1.24	7.52
SAP AG	0.11	0.99	-0.88	7.47
SAP SE	5.91	0.99	4.92	6.98
Enbridge Inc	3.61	0.36	3.25	6.09
HSBC Holdings PLC	1.73	0.69	1.04	5.78
Loblaw Cos Ltd	0.34	0.08	0.26	3.12
Deutsche Boerse AG	1.18	0.17	1.01	2.57

Ten Worst Performers (Benchmark: MSCI AC World ex USA (Net))				
	Portfolio Wt	Benchmark Wt	Active Wt	Quarterly Rtrn
Pernod Ricard SA	0.78	0.09	0.69	-27.79
Novo Nordisk A/S	0.51	1.08	-0.57	-27.76
Novo Nordisk A/S	5.72	1.08	4.64	-26.33
Anheuser-Busch InBev SA/NV	1.10	0.17	0.93	-24.32
Itau Unibanco Holding SA	1.46	0.09	1.37	-24.16
Glencore Plc	2.34	0.18	2.16	-23.16
Adani Energy Solutions Ltd	0.74	0.00	0.74	-21.84
Adani Enterprises Ltd	1.68	0.02	1.66	-21.07
Adani Power Ltd	1.86	0.01	1.85	-21.02
Nestle SA, Cham Und Vevey	2.16	0.84	1.32	-19.25

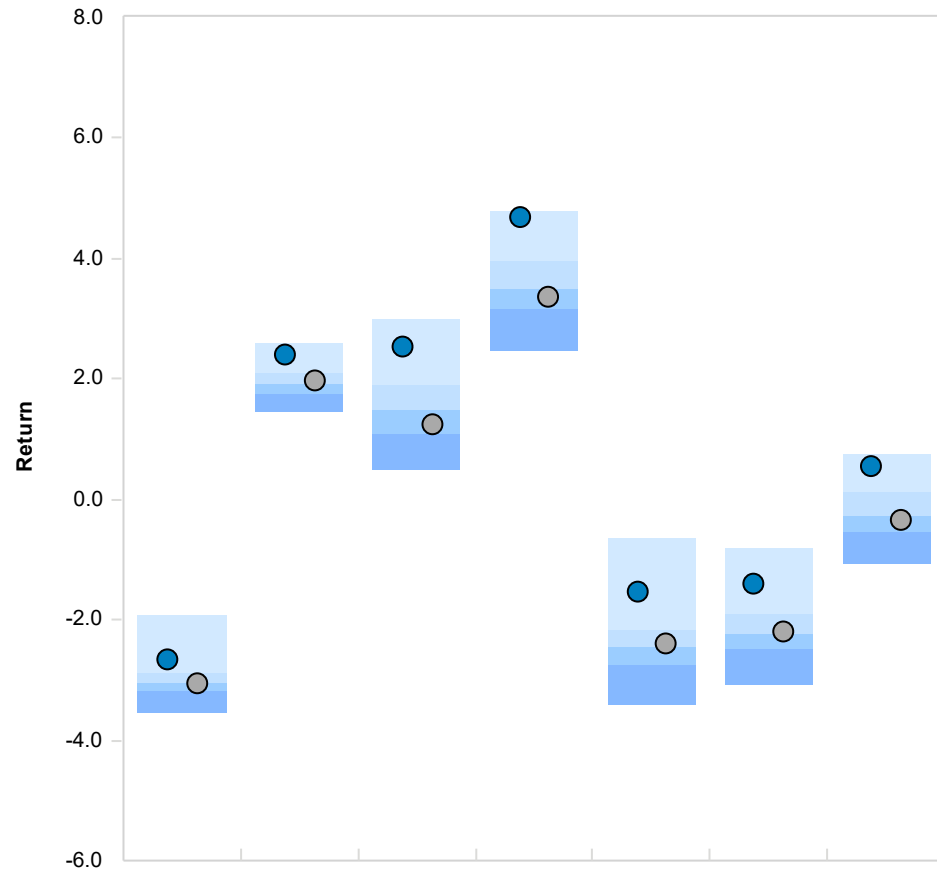
Buy and Hold Sector Attribution (Benchmark: MSCI AC World ex USA (Net))								Portfolio Comparison	
	Allocation		Performance		Stock	Attribution		Goldman Sachs GQG Ptnrs Intl Opportunities (GSIMX)	
	Portfolio	Benchmark	Portfolio	Benchmark		Sector	Total		
Communication Services	5.2	5.7	0.26	-6.51	0.41	-0.02	0.38	<b>Market Capitalization (%)</b>	
Consumer Discretionary	0.6	11.1	-6.45	-8.04	0.01	0.02	0.03		Greater than 25000M 96.32
Consumer Staples	17.2	7.2	-8.75	-12.42	0.57	-0.47	0.10		16000M To 25000M 1.98
Energy	13.4	5.1	-5.62	-7.14	0.21	0.02	0.23		12000M To 16000M 0.50
Financials	13.6	23.0	-4.31	-2.76	-0.40	-0.45	-0.85		8000M To 12000M 1.20
Health Care	16.3	9.2	-19.78	-13.94	-1.03	-0.50	-1.53		
Industrials	9.2	13.9	-8.80	-7.04	-0.17	-0.02	-0.19		
Information Technology	15.3	13.0	2.67	-1.72	0.63	0.18	0.81		
Materials	2.6	6.8	-23.16	-17.15	-0.17	0.42	0.25		
Real Estate	0.0	1.8	0.00	-11.49	0.00	0.07	0.07		
Utilities	6.6	3.2	-15.81	-12.65	-0.23	-0.18	-0.41		
Total	100.0	100.0	-8.61	-7.51	-0.17	-0.93	-1.10		

Historical Statistics 3 Years							
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.52	7.69	-0.68	100.92	5	93.57	7
Index	-2.41	7.72	-0.79	100.00	5	100.00	7

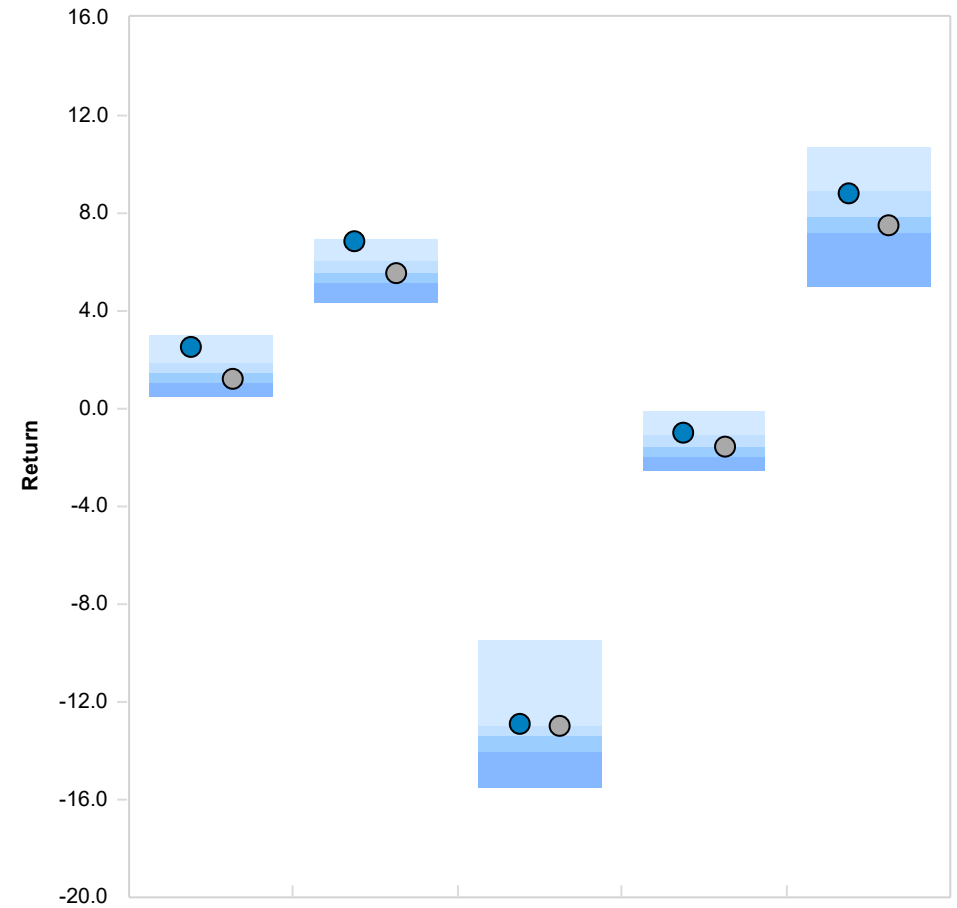
Historical Statistics 5 Years							
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.56	6.63	-0.25	108.50	11	98.14	9
Index	-0.33	6.37	-0.41	100.00	12	100.00	8



**Peer Group Analysis - Intermediate Core Bond**



**Peer Group Analysis - Intermediate Core Bond**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	5.22 (31)	0.30 (22)	-0.18 (12)	7.12 (16)	-2.73 (13)	-0.44 (5)
Index	5.20 (37)	0.07 (78)	-0.78 (72)	6.82 (35)	-3.23 (61)	-0.84 (48)
Median	5.13	0.17	-0.63	6.69	-3.16	-0.86

**Fund Information As of 12/31/2024**

Fund Name : Baird Core Plus Bond Inst  
Fund Family : Baird  
Ticker : BCOIX  
Inception Date : 09/29/2000  
Fund Assets : \$36,238 Million  
Portfolio Turnover : 35%

Portfolio Assets : \$35,092 Million  
Portfolio Manager : Team Managed  
PM Tenure : 24 Years 3 Months  
Fund Style : Intermediate Core-Plus Bond  
Style Benchmark : Bloomberg U.S. Universal Index

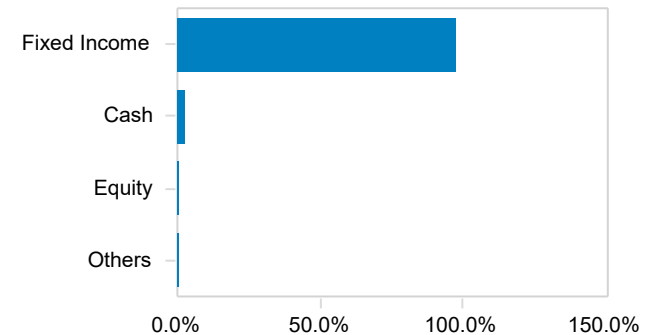
**Fund Characteristics As of 12/31/2024**

Avg. Coupon 4 %  
Avg. Effective Maturity 7.86 Years  
Avg. Effective Duration 5.84 Years  
Avg. Credit Quality A  
Yield To Maturity 5.23 %  
SEC Yield 4.56 %

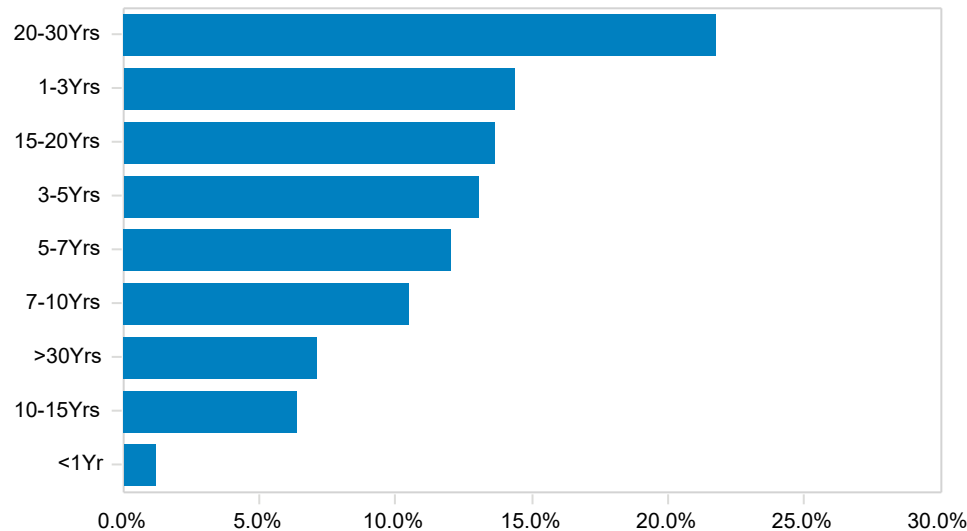
**Top Ten Securities As of 12/31/2024**

United States Treasury Notes 3.13%	2.4 %
First American Government Obligs	2.1 %
United States Treasury Bonds 3.88%	1.8 %
United States Treasury Bonds 3.38%	1.6 %
United States Treasury Bonds 2.88%	1.4 %
United States Treasury Notes 4.63%	1.4 %
United States Treasury Bonds 2.5%	1.3 %
United States Treasury Notes 3.88%	1.2 %
United States Treasury Notes 1.88%	1.1 %
United States Treasury Bonds 2.38%	1.1 %
Total	15.4 %

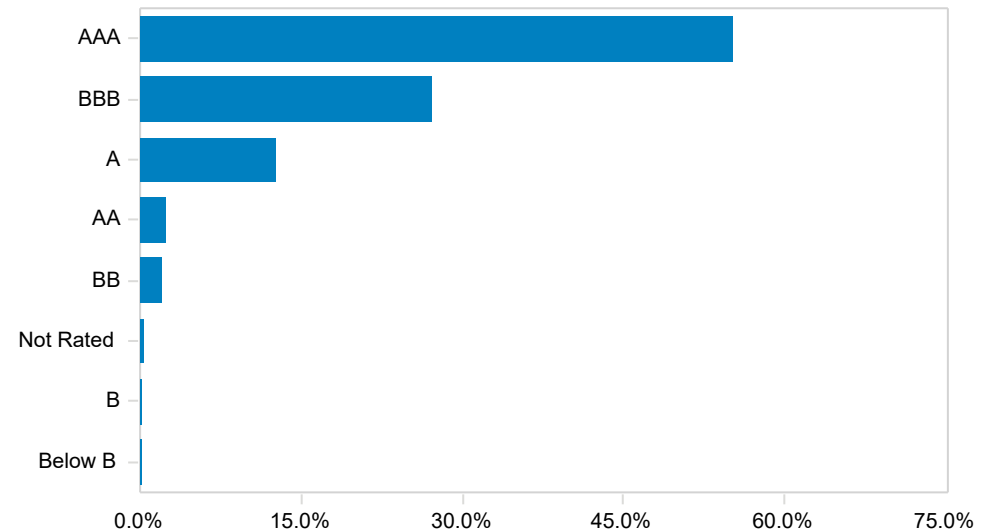
**Asset Allocation As of 12/31/2024**



**Maturity Distribution As of 12/31/2024**



**Quality Allocation As of 12/31/2024**



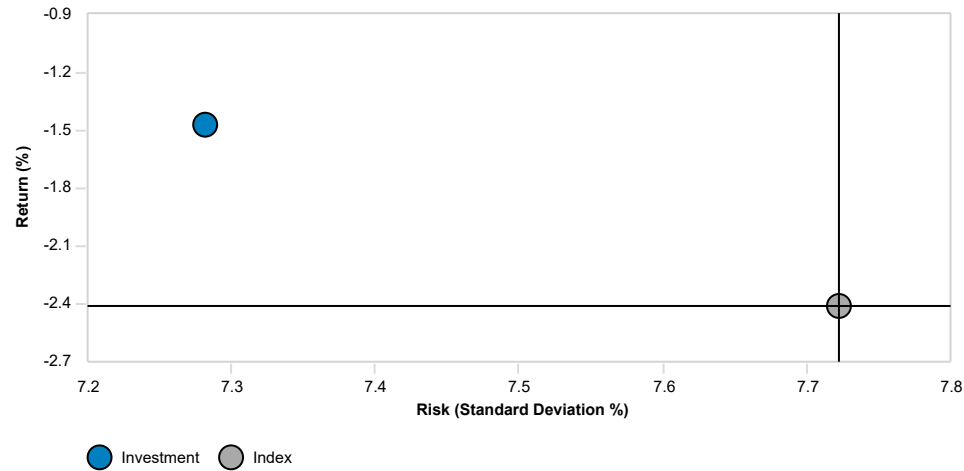
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.47	7.28	-0.71	95.21	5	88.61	7
Index	-2.41	7.72	-0.79	100.00	5	100.00	7

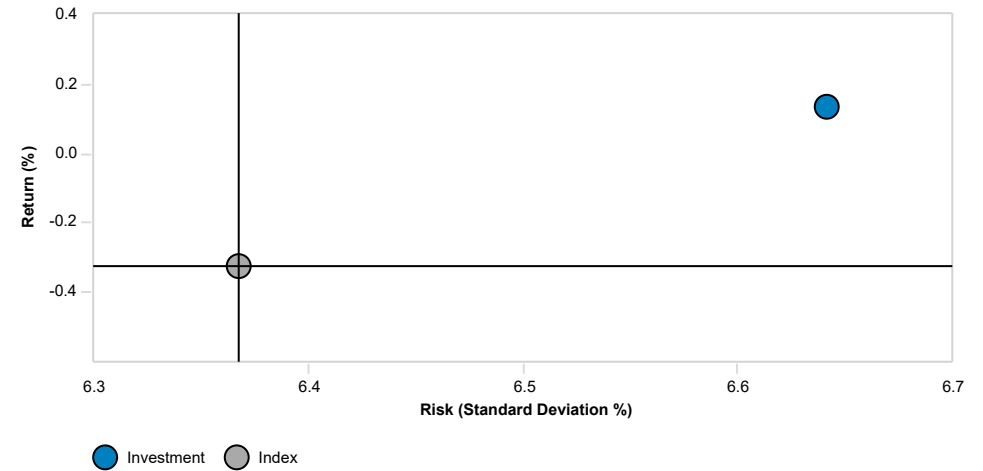
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.14	6.64	-0.31	101.79	10	96.30	10
Index	-0.33	6.37	-0.41	100.00	12	100.00	8

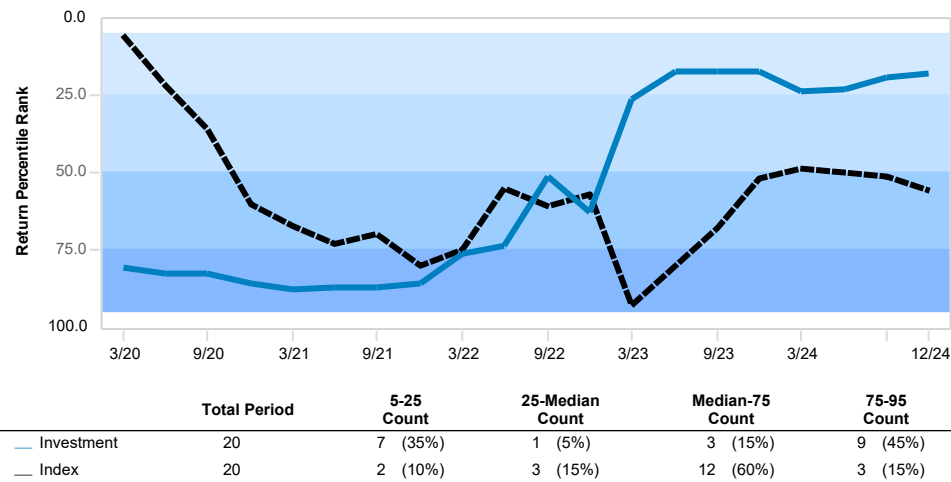
### Risk and Return 3 Years



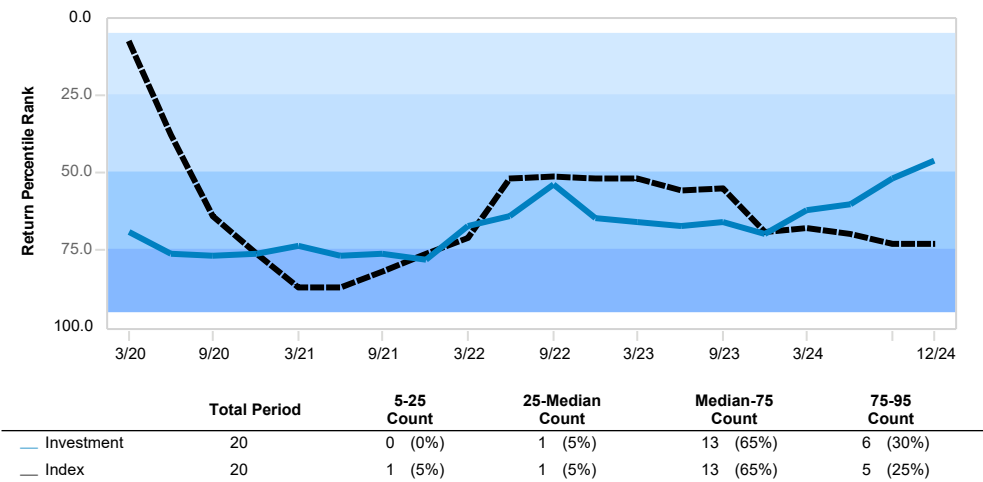
### Risk and Return 5 Years



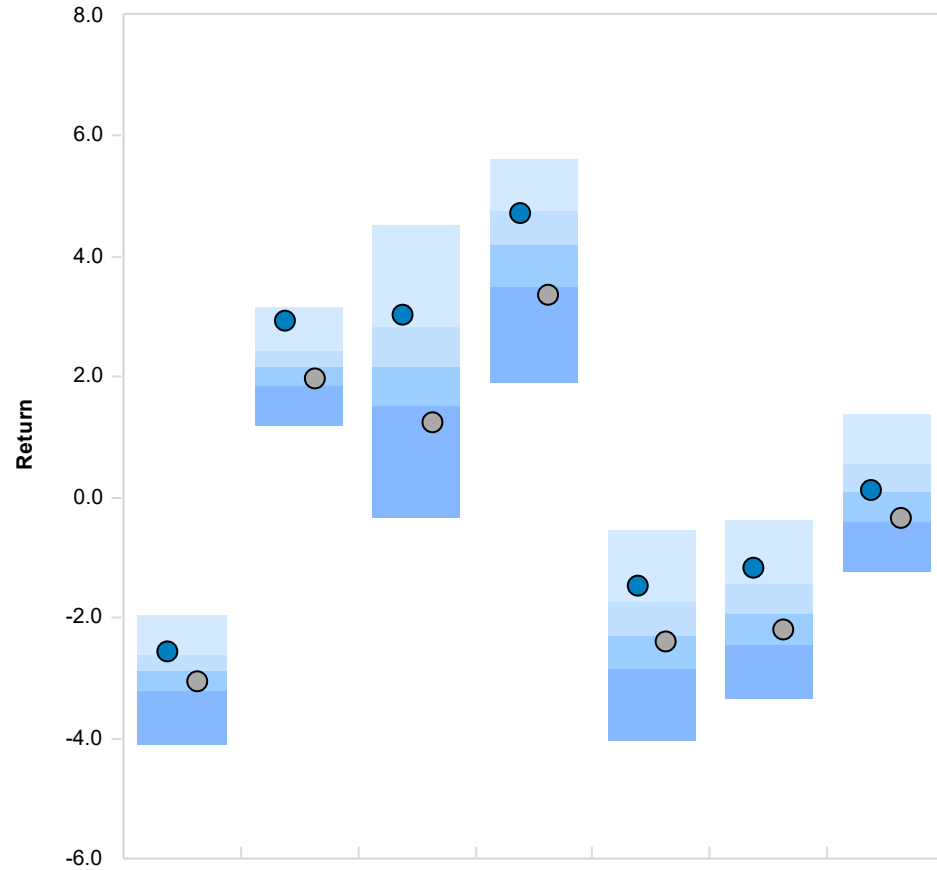
### 3 Year Rolling Percentile Rank Intermediate Core-Plus Bond



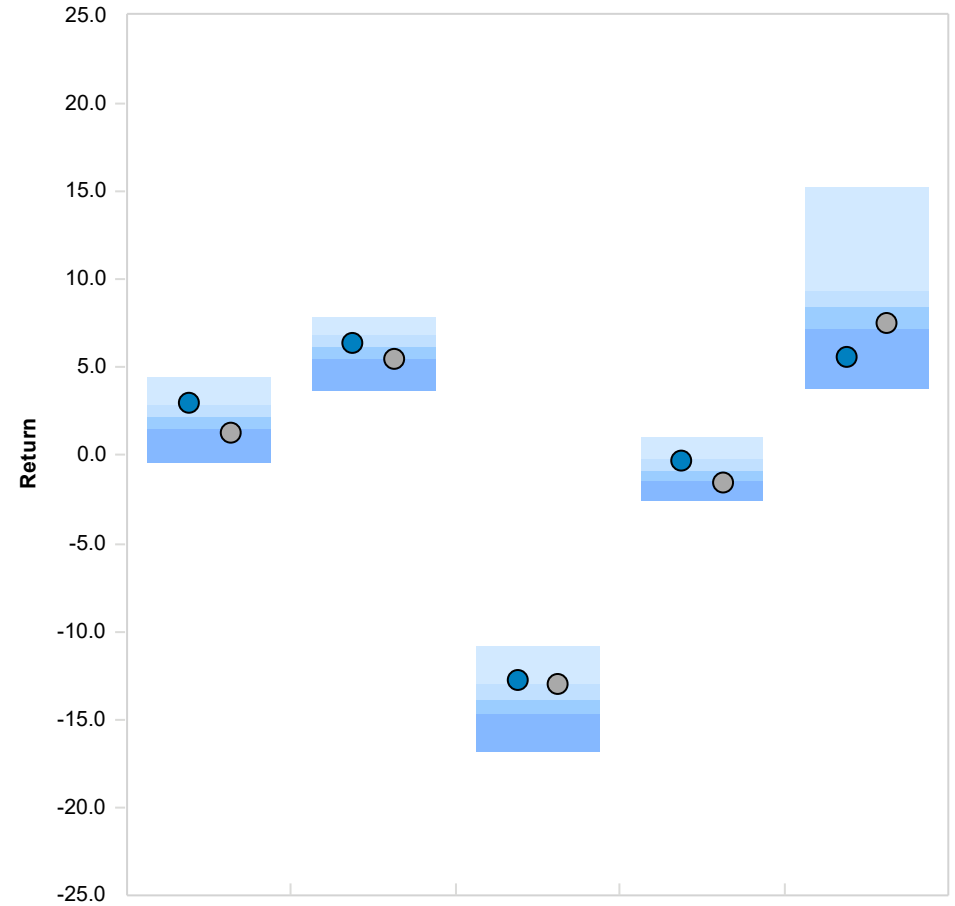
### 5 Year Rolling Percentile Rank Intermediate Core-Plus Bond



**Peer Group Analysis - Intermediate Core-Plus Bond**



**Peer Group Analysis - Intermediate Core-Plus Bond**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	5.64 (15)	0.26 (57)	-0.17 (41)	6.50 (83)	-2.93 (41)	-0.59 (40)
Index	5.20 (54)	0.07 (81)	-0.78 (86)	6.82 (63)	-3.23 (67)	-0.84 (66)
Median	5.22	0.30	-0.28	6.96	-3.03	-0.68

**Mutual Fund Holdings Analysis**  
**DoubleLine Core Fixed Income (DBLFX)**  
December 31, 2024

**Fund Information As of 12/31/2024**

Fund Name : DoubleLine Core Fixed Income I  
Fund Family : DoubleLine  
Ticker : DBLFX  
Inception Date : 06/01/2010  
Fund Assets : \$6,737 Million  
Portfolio Turnover : 119%

Portfolio Assets : \$6,138 Million  
Portfolio Manager : Gundlach,J/Sherman,J  
PM Tenure : 14 Years 6 Months  
Fund Style : Intermediate Core-Plus Bond  
Style Benchmark : Bloomberg U.S. Universal Index

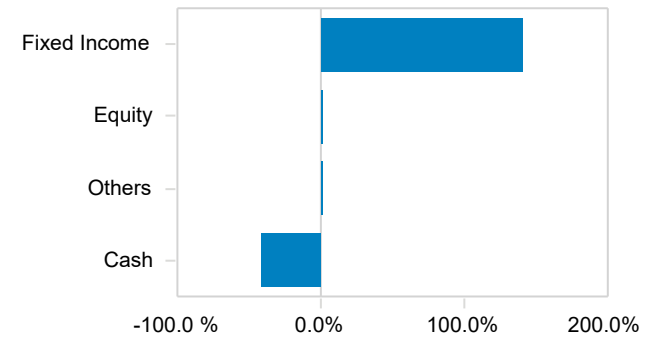
**Fund Characteristics As of 12/31/2024**

Avg. Coupon 4 %  
Avg. Effective Maturity 6.92 Years  
Avg. Effective Duration 5.69 Years  
Avg. Credit Quality BB  
Yield To Maturity 5.48 %  
SEC Yield 5.21 %

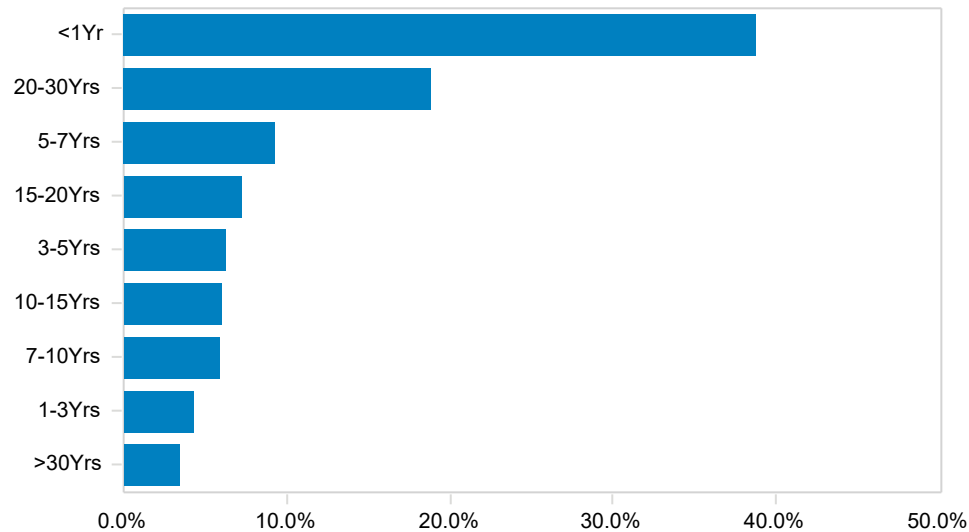
**Top Ten Securities As of 11/30/2024**

2 Year Treasury Note Future Mar	51.8 %
US Treasury Bond Future Mar 25	5.2 %
DoubleLine Infrastructure Income	4.6 %
United States Treasury Bonds 1.13%	3.7 %
United States Treasury Notes 0.88%	3.6 %
United States Treasury Notes 0.75%	2.7 %
United States Treasury Bonds 1.88%	2.2 %
Morgan Stanley Instl Lqudty Govt	2.1 %
JPMorgan US Government MMkt IM	2.1 %
Ultra 10 Year US Treasury Note	-9.5 %
Total	68.5 %

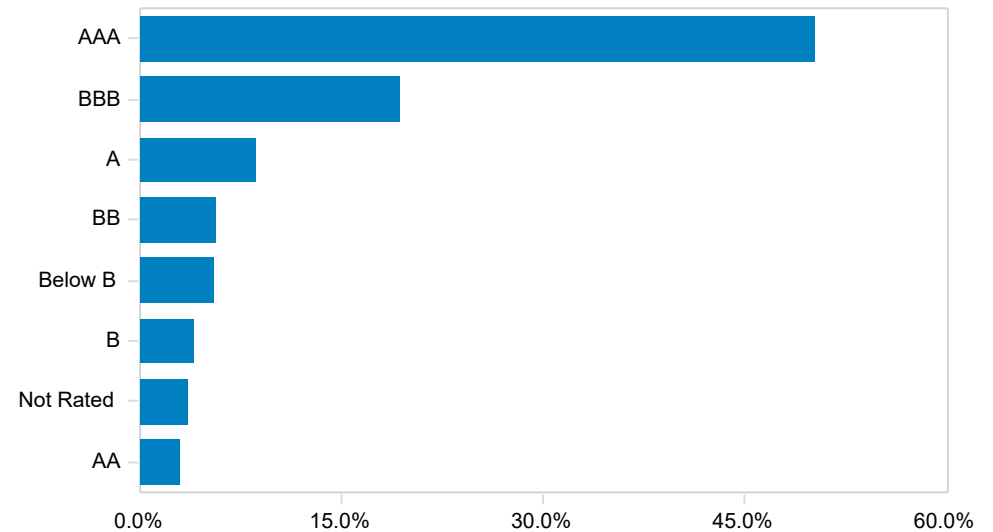
**Asset Allocation As of 11/30/2024**



**Maturity Distribution As of 11/30/2024**



**Quality Allocation As of 11/30/2024**





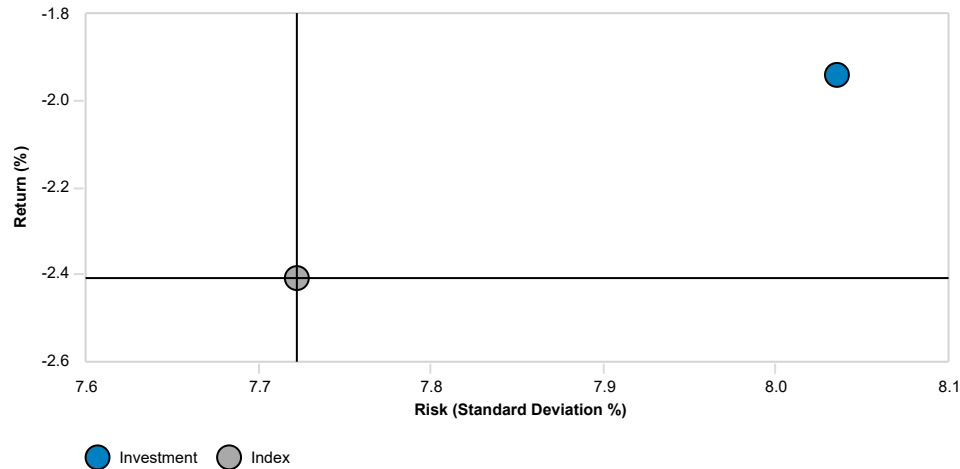
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.94	8.04	-0.70	102.28	7	97.84	5
Index	-2.41	7.72	-0.79	100.00	5	100.00	7

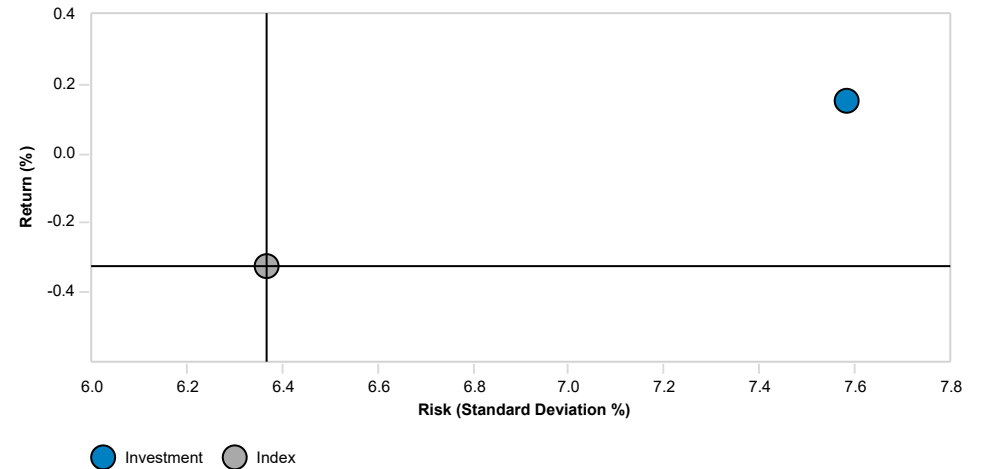
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.15	7.58	-0.26	120.69	12	113.98	8
Index	-0.33	6.37	-0.41	100.00	12	100.00	8

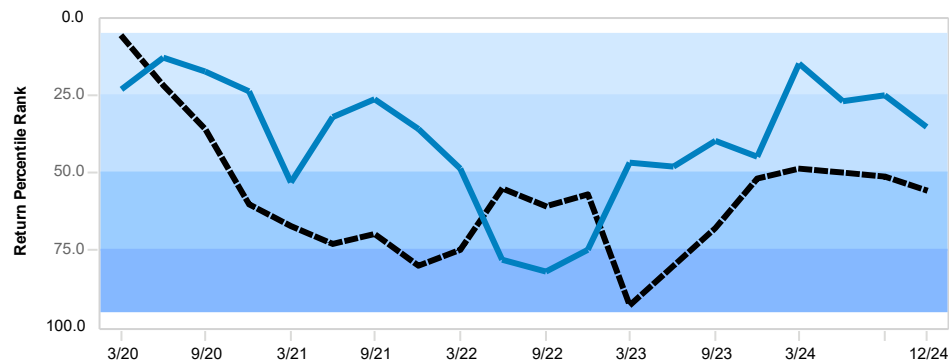
### Risk and Return 3 Years



### Risk and Return 5 Years

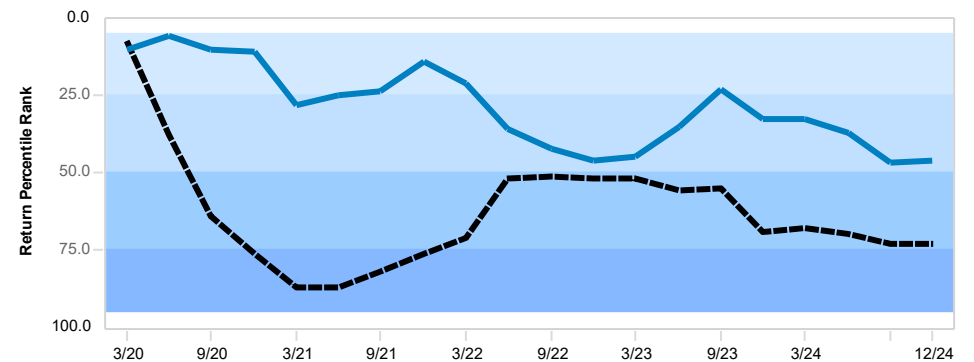


### 3 Year Rolling Percentile Rank Intermediate Core-Plus Bond



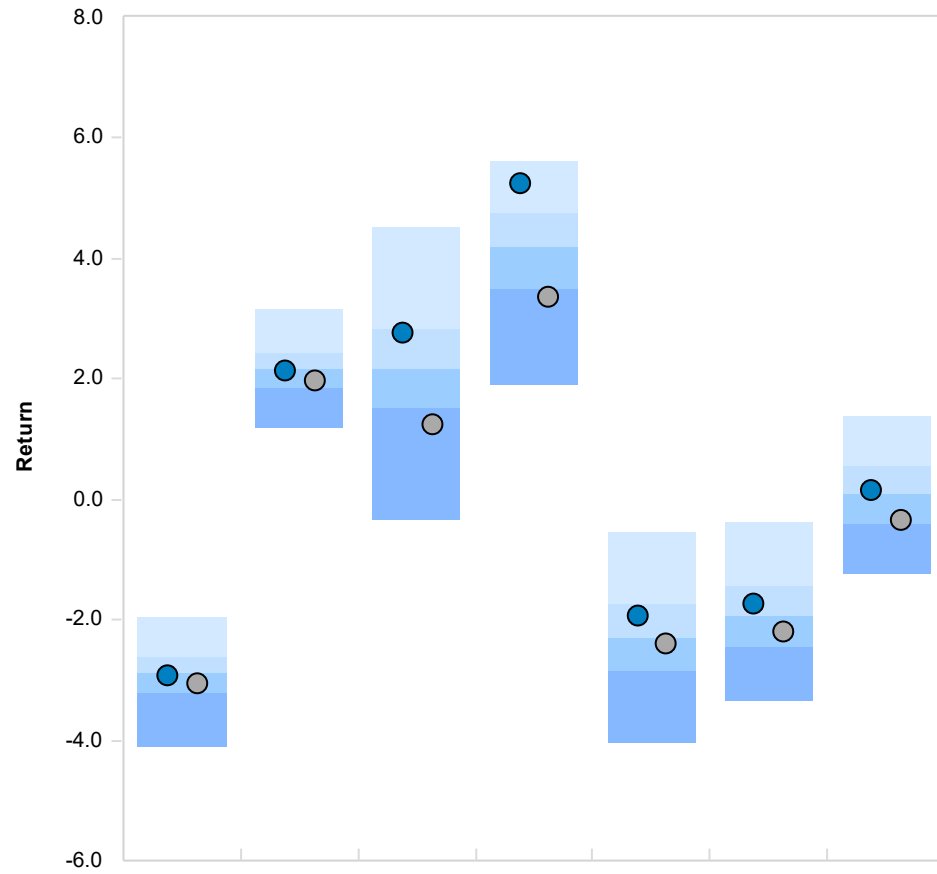
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	6 (30%)	10 (50%)	2 (10%)	2 (10%)
Index	20	2 (10%)	3 (15%)	12 (60%)	3 (15%)

### 5 Year Rolling Percentile Rank Intermediate Core-Plus Bond

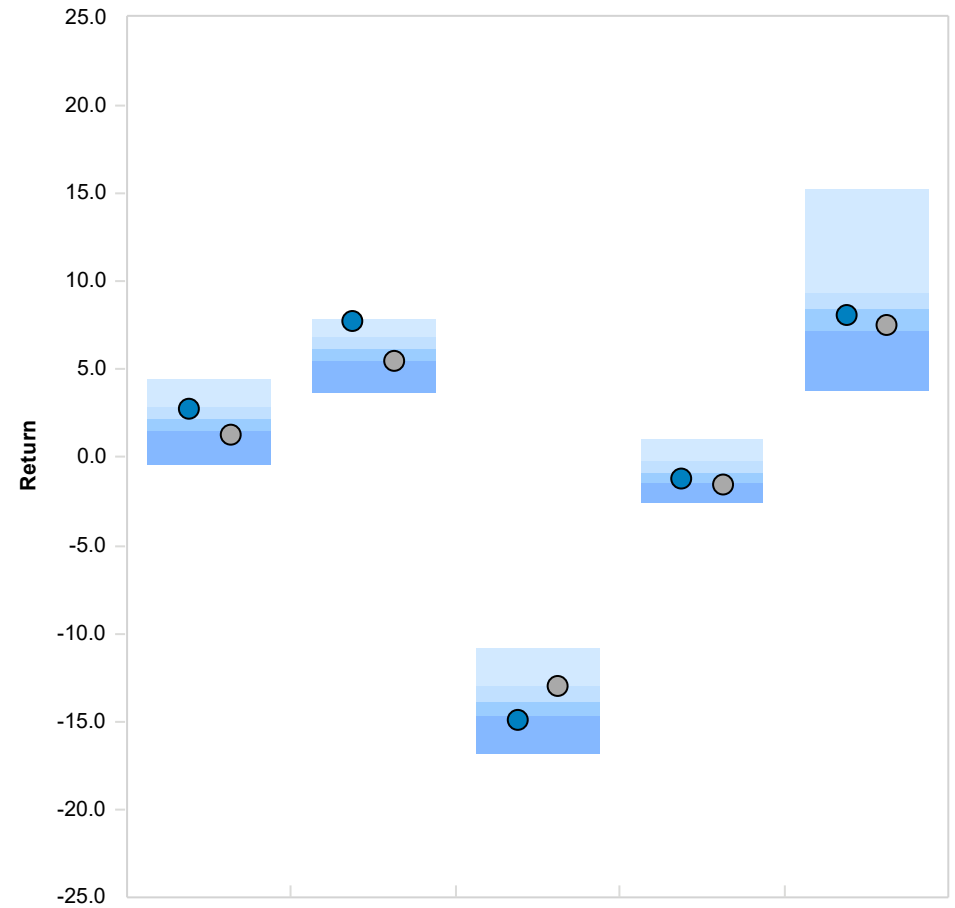


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	11 (55%)	0 (0%)	0 (0%)
Index	20	1 (5%)	1 (5%)	13 (65%)	5 (25%)

**Peer Group Analysis - Intermediate Core-Plus Bond**



**Peer Group Analysis - Intermediate Core-Plus Bond**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	5.21 (53)	0.47 (21)	0.14 (20)	7.16 (35)	-2.52 (16)	0.00 (7)
Index	5.20 (54)	0.07 (81)	-0.78 (86)	6.82 (63)	-3.23 (67)	-0.84 (66)
Median	5.22	0.30	-0.28	6.96	-3.03	-0.68

**Fund Information As of 12/31/2024**

Fund Name : PGIM Total Return Bond R6  
Fund Family : PGIM Investments  
Ticker : PTRQX  
Inception Date : 12/27/2010  
Fund Assets : \$49,066 Million  
Portfolio Turnover : 113%

Portfolio Assets : \$21,230 Million  
Portfolio Manager : Team Managed  
PM Tenure : 22 Years 2 Months  
Fund Style : Intermediate Core-Plus Bond  
Style Benchmark : Bloomberg U.S. Universal Index

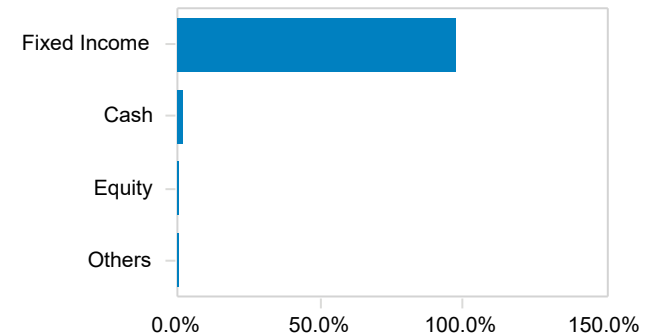
**Fund Characteristics As of 12/31/2024**

Avg. Coupon 4.49 %  
Avg. Effective Maturity 8.24 Years  
Avg. Effective Duration 6.12 Years  
Avg. Credit Quality BBB  
Yield To Maturity 6.09 %  
SEC Yield 5.25 %

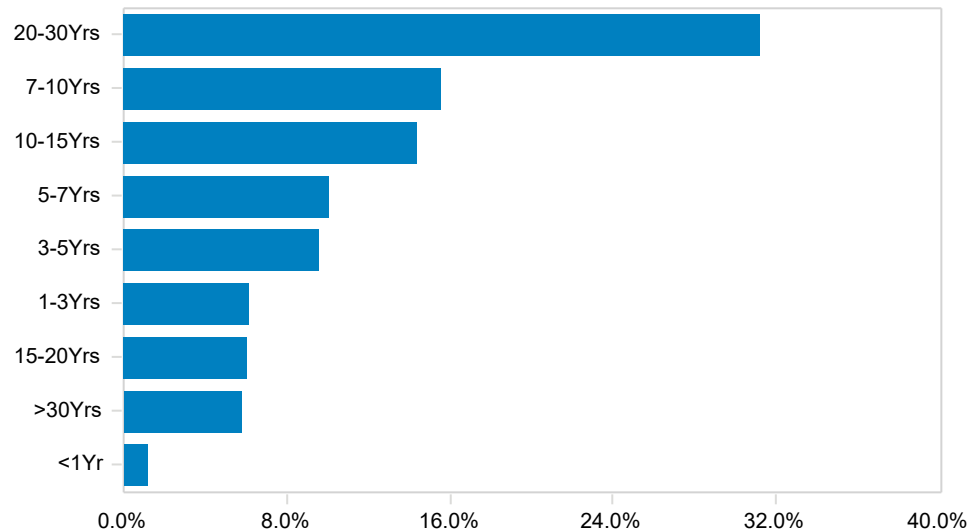
**Top Ten Securities As of 12/31/2024**

United States Treasury Bonds 1.625%	1.4 %
United States Treasury Bonds 1.375%	0.7 %
Federal Home Loan Mortgage Corp.	0.7 %
Federal National Mortgage Asso	0.7 %
United States Treasury Bonds 3%	0.6 %
Federal Home Loan Mortgage Corp.	0.6 %
Prudential Govt Money Mkt Fd	0.5 %
Federal Home Loan Mortgage Corp.	0.5 %
Bank of America Corp. 2.687%	0.5 %
Greece (Republic Of) 5.2%	0.5 %
Total	6.5 %

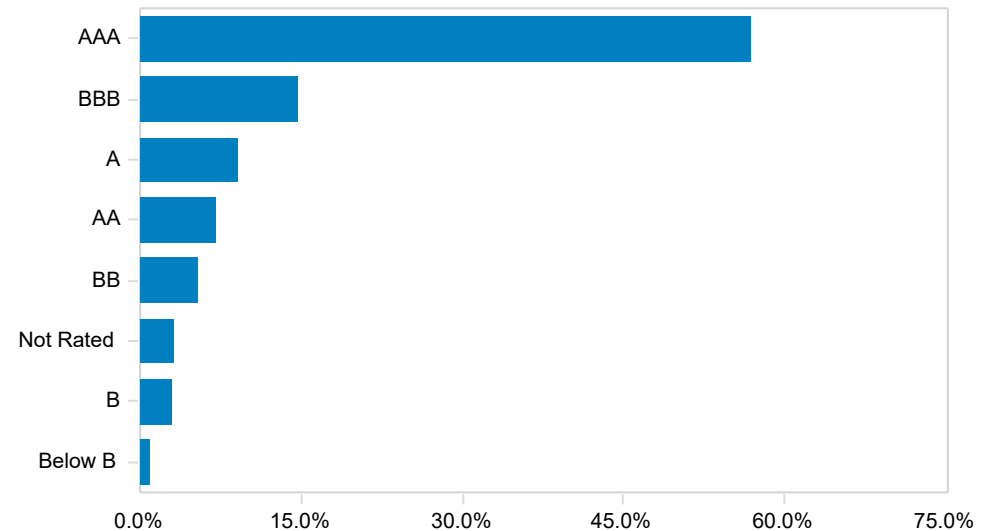
**Asset Allocation As of 11/30/2024**



**Maturity Distribution As of 12/31/2024**



**Quality Allocation As of 11/30/2024**



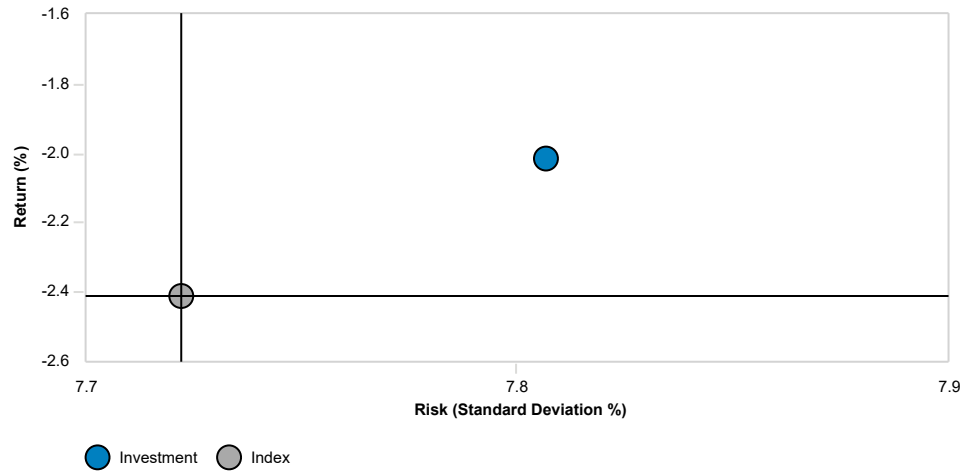
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-2.01	7.81	-0.73	100.41	5	97.07	7
Index	-2.41	7.72	-0.79	100.00	5	100.00	7

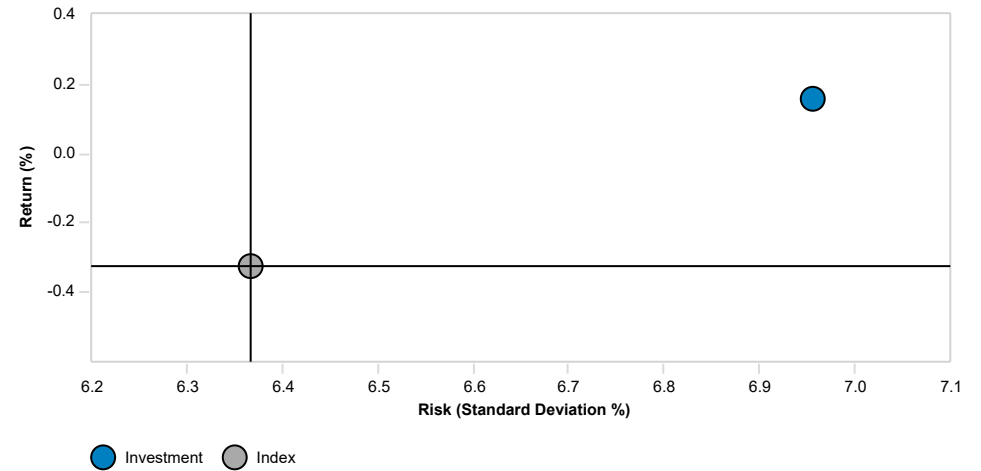
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.16	6.96	-0.29	110.18	10	104.08	10
Index	-0.33	6.37	-0.41	100.00	12	100.00	8

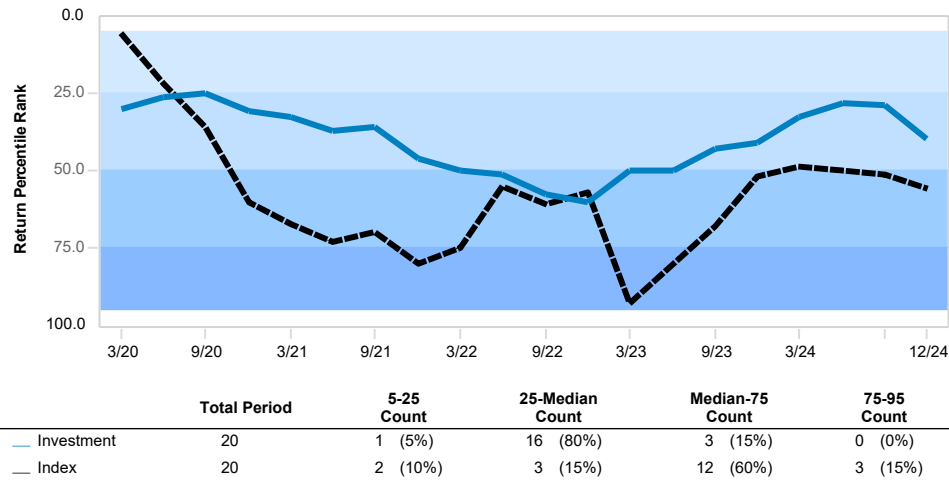
### Risk and Return 3 Years



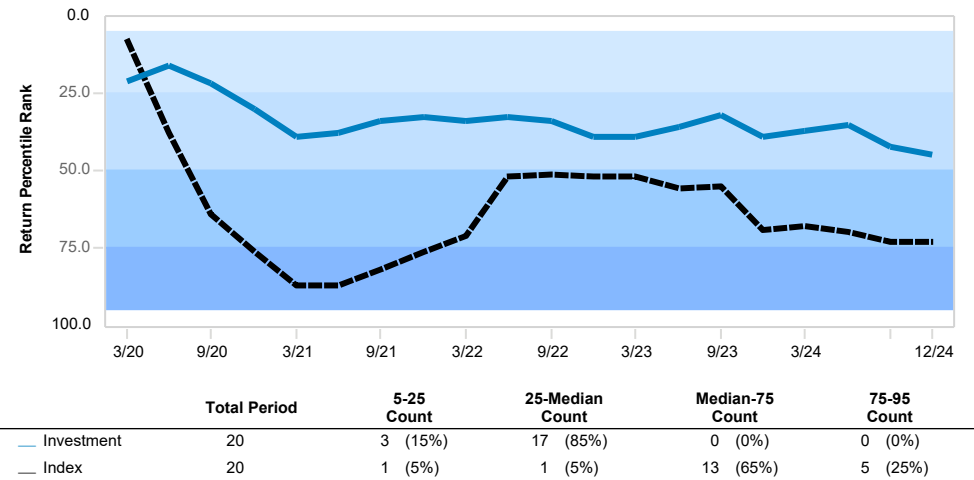
### Risk and Return 5 Years



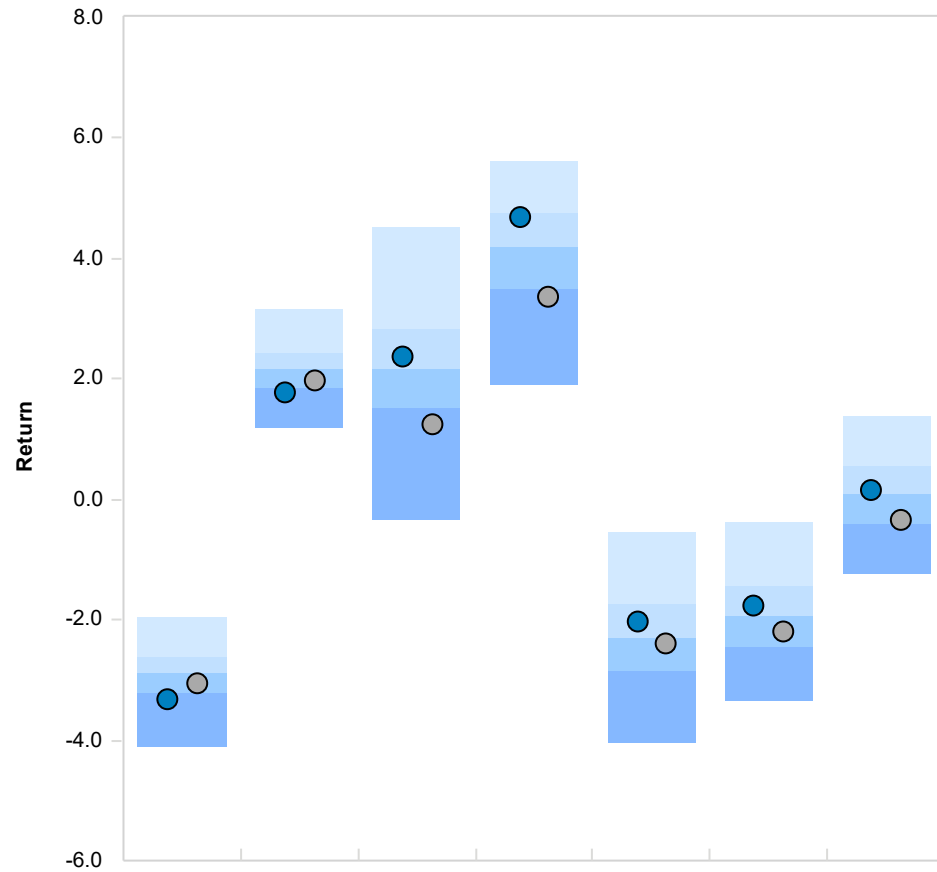
### 3 Year Rolling Percentile Rank Intermediate Core-Plus Bond



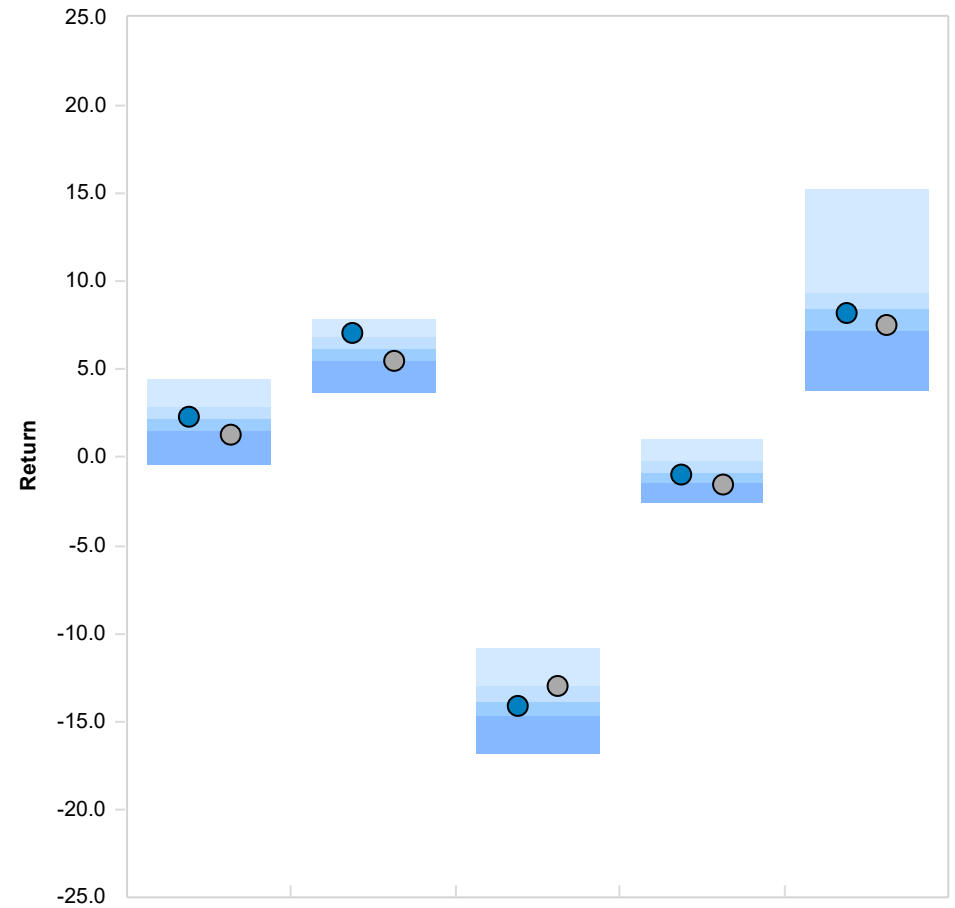
### 5 Year Rolling Percentile Rank Intermediate Core-Plus Bond



**Peer Group Analysis - Intermediate Core-Plus Bond**



**Peer Group Analysis - Intermediate Core-Plus Bond**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	5.25 (47)	0.64 (10)	-0.06 (32)	7.12 (38)	-2.66 (23)	-0.53 (35)
Index	5.20 (54)	0.07 (81)	-0.78 (86)	6.82 (63)	-3.23 (67)	-0.84 (66)
Median	5.22	0.30	-0.28	6.96	-3.03	-0.68

**Fund Information As of 12/31/2024**

Fund Name : Voya Intermediate Bond R6  
Fund Family : Voya  
Ticker : IIBZX  
Inception Date : 05/31/2013  
Fund Assets : \$9,200 Million  
Portfolio Turnover : 277%

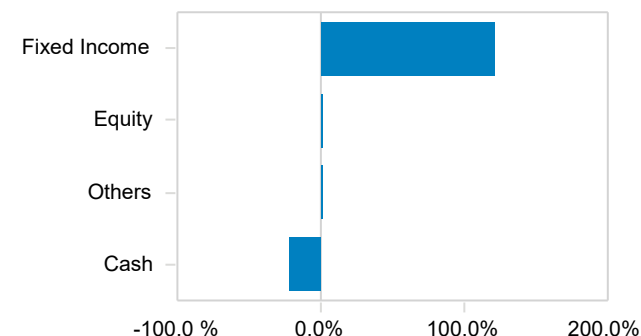
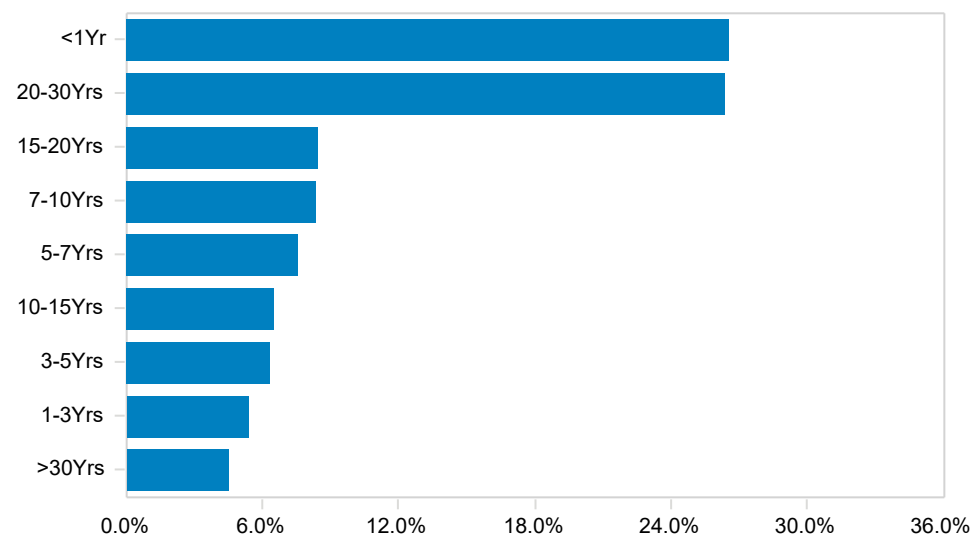
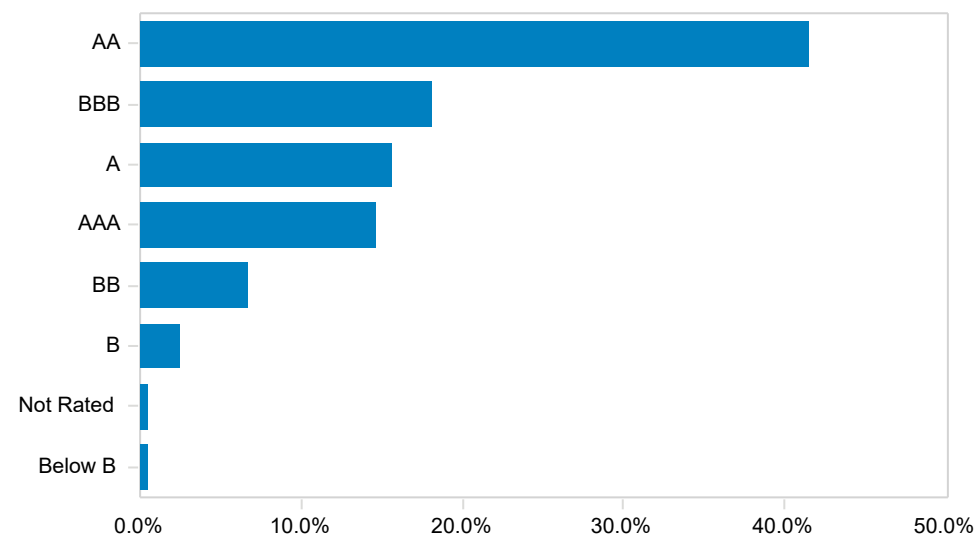
Portfolio Assets : \$2,654 Million  
Portfolio Manager : Team Managed  
PM Tenure : 7 Years 8 Months  
Fund Style : Intermediate Core-Plus Bond  
Style Benchmark : Bloomberg U.S. Universal Index

**Fund Characteristics As of 12/31/2024**

Avg. Coupon 4.47 %  
Avg. Effective Maturity 6.8 Years  
Avg. Effective Duration 5.9 Years  
Avg. Credit Quality BBB  
Yield To Maturity N/A  
SEC Yield 4.38 %

**Top Ten Securities As of 12/31/2024**

2 Year Treasury Note Future Mar	20.0 %
Ultra US Treasury Bond Future Mar	6.4 %
10 Year Treasury Note Future Mar	3.8 %
United States Treasury Bonds 4.625%	3.5 %
US Treasury Bond Future Mar 25	3.0 %
United States Treasury Notes 4%	1.3 %
Government National Mortgage A	1.2 %
United States Treasury Bonds 4.25%	1.0 %
5 Year Treasury Note Future Mar	-1.0 %
Ultra 10 Year US Treasury Note	-4.6 %
Total	34.5 %

**Asset Allocation As of 11/30/2024****Maturity Distribution As of 12/31/2024****Quality Allocation As of 12/31/2024**

**Strategy Review**  
**iShares Core US Aggregate Bond ETF (AGG) | Blmbg. U.S. Aggregate Index**  
As of December 31, 2024

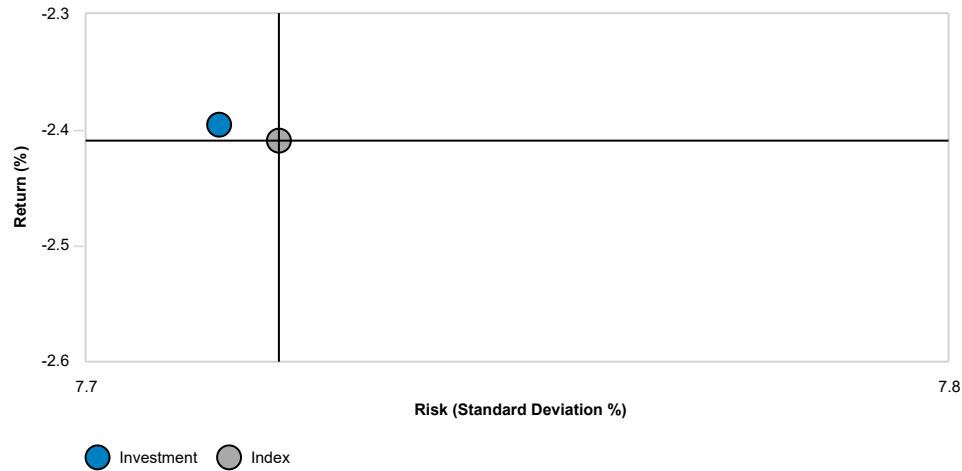
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-2.39	7.72	-0.79	100.07	5	99.95	7
Index	-2.41	7.72	-0.79	100.00	5	100.00	7

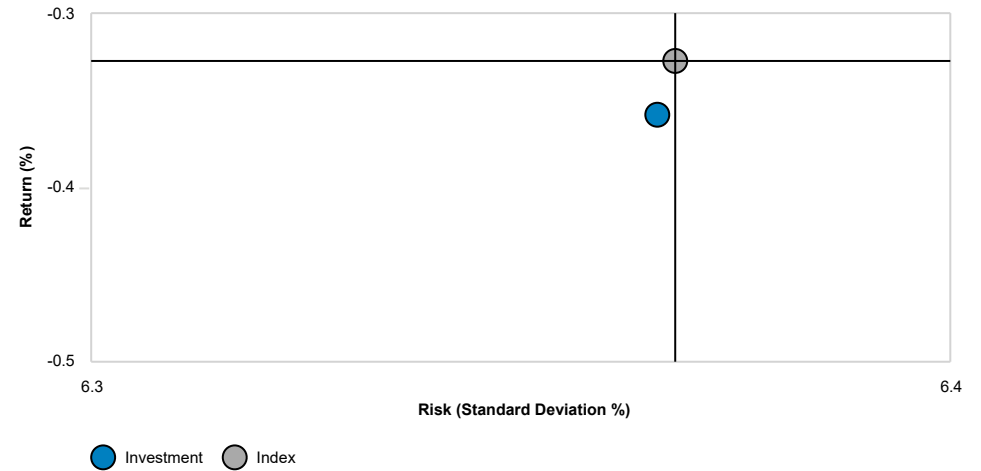
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.36	6.37	-0.41	100.00	11	100.37	9
Index	-0.33	6.37	-0.41	100.00	12	100.00	8

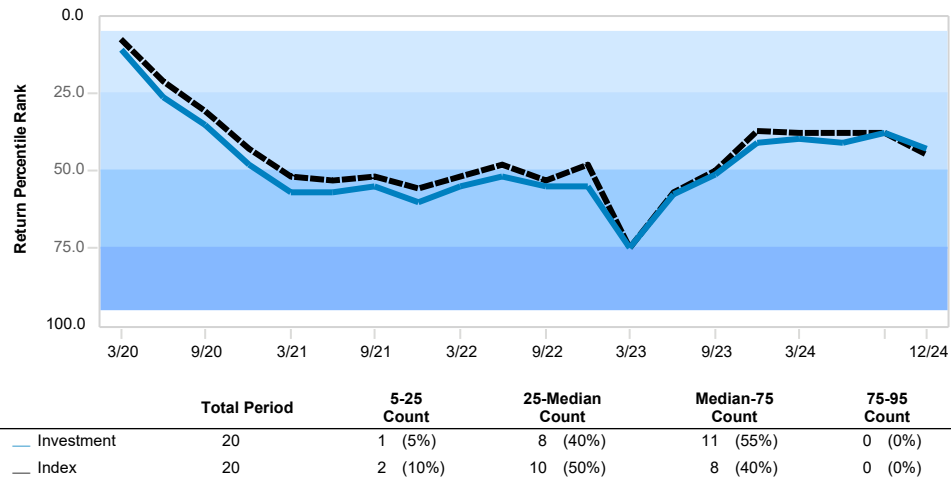
### Risk and Return 3 Years



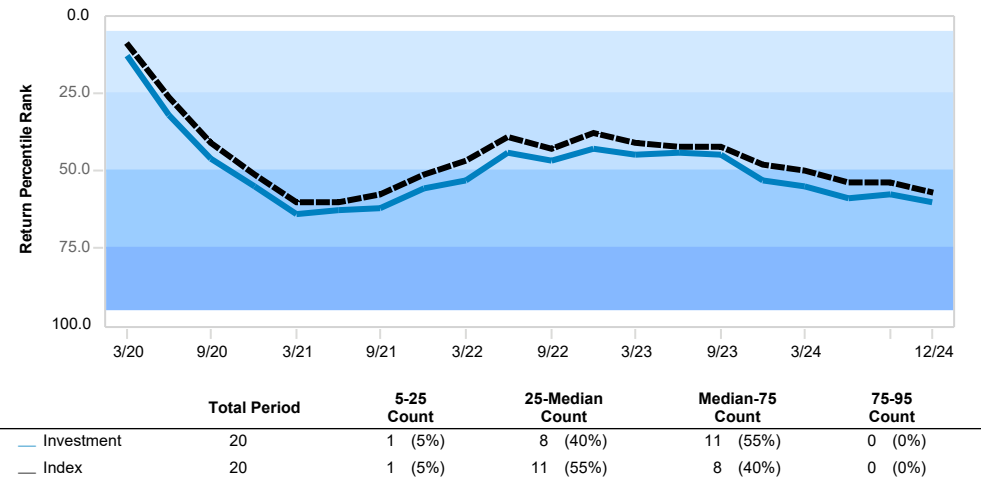
### Risk and Return 5 Years



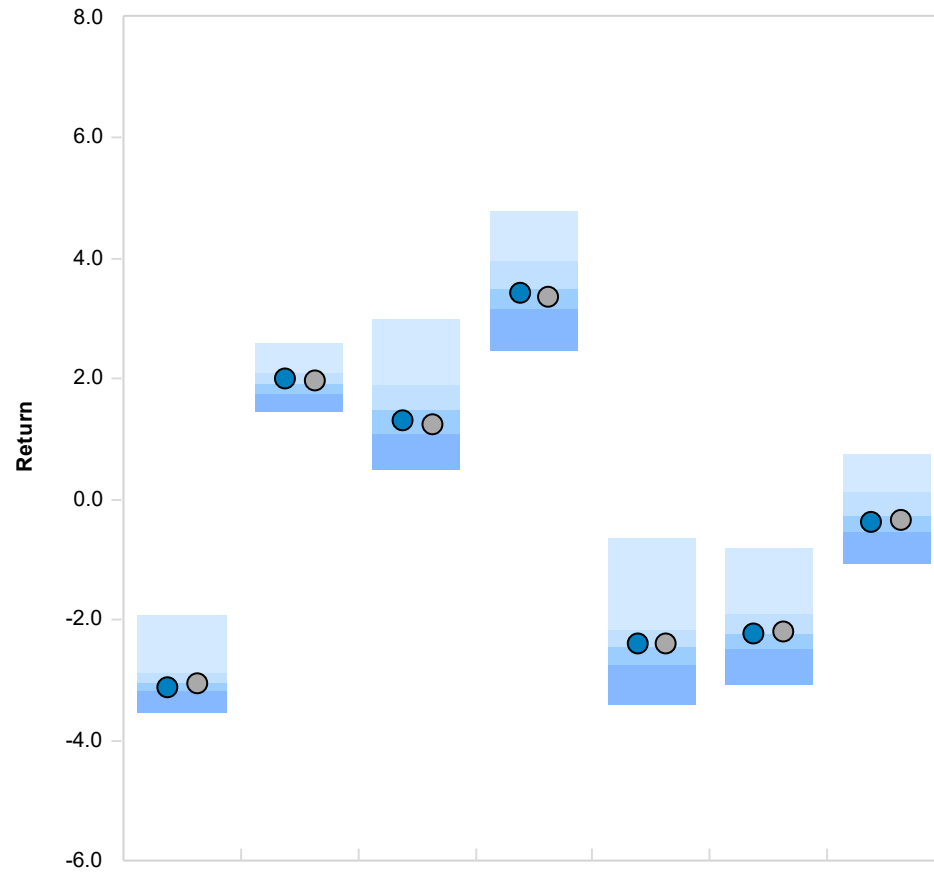
### 3 Year Rolling Percentile Rank Intermediate Core Bond



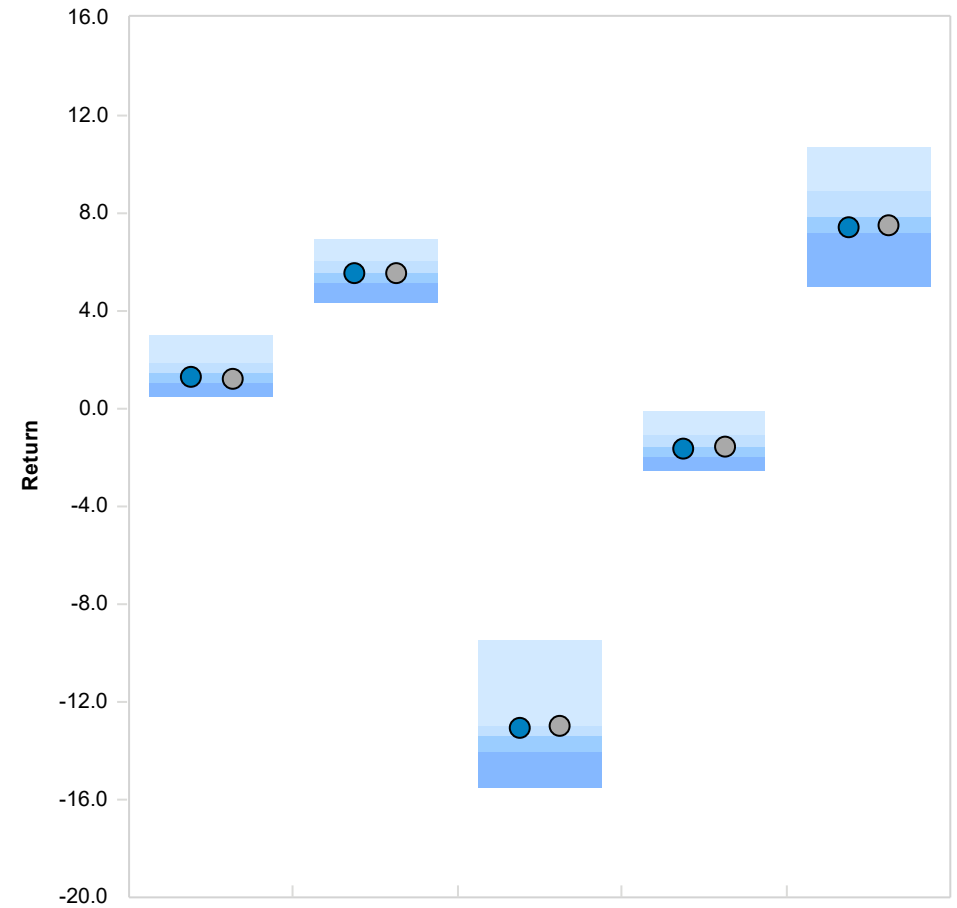
### 5 Year Rolling Percentile Rank Intermediate Core Bond



**Peer Group Analysis - Intermediate Core Bond**



**Peer Group Analysis - Intermediate Core Bond**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	5.30 (21)	0.03 (82)	-0.74 (64)	6.68 (53)	-3.22 (59)	-0.85 (50)
Index	5.20 (37)	0.07 (78)	-0.78 (72)	6.82 (35)	-3.23 (61)	-0.84 (48)
Median	5.13	0.17	-0.63	6.69	-3.16	-0.86



**Fund Information As of 12/31/2024**

Fund Name :	iShares Core US Aggregate Bond ETF	Portfolio Assets :	\$119,717 Million
Fund Family :	iShares	Portfolio Manager :	Mauro,J/Uyehara,K
Ticker :	AGG	PM Tenure :	13 Years 5 Months
Inception Date :	09/22/2003	Fund Style :	Intermediate Core Bond
Fund Assets :	\$119,717 Million	Style Benchmark :	Bloomberg U.S. Aggregate Index
Portfolio Turnover :	89%		

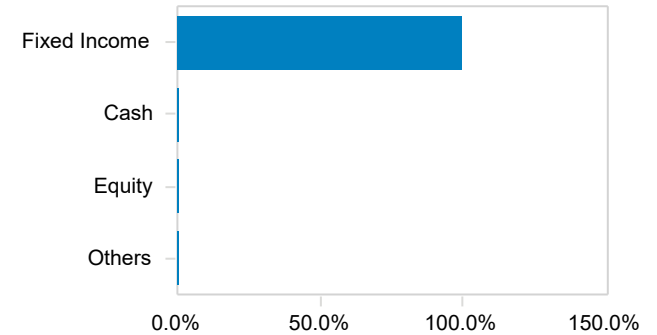
**Fund Characteristics As of 12/31/2024**

Avg. Coupon	3.55 %
Avg. Effective Maturity	8.37 Years
Avg. Effective Duration	5.9 Years
Avg. Credit Quality	A
Yield To Maturity	4.91 %
SEC Yield	4.54 %

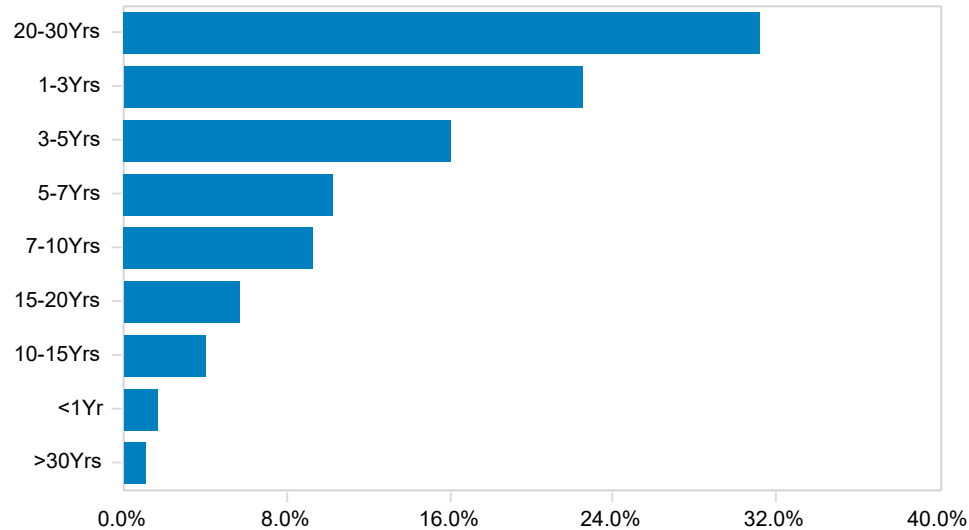
**Top Ten Securities As of 12/31/2024**

BlackRock Cash Funds Instl SL	3.1 %
United States Treasury Notes 1.375%	0.5 %
United States Treasury Notes 0.375%	0.5 %
United States Treasury Notes 4%	0.5 %
United States Treasury Notes 4.375%	0.5 %
United States Treasury Notes 4%	0.5 %
United States Treasury Notes 3.875%	0.5 %
United States Treasury Notes 4.5%	0.5 %
United States Treasury Notes 3.875%	0.4 %
United States Treasury Notes 3.375%	0.4 %
Total	7.4 %

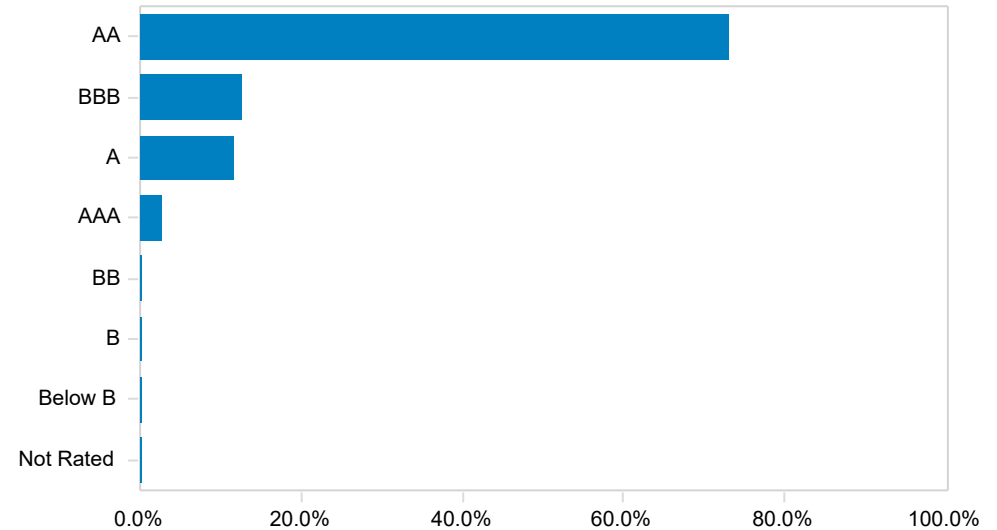
**Asset Allocation As of 12/31/2024**



**Maturity Distribution As of 12/31/2024**



**Quality Allocation As of 12/31/2024**



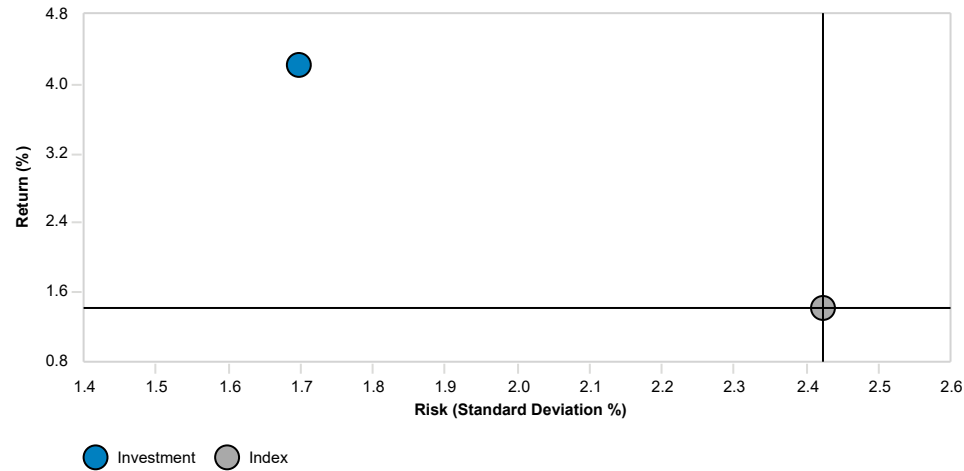
### Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.23	1.70	0.25	98.18	10	4.57	2
Index	1.43	2.42	-1.09	100.00	7	100.00	5

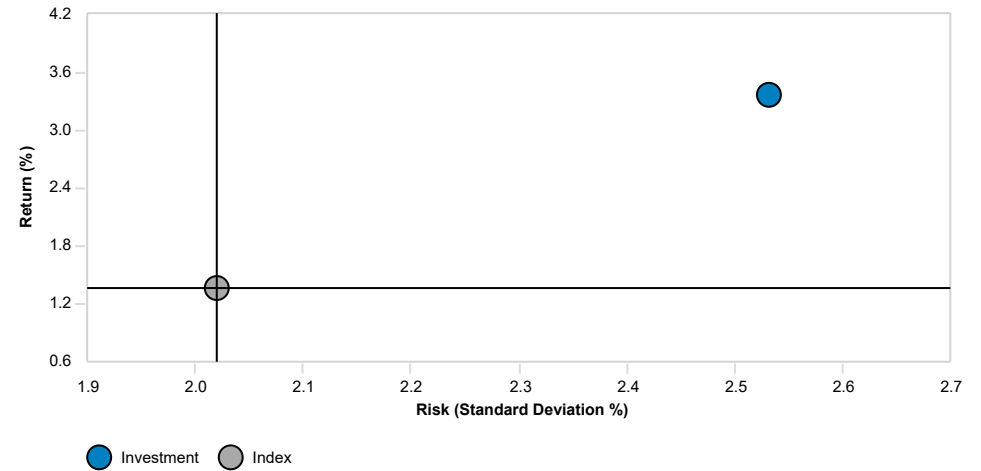
### Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.37	2.53	0.37	98.30	16	-3.89	4
Index	1.36	2.02	-0.57	100.00	12	100.00	8

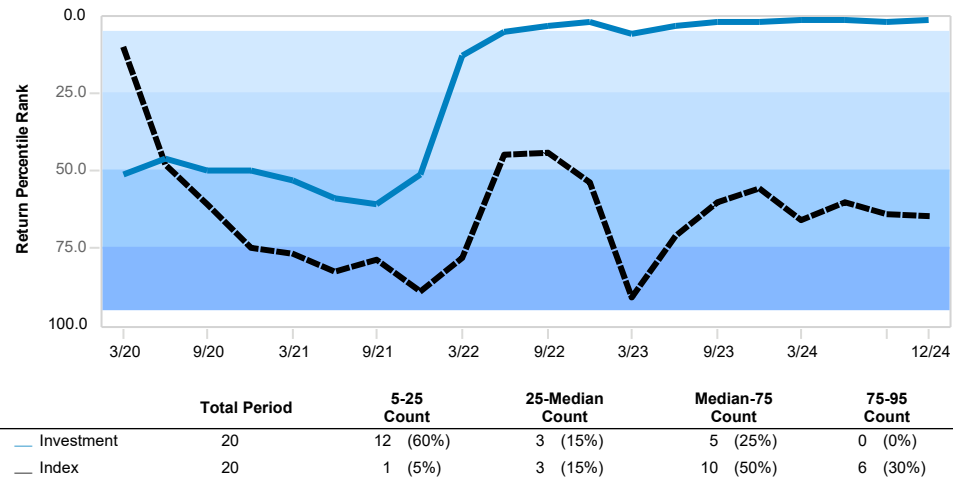
### Risk and Return 3 Years



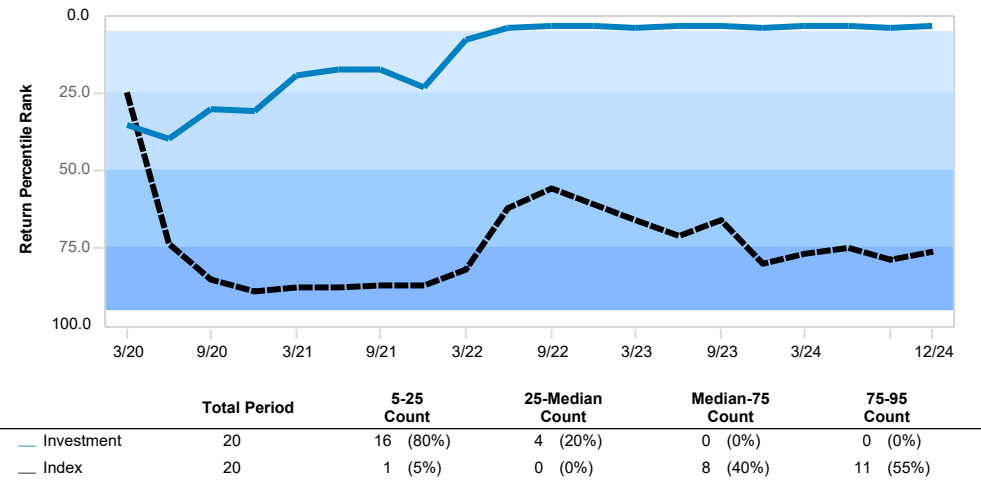
### Risk and Return 5 Years



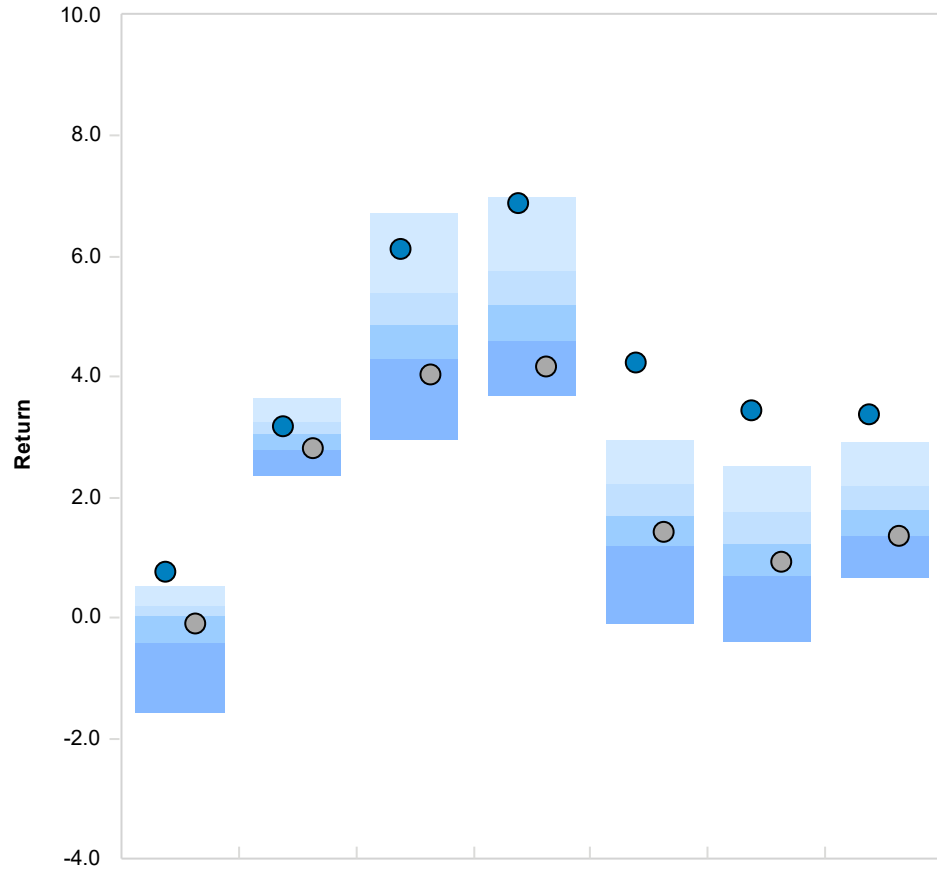
### 3 Year Rolling Percentile Rank Short-Term Bond



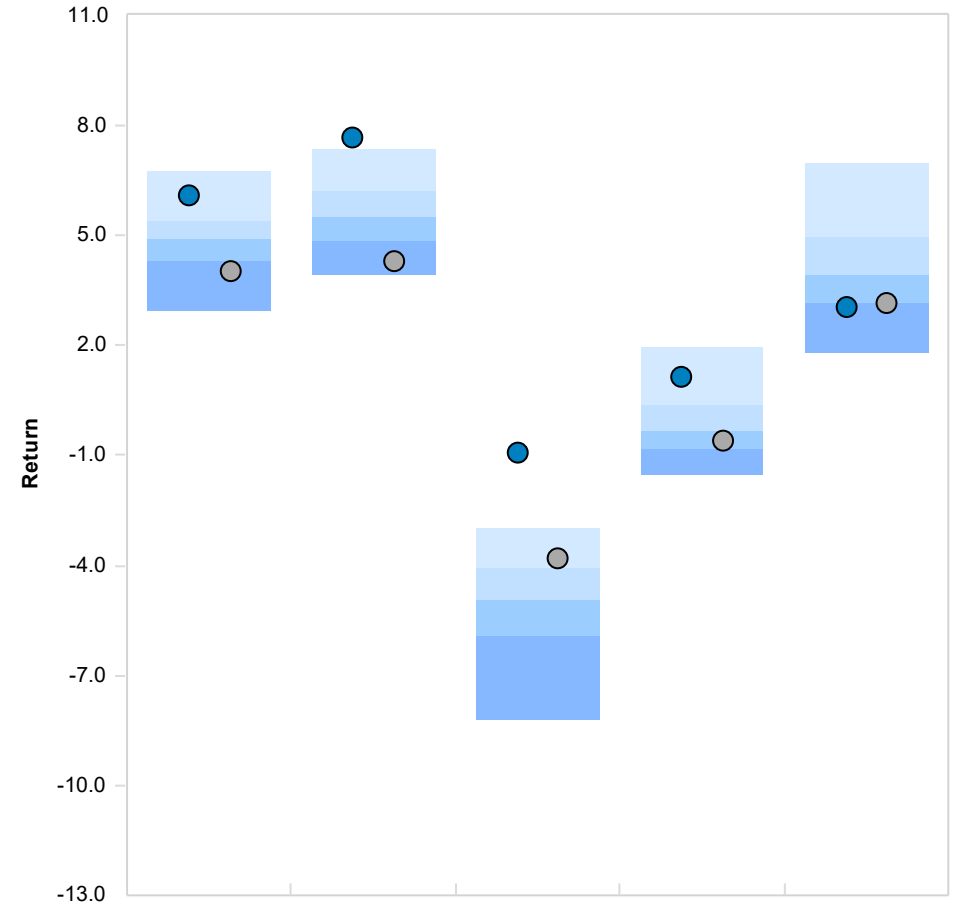
### 5 Year Rolling Percentile Rank Short-Term Bond



**Peer Group Analysis - Short-Term Bond**



**Peer Group Analysis - Short-Term Bond**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	2.39 (97)	1.51 (4)	1.33 (10)	2.80 (82)	1.72 (2)	1.28 (3)
Index	2.91 (73)	0.91 (70)	0.28 (87)	2.56 (94)	0.71 (53)	-0.60 (83)
Median	3.07	1.02	0.75	3.14	0.73	-0.08

**Fund Information As of 12/31/2024**

Fund Name : BBH Limited Duration I  
Fund Family : BBH  
Ticker : BBBIX  
Inception Date : 07/20/2000  
Fund Assets : \$8,956 Million  
Portfolio Turnover : 40%

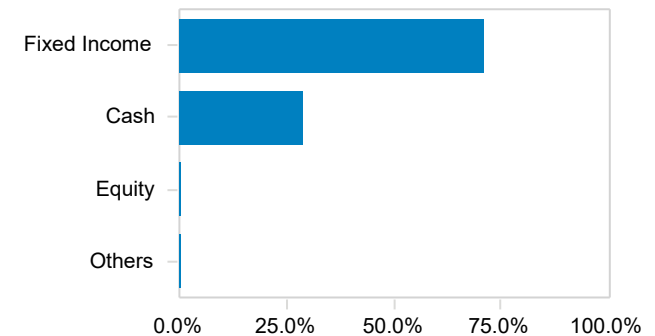
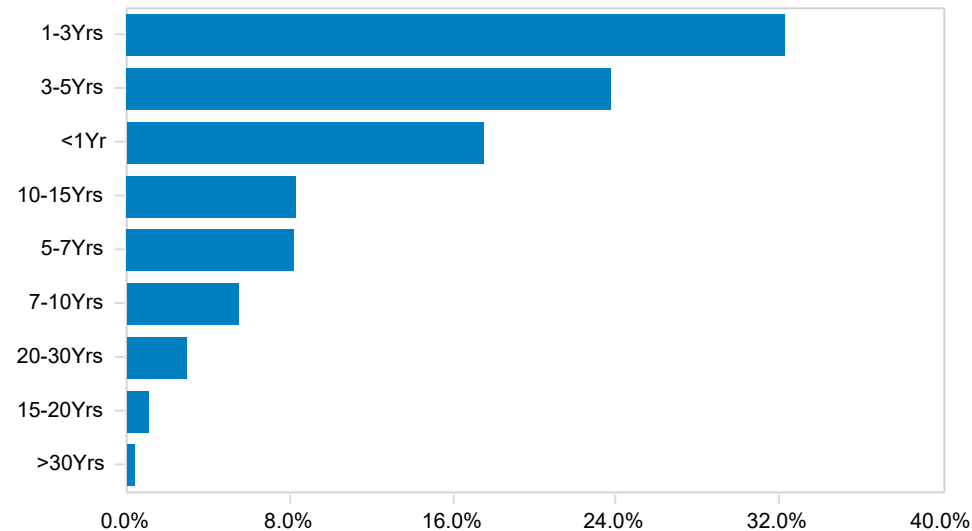
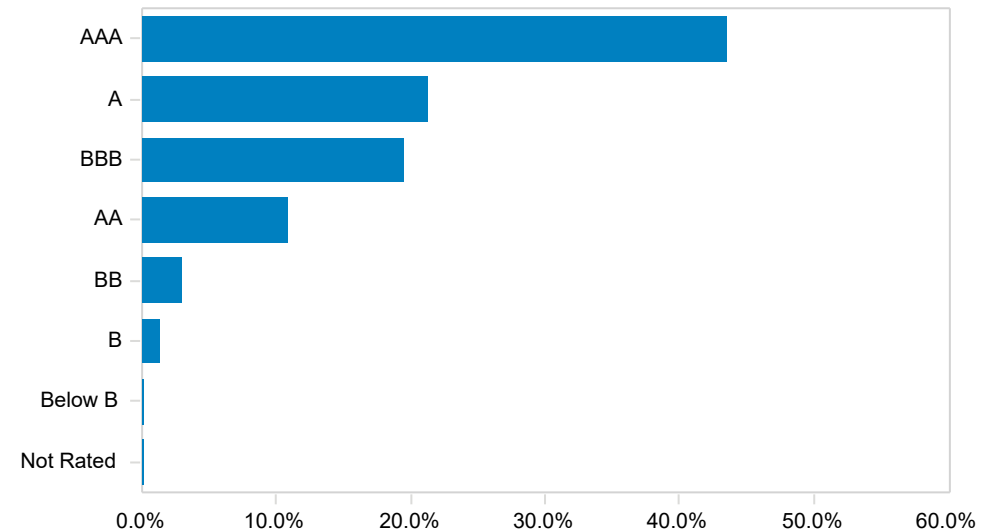
Portfolio Assets : \$8,469 Million  
Portfolio Manager : Hofer,A/Hohmann,N/Kunz,P  
PM Tenure : 13 Years 10 Months  
Fund Style : Ultrashort Bond  
Style Benchmark : Bloomberg U.S. Short-term Government/Corporate Index

**Fund Characteristics As of 12/31/2024**

Avg. Coupon 4.76 %  
Avg. Effective Maturity N/A  
Avg. Effective Duration 0.85 Years  
Avg. Credit Quality A  
Yield To Maturity 5.35 %  
SEC Yield 4.75 %

**Top Ten Securities As of 12/31/2024**

United States Treasury Bills	2.4 %
United States Treasury Bills	2.4 %
United States Treasury Bills	2.3 %
United States Treasury Bills	2.3 %
United States Treasury Bills	2.2 %
United States Treasury Bills	1.8 %
United States Treasury Bills	1.7 %
United States Treasury Bills	1.6 %
United States Treasury Bills	1.4 %
5 Year Treasury Note Future Mar	-2.6 %
Total	15.6 %

**Asset Allocation As of 12/31/2024****Maturity Distribution As of 12/31/2024****Quality Allocation As of 12/31/2024**

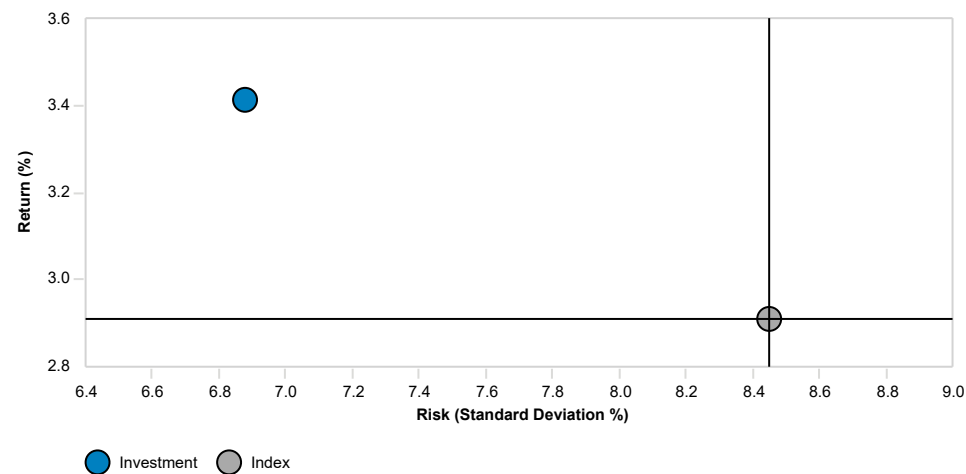
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.41	6.88	-0.03	84.70	9	75.71	3
Index	2.91	8.45	-0.07	100.00	9	100.00	3

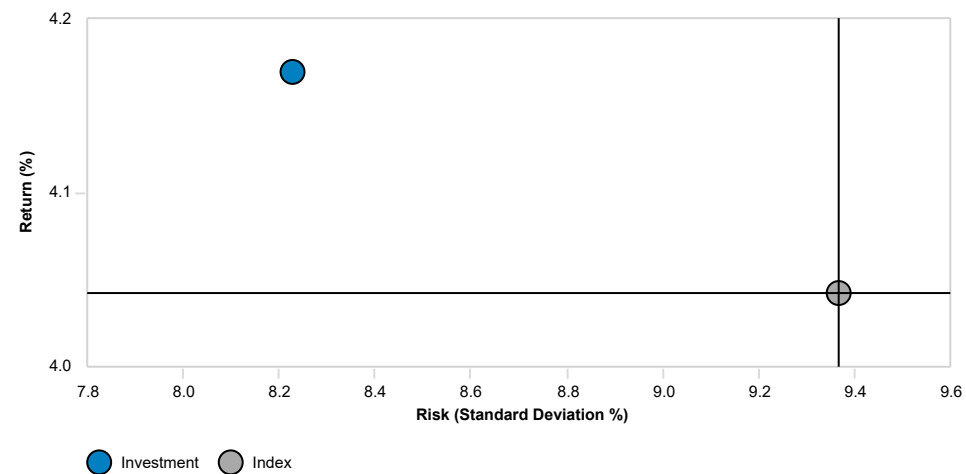
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.17	8.23	0.24	88.08	16	81.91	4
Index	4.04	9.37	0.21	100.00	16	100.00	4

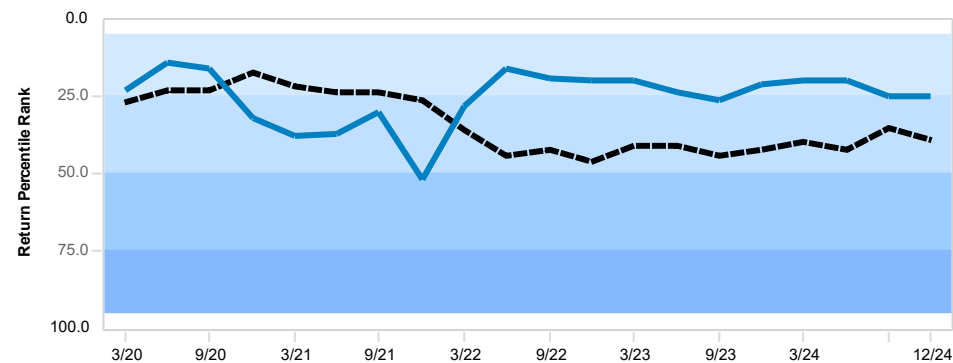
Risk and Return 3 Years



Risk and Return 5 Years

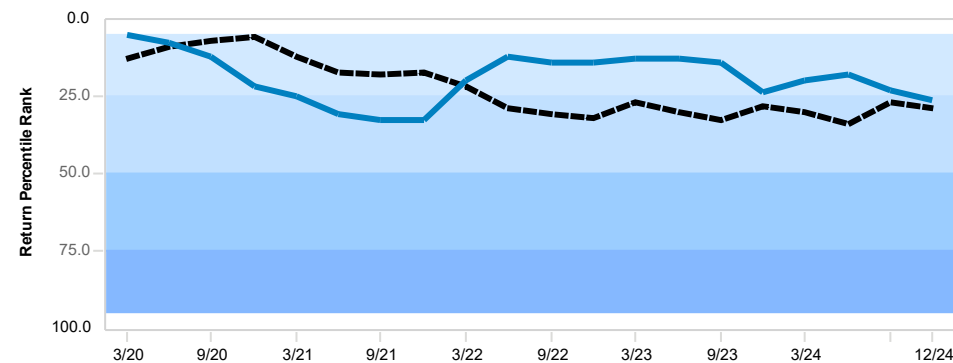


3 Year Rolling Percentile Rank High Yield Bond



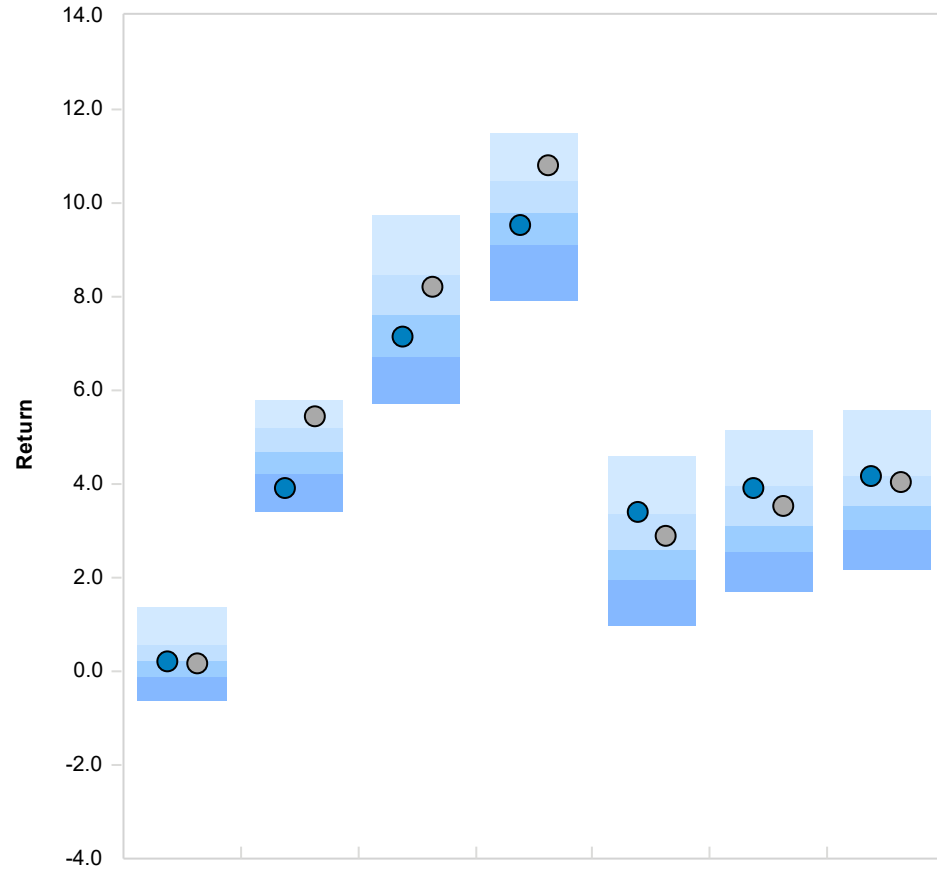
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	13 (65%)	6 (30%)	1 (5%)	0 (0%)
Index	20	6 (30%)	14 (70%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank High Yield Bond

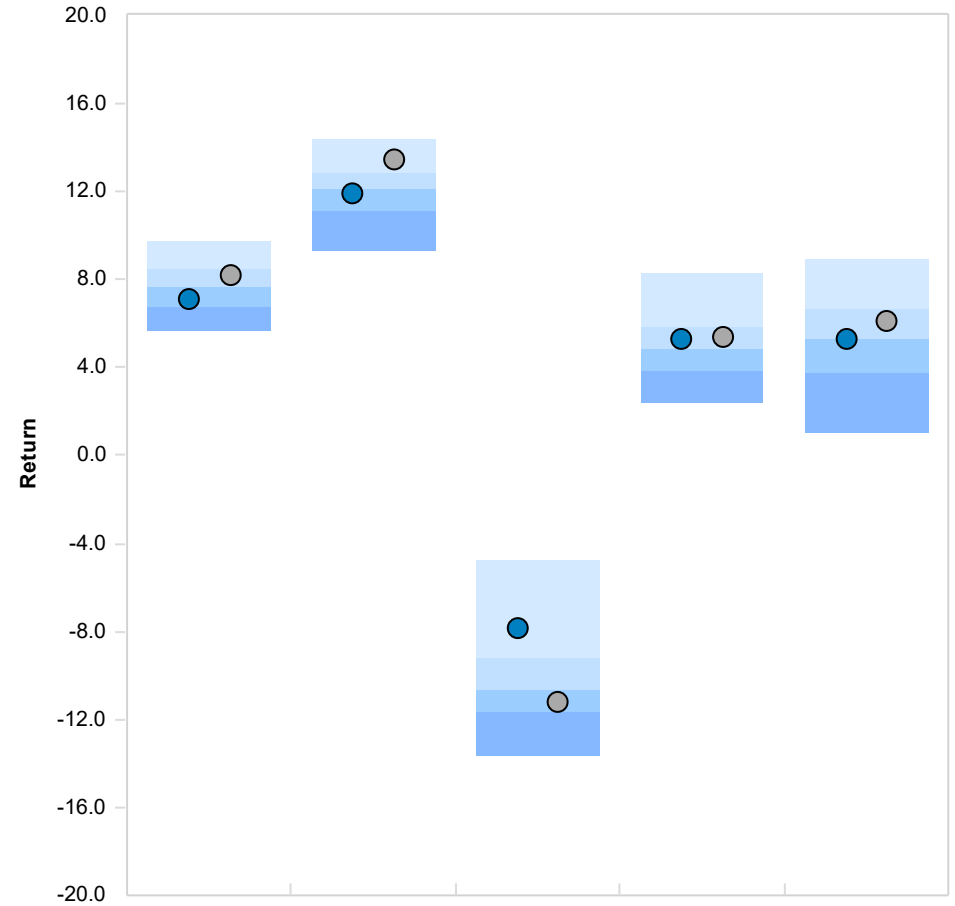


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)
Index	20	9 (45%)	11 (55%)	0 (0%)	0 (0%)

**Peer Group Analysis - High Yield Bond**



**Peer Group Analysis - High Yield Bond**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	3.70 (84)	1.41 (24)	1.68 (44)	5.82 (76)	0.52 (52)	1.30 (60)
Index	5.28 (12)	1.09 (64)	1.51 (56)	7.06 (18)	0.53 (50)	1.63 (35)
Median	4.51	1.20	1.59	6.48	0.53	1.39

**Mutual Fund Holdings Analysis**  
**MainStay MacKay High Yield Corp Bond Fund (MHYSX)**  
December 31, 2024

**Fund Information As of 12/31/2024**

Fund Name : NYLI MacKay High Yield Corp Bond CI R6  
Fund Family : New York Life Investment Management LLC  
Ticker : MHYSX  
Inception Date : 06/17/2013  
Fund Assets : \$11,506 Million  
Portfolio Turnover : 17%

Portfolio Assets : \$4,604 Million  
Portfolio Manager : Team Managed  
PM Tenure : 11 Years 10 Months  
Fund Style : High Yield Bond  
Style Benchmark : ICE BofA U.S. High Yield Cash Pay Index

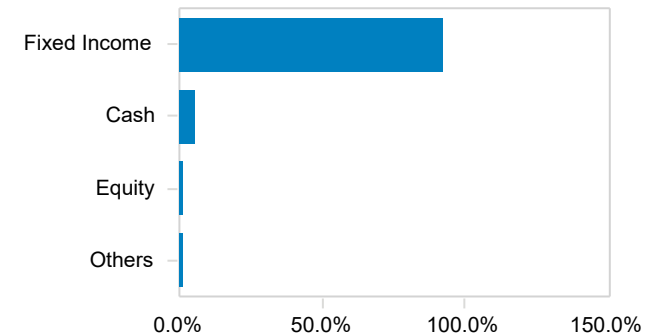
**Fund Characteristics As of 12/31/2024**

Avg. Coupon 6.29 %  
Avg. Effective Maturity 4.48 Years  
Avg. Effective Duration 2.46 Years  
Avg. Credit Quality BB  
Yield To Maturity N/A  
SEC Yield 6.15 %

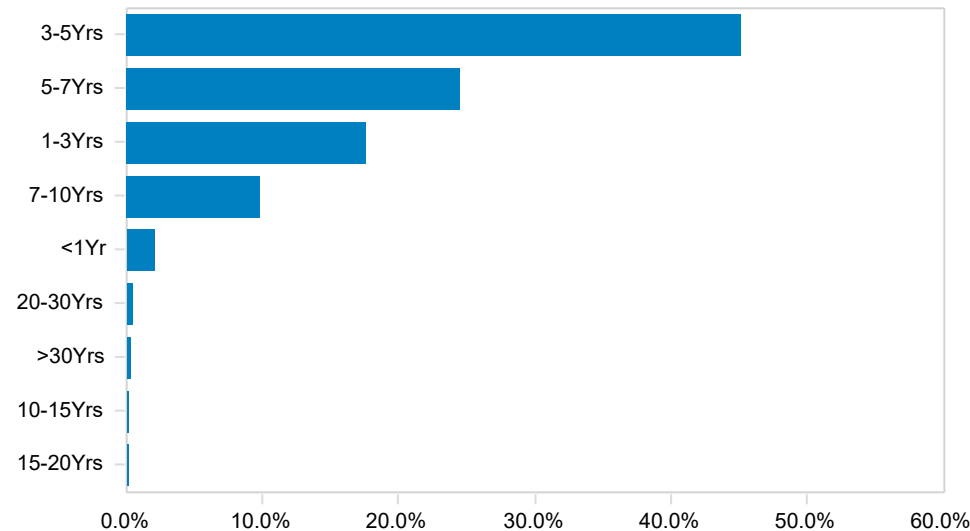
**Top Ten Securities As of 09/30/2024**

EnTrust Global Emrging Mkt Hldg	0.9 %
Sprint Capital Corporation 6.875%	0.8 %
NMG Holding Co Inc. 8.5%	0.8 %
TransDigm, Inc. 6.375%	0.7 %
Clarivate Science Holdings Corp.	0.6 %
Jane Street Group LLC / JSG Finance	0.5 %
Mercer International Inc. 5.125%	0.5 %
Talen Energy Supply LLC 8.625%	0.5 %
Directv Financing LLC/Directv	0.5 %
JB Poindexter & Co Inc 8.75%	0.5 %
<b>Total</b>	<b>6.4 %</b>

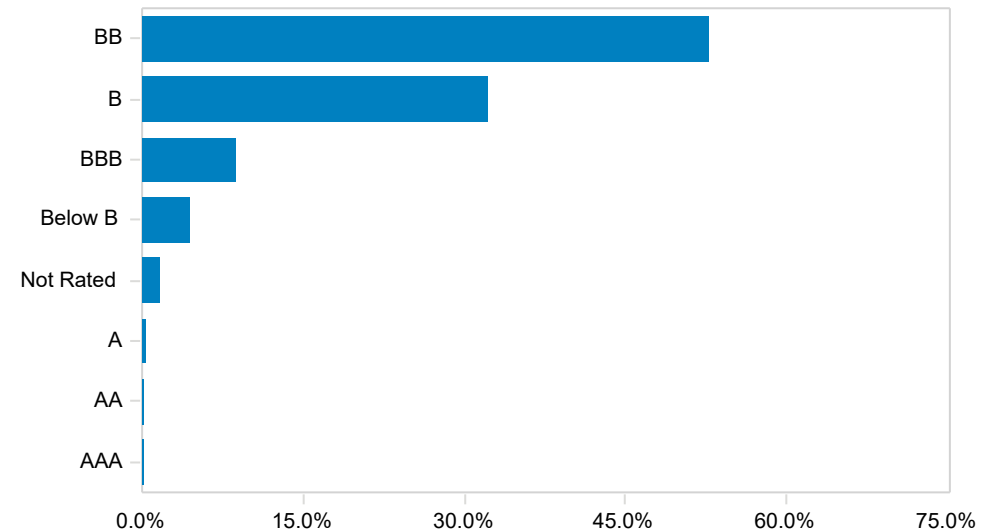
**Asset Allocation As of 09/30/2024**



**Maturity Distribution As of 09/30/2024**



**Quality Allocation As of 09/30/2024**



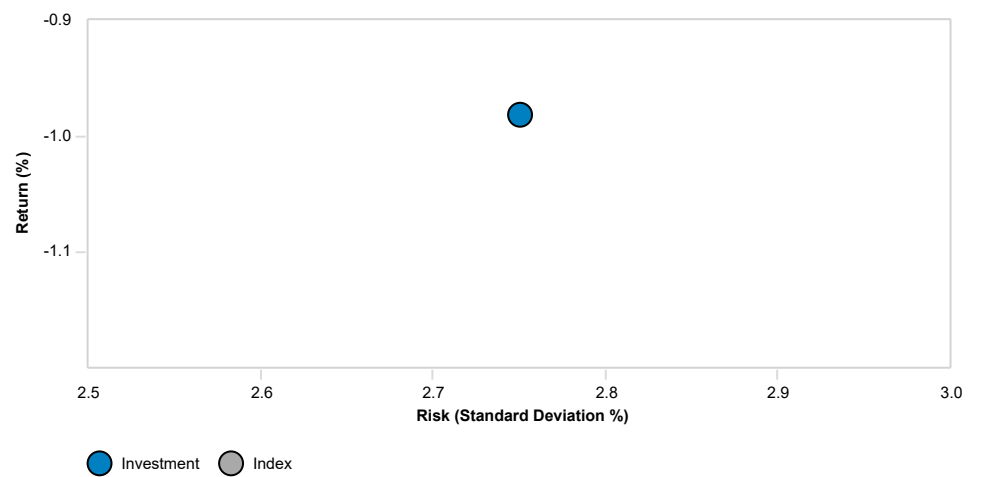
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.98	2.75	-1.35	N/A	6	N/A	6
Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A

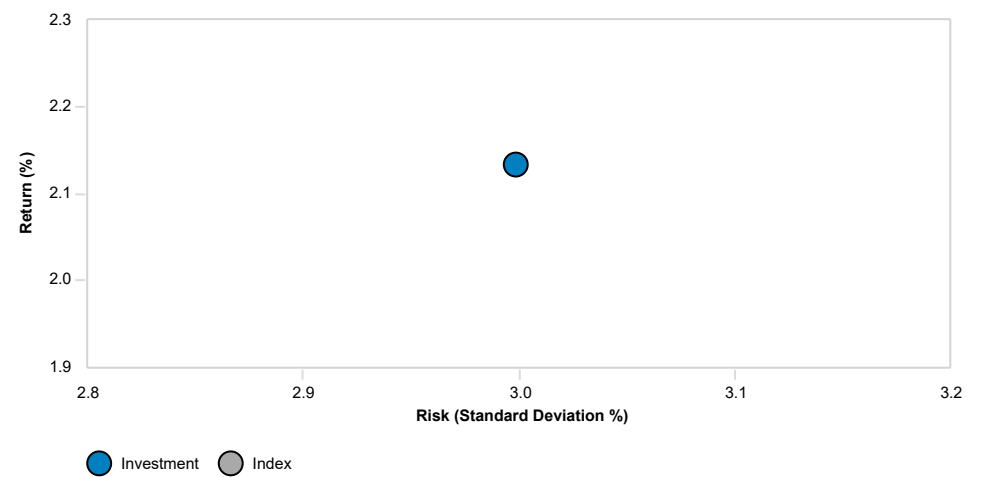
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.14	3.00	-0.07	N/A	14	N/A	6
Index	N/A	N/A	N/A	N/A	N/A	N/A	N/A

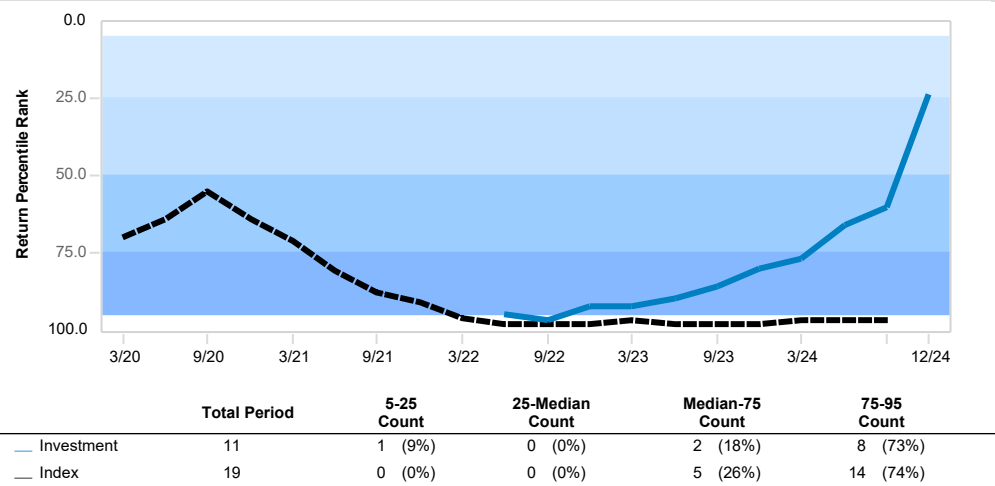
Risk and Return 3 Years



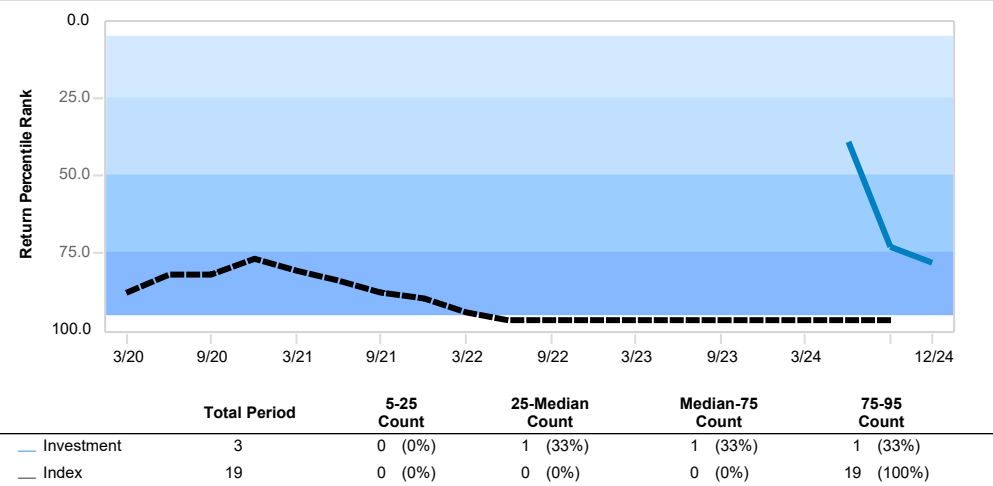
Risk and Return 5 Years



3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)

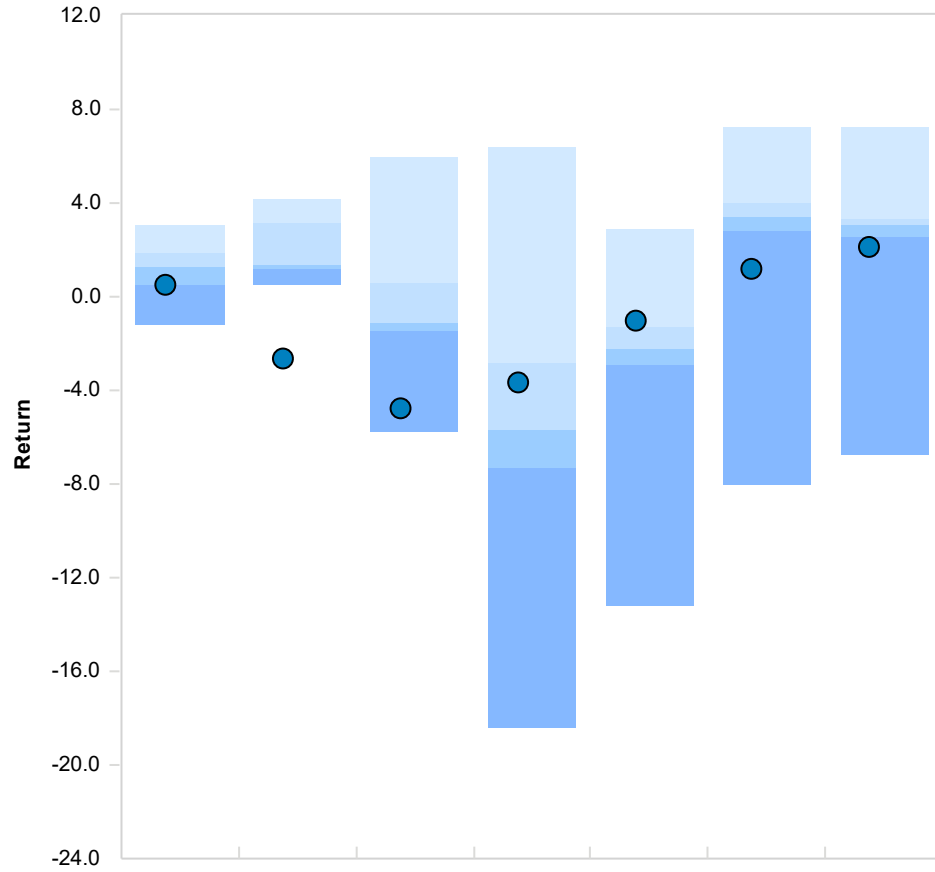


5 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)

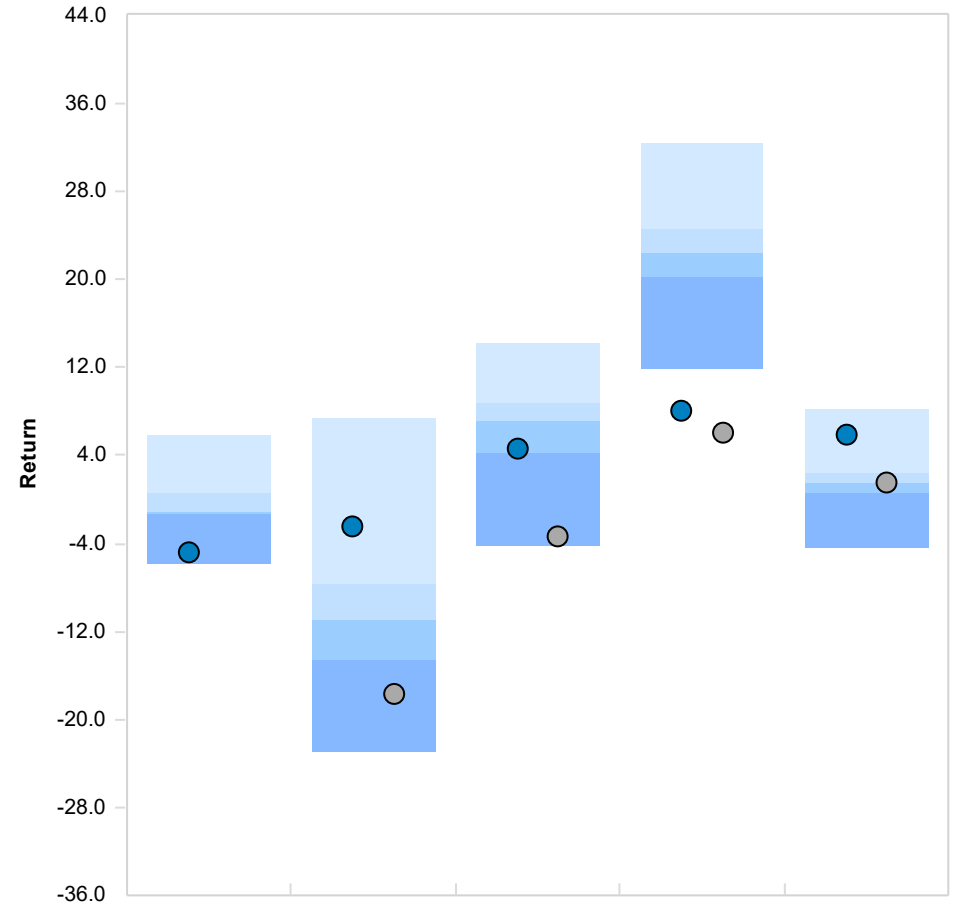




**Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)**



**Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)**



**Comparative Performance**

	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023
Investment	-3.07 (99)	-0.69 (52)	-1.53 (29)	-1.89 (27)	-0.54 (15)	0.50 (11)
Index	-1.07 (97)	-2.36 (92)	-3.80 (91)	-5.40 (71)	-3.67 (78)	-5.79 (94)
Median	0.26	-0.69	-2.10	-4.20	-2.37	-2.02

Historical Hybrid Composition	
Allocation Mandate	Weight (%)
<b>Aug-2009</b>	
Russell 3000 Index	33.00
MSCI AC World ex USA (Net)	21.00
FTSE NAREIT Equity REIT Index	6.00
Blmbg. U.S. Aggregate Index	40.00
<b>Apr-2013</b>	
Russell 3000 Index	33.00
MSCI AC World ex USA (Net)	21.00
FTSE NAREIT Equity REIT Index	3.00
Bloomberg Commodity Index Total Return	3.00
Blmbg. U.S. Aggregate Index	40.00
<b>Jul-2017</b>	
Russell 3000 Index	39.00
MSCI AC World ex USA (Net)	21.00
Blmbg. U.S. Aggregate Index	40.00

Data prior to 10/1/2023 was provided by the prior consultant.

As of 10/1/2023, Mariner began calculating client level returns for the underlying strategies and the asset class composites. Prior to this date, product returns are shown where possible. This data was not provided by the prior consultant.

Returns for periods greater than one year are annualized.

Rankings are relative to peer groups of similar style. Peer group ranking of 1 is the best, 50 is the median. Source is investment metrics.

<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
<b>Distributed to Paid In (DPI)</b>	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
<b>Public Market Equivalent (PME)</b>	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
<b>R-Squared</b>	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
<b>Standard Deviation</b>	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
<b>Total Value to Paid In (TVPI)</b>	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
<b>Up Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

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Methodology for this Award: For the 2022 Greenwich Quality Award for Overall U.S. Investment Consulting – Midsize Consultants – Between February and November 2022, Coalition Greenwich conducted interviews with 727 individuals from 590 of the largest tax-exempt funds in the United States. These U.S.-based institutional investors are corporate and union funds, public funds, and endowment and foundation funds, with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset management and investment consulting providers, including qualitative assessments of those firms soliciting their business and detailed information on important market trends.

# MARINER

*Access to a wealth of knowledge and solutions.*

TO: General Manager

FROM: Chief Information Officer

SUBJECT: Information Technology Department (ITD) Report for January 2025

DATE: February 10, 2025



## **Innovation**

Desktop support staff continue deployment of minicomputers to HRSD work centers. This is expected to be ongoing for several months.

The IT Help Desk processed 310 work orders and requests for assistance in January, ensuring the availability of computing resources to those working locally and remotely.

Senior Systems Engineers continue working on network switch replacements at HRSD pump stations.

Upgrading operating systems for mid-tier computing platforms within the data center are at 90% completion. Instances of incompatibility or anomalous performance associated with the upgrade continue to be addressed as part of the process.

Upgrade work on the Pre-treatment Information Management System (PIMS) and Biosolids Management System continue. The upgrade has many complexities due to the complicated integrations with other enterprise systems and regulatory requirements. The upgrade continues to be on scheduled for go live later in 2025.

Web portal programming staff continues collaborations with the Communications division staff and Tyler Tech on redesign of the HRSD.com website.

Cybersecurity staff continue to actively collaborate with our cybersecurity contract partners and are conducting IT system audits to continue strengthening HRSD's security posture.



## **Community Engagement**

Information Technology and Customer Care Center staff successfully implemented the new Meridan IDEA Customer Engagement Portal, new bill print and payment providers at the end of January 2025.



## Talent

Interviews were conducted for two vacant positions, the Director of Enterprise Application Services and Senior Systems Engineer-Virtualization. An internal Candidate, Mrs. Coleen Moody was selected and accepted the position of Director of Enterprise Applications. An external applicant, Mr. Victor Roque was selected and accepted the position of Senior Systems Engineer-Virtualization.

Respectfully,

*Mary Corby*

Chief Information Officer



TO: General Manager/Chief Executive Officer

FROM: Chief Operating Officer

SUBJECT: Operations Monthly Report for January 2025

DATE: February 11, 2024



## **Community Engagement**

Staff participated in several community events as follows:

1. North Shore (NS) Interceptor Operations staff continued to work on the logistics and implementation of strategies discussed between leadership and operations staff in October.
2. South Shore (SS) Interceptor Operations staff participated in several coordination and design meetings with the City of Chesapeake and a team of contractors regarding the Chesapeake Public Safety and Training Academy (PSTA). While the main goal is to provide city sewer service to the PSTA, the project will extend a larger force main south along South. Battlefield Boulevard, ultimately creating connection opportunities for other entities.



## **Environmental Responsibility**

### **Treatment and Interceptor System Reportable Items:**

There were multiple events reported this month. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report.

### **Internal Air and Odor Compliance:**

There were multiple events reported this month. Additional details are available in the Air and Effluent Summary in the Water Quality monthly report.

1. The York River Treatment Plant (YRTP) had an odor scrubber exhaust exception over 5 parts per million (ppm) due to issues with a pH probe used to control chemical feed.
2. The Williamsburg Treatment Plant (WBTP) had five odor scrubber exhaust exceptions over 5 ppm due to high odor scrubber influent hydrogen sulfide levels for the amount of chemical being fed. Increasing chemical feed was required to decrease odor scrubber effluent exhaust hydrogen sulfide levels in four occasions. One occasion was caused by a loss of chemical feed due to air entrainment in the chemical feed line.
3. There was one reportable event at the Virginia Initiative Plant (VIP) on January 16 due to invalid Total Hydrocarbon (THC) readings, caused by calibration issues from improperly mixed calibration gas.

4. There were two reportable events at the Army Base Treatment Plant (ABTP) due to the shutdown of odor control scrubbers for more than one hour. The event on January 22 was caused by a failed motor temperature sensor, while the event on January 28 resulted from a bearing failure. This affected fan is currently being rebuilt with new bearings, impeller, and fan housing.

#### **Additional Topics of Interest:**

1. On the ANRI/SWIFT Project at the James River Treatment Plant (JRTP) outside work was limited to laying underground pipes, installing a roof on the chemical building, and tank leak injection testing due to cold weather. The focus was on installing equipment, conduit, wire, ventilation duct, and mechanical piping throughout the process buildings. Foundation work on three of the off-site wells was also performed.
2. On the WBTP Intermediate Clarifier Wet Weather and Phosphorus Removal Improvements Project, a final workshop was conducted with our consultant to discuss and evaluate several alternative improvements. Once designed and constructed, the chosen alternatives will help meet obligations under the Regional Wet Weather Management Plan and more stringent phosphorus requirements in 2028.
3. The total volume of SWIFT recharge into the Potomac aquifer for the month of January was 3.2 million gallons (MG) (11 % Recharge Time based on 660gpm). The main reason for the low recharge can be attributed to high Total Nitrogen (TN) from the Nansemond Treatment Plant (NTP). With the ANRI construction taking place on the aeration tanks, and the need to convert the larger tanks to the new process, there was a loss in aeration capacity, which is necessary in the colder months, resulting in a decrease in nitrification and denitrification.
4. Atlantic Treatment Plant (ATP) staff continues to collaborate with the design firm on the ROCI program and recently met with consultants to discuss the digester gas, flares, and associated pressure balancing demands.
5. Small Communities Division (SCD) staff responded to four service calls on the Eastern Shore and 8 service calls on the Middle Peninsula, including 3 lateral repairs in the town of West Point.
6. A scaling issue was discovered on an effluent billing meter at the Onancock Treatment Plant (ONTP), which calculates the town of Onancock's combined wastewater bill. Billing was switched to the final effluent meter, and SCD staff met with the town manager to review the issue and outline the new path forward.
7. SCD staff repaired a leak on the Westpoint Treatment Plant (WPTP) effluent force main the night of January 22. Overnight temperatures dropped to 8 degrees Fahrenheit, causing multiple equipment failures due to extreme cold. Despite these challenges, staff worked through the night to complete the repair.
8. The ONTP experienced frozen pipes inside of the membrane building and SCD staff have been diligently repairing damaged couplings and gaskets.
9. The Urbanna Treatment Plant (URTP) experienced high effluent ammonia for the first half of the month. SCD staff coordinated with JRTP and NS Interceptors Operations staff to haul 13 sacks of Integrated Fixed-Film Activated Sludge (IFAS) media from JRTP to URTP

10. Staff completed repairs on instrumentation equipment, performed loop checks, and assisted contractors with the startup of Aeration Tank #6, which will operate using the new Partial Denitrification with Anammox (PdNA) process at NTP.
11. Staff completed system upgrades for ultraviolet Bank A and Bank B at ONTP. Upgrades included installing new lamps, connectors, and enhanced controls.



## Financial Stewardship

1. Inspection of underground primary clarifier influent and effluent piping, which was rehabilitated at the end of 2023, was conducted at the YRTP. The carbon fiber reinforced polymer (CFRP) used for the rehabilitation was found to be in excellent condition. CFRP was used as a cost-effective alternative to cured-in-place lining and pipe replacement, taking into considering impacts on plant operations, repair certainty, and risk reduction.
2. On January 21, SS Interceptor Operations staff assisted the NTP with cleaning the Regional Residuals Facility (RRF) influent manhole, well, and channels. Staff removed approximately 11 cubic yards of grit and debris. This work was completed as a cost-effective measure in lieu of hiring a contractor.
3. The Machine Shop had 23 projects this month. Notable projects included fabricating nine aluminum scum arm brackets from a cast aluminum part that is no longer available for purchase. Staff also rebuilt a SEW-EURODRIVE gearbox for the YRTP, replacing the shaft, bearings, races, and seals.
4. Material Transportation & Logistics staff hauled 36 loads of ash for a total of 281.52 dry tons. Additionally, staff transported 107 loads of primary clarifier solids, and 37 loads of thickened waste activated biosolids for a total of 3,357.36 wet tons. Staff also hauled 44 loads from ATP to McGill Compost facility with a total weight of 873.52 wet tons.



## Innovation

1. HRSD has reached the 90% design level for a new package treatment system to replace most of the existing facilities at the Chincoteague Treatment Plant. The existing package plant is in poor condition, unable to provide the capacity needed, and struggles to meet permit limits. The new package plant features an innovative process design that could serve as an effective solution for this and future small plant upgrades, particularly in scenarios where operator attention is limited and reliable nitrification is essential, even with challenging seasonal flows and loads. The process design includes a highly automated moving bed biofilm reactor followed by dissolved air floatation, cloth media filtration, and ultraviolet disinfection. Most of the process tanks will be constructed from welded polypropylene and stainless steel, resulting in much better corrosion protection than coated mild steel that is typical of package plant equipment.
2. The Supervisory Control and Data Acquisition (SCADA) program continues to make significant progress. Operations staff completed the cutover testing for the new Kingsmill and Williamsburg Pressure Control Valves (PCV) Wet Weather Mode functional. This new control configuration is active and now utilizes remote pressure settings to control the PCV's,

minimizing unneeded hydraulic losses in the Williamsburg System. This functional change was implemented to enhance system capacity in response to James City Service Authority's request for relief and to reduce sanitary sewer overflows.

3. Installation of the CREW Carbon Pilot began this month at ABTP. This pilot aims to reduce carbon emissions by adding calcium carbonate into the Return Activated Sludge piping, which traps carbon dioxide in the form of bicarbonate, a stable and environmentally inert ion for thousands of years. If successful, this pilot will increase the alkalinity in the biological process, enhance performance, and replace the current alkalinity needs, saving HRSD the cost of alkalinity at ABTP. Additionally, it may offer the potential for carbon removal credit sales. It might also save us some energy, methanol, and alum, but that is TBD.



## **Talent**

1. The one vacant HEO position for the NS Interceptor Operations work center will be held unfilled for the over-hire position of an incoming Interceptor Technician transfer from SS Interceptors. For the first time in years, NS Interceptor Operations is fully staffed.
2. Ms. Destinee Gainey, Interceptor Assistant, joined SS Interceptor Operations on January 6.

Respectfully submitted,

Eddie M. Abisaab, PE, PMP, ENV SP  
Chief Operating Officer

[Attachment: MOM Reporting](#)

## MOM Reporting Numbers

MOM #	Measure Name	Measure Target	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
2.7	# of PS Annual PMs Performed (NS)	37	3	2	5	3	3	3	4					
2.7	# of PS Annual PMs Performed (SS)	53	2	3	5	3	1	1	8					
2.7	# of Backup Generator PMs Performed	4.6	6	10	5	8	3	3	7					
2.8	# of FM Air Release Valve PMs Performed (NS)	234	397	483	515	539	273	343	288					
2.8	# of FM Air Release Valve PMs Performed (SS)	1,550	208	164	64	83	99	92	132					
2.9	# of Linear Feet of Gravity Clean (NS)	2,417	1,614	2,402	3,996	5,300	2,197	3,729	1,379					
2.9	# of Linear Feet of Gravity Clean (SS)	2,417	730	810	2,370	3,087	1,350	1,222	4,449					

TO: General Manager

FROM: Acting Chief People Officer

SUBJECT: Talent Management Monthly Report for January 2025

DATE: February 11, 2025



## Talent

The Talent Management (TM) Division made strides in enhancing workforce development, optimizing talent acquisition and strengthening the safety and security of our employees. Key accomplishments include the Safety and Security Department achieving full staffing levels ensuring optimal operational efficiency, the Learning and Development department developing our future leaders through the Leadership and Management Academy and the Human Resources Department focusing on advancing our strategic recruitment initiatives to attract top talent and enhance workforce capabilities.

**Human Resources (HR):** The HR team is actively working to fill critical vacancies, including positions such as HR Generalist, Benefits Specialist, and Talent Acquisition Specialist, while ensuring a streamlined and efficient hiring process. Several interviews for all vacancies are scheduled.

Participation in HRSD's Wellness Program continues to grow. Plan education, wellness-related presentations, individual and group coaching, and virtual guided meditation sessions continue.

**Learning and Development (L&D):** L&D successfully completed and distributed the annual L&D Training Catalog, providing a lineup of all training initiatives for the year ahead. As new initiatives are created in response to employee interests and requests, the catalog will be updated and expanded.

L&D also launched a new cohort for the year-long Leadership and Management Academy (LAMA) training program. The program kicked off with a fun orientation session that set the stage for a year of growth and development.

In addition, L&D made progress in filling the Workforce Development Specialist vacancy, conducting interviews with a strong candidate pool. L&D will be finalizing the selection and look forward to welcoming a new team member!

**Safety:** Staff conducted required safety training and medical monitoring. Weekly, monthly, and quarterly safety inspections, testing and monitoring were performed at various work centers and construction sites.

Safety completed the OSHA 300 Log for 2024. The information was submitted to OSHA and the completed and signed form was sent to all work centers to post. Safety is in the process of updating all the Emergency Response Procedures for all the plants and updating the Tier II forms which is then sent to DEQ and all the city and counties Local Emergency Planning Commissions.

Safety welcomed two new employees to the Department. Nicole Heald filled the Occupational Health and Safety Professional position, and John Sidwa is the new Emergency and Security Manager.

There were two reported auto accidents/property damage incidents and nine work-related injuries requiring medical attention, all of which are under review to identify root causes and implement preventative measures.

Respectfully submitted,

*Brenda Matesig*

Acting Chief People Officer

TO: General Manager/ Chief Executive Officer

FROM: Chief of Water Quality (CWQ)

SUBJECT: Monthly Report for January 2025

DATE: February 11, 2025



## Environmental Responsibility

### 1. HRSD's Regulatory Activities:

- a. Monthly Discharge Monitoring Report (DMR) Summary and Items of Interest: [Effluent and Air Emissions Summary](#).
- b. From Fiscal Year (FY) 2025 to date, there have been three Permit Exceedance out of 32,974 Total Possible Exceedances.
- c. Pounds of Pollutants Removed in FY 2025 to date: 120.5 million pounds.

### 2. Pretreatment and Pollution Prevention (P3) Program Highlights:

No civil penalties were issued in January.

### 3. Environmental and Regulatory Advocacy

Chief participated in the following advocacy and external activities:

- a. Participated in the University of Colorado – Boulder's (CUB) Water Reuse Program Professional Advisory Board meeting. The board is transitioning leadership and discussed opportunities for growing CUB's Water Reuse Professional Master's Program.
- b. Participated in the National Association of Clean Water Agencies (NACWA) annual winter conference. This conference of national wastewater utility leaders provides a forum for coordinating advocacy efforts and plans for addressing clean water challenges. Regulatory actions for Per- and polyfluoroalkyl substances (PFAS) continue to dominate the national conversation. Additional interests include continued federal funding to support the infrastructure investment that will be needed to meet the growing regulatory challenges and maintenance of aging infrastructure; workforce development in the face of high retirement rates and technology advancements; and addressing affordability challenges for lower income households. Co-chaired the Water Quality Committee meeting.
- c. Attended the monthly meeting of the Virginia Biosolids Council where the discussion focused on EPA's recently released biosolids risk assessment.
- d. Participated in a meeting of the Virginia Association of Municipal Wastewater Agencies (VAMWA) and the Maryland Association of Municipal Wastewater



Agencies (MAMWA) joint biosolids committee meeting to discuss EPA's recently released biosolids risk assessment.

- e. Participated in the Virginia Forever Membership Committee meeting to discuss opportunities for the recruitment of new members.
  - f. HRSD received a River Star Business award for Sustained Distinguished Performance River from the Elizabeth River Project.
  - g. Co-chaired the Chesapeake Bay Program's (CBPO) Wastewater Treatment Workgroup (WWTWG) meeting to discuss progress in improving wastewater related loads in the next phase of the Chesapeake Bay watershed model.
  - h. Participated in the CBPO Chesapeake Bay Total Maximum Daily Load (TMDL) Tracking Team to provide updates on WWTWG activities and receive a briefing on the updates of other workgroups and CBPO activities.
4. EPA released its biosolids risk assessment for the PFAS compounds, PFOA and PFOS. This is not a regulatory action. The risk assessment is out now for public comment. If EPA determines that regulations need to be developed for PFAS in biosolids, regulations will be developed in the coming years. This new assessment found that while there may be some risk from PFOA and PFOS in biosolids for a very narrow and specific segment of the population most likely to be exposed, there is no risk to the general public or the general food supply. This risk assessment was based on a farm family that subsists primarily on the food grown on the farm on which biosolids was applied and also assumes that biosolids was applied on an annual basis with minimal protections of the groundwater water supply.

HRSD complies with the regulatory practices and protocols outlined by the Virginia Department of Environmental Quality and the Virginia Department of Conservation and Recreation. These requirements are more restrictive and protective of public health than was represented in EPA's worst-case evaluation of potential risk. Importantly, HRSD does not land apply biosolids to any crops meant for human consumption and follows Virginia's more stringent buffer requirements around adjacent properties and private well sources than was depicted in the EPA risk assessment. In addition, land application occurs at a frequency of no greater than once every three years on a farm tract.

HRSD also strongly believes in using grounded science to inform regulatory policies. As such, HRSD has been actively engaged for decades in research to understand the benefits and risks associated with the land application of biosolids on farms in coastal Virginia. HRSD's research farm, the Progress Farm in Virginia Beach, has been the site of much of this research, including research focused on risks associated with PFAS in land applied biosolids.

In terms of plans for continued land application, HRSD is simultaneously committed to improving the experience of our neighbors around the HRSD Atlantic Wastewater Treatment Plant, the site of the production of the Class A Exceptional Quality biosolids that are used for land application in Chesapeake and Virginia Beach. We recognize that odors can pose a burden on the community. While we await EPA's finalization of this risk assessment and any potential future regulations, HRSD will pause land application activities. During this hiatus, HRSD will continue process optimization to create a low

odor, high quality material and will continue supporting research on risks associated with land application. HRSD will always advocate for the use of science in the development of federal and state regulations.



## **Financial Stewardship**

Staff supported the generation of high-quality data for use in permitting and environmental management decisions through our Municipal Assistance Program (MAP), which offers services to other municipal and regional authorities throughout the state. HRSD costs for this program are reimbursed by the customer. Below are program highlights for the month.

HRSD provided sampling and analytical services to the following to support monitoring required for their respective Virginia Permit Discharge Elimination System (VPDES) permits:

1. The City of Franklin
2. New Kent County
3. Northumberland County
4. Westmoreland County



## **Talent**

The Water Quality Leadership Team held the first quarterly “Water Quality Uncovered” virtual meeting. The format of the meeting includes a presentation from a team member from one of the Water Quality departments to share more about the work that they do. It is also a forum for general Water Quality Division and Department updates as well as organizational updates and an opportunity for Q&A. The first event included a presentation from James Sabo, P3 Manager, who provided a presentation on HRSD’s Waste Hauler Program. With this first event, we did run short on the update and Q&A time. Adjustments will be made to timing in the next quarterly event. This event was created in response to feedback collected by the Water Quality Communications Team which identified a need to improve knowledge sharing among the Water Quality Departments and with the leadership team.



## **Community Engagement**

Staff supported Microbial Source Tracking (MST) investigations in partnership with Hampton Roads localities. This work is required as part of HRSD’s Integrated Plan. Sampling and analytical services were provided for the localities and projects identified below:

1. City of Chesapeake (Southern Branch)
2. City of Newport News (Southeast Newport News)
3. City of Norfolk (Pretty Lake)
4. City of Suffolk (downtown)
5. City of Virginia Beach (Thalia Creek)
6. James City County

Respectfully submitted,

*Jamie Heisig-Mitchell*  
Chief of Water Quality

# EFFLUENT SUMMARY FOR JANUARY 2025

PLANT	FLOW mgd	% of Design	BOD mg/l	TSS mg/l	FC #/UBI	ENTERO #/UBI	TP mg/l	TP CY Avg	TN mg/l	TN CY Avg	CONTACT TANK EX
ARMY BASE	7.99	44%	4	4.4	1	1	0.42	0.42	4.3	4.3	12
ATLANTIC	40.27	75%	8	11	4	<1	NA	NA	NA	NA	14
BOAT HARBOR	9.69	39%	9	9.6	2	2	0.95	0.95	30	30	11
CENT. MIDDLESEX	0.023	93%	<2	<1.0	<1	<1	NA	NA	NA	NA	NA
JAMES RIVER	10.52	53%	9	12	3	1	2.1	2.1	11	11	9
KING WILLIAM	0.090	90%	<2	<1.0	NA	1	0.18	0.18	3.8	3.8	NA
NANSEMOND	15.82	53%	6	6.2	2	<1	1.1	1.1	6.3	6.3	0
ONANCOCK	0.196	26%	<2	<1.0	<1	2	0.12	0.12	3.4	3.4	NA
SUNSET BAY	0.008	21%	2	2.1	1	3	NA	NA	NA	NA	0
URBANNA	0.039	39%	12	26	6	23	3.6	3.6	28	28	NA
VIP	24.03	60%	5	3.2	1	1	0.30	0.30	5.9	5.9	5
WEST POINT	0.316	53%	30	11	1	2	3.8	3.8	24	24	0
WILLIAMSBURG	7.36	33%	5	4.2	7	3	0.38	0.38	2.9	2.9	11
YORK RIVER	10.19	68%	4	1.2	<1	<1	1.0	1.0	6.7	6.7	18
	126.55										

	% of Capacity
North Shore	46%
South Shore	62%
Small Communities	38%

### AIR EMISSIONS SUMMARY FOR JANUARY 2025

	No. of Permit Deviations below 129 SSI Rule Minimum Operating Parameters							Part 503e Limits		
	Temp 12 hr ave (F)	Venturi(s) PD 12 hr ave (in. WC)	Precooler Flow 12 hr ave (GPM)	Venturi Flow 12 hr ave (GPM)	Tray/PBs Flow 12 hr ave (GPM)	Scrubber pH 3 hr ave	Any Bypass Stack Use	THC Mo. Ave (PPM)	THC DC (%)	BZ Temp Daily Ave Days >Max
MHI PLANT										
BOAT HARBOR	0	0	0	0	0	0	0	22	92	0
VIP	0	0	0	0	0	0	0	38	99	0
WILLIAMSBURG	0	0	0	0	0	0	3	4	55	0

### ODOR COMPLAINTS

ARMY BASE	0
ATLANTIC	1
BOAT HARBOR	0
JAMES RIVER	0
NANSEMOND	0
VIP	0
WILLIAMIBURG	0
NS OPS	0
SS OPS	0
SCD	0
NON-HRSD	0

## **Items of Interest –January 2025**

### **MULTIPLE HEARTH INCINERATION (MHI)**

Total Hydrocarbon (THC) monthly averages (not to exceed 100 ppm) were met by all three MHI plants (Boat Harbor, Virginia Initiative, and Williamsburg). The THC continuous emissions monitoring (CEM) valid data capture was 55% or greater.

The four MHI plants had no deviations, two minor uses of the emergency bypass stack (<60 minutes), and one reportable use of the bypass at Williamsburg that lasted 67 minutes. The reportable malfunction event was caused by a loss of the non-potable water (NPW) to the MHI off-gas system that in turn shut the ID fan down. The operator completed a furnace burn out under natural draft. The NPW supply was ultimately restored and the furnace placed back into service. DEQ was notified per Title V air permit prompt notification requirements.

A stack test report for Boat Harbor MHI # 2 was submitted to DEQ. DEQ reviewed the report and deemed the facility in compliance.

A final reciprocating internal combustion engine (RICE) rule test report for Boat Harbor's non-emergency engines was submitted to DEQ. DEQ deemed the facility both in compliance and the previous warning letter issued as satisfied. No further action on this matter is expected.

The semiannual 129 MHI deviation reports were submitted to DEQ.

### **AIR PERMITS and ODOR CONTROL**

The Atlantic Plant renewable natural gas (RNG) team met with the DEQ Air Permits Division to discuss the air permitting options for the RNG project. HRSD's RNG contractors (Johnson Controls and Mead & Hunt) will be formally requesting an air permit exemption for the RNG facility via an air permit application submittal to DEQ.

The annual RICE reports were submitted to EPA for the non-emergency engines at Atlantic, Boat Harbor, Nansemond, and York River. These four plants participate in the energy share demand response program with HRSD's contractors (NRG and E2C).

There was a total of one (1) odor control complaint this month.

Atlantic Plant received one (1) complaint from an Ocean Lakes neighbor. Plant Staff responded to the complaint. The suspected source of the odors was the digesters. Communications provided a response to our neighbor. TSD recorded the complaint in the air permit required odor complaint log.

### **TREATMENT**

DEQ was notified of the following reportable events:

#### Nansemond

On January 8, during winterization, a non-potable water (NPW) line leaked after a valve was inadvertently left open on top of an Aeration Tank. The wind blew some of the NPW off the side of the tank resulting in 185 gallons of chlorinated NPW soaking into the ground.

On January 15, a corroded cam-lock connection broke and caused NPW to leak out of the Regional Residuals Facility (RRF) wet well pump hut. Staff secured the valve and replaced the corroded fittings. Approximately 50 gallons of NPW were released to the ground.

On January 25, freezing conditions resulted in a fracture of a NPW line supplying a temporary scum screen. The released NPW was captured by the storm drain on Plant site and sent to the retention pond. Approximately 144 gallons of NPW were released to the storm drain and retention pond.

#### Williamsburg

On January 4, a leak in the main 10-inch NPW line was discovered when the Plant Operator found NPW coming out of the ground. Staff set up pumping and were able to recover 89,100 gallons. The remaining 65,100 gallons of NPW soaked into the ground and down a storm drain leading to the James River.

On January 25, the gravity belt thickened sludge sample point was inadvertently left open resulting in sludge running out of the building into the marsh. Staff were able to recover 3,900 gallons, allowing only 1,500 gallons of gravity belt thickened sludge to be released to the ground, Grove Creek, and the marsh.

### **SYSTEM/TREATMENT, SMALL COMMUNITIES, AND EASTERN SHORE**

#### King William

On January 7, staff found the membrane filtrate water level overflowing the bypass weir in a filtrate storage tank due to an open influent valve allowing seepage into the tank. Staff were able to get the valve fully closed and stop the filtrate flow. A high level alarm has been added to the filtrate storage tank to alert operators. Approximately 480 gallons of membrane filtrate were released to Moncuin creek.

#### King William Collection System

On January 23, staff responded to a high wet well alarm at the Main Pump Station (PS) in King William and observed an overflow at the low rim manhole (KW-MH-C20). Staff verified that the station was running properly and found the standby pump was frozen and would not operate. The team defrosted the standby pump and removed solids and spread lime on the affected area. Approximately 1,300 gallons of raw wastewater were released to the ground and Moncuin Creek.

On January 29, staff responded to a high wet well alarm at Kennington PS when the primary electric bypass pump was in a fail state due to a temporary power phase drop and the secondary diesel bypass pump failed to start. Currently both station pumps are out of service due to pump repairs and installation of VFD pump drives. Staff were able to reset the electric bypass pump and ran the station in-hand for 10 minutes to free up wet well space. Shortly after, a combination of flows from Kennington and two other large PS cycling on at approximately the same time overwhelmed the collection system for KW Main PS resulting in an overflow at KW-MH-C20. Approximately 1,850 gallons of raw wastewater were released to the ground and Moncuin Creek. Electrical and Instrumentation staff were able to install new Variable Frequency Drives (VFD's) in the station and have since wired the electric bypass pump directly into one of the new station VFDs. This gives SCD staff top end control of adjustable setpoints for the pump

and will allow for much more system flexibility to help prevent future downstream overflows.

#### Onancock

On January 21, after reviewing calibration data, it was discovered that 3 events for the pH meter and 17 events for the dissolved oxygen probe calibrations were not acceptable. All calibrations were completed by the same employee between October 12 and January 15. The employee has undergone QA/QC training, passed testing on the procedure, performed the procedures in front of supervisory staff satisfactorily, and yet still had issues. An investigation is ongoing to determine the cause of the issue, and the employee is no longer permitted to take compliance samples until the cause is identified and retraining/recertification has taken place.

On January 28, mixed liquor overflowed at a manhole downstream of the membrane overflow pipe due to a malfunction of the level transmitter in membrane tank #1. The transmitter read zero inches when the membrane tank was actually full, and the control system opened the influent valve to fill up to the level set point. This caused the membrane tank to overfill into the overflow pipe and back through the gravity system of the plant into the influent pump station. Further investigation is ongoing to prevent the system from filling itself automatically when a level instrument problem is detected. Approximately 300 gallons of mixed liquor were released to the ground.

#### Urbanna

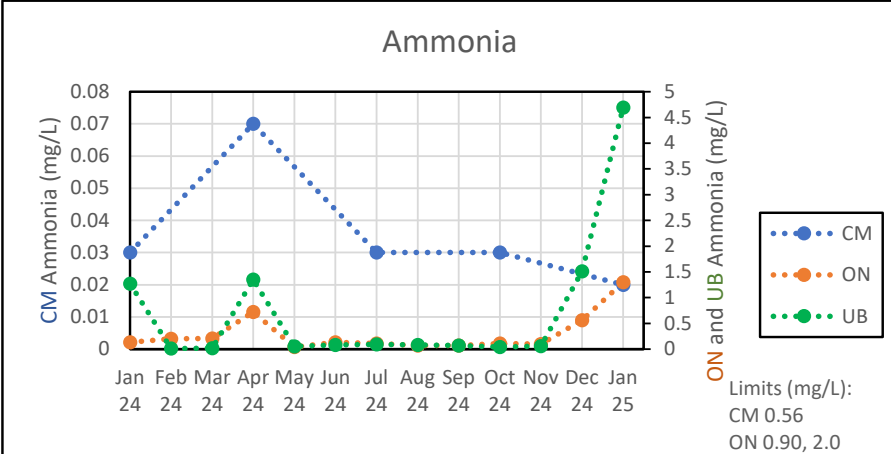
On January 23, staff discovered digester #1 overflowing due to a wasting valve from the secondary clarifier being inadvertently left open. A high level float alarm inside the digester failed to activate due to ice buildup inside the digester. Staff immediately closed the wasting valve and were able to recover 3,000 gallons through a process drain. The remaining 1,560 gallons of secondary clarifier effluent were released to the ground.

#### West Point Collection System

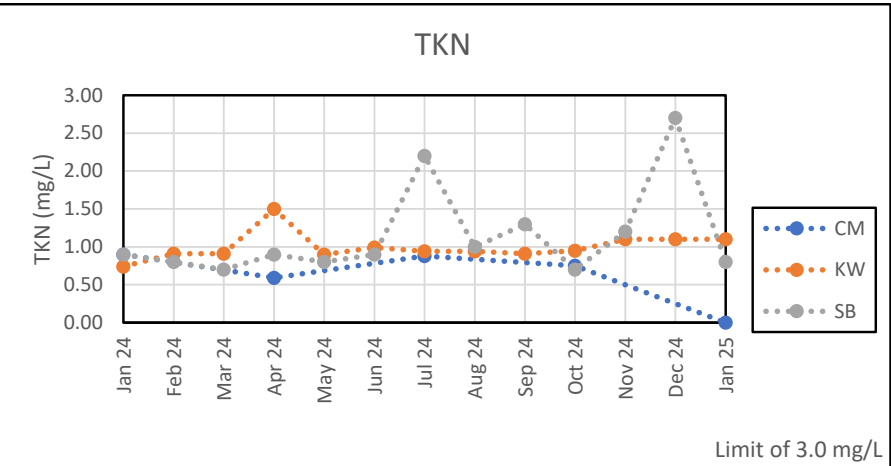
On January 22, a failure on the outfall force main was confirmed by staff after receiving a resident's report of a potential discharge. The discharge occurred intermittently, as the West Point Treatment Plant effluent pump station cycled on and off. Staff diverted flow to the equalization pond which stopped the spill and allowed the team to begin the repair. An excavation of the force main determined a transition gasket failed causing the release of 4,050 gallons of final effluent to be unrecoverable from the ground.



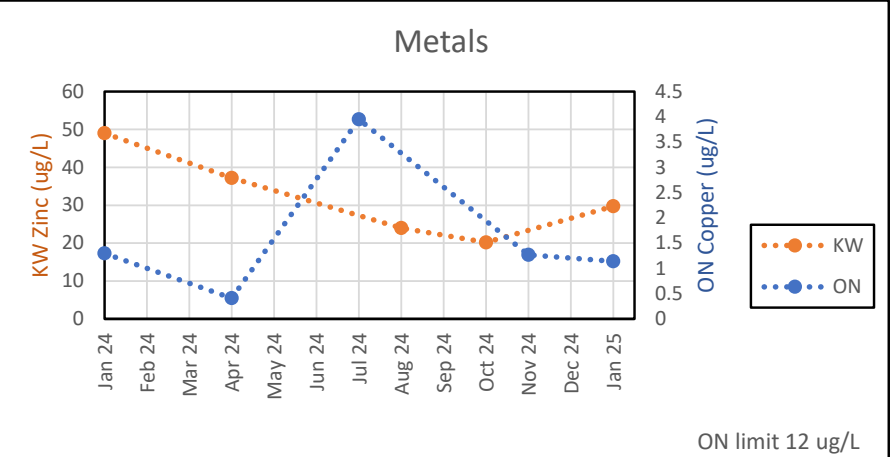
	Ammonia		
	CM	ON	UB
Jan 24	0.03	0.13	1.27
Feb 24		0.20	0.01
Mar 24		0.21	0.02
Apr 24	0.07	0.72	1.35
May 24		0.04	0.05
Jun 24		0.13	0.08
Jul 24	0.03	0.11	0.09
Aug 24		0.07	0.08
Sep 24		0.07	0.07
Oct 24	0.03	0.11	0.04
Nov 24		0.10	0.06
Dec 24		0.56	1.51
Jan 25	0.02	1.3	4.69



	TKN		
	CM	KW	SB
Jan 24	0.90	0.74	0.90
Feb 24		0.91	0.80
Mar 24		0.91	0.70
Apr 24	0.59	1.5	0.90
May 24		0.90	0.80
Jun 24		0.99	0.90
Jul 24	0.88	0.94	2.2
Aug 24		0.94	1.0
Sep 24		0.91	1.3
Oct 24	0.75	0.95	0.70
Nov 24		1.1	1.2
Dec 24		1.1	2.7
Jan 25	<0.50	1.1	0.80



	Zinc	Copper
	KW	ON
Jan 24	49	1.3
Feb 24		
Mar 24		
Apr 24	37	0.41
May 24		
Jun 24		
Jul 24		4.0
Aug 24	24	
Sep 24		
Oct 24	20	
Nov 24		1.3
Dec 24		
Jan 25	30	1.1





The following Internal Audit Status document has been prepared by SC&H for the HRSD Commission. Below is a summary of projects in process, upcoming projects, and the status of current management action plan monitoring.

## ***I. Projects in Process***

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### **Operational Technology Security and Resilience**

- **Completed Tasks (January 2025)**
  - Finalized report.
- **Upcoming Tasks (February 2025)**
  - Issue final report.

### **IT Governance**

- **Completed Tasks (January 2025)**
  - Completed testing and management review.
  - Initiated Director review.
- **Upcoming Tasks (February 2025)**
  - Update testing based on the Director's review and feedback.
  - Add additional context and recommendations to the gaps identified.
  - Prepare draft report.

### **Talent Management Investigations (planning only)**

- **Completed Task (January 2024)**
  - Validated process flowcharts and provided draft recommendations to POC.
  - Continued drafted final process flowcharts, risk and control matrix, and final deliverable.
- **Upcoming Tasks (February 2025)**
  - Present draft deliverables to POC for review and comment, as applicable.
  - Issue final deliverables.

### **Model 3**

- **Completed Task (January 2025)**
  - Continued following up for requested documentation.
- **Upcoming Tasks (February 2025)**
  - Continue following up on the request list and schedule meetings to discuss requests, if needed.
  - Document testing.
  - Identify discrepancies or gaps as part of testing.

### **Risk Assessment Refresh**

- **Completed Tasks (January 2024)**
  - Issued general survey with an initial due date of 2/4/2025.
  - Finalized Commission and IT survey.
- **Upcoming Tasks (February 2025)**
  - Extended general survey due date to 2/17/25.
  - Provide Commission and IT surveys.
  - Analysis of responses received for all surveys.
  - Initiate draft of annual audit plan



### **Bid Assessment**

- **Completed Tasks (January 2024)**
  - Received notification of purchase order for execution of the assessment.
- **Upcoming Tasks (February 2025)**
  - Provide assessment notification and conduct the kickoff meeting with management and POC.
  - Schedule process understanding meetings with management and the external engineering firm, as applicable.
  - Conduct external research and review of internal documentation provided by management and POC.

### **II. Management Action Plan Status**

SC&H performs on-going management action plan (MAP) monitoring for completed internal audits/projects. SC&H begins MAP follow-up approximately one year following the completion of each audit and periodically follows up until conclusion.

For each recommendation noted in an audit report, SC&H gains an understanding of the steps performed to address the action plan and obtains evidence to confirm implementation, when available.

The following describes the current project monitoring status. This listing does not include audits which were determined by HRSD Management and the Commission to include confidential or sensitive information.

Audit / Project	Next Follow-up	Recommendations		
		Closed	Open	Total
Safety Division	February 2025	2	1	3
Freedom of Information Act (FOIA)	February 2025	0	1	1
Personally Identifiable Information (PII)	February 2025	0	3	3
AP, ProCard	July 2025	1	2	3
Closed Audit/Projects (x21)	Closed	135	0	135
Totals		138	7	145

Strategic Measures  
January 2025

Strategic Planning Measure	Dec-24	Jan-25	FY-25
Educational and Outreach Events	14	3	82
Number of Community Partners	5	1	37
Number of Technical Presentations	1	0	38
Number of Technical Publications	2	0	2
Revenue vs. Budget	54%	63%	36%
Wastewater Expenses vs. Budget	41%	48%	27%
Accounts Receivable (HRSD)	\$47,266,066	\$50,884,771	\$48,665,704
Aging Accounts Receivable	35.90%	35.70%	32.19%
Turnover Rate wo Retirements	0.11%	0.45%	3.08%
Turnover Rate w Retirements	0.79%	1.02%	4.66%
Avg Time to Hire	3 months 1 days	3 months 13 days	3 months 2 days
Number of Vacancies	58	62	178
Average number of applicants per position	5.9	9.1	11.2
Percentage of positions filled with internal applicants	16.0%	21.4%	24.9%
Recruitment source Return on Investment	*	*	*
Average time required (days) to onboard new employees, including from initial posting of position to candidates' first day	*	*	*
Customer Call Wait Time (mins)	3.34	3.57	2.61
Capacity Related Overflows with Stipulated Penalties (Reported Quarterly)	**	**	*
Non-Capacity Related Overflows with Stipulated Penalties (Reported Quarterly)	**	**	*
TONS OF CARBON: Tons of carbon produced per million gallons of wastewater treated Energy consumed (gas (scfm) and electricity (kWh)) per million gallons of wastewater treated.	*	6 months 19 days	15,876
GAS CONSUMPTION: Tons of carbon produced per million gallons of wastewater treated Energy consumed (gas (scfm) and electricity (kWh)) per million gallons of wastewater treated.	*	*	*
ELECTRICITY CONSUMPTION: Tons of carbon produced per million gallons of wastewater treated Energy consumed (gas (scfm) and electricity (kWh)) per million gallons of wastewater treated.	*	4392	4,392
Cumulative CIP Spend	\$303,010,000	***	\$303,010,000

\*Not currently tracking due to constraints collecting the data.

\*\* Updated after EPA Quarterly Report submittal.

\*\*\*Billing is one month behind

Strategic Measures  
January 2025

Education Outreach and Community Partners			
Date	Event	Community Partner	Departments
01/01/2025		Ocean Lake High School	Operations
01/07/2025	Hosted a high school intern from Nansemond Suffolk Academy over a three-day period. The student had the opportunity to engage with each Water Quality Division, Treatment Process Engineers at Atlantic Plant, and SWIFT Research Interns.	Nansemond Suffolk Academy	Water Quality