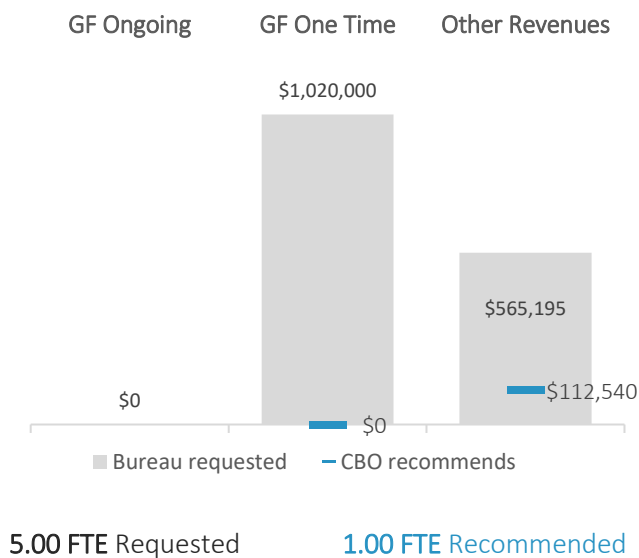


# Portland Water Bureau

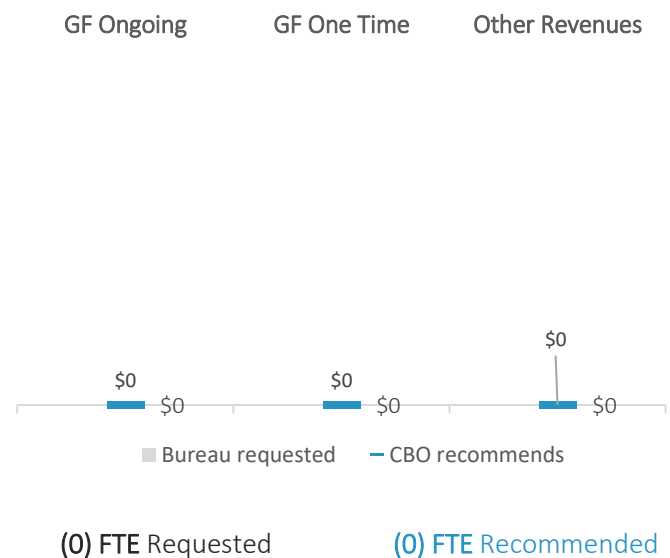
The Water Bureau requested FY 2017-18 budget includes \$95.6 million in operating expenses and \$109 million for capital expenses. There are 5 decision packages that include requests for additional FTEs. If all five positions are approved, there will be 586.35 FTE authorized for FY 2017-18. CBO recommends one position.

There is one decision package that requests \$1.02 million from the General Fund for preservation work at Mt. Tabor. City Council approved a resolution in 2015 to spend at least \$4 million over four years for the project. However, given other City priorities and underspending on the project in the current year's General Fund appropriation, CBO does not recommend the request at this time.

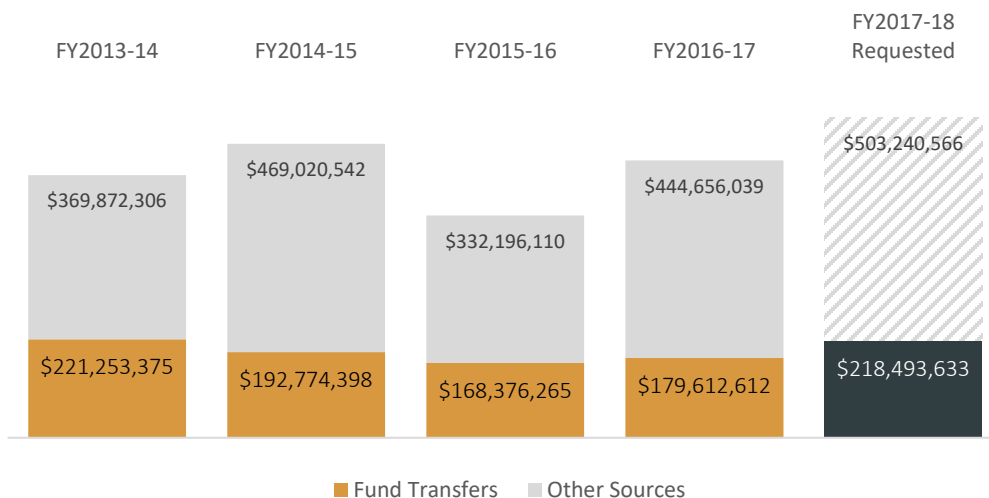
## Adds



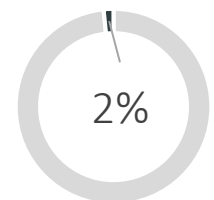
## Reductions



## Adopted Budget Revenues - 5-Year look back



## Decision Packages & Requested Budget



- FY-17-18 Request Base
- FY17-18 Decision Packages

## Key Issues

### FY 2017-18 Budget and Rates

The Portland Water Bureau, as part of its FY 2017-18 budget, has requested a 6.7% rate increase. This amounts to an increase of roughly \$2.28 on the monthly bill for the typical family household, totaling \$36.11 for water. Combined with the Bureau of Environmental Services requested rate increase of 2.85%, the rate increase for the typical family household will be 4.11% for water, wastewater, and stormwater services. Assuming approval of all budget requests for both bureaus and absent any other changes, the average monthly bill for a typical household would be \$107.89.

	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Maintain current service level	3.30%	3.00%	3.70%	2.90%	3.40%
Operating Fund Surplus	-1.00%				
Wholesale & Other Revenues Updates	-0.30%	-0.10%			
Operating Budget Additions	0.40%				
Portland Building Renovation				3.00%	
Capital Program	4.30%	8.20%	9.80%	9.90%	5.70%
Rate Stabilization Account		-4.40%	-6.80%	-9.10%	-2.40%
<b>FY 2017-18 Forecasted Rates</b>	<b>6.70%</b>	<b>6.70%</b>	<b>6.70%</b>	<b>6.70%</b>	<b>6.70%</b>
Forecasted Typical Retail Water Bill (per month; 5 ccf/month)					

As the table indicates, the bureau forecasts rate increases over the next five years. At the forecasted rates, the typical retail customer will pay \$46.80 a month for water in FY 2021-22 or a compounded increase of 29.6%.

Rate increases are driven by a number of factors. For example, the capital program is a major driver of rate increases through the forecast period. The bureau is planning a bond issue in the spring of 2018 for \$99 million with annual bond issuances planned through FY 2021-22; the debt service for the bonds are financed through rate increases. Further, escalation factors like personnel costs and material and utility costs will increase rates 3.30% in FY 2017-18 in addition to other factors like the Portland Building Renovation which are forecasted to increase rates 3.0% in FY 2020-21.

The bureau will draw on the Rate Stabilization Account to smooth rate increases in FY 2018-19 through FY 2021-22. The current balance of the Rate Stabilization Account is \$37.7 million. The bureau plans to draw the account down to \$9.9 million by the end of the forecasted period.

### *Changes to the Operating Budget*

The bureau's requested operating budget is estimated to increase by 6.0% in FY 2017-18 to \$95.6 million from the FY 2016-17 adopted budget. The requested budget includes six decision packages, totaling \$1.6 million. Of this, \$0.6 million (5.0 FTE) would be funded by water sales revenue which would have an ongoing impact on the operating budget. The remaining \$1

million in funds are requested from General Fund resources. The remaining increase is due to a projected \$500,000 cost increase in bank card fees for customers paying for their water bills with credit cards. This increase is in addition to the \$1.4 million budgeted amount for bank fees in FY 2016-17. The 6.0% increase in the FY 2017-18 operating budget also includes 3.0 permanent FTE and 3.0 limited term FTE that were added during the Fall BMP to assist with lead testing. The remainder of the increase is attributed to inflationary costs and increased personnel costs.

*Current Five-Year Capital Improvement Plan (CIP)*

The bureau forecasts \$627.3 million in capital expenditures (amount includes bureau overhead costs) over the next five years, including \$529.9 million in direct capital. The bureau estimates that it will fund 27% of the five-year CIP with cash resources and approximately 64% from bond proceeds. The remaining 9% will be paid for with capital revenues.

Compared to last year’s CIP, there are several changes that resulted in a net increase of \$46.1 million or 12% when comparing the capital plan between FY 2017-18 through FY 2020-21 (i.e. the four common years shared by the plan calculated using the CIP total in current dollars). A comparison of the four common years of the FY 2016-21 CIP to the FY 2017-22 CIP shows a \$40 million increase in Administration and Support, specifically bureau support. This funds the Water Bureau’s contribution to the renovation of the Portland Building. The change is also largely driven by an increase of approximately \$17 million in the Washington Park Reservoir 3 project. The increase is attributed to the difference between the estimated construction cost in the previous plan and the amount of the recently finalized construction contract reflected in the FY 2017-18 through FY 2021-22 CIP. Total projects costs are now estimated to be \$190,000,000 and the bureau has high confidence in this estimate. The remainder of the increase is in the treatment program for Headworks Facility Master Plan improvements and the chlorine scrubber replacement.

The requested budget includes 8 projects that are new to the capital plan in FY 2017-18. The estimated cost of the new projects is \$9,821,000 over five years. Fifty-eight percent of the new spending is for distribution-related projects. The remaining new spending is for supply (34%) and transmission storage projects (7%).

<b>New Projects in FY 2017-18 Plan</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>Total</b>	<b>Confidence</b>
Fulton Pump Mains Replacement	\$ 60,000	\$ 570,000	\$ 630,000	\$ 30,000	\$ 2,835,000	\$ 4,125,000	Low
NE 49th and Roselawn	\$ 127,000	\$ 101,000	\$ 678,000	\$ 10,000	\$ -	\$ 916,000	Low
SE 20th Avenue Oak Street North of SE Pine S	\$ 330,000	\$ -	\$ -	\$ -	\$ -	\$ 330,000	Low
SW Boones Ferry Road at SW Arnold Bridge	\$ 356,000	\$ -	\$ -	\$ -	\$ -	\$ 356,000	Low
Road 10E MP 6.2-8.2	\$ 135,000	\$ 110,000	\$ 1,407,000	\$ -	\$ -	\$ 1,652,000	Low
Vivian Groundwater Improvements	\$ 160,000	\$ 340,000	\$ 830,000	\$ 400,000	\$ -	\$ 1,730,000	Low
Conduit 3 Internal Inspection	\$ 62,000	\$ -	\$ -	\$ -	\$ -	\$ 62,000	Low
Sandy River Crossing Outfall	\$ 190,000	\$ 274,000	\$ 186,000	\$ -	\$ -	\$ 650,000	Low
<b>Total</b>	<b>\$ 1,420,000</b>	<b>\$ 1,395,000</b>	<b>\$ 3,731,000</b>	<b>\$ 440,000</b>	<b>\$ 2,835,000</b>	<b>\$ 9,821,000</b>	

The CIP includes funds in the Treatment program that can be used for changes to the way the bureau treats water for corrosion control. The bureau will bring a proposal to Council in March 2017 that includes building new corrosion control capacity at the Lusted Hill treatment facility. The CIP includes \$34.5 million over the next five years for unspecified treatment work and the bureau has said that it would not need to increase rates to accommodate this construction if approved.

After the bureau submitted its FY 2017-18 budget request, routine monitoring in the Bull Run watershed to comply with the Bull Run Treatment Variance detected the parasite *Cryptosporidium* in the Bull Run water source. The budgetary consequences of findings are unknown at this time but could impact the bureau in at least two ways. First, after several positive tests in January and February, the bureau stopped supplying the water from Bull Run to customers and switched to the bureau's groundwater source in the Columbia South Shore Wellfield. Groundwater is a more expensive source for the bureau due to the electricity needed to pump the water. The total cost implication of the switch will depend on when the bureau returns to using water from Bull Run. However, the bureau estimates electricity and maintenance costs of using groundwater are about \$1 million per month. Second, the City currently has a variance that allows it to use water from Bull Run without treating for *Cryptosporidium*. The positive *cryptosporidium* tests require the bureau to conduct increased testing and monitoring for the next year. Findings from those tests will determine if additional treatment will be needed, potentially requiring the construction of a treatment facility. Cost estimates for such a facility are uncertain and would depend on the particular treatment technology selected. In 2009, the bureau estimated that the design and construction costs of the ultraviolet (UV) facility would be \$100 million. A current estimate would likely be higher and would be a substantial unbudgeted expense for the bureau.

## Decision Package Analysis & Recommendations

### Unidirectional Flushing, WA 01, \$77,800, 1.00 FTE

This request is for 1.0 FTE to support the bureau's unidirectional flushing team. Unidirectional flushing (UDF) is a method for cleaning water distribution pipes. Left in the system, sediment, biofilm, and deposits in the pipelines can reduce the effectiveness of disinfection treatment and potentially foster the growth of microbes. Unidirectional flushing can improve water quality by flushing those from the system. This is particularly important for an unfiltered system like Portland's, where UDF has been used as a key mitigation strategy when water quality issues are observed. UDF is also used to identify broken valves and improve hydraulic capacity.

The number of miles the bureau's UDF program flushes each year varies by geography and system priorities. Currently, areas identified for flushing are based on water quality needs. The bureau's UDF program is staffed by a program coordinator (Engineering Tech III), a UDF Field Service Mechanic (Water Operations Mechanic) and a combination of temporary staff assigned to the unit when one is available (i.e. a community services aide (CSA) or other utility worker

positions). The flushing is done by a crew of two people--the UDF Field Mechanic and a temporary staff person that is available to help. However, depending on CSA staff has been problematic. CSA positions are temporary which results in turnover and time spent recruiting and training new CSAs. This request would permanently staff the UDF program.

The bureau estimates that with the UDF program's current staffing levels, it would take approximately 70 years to flush the entire distribution system. While there is not accepted industry guidance on the appropriate amount of flushing, the bureau provides that the general rule of thumb is to flush the entire system every 5 to 10 years. The bureau estimates it would be able to flush approximately 20%-25% more of its distribution system by permanently staffing this position. CBO notes that the bureau will not achieve the 5 to 10-year benchmark with one additional person. However, the additional FTE would provide a consistent third staff person and assist the bureau in conducting its unidirectional study in FY 2017-18. The bureau is currently working on a Water Research Foundation flushing study with assistance from an outside consulting firm.

Overall, CBO is supportive of permanently staffing the UDF team. However, CBO recommends delaying this request pending the completion of the study. Further, CBO encourages the bureau to establish an approach for demonstrating the value of expanding the UDF team based on the unidirectional study and other analysis so that a strong business case can be made for future investment in this program.

**CBO Recommendation: \$0, 0.00 FTE**

Records Management, WA 02, \$129,650, 1.00 FTE

This is the second year the bureau is requesting a position focused on records management. This request is driven by the bureau's need for a records management process and procedure. The bureau is required to manage records according to state law, city code, and legal hold standards set by the City Attorney. Over the past several years, the City has increased its focus on records retention through the adoption of TRIM as the City's primary archival system and updates to processing records requests.

While the bureau has taken steps to meet its immediate, short-term needs with contract staff and using existing staff (e.g. archiving files to prepare for the Portland Building Renovation Project), this position would develop and guide process improvements bureau wide. Information from the bureau demonstrates that opportunities for improvement exist in how the bureau responds to legal and legislative requirements for records management. For example, the bureau's current process for responding to record requests is somewhat ad hoc, leaving opportunity for consistency and transparency improvements in how the bureau responds to these requests.

CBO recognizes that efficiencies would likely result by creating a process that guides improvements bureau wide, including how records are classified and preserved as well as establishing a more transparent process for retrieving records and responding to legal holds. That said, it is incumbent on bureau leadership to define the importance of record management at the bureau, including the responsibilities of individual employees. Because this has not been defined, a backlog of records has not been retained according to adopted schedules.

Given other more urgent needs, the relatively small indirect impact on core service and the size of the bureau's existing staff, CBO does not recommend funding this request. Rather, CBO suggests the bureau realign existing staff responsibilities so that time is devoted to establishing a process that bureau leadership can enforce.

**CBO Recommendation: \$0, 0.00 FTE**

Bureau Administrative Support, WA 03 \$112,540, 1.00 FTE

This position is focused on providing administrative support to the bureau's Deputy Director and the individual groups managed by the deputy. With the addition of the Deputy Director position to bureau leadership over a year ago, the bureau shifted oversight of the groups Public Information and Involvement, Business Operations, Emergency Management and Security to the Deputy Director.

Without administrative support, the Deputy Director has been challenged to address some of the core functions that have been assigned to that position. This includes bureau strategic planning and implementation of the equity plan. Currently, administrative support from the other areas of the bureau, including the Director's administrative support, has provided support on an ad hoc basis.

Given the Deputy Director's current workload, the support the position would provide to other units that report to the deputy, and the extent that the deputy will have more time to devote to the bureau's priorities, CBO recommends this position.

**CBO Recommendation: \$112,540, 1.00 FTE**

Water Loss Control, WA 04, \$134,500, 1.00 FTE

This request is for a position to develop and implement the bureau's water loss control program. In 2016, the bureau completed a Water Audit and Strategic Loss Control Plan. The plan included several non-binding recommendations to improve the reliability and confidence in water loss data and to help manage water losses in the water system. The bureau cites one of the plan's recommendations to create a Program Coordinator position to oversee annual water audits and manage the program, as evidence to support the addition of a full-time position.

Based on the findings in the report and information provided by the bureau, CBO agrees that the bureau should take steps to address water loss, though noting that a zero real loss target is

not achievable. The plan makes a number of recommendations to begin this work which can be done with existing staff and resources. For example, the plan suggests conducting more small meter and wholesale meter testing and field validation of suspected data and billing issues. The plan also recommends conducting more proactive leakage detection and to standardize leak reporting. These are all things that can be done without a coordinator.

Thus, relative to the other urgent needs within the bureau and the pressure to minimize rates, CBO recommends the bureau take a collaborative bureau-wide approach to address water loss using existing staff and resources rather than delegating the tasks to a new FTE program coordinator.

**CBO Recommendation: \$0, 0.00 FTE**

Emergency Management, WA 05, \$110,705, 1.00 FTE

This request is for a program specialist position to augment the bureau's existing Emergency Management Program. In FY 2009-10, the bureau had 3.25 to 3.5 FTE working on emergency management (a Program Manager, Program Coordinator, Program Specialist and part-time admin support). Staff levels were decreased by 1 and 2 FTE between 2010 and 2016 due to budget cuts and realignments. Currently, there are two Emergency Management staff. This request would bring the team back to 3 FTE. The position would support emergency functions, equipment maintenance, and training so that the bureau's Emergency Operations Center is ready to be activated in the event of an emergency. According to the bureau, emergency plan updates, training coordination, and exercise planning and support are not receiving adequate attention.

Like the Water Bureau, other large City bureaus have emergency management teams to focus on emergency preparedness. For example, BES and Parks each have one emergency response person on staff. The City also has the Portland Bureau of Emergency Management that focuses on developing the city's mitigation, preparedness, response and recovery capabilities.

Aside from the desire to improve the bureau's emergency response ability, there is no unique, urgent need for more staff to accomplish this work. Given that the bureau already has two staff, which is one more than both BES and Parks, the bureau should have sufficient resources to execute emergency management effectively. CBO does not recommend funding this position.

**CBO Recommendation: \$0, 0.00 FTE**

Tabor Preservation Project 06, \$1,020,000

On July 15, 2015, City Council approved resolution No. 37146 making financial obligations and other commitments for work at Mount Tabor. The resolution included a provision that the City shall allocate at least \$4 million over the next four years to the maintenance,

repair and preservation work identified in the 2009 Mount Tabor Reservoirs Historic Structures Report. The resolution did not specify the funding source. Because the reservoirs are no longer part of the water system, these funds are being requested from the General Fund and not included as part of the water rate increase.

In FY 2016-17 budget, the Water Bureau requested and received \$750,000 in General Fund resources to fund the first year's activities to fulfill this obligation. The \$750,000 included about \$400,000 to hire a preservationist, \$200,000 for internal costs, and \$150,000 for planning and permitting. Of the \$750,000 budget, the Water Bureau estimates it will spend \$220,000 in FY 2016-17. This includes \$157,000 for the preservationist to update the 2009 Mt. Tabor Reservoirs Historic Structures Report to reflect current preservation needs and costs and \$63,000 on historic preservation consultant services, internal costs and any other requirements. The Water Bureau will request to carry over the \$530,000 in unspent funds. In addition, the Water Bureau requests \$1,020,000 in one-time General Fund resources for FY 2017-18. Together, the \$1,550,000 would fund a prioritized list of preservation projects to be completed in FY 2017-18, including cleaning, patchwork and repairing concrete, metalwork, painting and internal costs.

There are several unresolved issues as to the full scope of the work to be completed at the site and who will be financially responsible for those costs. Last year, the Water Bureau updated the cost estimates for the list of project components to account for inflation and to add project design and management costs that were not included in the initial estimates in 2009. These initial estimates indicate that total preservation costs could amount to more than \$12.0 million. Roughly 80% of those costs are to repair and replace lighting and to replace the lining of two reservoirs. Resolution No. 37146 requires the Council to consider an additional \$1.5 million at some time in the future for the lighting work. The Water Bureau believes that the linings of the reservoirs, especially Reservoirs 1 and 6 will need to be replaced but that work was not included in the \$4.0 million offered in the Resolution. Reservoir 1 is in the most need of repair and has no lining or underdrain system to monitor how much it leaks. Installing new liners in Reservoir 1 and 6 would cost several million dollars per reservoir.

The remaining projects, totaling an estimated cost of about \$4.0 million, include cleaning and repairing concrete, metalwork, and structures, and removing non-historic components. Some of the work is reflected in the Water Bureau's FY 2017-18 request for funding, but much of the work will require land use reviews and permits with additional planning needs and could not be completed in the next year. In addition, the bureau will incur ongoing costs to maintain the facilities. While some of that work will be done in the normal course of draining, cleaning, and filling the reservoirs as agreed to in the land use agreement, other work would require additional costs to the Water Bureau. Whether ongoing preservation work will be paid from the initial \$4.0 million commitment remains unresolved.



Finally, as part of the Mount Tabor land use review that the City Council approved in August 2015, the City is required, within 5 years of approval, to develop an interpretive program related to the Mount Tabor Reservoirs Historic District. The Council resolution directed the Water Bureau to collaborate with the neighborhood association to develop the interpretive program. The resolution does not include a monetary commitment for these activities and they are not part of the initial \$4.0 million allocation for preservation work. The Water Bureau has estimated, based on its work at Powell Butte and Washington Park, that the total estimated project costs for an interpretive program could cost up to \$800,000. The bureau plans to bring a contract to the City Council for approval in March 2017 for interpretive services for the Mt. Tabor Reservoirs. Development of the historical interpretive program will involve public input through a series of workshops. The bureau is requesting \$199,691 over four years to complete the initial work. Funding for the interpretive work is not part of the FY 2017-18 request but will be requested in the FY 2016-17 Spring BMP.

While Council committed to these historic improvements via Resolution No. 37146 and the Tabor land use approval, CBO notes that there are other, more urgent needs that compete for one-time General Fund resources. CBO supports the bureau's intent to carryover current fiscal year funds to begin work on the priority list of projects next year. CBO recommends the bureau request additional General Fund support during the Fall BMP if they have capacity to use the funding in FY 2017-18.

**CBO Recommendation: \$0**

## Bureau Budget Summary – Request and Recommendations

Below is a summary of Portland Water Bureau's budget.

	Adopted FY 2016-17	Request Base (A)	Bureau Decision Packages (B)	CBO Recommended Adjustments (C)	Total Recommended Revised (A+B+C)
<b>Resources</b>					
Budgeted Beginning Fund Balance	\$200,349,066	\$219,020,395	\$ -	\$ -	\$219,020,395
Taxes	\$ -	\$ -	\$ -	\$ -	\$ -
Licenses & Permits		\$ -	\$ -	\$ -	\$ -
Charges for Services	\$165,665,337	\$176,339,675	\$ 565,195	\$ (452,655)	\$176,452,215
Intergovernmental Revenues	\$ 555,000	\$ 526,000	\$ -	\$ -	\$ 526,000
Interagency Revenue	\$ 3,534,320	\$ 3,305,748	\$ -	\$ -	\$ 3,305,748
Fund Transfers - Revenue	\$179,612,612	\$217,473,633	\$ 1,020,000	\$ (1,020,000)	\$217,473,633
Bond and Note	\$ 91,875,000	\$ 99,045,000	\$ -	\$ -	\$ 99,045,000
Miscellaneous	\$ 3,413,770	\$ 4,965,315	\$ -	\$ -	\$ 4,965,315
General Fund Discretionary	\$ -	\$ -	\$ -	\$ -	\$ -
General Fund Overhead	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Resources</b>	<b>\$645,005,105</b>	<b>\$720,675,766</b>	<b>\$ 1,585,195</b>	<b>\$ (1,472,655)</b>	<b>\$720,788,306</b>
<b>Requirements</b>					
Personnel Services	\$ 66,704,235	\$ -	\$ 535,195	\$ (427,655)	\$ 70,511,211
External Materials and Services	\$ 30,242,593	\$ -	\$ 1,050,000	\$ (1,045,000)	\$ 43,860,243
Internal Materials and Services	\$ 20,779,345	\$ -			\$ 22,656,382
Capital Outlay	\$ 55,882,000	\$ -		\$ -	\$ 78,310,000
Bond Expenses	\$ 60,698,563	\$ -		\$ -	\$ 60,049,540
Fund Transfers - Expense	\$185,204,118	\$ -	\$ -	\$ -	\$222,967,883
Contingency	\$102,889,753	\$ -	\$ -	\$ -	\$ 96,607,803
Unappropriated Fund Balance	\$122,604,498	\$ -	\$ -	\$ -	\$125,825,244
<b>Total Requirements</b>	<b>\$645,005,105</b>	<b>\$ -</b>	<b>\$ 1,585,195</b>	<b>\$ (1,472,655)</b>	<b>\$720,788,306</b>