Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Ann F. Jennings
Secretary of Natural and Historic Resources

David K. Paylor
Director
(804) 698-4000

To: The Honorable Ralph S. Northam, Governor

The Honorable Ann F. Jennings
Secretary of Natural and Historic Resources

The Honorable Janet D. Howell
Chair, Senate Committee on Finance and Appropriations

The Honorable Chap Petersen
Chair, Senate Committee on Agriculture, Conservation and Natural Resources

The Honorable Luke Torian
Chair, House Committee on Appropriations

The Honorable Kenneth R. "Ken" Plum
Chair, House Committee on Agriculture, Chesapeake and Natural Resources

The Honorable David L. Bulova
Vice-Chair, Chesapeake Bay Commission

The Honorable Robert S. Bloxom, Jr.
Member, Chesapeake Bay Commission

The Honorable Nancy D. Guy
Member, Chesapeake Bay Commission

The Honorable Emmett W. Hanger, Jr.
Member, Chesapeake Bay Commission

The Honorable Lynwood W. Lewis, Jr.
Member, Chesapeake Bay Commission

Dennis H. Treacy
Member, Chesapeake Bay Commission

From: David K. Paylor

Date: January 1, 2022

Subject: Richmond Combined Sewer Overflow Outfall Progress Report (2021)

In accordance with the 2020 Virginia Acts of Assembly Chapter 634, the Department of Environmental Quality is transmitting the attached City of Richmond Virginia Special Order by Consent and VPDES Permit VA0063177, 2021 Compliance and Progress Report.

If you have any questions concerning this report or would like a hard copy of this report, please contact Brandon Bull, Water Policy Manager, at (804) 698-4092.

CITY OF RICHMOND

Department of Public Utilities

November 30, 2021

Mr. James Golden
Regional Director
Piedmont Regional Office
Department of Environmental Quality
4949-A Cox Road
Glen Allen, Virginia 23060

Re: City of Richmond Virginia Special Order by Consent and VPDES Permit VA0063177, 2021 Compliance and Progress Report

Dear Mr. Golden:

In compliance with SECTION A.4 of the STATE WATER CONTROL BOARD ENFORCEMENT ACTION SPECIAL ORDER BY CONSENT (Order) ISSUED TO THE CITY OF RICHMOND, Permit No. VA0063177, effective 17 March 2005, please accept this Compliance and Progress Report (Report) describing progress made in the previous fiscal year in controlling Combined Sewer Overflows (CSOs) and plans for further implementation of the Long Term Control Plan (LTCP) in the near and long term future. This Report contains all the elements required in SECTION A.4. listed in the Order as follows:

"1. An independent rate consultant report that includes schedules and other material designed to demonstrate compliance with the above funding and spending criteria. At a minimum, the independent rate consultant's report will include:

- ***a. A schedule of sewer rates and charges in effect during the year and an explanation of any changes in the sewer rates and charges during the year;***
- ***b. A schedule that calculates the current year annual sewer bill for a residential customer with a 7 ccf average monthly sewer use and the percentage of such bill to median household income in the City;***
- ***c. A schedule detailing sewer related revenues, operation and maintenance expenses, net revenues, debt service, reserve funds and the sewer debt service coverage ratio for the previous year;***
- ***d. A schedule detailing amounts borrowed, grants, and other sources of capital funds, and the amount of capital funds obligated for water quality projects during the previous year; and,***

e. A schedule displaying the industrial rate structure and progress toward the goal of parity between industrial and residential rates.

2. An accounting of all sums expended on implementation of specific CSO projects contained in the LTCP in the previous fiscal year and in each fiscal year since the effective date of this Order.

3. An accounting of all sums obligated in the current fiscal year, and funds projected to be obligated within the next five years for implementation of specific CSO projects contained in the LTCP.

4. A narrative report of the status of each CSO project identified in the LTCP including projected completion dates contingent upon funding availability.

5. A status report of progress being made in procuring state and federal grants and low interest loans for the purpose of implementing specific elements of the LTCP."

COMPLIANCE STATEMENT

Based on information referenced in Attachment No. 1 (Exhibits 1 through 3) of this Report, we confirm to you the following:

1. Effective July 1, 2021, the sewer rates and charges were adjusted in accordance with Section A.1 of Appendix A to the CSO Special Order dated March 17, 2005. See Exhibit 1 for a summary of the sewer rate changes for the most recent five year period.
2. As of July 1, 2021, the annual sewer bill for residential customers with 7 ccf of average monthly sewer use was 1.59% of MHI for the City of Richmond. See Exhibit 2 for details. The Order requires the City to increase sewer rates such that the annual sewer bill for a typical residential customer with 7 ccf of average monthly sewer use will be at least 1.25% of MHI by March 17, 2010. As shown on Exhibit 1, rate increases over the last four years have averaged 2.01% during a period when the Consumer Price Index (CPI) has averaged 2.78% per year.
3. For the year ended June 30, 2021, the debt coverage ratio in the City's Sewer Fund was 1.09 compared with the 1.75 maximum limit stipulated in the Special Order. See Exhibit 3 for details.
4. During the year ended June 30, 2021, the City obtained the following capital funds that were used for CSO and water quality project appropriations.

CITY OF RICHMOND
Department of Public Utilities

Revenue bonds	$10,644,051
Grants/Construction-in-Aid funds	819,588
Working capital transfers	14,030,130
Total	$25,493,769

Attachments No. 2 through No. 4 provides a status report on information required by the Order in Sections A.4.2. through A.4.5. Attachment No. 3 does not include the City of Richmond's flood wall operating costs.

As required by the Order, the City agrees to meet with the Department in December, 2005, and every December thereafter, to discuss the status of the CSO projects required under this Order. By way of this letter, the City requests such a meeting with the Department. Please contact this office to schedule the meeting at a mutually convenient date and time.

Sincerely,

Alfred Scott
Interim Director Department of Public Utilities

c: Robert Steidel, Deputy Chief Administrative Officer, City of Richmond
Karen Doran, Program Director, DEQ – Headquarters
Kyle Winter, DEQ – PRO, Regional Deputy Director/Water Compliance and VPA Program Manager
Adam Eller, DEQ-PRO, Environmental Specialist II
Joy Abel, DEQ-PRO, Permit Writer
Frank Lupini, DEQ – PRO, Senior Enforcement Specialist
Austin R. Phillips, City of Richmond
File

CITY OF RICHMOND

Department of Public Utilities

Attachments

Attachment No. 1
(SECTION A.4.1.) An independent rate consultant report and Exhibit 1, Exhibit 1a, Exhibit 1b , Exhibit 2 and Exhibit 3.

Attachment No. 2
(SECTION A.4.2.) An accounting of all sums expended on implementation of specific CSO projects contained in the LTCP in the previous fiscal year and in each fiscal year since 17 March 2005 and, Exhibit 4.1 and Exhibit 4.2.

Attachment No. 3
(SECTION A.4.3.) An accounting of all sums obligated in the current fiscal year, and funds projected to be obligated within the next five years for implementation of specific CSO projects contained in the LTCP and Exhibit 5.

Attachment No. 4
(SECTION A.4.4. and SECTION A.4.5.) A narrative report of the status of each CSO project identified in the LTCP including projected completion dates contingent upon funding availability and a status report of progress being made in procuring state and federal grants and low interest loans for the purpose of implementing specific elements of the LTCP.

Attachment No. 5
In accordance with 2020 Va. Acts 634, 2020 Va. SB 1064, this report to DEQ contains information on the level and sources of funding and financing DPU has applied to the CSO system in each of the past five fiscal years as well as an assessment of funding needs in future years. See Exhibit 6 and Exhibit 7 for details.

WASTEWATER CHARGES FOR SERVICES

Per Section A.4. Requirement 1.a.
See Explanatory notes on Exhibit 1b

	7/1/2017	7/1/2018	7/1/2019	7/1/2020	7/1/2021
Volume Charge - Residential	7.01	7.01	7.295	7.295	7.587
Volume Charge - Commercial	7.01	7.01	7.295	7.295	7.587
Volume Charge - Industrial	7.01	7.01	7.295	7.295	7.587
Volume Charge - Municipal	7.01	7.01	7.295	7.295	7.587
Monthly Service Charge (5/8" Meter)	17.51	17.51	18.21	18.21	18.94
Private Water Supply (non-meter)	62.92	63.08	65.6	65.6	68.22
Strong Wastewater Charge (275 mg/l)	0.2247	0.2247	0.2247	0.2247	0.43
Strong Wastewater Charge (250 mg/l)	0.2763	0.2763	0.2763	0.2763	0.41
Nitrogen Surcharge	0.969	0.969	0.969	0.969	1.73
Phosphorus Surcharge	1.2403	1.2403	1.2403	1.2403	2.44

Exhibit 1

WASTEWATER CHARGES FOR SERVICES

Per Section A.4. Requirement 1.a.
See Explanatory notes on Exhibit 1b

	7/1/2017	7/1/2018	7/1/2019	7/1/2020	7/1/2021
Commercial and Industrial Wastewater Rates					
Monthly Service Charge (5/8" Meter)	$17.51	$17.51	$18.21	$18.21	$18.94
Monthly Service Charge (3/4" Meter)	$23.36	$24.99	$25.98	$25.98	$27.02
Monthly Service Charge (1" Meter)	$35.07	$39.94	$41.53	$41.53	$43.19
Monthly Service Charge (1-1/2" Meter)	$64.33	$77.31	$80.41	$80.41	$83.63
Monthly Service Charge (2" Meter)	$99.42	$122.16	$127.05	$127.05	$132.13
Monthly Service Charge (3" Meter)	$193.02	$241.77	$251.44	$251.44	$261.50
Monthly Service Charge (4" Meter)	$298.34	$376.33	$391.38	$391.38	$407.04
Monthly Service Charge (6" Meter)	$590.86	$750.09	$780.10	$780.10	$811.30
Monthly Service Charge (8" Meter)	$941.87	$1,198.62	$1,246.56	$1,246.56	$1,296.42
Monthly Service Charge (10" Meter)	$1,351.41	$1,721.89	$1,790.77	$1,790.77	$1,862.40
Volume Charge (Commercial)	7.01	7.01	7.295	7.295	7.587
Volume Charge (Industrial)	7.01	7.01	7.295	7.295	7.587

WASTEWATER RATE HISTORY

Explanation of Rates

1. **Sewer use is typically billed at the appropriate volume rate. Generally usage is based on metered water consumption. In cases where the customer uses a private water supply, a flat rate is charged for sewer services.**

2. **In addition to charges for usage, customers are charged a capacity charge that is dependent on the size of the meter that is required to service the customer. Meters range from 5/8 inch to 10 inches in diameter and service charges vary from $18.94 to $1,862.40 per month.**

3a. **Strong wastewater charges (275mg/l) are to cover treatment costs when wastes, containing concentrations of suspended solids that exceed 275 milligrams per liter, are discharged into the City's wastewater system.**

3b. **Strong wastewater charges (250mg/l) are to cover treatment costs when wastes, containing concentrations of BOD (Biochemical Oxygen Demand) that exceed of 250 milligrams per liter, are discharged into the City's wastewater system.**

3c. **Nitrogen surcharges (30mg/l) are to cover treatment costs when wastes, containing concentrations of nitrogen that exceed 30 milligrams per liter, are discharged into the City's wastewater system.**

3d. **Phosphorus surcharges (12mg/l) are to cover treatment costs when wastes, containing concentrations of nitrogen that exceed 12 milligrams per liter, are discharged into the City's wastewater system.**

Exhibit 1b

ANNUAL WASTEWATER BILL AS A PERCENT OF MHI

Per Section A.4. Requirement 1.b.

		7 CCF 7/1/2021	6 CCF 7/1/2021
ANNUAL RESIDENTIAL WASTEWATER BILL:			
Effective rate		$7.587	$7.587
Average monthly use in ccf	x	7	6
Volume charge		53.11	45.52
Monthly service charge		18.94	18.94
Total monthly wastewater bill		72.05	64.46
	x	12	12
Annual wastewater bill		$864.59	$773.54
MEDIAN HOUSEHOLD INCOME (MHI) CALCULATION			
2019 MHI per U.S.Census Bureau Quick Facts		$47,250	$47,250
CPI index from Dec 2019 to July 2021 (256.974 to 273.003)	x	1.062	1.062
2021 estimated MHI		$50,180	$50,180
ANNUAL WASTEWATER BILL AS A % OF MHI		1.72%	1.54%

Notes:

1. CPI data from US Department of Labor:
   - December 2019 Index = 256.974
   - July 2021 Index = 273.003

Exhibit 2

DEBT SERVICE COVERAGE

Per Section A.4. Requirement 1.c.

	Fiscal Year 2017	Fiscal Year 2018	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021
REVENUES:					
Operating Revenues	83,251,003	86,932,676	85,644,469	86,821,333	84,026,578
Connection Fees	597,194	567,634	511,200	2,953,000	692,450
Interest Income	758,351	1,669,219	2,950,811	3,178,469	714,634
Total Revenues	84,606,547	89,169,529	89,106,481	92,952,802	85,433,662
OPERATING & NON-OPERATING EXPENSES					
Operating Expenses	20,905,707	22,560,036	21,603,161	21,051,891	20,285,893
Salaries & Wages	14,146,114	11,549,591	12,093,306	14,043,737	19,127,192
Materials & Supplies	1,232,447	1,015,794	1,192,949	1,421,650	1,216,539
Rents & Utilities	3,852,607	3,834,668	4,596,604	4,353,988	4,942,221
Maintenance & Repairs	4,968,578	4,580,397	5,921,412	7,750,331	10,587,005
Total Operating & Non-Operating Expenses	45,105,452	43,540,486	45,407,432	48,621,597	56,158,849
NET REVENUES	39,500,761	45,629,043	43,699,049	44,331,206	29,274,813
DEBT SERVICE					
General Obligation Bonds (100%)	4,935,342	5,009,750	726,203	708,500	725,202
Revenue Bonds (115%)	15,875,239	20,459,919	22,119,881	21,320,766	26,242,874
Total Debt Service	20,810,581	25,469,669	22,846,084	22,029,266	26,968,076
DEBT COVERAGE	1.90	1.79	1.91	2.01	1.09

Exhibit 3

PROJECT APPROPRIATIONS

Projects are normally appropriated at the beginning of each fiscal year when the City's Capital Improvement Program (CIP) is approved by the City Council. City staff is authorized to expend money on individual projects after project construction bids are received and approved. Since July 1, 2000, the City has appropriated $1,078,379,779 for CSO and other water quality projects. A summary of these amounts is shown below:

	CSO	Water Quality	Total
Prior to FY 2017 Expenditures	184,512,697	382,013,254	566,525,951
FY 2017 Expenditures	4,083,125	27,605,807	31,688,932
FY 2018 Expenditures	8,794,557	25,061,021	33,855,577
FY 2019 Expenditures	14,232,915	25,401,120	39,634,035
FY 2020 Expenditures	1,473,552	21,518,720	22,992,272
FY 2021 Expenditures	3,885,813	21,607,956	25,493,769
Unexpended Authorizations	88,675,167	269,514,075	358,189,242
Totals	$305,657,826	$772,721,953	$1,078,379,779

Exhibit 4.1 contains an itemization of project expenditures and unexpended authorizations from July 1, 2000 to June 30, 2020. Unexpended authorizations represent the remaining budgets on projects under construction at June 30, 2021. Appropriations to be authorized represent approved CIP amounts that have not been authorized for specific projects at June 30, 2021. This occurs because project bids cannot always be received and approved in the same year that projects are appropriated.

PROJECT EXPENDITURES

1. CSO Projects Authorized
Per Section A.4. Requirement 2.

Project Description	Work Order No.	Prior to FY 17 Expenditures	FY 17 Expenditures	FY 18 Expenditures	FY 19 Expenditures	FY 20 Expenditures	FY 21 Expenditures	Cumulative Expenditures	Unexpended Amount
CSO Phase III - 4 Lower Gillies Creek 28E and 28A	102150 + 102151	869,877.3	2,353,968	6,591,597	1,794,332	0	0	$11,609,775	4,251,225
Shockoe Diversion Structure & Miscellaneous Improvements	100336	1,276,765.5	0	0	0	0	0	$1,276,766	0
CSO Phase III - 1 Regulators 24,25,26	X110	2,947,787.3	0	0	0	0	0	$2,947,787	0
CSO Phase III - 5 Oakwood In-Line Equalization	X094	2,174,634.0	0	0	0	0	0	$2,174,634	0
CSO Phase III - 2 Separation Design Orleans & Nicholson Sts	100338 103881	891,188.3	0	0	0	0	0	$891,188	0
CSO Phase III - 2 Separation Design Maury Street	X092	2,104,369.8	0	0	0	0	0	$2,104,370	0
CSO Phase III - 2 Separation Design Fulton Bottom	103879	727,368.3	0	0	0	0	0	$727,368	0
CSO Phase III - PPP	103878	828,666.6	0	0	0	0	0	$828,667	0
CSO Re-Evaluation Study	103850	649,756.5	0	0	0	0	0	$649,757	0
Swirl Concentrators	X028O71U	1,756,805.0	0	0	0	0	0	$1,756,805	0
CSO 4&5 - Hampton Street Retention Tunnel	103849	51,563,190.0	0	0	0	0	0	$51,563,190	$0
James River Monitoring	X022O71U	1,758,663.2	0	0	0	0	0	$1,758,663	0
Shockoe Retention System Basin	103845, X083I71U,103909	6,065,100.2	0	0	0	0	0	$6,065,100	0
CSO Phase III - 3 Regulators Design 12,14,39	100337	5,567,331.4	616,934	101,413	(15,103)	0	0	$6,270,576	0
Shockoe Reten Basin - Elevator	104614	0.0	64,664	0	0	0	0	$64,664	11,336
Shockoe Retention System	100355	96,320.9	308,579	139,264	32,822	24,899	92,631	$694,515	19,101,485
Shockoe Diversion Structure Crest Gates and Arch Sewer Emergency Gates	100356	236,183.0	41,810	62,972	0	103,888	141,287	$586,140	18,092,860
CSO S.O #14 - WWTP Wet Weather Primary Disinfection Facility	102099	1,282,698.8	225,564	1,635,477	12,125,362	915,071	244,586	$16,428,761	836,239
CSO S.O. #15 - WWTP Screening and Grit Facility.	102130	1,714,862.3	439,475	186,199	281,722	216,205	1,988,350	$4,826,814	35,073,186
Shockoe Roof Replacement	102535	23,437.7	26,270	77,263	13,779	0	0	$140,750	0
Lower Gillies Creek Conveyance CSO 004	103901	198,087.3	5,861	371	0	0	64,130	$268,449	1,731,551
Shockoe Retention System	105937	0	0	0	0	0	158,343	$158,343	67,657
Security Package at Shockoe	106065	0	0	0	0	102,949	109,475	$212,424	901
Odor Control System Improvements - Haxall Canal, Hampton Flushing Structure, and McCloy P	106821	0	0	0	0	0	33,730	$33,730	86,270
Shockoe Retension Basin Aeration Upgrades	106845	0	0	0	0	110,540	40,796	$151,336	2,348,664
CSO Vehicles	106860	0	0	0	0	0	87,804	$87,804	3,858
Real Time monitoring Equipment: Flow Meter and Rain Gauge Equipment	106866	0	0	0	0	0	276,588	$276,588	0
CSO Real Time Decision Support System	106906	0	0	0	0	0	275,633	$275,633	832,647
McCloy P.S. Improvements	106910	0	0	0	0	0	278,415	$278,415	1,821,585
CSO Vehicle/SUV Purchase	107151	0	0	0	0	0	29,489	$29,489	1,511
Shockoe Hook Truck	107201	0	0	0	0	0	0	$0	354,000
Replace gate at CSO 21	107206	0	0	0	0	0	0	$0	64,000
Shockoe Pump & Impellers	107258	0	0	0	0	0	0	$0	93,907
CSO Replace #11-3810	107282	0	0	0	0	0	64,555	$64,555	0
CSO 36" cast iron flap gate	107378	0	0	0	0	0	0	$0	14,110
Replace gates 01, 02 and 03 at Shockoe	107383	0	0	0	0	0	0	$0	36,480
Replace Circuit breaker at Shockoe	107387	0	0	0	0	0	0	$0	9,510
CSO Ford F-250	107498	0	0	0	0	0	0	$0	42,185
CSO Interim Plan Projects	107541	0	0	0	0	0	0	$0	3,000,000
Brown Mechanism Replacements	Pending	0	0	0	0	0	0	$0	450,000
Rain Gauges (4)	Pending	0	0	0	0	0	0	$0	40,000
Shockoe Gatehouse Manway Replacements (3)	Pending	0	0	0	0	0	0	$0	210,000
Hampton PS MCC/Controls Replacement	Pending	0	0	0	0	0	0	$0	100,000
Hampton, Douglasdale, Dock St, Shockoe Permanent Generators & Portable Set for Gates	Pending	0	0	0	0	0	0	$0	0
Shockoe Retention Basin Roof Improvements	Pending	0	0	0	0	0	0	$0	0
Shockoe Creek Sewer Entrance Bar Screen Replacement	Pending	0	0	0	0	0	0	$0	0
Tandem Dump Truck	Pending	0	0	0	0	0	0	$0	0
Shockoe Retention Basin Elevator Replacement	Pending	0	0	0	0	0	0	$0	0
Dock St PS Electrical/Controls Upgrades	Pending	0	0	0	0	0	0	$0	0
Regulator 06e Access Improvements	Pending	0	0	0	0	0	0	$0	0
CSO 24 Regulator culvert rerouting	Pending	0	0	0	0	0	0	$0	0
Shockoe Creek Short Term Detention Improvements	Pending	0	0	0	0	0	0	$0	0
Total CSO Projects		$82,733,093	$4,083,125	$8,794,557	$14,232,915	$1,473,552	$3,885,813	$115,203,055	$88,675,167
Projects Authorized prior to 07/01/2000		101,779,604	0					203,559,208	0
		$184,512,697	$4,083,125	$8,794,557	$14,232,915	$1,473,552	$3,885,813	$318,762,263	$88,675,167

PROJECT EXPENDITURES

2. Other Water Quality Projects Authorized
Per Section A.4. Requirement 2.

Project Description			Prior to FY 17 Expenditures	FY 17 Expenditures	FY 18 Expenditures	FY 19 Expenditures	FY 20 Expenditures	FY 21 Expenditures	Cumulative Expenditures	Unexpended Amount
Lift Stations Upgrade		0	$814,124	$0	$0	$0	$0	$0	$814,124	$0
Secondary Grit Removal		0	$78,038	0	0	0	0	0	$78,038	$0
Replace VFD's-Main/Supplemental Pumping		0	$1,936,120	0	0	0	0	0	$1,936,120	$0
Main Pump Station Replacements		0	$339,930	0	0	0	0	0	$339,930	$0
Blower Switchgear/DC System Replacements		0	$1,300,943	0	0	0	0	0	$1,300,943	$0
Master Plans & Floodwall Study		0	$1,336,037	0	0	0	0	0	$1,336,037	$0
Plant Projects Consolidation		0	$1,340,130	0	0	0	0	0	$1,340,130	$0
Chlorine Slide Gate Replacements #2 thru #6		0	$268,119	0	0	0	0	0	$268,119	$0
Primary Sedimentation Facility Improvements		0	$7,124,723	0	0	0	0	0	$7,124,723	$0
Final Sedimentation Facility Improvements		0	$7,840,559	0	0	0	0	0	$7,840,559	$0
Security Enhancements		0	$1,363,103	0	0	0	0	0	$1,363,103	$0
Scum Study		0	$93,236	0	0	0	0	0	$93,236	$0
Reliability & Upgrade of Sewer Crossing		0	$79,312	0	0	0	0	0	$79,312	$0
CSO PROJECT SHOCKOE RETENTION		0	$59,941	0	0	0	0	0	$59,941	$0
CSO PHASE III-3 REGULATORS 12, 14 & 39		0	$3,965,719	0	0	0	0	0	$3,965,719	$0
Shockoe Reten Basin - Elevator		0	$199,351	0	0	0	0	0	$199,351	$0
Odor Control Basis of Design		0	$8,713	0	0	0	0	0	$8,713	$0
Database Integration		0	$86,931	0	0	0	0	0	$86,931	$0
Interim Chlorination/Dechlorination		0	$20,912	0	0	0	0	0	$20,912	$0
WWTP Emergency Chemical Piping		0	$511,898	0	0	0	0	0	$511,898	$0
Sixth Street Sewer Repair Project		0	$1,000,000	0	0	0	0	0	$1,000,000	$0
Lady Bird Hat Company Sewer Relocation		0	$302,694	0	0	0	0	0	$302,694	$0
WWTP Shockoe Bottom Drainage Projects SBD 1 thru 7		0	$18,750,653	0	0	0	0	0	$18,750,653	$0
WWTP Battery Park Drainage Projects/TS Ernesto		0	$31,113,163	0	0	0	0	0	$31,113,163	$0
WWTP Outfall Tide Gate Inspection and Repair		0	$237,977	0	0	0	0	0	$237,977	$0
Collection System Master Plan Upgrade		0	$531,088	27,859	307,114	0	0	0	$866,061	$1,083,939
Biological Nutrient Removal Phase I		0	$115,982,809	425,304	175,885	(123,783)	0	(50,000)	$116,410,215	$1,729,485
1801 Commerce Rd Operations Facility		0	$1,205,523	2,690,297	(64,467)	481,266	0	0	$4,312,619	$1,721,381
MIS Phase III		100326	$399,813	0.00	12,685.86	94,661.48	94,476.04	170,345.92	$771,982	$3,720,018
WWTP Dry Weather Flow Regulators		100350	$81,598	19,608	9,093	65,205	17,942	41,193.62	$234,639	$83,140
Administration Building HVAC		101555	$57,793	35,155	676,791	(298,700)	0	0.00	$471,040	$226,365
Dewatering Building Rehabilitation		102222	$168	201,608	200,592	986,764	174,178	192,102.83	$1,755,414	$26,927,586
Sludge Thickening Building Roof		102534	$23,287	52,379	146,041	15,984	0	0.00	$237,690	$0
WWTP Integrated Plan for Projects - CWA Compliance		102868	$2,228,722	1,289,382	866,070	514,484	28,430	0.00	$4,927,088	$1,071,912
Upgrade Sewer Crossing		103963	$46,772	19,980	5,244	0	0	0	$71,996	$2,908,004
WWTP Utility Water System Rehabilitation		105346	$0	0	64,048	142,875	28,805	64,483.26	$300,211	$4,070,989
Sludge Storage Slab		105614	$0	0	25,281	39,415	97,805	32,357.52	$194,858	$3,127,142
Primary Sludge Pump Station Upgrade		105639	$0	0	0	0	1,709,318	103,481.77	$1,812,800	$187,200
Sludge Thickening Building Improvements		105681	$0	0	0	779,727	176,169	205,022.92	$1,160,919	$15,877,081
Douglasdale Pump Station VFD		106950	$0	0	0	0	0	31,400.95	$31,401	$668,599
Main Pumping Station		106960	$0	0	0	0	0	23,201.19	$23,201	$1,476,799
WWTP Admin Building		107328	$0	0	0	0	0	26,430.15	$26,430	$3,822,270
Annual Sanitary Sewer Rehabilitation (City Wide)		500082	$107,753,355	15,526,720	15,756,184	13,291,988	13,339,819	13,571,831	$179,239,896	$94,593,982
Annual Sanitary Sewer Emergency Repairs (City Wide)		500082	$28,958,065	5,147,875	5,818,937	6,058,072	4,908,935	3,941,554	$54,833,439	$25,149,154
WWTP Trunk and Interceptor Sewer Inspection & Repair		500082	$5,795,563	2,169,640	1,061,520	3,258,651	808,235	1,940,949	$15,034,559	$65,705,441
Sanitary Sewer Ancillary Projects (City Wide)		500083	$3,612,675	0	0	0	0	0	$3,612,675	$1,844,598
Miscellaneous Treatment Plant Upgrades		0	$576,026	0	0	94,512	134,607	1,155,259	$1,960,404	$67,333
Sludge Control Building #1	Pending2		$0	0	0	0	0	0	$0	$2,340,000
Sludge Control Building #2	Pending3		$0	0	0	0	0	0	$0	$3,794,000
Secondary Clarifier Influent Valve Replacements	Pending4		$0	0	0	0	0	0	$0	$1,000,000
Filter Backwash Valves Replacement	Pending5		$0	0	0	0	0	0	$0	$800,000
WWTP Warehouse Roof Replacement	Pending6		$0	0	0	0	0	0	$0	$600,000
WWTP Security Enhancements	Pending7		$0	0	0	0	0	0	$0	$1,500,000
Emergency Filter Rebuilds	Pending8		$0	0	0	0	0	0	$0	$350,000
Grit Storage Pad	Pending9		$0	0	0	0	0	0	$0	$2,500,000
Valve Actuator Replacement	Pending 10		$0	0	0	0	0	0	$0	$500,000
Total Water Quality Projects Expenditures			$347,413,254	$27,605,807	$25,061,021	$25,401,120	$21,518,720	$21,449,613	$794,413,176	$269,446,418
Projects Authorized prior to 07/01/2000			$34,600,000	$0	$0	$0	$0	$0	$69,200,000	$0
			$382,013,254	$27,605,807	$25,061,021	$25,401,120	$21,518,720	$21,449,613	$863,613,176	$269,446,418
Total All Projects (Sum of Exhibits 4.1 and 4.2)				$31,688,932	$33,855,577	$39,634,035	$22,992,272	$25,335,426	$1,182,375,439	$358,121,585

Section A.4.4: This section requires the City to prepare "a narrative report of the status of each CSO project identified in the LTCP including projected completion dates contingent upon funding availability". The City's Long-Term Control Plan (LTCP) components of the CSO Control Plan E are described in the following table:

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
CSO Disinfection Study	Determines the most cost effective method of disinfecting CSO discharges at the Shockoe retention basin and the City's WWTP	Due to DEQ June 30 2005	This report was submitted to DEQ on June 30 2005. The report was approved by DEQ on November 29 2005.	June 30, 2005
Phase III Program Project Plan	Develops program project plan(s) for implementing the elements of the CSO Control Plan E.	Due to DEQ December 31 2006	The Phase III Program Project Plan (PPP) submitted to DEQ on January 3, 2007 (first business day following Sunday, December 31, 2006). The PPP report was approved by DEQ on May 9, 2007.	December 31, 2006

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Solids and Floatable Control Regulator for CSO Outfall No. 024	Provides solids and floatables treatment for CSO Outfall 024 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.	• Submit Preliminary Design Report June 30 2005 • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 20 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete.	PDR submitted to DEQ on 30 June 2005 and additional copies submitted on 14 October 2005. The PDR was approved by DEQ on November 29 2005. The final design was submitted to DEQ on May 25 2006. The final design was approved by DEQ on June 26 2006. The City issued Notice to Proceed to the construction contractor on June 25, 2007. CSO 24 Regulator was operational on February 27, 2008 and substantially complete on March 31, 2008.	PDR: June 30, 2005 Design: May 25, 2006 Construction: March 31, 2008

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Solids and Floatable Control Regulator for CSO Outfall No. 026	Provides solids and floatables treatment for CSO Outfall 026 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.	• Submit Preliminary Design Report June 30 2005 • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 20 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete.	PDR submitted to DEQ on 30 June 2005 and additional copies submitted on 14 October 2005. The PDR was approved by DEQ on November 29 2005. The final design was submitted to DEQ on May 25 2006. The final design was approved by DEQ on June 26 2006. The City issued Notice to Proceed to the construction contractor on June 25, 2007. CSO 26 Regulator was operational on April 15, 2008 and substantially complete on May 12, 2008.	PDR: June 30, 2005 Design: May 25, 2006 Construction: May 12, 2008
Solids and Floatable Control Regulator for CSO Outfall No. 025	Provides solids and floatables treatment for CSO Outfall 025 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.	• Submit Preliminary Design Report June 30 2005 • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 20 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete.	PDR submitted to DEQ on 30 June 2005 and additional copies submitted on 14 October 2005. The PDR report was approved by DEQ's PRO on November 29 2005. The final design was submitted to DEQ on June 26 2006. The final design was approved by DEQ on June 26 2006. The City issued Notice to Proceed to the construction contractor on June 25, 2007. CSO 25 Regulator was operational on February 27, 2008 and substantially complete on April 24, 2008.	PDR: June 30, 2005 Design: May 25, 2006 Construction: April 24, 2008

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Fulton Bottom Urban Renewal Separation Project	Separates combined sewers into separate sewers for the conveyance of sanitary sewage and storm water to eliminate discharges of combined sewer overflows from this CSO area into Gillies Creek and the James River. Part of the project for Separation of Select CSO Basins (#III-5) in the City's Long Term Control Plan.	• Submit Preliminary Design Report 3 months after DEQ approval of the Phase III Program Project Plan • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 36 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete.	PDR submitted to DEQ on August 9, 2007. The PDR report was approved by DEQ's PRO on August 21, 2007. Final plans and specification provided to DEQ PRO on February 21, 2008 and approved by DEQ PRO on March 19, 2008. Project construction began on June 14, 2010. Project was substantially complete on April 14, 2011.	PDR: August 9, 2007 Design: February 21, 2008 Construction: December 2010

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Maury Street Separation Project	Separates combined sewers into separate sewers for the conveyance of sanitary sewage and storm water to eliminate discharges of combined sewer overflows from this CSO area into the James River. Part of the project for Separation of Select CSO Basins (#III-5) in the City's Long Term Control Plan.	• Submit Preliminary Design Report 3 months after DEQ approval of the Phase III Program Project Plan • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 48 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete.	PDR submitted to DEQ on August 9, 2007. The PDR report was approved by DEQ's PRO on August 21, 2007. The final design is being prepared. Final plans and specification provided to DEQ PRO on February 21, 2008 and approved by DEQ PRO on March 19, 2008. Project construction began on June 14, 2010. Project was substantially complete on April 7, 2011.	PDR: August 9, 2007 Design: February 21, 2008 Construction: May 2011

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Orleans and Nicholson Street Separation Project	Separates combined sewers into separate sewers for the conveyance of sanitary sewage and storm water to eliminate discharges of combined sewer overflows from this CSO area into the James River. Part of the project for Separation of Select CSO Basins (#III-5) in the City's Long Term Control Plan.	• Submit Preliminary Design Report 3 months after DEQ approval of the Phase III Program Project Plan • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 60 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete.	PDR submitted to DEQ on August 9, 2007. The PDR report was approved by DEQ's PRO on August 21, 2007. Final plans and specification provided to DEQ PRO on February 21, 2008. Project funded under ARRA/VCWRLF. Construction commenced on November 9, 2009. Final completion was in July 2010.	PDR: August 9, 2007 Design: February 21, 2008 Construction: Major portions of area completed in April 2010. Remaining small areas awaiting planned redevelopment were separated as of May 14, 2013.

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Peripheral In-Line Flow Equalization at Oakwood	Captures and stores combined sewage in excess of the capacity of existing conveyance system, and conveys it to the WWTP once the conveyance and treatment capacities are restored. It attenuates peak combined sewer flows, provides a relatively constant flow into the WWTP and thus reduces the size and cost of treatment facilities.	• Submit Preliminary Design Report 3 months after DEQ approval of the Phase III Program Project Plan • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 72 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete.	PDR submitted to DEQ on August 9, 2007. The PDR report was approved by DEQ's PRO on August 17, 2007. The final design is being prepared. Final plans and specification provided to DEQ PRO on February 19, 2008. Project funded under ARRA/VCWRLF. Construction commenced on November 30, 2009. The project was substantially complete and in-service as of November 19, 2010.	PDR: August 9, 2007 Design: February 19, 2008 Construction: December 2010

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Solids and Floatable Control Regulator for CSO Outfall No. 012	Provides solids and floatables treatment for CSO Outfall 012 prior to discharge to Almond Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.	• Submit Preliminary Design Report 3 months after DEQ approval of the Phase III Program Project Plan • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 84 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete	PDR submitted to DEQ on August 9, 2007. The PDR report was approved by DEQ's PRO on August 17, 2007. The final design is being prepared. Final plans and specification provided to DEQ PRO on February 19, 2008. Project funded under ARRA/VCWRLF. Construction commenced on November 30, 2009. The project was substantially complete and in-service as of November 19, 2010.	PDR: August 9, 2007 Design: February 19, 2008 Construction: December 2010

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Solids and Floatable Control Regulator for CSO Outfall No. 014	Provides solids and floatables treatment for CSO Outfall 014 prior to discharge to Manchester Canal and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.	• Submit Preliminary Design Report 3 months after DEQ approval of the Phase III Program Project Plan • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 96 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete	PDR submitted to DEQ on August 9, 2007. The PDR report was approved by DEQ's PRO on August 17, 2007. The final design is being prepared. Final plans and specification provided to DEQ PRO on February 19, 2008. Construction began on January 25, 2015 and was functionally in service as of Oct 2016 and complete in November 22, 2016	PDR: August 9, 2007 Design: February 19, 2008 Construction: November 22, 2016

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Solids and Floatable Control Regulator for CSO Outfall No. 039	Provides solids and floatables treatment for CSO Outfall 039 prior to discharge to Gillies Creek and the James River. Part of the project for Solids and Floatable Control Regulators (#III-7) in the City's Long Term Control Plan.	• Submit Preliminary Design Report 3 months after DEQ approval of the Phase III Program Project Plan • Submit Final Design to DEQ 6 months after DEQ approval of PDR. • Complete construction 108 months after DEQ approval of Final Design. • Place unit into operation 30 days after construction is complete	PDR submitted to DEQ on August 9, 2007. The PDR report was approved by DEQ's PRO on August 17, 2007. The final design is being prepared. Final plans and specification provided to DEQ PRO on February 19, 2008 and approved on March 14, 2008. Construction bids received on October 15, 2008. Construction commenced on April 20, 2009. Project was substantially complete and in-service as of November 2009. Final completion date was January 26, 2010.	PDR: August 9, 2007 Design: February 19, 2008 Construction: January 26, 2010

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Lower Gillies Creek Conveyance System Project	Conveys combined sewer flows from the lower portion of the Gillies Creek CSO district to WWTP, and control these CSOs to 4 overflows per year. Conveys combined sewer flows from CSO Outfall 034 to Shockoe Retention Basin to reduce discharges of combined sewer overflows from this CSO area into the James River.	• Submit Preliminary Design Report NLT 3 months after the Board or DEQ determines that Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy • Submit Final Design drawings and specifications to DEQ NLT nine (9) months after DEQ approval of PDR. • Construct, start-up and test NLT 26 months after approval of the final drawings and specifications under requirement 13.b.	**CSO 028E** separation construction commenced on August 1, 2016 **CSO 028A** construction bids for were opened on December 7, 2017. Construction began on May 1, 2017. Change orders were submitted for additional time changing the final completion date to November 8, 2018. **CSO 028E:** The system was fully separated as of March 3, 2018 for beneficial use. **CSO 028A:** The system was fully separated as of November 8, 2018 for beneficial use.	2013 General Assembly appropriated $45 million is CSO grant funding which will be used to fund design and construction of functioning elements this project in advance of the Board or DEQ determination that Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy. **CSO 028E:** The project reached Final Completion on August 22, 2018. Change Order approvals and final payment will close out the project. **CS0 028A:** The project reached Final Completion on November 8, 2018. Change Order approvals, submission of as-builts and final payment will close out the project.

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Wet Weather Flow Improvements at the WWTP: Solids Removal Improvements Project	Upgrades the primary treatment facilities to provide reliable treatment of up to 140 MGD wet weather flow; upgrades solids handling facilities to handle an increased solids loading associated with the increased CSO wet weather flow treatment.	• After the Board or DEQ determines that Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy, submit Preliminary Design Report NLT 3 months after starting construction of the project under Requirement 13.c. • Submit Final Design drawings and specifications to DEQ NLT nine (9) months after DEQ approval of PDR. • Construct, start-up and test NLT 26 months after approval of the final drawings and specifications under requirement 14.b.	New UV building for Nutrient Removal Program constructed with 3 channels for future 65 MGD primary effluent disinfection. Construction bids due in December 2017. Notice to proceed issued April 16, 2016. Final operation testing of new UV disinfection units in progress was completed in 2020. Certificate to Operate issued 2021	2013 General Assembly appropriated $45 million is CSO grant funding which will be used to fund design and construction of this project in advance of the Board or DEQ determination that Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy. PDR: November 2015 Final Design: Sep 2017 Project completed 2021

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Wet Weather Flow Improvements at the WWTP: Wet Weather Disinfection Facilities Project	Maximizes the wet weather treatment capacity to 300 MGD at WWTP; controls Gordon Avenue (CSO 021) outfall to 4 overflows per year. Upgrades the coarse screens, primary grit removal facilities, Main Pumping Station, and fine screens to provide reliable treatment of up to 300 MGD wet weather flow; Constructs a new wet weather disinfection facility at WWTP to treat flows up to 215 MGD (55 MGD primary effluent plus 160 MGD wet weather flow)	• After the Board or DEQ determines that Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy, submit Preliminary Design Report NLT 3 months after starting construction of the project under Requirement 14.c. • Submit Final Design drawings and specifications to DEQ NLT nine (9) months after DEQ approval of PDR. • Construct, start-up and test NLT 26 months after approval of the final drawings and specifications under requirement 15.b.	Began preliminary design in December 2013. Completed review of new screening and grit removal facility equipment technology options and facility layout options. Submitted PDR to DEQ in August 2015. Final design is at about the 100% stage as of October 2017. Advertised for construction bids in August 2018 and bids were opened on October 24, 2018. All bids exceeded pre-bid estimate and available budget. Revised the design to reduce the project cost. The new construction IFB was advertised on Nov. 9, 2020.	2013 General Assembly appropriated $45 million is CSO grant funding which will be used to fund design and construction of functioning elements this project in advance of the Board or DEQ determination that Plan E satisfies all the criteria under Section II.C.4.b.i and ii of the CSO Policy. PDR: August 2015 Final Design: Nov 2017 Construction on screenings and grit is ongoing. Estimated completion is 2024.

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Wet Weather Flow Improvements at the WWTP: Expand Secondary Wet Weather Flow Treatment Project	Installs sedimentation enhancing technologies such as inclined plate settlers in the Final Sedimentation Tanks to increase the solids capture efficiency for up to 85 MGD wet weather flow; upgrades the return sludge and sludge withdrawals to increase the capacity of this facility.			10 Interim Plan projects were substituted for this project

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Shockoe Retention Basin: Adapt Existing Basin for Pass Through Wet Weather Flow Project	Modifies Shockoe Diversion Structures, including trash rack improvement, solids removal and cleaning of Shockoe retention basin and diversion structure; Reconfigures aeration piping; Modifies retention basin bottom to slope to drain gates; Provides potential flushing system to clean the retention basin and diversion structures after every storm event.		Constructed access ramp for basin cleaning (2008-2010). Cleaned Shockoe Retention Basin and Diversion Structures (2010). Separated the Shockoe Cross-over Chamber to allow simultaneous operation of Retention Basin and East Gravity Outlet (2009-2010). Replace dry weather flow sluice gates and outlet flap gates at East and West Shockoe Diversion Structures (2011-2012). Design for restoration of Shockoe bascule gates is about 90% complete. Design for improvements trash rack system for the west diversion structure is approximately 90% complete.	
Shockoe Retention Basin: Shockoe Retention Basin 15 MG Expansion Project	Expands the Shockoe Retention Basin by 15 MG; Provides flushing system; Relocates outfall to east end of retention basin; Provides access for servicing and mechanically cleaning the retention basin.			The 10 Interim Plan projects were substituted for this project.
Level 1 Shockoe Retention Basin controls	Automate drainage at Shockoe to improve operation	Design completion 2022	Design at 60%	Construction begins 2023

PROJECTS	DESCRIPTION	Milestone Dates	Status	Projected Completion Date Contingent on Funding Availability
Level 2 Shockoe Retention Basin controls	Automates drainage at Shockoe to improve operations	Design completion 2023	Preliminary Engineering Report in development	Construction begins 2026
CSO-21 Wet weather controls	Increase storage of wet weather flow in existing pipe structure	Design completion 2022	30% design is complete	Construction begins 2024
CSO 40 – 1	Increase storage of wet weather flow in existing pipe structure	Design complete 2023	30% design is complete	Constructions begins 2025
CSO 19A	Diversion of flow to Hampton/McCloy tunnel	Design complete 2023	30% design is complete	Construction begins 2024
CSO 19B	Diversion of flow to Hampton/McCloy tunnel	Design complete 2022	30% design is complete	Construction begins 2023
CSO 20	Diversion of flow to Hampton/McCloy tunnel	Design complete 2023	30% design is complete	Construction begins 2024
CSO -04	Relocate regulator structure and increase storage in existing pipe	Design complete 2022	50% design is complete	Construction begins 2023
CSO 24	Divert additional wet weather flow to Gillies Creek Interceptor	Design complete 2023	30 % design is complete	Construction begins 2024
CSO 39	Divert additional wet weather flow to Gillies Creek Interceptor	Design complete 2023	30 design is complete	Construction begins 2024

Section A.4.5. This section requires the City to prepare "a status report of progress being made in procuring state and federal grants and low interest loans for the purpose of implementing specific elements of the LTCP". The City's progress report on procuring grants and low interest loans is summarized in the following table:

Program Area	Grants			Loans	
	Virginia	EPA	Army Corps of Engineers	Virginia Clean Water Revolving Loan Fund	Other
Combined Sewer Overflow (CSO), Combined Sewer System (CSS)	Virginia CSO Matching Fund: • FY 06: $2,000,000.00 • FY 07: $3,750,000.00 • FY 08: $3,050,000.00 • FY 09: $1,500,000.00 • FY 14: $45,000,000 FY22 ARPA $50,000,000.00	• EPA FY 2003 & 2004 Appropriations Act Grant for the City of Richmond CSO Program $1,638,700.00	• FY2008 Consolidated Appropriations Act (Public Law 110-161): $280,000 for the Richmond CSO Design/Studies (required a $93,000 City match)	• FY 2007: Shockoe CSO Retention Basin Access Ramp $4,316,181.00 • FY 2010 (ARRA): CSO 002 Orleans St Separation $326,920, CSO 012 Regulator $836,000, CSO 031 Oakwood In-Line Equalization $1,558,700 • FY 2012 CSO 014 Regulator $2,600,000 • FY2018 WWTP Screening & Grit Facility $9,550,000 • FY2021 Shockoe Diversion Structure Improvements $24,871,250 •	•
Wastewater Treatment Facility	•	•	• FY2006 Energy and Water Appropriations: $750,000 for the Richmond CSO	• FY 2006: Primary and secondary sedimentation tanks $11,000,000.00. •	•

Wastewater Collection System (Pumping and Separate Sanitary Sewer System)	•	•	•	• FY 2007: Gambles Hill $2,583,819.00 • FY 2017: Marshall St 60" Sewer Rehab $2,696,622 • FY 2017: Maurice Ave Drainage Improvements $4,307,361 • FY2018: Chimborazo Sewer $8,994,513; Almond Creek Sewer $4,092,126; • Forest View Sewer $1,458,010	•

Chesapeake Bay / James River Tributary Strategy Nitrogen and Phosphorus Control	• Water Quality Improvement Fund Technical Assistance Grant approved by DEQ for $45,674,244.00 (to be adjusted based on actual construction costs) • WQIF Grant increased to $50,131,031.00	•	•	• FY 2008 - $22,000,000.00 • FY 2009 - $10,000,000.00 • FY 2010 - $20,000,000.00 • FY 2012 - $3,289,955.00	•
Green Project Reserve Program	• Clean Water Revolving Loan Fund for Green Pilot Projects for $450,000	•	•	• FY 2010- $225,000	• FY 2010- $225,000
Stormwater Improvements	• SLAF Grant for $1,670,839 • SLAF Grant for $1,903,000	•	•	• Virginia Water Facilities Revolving Loan Fund FY2013 $1,060,650	•

PROJECT EXPENDITURES

3. CSO Capital Improvement Projects

Per Section A.4. Requirement 3.

NOTE: All amounts are in (000's)	TOTAL PRIOR AUTH.	FY23	FY24	FY25	FY26	FY27	TOTAL
Closed Projects	$282,574	$0	$0	$0	$0	$0	$282,574
Shockoe Retention Basin Elevator	76	0	0	0	0	0	$76
CSO Phase III - 4 Lower Gillies Creek 28E and 28A	15,861	0	0	0	0	0	$15,861
Shockoe Retention System	19,796	0	0	0	0	0	$19,796
Shockoe Diversion Structure Crest Gates and Arch Sewer Emergency Gates	18,679	0	0	0	0	0	$18,679
CSO S.O #14 - WWTP Wet Weather Primary Disinfection Facility	17,265	0	0	0	0	0	$17,265
CSO S.O. #15 - WWTP Screening and Grit Facility.	39,900	0	0	0	0	0	$39,900
Shockoe Roof Replacement	141	0	0	0	0	0	$141
Lower Gillies Creek Conveyance CSO 004	2,000	0	0	0	0	0	$2,000
Shockoe Retention System	226	0	0	0	0	0	$226
Odor Control System Improvements - Haxall Canal, Hampton Flushing Structure, and McCloy Pump Station	120	0	0	0	0	0	$120
Shockoe Retension Basin Aeration Upgrades	2,500	0	0	0	0	0	$2,500
Real Time monitoring Equipment: Flow Meter and Rain Gauge Equipment	277	0	0	0	0	0	$277
CSO Real Time Decision Support System	1,108	0	0	0	0	0	$1,108
McCloy P.S. Improvements	2,100	0	0	0	0	0	$2,100
Shockoe Reten Basin Elevator Replacement	0	500	0	0	0	0	$500
Shockoe Reten Basin - Flushing Water Line	226	0	0	0	0	0	$226
Brown Mechanism Replacements	450	0	0	0	0	0	$450
Rain Gauges (4)	40	0	0	0	0	0	$40
Shockoe Gatehouse Manway Replacements (3)	210	0	0	0	0	0	$210
Hampton PS MCC/Controls Replacement	100	0	0	0	0	0	$100
CSO Interim Plan Projects	3,000	30,000	0	0	0	0	$33,000
Hampton, Douglasdale, Dock St, Shockoe Permanent Generators & Portable Set for Gates	0	2,000	0	0	0	0	$2,000
Shockoe Retention Basin Roof Improvements	0	500	0	0	0	0	$500
Shockoe Creek Sewer Entrance Bar Screen Replacement	0	100	0	0	0	0	$100
Tandem Dump Truck	0	150	0	0	0	0	$150
Shockoe Retention Basin Elevator Replacement	0	500	0	0	0	0	$500
Dock St PS Electrical/Controls Upgrades	0	250	0	0	0	0	$250
Regulator 06e Access Improvements	0	0	50	0	0	0	$50
CSO 24 Regulator culvert rerouting	0	0	0	1,000	0	0	$2,000
Shockoe Creek Short Term Detention Improvements	0	0	0	0	2,000	0	$2,000
	$406,649	$34,000	$50	$1,000	$2,000	$0	$444,699

Compliance with 2020 Va. Acts 634, 2020 Va. SB 1064

§ 3. Any such owner or operator of a CSO system shall report annually to the Department on its progress pursuant to § 1 and § 2, with the first annual report due no later than December 1, 2020, and the final annual report due after completion of (i) the construction activities pursuant to the final plan required in subsection B of § 1 and (ii) additional actions identified in subsection D of § 2.

The report, which may be included as part of any annual report required under a consent special order issued by the Department to the owner or operator regarding the CSO system, shall include information on the level and sources of funding and financing such owner or operator has applied to the CSO system in each of the past five fiscal years, as well an assessment of funding needs in future years with a request that appropriation amounts sufficient to carry out the purposes of this act be included in the budget bill.

In accordance with Chapter 634 signed by the Governor on April 2, 2020, the city of Richmond is required to report annually to DEQ on progress related to requirements to develop Interim and Final Plans to address combined sewer overflows, as well as requirements of the Special Order by Consent issued by the State Water Control Board for the combined sewer system (CSS). This report shall cover the following:

1. Progress on the Interim and Final Plans
2. Level and sources of funding and financing applied to the CSS in each of the past five fiscal years
3. Assessment of funding needs in future years with a request for appropriations to effect the Interim and Final Plans

The City of Richmond Department of Public Utilities (DPU) submitted the Interim Plan to the Virginia Department of Environmental Quality (DEQ) July 1, 2021 and is working to implement that plan while developing the Final Plan that will be submitted to DEQ no later than July 1, 2024. The Interim Plan includes actions that can be initiated by July 1, 2022. DPU has continued extensive communication with its stakeholders via the RVAH2O meetings and have updated them on progress to date. DPU has also been meeting bi-monthly to update DEQ Staff on timelines and progress. Developing the Interim Plan required updating and calibrating the CSS Hydrologic and Hydraulic (H&H) model and the Tributary and Receiving Water Quality model, and using information obtained by the extensive network of metering technology installed in the CSS since 2018. Both model updates are now complete and are being used to assess proposed projects for potential water quality improvements and reduction in overflow volume and number of events.

The General Assembly has mandated that that City substantially eliminate all combined sewer overflows into the James River by 2035, a goal estimated to cost upward of $1.3 billion. The City received $50 million in ARPA funds during the 2021 General Assembly Special Session II, along with the $50 million in local match. These funds will be applied to plans that are underway to initiate Capital Improvement Projects identified in Interim Plan. The Interim Plan includes ten projects to be completed over the next six years that will cut combined sewer overflow volume by 182 million gallons per year The City of Richmond is grateful for the state investment to-date but the city and its ratepayers cannot do it alone. The General Assembly is requested to provide consistent funding in successive state budgets to enable the city to complete this project by 2035 as mandated.

As noted, the projected costs for implementing the Final Plan projects at the conceptual stage and using ACEE Class 5 ranges are upward of $1.3 billion in 2021 dollars, therefore the city requests $1.3 billion for the appropriation in the budget bill. The city intends to update this request in the 2022 Financial Compliance report and include updated costs based on the Interim Plan and continued planning in 2021 for the Final Plan.

CSO Level and Sources of Funding

Per Virginia SB 1064 1. § 3

	FY 17	FY 18	FY 19	FY 20	FY 21	Five Year Totals
Total CSO Expenditures	**$4,083,125**	**$8,794,557**	**$14,232,915**	**$1,473,552**	**$3,885,813**	**$32,469,962**
Virginia Revolving Loan Fund	$644,435	$592,203	$0	$0	886,551	$2,123,189
Grant Receipts	$3,739,439	$3,655,252	$10,008,717	$10,351,801	$0	$27,755,209
Wastewater Revenue Bonds/Operating Cash	($300,750)	$4,547,102	$4,224,198	($8,878,249)	$2,999,262	$2,591,564
Total CSO Funding Sources	**$4,083,125**	**$8,794,557**	**$14,232,915**	**$1,473,552**	**$3,885,813**	**$32,469,962**