FLOWSERVE CORP Form 10-K February 27, 2008

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

#### Form 10-K

#### þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES **EXCHANGE ACT OF 1934** FOR THE FISCAL YEAR ENDED DECEMBER 31, 2007 OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES 0 **EXCHANGE ACT OF 1934** 

**Commission file number 1-13179** 

FLOWSERVE CORPORATION (Exact name of registrant as specified in its charter)

**New York** 

(State or other jurisdiction of incorporation or organization)

5215 N. O Connor Boulevard Suite 2300. Irving. Texas (Address of principal executive offices)

> **Registrant** s telephone number, including area code: (972) 443-6500

Securities registered pursuant to Section 12(b) of the Act:

**Title of Each Class** Common Stock, \$1.25 Par Value Name of Each Exchange on Which Registered New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes b No o

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No b

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes b No o

75039 (Zip Code)

(I.R.S. Employer Identification No.)

31-0267900

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. b

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer þ	Accelerated filer o	Non-accelerated filer o	Smaller reporting
		(Do not check if a smaller reporting	company o
		company)	

Indicate by check mark whether the registrant is a shell company. Yes o No b

The aggregate market value of the common stock held by non-affiliates of the registrant, computed by reference to the closing price of the registrant s common stock as reported on June 29, 2007 (the last business day of the registrant s most recently completed second fiscal quarter), was approximately \$2,962,922,417. For purposes of the foregoing calculation only, all directors, executive officers and known 5% beneficial owners have been deemed affiliates.

Number of the registrant s common shares outstanding as of February 26, 2008 was 57,324,322.

### DOCUMENTS INCORPORATED BY REFERENCE

Certain information contained in the definitive proxy statement for the registrant s Annual Meeting of Shareholders to be held on May 30, 2008 is incorporated by reference into Part III hereof.

#### **FLOWSERVE CORPORATION** FORM 10-K

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**Signatures** 

Amendment to Deferred Compensation Plan as Amended and Restated Executive Officer Change in Control Severance Plan, as Amended and Restated

Executive Officer Change in Control Severance Plan, as Amended and Restated

Key Management Change in Control Severance Plan, as Amended and Restated

Senior Manager Retirement Plan

Supplemental Executive Retirement Plan

Subsidiaries of the Registrant

Consent of Independent Registered Public Accounting Firm

Certification By Prncipal Executive Officer - Section 302

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# PART I

#### ITEM 1. BUSINESS.

### GENERAL

Flowserve Corporation is a world leading manufacturer and aftermarket service provider of comprehensive flow control systems. Unless the context otherwise indicates, references herein to Flowserve, the Company and such words as we, our and us include Flowserve Corporation and its subsidiaries. We were incorporated in the State of New York on May 1, 1912. We develop and manufacture precision-engineered flow control equipment, such as pumps, valves and seals, for critical service applications that require high reliability. We use our manufacturing platform to offer a broad array of aftermarket equipment services, such as installation, advanced diagnostics, repair and retrofitting. We utilize a footprint of Quick Response Centers (QRCs) around the globe to deliver these aftermarket services.

We sell our products and services to more than 10,000 companies, including some of the world s leading engineering and construction firms, original equipment manufacturers, distributors and end users. Our products and services are used in several distinct industries across a broad geographic reach. Our bookings mix by industry in 2007 consisted of:

oil and gas	39%
chemical	19%
general industries(1)	24%
power generation	12%
water treatment	6%

The breakdown of the geographic regions to which our sales were shipped in 2007 were as follows:

North America	39%
Europe	26%
Middle East and Africa	13%
Asia Pacific	15%
Latin America	7%
(1) General industries also includes sales to distributors, whose end customers operate in the industries we	

(1) General industries also includes sales to distributors, whose end customers operate in the indu primarily serve.

We have pursued a strategy of industry diversity and geographic breadth to mitigate the impact on our business of an economic downturn in any one of the industries or in any particular part of the world we serve. For information on our sales and long-lived assets by geographic areas, see Note 17 to our consolidated financial statements included in this Annual Report on Form 10-K for the year ended December 31, 2007 (Annual Report).

We conduct our operations through three business segments:

Flowserve Pump Division ( FPD ) for engineered pumps, industrial pumps and related services;

Flow Control Division ( FCD ) for engineered and industrial valves, control valves, actuators and controls and related services; and

Flow Solutions Division (FSD) for precision mechanical seals and related products and services.

# FINANCIAL INFORMATION ABOUT SEGMENTS AND GEOGRAPHIC AREAS

In addition to the information presented below, Note 17 Business Segment Information of the notes to our consolidated financial statements contains additional information about our business segments and geographic areas in which we have conducted business for fiscal years 2007, 2006 and 2005.

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### FLOWSERVE PUMP DIVISION

Through FPD, we design, manufacture, distribute and service engineered and industrial pumps and pump systems, submersible motors, replacement parts and related equipment, principally to industrial markets. FPD s products and services are primarily used by companies that operate in the oil and gas, chemical processing, power generation, water treatment and general industrial markets. Our pump systems and components are currently manufactured at 28 plants worldwide, of which 8 are located in North America, 11 in Europe and 9 in Latin America and Asia. We also manufacture a small portion of our pumps through several existing foreign joint ventures. We market our pump products through our worldwide sales force and our regional service and repair centers or through independent distributors and sales representatives.

In April 2007, Flowserve entered into a joint venture agreement with Changsha Pump Works, a Chinese pump manufacturer that is owned by Xiangtan Electric Manufacturing Co. This joint venture will focus on the domestic Chinese power and water markets and will add approximately 2.7 million square feet in manufacturing capacity, which will be brought online in late 2008. This relationship with Changsha Pump Works also expands our operational platform to support low-cost sourcing initiatives and capacity demands for markets outside China.

In June 2006, Flowserve entered into a joint venture agreement with the Al Rashaid Group to build the largest original pump equipment service and repair and learning center facility in Saudi Arabia. In addition to service and repair, the facility is designed to have the capability to engineer, assemble and test new and upgraded pumping equipment. Construction of the 220,660 square feet complex will be located at the Al Rashaid Oil Field Center in Dhahran, Saudi Arabia and should be completed by the end of second quarter of 2008.

#### **FPD** Products

We manufacture more than 150 different active pump models, ranging from simple fractional horsepower industrial pumps to high horsepower engineered pumps (greater than 30,000 horsepower). Our pumps are manufactured in a wide range of metal alloys and with a variety of configurations, including pumps that utilize mechanical seals (sealed pumps) and pumps that do not utilize mechanical seals (magnetic-drive and other pumps).

The following is a summary list of our pump products and globally recognized brands:

#### FPD Product Types

#### **Centrifugal Pumps Positive Displacement Pumps Specialty Products & Systems** Chemical Process ANSI and ISO Reciprocating Hydraulic Decoking Systems Petroleum Process API 610 Reactor Recycle Systems Gear Horizontal Between Bearing Single stage Twin Screw Cryogenic Liquid Expander Horizontal Between Bearing Multi stage Vertical Submersible Motor Nuclear

#### FPD Brand Names

Aldrich Byron Jackson Cameron Durco Duriron Flowserve IDP Jeumont-Schneider Pacific Scienco Sier-Bath TKL United Centrifugal Western Land Roller Wilson-Snyder Worthington WorthingtonSimpson

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# FPD Services

We provide engineered aftermarket services through our global network of 76 service centers and QRCs, some of which are co-located in a manufacturing facility, in 28 countries. Our FPD service personnel provide a comprehensive set of equipment maintenance services for flow management control systems, including repair, advanced diagnostics, installation, commissioning, re-rate and retrofit programs, machining and full service solution offerings. A large portion of our FPD service work is performed on a quick response basis, and we offer 24-hour service in all of our major markets.

# FPD New Product Development

Our investments in new product research and development have consistently led to the production of more reliable and higher efficiency pump designs. In line with our end-user strategy, the majority of our new FPD products and enhancements are driven by our customers need to achieve higher production rates at lower costs. As a result, we continually collaborate with our customers in developing advanced technical solutions to improve the availability and productivity of their pumping systems. This type of technology advancement is best demonstrated by our recent release of the IPS Tempo product. The flagship of our *Intelligent Pumping Series*, IPS Tempo is a product developed and designed to incorporate our operating intelligence and protection logic in the control of pumps installed at unmanned locations. Much of our new product development is applied to projects where customer funding is available to support the investment.

We are prominent in the development of equipment and systems to harness alternative and renewable energy sources. One such project is the German Geothermal Motor Development (GGMD) program. One of our pump engineering teams has focused on the challenges of reliably pumping geothermal product fluid at elevated temperatures. The design review was completed in September 2007 and a field test unit is expected to be installed in September 2008. The standard expectation by customers of an equipment life performance of six to 12 months will be more than surpassed by our product s performance expectancy of three to five years of continuous operation before maintenance or replacement. The GGMD program is expected to result in as many as four U.S. patent applications.

In addition to product and technology development, FPD research and development personnel continue to support many of the organizations leading the industry (HI, API, ISO, Europump) and have been recognized as leaders in pump technology. For example, Bruno Schiavello, our hydraulics specialist, was awarded the prestigious 2006 ASME Fluids Machinery Design Award for his many years of service in the fluids design discipline.

None of these newly developed pump products or services required the investment of a material amount of our assets or was otherwise material.

# FPD Customers

FPD s customer mix is diversified, including leading engineering procurement and construction firms, original equipment manufacturers, distributors and end users. Our sales mix of original equipment (OE) products and aftermarket products and services diversifies our business and somewhat mitigates the impact of economic cycles in our business.

# FPD Competition

The pump industry is highly fragmented, with more than 100 competitors. We compete, however, primarily against a relatively limited number of large companies operating on a global scale. Competition is generally based on delivery times, expertise, price, breadth of product offerings, contractual terms, previous installation history and reputation for

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quality. Some of our largest pump industry competitors include ITT Industries, Ebara Corporation, KSB Inc., The Weir Group PLC, Sulzer Pumps and United Technologies Corporation.

The pump industry has undergone considerable consolidation in recent years, primarily caused by (i) the need to lower costs through reduction of excess capacity and (ii) customers preference to align with global full service suppliers in simplifying their supplier base. Despite the consolidation activity, the market remains highly competitive. Based on independent industry sources, we believe that we are the largest pump manufacturer serving the oil, chemical and power generation industries, and the third largest pump manufacturer overall. We believe that our broad range of pumps for the oil, power and chemical industries, our strong customer relationships, our more than

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100 years of experience in pumping equipment, and our reputation for providing quality engineering solutions are our major sources of competitive advantage.

# **FPD Backlog**

FPD s backlog of orders as of December 31, 2007 was \$1.8 billion, compared with \$1.3 billion as of December 31, 2006. We expect to ship over 87% of our December 31, 2007 backlog during 2008.

#### FLOW CONTROL DIVISION

FCD, the second largest business segment within Flowserve, designs, manufactures and distributes a broad portfolio of industrial valve products, including actuators, controls and related equipment. In addition, FCD offers energy management products such as steam traps and condensate recovery systems. FCD leverages its experience and application know-how by offering a complete menu of engineered services to complement its expansive product portfolio. FCD products used to control, direct, and manage the flow of liquids and gases, are an integral part of any flow control system. Typically, our valve products are customized, being engineered to perform specific functions within each of our customer s unique flow control environments.

Our products are primarily used by companies that operate in the chemical, power generation (nuclear, fossil, coal gasification and renewable), oil and gas and general industries including aerospace, water, mining and pharmaceutical. We have 40 sites worldwide, including 20 principal manufacturing facilities, of which five are located in the United States (U.S.), and 20 QRCs. A small portion of our valves are produced through a foreign joint venture.

#### FCD Products

Together, our valve, actuator steam trap, and automated valve accessory offerings represent one of the most comprehensive product portfolios in the flow control industry. Our products are used in a wide variety of applications, from the more customary general service operations to the most extreme of environments, involving high degrees of corrosion, temperatures and/or pressures. FCD s smart valve technologies, which integrate high technology sensors, microprocessor controls and digital positioners into a high performance control valve, permit real time system analysis, system warnings and remote services. These smart valve technologies were developed in response to the growing demand for increased automation, improved process control efficiency and digital communications at the plant level. We are committed to further enhancing the quality of our product portfolio by continuing to upgrade our existing offerings with cutting-edge technologies.

The following is a summary list of our generally available valve products and globally recognized brands:

#### **FCD Product Types**

- Actuators and Accessories Control Valves Ball Valves Lubricated Plug Valves Butterfly Valves Condensate and Energy Recovery Systems Pneumatic Positioners Electro Pneumatic Positioners Smart Valves
- Gate Valves Globe Valves Check Valves Steam Traps Manual Quarter-Turn Valves Valve Automation Systems Valve/Actuator Software Nuclear Valves Ouarter-Turn Actuators

Digital Communications

Valve Repair Services

#### FCD Brand Names

Accord	NAF
Anchor/Darling	NAVAL
Argus	Noble Alloy
Atomac	Norbro
Automax	Nordstrom
Battig	PMV
Durco	P+W
Edward	Serck Audco
Gestra	Schmidt Armaturen
Kammer	Valtek
Limitorque	Vogt
McCANNA/MARPAC	Worcester Controls

#### FCD Services

We provide aftermarket products and services through our network of 20 service centers located throughout the world. Our service personnel provide a comprehensive set of equipment maintenance services for flow control systems, including advanced diagnostics repair, installation, commissioning, retrofit programs and field machining capabilities. A large portion of our service work is performed on a quick response basis, including 24-hour service in all of our major markets. We believe our ability to offer these types of services provides us with a unique competitive advantage and unparalleled access to our customers installed base of flow control products.

#### FCD New Product Development

Our research and development investment has been targeted in areas that will advance our technological leadership and further differentiate our competitive advantage from a product perspective. The investment priority has been focused on significantly enhancing the digital integration and interoperability of the valve top works (positioners, actuators, limit switches and associated accessories) with Distributed Control Systems (DCS). Our efforts in this area continue to pursue the development and deployment of next-generation hardware and software for valve diagnostics, and the integration of the resulting device intelligence through the DCS to provide a practical and effective asset management capability for the end-user. In addition to developing these new capabilities and value-added services, our investments also include product portfolio expansion and fundamental research in material sciences in order to increase the temperature, pressure, and erosion-resistance limits of existing products. These investments are made by adding new resources and talent to the organization, as well as leveraging the experience of FPD and FSD and increasing our collaboration with third parties. We expect to continue our research and development investments in the areas discussed above.

None of these newly developed valve products or services required the investment of a material amount of our assets or was otherwise material.

#### FCD Customers

FCD s customer mix spans several industries, including the chemical, oil and gas, power, water and general industries. FCD s product mix includes original equipment and aftermarket parts and services. FCD contracts with a variety of customers, ranging from engineering, procurement and construction companies, to distributors and end-users.

### FCD Competition

While in recent years the valve market has undergone a significant amount of consolidation, in relative terms, the market remains highly fragmented. Some of the largest valve industry competitors include Crane Co., Dresser Inc., Emerson, Kitz and Tyco.

Our assessments show that the top 10 global valve manufacturers collectively comprise less than 30% of the total valve market. Based on independent industry sources, we believe that we are the third largest industrial valve supplier on a global basis. We believe that our comprehensive portfolio of valve products and services, our focus on execution and our competency in severe corrosion and erosion applications are key sources of our competitive advantage.

#### FCD Backlog

FCD s backlog of orders as of December 31, 2007 was \$414.8 million, compared with \$314.3 million as of December 31, 2006. We expect to ship over 97% of our December 31, 2007 backlog during 2008.

#### FLOW SOLUTIONS DIVISION

Through FSD, we design, manufacture and distribute mechanical seals, sealing systems and parts, and provide related services, principally to process industries. Mechanical seals contained in rotating equipment require replacement throughout the products useful lives and the repair and replacement of mechanical seals is an integral part of our aftermarket services. Our mechanical seals are used on a variety of rotating equipment, including pumps, compressors, mixers, steam turbines and other specialty equipment, primarily in the oil and gas, chemical processing, mineral and ore processing and general industrial end-user markets. The use of mechanical seals provides users both safety and environmental benefits, including reductions of liquid and gaseous emissions, greenhouse gases, water and electric power.

We manufacture mechanical seals at four plants in the U.S. and at five plants outside the U.S. Through our global network of 70 QRCs, five of which are co-located in a manufacturing facility, we provide service, repair and diagnostic services for maintaining components of seal support systems. Our mechanical seal products are primarily marketed to end users through our direct sales force and to distributors and, on a commission basis, sales representatives. A portion of our mechanical seal products is sold directly to original equipment manufacturers for incorporation into rotating equipment requiring mechanical seals.

#### FSD Products

We design, manufacture and distribute approximately 185 different models of mechanical seals and sealing systems. We believe our ability to deliver engineered new seal product orders within 72 hours from the customer s request through design, engineering, manufacturing, testing and delivery provides us with a leading competitive advantage. Mechanical seals are critical to the reliable operation of rotating equipment for prevention of leakage and emissions of hazardous substances and the reduction of shaft wear caused by non-mechanical seals. We also manufacture a gas-lubricated mechanical seal that is used in high-speed compressors for gas pipelines and in the oil and gas production and process markets. We continually update our mechanical seals and sealing systems to integrate emerging technologies.

The following list summarizes our seal products and services and globally recognized brands:

#### FSD Product Types

Cartridge Seals Dry-Running Seals Metal Bellow Seals Elastomeric Seals Slurry Seals Gas Barrier Seals Couplings Service and Repair Accessories and Support Systems Monitoring and Diagnostics Split Seals

#### FSD Brand Names

BW Seals	Interseal
Durametallic	Pacific Wietz
Five Star Seal	Pac-Seal
Flowserve	QRC
Flowstar	ReadySeal
GASPAC	LifeCycle Advantage

#### **FSD** Services

We provide aftermarket services through our network of 70 QRCs located throughout the world, including 24 sites in North America. We also provide asset management services and condition monitoring for rotating equipment through special contracts with many of our customers that provide for lower maintenance costs. This work is performed on a quick-response basis, and we offer 24-hour service in all of our major markets.

#### FSD New Product Development

Our investments in new product research and development focus on developing longer-lasting and more efficient products and value-added services. In addition to numerous product upgrades, our recent mechanical seal and seal system innovations include:

high-temperature and pressure applications for water pump usage in power plants;

laser-machined seal face advancements;

special underwater seals for pumps operating at high ocean depths;

expanded product offerings associated with the start up of the seal support systems business; and

special bellows containment seals for hot refinery services.

We also market Flowstar.Net, an interactive tool used to actively monitor and manage information relative to equipment performance. Flowstar.Net enhances our customers ability to make informed decisions and respond quickly to plant production problems, extends the life of their production equipment and lowers maintenance expenses. The functionality of Flowstar.net has been expanded to show our customers the lower maintenance costs provided by our services and allows our distributors to use this tool with their customers.

None of these newly developed seal products or services required the investment of a material amount of our assets or was otherwise material.

#### FSD Customers

Our mechanical seal products and systems are sold directly to end users and to original equipment manufacturers for incorporation into pumps, compressors, mixers or other rotating equipment requiring mechanical seals. Our mechanical seals are diversified among several industries, including oil and gas, chemical, mineral and ore processing and general industries.

#### FSD Competition

We compete against a number of manufacturers in the sale of mechanical seals. Among our largest global mechanical seal competitors are John Crane, a unit of Smiths Group Plc. and Eagle Burgmann, Inc., which is a joint venture of two traditional global seal manufacturers, Chesterton and AES. Based on independent industry sources, we believe that we are the second largest industrial mechanical seals supplier in the world. Our ability to quickly manufacture customers requests for engineered seal products, from design to engineering, manufacturing, testing and delivery, is a major competitive advantage.

# FSD Backlog

FSD s backlog of orders as of December 31, 2007 was \$109.4 million (including \$18.1 million of interdivision backlog, which is eliminated and not included in consolidated backlog), compared with \$74.4 million (including \$14.7 million of interdivision backlog) as of December 31, 2006. We expect to ship over 92% of our December 31, 2007 backlog during 2008.

# **GENERAL BUSINESS**

### Competition

Despite the consolidation trend over the past years, the markets for our products are fragmented and highly competitive, with competition occurring on the basis of price, technical expertise, timeliness of delivery, contractual terms, previous installation history and reputation for quality and reliability. In the pursuit of large capital projects, competition varies depending on the industry and products involved. Industries experiencing slow growth will have a more aggressive competitive environment due to greater supply than demand. In 2007, we experienced less price competition due to the large volume of projects, particularly in the oil and gas segment. Price competition tends to be more significant for OE orders than aftermarket services.

In the aftermarket portion of our business, we compete against large and well-established national and global competitors and, in some markets, against regional and local companies who produce low cost replications of spare parts. In the oil and gas industry, the competitors for aftermarket services tend to be the customers own in-house capabilities. In the nuclear power industry, we possess certain competitive advantages due to our N Stamp, a prerequisite to serve customers in that industry, and our considerable base of proprietary knowledge. In other industries, the competitors for aftermarket services tend to be local independent repair shops and low cost replicators. Aftermarket competition for standard products is very competitive due to common standards providing easier replacement or repair of the installed products.

In the sale of aftermarket products and services, we benefit from our large installed base of pumps, valves and seals, which require maintenance, repair and replacement parts. Timeliness of delivery, quality and the proximity of service centers are important considerations for our aftermarket products and services. In geographic regions where we are positioned to provide a quick response, customers have traditionally relied on us, rather than our competitors, for aftermarket products relating to our highly engineered and customized products.

Generally, our customers are attempting to reduce the number of vendors from which they purchase, thereby reducing the size and diversity of their inventory. Although vendor reduction programs could adversely affect our business, we have been successful in entering into global arrangements with a number of customers to leverage competitive advantages.

Our ability to use our portfolio of products and solutions to meet customer demands is a competitive strength. We continue to explore and develop potential new solutions, as well as products (pumps, valves and seals), with our customers to improve service opportunities and increase our market share.

#### New Product Development

We spent \$40.0 million, \$29.7 million and \$24.3 million during 2007, 2006 and 2005, respectively, on research and development initiatives. Our research and development group consists of engineers involved in new product development and improvement of existing products. Additionally, we sponsor consortium programs for research with various universities and jointly conduct limited development work with certain vendors, licensees and customers. We

believe current expenditures are adequate to sustain our ongoing research and development activities. In addition, we work closely with our customers on customer-sponsored research activities to help solve their research and development initiatives in connection with our products and services.

#### **Customers**

We sell to a wide variety of customers globally in several distinct industries: oil and gas, chemical, power generation and water management, as well as a number of other industries that are collectively referred to as general industries. No individual customer accounted for more than 5% of our consolidated 2007 revenues.

We are not normally required to carry unusually high amounts of inventory to meet customer delivery requirements, although higher shipment levels usually require higher amounts of inventory. We have been working to increase our overall inventory efficiency to improve our operational effectiveness and to reduce working capital needs. We generally do not provide rights of product return for our customers and do not offer extended payment terms.

#### Selling and Distribution

We primarily distribute our products through direct sales by employees assigned to specific regions, industries or products. In addition, we use distributors and sales representatives to supplement our direct sales force in countries where business practices or customs make it appropriate, or wherever it is not economical to have direct sales staff. We generate a majority of our sales leads through existing relationships with vendors, customers and prospects or through referrals.

#### Intellectual Property

We own a number of trademarks and patents relating to the name and design of our products. We consider our trademarks and patents to be an important aspect of our business. In addition, our pool of proprietary information, consisting of know-how and trade secrets related to the design, manufacture and operation of our products, is considered particularly important and valuable. Accordingly, we attempt to proactively protect such proprietary information. We generally own the rights to the products that we manufacture and sell and are unencumbered by any license or franchise to operate. Our trademarks can typically be renewed indefinitely as long as they remain in use, whereas our existing patents generally expire 20 years from the dates they were filed, which has occurred at various times in the past. We do not believe that the expiration of any individual patent(s) will have a material adverse impact on our operations.

#### **Raw Materials**

The principal raw materials used in manufacturing of our products are readily available and include bar stock, machined castings, fasteners, gaskets, motors, silicon and carbon faces and fluoropolymer components. While substantially all raw materials are purchased from outside sources, we have been able to obtain an adequate supply and anticipate no shortages of such materials in the future. We continue to expand worldwide sourcing to capitalize on low cost sources of purchased goods balanced with efficient logistics.

We are a vertically integrated manufacturer of certain pump and valve products. Certain corrosion-resistant castings for our pumps and valves are manufactured at our foundries. Other metal castings are either manufactured at our foundries or purchased from outside sources.

We also use highly engineered corrosion resistant plastic parts for certain pump and valve product lines. These include rotomolding as well as injection and compression molding of a variety of fluoropolymer and other plastic materials. We do not anticipate difficulty in obtaining these raw materials in the future.

Suppliers of raw materials for nuclear markets must be qualified by the American Society of Mechanical Engineers and we have not experienced any difficulty in obtaining such materials.

### **Employees and Labor Relations**

We have approximately 15,000 employees globally. In the United States, a portion of the hourly employees at our pump manufacturing plant located in Vernon, California, our pump service center located in Cleveland, Ohio, our valve manufacturing plant located in Lynchburg, Virginia and our foundry located in Dayton, Ohio, are represented by unions. Additionally, some employees at select facilities in the following countries are unionized or

have employee works councils: Argentina, Australia, Australi, Belgium, Brazil, Canada, Finland, France, Germany, Italy, Japan, Mexico, the Netherlands, Spain, Sweden, Switzerland and the United Kingdom. We believe relations with our employees throughout our operations are generally satisfactory, including those employees represented by unions and works councils. No unionized facility produces more than 10% of our revenues.

#### **Environmental Regulations and Proceedings**

We are subject to environmental laws and regulations in all jurisdictions in which we have operating facilities. These requirements primarily relate to the generation and disposal of wastes, air emissions and waste water discharges. We periodically make capital expenditures to abate and control pollution and to satisfy environmental requirements. At present, we have no plans for any material capital expenditures for environmental control equipment at any of our facilities. However, we have incurred and continue to incur operating costs relating to ongoing environmental compliance matters. Based on existing and proposed environmental requirements and our anticipated production schedule, we believe that future environmental compliance expenditures will not have a material adverse effect on our financial position, results of operations or cash flows.

We use hazardous substances and generate hazardous wastes in many of our manufacturing and foundry operations. Most of our current and former properties are or have been used for industrial purposes and some may require clean-up of historical contamination. During the due diligence phase of our acquisitions, we conduct environmental site assessments in an attempt to determine any potential environmental liability and to identify the need for any clean-up measures. We are currently conducting follow-up investigation and/or remediation activities at those locations where we have known environmental concerns. We have cleaned up a majority of the sites with known historical contamination and are addressing the remaining identified issues.

Over the years, we have been involved as one of many potentially responsible parties (PRP) at former public waste disposal sites that are or were subject to investigation and remediation. We are currently involved as a PRP at four Superfund sites. The sites are in various stages of evaluation by government authorities. Our total projected fair share cost allocation at all four of these sites is expected to be less than \$100,000. See Item 3. Legal Proceedings for more information.

In addition to the above public disposal sites, we have received a Clean Up Notice on September 17, 2007 with respect to a site in Australia. The site was used for disposal of spent foundry sand. A risk assessment of the site is currently underway, but it will be several months before the assessment is completed. It is not currently believed that additional remediation costs at the site will be material.

We have established reserves that we currently believe to be adequate to cover our currently identified on-site and off-site environmental liabilities.

#### Exports

Our export sales from the U.S. to foreign unaffiliated customers were \$267.7 million in 2007, \$283.9 million in 2006 and \$221.6 million in 2005.

Licenses are required from U.S. and other government agencies to export certain products. In particular, products with nuclear and/or military applications are restricted, as are certain other pump, valve and mechanical seal products.

We are continuing a process to determine our compliance posture with respect to U.S. export control laws and regulations and to disclose, to the applicable U.S. governmental authorities, any past potential violations of the U.S. export control laws. See Item 3. Legal Proceedings for more information.

We have resolved investigations by the U.S. Securities and Exchange Commission (SEC) and the United States Department of Justice (DOJ) relating to products that two of our foreign subsidiaries delivered to Iraq from 1996 through 2003 under the United Nations Oil-for-Food Program. These two foreign subsidiaries have also been contacted by governmental authorities in their respective countries concerning their involvement in the United Nations Oil-for-Food Program. We engaged outside counsel in February 2006 to conduct an investigation of our foreign subsidiaries participation in the United Nations Oil-for-Food program. The outside counsel s investigation

has found evidence that, during the years 2001 through 2003, certain non-U.S. personnel at the two foreign subsidiaries authorized payments in connection with certain of our product sales under the United Nations Oil-for-Food Program totaling approximately 600,000, which were subsequently deposited by third parties into Iraqi-controlled bank accounts. These payments were not authorized under the United Nations Oil-for-Food Program and were not properly documented in the foreign subsidiaries accounting records, but were expensed as paid.

We have negotiated a final settlement with the SEC in which, without admitting or denying the SEC s allegations, we agreed to (i) a stipulated judgment enjoining us from future violations of the internal control and recordkeeping provisions of the federal securities laws, (ii) pay disgorgement of \$2,720,861 plus prejudgment interest of \$853,364 and (iii) pay a civil money penalty of \$3 million.

Separately, we negotiated a resolution with DOJ. The contemplated resolution includes a deferred prosecution agreement under which the Company will pay a monetary penalty of \$4,000,000. See Item 3. Legal Proceedings for more information.

BBB+248,1693,000 0.000%, 1/01/37 - FGIC Insured No Opt. CallBBB-1,286,8202,000 Cook County, Illinois, Sales Tax Revenue Bonds, Series 2017, 5.000%, 11/15/38 11/27 at 100.00AAA2,264,8005,035 Illinois Finance Authority, Revenue Bonds, Northwestern Memorial Hospital, Series 2009A, 6.000%, 8/15/39 (Pre-refunded 8/15/19) 8/19 at 100.00AA+ (6)5,268,1213,500 Illinois Finance Authority, Revenue Bonds, OSF Healthcare System, Series 2009A, 7.125%, 11/15/37 (Pre-refunded 5/15/19) 5/19 at 100.00A2 (6)3,652,8805,000 Illinois Finance Authority, Revenue Bonds, Rush University Medical Center Obligated Group, Series 2009A, 7.250%, 11/01/38 (Pre-refunded 11/01/18) 11/18 at 100.00Aaa5,073,0003,500 Illinois Finance Authority, State of Illinois Clean Water Initiative Revolving Fund Revenue Bonds, Series 2017, 5.000%, 7/01/37 1/27 at 100.00AAA3,972,465525 Illinois State, General Obligation Bonds, October Series 2016, 5.000%, 2/01/29 2/27 at 100.00BBB-561,33511,420 Metropolitan Pier and Exposition Authority, Illinois, Revenue Bonds, McCormick Place Expansion Project, Series 2002A, 0.000%, 12/15/37 – NPFG Insured No Opt. CallBaa24,679,117615 University of Illinois, Health Services Facilities System Revenue Bonds, Series 2013, 6.000%, 10/01/42 10/23 at 100.00A-693,523 Will County Community Unit School District 201U, Crete-Monee, Illinois, General Obligation Bonds, Capital Appreciation Series 2004: 300 0.000%, 11/01/23 - NPFG Insured (ETM) No Opt. CallBaa2 (6)263,196745 0.000%, 11/01/23 - NPFG Insured No Opt. CallA+641,53438,110 Total Illinois 30,945,580 Indiana - 3.4% 5,000 Indiana Finance Authority, Hospital Revenue Bonds, Deaconess Hospital Obligated Group, Series 2009A, 6.750%, 3/01/39 (Pre-refunded 3/01/19) 3/19 at 100.00A+ (6)5,153,7502,000 Indiana Municipal Power Agency, Power Supply System Revenue Bonds, Series 2009B, 6.000%, 1/01/39 (Pre-refunded 1/01/19) 1/19 at 100.00A1 (6)2,038,5601,500 Indianapolis Local Public Improvement Bond Bank, Indiana, Series 1999E, 0.000%, 2/01/25 - AMBAC Insured No Opt. CallAA1,263,3608,500 Total Indiana 8,455,670 3

	en AMT-Free Municipal Value Fund (continued) lio of Investments July 31, 2018 dited)			
Principal				
Amount (000)	Description (1)	Optional Call Provisions (2)	Ratings (3)	Value
	Iowa – 1.9%			
	Iowa Finance Authority, Iowa, Midwestern Disaster Area Revenue			
\$ 1,545	Bonds, Iowa Fertilizer Company Project, Series 2013, 5.500%, 12/01/22	12/18 at 100.00	)B-	\$1,557,808
3,075	Iowa Tobacco Settlement Authority, Asset Backed Settlement Revenue Bonds, Series 2005C, 5.375%, 6/01/38	10/18 at 100.00	) B2	3,108,271
4,620	Total Iowa			4,666,079
	Kentucky – 1.3%			
	Kenton County Airport Board, Kentucky, Airport Revenue Bonds,			
1,150	Cincinnati/Northern Kentucky International Airport, Series 2016, 5.000%, 1/01/29	1/26 at 100.00	A+	1,285,631
	Kentucky Economic Development Finance Authority, Revenue			
1,750	Bonds, Next Generation Kentucky Information Highway Project,	7/25 at 100.00	Baa2	1,866,147
	Senior Series 2015A, 5.000%, 1/01/45			
2,900	Total Kentucky			3,151,778
	Maine – 1.4%			
	Maine Health and Higher Educational Facilities Authority,			
3,335	Revenue Bonds, Bowdoin College, Tender Option Bond Trust 2016-XL0014, 11.867%, 7/01/39 (Pre-refunded 7/01/19), 144A	7/19 at 100.00	Aa2	3,616,207
	(IF) (4)			
	Maryland – 3.7%			
	Baltimore, Maryland, Convention Center Hotel Revenue Bonds,			
1 000	Refunding Series 2017:	0.07 100.00	DDD	1 100 010
1,000	5.000%, 9/01/32	9/27 at 100.00		1,138,310
2,250	5.000%, 9/01/34	9/27 at 100.00	RRR-	2,517,975
5 000	Maryland Health and Higher Educational Facilities Authority,	<b>5 107</b> × 100 00		5 570 000
5,000	Revenue Bonds, MedStar Health Issue, Series 2017A, 5.000%,	5/27 at 100.00	А	5,570,800
9.250	5/15/45 Tatal Maryland			0 227 095
8,250	Total Maryland Massachusetts – 0.4%			9,227,085
1 000	Massachusetts Water Pollution Abatement Trust, Pooled Loan	9/10 at 100.00		1 001 000
1,000	Program Bonds, Tender Option Bond Trust 2015-XF2186,	8/19 at 100.00	AAA	1,091,990
	11.926%, 8/01/38, 144A (IF) (4) Minnesota – 0.5%			
1,145	Rochester, Minnesota, Electric Utility Revenue Bonds, Refunding	12/26 at 100.00	) Aa3	1,299,999
	Series 2017A, 5.000%, 12/01/47			
	Nebraska – 0.2%			
500	Central Plains Energy Project, Nebraska, Gas Project 3 Revenue	9/22 at 100.00	А	547,180
	Bonds, Series 2012, 5.000%, 9/01/42			
	Nevada – 3.2%			
5 415	Las Vegas Redevelopment Agency, Nevada, Tax Increment	6/10 at 100 00	BBB+	5 712 266
5,415	Revenue Bonds, Series 2009A, 8.000%, 6/15/30 (Pre-refunded 6/15/10)	6/19 at 100.00	(6)	5,713,366
2,000	6/15/19)	12/24 at 100.00		2,257,260
2,000		12/2+ at 100.00	) AAŦ	2,237,200

	Las Vegas Valley Water District, Nevada, General Obligation	
	Bonds, Refunding Series 2015, 5.000%, 6/01/39	
7,415	Total Nevada	7,970,626
	New Jersey – 4.9%	
	New Jersey Economic Development Authority, School Facilities	
935	Construction Bonds, Series 2005N-1, 5.500%, 9/01/27 – FGIC No Opt. Call A-	1,096,044
	Insured	
4		

Principal Amount	Description (1)	Optional Call Provisions (2)	Ratings (3)	Value
(000)	New Jersey (continued)			
	New Jersey Economic Development Authority, School Facilities			
\$ 1,000	Construction Financing Program Bonds, Refunding Series	3/21 at 100.00	A-	\$1,057,970
ψ 1,000	2011GG, 5.000%, 9/01/22	5721 at 100.00	11	\$1,057,770
	New Jersey Economic Development Authority, School Facility			
1,250	Construction Bonds, Series 2005K, 5.500%, 12/15/19 – AMBA Insured	No Opt. Call	A-	1,310,513
	New Jersey Educational Facilities Authority, Revenue Bonds,			
	University of Medicine and Dentistry of New Jersey, Refunding			
	Series 2009B:			
2,135	7.125%, 12/01/23 (Pre-refunded 6/01/19)	6/19 at 100.00	N/R (6)	2,234,982
3,000	7.500%, 12/01/32 (Pre-refunded 6/01/19)	6/19 at 100.00		3,149,730
,	New Jersey Transportation Trust Fund Authority, Transportation			, ,
5,020	System Bonds, Capital Appreciation Series 2010A, 0.000%,	No Opt. Call	A-	2,834,945
,	12/15/31	I		, ,
255	New Jersey Transportation Trust Fund Authority, Transportation	C105 100.00	DDD	075 550
255	System Bonds, Series 2015AA, 5.250%, 6/15/41	6/25 at 100.00	BBB+	275,558
	Tobacco Settlement Financing Corporation, New Jersey,			
355	Tobacco Settlement Asset-Backed Bonds, Series 2018B, 5.000%,	6/28 at 100.00	BBB	381,213
	6/01/46			
13,950	Total New Jersey			12,340,955
	New York – 4.8%			
3,000	Liberty Development Corporation, New York, Goldman Sachs	No Opt. Call	А	3,822,720
5,000	Headquarters Revenue Bonds Series 2007, 5.500%, 10/01/37	No Opt. Call	11	5,022,720
	Long Island Power Authority, New York, Electric System			
	General Revenue Bonds, Series 2017:			
2,500	5.000%, 9/01/42	9/27 at 100.00	A-	2,835,250
1,500	5.000%, 9/01/47	9/27 at 100.00	A-	1,694,865
	New York City Municipal Water Finance Authority, New York,			
1,450	Water and Sewer System Revenue Bonds, Second Generation	6/19 at 100.00	AA+	1,494,587
	Resolution, Series 2009EE-2, 5.250%, 6/15/40			
	New York Liberty Development Corporation, New York, Liberty			
1,500	Revenue Bonds, 4 World Trade Center Project, Series 2011,	11/21 at 100.00	A+	1,670,895
	5.750%, 11/15/51			
100	Port Authority of New York and New Jersey, Special Project			
430	Bonds, JFK International Air Terminal LLC Project, Eighth	12/20 at 100.00	BBB	469,272
10.200	Series 2010, 6.000%, 12/01/42			11 007 500
10,380	Total New York			11,987,589
	North Carolina – 1.2%			
2 000	North Carolina Capital Facilities Finance Agency, Revenue	10/26 -+ 100.00		2 202 240
2,000	Bonds, Duke University Project, Refunding Series 2016B,	10/26 at 100.00	AA+	2,292,340
	5.000%, 10/01/44 North Carolina Turnpike Authority, Triangle Expressival System			
700	North Carolina Turnpike Authority, Triangle Expressway System	1/27 at 100.00	BBB	702 281
/00	Revenue Bonds, Refunding Senior Lien Series 2017, 5.000%, 1/01/32	1121 at 100.00	ססט	792,281
2,700	Total North Carolina			3,084,621
2,700	Ohio $-5.2\%$			5,004,021
	Omo = 3.270			

	American Municipal Power Ohio Inc., Prairie State Energy			
3,500	Campus Project Revenue Bonds, Series 2009A, 5.750%, 2/15/39	2/19 at 100.00	AA (6)	3,582,355
	(Pre-refunded 2/15/19) – AGC Insured			
	Buckeye Tobacco Settlement Financing Authority, Ohio,			
	Tobacco Settlement Asset-Backed Revenue Bonds, Senior Lien,			
	Series 2007A-2:			
2,115	5.875%, 6/01/30	9/18 at 100.00	Caa1	2,125,575
5,910	6.500%, 6/01/47	9/18 at 100.00	B-	6,087,241
5				

NUWNuveen AMT-Free Municipal Value Fund (continued) Portfolio of Investments July 31, 2018 (Unaudited)				
	dited)			
Principal Amount	Description (1)	Optional Call Provisions (2)	Ratings (3)	Value
(000)				
	Ohio (continued)			¢
\$ 1,305	Franklin County, Ohio, Revenue Bonds, Trinity Health Credit	6/27 at 100.00	AA-	\$
	Group, Series 2017OH, 4.000%, 12/01/46			1,326,337
12,830	Total Ohio			13,121,508
	Oklahoma – 0.1%			
	Oklahoma Development Finance Authority, Health System			
255	Revenue Bonds, OU Medicine Project, Series 2018B, 5.250%,	8/28 at 100.00	BB+	288,339
	8/15/43			
	Rhode Island $-1.2\%$			
	Rhode Island Health and Educational Building Corporation,			
3,000	Hospital Financing Revenue Bonds, Lifespan Obligated Group	5/19 at 100.00	Aaa	3,129,330
	Issue, Series 2009A, 7.000%, 5/15/39 (Pre-refunded 5/15/19)			
	South Carolina – 1.5%			
	Piedmont Municipal Power Agency, South Carolina, Electric			
5,435	Revenue Bonds, Series 2004A-2, 0.000%, 1/01/29 – AMBAC	No Opt. Call	AA	3,814,066
	Insured			
	Tennessee – 0.3%			
	Metropolitan Government of Nashville-Davidson County,			
605	Tennessee, Water and Sewerage Revenue Bonds, Green Series	7/27 at 100.00	AA	696,458
	2017A, 5.000%, 7/01/42			
	Texas – 10.6%			
	Austin Community College District Public Facility Corporation,			
1,000	Texas, Lease Revenue Bonds, Highland Campus - Building 3000	8/27 at 100.00	AA	1,128,920
	Project, Series 2018A, 5.000%, 8/01/42			
2,000	Austin, Texas, Electric Utility System Revenue Bonds, Refunding	11/26 at 100.00	ΑΑ	2,300,940
2,000	Series 2017, 5.000%, 11/15/35	11/20 at 100.00	1111	2,300,910
1,855	Grand Parkway Transportation Corporation, Texas, System Toll	10/23 at 100.00	Α-	2,072,424
1,000	Revenue Bonds, First Tier Series 2013A, 5.500%, 4/01/53	10,20 at 100.00		2,072,121
	Houston, Texas, Hotel Occupancy Tax and Special Revenue			
	Bonds, Convention and Entertainment Project, Series 2001B:			
3,000	0.000%, 9/01/32 – AMBAC Insured	No Opt. Call	A2	1,729,530
7,935	0.000%, 9/01/33 – AMBAC Insured	No Opt. Call	A2	4,366,710
	Katy Independent School District, Harris, Fort Bend and Waller			
7,500	Counties, Texas, General Obligation Bonds, School Building	2/27 at 100.00	AAA	7,780,200
	Series 2017, 4.000%, 2/15/47			
	Katy Independent School District, Harris, Fort Bend and Waller			
2,500	Counties, Texas, General Obligation Bonds, Series 2017, 4.000%,	2/27 at 100.00	AAA	2,593,400
	2/15/47 (UB) (4)			
915	North Texas Tollway Authority, System Revenue Bonds,	1/25 at 100.00	Δ	1,008,678
715	Refunding First Tier, Series 2015B, 5.000%, 1/01/45	1725 at 100.00	11	1,000,070
	Tarrant County Cultural Education Facilities Finance Corporation,			
250	Texas, Revenue Bonds, Texas Health Resources System, Series	8/26 at 100.00	AA	279,595
	2016A, 5.000%, 2/15/41			
1,500		12/22 at 100.00	BBB	1,618,125

Texas Municipal Gas Acquisition and Supply Corporation III, Gas Supply Revenue Bonds, Series 2012, 5.000%, 12/15/32

Principal Amount (000)	Description (1)	Optional Call Provisions (2)	Ratings (3)	Value
	Texas (continued) Wylie Independent School District, Collin County, Texas, General Obligation Bonds, School Building Series 2010:			
\$ 2,000 1,945 32,400	0.000%, 8/15/33 0.000%, 8/15/38 Total Texas	No Opt. Call No Opt. Call	AAA AAA	\$968,100 703,545 26,550,167
	Utah – 0.6% Salt Lake City, Utah, Airport Revenue Bonds, International			
1,405	Airport Series 2017B, 5.000%, 7/01/42 Virginia – 1.8%	7/27 at 100.00	A+	1,603,260
1,160	Chesapeake Bay Bridge and Tunnel District, Virginia, General Resolution Revenue Bonds, First Tier Series 2016, 5.000%, 7/01/51	7/26 at 100.00	BBB	1,286,359
1,400	Chesapeake, Virginia, Transportation System Senior Toll Road Revenue Bonds, Capital Appreciation Series 2012B, 0.000%, 7/15/40 (5)	7/28 at 100.00	BBB	1,205,890
2,000	Washington County Industrial Development Authority, Virginia, Hospital Revenue Bonds, Mountain States Health Alliance, Series 2009C, 7.750%, 7/01/38 (Pre-refunded 1/01/19)	1/19 at 100.00	A (6)	2,052,520
4,560	Total Virginia Washington – 1.1%			4,544,769
3,330	Chelan County Public Utility District 1, Washington, Columbia River-Rock Island Hydro-Electric System Revenue Refunding Bonds, Series 1997A, 0.000%, 6/01/29 – NPFG Insured	No Opt. Call	AA+	2,343,588
440	Washington Health Care Facilities Authority, Revenue Bonds, Virginia Mason Medical Center, Series 2017, 5.000%, 8/15/37	8/27 at 100.00	BBB	483,586
3,770	Total Washington West Virginia – 2.1%			2,827,174
1,500	West Virginia Hospital Finance Authority, Hospital Revenue Bonds, West Virginia United Health System Obligated Group, Refunding & Improvement Series 2013A, 5.500%, 6/01/44	6/23 at 100.00	A	1,648,980
3,000	West Virginia State, General Obligation Bonds, State Road Competitive Series 2018B, 5.000%, 6/01/33	6/28 at 100.00	Aa2	3,521,370
4,500	Total West Virginia Wisconsin – 4.8%			5,170,350
1,000	Wisconsin Health and Educational Facilities Authority, Revenue Bonds, Marshfield Clinic, Series 2012B, 5.000%, 2/15/27 Wisconsin Health and Educational Facilities Authority, Revenue	2/22 at 100.00	A-	1,074,960
1,605	Bonds, ProHealth Care, Inc. Obligated Group, Series 2009, 6.625%, 2/15/39 (Pre-refunded 2/15/19)	2/19 at 100.00	N/R (6)	1,649,362
9,000	Wisconsin State, General Fund Annual Appropriation Revenue Bonds, Refunding Series 2009A, 6.000%, 5/01/36 (Pre-refunded 5/01/19)	5/19 at 100.00	Aa2 (6)	9,305,730
11,605	Total Wisconsin			12,030,052
\$ 274,955	Total Long-Term Investments (cost \$234,123,536)			253,755,909

Portf	en AMT-Free Municipal Value Fund (continued) olio of Investments July 31, 2018 udited)			
Principal		Optional Call	Doting	
Amount (000)	Description (1)	Optional Call Provisions (2)	(3)	'Value
	SHORT-TERM INVESTMENTS – 0.5%			
	MUNICIPAL BONDS – 0.5%			
	New York – 0.5%			
	New York City Municipal Water Finance Authority, New York,			
\$ 1,250	Water and Sewer System Second General Resolution Revenue	10/18 at	AA+	\$ 1,250,000
\$ 1,230	Bonds, Fiscal 2014 Adjustable Rate Series AA-2, Variable Rate	100.00	ЛЛТ	\$ 1,230,000
	Demand Obligations, 1.500%, 6/15/50 (8)			
\$ 1,250	Total Short-Term Investments (cost \$1,250,000)			1,250,000
	Total Investments (cost \$235,373,536) - 101.5%			255,005,909
	Floating Rate Obligations $-$ (3.6)%			(9,125,000)
	Other Assets Less Liabilities – 2.1%			5,401,970
	Net Assets – 100%			\$ 251,282,879

Fair Value Measurements

Fair value is defined as the price that would be received upon selling an investment or transferring a liability in an orderly transaction to an independent buyer in the principal or most advantageous market for the investment. A three-tier hierarchy is used to maximize the use of observable market data and minimize the use of unobservable inputs and to establish classification of fair value measurements for disclosure purposes. Observable inputs reflect the assumptions market participants would use in pricing the asset or liability. Observable inputs are based on market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability. Unobservable inputs are based on the best information available in the circumstances. The following is a summary of the three-tiered hierarchy of valuation input levels.

Level 1 – Inputs are unadjusted and prices are determined using quoted prices in active markets for identical securities.

Level 2 – Prices are determined using other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.).

Level 3 – Prices are determined using significant unobservable inputs (including management's assumptions in determining the fair value of investments).

The inputs or methodologies used for valuing securities are not an indication of the risks associated with investing in those securities. The following is a summary of the Fund's fair value measurements as of the end of the reporting period:

	Level 1	Level 2	Level 3	8 Total
Long-Term Investments	:			
Municipal Bonds	\$ —	\$253,755,909	9\$ —	\$253,755,909
Short-Term Investments:				
Municipal Bonds		1,250,000		1,250,000
Total	\$ —	\$255,005,909	9\$ —	\$255,005,909
8				

Income Tax Information

The following information is presented on an income tax basis. Differences between amounts for financial statement and federal income tax purposes are primarily due to timing differences in recognizing taxable market discount, timing differences in recognizing certain gains and losses on investment transactions and the treatment of investments in inverse floating rate securities reflected as financing transactions, if any. To the extent that differences arise that are permanent in nature, such amounts are reclassified within the capital accounts on the Statement of Assets and Liabilities presented in the annual report, based on their federal tax basis treatment; temporary differences do not require reclassification. Temporary and permanent differences do not impact the net asset value of the Fund. The table below presents the cost and unrealized appreciation (depreciation) of the Fund's investment portfolio, as determined on a federal income tax basis, as of July 31, 2018. Tax cost of investments \$225,495,528

Gross unrealized:

Appreciation

Depreciation

(3)

Net unrealized appreciation (depreciation) of investments \$20,385,400

- (1) All percentages shown in the Portfolio of Investments are based on net assets.
- Optional Call Provisions: Dates (month and year) and prices of the earliest optional call or redemption. There
- (2) may be other call provisions at varying prices at later dates. Certain mortgage-backed securities may be subject to periodic principal paydowns.
  For financial reporting purposes, the ratings disclosed are the highest of Standard & Poor's Group ("Standard &
  - Poor's"), Moody's Investors Service, Inc. ("Moody's") or Fitch, Inc. ("Fitch") rating. This treatment of split-rated securities may differ from that used for other purposes, such as for Fund investment policies. Ratings below

\$21,010,244

(624, 844)

- BBB by Standard & Poor's, Baa by Moody's or BBB by Fitch are considered to be below investment grade. Holdings designated N/R are not rated by any of these national rating agencies.
- (4) Investment, or portion of investment, has been pledged to collateralize the net payment obligations for investments in inverse floating rate transactions.
- (5) Step-up coupon bond, a bond with a coupon that increases ("steps up"), usually at regular intervals, while the bond is outstanding. The rate shown is the coupon as of the end of the reporting period.
- (6) Backed by an escrow or trust containing sufficient U.S. Government or U.S. Government agency securities, which ensure the timely payment of principal and interest.

As of, or subsequent to, the end of the reporting period, this security is non-income producing. Non-income producing, in the case of a fixed-income security, generally denotes that the issuer has (1) defaulted on the payment of principal or interest, (2) is under the protection of the Federal Bankruptcy Court or (3) the Fund's

(7) payment of principal or interest, (2) is under the protection of the Federal Bankruptcy Court or (3) the Fund's Adviser has concluded that the issue is not likely to meet its future interest payment obligations and has ceased accruing additional income on the Fund's records.

Investment has maturity of greater than one year, but has variable rate and/or demand features which qualify it as a short-term investment. The rate disclosed, as well as the reference rate and spread, where applicable, is that

(8) as a short-term investment. The fate disclosed, as well as the reference fate and spread, where appreade, is that in effect as of the end of the reporting period. This rate changes periodically based on market conditions or a specified market index.

Investment is exempt from registration under Rule 144A of the Securities Act of 1933, as amended. These

144A investments may only be resold in transactions exempt from registration, which are normally those transactions with qualified institutional buyers.

ETM Escrowed to maturity.

Inverse floating rate security issued by a tender option bond ("TOB") trust, the interest rate on which varies

- IF inversely with the Securities Industry Financial Markets Association (SIFMA) short-term rate, which resets weekly, or a similar short-term rate, and is reduced by the expenses related to the TOB trust.
- UB Underlying bond of an inverse floating rate trust reflected as a financing transaction.

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#### Item 2. Controls and Procedures.

- a. The registrant s principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant s disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the 1940 Act ) (17 CFR 270.30a-3(c))) are effective, as of a date within 90 days of the filing date of this report that includes the disclosure required by this paragraph, based on their evaluation of the controls and procedures required by Rule 30a-3(b) under the 1940 Act (17 CFR 270.30a-3(b)) and Rule 13a-15(b) or 15d-15(b) under the Securities Exchange Act of 1934 (17 CFR 240.13a-15(b) or 240.15d-15(b)).
- b. There were no changes in the registrant s internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act (17 CFR 270.30a-3(d)) that occurred during the registrant s last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant s internal control over financial reporting.

# Item 3. Exhibits.

File as exhibits as part of this Form a separate certification for each principal executive officer and principal financial officer of the registrant as required by Rule 30a-2(a) under the 1940 Act (17 CFR 270.30a-2(a)), exactly as set forth below: See EX-99 CERT attached hereto.

#### SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

(Registrant)	Nuveen AMT-Free Municipal Value Fund
By (Signature and Title)	/s/ Gifford R. Zimmerman
Date: September 28, 2018	Gifford R. Zimmerman Vice President and Secretary
-	s of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this w by the following persons on behalf of the registrant and in the capacities and on the dates
By (Signature and Title)	<u>/s/ Cedric H. Antosiewicz</u> Cedric H. Antosiewicz Chief Administrative Officer (principal executive officer)
Date: September 28, 2018	

By (Signature and Title)	/s/ Stephen D. Foy
	Stephen D. Foy
	Vice President and Controller (principal financial
	officer)

Date: September 28, 2018