



Board of Directors
John Hill, Chair
Patti Turner, Vice Chair
William Dickinson, Sec'y-Treas
James Beall
Bruce Johnson

Chief Executive Officer
Karen L. Pallansch, P.E., BCEE

General Counsel
McGuireWoods, LLP

INTERNAL MEMORANDUM

TO: Board of Directors of Alexandria Renew Enterprises
FROM: Secretary-Treasurer
DATE: Tuesday, January 14, 2020
SUBJECT: Regular Board of Directors Meeting

The Regular Meeting of the Board of Directors will be held in the Environmental Center, Edward Semonian Boardroom on Tuesday, January 21, at 6:00 p.m.

Attached is the January Monthly Board Meeting information for your review.

There are no items requiring Board action this month.



Agenda
 Alexandria Renew Enterprises Board of Directors
 Tuesday, January 21, 2020 6:00 p.m.
 1800 Limerick Street, Ed Semonian Boardroom

No.	Item	Presenter	Action Required
1.	Call Meeting to Order (6:00 p.m.)	Chairman	
2.	Approval of the Agenda (6:02 p.m.)	Chairman	Approval
3.	Public Comment Period (6:15 p.m.)	Chairman	
4.	Education Discussion: AlexRenew Artist in Residence Program (6:35 p.m.)	Sto Len	Information
5.	Consent Calendar (6:37 p.m.)	Chairman	Approval
	A. Approval of Minutes (Held November 19, 2019) (Tab 1)		
6.	Unfinished Business (6:38 p.m.)	Chairman	Approval
	A. None		
7.	New Business (6:39 p.m.)	Chairman	
	A. None		Information
8.	Board Strategic Roundtable – Member & Committee Reports (6:49 p.m.)		
	A. Council/Board CSO Workgroup		
	B. Stakeholder Advisory Group		
	C. General Member Updates		
	D. Community Meeting Updates – (as needed)		
	E. Chamber of Commerce update – Ms. Turner - (as needed)		Information
	F. Chesapeake Bay Citizens Advisory Group update - Mr. Dickinson (as needed)		
	G. Finance and Audit Committee update – Mr. Johnson		
	H. Governance Committee update – Ms. Turner		
9.	Chief Executive Officer’s Reports and Recommendations (7:00 p.m.)	Ms. Pallansch	
	A. Consideration of Monthly Financial Report (<i>December</i>) (Tab 2)	Ms. McIntyre	Accept
	B. CEO’s Monthly Report (<i>December</i>) (Tab 3)	Ms. Pallansch	Information
	i. Jurisdictional Flows to AlexRenew		
	ii. RiverRenew Dashboard		
	iii. Secretary of Natural Resources Budget Briefing (January 13, 2020)		
	iv. HOA Calendar		
10.	Closed session for annual performance review of CEO pursuant to Virginia Code Section 2.2-3711(A), Subsection 1. (7:20 p.m.)	Chairman	
11.	Adjourn (7:25 p.m.)	Chairman	

Times shown in parentheses are approximate and serve as guidelines

If you need an interpreter, translator, materials in alternate formats or other accommodations to access this service, activity or program, please call (703) 549-3381 at least three business days prior to the meeting.

The Finance and Audit Committee meets on Monday, February 10, 2020 @ 6:00 p.m.

The next Board meeting is Tuesday, February 18, 2020 @ 6:00 p.m.

The next Council Board Workgroup Meeting is February 27, 2020 @ 5:00 p.m. @ AlexRenew

Chairman- John Hill • Vice Chairwoman- Patti Turner
 • Secretary-Treasurer-William Dickinson
 • Members- James Beall, Bruce Johnson

Minutes of the 872nd Meeting
“Celebrating Over 60 Years of Continuous Environmental Excellence”
Alexandria Renew Enterprises
6:00 p.m., Tuesday, December 17, 2019

On Tuesday, December 17, at 6:00 p.m., Alexandria Renew Enterprises held its regular Board of Directors meeting at Alexandria Renew Enterprises in the Ed Semonian Board Room at 1800 Limerick Street with the following present:

Members: Mr. John Hill, Chairman
Ms. Patti Turner, Vice Chairwoman
Mr. William Dickinson, Secretary-Treasurer
Mr. Bruce Johnson, Member
Mr. James Beall, Member

Staff: Ms. Karen Pallansch, Chief Executive Officer
Ms. Liliana Maldonado, Deputy General Manager, Engineering & Planning
Mr. Brian Mosby, Deputy General Manager, Operations & Maintenance
Ms. Lisa Van Riper, Director of Enterprise Communications
Ms. Christine McIntyre, Director of Finance
Ms. Allison Deines, Senior Policy Analyst
Ms. Caitlin Feehan, Program Manager, RiverRenew
Ms. Lorna Huff, Secretary to the Board

Counsel: Mr. Jonathan Rak
McGuireWoods, LLP

Consultants: Mr. Justin Carl, Owner’s Advisor

Fairfax County Representative: Mr. Shahram Mohsenin, Director
Fairfax County Wastewater Planning & Monitoring Division

City Representative: Mr. Lalit Sharma, Division Chief
Sanitary Sewer Infrastructure Division

Call to Order

The Chairman called the meeting to order at 6:01 p.m.

Approval of Agenda

The Chairman requested that members review the Agenda and inquired if there were any changes. There being no changes, the Chairman requested a motion to approve the Agenda. Mr. Dickinson moved and Mr. Johnson seconded. The Board unanimously approved.

Consent Calendar

A. Review and Approve Minutes from the November 17, 2019 Board Meeting

Mr. Hill requested that members review the Minutes of the November 17 meeting and inquired if they had questions or comments.

There were no edits to the Minutes. Mr. Dickinson moved approval and Mr. Beall seconded. The Board

unanimously approved.

There being no additional discussion, the Chairman moved to New Business.

New Business

A. Review and approval of Contract 19-071 for SCADA Planning, Integration and Maintenance Services

Discussion

The SCADA system deployed by AlexRenew controls most process decisions and equipment on the Water Resource Recovery Facility (WRRF). This system provides for efficient decision-making and operational control, given the complexity and rigid compliance requirements of our permits. The system is comprised of field instruments, network communications devices, Programmable Logic Controllers (PLC's), and visualization and historian servers. The PLC's are at the end of their useful life and must be replaced; these units control the functions of equipment and processes and are critical to compliance. The RiverRenew program brings additional complexity to flow management and will be outfitted with a variety of PLC's and other instrumentation, all of which will need to be seamlessly integrated into our existing system.

This contract will provide these functions, as well as strategic and master planning to allow AlexRenew to manage these assets proactively in the future.

Ms. Pallansch reported that the recommended period of services is 8 years. This allows for the integration of new assets from various projects including the RiverRenew Tunnel System.

Board members inquired about system redundancies and a seamless integration. They requested periodic briefings on the SCADA system work.

There were no additional questions or comments. The Chairman requested a motion to approve the contract for the SCADA system. Mr. Johnson moved and Mr. Beall seconded. The Board unanimously approved.

Be It Resolved That: The Board authorizes the CEO to execute a contract with Jacobs Engineering Group for SCADA System Planning, Integration, Upgrade and Maintenance Services in the amount of \$1.7 million for the first year. This is a two-year contract with an additional six, 1-year renewal options.

There were no additional questions or comments and the Chairman moved to New Business Item B.

B. Review and Approval of a Contract No. 20-001, Basic Ordering Agreements for Professional Engineering Services

Discussion

AlexRenew does no design work in-house; for efficiency and cost savings, it utilizes a series of consultants and contractors to fulfill its engineering, architecture, operational, business management and other specialty needs. Having a variety of contracts in place allows AlexRenew to retain its nimbleness in responding to or proactively addressing its assets and changing business climate.

Ms. Pallansch reported that the agreements include engineering and other professional services to support AlexRenew's capital investments and business opportunities.

Members inquired on the contractors performing the work and training. There were no additional

questions or comments. The Chairman requested a motion to approve. Ms. Turner moved and Mr. Johnson seconded. The Board unanimously approved.

Be It Resolved That: The Board authorizes the CEO to execute four Basic Ordering Agreement contracts with Brown and Caldwell, GHD, Inc., HDR Engineering, Inc., and Jacobs Engineering Group. Each agreement is for one year with up to four additional one-year period renewals. The term of each contract shall not exceed \$6 million.

There were no additional questions or comments. The Chairman moved to the Board Strategic Roundtable.

Board Strategic Roundtable – Member and Committee Reports

Council/Board Workgroup & Stakeholder Advisory Group (SAG) – Mr. Hill

Mr. Hill reported that he attended both meetings in December. He reported that City Council and staff has confidence in AlexRenew's ability to complete the RiverRenew project. He commended the CEO and RiverRenew team.

Mr. Hill inquired if any of the group had made contacts.

Del Ray Citizens Association – Mr. Beall

Mr. Beall reported he attended the Association's Christmas party.

Chesapeake Bay Citizens Advisory Group – Mr. Dickinson

Mr. Dickinson reported that he attended the November meeting. They discussed the verification of attainments of Best Management Practices (BMPs) for members. The next meeting is scheduled for early February.

Chamber of Commerce – Ms. Turner

Nothing to report.

Finance & Audit Committee – Mr. Johnson

Ms. Pallansch reported that the Finance and Audit Committee needs to meet to discuss AlexRenew's debt financing. In addition to the Committee members, PFM (Investment Advisors) and Raftelis (Rate Consultants) will attend.

Governance Committee – Patti Turner

Nothing to report.

There were no additional questions or comments. The Chairman moved to the CEO's Reports and Recommendations.

CEO's Reports and Recommendations

A. Consideration of November 2019 Financial Report

Ms. McIntyre reviewed the financials noting reserves are steady and debt coverage is good.

AlexRenew and the City will execute the grant agreement by the end of December.

There were no additional questions or comments and the Chairman moved to the CEO Monthly Report.

B. CEO Monthly Report (November 2019)

Ms. Pallansch noted her written report and referenced additional items including updated Board of Director Talking Points on the RiverRenew project and a Chesapeake Bay water quality findings handout.

She further clarified that the Virginia Resources Authority (VRA) reimburses AlexRenew for money that is already spent. She reported that the Governor's FY21-22 Budget includes \$90 million for the CSO program.

She noted that AlexRenew will be holding their length of service awards on January 16 and invited members to attend.

The Chairman recognized Ms. Turner who resigned her seat on the Board due to a family illness. The Chairman thanked her for her service on the Board and recognized her contributions as the Chairwoman of the Governance Committee. Board members also thanked her for her service.

There were no additional questions or comments. The Chairman requested a motion to adjourn. Mr. Beall moved and Ms. Turner seconded. The Board unanimously approved.

The meeting adjourned at 7:02 p.m.

APPROVED:

Secretary-Treasurer

Monthly Financial Report

Month: December 2019

Overview

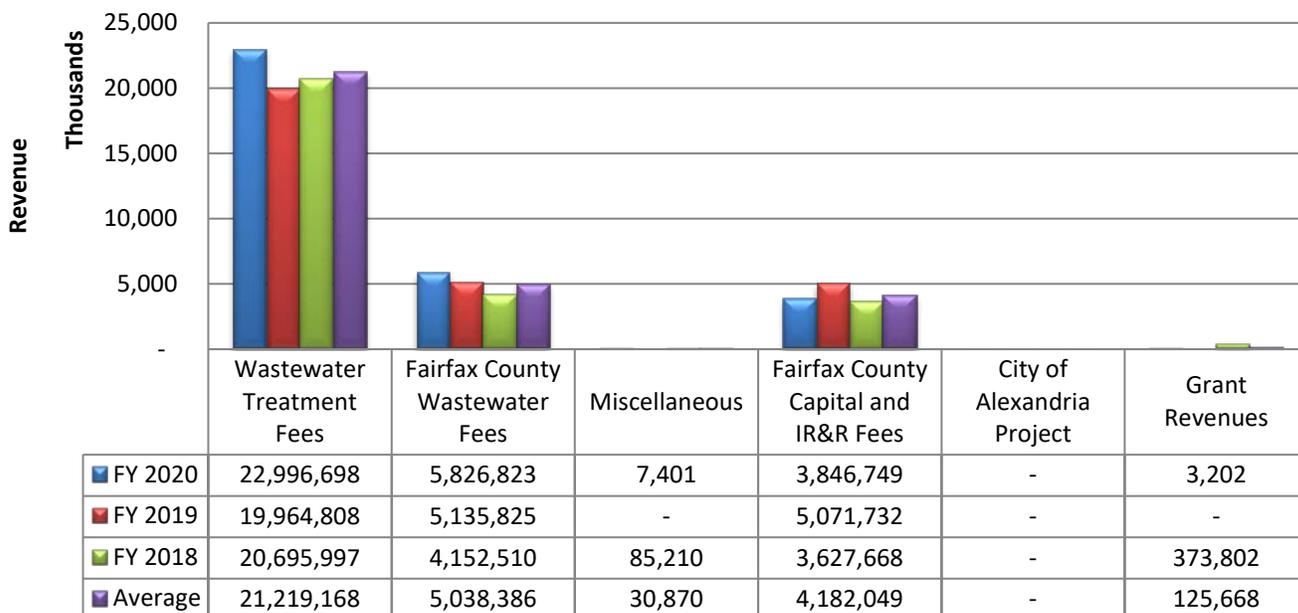
Monthly performance of AlexRenew's annual approved budget is reviewed and evaluated against actual to planned spend rates, historical trends, appropriate benchmarks and internal financial policies, to ensure overall organizational financial stability.

Currently, as the summary data herein will indicate, AlexRenew is trending slightly above its FY20 consolidated revenue budget and below its consolidated expense budget, month-to-date.

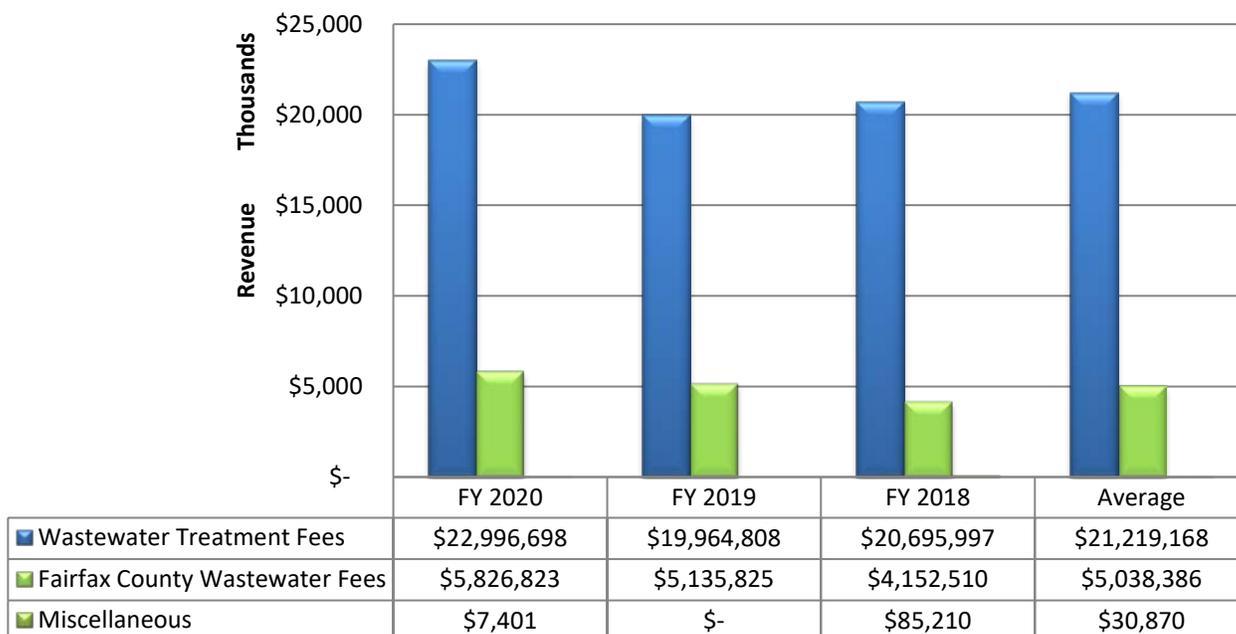
Revenues

- FY20 operating revenues total \$28.8 million through the end of December with approximately \$23.0 million in Wastewater Treatment Charge revenue and \$5,826,823 collected from Fairfax County. Wastewater Treatment Charge revenue is approximately \$3.03 million (15.2%) more compared to the same time period in FY19, and \$1,072,698 (4.9%) above the Fiscal 2020 YTD budget.
- Our revenue performance is primarily driven by billed flows that may be impacted by seasonality and by the Virginia American Water meter reading process, which can vary month-to-month.
- The Fairfax County operating expense charge and IR&R contribution YTD are on budget respectively. Fairfax County capital outlay contributions are also in-line with capital expenditures.

Revenue and Capital Contributions



Operating Fund Revenues 3 Year Comparison



Expenses

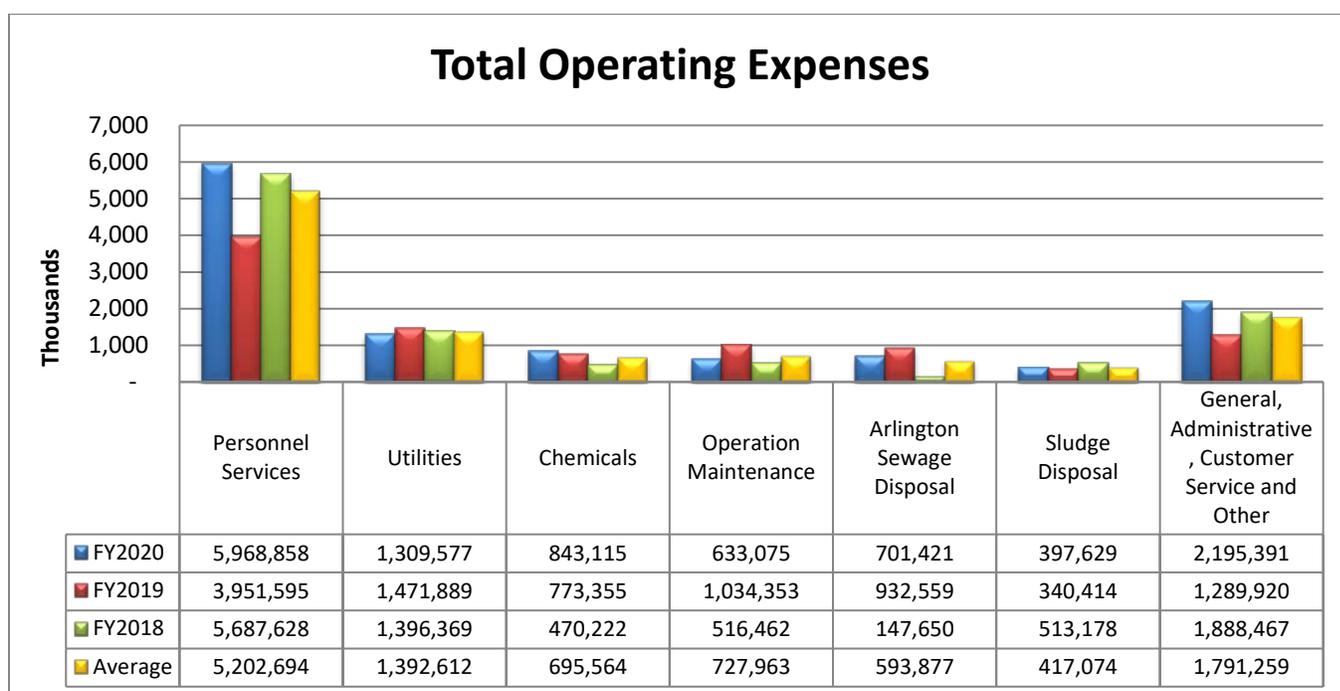
FY20 operating and maintenance expenses are approximately 17% or \$2.4 million under our year-to-date budget, representing a spend rate of 41.7%. An overall decrease in Operations and Maintenance costs and Utilities accounts primarily for this variance.

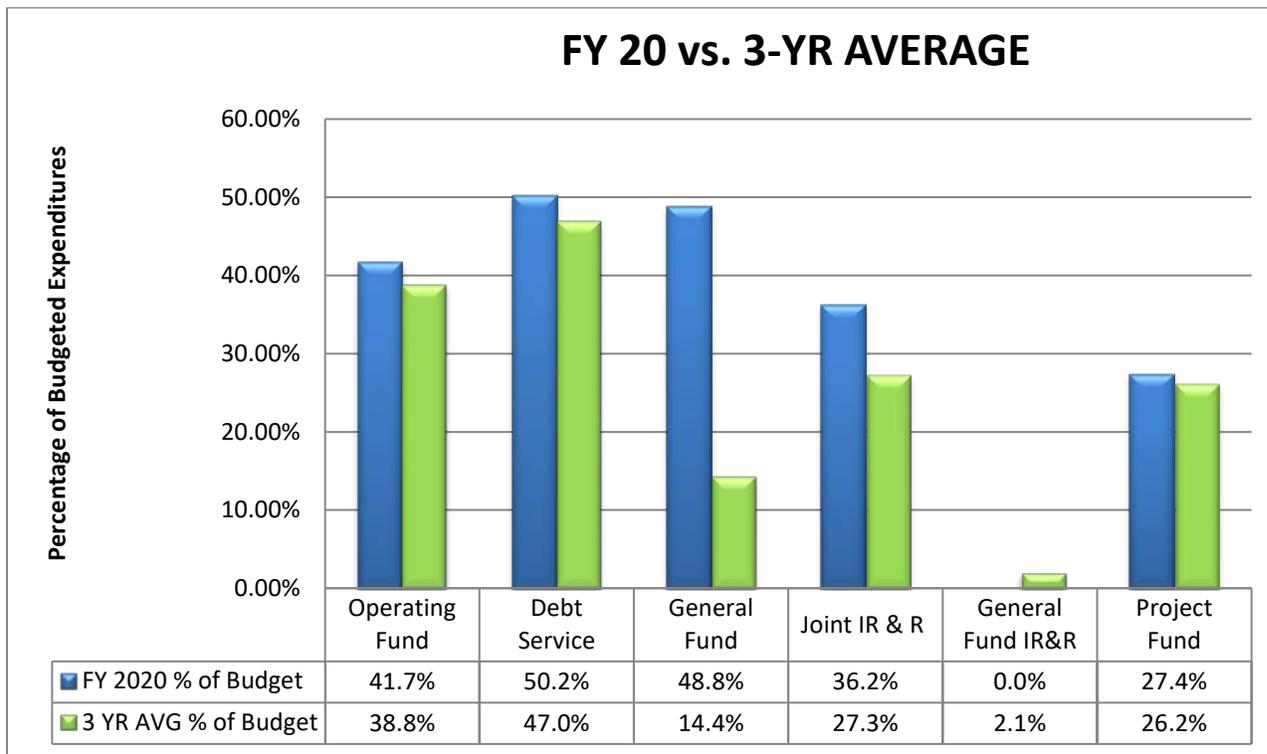
Capital outlay expenses are \$11.6 million year-to-date, representing a spend rate of 27.4%.

At six (6) months into our fiscal year, our overall spend rate is 36.2% of our total budget.

EXPENSES BY FUND

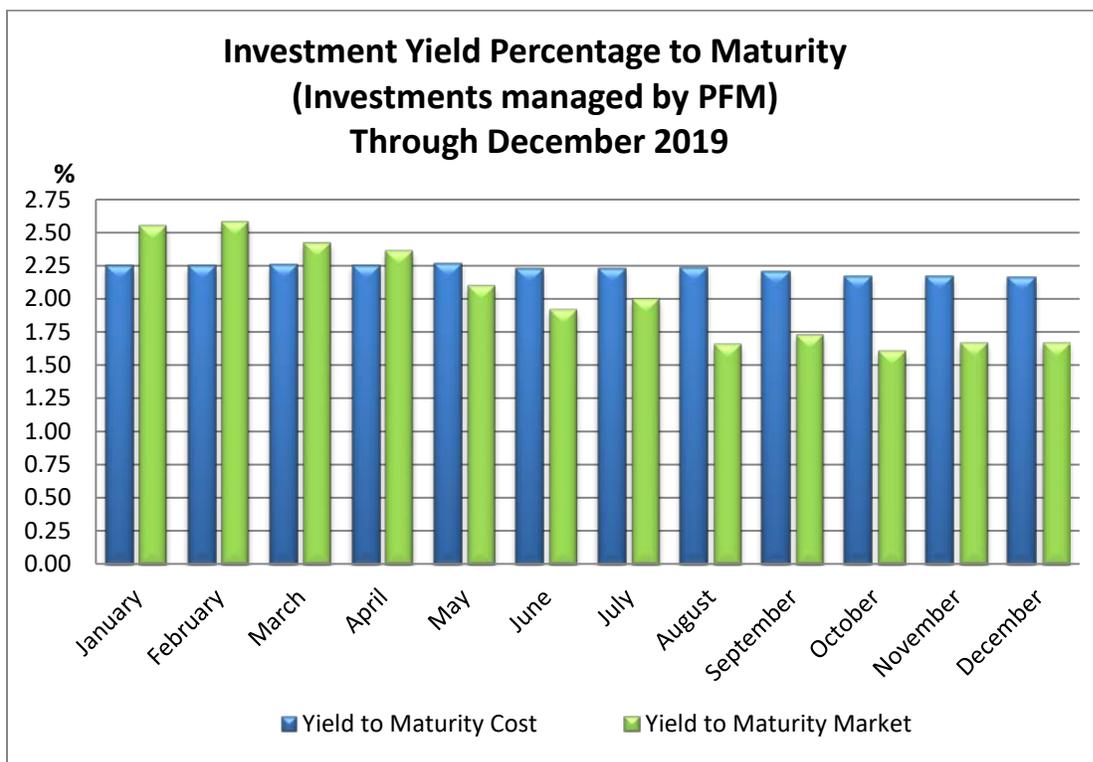
ACTUAL VS. BUDGET Through December, 2019					SPEND RATE		
(Millions of Dollars)	FY 2020	FYTD 2020	3 YR AVG	FYTD 2020	FY 2020	3 YR AVG	Variance FY20
Expenses (By Fund)	BUDGET	ACTUAL	ACTUAL	BUDGET	% of Budget	% of Budget	to 3 YR AVG
Operating Fund	\$ 28.45	\$ 11.88	\$ 10.81	\$ 14.23	41.7%	38.8%	2.9%
Debt Service	14.22	7.15	6.89	7.11	50.2%	47.0%	3.3%
General Fund	1.76	0.86	0.57	0.88	48.8%	14.4%	34.5%
Joint IR & R	4.32	1.57	1.27	2.16	36.2%	27.3%	8.9%
General Fund IR&R	0.07	-	0.01	0.04	0.0%	2.1%	-2.1%
Project Fund	42.44	11.62	7.96	21.22	27.4%	26.2%	1.2%
Total	\$ 91.26	\$ 33.07	\$ 27.50	\$ 45.63	36.2%	33.6%	2.7%





Investments

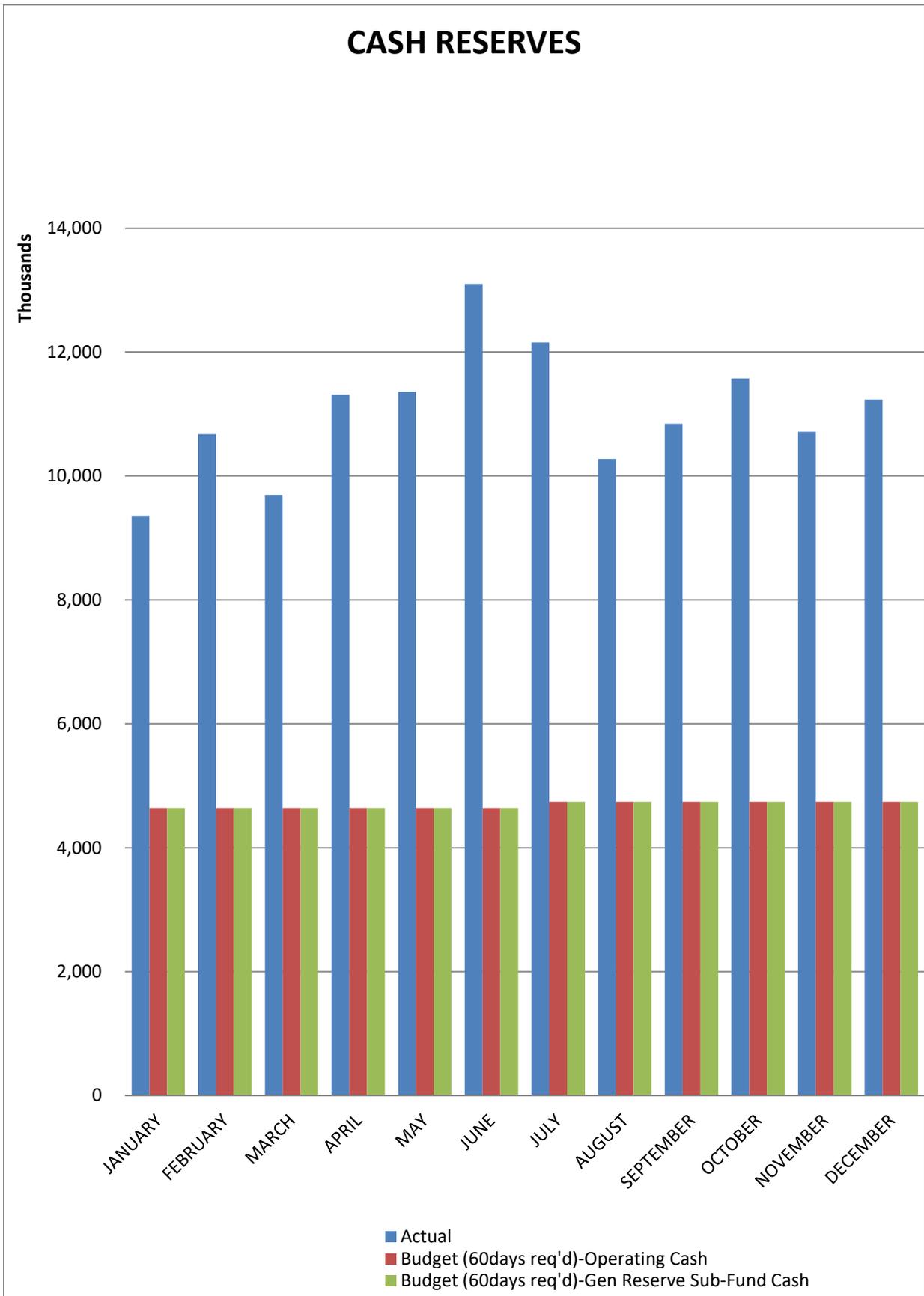
PFM Investment Advisors manages approximately \$24 million of AlexRenew’s \$31.5 million investment portfolio. The following graph demonstrates current earnings on investments of approximately 2.16%; a level significantly higher than general bank deposit earnings rates.



Cash Reserves

Our Indenture requires that we maintain a balance on deposit in our Operating Fund equal to not less than 60 days of budgeted operating expenses. AlexRenew Financial Policy requires a balance on deposit in our General Reserve sub-Fund also equal to not less than 60 days of budgeted operating expenses. In total, these combined compliance conditions require AlexRenew to maintain at least 120 days cash on hand, and for FY20 this equals a minimum of \$9,484,522. The chart and graph below demonstrate that AlexRenew currently exceeds this requirement.

Board Policy 120 Days Operating-General fund Cash Reserve	FY 2020 Actual	Percentage of Goal
As of December, 2019		
Total Operating Cash	\$ 3,664,292	
Total Certificates of Deposit (Cash Equivalent)	\$ 2,825,666	
Total Operating Cash	<u>\$ 6,489,958</u>	
Total General Reserve Sub-Fund Cash	<u>4,742,261</u>	
Total Operating and General Reserve Sub- Fund Cash	<u>11,232,219</u>	118%

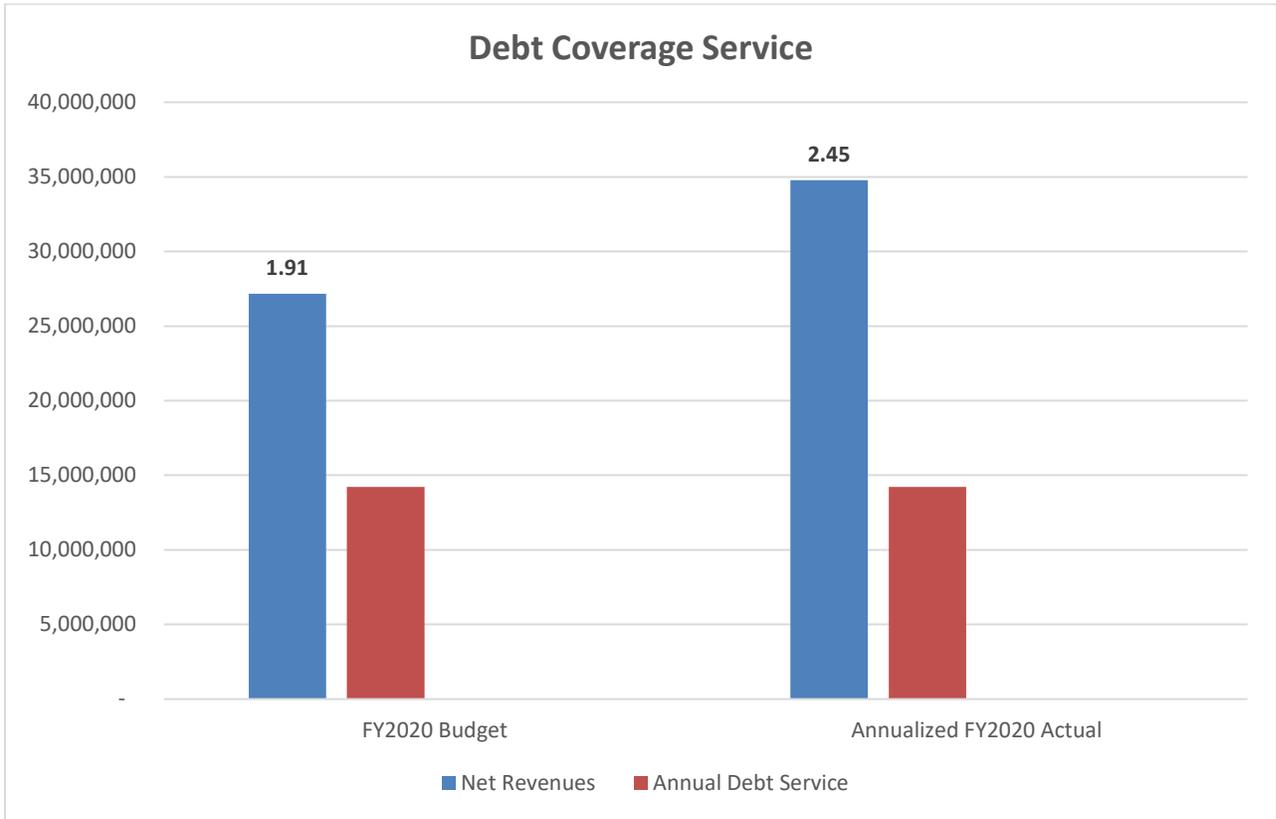


Debt Service Coverage

Our Indenture also requires AlexRenew to maintain a minimum debt service coverage such that Revenues less Operating Expenses or Net Revenues (each term as defined in the Indenture) is at least 1.10x our parity debt service due in any fiscal year. Compliance with our Board-approved financial policies requires AlexRenew to maintain a higher minimum debt service coverage of at least 1.50x applying the same criteria as defined above.

In both cases, AlexRenew currently exceeds its compliance standard as indicated in the graph below. The 2.45x designated in the graph below represents projected coverage for FY20 based on actual results to date. We also note our anticipated coverage of 1.91x based on original FY20 budget expectations. As a result; we are well ahead of our budgeted projection, as well as our minimum policy level.

Financial Policy Compliance - All-In Debt Coverage	FY 2020 Actual	FY 2020 Budget
Gross Revenues Available for Debt Service Coverage:		
Wastewater Treatment Charges - Alexandria	45,993,397	43,848,000
Fairfax County Operating Expense Charge	11,653,645	11,653,647
Reimbursement from other systems	14,802	-
Investment Income	872,766	115,000
Less Restricted Investment Income	-	-
Total	58,534,610	55,616,647
Operating Expenses	23,755,195	28,453,556
Net Revenues	34,779,415	27,163,091
Annual Debt Service	14,220,146	14,220,146
Calculated All-In Debt Coverage	2.45	1.91
Financial Policy Target	≥150%	≥150%



Glossary:

Revenue Fund

All revenue receipts of Alexandria Renew are deposited in the Revenue Fund.

The Operating Fund

The Operating Fund accounts for the administration and maintenance of the wastewater treatment system. By Board policy, the Operating Fund shall maintain 120 days of cash in reserve as established by Board Policy.

Parity Debt Service Fund

The Parity Debt Fund shall have deposited in it one-twelfth (1/12th) of the annual required debt payment due within the budget year. Deposits are restricted funds for use to make semiannual payments in accordance with the Alexandria Renew Trust Agreements.

Joint Improvement, Renewal & Replacement (IRR) Fund

The IR&R Fund receives deposits directly from Fairfax County (60% of IR&R budget) and from AlexRenew customer revenue (40% of IR&R budget) for asset renewal of joint use facilities. The contribution to the IRR Fund is 0.7% of the total amount of capital expenditures made subsequent to October 1, 1997, for the joint portion of the system, as set forth by the service agreement with Fairfax County.

Project Fund

The Project Fund records the cost of each joint use capital project included in the Alexandria Renew Capital Improvement Plans (CIP).

The plans for current and future capital projects, both joint and City only, is summarized in a Ten-Year CIP. City use only CIP are accounted for within the General Fund.

General Fund

The General Fund serves as reserve fund to be used for any lawful purpose of the Authority. Deposits to the General Fund are made from the Revenue Fund after all other fund expenditures and requirements have been satisfied. Alexandria Renew principally uses the General Fund to finance specific capital improvements and to provide sufficient reserves in accordance with policy.

CEO Board Report December 2019

Dear Members of the Board of Alexandria Renew Enterprises,

During the calendar year 2019, our Environmental Center welcomed a record 6,200 visitors; this includes community organization members who attended meetings in our sixth floor suite of meeting rooms, citizens who voted in elections, and AlexRenew tour and water educational event attendees.

On December 12, the RiverRenew team hosted the final Stakeholder Advisory Group (SAG) meeting. Members of the SAG will continue to be engaged through the next year through program update emails and a new RiverRenew SAG will begin as we move into the tunnel system's construction.



Members of the RiverRenew SAG with members of the RiverRenew team at the final SAG meeting

Operational Excellence

Precipitation for December was 3.28 inches, as recorded at the Reagan National Airport, which was above the historical average of 3.05 inches for Washington, D.C. On December 26, an overflow occurred at the Hooffs Run Junction Chamber from 10:00 p.m. to 11:30 p.m., discharging approximately 0.7 MG into Hooffs Run due to an unexpected PLC failure. Due to construction, HVAC throughout the plant was off line, resulting in building temperatures into 100 degrees Fahrenheit. Several PLC's were unable to hold their reset, causing a back water condition, ultimately relieving at the Hooffs Run Junction Chamber. All processing equipment is back in service and operating properly. The area around the discharge location was inspected and no adverse environmental impacts were observed. VDEQ was notified of this overflow event.

Biosolids production for December 2019 was 1,585 wet tons, all of which was beneficially reused through land application in the Virginia counties of Fauquier and King and Queen. The biosolids were land applied as Class B biosolids.

AlexRenew met all Virginia Pollutant Discharge Elimination System (VPDES) effluent parameters for December 2019.

Treatment	Daily Average Flow MGD	Carbonaceous Biochemical Oxygen Demand (Monthly Average) mg/L	Total Suspended Solids (Monthly Average) mg/L	Ammonia (as N) (Monthly Average) mg/L	Dissolved Oxygen (Minimum) mg/L	Total Nitrogen ¹ (Annual Average) mg/L	Total Nitrogen LOAD (YTD) lb	Total Phosphorus (Monthly Average) mg/L	Total Phosphorus LOAD (YTD) lb
Permit	54.0	5.0	6.0	Seasonal ²	6.0	3.0	493,381	0.18	29,603
Reported	34.1	<QL	2.8	0.32	8.8	2.7	306,696	0.07	12,885

NOTES

1. Total Nitrogen expressed as year-to-date average.
2. Ammonia has seasonal limits:
 - o **November – January: 8.4 mg/L**
 - o February – March: 6.9 mg/L
 - o April – October: 1.0 mg/L

Public Engagement and Trust

Tours and Events

During December, we welcomed 241 visitors to our Environmental Center. We hosted 14 events, including an Islamic Relief USA staff meeting for 12, a Chesapeake Bay Foundation training for 40 attendees, a monthly staff meeting for 12 Campagna Center employees, and a WaterReuse Mid-Atlantic Section Feasibility Meeting for 26 attendees.

Customer Service

Customer Service received 2,123 calls in December, with 51% of callers opting for self-service. Average call answer time was 31 seconds. Call Center staff also answered 160 customer emails.

Social Media and Website

Seventy-five percent of people who engaged with us on Facebook during December were from the City of Alexandria; the majority (54%) were women. We had 4,570 active, organic engagements on Facebook as evidenced by likes, comments, and shares (the industry average is 232). We have 3,460 Facebook Fans.

More than 830 Twitter, 30 LinkedIn, and 35 Instagram followers engaged with our posts during December. We have 3,500 Twitter, 2,100 LinkedIn, and 190 Instagram followers. Our website had 8,583 visitors and 27,546 page views during December. We had 34 visitors click through to our website from social media. The RiverRenew website had 728 visitors and 1,665 page views during December.

Watershed Stewardship

During December, I attended the Virginia Risk Sharing Association (VRSA) and Virginia Association of Municipal Water Agencies (VAMWA) board meetings. Our Senior Policy Advisor attended the VAMWA annual meeting.

RiverRenew

As part of an ongoing effort to incorporate lessons learned from other entities implementing tunnels, the RiverRenew team concluded an outreach effort in December on pump station design and operations. The team gathered insights from a variety of sources including DC Water, the City-County of Honolulu, subject matter experts, and recommendations from manufacturers.

AlexRenew received four proposals on December 17 in response to the Tunnel System Resident Engineering and Inspection (RE&I) Request for Proposals (RFP). The respondents include AECOM Technical Services, Inc., Dulles Geotechnical and Materials Testing Services, Inc. (DGMTS), EPC Consultants, Inc., and WSP USA, Inc. Award recommendation is expected to be made in March.

Adaptive Culture

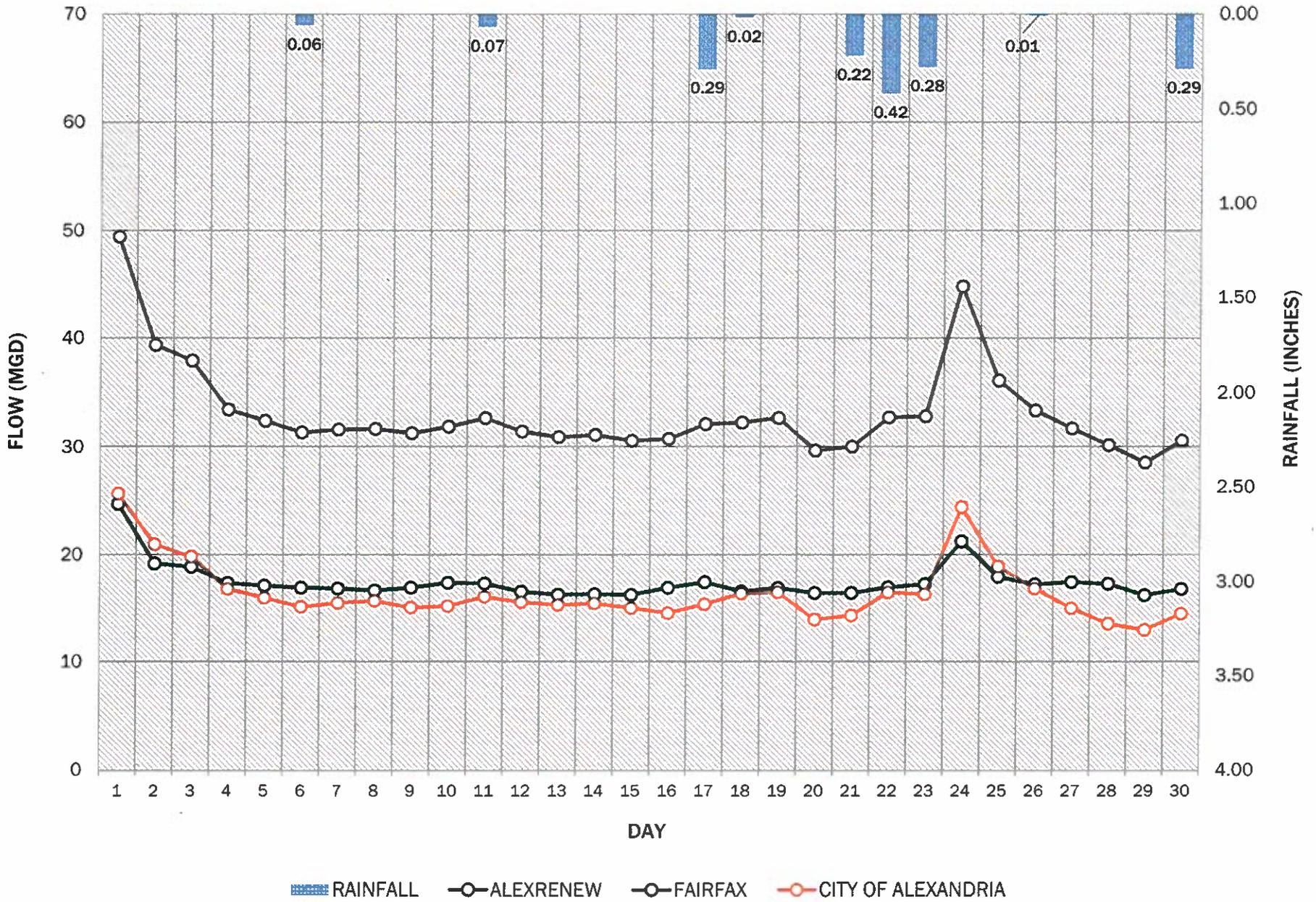
From April 30, 2018, we have logged 263,098 hours without a lost time accident.

Thank you for your ongoing dedicated service to AlexRenew.

Regards,

Karen Pallansch
Chief Executive Officer

ALEXRENEW DAILY FLOWS, NOVEMBER 2019





office of the governor of the commonwealth of virginia

natural resources budget briefing

house appropriations committee

January 13, 2020

Secretary of natural resources

Matthew j. strickler

governor northam's natural resources budget priorities

- Chesapeake Bay / Water Quality
- Land Conservation & State Parks
- Agency Operations
- Climate Change & Resilience
- Historic Justice

chesapeake bay/water quality

- Stormwater Local Assistance Fund **\$182,000,000**
 - VPBA bond proceeds
- Water Quality Improvement Fund/ Point Source – **\$120,000,000**
 - VPBA bond proceeds
- Natural Resources Commitment Fund – **\$47,000,000** FY 21 Mandatory Deposit
\$41,800,000 FY 22 General Fund
- Oyster Reef Restoration – **\$10,000,000**
 - VPBA bond proceeds
- Alexandria Combined Sewer Overflow – **\$65,000,000**
 - VPBA bond proceeds

natural resources commitment fund

	<u>FY 21</u>	<u>FY22</u>
• Conservation Reserve Enhancement Program	\$500,000	\$500,000
• Virginia Conservation Assistance Program	\$500,000	\$500,000
• Poultry Litter Transport and Resource Management Plan Program	\$750,000	\$750,000
• Virginia Department of Forestry Water Quality Grants	\$250,000	\$250,000
• Virginia Department of Conservation and Recreation Conservation Application Suite	\$250,000	\$250,000
• Water Quality Improvement Fund Reserve	\$4,857,829	n/a
• Soil and Water Conservation District Technical Assistance	\$4,790,144	\$4,570,000
• Agriculture BMP Cost Share, Chesapeake Bay Watershed	\$24,589,407	\$24,500,000
• Agriculture BMP Cost Share, Outside Chesapeake Bay Watershed	\$10,538,317	\$10,500,000

land conservation & state parks

- Virginia Land Conservation Fund **\$20,000,000** per year
- Capital Investments in Virginia State Parks infrastructure – **\$144,000,000**
- Natural Area Preserves land acquisition – **\$6,500,000** NGF
- DGIF – improve WMAs and boating access, land acquisition – **\$9,250,000** NGF

land conservation & state parks

DCR Capital Investments:

- Item C-40: Acquisition of Land for State Parks \$309,802
 - Mayo River, New River Trail, Seven Bends, Lake Anna, First Landing, Natural Tunnel, Sailor's Creek Battlefield, Shenandoah River, Wilderness Road, Westmoreland, Loudon, and Southwest Virginia Museum.
- Item C-41: Acquisition of Natural Area Preserves \$6,547,328
 - The Cedars, Bald Knob, Deep Run Ponds, Buffalo Mountain, Antioch Pines, Pinnacle, Mount Joy Ponds, Camp Branch Wetlands, Chestnut Ridge, Cleveland Barrens, Difficult Run, Hills Glades, Poor Mountain, South Quarter, Sandhills, Grafton Ponds, Cowbane Prairie, Bush Mill Stream, Cypress Bridge, Cape Charles, and Crow's Nest Natural Area Preserves.
- Item C-42: State Park Critical Infra. Repair/Residences \$25,000,000

land conservation & state parks

- Item C-43: Belle Isle State Park Mansion repairs \$1,500,000
- Item C-44: State Park Shoreline Erosion Projects \$5,000,000
- Item C-45: Soil and Water District Dam Rehabilitation \$20,000,000
- Item C-46: Renovation of Existing Revenue Generating Cabins \$31,158,000
- Item C-47: Revenue Generating Facilities \$10,000,000
- Item C-48: New Revenue Generating Cabins at Various Parks \$41,900,000

historic justice & equity

- Historic Highway Markers- **\$200,000**
- Virginia African American History Trail – **\$100,000**
- City of Richmond – **\$2,000,000** to expand the exhibition at Maymont "Below Stairs: In Service and Beyond"
- Charlottesville – **\$700,000** for permanent installation “ Paradox of Liberty: Slavery at Jefferson's Monticello”
- Alexandria – **\$2,443,000**to support the purchase of the Freedom House

agency operations

- DEQ – Increase of **\$32,000,000** over the biennium
Implement EO-6, restore Chesapeake Bay funds, support environmental justice
- DCR – Increase of **\$4,000,000** over the biennium
Support for soil and water conservation, dam safety, state parks operations and maintenance
- VMRC – Increase of **\$1,250,000** over the biennium
Add fisheries and habitat staff, boat motors, UAV pilot, IT upgrades
- DHR – Increase of **\$1,500,000** over the biennium
Preservation staff, salary adjustments, highway marker program, archive space

agency operations - deq

totals for the biennium

	Personnel	Contractual	Equipment	Total
Air and water monitoring and compliance activities	\$3,465,000	\$2,463,200	\$5,760,104	\$11,688,304
Environmental justice and outreach initiatives	\$4,157,000	\$1,193,000	\$40,000	\$5,390,000
Regulatory Affairs	\$3,465,000	\$1,170,000	\$20,000	\$4,655,000
Enhance permitting capacity in water and land programs	\$2,079,000	\$1,600,000	\$0	\$3,679,000
Enhance water protection permitting capacity	\$2,466,000	\$0	\$0	\$2,466,000
Improve solid waste permit program efficiency	\$2,000,000	\$0	\$0	\$2,000,000
Increase Biosolids program capacity	\$898,800	\$0	\$0	\$898,800
Restoration and protection of the Chesapeake Bay	\$462,000	\$429,026	\$0	\$891,026
	\$18,992,800	\$6,855,226	\$5,820,104	\$31,668,130

agency operations - dcr

totals for the biennium

	Personnel	Equipment	Total
State park public highway signage	\$0	\$160,000	\$160,000
Dam safety lead engineer	\$341,516	\$0	\$341,516
Floodplain management positions	\$459,247	\$0	\$459,247
Soil and water nutrient management planner	\$229,640	\$0	\$229,640
Soil and water resource management planning	\$242,068	\$0	\$242,068
Green Pastures Recreation Area	\$0	\$552,187	\$552,187
State parks operations	\$0	\$1,112,000	\$1,112,000
State parks preventative maintenance	\$0	\$1,000,000	\$1,000,000
	\$1,272,471	\$2,824,187	\$4,096,658

agency operations – vmrc

totals for the biennium

	Personnel	Equipment	Total
Implementation of EO 24 and coastal resiliency projects	\$156,400	\$0	\$156,400
Enhance fisheries science and support developing fisheries	\$362,050	\$24,100	\$386,150
Implement aquaculture legislation and support oyster Bay restoration	\$474,544	\$115,000	\$589,544
Unmanned aerial vehicles to enhance search and rescue capacity	\$0	\$18,692	\$18,692
Improve Law Enforcement safety	\$0	\$96,436	\$96,436
	\$992,994	\$254,228	\$1,247,222

agency operations – dhr

totals for the biennium

	Personnel	Equipment	Total
Staff salary adjustments	\$278,656	\$0	\$278,656
Additional cemetery preservation funds	\$0	\$140,690	\$140,690
IT enhancements	\$0	\$414,412	\$414,412
Archeological Collections Space	\$0	\$150,000	\$150,000
Cemetery Preservationist	\$216,174	\$0	\$216,174
Additional Historic Highway Marker Funding	\$0	\$200,000	\$200,000
Digitize Historic Highway Markers for AA History Trail	\$0	\$100,000	\$100,000
	\$494,830	\$1,005,102	1,499,932

climate change and resilience

- Remove prohibitions regarding RGGI legislation to come
- Dam Rehabilitation ~~to~~ **\$45,000,000** over the biennium (DCR, DGIF, SWCDs)
- Dam Safety Lead Engineer and floodplain management positions
- Coastal Resilience position at VMRC

governor northam's natural
resources budget priorities

QUESTIONS?



office of the governor of the commonwealth of virginia

virginia's chesapeake bay tmdl

watershed implementation plan phase iii

January 13, 2020

Secretary of natural resources

Matthew j. strickler



chesapeake bay and virginia tributaries are impaired

Much of the Bay and tributaries do not meet sciencebased water quality standards set for:

- water clarity,
- chlorophyll a,
- underwater grasses, and
- dissolved oxygen.

state of the bay and virginia's rivers

How is the Bay doing?

Better- 2018 UMCES report card showed statistically significant improvement for first time. VIMS ~~dead~~ report within normal range despite environmental conditions.

But, not great 2019 UMCES grade dropped from 54% to 46%: C.

Bottom line—we are over the hump: our efforts are working but restoration requires more

How is Virginia doing?

On track: Hit our 2017 midpoint assessment nutrient pollution reduction goals

But, not on pace: Prior level of effort will not achieve targets

Where do we go from here?

Phase III Watershed Implementation Plan (WIP III)

Virginia Secretary of Natural Resources

Chesapeake Bay Stakeholders Advisory Group

Local Soil and Water Conservation Districts
Input on Agriculture Policies and Practices

Local Planning District Commissions
Input on Developed Lands Policies and Practices

Virginia Interagency Chesapeake Bay TMDL Team

agriculture

Priority BMPs

Nutrient
Management
Planning

Cover Crops

Livestock Stream
Exclusion

Grass and Forest
Buffers

Incentives and Technical Assistance:

- Virginia Agricultural BMP Cost Share Program
- Governor Northam's budget proposal includes \$109 M for cost share and technical assistance
- Agricultural BMP Loan Program

Documentation:

- Resource Management Plan and Agriculture Stewardship Act Programs;
- Document voluntary practices through farm 2020/2021 survey

Clear Timelines:

- Set December 31, 2025 as deadline to either achieve goals for nutrient management plans on cropland and for livestock stream exclusion or sign up for cost share

wastewater/septic

Priority BMPs

Wastewater
Treatment
Technologies

Onsite Septic
System
Maintenance

-

Reasonable Assurance:

- Achieve additional reductions from municipal WWTPs equivalent to 4 mg/l of TN and 0.3 mg/l TP through regulatory revisions or other means
- Shift oversight of septic maintenance from local governments to Virginia Department of Health

Adequate Funding:

- Consult with VAMWA on annual funding needs
- Governor Northam's budget proposal includes \$120 M for the Water Quality Improvement Fund
- Designate VDH as a state certifying authority to provide tax exemptions

developed lands

Priority BMPs

Urban Nutrient
Management
Planning

Green
Infrastructure

Tree Canopy

Forest Retention

Adequate Funding:

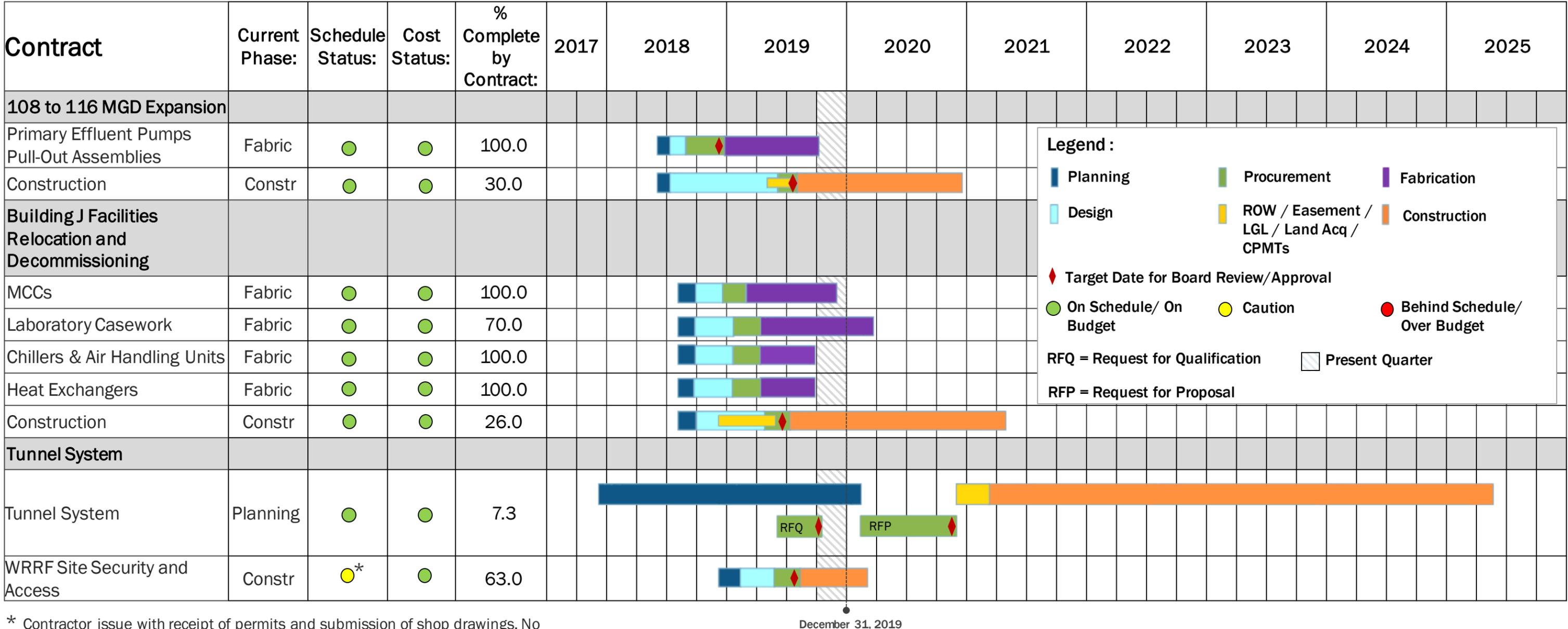
- Consult with local governments on annual funding needs
- Governor Northam's budget proposal includes \$182 M for the Stormwater Local Assistance Fund, \$65 M for City of Alexandria combined sewer overflow, and \$500,000 for the Virginia Conservation Assistance Program

Technical Assistance:

- Establish long-term partnership with local Planning District Commissions; Rebuild local engagement capacity at Department of Environmental Quality
- Enhance existing Virginia Certified Fertilizer Applicator Program
- Enhance Department of Forestry presence in urban centers
- Implement DOF/ Rappahannock River Basin Commission Healthy Watershed Initiative



Program Schedule



* Contractor issue with receipt of permits and submission of shop drawings. No impact to Tunnel System Project anticipated at this time.

Summary of Upcoming Activities

Date:	Upcoming Activities:
1/23/2020	Issue Shortlist for Request For Proposal (RFP) 20-013, RE&I Services for Tunnel System Project
2/11/2020	Issue Request For Proposal (RFP) for RiverRenew Tunnel System Project



Contract Award Status

Contract	Contract No.:	Date of Contract Award:	Vendor:	Contract Amount:	Notice to Proceed:	Construction / Services Start Date:	Construction / Services Finish Date:
108 to 116 MGD Expansion							
Primary Effluent Pumps Pull-Out Assemblies	19-001	12/19/2018	Flowserve	\$235,478 ³	12/20/2018	12/21/2018	9/23/2020
Construction	19-072	7/26/2019	ACE	\$2,665,000	7/29/2019	7/29/2019	11/30/2020
Wastewater Services Resident Engineering & Inspection ¹	19-031	6/11/2019	Hazen and Sawyer, P.C.	\$522,120	N/A	7/2/2019	6/30/2024
Engineering Services During Construction (ESDC) ²	14-017-2	7/11/2019	CH2M Hill Engineers, Inc	\$280,320	N/A	7/12/2019	11/30/2020
Building J Facilities Relocation and Decommissioning							
MCCs	19-016	2/26/2019	Rexel	\$42,068 ⁴	2/27/2019	2/27/2019	10/30/2020
Lab Casework	19-017	4/4/2019	Nycom	\$64,846 ⁵	4/8/2019	4/8/2019	10/30/2020
Chillers and Air Handling Units	19-018	4/1/2019	Johnson Controls	\$65,328 ⁷	4/3/2019	4/3/2019	10/30/2020
Heat Exchangers	19-019	4/1/2019	United Energy Products	\$7,636 ⁶	4/8/2019	4/8/2019	10/30/2020
Construction	19-064	6/11/2019	Clark	\$19,409,800	7/9/2019	7/9/2019	3/30/2021
Engineering Services During Construction (ESDC) ²	18-006	6/11/2019	CH2M Hill Engineers, Inc	\$885,963	N/A	7/1/2019	3/30/2021
Wastewater Services Resident Engineering & Inspection ¹	19-031	6/11/2019	Hazen and Sawyer, P.C.	\$994,924	N/A	7/2/2019	6/30/2024
Tunnel System							
RiverRenew Owner's Advisor (OA) Scope of Services and Budget for Amendment No. 3	17-022	6/18/2019	Brown & Caldwell	\$16,968,912	N/A	7/1/2019	6/30/2020
Wastewater Services Resident Engineering and Inspection ¹ (Programmatic)	19-031	6/11/2019	Hazen and Sawyer, P.C.	\$346,024	N/A	7/2/2019	6/30/2024
Wastewater Services Resident Engineering & Inspection ¹ (WRRF Site Security and Access)	19-031	6/11/2019	Hazen and Sawyer, P.C.	\$261,060	N/A	7/2/2019	6/30/2024
WRRF Site Security and Access Construction	19-077	7/25/2019	Sorensen Gross Company	\$1,527,000	7/29/2019	7/29/2019	2/1/2020
Total				\$44,276,479			

¹ 'Wastewater Services Resident Engineering & Inspection (RE&I)' Contract supports multiple projects. Amounts reported are specific to each project thru FY2020. Total Contract Award was for \$ 2,907,309

² 'Engineering Services During Construction (ESDC)' amounts reported are through FY2020.

³ Original contract award was for \$941,911. Remaining contract value of \$706,434 assigned to Contract 19-072 as of September 6, 2019.

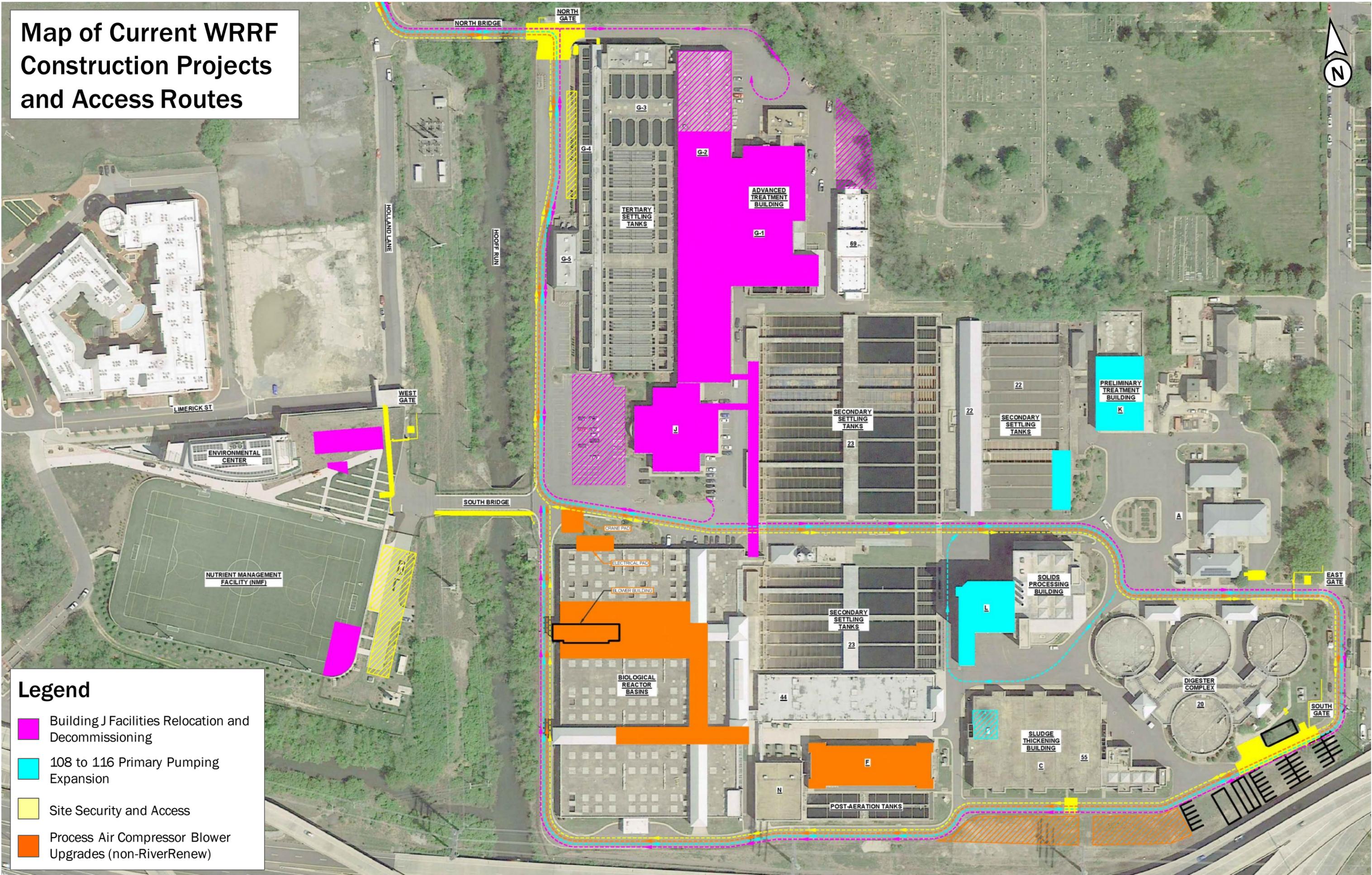
⁴ Original contract award was for \$280,453. Remaining contract value of \$238,385.02 assigned to Contract 19-064 as of October 31, 2019.

⁵ Original contract award was for \$432,307. Remaining contract value of \$367,461 assigned to Contract 19-064 as of November 12, 2019.

⁶ Original contract award was for \$51,757. Remaining contract value of \$44,121 assigned to Contract 19-064 as of November 15, 2019.

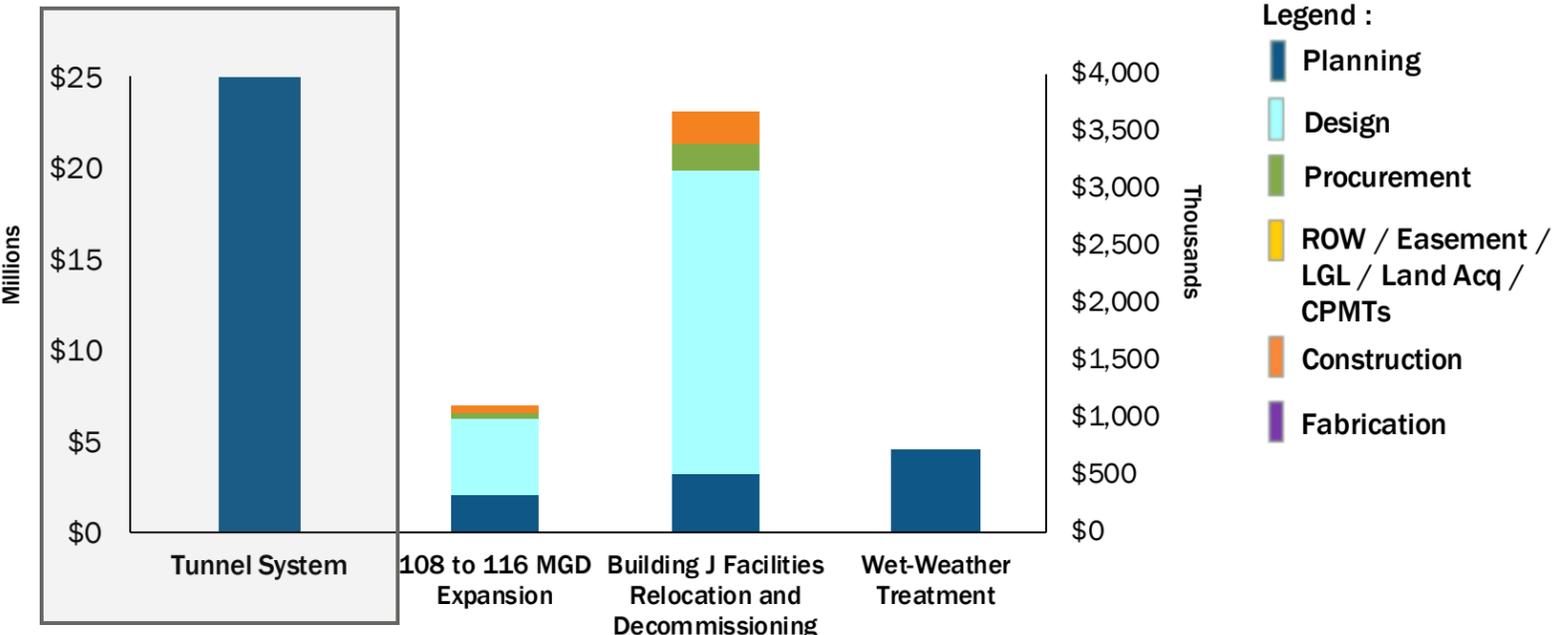
⁷ Original contract award was for \$435,522. Remaining contract value of \$370,194 assigned to Contract 19-064 as of December 19, 2019.

Map of Current WRRF Construction Projects and Access Routes

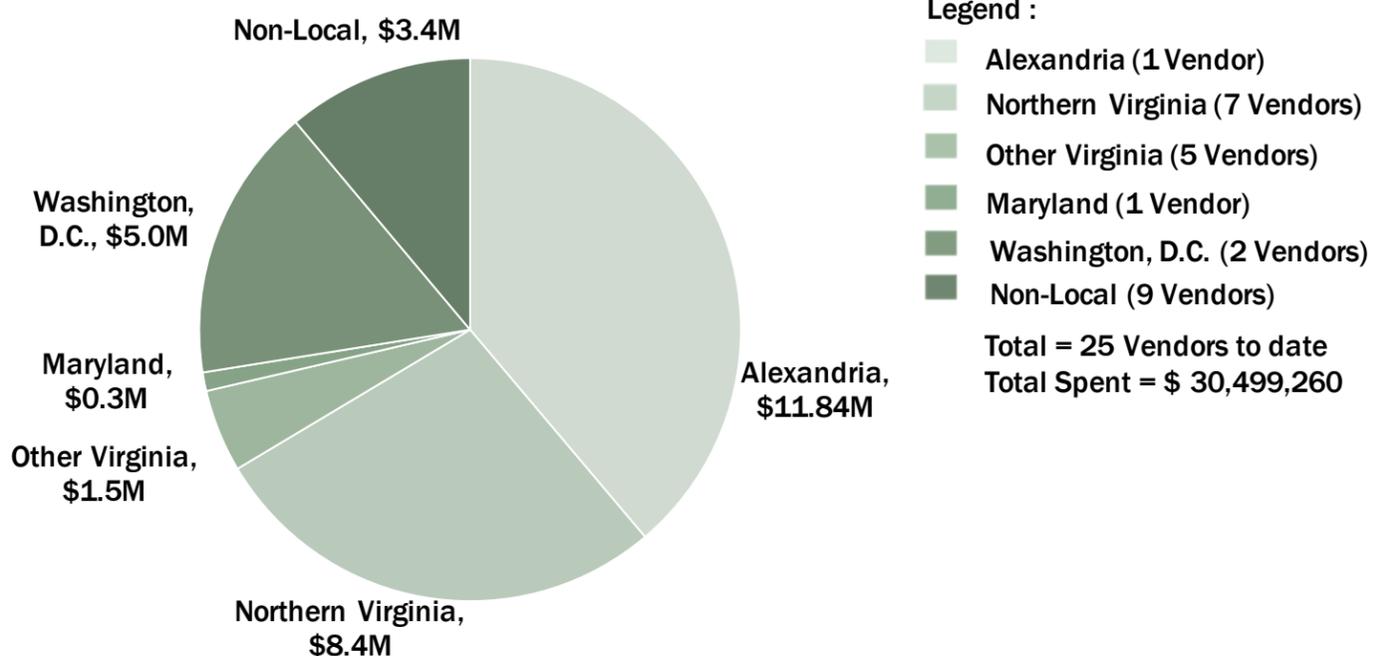




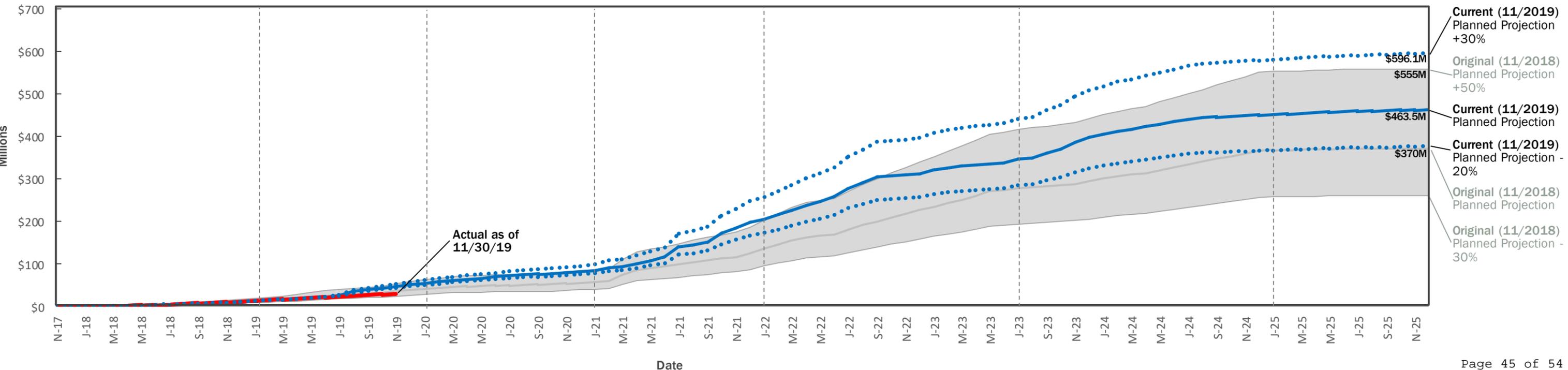
Project to Date Cost by Phase*



RiverRenew Spent to Date by Locality*



RiverRenew Cashflow Analysis*





Summary of Accomplished Milestones

Date:	Accomplished Milestones:
1/13/2020	City of Alexandria issued a letter concurring with RiverRenew TDPS DSUP condition matrix identifying permit conditions that the Tunnel System Contract Design-Build contractor must comply with for the TDPS construction activities

Tunnel System Contract Permit Status and Descriptions

Permit/Activity:	Anticipated Date of Completion:	Status:	Description:
National Park Service (NPS) Special Use Permits (SUP)	Completed	● Received modified SUPs for Jones Point Park on 7/23/2019 and for Potomac River on 7/25/2019	Required for Phase B geotechnical investigations within Jones Point Park and Potomac River
U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) #6	Completed	● Received modified NWP #6 on 7/25/2019	Required for Phase B geotechnical investigations within Potomac River and/or wetlands
Virginia Department of Transportation (VDOT) Land Use Permits (LUP)	Completed	● Issued Land Use Permit on 12/6/2019	Required for deep tunnel crossing under, and geotechnical investigations within VDOT limited access right-of-way
City of Alexandria Development Special Use Permit (DSUP) Tunnel System (DSUP No. 2018-0020)	Completed	● Received unanimous City Council approval on 7/9/2019	Required for the approval of RiverRenew's tunnel system and diversion facilities
City of Alexandria Development Special Use Permit (DSUP) Tunnel Dewatering Pumping Station (DSUP No. 2019-0013)	Completed	● Received unanimous City Council approval on 9/14/2019	Required for the approval of the new Tunnel Dewatering Pumping Station and associated superstructure
Environmental Assessment (EA)	February 2020	● EA was issued on 6/19/2019. Public Comment period ended 7/19/2019. NPS concurred with draft FONSI and will issue Decision Document upon execution of Programmatic Agreement	Required to comply with the National Environmental Policy Act (NEPA) as RiverRenew will need NPS permits. Prepared in coordination with the NPS as the lead federal agency
Joint Permit Application	February 2020	● Submitted permit application on 9/12/2019	Required application for Clean Water Act permits. A single application is sent to USACE, Virginia Department of Environmental Quality (VDEQ) and Virginia Marine Resources Commission (VMRC) to request authorization for all RiverRenew wetland/stream impacts
NPS Construction/Right-of-Way Permits	June 2020	● Submitted permit application for work within Jones Point Park on 11/26/2019 Submitted permit application for work within Potomac River bed on 12/16/2019	Required for diversion facility construction within, and deep tunnel crossing under Jones Point Park. Also required for Outfall 001 extension and deep tunnel crossing under Potomac River bed
Flood Emergency Management Agency (FEMA) Letter of Map Revision (LOMR)	N/A	● City determined the Tunnel System project has no significant impact on floodplain	No LOMR required from FEMA
U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) #18	Completed	● NWP #18 received 6/10/2019	Required for wetland impacts associated with contractor trailers, staging, and laydown areas on the WRRF campus.



RiverRenew Accomplishments *

Third Party Coordination	Planning & Design	Community Engagement	Construction
 <p>17 Permits Approved</p>	 <p>Long Term Control Plan Update Approved June 2018</p>	 <p>39 Events Hosted</p>	 <p>\$24M Awarded for Construction</p>
 <p>10 Permits Underway</p>	 <p>Ownership of Outfalls Transferred June 2018</p>	 <p>45 Community Presentations</p>	
 <p>10 Easements Underway</p>	 <p>Preliminary Engineering Report Finalized March 2019</p>	 <p>RiverRenew.com Launched July 2018</p>	
 <p>Environmental Assessment Published June 2019</p>	 <p>Tunnel System Bidding Documents RFP at 60% Completed September 2019</p>		
 <p>VPDES Permit Issued September 2018</p>	 <p>77 Soil Borings Completed</p>		
 <p>Clean Water Revolving Loan Fund Preliminary Approval October 2019</p>	 <p>Tunnel System RFQ Shortlist October 2019</p>		
 <p>Water Infrastructure Finance and Innovation Act Letter of Interest Accepted & Invitation to Apply October 2019</p>	 <p>Tunnel DSUP Approved July 2019</p>		
 <p>Virginia \$25M CSO Grant Approved by GA</p>			

* Since January 2018



Program Breakdown Summary by Project

<p>108 to 116 MGD Expansion</p>	<p>Upgrade front-end capacity of the plant from 108 to 116 mgd</p>	<ul style="list-style-type: none"> • Upgrade of the primary effluent pumps • Modifications to the filter effluent backwash
<p>Building J Facilities Relocation and Decommissioning</p>	<p>Building J relocation of building uses and demolition</p>	<ul style="list-style-type: none"> • Relocation of WRRF lab, WRRF electrical equipment, and WRRF chillers • Construction of a new lab • Disconnection and relocation of building utilities • Demolition of Building J and hauling of materials off-site • Building G/2 roof replacement
<p>Tunnel System</p>	<p>Waterfront Tunnel</p>	<p>Storage and conveyance tunnel to control overflows from Outfalls 001 and 002</p> <ul style="list-style-type: none"> • Installation of a 12-ft inside diameter reinforced concrete tunnel • Construction of four shafts ranging from 35 to 65 feet inside diameter, two diversion chambers, and one overflow structure • Installation of two below-grade ventilation control vaults
	<p>Hooffs Run Interceptor</p>	<p>Diversion sewer to control overflows from Outfalls 003 and 004</p> <ul style="list-style-type: none"> • Installation of an open-cut diversion sewer with an inside diameter of 6-ft which will replace a portion of the existing Commonwealth Interceptor • Construction of one diversion chamber • Relocation of Outfall 004
	<p>Tunnel Dewatering and Wet Weather Pumping Station</p>	<p>Installation of tunnel dewatering pumps and wet weather pumps</p> <ul style="list-style-type: none"> • Installation of a 20 mgd pumping station and 130 mgd pumping station in a 65-ft diameter shaft • Installation of a screening facility and gantry crane in a 35-ft diameter shaft • Superstructure to house gantry crane and odor control equipment • Installation of electrical and instrumentation equipment
	<p>WRRF Site Security and Access</p>	<p>Improvements to four existing gates and perimeter fencing</p> <ul style="list-style-type: none"> • Installation of one new rollup gate and security booth under garage overhang south of Limerick Street • Installation of a new walkway along the South Bridge crossing Hooffs Run • Replacement of three existing gates and installation of three security booths

February 2020 Association Meetings | Alexandria Civic

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3 Lynhaven Civic Assn. 7:00p Cora Kelly Rec Center 25 W. Reed Ave. Jim Beall	4	5 Cameron Station Civic Assn. 7:00p – Cameron Club - Vacant	6	7	8
9	10 North Ridge Citizens Assn. 7:30p – Beverly Hills United Methodist, 3512 Old Dominion Blvd - Bruce Johnson Potomac Yard Civic Assoc 7:00p - Community Room, The Station At Potomac Yard Apts, 650 Maskell St - Vacant	11	12 Del Ray Citizens Assn. 6:30p Del Ray United Methodist Church, 100 E. Windsor Ave. – Jim Beall Old Town Civic Assn. 7p-Social, 7:30p-Mtg. Lyceum 201 S. Washington St. Bill Dickinson	13 Seminary Hill Assn. 7:30p-Immanuel Church on the Hill, 3606 Seminary Rd. Bill Dickinson West Old Town Citizens Assoc. 7:30pm – Durant Arts Ctr., 1605 Cameron St. Vacant	14	15
16	17	18 Hume Springs Citizens Assoc. 7p Cora Kelly Rec Center 25 W. Reed Ave. – Jim Beall	19 Park Fairfax Unit Owners Assn. 7:00p-Assn. Office, 3360 Gunston Rd. Bruce Johnson	20	21	22
23	24 Lenox Park @ Sunnyside HOA 7:00p – Beverly Hills United Methodist, 3512 Old Dominion Blvd - Vacant	25	26 Alex. Federation of Civic Assn. 7:00p City Hall, Rm. 2000 - Bill Dickinson	27 Potomac Greens HOA 7:00p Potomac Greens Clubhouse - Patti Turner	28	29

March 2020 Association Meetings | Alexandria Civic

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Lynhaven Civic Assn. 7:00p Cora Kelly Rec Center 25 W. Reed Ave. Jim Beall	3	4	5	6	7
8	9 North Ridge Citizens Assn. 7:30p – Beverly Hills United Methodist, 3512 Old Dominion Blvd - Bruce Johnson Potomac Yard Civic Assoc 7:00p - Community Room, The Station At Potomac Yard Apts, 650 Maskell St - Vacant	10	11 Del Ray Citizens Assn. 6:30p Del Ray United Methodist Church, 100 E. Windsor Ave. – Jim Beall Old Town Civic Assn. 7p-Social, 7:30p-Mtg. Lyceum 201 S. Washington St. Bill Dickinson	12 Seminary Hill Assn. 7:30p-Immanuel Church on the Hill, 3606 Seminary Rd. Bill Dickinson West Old Town Citizens Assoc. 7:30pm – Durant Arts Ctr., 1605 Cameron St. Vacant	13	14
15	16	17 Hume Springs Citizens Assoc. 7p Cora Kelly Rec Center 25 W. Reed Ave. – Jim Beall	18 Park Fairfax Unit Owners Assn. 7:00p-Assn. Office, 3360 Gunston Rd. Bruce Johnson	19	20	21
22	23 Lenox Park @ Sunnyside HOA 7:00p – Beverly Hills United Methodist, 3512 Old Dominion Blvd – Vacant	24	25 Alex. Federation of Civic Assn. 7:00p City Hall, Rm. 2000 -Bill Dickinson	26 Potomac Greens HOA 7:00p Potomac Greens Clubhouse - Patti Turner	27	28
29	30					

April 2020 Association Meetings | Alexandria Civic

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6 Lynhaven Civic Assn. 7:00p Cora Kelly Rec Center 25 W. Reed Ave. Jim Beall	7	8 Del Ray Citizens Assn. 6:30p Del Ray United Methodist Church, 100 E. Windsor Ave. – Jim Beall Old Town Civic Assn. 7p-Social, 7:30p-Mtg. Lyceum 201 S. Washington St. Bill Dickinson	9 Seminary Hill Assn. 7:30p-Immanuel Church on the Hill, 3606 Seminary Rd. Bill Dickinson West Old Town Citizens Assoc. 7:30pm – Durant Arts Ctr., 1605 Cameron St. Vacant	10	11
12	13 North Ridge Citizens Assn. 7:30p – Beverly Hills United Methodist, 3512 Old Dominion Blvd - Bruce Johnson Potomac Yard Civic Assoc 7:00p - Community Room, The Station At Potomac Yard Apts, 650 Maskell St - Vacant	14	15 Park Fairfax Unit Owners Assn. 7:00p-Assn. Office, 3360 Gunston Rd. Bruce Johnson	16	17	18
19	20	21 Hume Springs Citizens Assoc. 7p Cora Kelly Rec Center 25 W. Reed Ave. – Jim Beall	22	23	24	25
26	27 Lenox Park @ Sunnyside HOA 7:00p – Beverly Hills United Methodist, 3512 Old Dominion Blvd - Vacant	28	29 Alex. Federation of Civic Assn. 7:00p City Hall, Rm. 2000 - Bill Dickinson BSVCA 7pm Patrick Henry Rec Ctr. – Bruce Johnson	30 Potomac Greens HOA 7:00p Potomac Greens Clubhouse - Patti Turner		

May 2020 Association Meetings | Alexandria Civic

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 Lynhaven Civic Assn. 7:00p Cora Kelly Rec Center 25 W. Reed Ave. Jim Beall	5	6 Cameron Station Civic Assn. 7:00p – Cameron Club - Vacant	7	8	9
10	11 North Ridge Citizens Assn. 7:30p – Beverly Hills United Methodist, 3512 Old Dominion Blvd - Bruce Johnson Potomac Yard Civic Assoc 7:00p - Community Room, The Station At Potomac Yard Apts, 650 Maskell St - Vacant	12	13 Del Ray Citizens Assn. 6:30p Del Ray United Methodist Church, 100 E. Windsor Ave. – Jim Beall Old Town Civic Assn. 7p-Social, 7:30p-Mtg. Lyceum 201 S. Washington St. Bill Dickinson	14 Seminary Hill Assn. 7:30p-Immanuel Church on the Hill, 3606 Seminary Rd. Bill Dickinson West Old Town Citizens Assoc. 7:30pm – Durant Arts Ctr., 1605 Cameron St. Vacant	15	16
17	18	19 Hume Springs Citizens Assoc. 7p Cora Kelly Rec Center 25 W. Reed Ave. – Jim Beall	20 Park Fairfax Unit Owners Assn. 7:00p-Assn. Office, 3360 Gunston Rd. Bruce Johnson	21	22	23
24 31	25 Lenox Park @ Sunnyside HOA 7:00p – Beverly Hills United Methodist, 3512 Old Dominion Blvd - Vacant	26	27 Alex. Federation of Civic Assn. 7:00p City Hall, Rm. 2000 - Bill Dickinson	28 Potomac Greens HOA 7:00p Potomac Greens Clubhouse - Patti Turner	29	30



Monthly Market Review

It has been a bountiful year for investors. Equities ascended to new highs, Treasury yields fell and boosted fixed income returns, while major central banks harmonized accommodative monetary policies. Moreover, while trade frictions remain a potential headwind, some progress was made on that front in the form of a "Phase One" trade agreement between the U.S. and China.

Economic Highlights

- Third quarter U.S. gross domestic product (GDP) growth was revised up to 2.1% from 1.9%. The revision highlighted continued reliance on the American consumer (as consumer spending accounted for nearly all the growth). Meanwhile, government spending and housing were also positive contributors. Conversely, business investment was a detractor.
- The U.S. economy added 266,000 jobs in November – far exceeding expectations – as the labor market resumed momentum after the General Motors (GM) strike. There were notable gains in healthcare, professional and technical services, and manufacturing, which reflected the return of workers from the GM strike. The unemployment rate fell to 3.5% but wage growth remained tepid, holding steady at 3.1% over the past 12 months.
- Manufacturing activity was mixed. In November, the Institute for Supply Management (ISM) manufacturing index fell to 48.1% from 48.3% in October. That was the fourth consecutive reading under 50%. New orders also deteriorated. However, the IHS Markit U.S. Manufacturing Purchasing Managers' Index™ rose to 52.6 from 51.3 in October. While both surveys tell slightly different stories, it is clear that U.S. and China trade tensions continued to weigh on confidence and business decisions.
- The housing market trended higher, boosted by strong employment, rising wages and historically low rates. Recent readings on existing home sales, new homes sales, housing starts, and building permits were all near current cycle highs.
- November prices remained stable, as the newest core personal consumption expenditure gauges affirmed muted inflation below the Federal Reserve's (Fed) 2% target.

Bond Markets

- The U.S. Treasury yield curve moved higher over the month, with one- to 10-year maturities up nine to 13 basis points (bps). A stable Fed, abundant liquidity, and reduced trade risks stabilized the U.S. rate outlook.
- The move higher in rates caused shorter-term Treasuries to outperform their longer-dated counterparts. For the month, the three-month Constant Maturity U.S. Treasury Index returned 0.12%, while the two-year returned -0.06%. Meanwhile, the five-year index generated a total return of -0.40%, and the 10-year index generated a total return of -0.76%.

- Markets remain supportive of credit and other non-government spread sectors, which continue to perform well. However, narrow yield spreads mean that current valuations are generally rich.

Municipal Bond Market

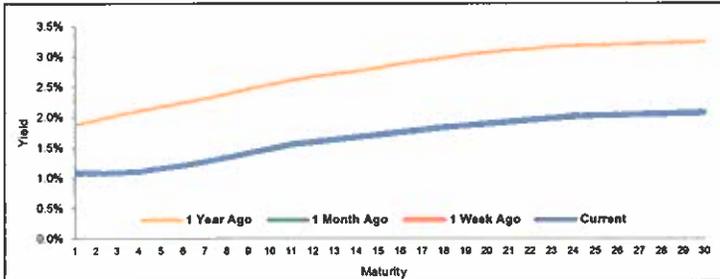
- Municipal new issuance increased in November by 59.1% to \$46.2 billion from \$29.1 billion the same month last year. YTD municipal new issuance is up 18.5% to \$379.3 billion for 2019 from \$320.1 billion during the same period last year, according to Municipal Market Monitor (TM3) data.
- November experienced positive bond flows throughout the month and ended with net inflows totaling \$9.39 billion, following October's net inflows of \$8.39 billion, according to Investment Company Institute (ICI) data.
- The Municipal Market Data (MMD) Index experienced an overall slight decrease in rates during November. On the front-end, the one-year rate fell 4 basis points (bps) to 1.07% and the three-year rate dropped 3 bps to 1.08%. The five-year rate remained unchanged at 1.15%. On the long-end, the 10-year rate dipped by 2 bps to 1.47% and the 30-year rate remained unchanged at 2.06%, according to TM3 data.
- The 10-year MMD Single-A General Obligation (GO) Index credit spread and the Double-A GO Index credit spread both remained unchanged at 30 bps and 14 bps, respectively, according to TM3 data.
- In November, Municipal-to-Treasury ratios experienced declining ratios across the yield curve. The two-year ratio decreased to 66.6% from 73.0% in October, and the five-year ratio fell to 70.6% from 75.7%. The intermediate-term ratio decreased to 72.7% from 79.4% and the 10-year ratio fell to 82.4% from 88.2%. The 30-year ratio decreased slightly to 93.2% from 94.9%, according to TM3 data.
- The Municipal curve steepened in November with the AAA MMD 2-year/10-year slope rising to 40 bps from 38 bps in October, and the AAA MMD 2-year/30-year slope increasing to 99 bps from October's 95 bps.

Spot Rates				
Term	Current 11/29/2019	1 Week Ago 11/22/2019	1 Month Ago 10/31/2019	1 Year Ago 11/29/2018
2-Year	1.07	1.09	1.11	1.85
3-Year	1.08	1.10	1.11	2.03
5-Year	1.15	1.17	1.15	2.17
7-Year	1.26	1.28	1.27	2.31
10-Year	1.47	1.50	1.49	2.54
30-Year	2.06	2.09	2.06	3.24

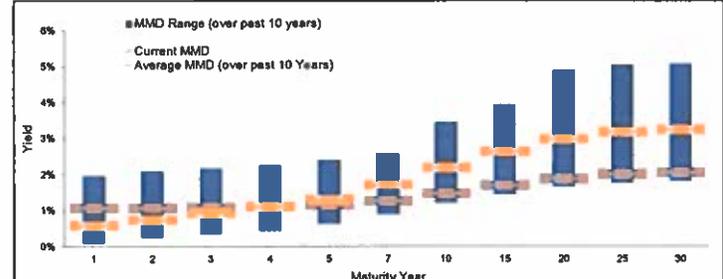
Change in Spot Rate (basis points)			
	1 Week Ago 11/22/2019	1 Month Ago 10/31/2019	1 Year Ago 11/29/2018
2-Year	-2	-4	-88
3-Year	-2	-3	-95
5-Year	-2	0	-102
7-Year	-2	-1	-105
10-Year	-3	-2	-107
30-Year	-3	0	-118

Market Rates			
Term	MMD AAA GO	U.S. Treasury	Muni Swap Rate
2-Year	1.07%	1.61%	1.05
3-Year	1.08%	1.61%	1.05
5-Year	1.15%	1.63%	1.09
7-Year	1.26%	1.73%	1.16
10-Year	1.47%	1.78%	1.28
30-Year	2.06%	2.21%	1.60

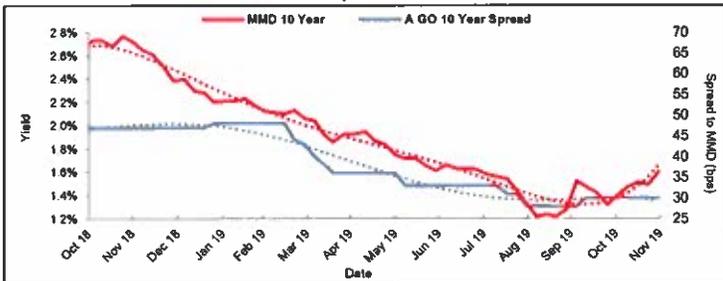
MMD AAA GO Curve



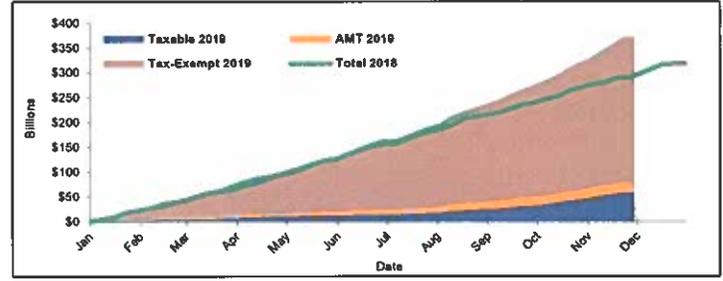
MMD Rates Over Time



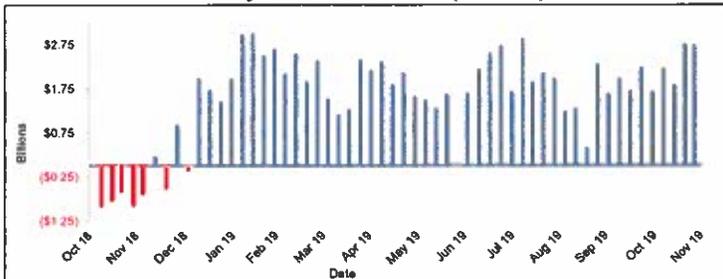
Rate and Spread Movement



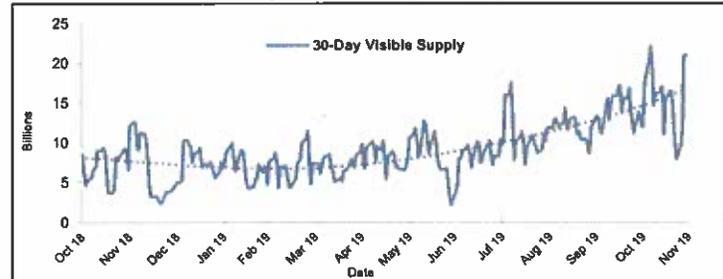
2019 Cumulative Issuance



Weekly Mutual Fund Inflows (Outflows)



30-Day Visible Municipal Supply



Economic Calendar

Date	Time	Statistic	Date	Time	Statistic	Date	Time	Statistic
12/10/2019	06:00 AM	NFIB Small Business Optimism	12/16/2019	04:00 PM	Total Net TIC Flows	12/23/2019	10:00 AM	New Home Sales
12/10/2019	08:30 AM	Nonfarm Productivity	12/17/2019	08:30 AM	Housing Starts	12/24/2019	08:30 AM	Cap Goods Ship Nondef Ex Air
12/10/2019	08:30 AM	Unit Labor Costs	12/17/2019	08:30 AM	Building Permits	12/24/2019	10:00 AM	Richmond Fed Manufact. Index
12/11/2019	07:00 AM	MBA Mortgage Applications	12/17/2019	08:30 AM	Housing Starts MoM	12/26/2019	08:30 AM	Initial Jobless Claims
12/11/2019	08:30 AM	Real Avg Weekly Earnings YoY	12/17/2019	08:30 AM	Building Permits MoM	12/26/2019	08:30 AM	Continuing Claims
12/11/2019	08:30 AM	CPI MoM	12/17/2019	10:00 AM	JOLTS Job Openings	12/28/2019	09:45 AM	Bloomberg Consumer Comfort
12/11/2019	08:30 AM	CPI Ex Food and Energy MoM	12/18/2019	07:00 AM	MBA Mortgage Applications	12/30/2019	08:30 AM	Advance Goods Trade Balance
12/12/2019	08:30 AM	Initial Jobless Claims	12/19/2019	08:30 AM	Current Account Balance	12/30/2019	09:45 AM	MNI Chicago PMI
12/12/2019	08:30 AM	Continuing Claims	12/19/2019	08:30 AM	Philadelphia Fed Business Outlook	12/30/2019	10:00 AM	Pending Home Sales MoM
12/12/2019	09:45 AM	Bloomberg Consumer Comfort	12/19/2019	08:30 AM	Initial Jobless Claims	12/30/2019	10:00 AM	Pending Home Sales NSA YoY
12/12/2019	12:00 AM	Household Change in Net Worth	12/20/2019	10:00 AM	Personal Income	12/30/2019	10:30 AM	Dallas Fed Manf. Activity
12/13/2019	08:30 AM	Import Price Index MoM	12/20/2019	10:00 AM	Personal Spending	12/31/2019	09:00 AM	S&P CoreLogic CS US HPI YoY NSA
12/13/2019	09:45 AM	Bloomberg Dec. United States Economic Survey	12/20/2019	10:00 AM	Real Personal Spending	12/31/2019	09:00 AM	S&P CoreLogic CS US HPI NSA Index
12/13/2019	10:00 AM	Business Inventories	12/20/2019	11:00 AM	Kansas City Fed Manf. Activity	12/31/2019	10:00 AM	Conf. Board Consumer Confidence
12/16/2019	08:30 AM	Empire Manufacturing	12/23/2019	08:30 AM	Chicago Fed Nat Activity Index	12/31/2019	10:00 AM	Conf. Board Business Situation

Sources: Bloomberg, Thomson Reuters and ICI. Unless otherwise noted, all data is presented as of November 30, 2019.

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