

# Consolidating Public Services in Anne Arundel County and the City of Annapolis: Impacts and Expenses

Under the supervision of Professor Ken Coriale  
ECON454: Public Finance and Public Policy  
The University of Maryland – College Park  
Fall 2016



PALS - Partnership for Action Learning in Sustainability  
An initiative of the National Center for Smart Growth

Gerrit Knaap, NCSG Executive Director  
Uri Avin, PALS Director

## Contents

### Introduction

#### Proposal to Consolidate Election Services

Isioma Obima, Ian Pimental, Koukou Epey, Guillermo Andrada, Soulyana

#### Consolidating Transit Services

Jamal Anifowoshe, Perry Bloch, Josh Goldman, Michael Kaplan, Erhan Sarayli, Yao Yao

#### Recreation and Parks Case Analysis

Nazar Bedi, Laetitia Beyegue, Ray Joyce, Kaushik Nagarur, Mohamed Nur, Abhinav Saraogi

#### Combined Fire Department Services

Charles Cadiz, Ashley Mason, Lucas McGrath, Rakesh Poojary, Daniel Riordan, Claire Zhang

#### Public Works and Utilities

Xiaoyou Chen, Othniel Kamassee, Ryan Joyce, Alexander Roos, Miles Welch

#### Combining Police Department Services

Victor Carvajal, Ian Henderson, Scott Livingston, Rye McKenzie, Surjit Singh, Aaron Wong

## Introduction

This report is a collection of papers completed by students in the ECON454, Public Finance and Public Policy, who applied their students to a real world question as part of the PALS program.

The class's goal is understand the field of public finance and the relationship between economic theory and real world government policies. The goal of the PALS program is to use instructor expertise and student energy to advance sustainability in Maryland communities.

In this effort, students explored the potential for consolidating public services in Anne Arundel County and the City of Annapolis, including the fiscal impacts and service level.

## Proposal to Consolidate Election Services

Isioma Obima, Ian Pimental, Koukou Epey, Guillermo Andrada, Soulyana

### Introduction

This paper explores a consolidated Board of Elections between the City of Annapolis and Anne Arundel County. The objective of this department will be efficiently providing all federal, state and local elections to the community.

After analyzing how both Boards of Elections operated individually, we conclude that the Anne Arundel County Board of Elections is better equipped because it is already running efficiently on a large scale. Currently, the City of Annapolis only runs local elections and because it does not deal with constant elective events it lacks the specialization in its operations, resulting in a loss of efficiency. Considering this, the optimal way to proceed would be to delegate every election event to the County's Board, including elections currently held at the local Annapolis level.

The proposed consolidated department will focus on contracting qualified workers, providing the necessary amount of voting equipment, and offering citizens an easy and convenient way to registration for elections.

### Current Status

Currently, both Anne Arundel County and the City of Annapolis operate their own elections. In the county, the Board of Elections is a State Agency totally funded by the County and has over 388,363 active, inactive, and pending registered voters. As the FY17 budget mentions "All employees of the County Board of Elections (15 positions) are State Employees; Anne Arundel County reimburses the State for their salaries and benefits. There are also three Board members, two alternates, as well as an appointed attorney."

According to the County's budget for the current year, the Board of Elections has been running efficiently due to the implementation of a new voting system and the centralization of operations into a single facility in Glen Burnie. Therefore, substantial modifications are not necessary beyond adding new responsibilities associated with conducting City of Annapolis elections.

General Classifications of Expenditure	Actual FY2015	Original FY2016	Estimate FY2016	Budget FY2017	Inc (Dec) From Orig.
Fund					
General Fund	3,586,691	4,353,600	4,109,400	4,610,900	257,300
Total by Fund	3,586,691	4,353,600	4,109,400	4,610,900	257,300
Character					
Board of Supervisor of Elections	3,586,691	4,353,600	4,109,400	4,610,900	257,300

Total by Character	3,586,691	4,353,600	4,109,400	4,610,900	257,300
Object					
Personal Services	2,289,994	2,041,600	2,080,700	2,199,500	157,900
Contractual Services	1,095,046	2,032,400	1,757,300	2,097,600	65,200
Supplies & Materials	146,553	220,300	212,100	237,800	17,500
Business & Travel	40,454	42,900	42,900	55,500	12,600
Capital Outlay	14,644	16,400	16,400	20,500	4,100
Total by Object	3,586,691	4,353,600	4,109,400	4,610,900	257,300

In comparison, in Annapolis, the Board of Supervisors of Elections is part of the City Attorney's Office, which consists of the City Attorney, three Assistant City Attorneys, a City Clerk, an Assistant City Clerk, a Legislative & Policy Analyst, a Legal Assistant, and a City Council Liaison. The City Clerk or their designee serves as Clerk to the City Council, the Alcoholic Beverage Control Board, and the Board of Supervisors of Elections.

Budget Summary	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	% of Total
	Actual	Actual	Actual	Adopted	Adopted	(FY 17)
Personnel	\$842.761	\$1,005.496	\$906.122	\$927.667	\$1,157.371	91.87%
Operating	215.743	340.647	111.908	134.430	102.452	8.13%
Total	\$1,058,504	\$1,346,143	\$1,018,030	\$1,062,097	\$1,259,822	100%
<u>% Change from Prior Year</u>		27.17%	-24.37%	4.33%	18.62%	

The City of Annapolis does not have an actual office for the Board of Supervisors of Elections, which could account for several efficiency problems. Consolidating the city and County election services would exempt the City Clerk from serving the Board of Supervisors of Elections, this could optimize other functions of these entities apart from providing a dedicated Board of Elections to supervise the democratic events of the city. For example, freeing the City Clerk from election duties would eliminate the need for the Deputy City Clerk currently serving the Alcoholic Beverage Control Board.

## Comparison with Other City-County Consolidations

In communities across the U.S., Departments of Elections conduct all federal, state, district, and municipal elections in a manner that is free, fair, and functional. The Departments are responsible for conducting elections under the rules and regulations established by federal, state, and local laws – notably, the Voting Rights Act, the Help America Vote Act, and the Americans with Disabilities Act, maintaining an open process that inspires public confidence in the election system, providing and improving public outreach.

While city-county consolidations are rare, there have been many state and local initiatives attempting consolidation. The rationale for consolidation is to produce cost savings, increase efficiency, improve resource base, enhance planning capacity, and improve accountability. According to the National Association of Counties, which maintains a complete list of city-county consolidation proposals since 1805, there are 40 city-county consolidations. Some of these include City and borough of Anchorage in Alaska, City and county of Honolulu in Hawaii, and City and county of San Francisco in California.

The San Francisco Department of Elections continues to improve its services by streamlining processes and anticipating the needs of its voters. To improve the resource base, accountability, and productivity of the City and County, the Department would have to change its organizational structure and reallocate its budget.

The Department’s proposed FY16-17 and FY17-18 budgets include the funding for fixed operating expenses as well as funding for services and programs associated with two upcoming elections: the November 2016 Consolidated General Election and the June 2018 Consolidated Statewide Direct Primary Election.

The budgeted election-related expenses include ballot production and printing, assembly and mailing of vote-by-mail ballots, production and mailing of the Voter Information Pamphlet, publication of legal notices, polling place rental and supplies, poll worker stipends, drayage of equipment and supplies, seasonal employee salaries, and other miscellaneous expenses. Additionally, the Department’s proposed budget considers the financial impact of several State regulatory changes.

The Department’s projected expenses will be partially offset by its projected revenue. The Department generates revenue through candidate filing and statement fees and ballot argument fees, which decrease the General Fund contribution to the Department..

**Figure 1: Snapshot of San Francisco Board of Elections proposed operating budget**

	<b>FY 2016-17</b>	<b>FY 2017-18</b>
<b>Total Expenditures</b>	\$16,761,269	\$14,735,854
<b>Total Revenue &amp; Recovery</b>	(\$752,689)	(\$45,159)
<b>Total General Fund Support</b>	<b>\$16,008,580</b>	<b>\$14,690,695</b>

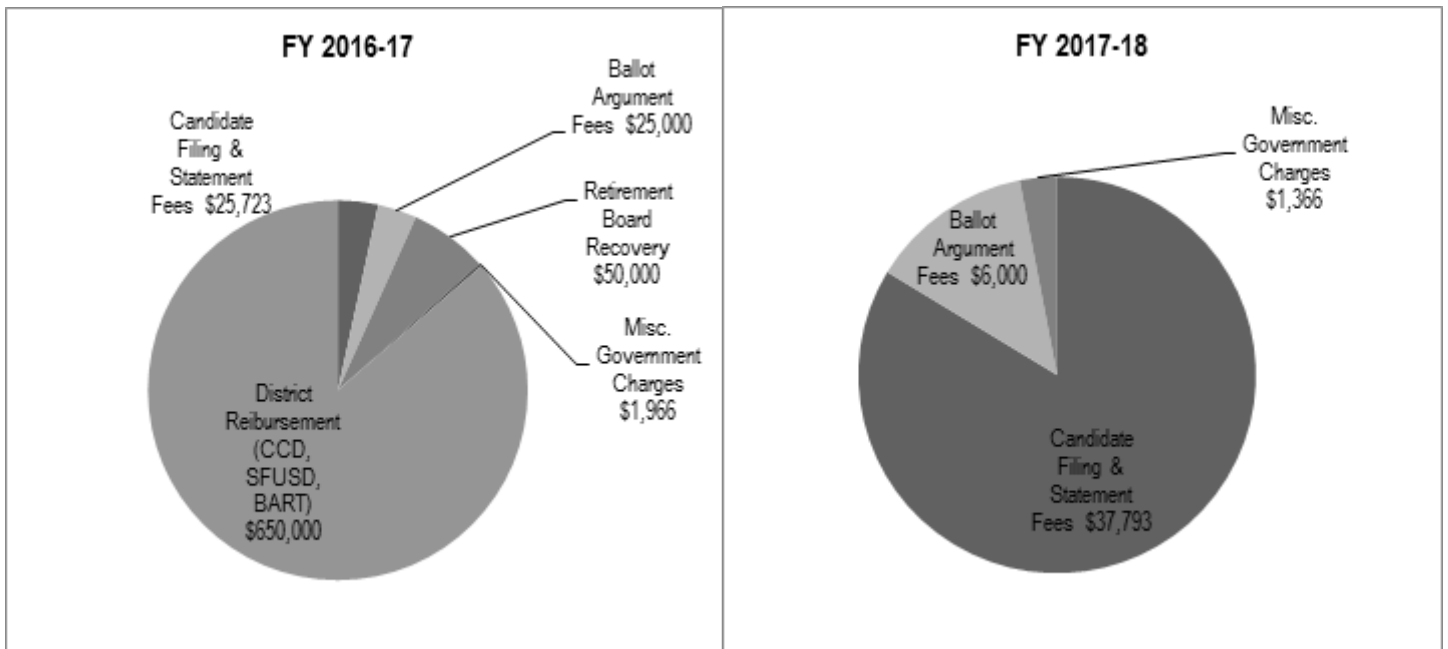
## Budget Reductions

The San Francisco Mayor’s Office of Public Policy and Finance projected a \$99.8 million General Fund shortfall for FY16-17, and a \$240.2 million shortfall for FY17-18, based on City’s current operations, staffing levels, and estimated revenue.

In light of these shortfalls, the Mayor’s Office instructed City departments to propose a 1.5% budget reduction in their FY16-17 budgets, and an additional 1.5% reduction in their FY17-18 budgets.

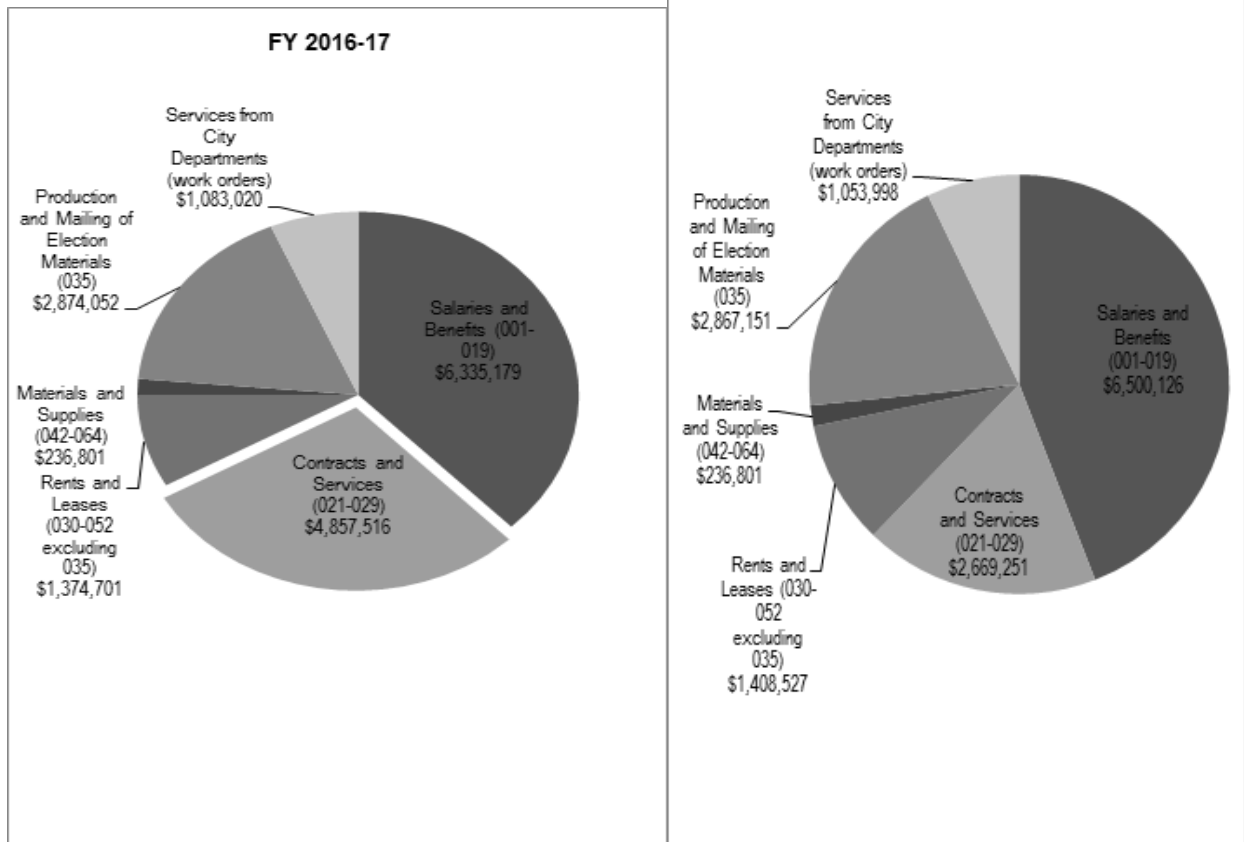
For the Department of Elections, the proposed reductions amount to \$197,830 and \$395,660, respectively. According to guidance from the City’s Office of the Controller, the budgeted recovery will be realized from reimbursement for costs the Department will incur for conducting the Retirement Board Election in FY16-17.

**Figure 2: Total Projected Revenue by Main Sources**



Expenditures in the Department’s of Elections operating budget fall into six categories: Salaries and Benefits, Contracts and Other Services, Rents and Leases, Materials and Supplies, Production and Mailing of Election Materials, and Services from City Departments (work orders).

**Figure 3: Total Projected Expenditures by Category**



The following is a subset of Expenditures and Work Order Object Codes present in the Department’s budget, accompanied by descriptions of programs/goods/services funded in each Object:

**Permanent Salaries (Object 001)** includes funding allocated to salaries of existing permanent positions authorized under the Annual Salary Ordinance.

**Temporary Salaries (Object 005)** includes funding allocated to salaries associated with seasonal as-needed positions. Every election, the Department fills as-needed positions with seasonal personnel for periods ranging from one day to four months, to meet multiple statutory deadlines imposed by federal, state, and municipal laws, as well as various vendors' production schedules.

**Premium Pay (Object 009)** includes funding allocated to compensation of employees who provide bilingual services to the Department’s customers.

**Rents and Leases – Buildings and Structures – (Object 030)** includes fees associated with space rental for outreach events; contracting more than 550 facilities to house polling places; parking to accommodate the over 200 rental vehicles used on Election Day.

San Francisco’s Department of Elections continuously strives to maximize the reach and effectiveness of its resources and services to improve election access and transparency. While the Department continues to pursue its own cost efficiencies and exercise responsible budgeting and fiscal discipline, consistent General Fund support remains a crucial part of its budget. The city-county consolidation in San Francisco has been functioning efficiently while being able to cut some unnecessary costs.



## Savings

The City of Annapolis would save \$60,951.25 in salary expenses from eliminating the Deputy City Clerk position. Since the Board of Supervisors of Elections are unpaid positions in Annapolis, this is the only savings from salaried positions. During election years, Annapolis government would save more by cutting personnel and operating budgets, which in 2014, were \$32,606.50 and \$205,338, respectively.

Unfortunately, the budget information for the Board of Supervisors of Elections is limited. For this reason, we cannot determine how Anne Arundel County's election budget will change.

According to county election information, ballots from Annapolis registered voters are collected by Anne Arundel County. This causes some confusion in determining what the City of Annapolis was responsible for and what their expenditures cover. Without these itemized budget breakdowns, we cannot give an accurate estimation of what the county will save or how its personnel would need to change.

<b>Regular Annual Savings - Annapolis</b>	<b>Election Year Savings - Annapolis</b>
<ul style="list-style-type: none"> <li>• Deputy City Clerk = \$60,951.25</li> </ul>	<ul style="list-style-type: none"> <li>• Deputy City Clerk = \$60,951.25</li> <li>• Elections Personnel = \$32,606.50</li> <li>• Elections Operations = \$205,338.00</li> </ul>
<ul style="list-style-type: none"> <li>• <b>TOTAL = \$60,951.25</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>TOTAL = \$298,895.75</b></li> </ul>

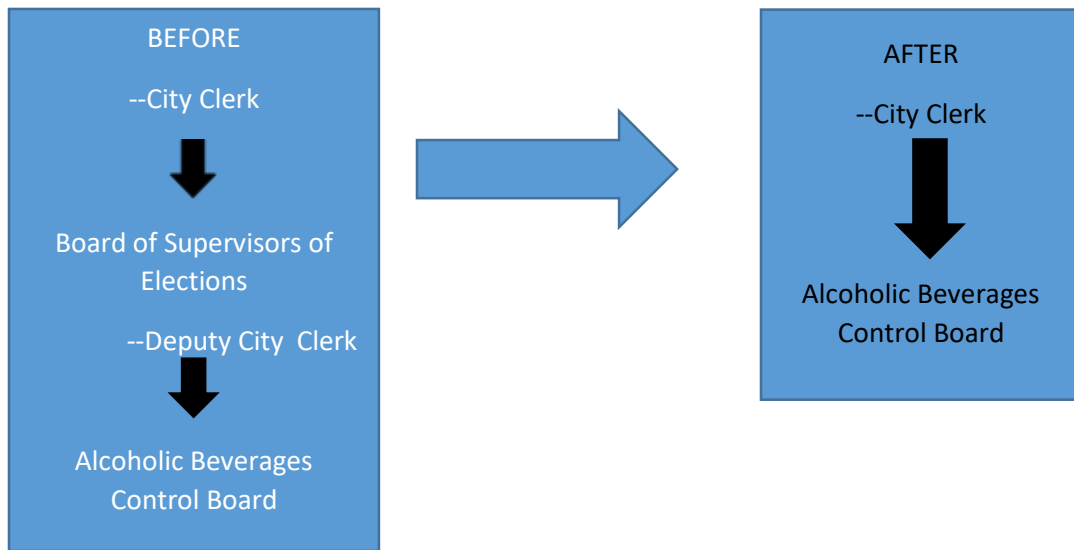
## Changes to Government Personnel

### Anne Arundel County Staff: UNCHANGED

<b>Administration Division</b>	<b>Voting System &amp; Supply Division</b>
Election Director	Voting System Manager
Deputy Director	Electronic Pollbook & Polling Place Supply Mngr.
Administrator	Polling Place Manager
Administrative Assistant	Two (2) Election Clerk III
<b>Voter Registration Division</b>	
Two (2) Supervisors	
Data Application Specialist	
Election Clerk III	
<b>Absentee Voting Division</b>	
Administrator	
Administrative Assistant	
Three (3) Election Clerk III	
<b>Election Worker Division</b>	
Administrator	
Election Data and Networking App Specialist	
Election Judge Training Manager	
Six (6) Election Clerk III	

### City of Annapolis Staff:

In addition to the structural changes below, consolidation will eliminate seasonal personnel during election years.



## Consolidating Transit Services

Jamal Anifowoshe, Perry Bloch, Josh Goldman, Michael Kaplan, Erhan Sarayli, Yao Yao

### Overview

When determining points for consolidating the Anne Arundel County and Annapolis transit services, maintaining efficiency and low cost is key. Working at the absolute optimal level will increase productivity in a combined Department of Transportation, and make it a more uniform system. Specifically, we are looking to combine overlapping bus routes to reduce additional personnel, cut excessive routes, and create easier communication.

By eliminating overlapping routes on Annapolis city buses, the number of buses and personnel needed to cover the total routes will be reduced. Combining these routes eliminates the need for additional drivers, because one driver could service routes previously requiring multiple drivers during the same shift. With fewer drivers, the need for oversight is proportionally reduced. Transit controllers previously monitoring multiple routes can now monitor one route covering the same ground. With reduced need for oversight, personnel requirements are lessened as well. Fewer drivers, leading to less oversight, resulting in fewer controllers optimizes efficiency and reduces wage expenses.

While some employees may see a slight increase in responsibility mandating higher pay, the increased wage is marginal compared to the overall savings from route consolidation.

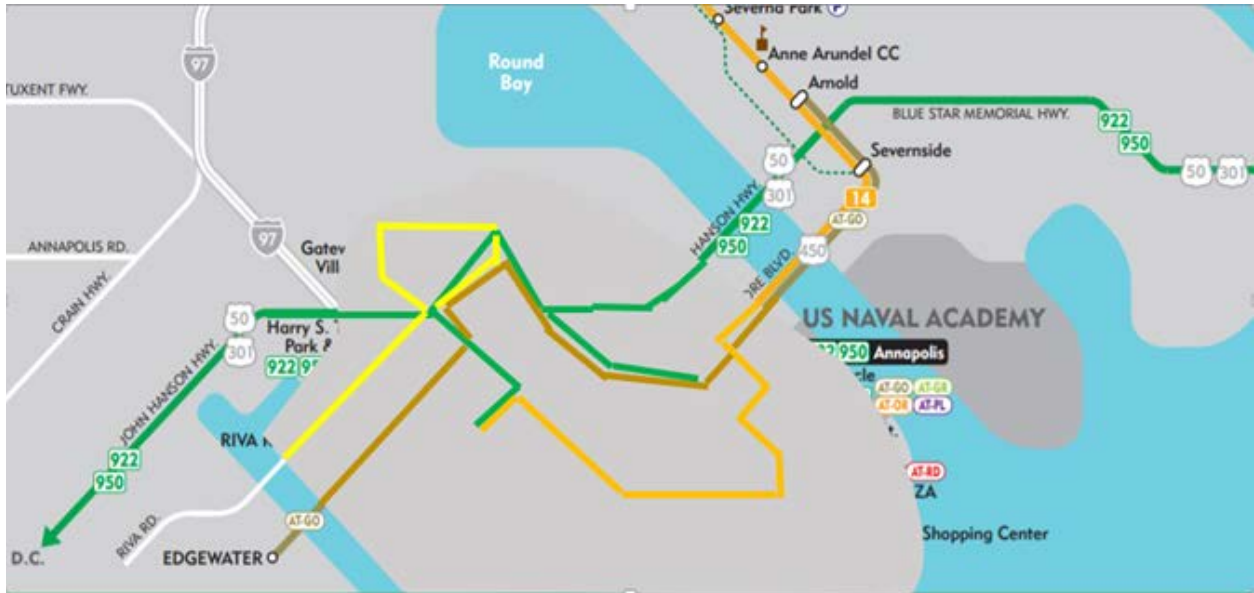
### Route Specifics

There are currently ten bus routes in Annapolis; seven serve Annapolis and three serve Anne Arundel County. Combining these transit systems reduces the amount of routes to four longer routes serving the entire region.

### Current Bus Routes



### New Merged Bus Routes



### Current System

Bus Route	Approx. Distance (miles)	Route Origin
Red	5.0	Annapolis
Purple	9.9	Annapolis
Orange	4.1	Annapolis
Green	5.0	Annapolis

Brown	3.3	Annapolis
Gold	6.7	Annapolis
Yellow	4.2	Annapolis
14	2.4	Anne Arundel
922 and 950	10.8	Anne Arundel

**Total: 51.4**

### Proposed System

Bus Route	Approx. Distance (miles)	Route Origin
Gold	6.5	Anne Arundel
Yellow	4.2	Anne Arundel
14	8.7	Anne Arundel
922 and 950	11.5	Anne Arundel

**Total: 30.9**

The proposed bus routes increase efficiency by saving 20.5 miles. On average, each bus runs its route 27 times per day Sunday through Friday and 11 times per day on Saturday. Therefore, the proposed bus routes save: 20.5 miles x 27 times per day, x 6 days + 20.5 miles x 11 times per day x 1 day = 3546.5 miles per week.

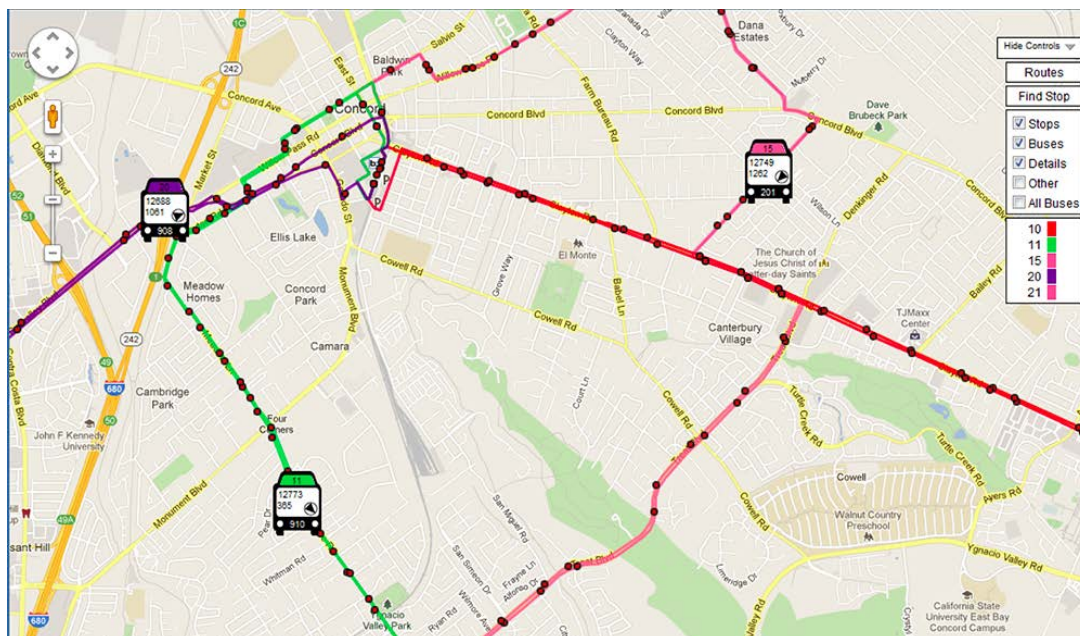
The average mass transit bus gets 2.96 miles to the gallon. Calculating 3546.5 miles per week at 2.96 miles per gallon shows that the proposed system saves approximately 1,198 gallons of diesel fuel per week. The average cost of diesel fuel in Anne Arundel County is \$2.40 per gallon. The proposed bus system will save approximately \$2,875.54 per week, and \$149,528.11 per year.

### Communication

Communication is a crucial component of a transportation system, especially during a consolidation. Fewer bus lines, buses covering increased distances, and fewer personnel to monitor are all results of combining routes. A more efficient communication system would result in a more uniform system.

The manager-to-driver ratios will increase significantly, with fewer drivers per manager. Managers will be able to maintain an increased presence in the routes they oversee, ensuring quality service. They will become more aware of what is happening on these routes on a daily basis. Issues can be identified and fixed more efficiently. Management would have an easier time running the transportation system.

With consolidated bus routes, one of the most important aspects of operation communications is driver-to-driver communication. Communication between drivers is critical to ensure the continued safety and operation of every vehicle and its passengers, as well as increasing efficiency. With a small margin of flexibility given to each driver, routes can be slightly altered in real time to avoid traffic, accidents, or road hazards caused by weather or other events. Drivers will be able to communicate to their colleagues and make them aware of incidents allowing each driver to make decisions that minimize the negative effect on a specific route. Additionally, in-bus vehicle locators will help drivers monitor other busses to ensure they are appropriately spaced. If drivers are unaware of other busses, they may end up too close, resulting in a massive efficiency loss as the second bus consistently encounters empty bus stops recently serviced by the leading vehicle.



The geolocation of each vehicle along its route.

With drivers able to monitor the other busses in real time, they can alter the time they wait at each stop to ensure the spacing remains constant. This is important during rush hour when busses cannot move as quickly between stops and need to remain at stops longer to board more passengers. With combined routes, efficiency is one metric critical to continued success.

One change both County and City transit routes that would further increase efficiency is the Thoreb C7 PT Communication System. The Thoreb C7 functions via an onboard computer on every transit vehicle that provides VoIP (Voice over Internet Protocol), for uninterrupted driver communication, which has surpassed standard radio frequency technology and also generates a display that shows drivers every other member vehicle's location. The operator home-base is the second piece of the system, and sends out both vocal and text communication to all bus drivers, either individually or in customizable groups. This feature is typically used to communicate emergencies, to report passenger numbers, and coordinate schedule adjustments for passenger overflow. A study in Tallinn, Estonia of this product shortly before its commercial release found that 84% of bus drivers and 90% of transit managers found the system had a positive effect on communication and that it improved driver awareness. Additionally, 90% of both drivers and managers believed the new system improved transit safety.

### **Personnel Cost Reduction**

Personnel reduction is a natural outcome of combining routes. Not are fewer drivers needed to service the newly combined routes, but the support staff will also be reduced to eliminate overlap. The dispatch facilities servicing the city and county will be combined into one.

The table below is the current staffing plan of Anne Arundel County and The City of Annapolis's Department of Transportation. (Details of the Anne Arundel Department of Transportation are estimated using past information. To estimate the size of Anne Arundel County, we used a ratio based on Anne Arundel and Annapolis ridership. We also assume the internal structure of Anne Arundel is similar to Annapolis.)

Department	Position	Salary (In Thousands)	Count	Sum
Annapolis	Bus Driver 1	\$43.00	14	602
Annapolis	Bus Driver 2	\$56.00	13	728
Annapolis	Director	\$132.00	1	132
Annapolis	Equipment 1	\$50.00	19	950
Annapolis	Equipment 2	\$56.00	6	336
Annapolis	Equipment 3	\$60.00	4	240
Annapolis	Facilities	\$80.00	3	240
Annapolis	Office Associate	\$49.00	8	392
Annapolis	Traning program	\$102.00	1	102
Annapolis	Transportation supervisor	\$54.00	3	162
Anne Arundel Country	Bus Driver 1	\$29.00	11	319
Anne Arundel Country	Bus Driver 2	\$28.00	10	280
Anne Arundel Country	Director	\$88.00	1	88
Anne Arundel Country	Equipment 1	\$34.00	14	476
Anne Arundel Country	Equipment 2	\$38.00	4	152
Anne Arundel Country	Equipment 3	\$40.00	3	120
Anne Arundel Country	Facilities	\$54.00	2	108
Anne Arundel Country	Office Associate	\$33.00	6	198
Anne Arundel Country	Traning program	\$68.00	1	68
Anne Arundel Country	Transportation supervisor	\$36.00	2	72

Using this data we can conclude that the City of Annapolis spends approximately \$2.5 million/year on transportation department salaries. Anne Arundel County spends approximately \$1.8 million. Between the two departments, there are about 120 employees. When these two organizations merge, they will retain the total ridership, but would be able to make cuts due to the overlap that would result.

The City of Annapolis has a ridership close to one million users; Anne Arundel county has a ridership just above a quarter million. A ratio of ridership-to-transit employees shows that each Annapolis employee serves 15.4 thousand riders and each Anne Arundel employee serves a just under 5,000 riders. With total ridership topping 1.3 million, a consolidated department can cut 26 employees and still keep the same ridership ratio as Annapolis on its own.

Each Department's director can better estimate the optimal ratio, but this proposal recommends a staff size between The City of Annapolis (15,400 riders/employee) and Anne Arundel County (4,600 riders/employee). Estimates show that the department can function well with a figure close to 13,000 riders/employee. This will mean cutting close to 31 employees.



Reducing the number of bus drivers for both departments will provide immediately significant cost savings. We also went through the rest of the staffing plan and cut positions where there was overlap as a result of the consolidation.

The table below shows the savings at a staff level of 13,000 riders/employee.

Department	Position	Salary (In Thousands)	Before	After	Change
Annapolis	Bus Driver 1	\$43.00	14	6	-8
Anne Arundel Country	Bus Driver 1	\$29.00	11	8	-3
Annapolis	Bus Driver 2	\$56.00	13	6	-7
Anne Arundel Country	Bus Driver 2	\$28.00	10	8	-2
Annapolis	Director	\$132.00	1	1	0
Anne Arundel Country	Director	\$88.00	1	0	-1
Annapolis	Equipment 1	\$50.00	19	14	-5
Anne Arundel Country	Equipment 1	\$34.00	14	12	-2
Annapolis	Equipment 2	\$56.00	6	6	0
Anne Arundel Country	Equipment 2	\$38.00	4	3	-1
Annapolis	Equipment 3	\$60.00	4	3	-1
Anne Arundel Country	Equipment 3	\$40.00	3	2	-1

These reductions will save the department \$1.4 million in salary expenses, with a staff reduced from 126 to 95 people. Additionally, capital costs will reduce over time as buildings and resources are combined, and the overall cost per employee decreases. We are unable to provide more specific details due to information restrictions.

### Additional Revenues

Annapolis Transit actively encourages businesses and organizations to place print ads on buses, and in bus shelters. After combining the transit systems, businesses can use the transit system to increase advertising efforts, creating a more highly visible medium to reach larger audiences of all ages, backgrounds and incomes. In this way, the transit system can increase revenues by reaching more riders during their commute, and by maximizing advertising on transit vehicles (interior and exterior), bus stops and terminals, and in local rail stations. Additionally, repartition of retail shops and re-layout of station facilities as a result of consolidation will optimize leasing revenue.

A combined the transit system can diversify its service. Fewer routes will reduce costs, and allows transit to prioritize linking affluent areas to the metropolitan centers with specialized routes. Targeted services will allow analysts to more accurately predict future ridership.

### Vehicle Maintenance and Depreciation

Understanding the life span of the buses, as well as their maintenance is crucial to running a successful operation. The industry standard for the life expectancy of a transit bus is 12 years and 250,000 miles. Once the buses reach their 12th year in service, they are auctioned for around \$2,500 to private operators. The transit system is then eligible for government funding to replace vehicles. By reducing the routes from ten to four and reducing the number of busses, the operation becomes much more efficient.

Previously, ten routes operated with two buses per route, for a total of 20 buses. A consolidated system of four routes with three buses per route operating with two shifts per bus only requires 12 buses, 60% of the former equipment requirement.

In terms of distance traveled, each route is 30.9 miles. Each bus will cover 61.8 miles daily, and 22,557 miles yearly. During a bus's final (12th) year, it will reach the maximum of 250,000 miles just in time to be replaced. This is the optimal efficiency as the bus is being auctioned at its required time with its maximum allowed mileage.

With an increased distance per route, each vehicle will require additional maintenance, and more frequent fuel refills. According to a 2008 study by the American Automobile Association the cost of gas and oil, maintenance and tires for buses are \$0.1777 per mile, which comes out to \$4,008.38 a year per bus. For all 12 buses, this comes to \$48,100.56 per year.

In conclusion, our proposal begins to outline the baseline considerations to determine that a combined City of Annapolis and Anne Arundel County transit system can run as a more efficient organization by reducing overlapping route coverage, and eliminating redundant roles within each entity. The new combined transit system will emphasize targeted coverage, increased efficiency through advanced technology, and minimizing redundancy.

## Parks and Recreation Case Analysis

Nazar Bedi, Laetitia Beyegue, Ray Joyce, Kaushik Nagarur, Mohamed Nur, Abhinav Saraogi

### Introduction

Anne Arundel County is home to one of the most complex systems of parks in the United States. There are ten regional parks, gardens, and sanctuaries, encompassing over 5,300 acres with access to waterfront for fishing, boating, and viewing. There are also two swim centers, two golf courses, two outdoor ice rinks, two recreation centers, and a baseball and softball complex. The county boasts 58 cultural and historic sites and over 100 community parks.

In total, Anne Arundel county parks occupy over 10,860 acres of land, including close to 159 miles of trails, which also accounts for some shared areas with the City of Annapolis. Over 12,800 acres are governed by the U.S. Fish and Wildlife Service, which maintains biological diversity and protects native and migratory bird species.

The City of Annapolis has 40 parks and facilities on over 200 acres. These include two sports complexes, access points for boating, and three recreation or community centers. About a third of the City's open spaces have water access, while over half have water views. The Colonial Annapolis Maritime Trail, designed for bicycle and pedestrian use, is a 19-mile system. The City is currently following its 2009 Comprehensive Plan recommendations to enhance and increase park space and pathways to meet population growth and greater demand. The Plan's three policy recommendations for parks are enhancing the existing park system, completing the network of pedestrian and bicycle pathways, and expanding the park system to serve underserved areas.

Currently, the city is facing a crisis in regards to its park system. There is a lack of available, vacant land as well as outdated infrastructure, an increased demand for recreational activities, and a decrease in federal funding. The loss in federal funding combined with the increase in costs has caused a financial burden for the city.

In Anne Arundel County, the non-city debt for FY17 was \$4,562,300. Due to the county's amount of debt, there is a high possibility that they might not be able to engage in the expansion and improvement to meet public demand.

Currently the city and county operate their parks and recreation departments separately but there is a proposal to merge the county and the city departments. In the course of this paper, we will analyze the costs and benefits of merging the two departments.

### Merger

Our proposal is to initiate a merger of the Anne Arundel County Recreation and Parks and Annapolis Recreation & Parks, based on a cost-benefit analysis. According to research, the total cost for Annapolis to maintain the Recreation & Parks is roughly \$3.6 million annually. A large portion of this is salaries. This is a common theme seen across counties or districts, with some areas attributing 50% of expenditure costs to labor and salaries.

That being said, the merger's main driver will be the synergies achieved from reducing staff. Our proposal would eliminate the City positions of Director, Sports Supervisor, Program Supervisor, Parks

Administrator, Front Desk Supervisor, Foreman, maintenance workers, and Recreation Leader for an annual salary savings of \$413,413.

For example, instead of the county and City each having a Director, these two positions become a single Director who oversees the entire park system. This will allow the county and Annapolis to reduce spending on salaries.

We also propose combining the three supervisor/administrator positions directly beneath the Director, so one individual will handle each position across the county and City. To help alleviate the additional workload brought about by reducing these positions, two assistant positions and one supervisor position would be added.

This means our annual savings is now \$289,413. Next, we removed the Front Desk supervisor because as technology improves this position will slowly die out. We suggest the eliminating the Foreman position because the current position and workload can be redistributed amongst other individuals. The Recreation Leader II position can also be removed because the job functions can be divided between both Recreation Leader I positions. We also reduced maintenance workers from eight to five because the City has too many maintenance workers per acre.

To alleviate some of the workload and help out the directors, two assistant positions will be added. Furthermore, we added one Maintenance supervisor to oversee all of the parks in Annapolis. This reduces the expenditure for Annapolis to \$3.3 million, approximately.

As of 2015, Anne Arundel County spends approximately \$13.8 million annually to maintain parks and recreation centers. The county earns an annual revenue of approximately \$9.4 million, and has a population of 564,000 residents. The revenue per capita is approximately \$16.70 and the expenditure per capita, as of 2015, is \$24.45. This results in a gross loss of \$7.75 per capita annually. Although this is not a great metric, the City of Annapolis fares much worse. Current data suggest the gross loss per capita is \$51 in Annapolis.

By merging resources, the combined expenditure will be \$17.1 million annually (after synergistic cost-cutting measures) and the combined revenue will be approximately \$11.1 million annually. This results in a gross loss of \$10.02 per capita, for the combined City and county resources. Although this is a 29% increase for the County, the proposed merger results in an 80% reduction in gross loss for the City. Additionally, as this new entity begins to maximize efficiency, further cost-cutting measures can be implemented to reach a break-even and profitability point in the future.

## **Restructuring**

Prior to the proposed merger, Anne Arundel County and the City of Annapolis had redundant positions in their Parks and Recreation divisions that could easily be consolidated. The first step in this consolidation would include removing the Recreation and Parks Director of Annapolis from under the City Administration, and moving the position to the County's jurisdiction. This shift is cost effective and one person is capable of handling the job. Each position in Annapolis under the Recreation and Parks Director would also be moved to the County's, with the exception of the Harbormaster, which should remain under City Administration as the harbor is unique to Annapolis.

Moving these positions to the County would cut costs further by placing one person in a job instead of multiple individuals. The City of Annapolis also employs a Sports Supervisor, Parks Administrator, and Program Supervisor. Anne Arundel County has its own Recreation Administrator and Parks Administrator, as well as two Program Specialists. Combining the city and county resources can consolidate those positions into a single Sports and Recreation Administrator, Parks Administrator, and team of two Program Supervisors.

Because this merger proposes eliminating higher-level managerial positions, the workload for remaining administrators will likely increase as they become responsible for a larger area of park space. To mitigate this, we also propose hiring assistants to work with these administrators to alleviate the workload burden. The Sports and Recreation Administrator and the Parks Administrator would each get an assistant to assist with daily tasks that may require additional personnel. Since there are already two Program Supervisors, they will be able to manage their work without an assistant. Since these assistant level positions are lower-paid than administrator positions, costs would still be reduced through salary reductions by removing redundant administrator positions and replacing them with assistant positions.

In addition to eliminating the managerial positions, we also propose reducing the number of maintenance workers. Currently, the City employs eight maintenance workers for approximately 200 total acres of park space, making each city maintenance worker responsible for 25 acres. Anne Arundel County has over 7,000 acres of park space, and employs 10 maintenance workers, resulting in a ratio of approximately 700 acres per maintenance worker. This discrepancy can be adjusted by reducing the 18 total maintenance workers across the city and county to 15, resulting in a ratio of 480 acres of park space per maintenance worker. We also propose creating a new position, Maintenance Supervisor, to oversee the 15 maintenance workers to ensure that the appropriate maintenance work is being performed (see Figures 1, 2, and 3).

### **Additional Cost Savings**

This project assumes a few key data points to analyze and summarize the cost savings of consolidation between Anne Arundel County and Annapolis City. Initially, we assumed that as government employees, workers would receive a phone credit in the line of \$40 per month for job-related telecommunications. Next, we assumed that each employee has access to a desktop computer, with an average cost of close to \$500. These are direct costs necessary to establish since they vary with the number of workers. Sharing computers is not feasible and to save money we would have to get rid of the entire desktop.

Additionally, we assumed that miscellaneous items such as pens, papers, staplers, calendars, planners, notebooks would have a yearly cost of \$100 per person. Each office makes an investment in set up, including chairs, desks, sofa, shelving, with fixed costs estimated to be close to \$1,000. These expenses remain constant across the city and County since most procurement is done via the internet and the cost is standard, regardless of the location of the two offices.

After researching public offices in the city, we noticed that the average office space was in the range of 2,000-3,000 square feet. For this analysis, we assumed that the average public office in the city would be close to 2,400 square feet (see Appendix for sample office floor plan). The city of Annapolis demands a higher premium due to the scarcity of office space and overwhelming demand due to growth in the retail sector, and the rates per square foot are \$25. Offices in the city would be close to \$60,000, which could be saved entirely through consolidation.

Analyzing the county, the public office area was very similar to city data. Since the office can be located anywhere across the county and there is adequate space, the per square foot rate could be close to \$18. Assuming one county building for all its employees, cost for the entire year would be \$43,200. Comparing the city and the county, we observe a \$16,800, or a 28%, cost savings assuming the same amount and type of office space in the two different locations.

The group also analyzed the financial aspects of the merger. If the city and county consolidate their office space, instead of maintaining a more expensive office in the city, the current 2,400 square feet can be upgraded to 3,000 square feet in the county. With the county rate of \$18 per square foot new offices would cost \$54,000. This new cost represents a consolidated space following the merger of city and county office resources and a 48% cost savings--\$49,000 rather than \$103,200. (Note: the analysis assumed a combined office space of 3,000 square feet to accommodate new positions and that each employee would require approximately 300 square feet of office space.)

### **Conclusion**

The proposed merger of the Anne Arundel County and the City of Annapolis Recreation and Parks departments would reduce costs from salaries, office space, office supplies, and more.

After the cost-benefit analysis, we found that the city of Annapolis spends about \$3.6 million to maintain its department. With a merger, the city will spend \$3.3 million in the coming financial year. To decrease this expenditure, we proposed eliminating the positions of Director, Front desk supervisor, Foreman, three maintenance workers, and Recreation Leader II, which would lead to savings of \$413,413 annually.

Eliminating positions may stress remaining workers with more responsibilities and so two assistant positions and one maintenance supervisor position are proposed. The assistant positions will give each administrator the help they need to create successful and more innovative activities for the community. The proposed merger would also combine some City and County positions. This would result in a Sports and Recreation Administrator, Parks Administrator, and two Program Specialists. These positions will help ensure that the need for more recreation activities is met in both the City and County. With the elimination of some positions and the addition of three positions, Anne Arundel County and the City of Annapolis will be able to save substantially on salaries.

Not only, will there be annual savings in salaries, but there will also be a chance to reduce costs in upkeep of two department offices by expanding the office space in Anne Arundel County to serve as the office for employees after the proposed merger. That additional revenue can be used to partially alleviate both departments of their debt. As expenditures continue to decrease, the City of Annapolis will be able to complete its pedestrian and bicycle pathways, enhance their current park system, and expand the park system to serve underserved areas.

## **Appendix**

**Figure 1 County Employment Structure**  
**Insert from original**

## **Figure 2 City Employment**

Annapolis Recreation & Parks Staff:

Recreation Leader I: 2

Parks Administrator: 1

Recreation Maintenance Worker: 8

Park Foreman: 1

Stanton Center Rec Manager: 1

Director of Recreation & Parks: 1

Recreation Program Supervisor: 1

Recreation Sports Supervisor: 1

Recreation Leader II: 1

Recreation Office Administrator: 2

Marketing Coordinator: 1

Facility Supervisor: 1

Front Desk Supervisor: 1

## **Figure 3 New Merged Structure**

**Insert from original**

New Positions: Marketing Coordinator: 1, Harbor Master: 1, Deputy Harbor Master: 1, Assistant Position: 2

## **Data on Cost Savings**

**Insert from original**

## **Figure 4 Sample Floor Plan**

**Insert from original**

## **Figure 5 Cost Structure**

**Insert from original**

## **Data on Annapolis City Lease Rates**

<http://www.capitalgazette.com/cg2-arc-acd757a8-3685-5214-8111-490734693db3-2013-0705-story.html>

## **Data on Anne Arundel County Lease Rates:**

[http://www.loopnet.com/Maryland/Anne-Arundel-County\\_Office-Space-For-Lease/](http://www.loopnet.com/Maryland/Anne-Arundel-County_Office-Space-For-Lease/)

## Combined Fire Department Services

Charles Cadiz, Ashley Mason, Lucas McGrath, Rakesh Poojary, Daniel Riordan, Claire Zhang

### Introduction

Home of the state capital, its oldest university, and the region's largest airport, with borders defined by the Chesapeake Bay and two major rivers, Anne Arundel County and its seat of Annapolis are among Maryland's most important political, economic, and cultural crossroads.

The Anne Arundel County Fire Department currently operates 21 Advanced Life Support units, nine Basic Life Support units, 28 engine companies, three Quint companies, nine ladder companies and five squad companies. Other segments of the department include the Office of Emergency Management, Fire & EMS Training, Fire Marshal Office, Communications and Logistics Division. (Anne Arundel County)

As the County grew, so did the demand for emergency services and the department has developed into one of the premiere combination fire departments in the nation. Anne Arundel County operates 30 fire stations staffed by over 800 career and 450 volunteer firefighters and EMS personnel. All personnel are nationally certified at their rank in accordance with National Fire Protection Association standards. The department proudly serves a population in excess of 500,000 residents. According to the 2005 U.S. Census updates, Anne Arundel County is one of the most populated jurisdictions in the nation, ranked 114 out of 3,141 U.S. counties. (Soundoff)

To help create a more sustainable community, we will consider the cost savings from budget reallocations in combining Fire Department services from Anne Arundel County and the City of Annapolis. To make these much needed changes efficiently, this proposal is directed to Allan Graves, the current Chief of the Anne Arundel County Fire Department. We are proposing a three-phase plan and this proposal outlines service combination along with the improvement and cost savings on personnel, equipment and other sources (office supplies, contract services, etc.).

### Cost Savings on Changes

#### 1. Materials and Supplies

Anne Arundel County has approved a \$4,307,100 budget for 2017 to cover the expenditure of supplies and materials. With 31 fire stations in the county, the estimated allotted budget per fire station is about \$138,938.71 for 2017. Based on this estimation, this proposal aims to minimize the



county expenditures for fire department supplies and materials to save funds and use them for future projects.

To successfully obtain this outcome, the county could consider shutting down and realigning station service boundaries. For instance, fire company 38 and fire company 40, West Annapolis are just 2.5 miles apart. One of them can be shut down. By eliminating one of the fire stations, the county could save \$138,938.71, which would also decrease other budget items such as capital outlays, maintenance, payroll, department supplies, and so forth.

Moreover, combining fire departments could potentially lead to savings through decreased supply prices from retailers; a second approach that the county should consider. Under the aforementioned proposal, the combined department would be able to purchase a much greater volume of supplies in a single transaction. However, this would only be realized if supplies were bought in bulk centrally and then distributed to stations. In practice this may prove impractical due to the varying operational needs of each station. Subsequently, it may prove more appropriate to instead continue to provide each station with funding to be used at the Bureau Deputy Chief's discretion.

## **2. Equipment**

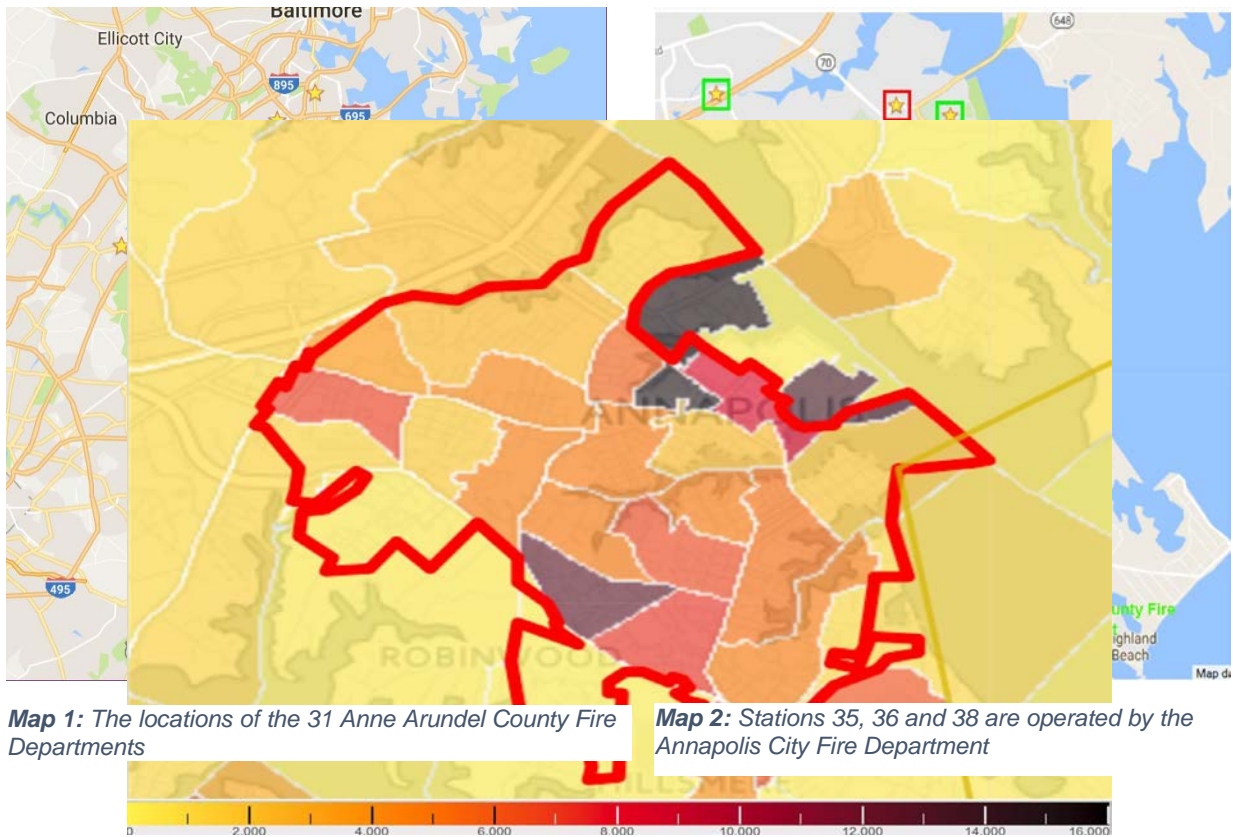
Savings may also arise from sharing equipment. For example, there are likely many pieces of training equipment in the inventory of both the city and county departments. The average cost of a firetruck is about \$450,000, a ladder truck is about \$ 900,000. The training Academy in Millersville, MD provides training, education, and certification to fire personnel. Under a combined services scheme, less equipment would be required to train the same number of new recruits. Also, it is likely that both the city and county departments currently own pieces of equipment that are rarely used, but are still vital to the station's inventory. By combining services, duplicate equipment could be removed from the budget.

As mentioned earlier, this proposal also outlines the importance of minimizing the costs of unnecessarily replacing equipment or inefficiently buying new stock. It is likely that a combined department would more efficiently allocate new capital, and that cheaper prices could be secured through centralized, bulk purchases of new equipment. The 2017 budget for supplies and materials is \$4,307,100. In 2016, the estimated budget was \$3,666,200 and the county has 31 fire stations each costing \$104,748. Combining with the city's fire department can also eliminate the firetruck usage. In some areas with a population less than the county average, stations can be merged.

Comparative Statement of Expenditures

General Classifications of Expenditure	Actual FY2015	Original FY2016	Estimate FY2016	Budget FY2017	Inc (Dec) from Orig.
<b>Fund</b>					
General Fund	102,673,350	104,360,900	105,317,600	105,566,600	1,205,700
Grant Fund-Fire Dept	4,154,215	1,640,500	1,126,400	3,450,100	1,809,600
Video Lottery Local Impact Aid	7,000,000	5,898,000	5,898,000	6,898,000	1,000,000
Total by Fund	113,827,566	111,899,400	112,342,000	115,914,700	4,015,300
<b>Character</b>					
Planning & Logistics	29,145,295	27,220,900	27,253,800	31,163,600	3,942,700
Operations	83,237,355	82,925,100	83,402,700	84,751,100	1,826,000
Emergency Management	1,444,915	1,753,400	1,685,500	0	(1,753,400)
Total by Character	113,827,566	111,899,400	112,342,000	115,914,700	4,015,300
<b>Object</b>					
Personal Services	92,913,489	94,462,700	95,082,600	97,576,600	3,113,900
Contractual Services	10,295,948	9,872,400	10,093,400	9,634,600	(237,800)
Supplies & Materials	3,136,001	3,962,400	3,666,200	4,307,100	344,700
Business & Travel	165,950	165,500	95,500	115,100	(50,400)
Capital Outlay	6,053,362	2,768,400	2,894,300	3,613,300	844,900
Grants, Contributions & Other	1,262,816	668,000	510,000	668,000	0
Total by Object	113,827,566	111,899,400	112,342,000	115,914,700	4,015,300

3. Personnel:



**Map 3:** The population density for each area of Annapolis. When compared to Map 2, it is clear to see that the fire stations are operating in efficient areas of the city.

Sta	Engine	Truck	HD Rescue	Special Units	Medic	Address
35	Engine 35			Tanker 35, Battalion Chief 35	Medic 35	1790 Forest Drive
36	Engine 35	Truck 36			Medic 36	916 Bay Ridge Avenue
38	Engine 38	Tower 39	Squad 38		Medic 39	620 Taylor Avenue

**Figure 1:** Some of the basic equipment operated by each of the three Annapolis City Fire Departments.

## Cost Saving Proposals

### 1. Merging Station 38 and the Naval Academy Station

The Naval Academy has its own fire department less than one mile from Station 38, which is the most heavily outfitted department in Annapolis. Usually there are fire departments on military bases to serve a particular bases' mission. For example, Joint Base Andrews flies multiple types of aircraft, including fighters, tankers and helicopters and is required to have a fire department equipped for a runway emergency. The Naval Academy, however, has no such need for its own department since it does not have high risk operations occurring on the grounds. Despite this lack of risk, the academy employs a Fire Chief, Training Chief and two Battalion Chiefs, employees who could as easily complete their duties working at Station 38.

We understand the difference between military firefighters and civilian firefighters, but the help that the military personnel and equipment could supply to Station 38 would be significant. Not only would it help save lives off Academy grounds, it would also not endanger the lives of the midshipmen and other Academy personnel. The response time change to a fire on Academy grounds from station 38 is minimal with the distance between the two stations is less than one mile.

### 2. Increased efforts to improve volunteer participation

This proposal recommends continued efforts to increase the number of volunteer firefighters in the city. Within the city of Annapolis, the most basic full-time position available at a station is classified as Firefighter II. Within the station hierarchy, this role requires the least qualifications and commands the lowest pay.

Currently, the requirements to fulfill this role include a high school degree, and some basic training in fire safety procedures and the operation of heavy equipment. The duties conducted by these

personnel, and the above requirements needed for the role, could easily be achieved through the use of volunteer personnel.

For this reason, we recommend that the City Fire Department attempts to increase volunteers by approximately 200 people in the next year. Rather than allocating additional funding toward a recruitment drive, we believe this goal could be met through increased community interaction, information sessions and other public events. These events would be operated and advertised by currently serving fire fighters in their spare time.

## **Savings Arising from Each Proposal**

### **1. Merging Station 38 and the Naval Academy Station**

The proposal to merge Station 38 and the Naval Academy Station would involve closing the Naval Academy Fire Department and relocating some Navy personnel to Station 38. The total funding allocated in 2017 toward the Fire Department in Anne Arundel County is proposed at approximately \$105.5 million. Split among the county's 31 stations located, this equates to an average funding of \$3.4 million per station. Even after accounting for the additional costs of stationing Navy personnel at Station 38, this proposal should lead to savings of over \$3 million.

Furthermore, additional savings could be generated if the DOD agrees to provide additional funding toward Station 38, since it now would be serving military property. This means that the city would not have to pay all of the costs of equipment upkeep and operation because the DOD would also have an interest in keeping them functional. Also, this rearrangement of personnel and equipment would allow for further distribution of trucks and firefighters around Annapolis. As shown in Figure 1, Station 38 has more trucks than any other station in the city. The addition of the Navy trucks would allow the city to move its trucks to stations that are currently sharing engine 35. If the additional engine was not needed by Stations 35 and 36, the city could get rid of it and save approximately \$450,000.

### **2. Increased efforts to improve volunteer participation**

Of the additional 200 volunteers that would be recruited, it would be hoped that each could work at least one full day per week. This would equate to the saving of approximately 40 current firefighters if it is assumed that workers currently work a standard 5-day week.

Currently, the Fire Fighter II role commands a minimum annual salary of \$39,418. Using this as a conservative figure, this measure would save the city approximately \$1.6 million dollars per year in staffing costs. While laying off staff is always unpopular, Figure 2 shows that a reduction of 40 full-

time Fire Fighter II positions would only translate to a decrease in total full-time staff by less than 5% and less than 14% of total Fire Fighter II personnel.

**Fire Department  
General Fund**

**FY2017 Approved Budget**

**Personnel Summary - Positions in the County Classified Service**

Job Code - Title	Plan	Grade	FY2015 Approved	FY2016 Request	FY2016 Approved	FY2016 Adjusted	FY2017 Budget	Variance
0212 Office Support Assistant II	OS	4	2	2	2	2	2	0
0213 Office Support Specialist	OS	6	4	4	4	4	3	-1
0223 Secretary III	OS	6	4	4	4	4	4	0
0224 Management Aide	NR	12	3	3	3	3	3	0
0242 Management Assistant II	NR	17	2	2	2	2	2	0
0265 Program Specialist I	NR	15	2	2	2	2	2	0
0266 Program Specialist II	NR	17	1	1	1	1	1	0
0711 Storekeeper I	LM	4	2	2	2	2	2	0
0716 Warehouse Manager	NR	14	1	1	1	1	1	0
1305 Comm Systems Support Specialis	NR	13	1	1	1	1	1	0
1400 Fire Communication Operator	LM	10	9	9	9	9	9	0
1402 Fire Fighter II	F	1	283	301	301	354	306	-48
1403 Fire Fighter III	F	2	166	150	150	155	160	5
1404 FF Emergency Med Tech-Intermed	F	3	23	25	25	26	24	-2
1405 FF Emergency Medical Tech - PM	F	4	192	188	188	181	184	3
1411 Lieutenant	F	5	136	136	136	136	136	0
1421 Fire Captain	F	6	33	33	33	33	33	0
1431 Fire Battalion Chf	F	7	17	17	17	17	17	0
1441 Fire Division Chief	F	8	8	8	8	8	7	-1
1451 Fire Deputy Chief	F	9	2	2	2	2	2	0
1461 Fire Inspector	LM	12	3	3	3	3	3	0
2023 Automotive Mechanic III	LM	11	2	2	2	2	2	0
<b>Fund Summary</b>			896	896	896	948	904	-44
<b>Department Summary</b>			896	896	896	948	904	-44

*Figure 2 County Fire Department staffing*

**Savings from Other Areas**

**1. Supplies**

The county and city fire departments have approved operating supplies budgets of \$719,600 and \$285,142.44 respectively. The office and field supplies for both the county and city fire departments are roughly the same. Therefore, the supplies budget for both county and city departments could be combined into a single budget of \$1,004,742.44. The city fire department also receives a grant that deducts \$71,745.00 from their supplies expenditure. If this is applied to the new supplies budget, the departments would have a combined budget of \$932,997.44. Any grants to the county fire department for supplies and materials will also be subtracted from the combined budget. This method transfers some of the savings from funds granted to one branch's fire department to the other.

Combining the purchase of operating supplies will also result in savings from buying in bulk. If some of the supplies for both the county and city fire departments are purchased from the same supplier, there is potential savings from buying the supplies in bulk. Bulk purchasing for both branches should be done for supplies used by all branches, which will allow a sufficient inventory of supplies while also getting a better value (consumer surplus). Savings would be realized on future budgets because supplies bought in bulk will lower the overall expenditure on operating supplies.

## **2. Contract Services**

The county and city fire departments can also combine their budget for contract services. The departments have approved 2017 budgets for contract services of \$310,618 and \$829,900, respectively. The combined budget for both departments would be \$1,140,518. The city receives grant funding for contract services amounting to \$221,518. If this grant plus any county grants are subtracted from the combined budget, the new proposed budget for the branches would be \$919,000. Combining these budgets could save expenditures on these services. If both branches receive services from the same companies, they will gain bargaining power and could save even more. Most contract services should be equivalent in both the city and county. Therefore, both could benefit from using the same company, as it could result in lower costs for both branches.

## **Conclusion**

Every twenty seconds, a fire department responds to a fire somewhere in the United States. Once a minute, a fire occurs in a structure (National Fire Protection Association). With annual multi-billion-dollar property damages and thousands of lives lost every year, fire safety is growing priority. To combat these statistics and to create a fire safe and sustainable community, our proposal offers effective collaboration and budgeting plans that will increase productivity and efficiency.

By restructuring salaries, positions, volunteering opportunities, and the cost of supplies, we can enhance service. Our plan analyzes the benefits that the reallocating funds will have on the effectiveness of service delivery. Advocacy for encouraging people to volunteer will benefit not only the budget, but also the community by exposing them to useful opportunities and training. By combining specific resources and eliminating ones that waste funding, we can save more lives.

## **References**

Anne Arundel County, *Fire Department* (2016)

<http://www.aacounty.org/departments/fire-department/about-us/index.html>

National Fire Protection Association, (2015 March) *Fire Analysis and Research Division*.

<http://www.nfpa.org/research/reports-and-statistics/fires-in-the-us/overall-fire-problem/trends-and-patterns-of-us-fire-losses>

NSA Annapolis Fire Department, CNIC, Naval Support Activity (2016)

[http://www.cnic.navy.mil/regions/ndw/installations/nsa\\_annapolis/om/fire\\_and\\_emergency\\_services.html](http://www.cnic.navy.mil/regions/ndw/installations/nsa_annapolis/om/fire_and_emergency_services.html)

Schuh, Steven (2016). Approved Current Expense Budget and Budget Message (FY 2017). Anne Arundel County, Maryland

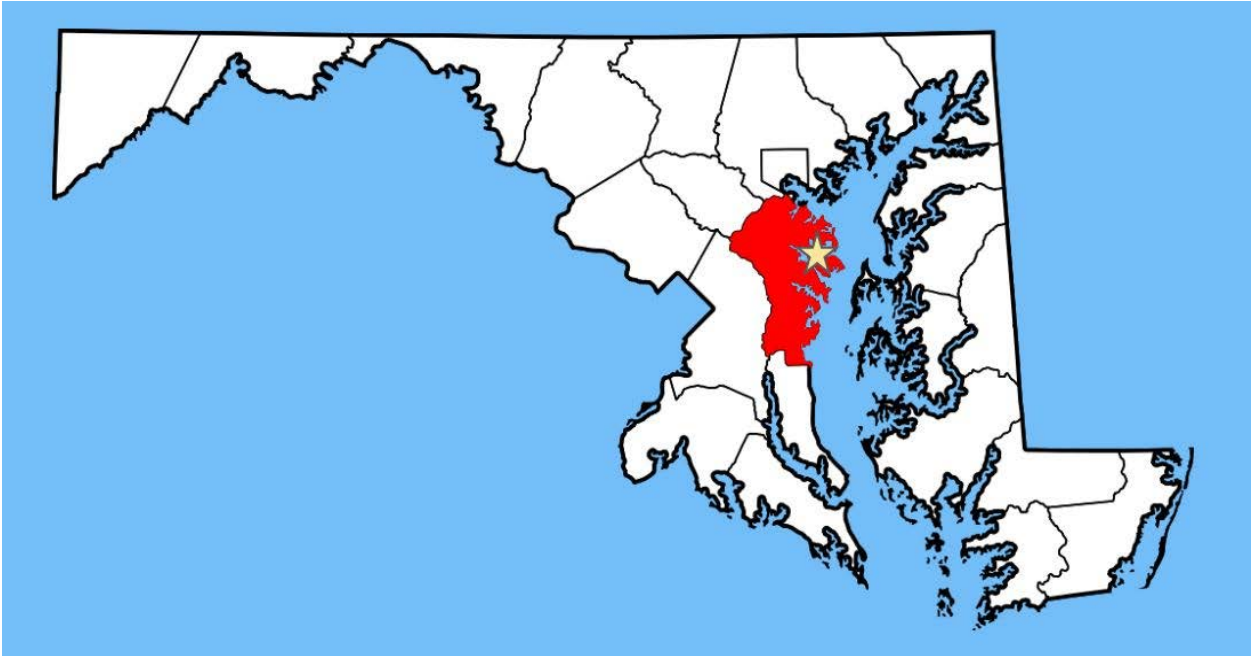
<http://www.aacounty.org/departments/budget-office/forms-and-publications/fy-2016/FY2016%20Approved%20Current%20Expense%20Budget%20and%20Budget%20Message-Reduced.pdf>

Soundoff (2008)

<http://www.ftmeadesoundoff.com/news/5426/dod-pro-patria-awards-presented-anne-arundel-county-fire-department-summit-solutions/>

**Public Works and Utilities**

Xiaoyou Chen, Othniel Kamassee, Ryan Joyce, Alexander Roos, Miles Welch





## Overview

Public Works and Utilities departments plays an integral role in municipal day-to-day operations. In Anne Arundel County it is responsible for the managing the county's highways, utilities, waste, as well as capital projects. Annapolis Public Works divides its core responsibilities up slightly differently (see chart on following page).

Anne Arundel County is Maryland's 4th largest with over 550,000 residents. The city of Annapolis, which lies within the county limits, has roughly 39,000 residents. Both the county and city's coastal geography play a vital role and present unique challenges to the public works departments. For example, stormwater management is extremely important because of the area's low elevation and its abundance of wetlands.

From an equipment perspective, combining the resources of Anne Arundel County and the City of Annapolis is cost effective and environmentally friendly. Combining and reducing personnel, while focusing on ratios of outward-facing personnel to service needs, increases efficiency and minimizes salary expenditures on employees with overlapping responsibilities.

The following proposal details a plan for combining specific public works and utilities services between Anne Arundel County and the City of Annapolis and includes a structure of what a combined department would look like. The analysis includes comparisons between Anne Arundel County and the City of Annapolis and Baltimore County and the City of Baltimore.

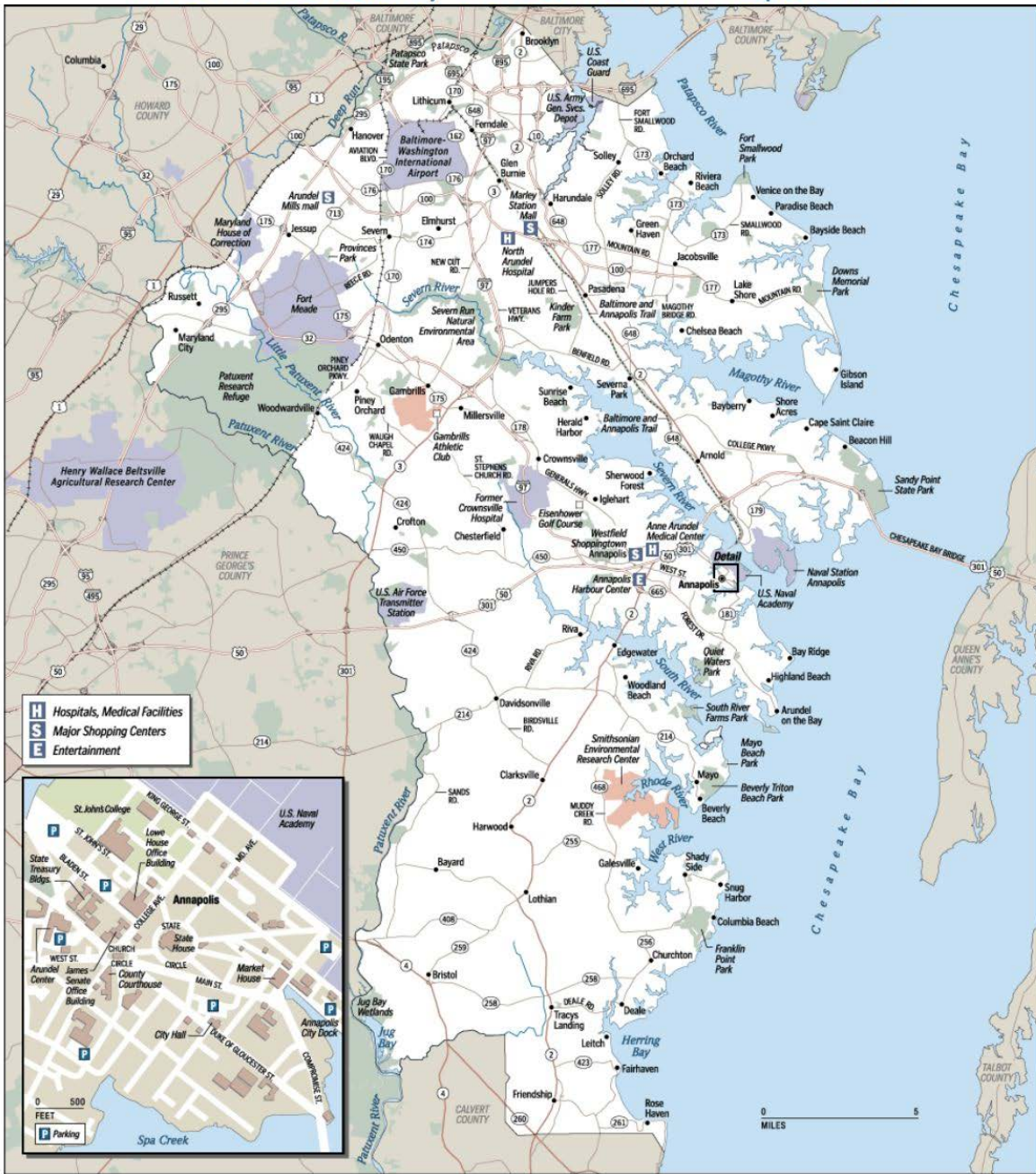
<b>Anne Arundel County</b>	<b>Annapolis City</b>
<p>Comprises 4 Bureaus.</p> <ul style="list-style-type: none"> <li>➤ Bureau of Engineering, responsible for <ul style="list-style-type: none"> <li>○ Roadway upgrades</li> <li>○ Solid waste facilities</li> <li>○ Landfill infrastructure</li> <li>○ Police and fire infrastructure</li> <li>○ Stream restoration</li> <li>○ Stormwater management infrastructure</li> </ul> </li> <li>➤ Bureau of Highways, responsible for <ul style="list-style-type: none"> <li>○ Maintenance activities associated with the County's 6,715 roads or approximately 1,825 centerline miles of the county's roadway system</li> </ul> </li> <li>➤ Bureau of Utility Operations, responsible for <ul style="list-style-type: none"> <li>○ Water distribution</li> <li>○ Wastewater collection</li> <li>○ Stormwater management</li> </ul> </li> <li>➤ Bureau of Waste Management Services, responsible for <ul style="list-style-type: none"> <li>○ Curbside collection</li> <li>○ Yard waste</li> <li>○ Recycling</li> <li>○ Operation of the Millersville Landfill</li> <li>○ Operation of County's recycling</li> </ul> </li> </ul>	<p>Divisions:</p> <ul style="list-style-type: none"> <li>➤ Administration</li> <li>➤ Engineering and Construction Services</li> <li>➤ Streets</li> <li>➤ Snow and Ice Removal</li> <li>➤ Traffic Control and Maintenance</li> <li>➤ Fleet Maintenance Center</li> <li>➤ Facilities/General Government Buildings</li> <li>➤ Water Supply and Treatment</li> <li>➤ Water Distribution</li> <li>➤ Annapolis Water Reclamation Facility</li> <li>➤ Wastewater Collection</li> <li>➤ Stormwater Management</li> <li>➤ Solid Waste</li> <li>➤ Curbside Recycling</li> <li>➤ Market House</li> <li>➤ Sidewalk</li> </ul>

**Goals**

In restructuring public works and utilities services, the proposal is focused on two goals.

1. Reduce costs by combining personnel and services of public works and utilities delivery in Annapolis and Anne Arundel County.
2. Reduce equipment spending by combining use and reducing equipment used on overlapping areas of the City and County.

## Anne Arundel County with Downtown Annapolis Inset



Source: Washington Post

## Highways, Roads, and Bridges

The Anne Arundel Bureau of Highways is responsible for all maintenance associated with the county's 6,715 roads (approximately 1,825 centerline miles). The Bureau of Highways is organized into four divisions: Administration, Road Operations, Infrastructure Management, and Traffic Engineering.

### Department of Public Works Bureau of Highways

FY2017 Approved Budget

#### Program Statement

Highway Administration – plans, designs, administers and provides budgetary oversight of all activities related to road and drainage maintenance within County rights of way, and all programs within the bureau.

Pavement Maintenance – manages the inventory, inspection and program development for maintenance of the County's highway infrastructure. Performs, through management of both contractual and County forces, various patching, sealing, surfacing and road construction activities.

Roadside Maintenance – maintains drainage, safety, appearance, shoulders, mowing, trimming, cutting or removing vegetation to eliminate safety hazards and control impediments to visibility, road sweeping, and litter pickup. Also repairs and upgrades guardrail, concrete curb, and sidewalk.

Storm Water Maintenance – manages the inventory, inspection and program development for maintenance of the County's storm drain/storm water infrastructure. Activities to include pipe cleaning and repair, machine cleaning drainage structures, and ditch cleaning by hand and machine.

Other Programs – manage snow and ice control operations, streetlights, County participation in State gypsy moth control, right of way management (space permit program), weeded lots, and work for others.

Support Services – performs regular maintenance and minor repairs, paints and services equipment, and maintains road districts buildings and grounds.

Traffic Engineering – provides technical analysis of the County's road network, evaluating the need for new signals through traffic counts, and the resolution of neighborhood traffic control problems.

Traffic Maintenance – manufactures and installs all street name and traffic signs, and maintains all pavement markings and traffic signals.

#### Budget Summary

General Class of Expenditure	Actual FY2015	Original FY2016	Estimate FY2016	Budget FY2017	Inc (Dec) from Orig.
<b>Fund</b>					
General Fund	34,162,539	25,975,100	31,252,200	27,965,400	1,990,300
Watershed Protectio	4,930,897	4,923,000	4,813,900	4,695,800	(227,200)
Total by Fund	39,093,436	30,898,100	36,066,100	32,661,200	1,763,100
<b>Object</b>					
Personal Services	16,119,435	15,604,800	15,857,200	16,061,500	456,700
Contractual Services	16,536,397	12,011,100	15,320,700	12,171,400	160,300
Supplies & Materials	4,049,733	1,591,400	3,187,900	1,741,400	150,000
Business & Travel	20,159	40,900	45,400	40,900	0
Capital Outlay	2,367,713	1,649,900	1,654,900	2,646,000	996,100
Total by Object	39,093,436	30,898,100	36,066,100	32,661,200	1,763,100

- The increase in Personal Services is attributable to Countywide increases to the pay package offset by pension savings.
- Included in Contractual Services is \$6.1 million for electricity and other costs related to the operation and maintenance of streetlights. Also included is approximately \$2.4 million for the operation and replacement of the fleet, and approximately \$2.1 million in Watershed Protection and Restoration Fund contractual expenditures. The increase is attributable to \$450,000 one-time funding for Roadside Tree Insect and Disease Control program, offset by cost savings in Street Light electricity.
- The increase in Supplies & Materials is attributable to \$100,000 additional funding for road marking materials and \$50,000 additional funding for traffic signal parts.
- The increase in Capital Outlay is due to a one-time \$1,000,000 funding in heavy equipment replacement in the General Fund.
- The considerable increase in the FY16 Estimate is due to approximately \$5 million of costs incurred for snow removal.

	<b>2015</b>		
	Budget as revised	Actual	Variance - positive (negative)
Traffic Control			
Salaries	159,444	164,750	(5,306)
Employee benefits	74,166	74,166	-
Materials and supplies	28,160	21,373	6,787
Contractual services	12,300	4,833	7,467
Repair and maintenance	18,000	15,943	2,057
Utilities	360	-	360
Other	5,800	2,213	3,587
Total Traffic Control	<u>298,230</u>	<u>283,278</u>	<u>14,952</u>
Snow and Ice Removal			
Salaries	38,724	38,539	185
Employee benefits	11,410	11,404	6
Materials and supplies	113,646	104,906	8,740
Contractual services	69,470	69,449	21
Repair and maintenance	6,358	6,325	33
Total Snow and Ice Removal	<u>239,608</u>	<u>230,623</u>	<u>8,985</u>
Total Roadways, Traffic Control & Snow/Ice Removal	<u>3,877,870</u>	<u>3,536,165</u>	<u>341,705</u>
Buildings and Maintenance			
Salaries	264,764	272,276	(7,512)
Employee benefits	117,509	124,361	(6,852.00)
Materials and supplies	12,081	14,758	(2,677)
Utilities	144,000	176,544	(32,544)
Contractual services	329,000	325,941	3,059
Rents and Leases	461,410	438,416	22,994
Repair and maintenance	204,912	187,572	17,340
Total Buildings and Maintenance	<u>1,533,676</u>	<u>1,539,868</u>	<u>(6,192)</u>
Fleet Maintenance Center			
Salaries	359,726	319,103	40,623
Employee benefits	105,588	105,588	-
Materials and supplies	20,740	15,628	5,112
Utilities	61,820	44,420	17,400
Contractual services	8,170	8,028	142
Repair and maintenance	14,730	4,225	10,505
Other	500	398	102
Total Fleet Maintenance Center	<u>571,274</u>	<u>497,390</u>	<u>73,884</u>
<b>Total Public Works</b>	<u>7,435,399</u>	<u>7,076,872</u>	<u>358,527</u>
<b>Roadways</b>			
Salaries	1,724,542	1,454,566	269,976
Employee benefits	641,080	665,105	(24,025)
Materials and supplies	146,790	112,328	34,462
Utilities	585,980	604,884	(18,904)
Contractual services	29,400	26,937	2,463
Repair and maintenance	209,740	158,183	51,557
Other	2,500	261	2,239
Total Roadways	<u>3,340,032</u>	<u>3,022,264</u>	<u>317,768</u>

**FULL TIME EQUIVALENT EMPLOYEES BY FUNCTION**

Fiscal Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General Government	62	64	67	63	68	57	59	56	76	75
Public Safety	303	320	331	341	340	307	320	335	322	318
Public Works	50	50	48	51	49	46	45	40	42	60
Recreation & Parks	20	21	21	20	20	18	12	20	21	26
Water Fund	23	23	26	27	27	27	26	25	22	25
Sewer Fund	7	7	7	7	7	6	5	6	6	6
Dock Fund	3	3	3	3	3	3	2	3	3	2
Transportation Fund	49	49	49	55	55	49	37	38	50	55
Stormwater Mgmt Fund	3	3	3	3	3	3	3	3	3	3
Refuse Fund	22	22	22	22	22	21	23	1	2	2
<b>Total</b>	<b>542</b>	<b>562</b>	<b>577</b>	<b>592</b>	<b>594</b>	<b>537</b>	<b>537</b>	<b>527</b>	<b>547</b>	<b>572</b>

Source:  
City of Annapolis - Finance Office

**Personnel Before Combining**

City of Annapolis

For FY15, the City of Annapolis budgeted for 60 positions with an expense of \$2,249,234.00. This budget is broken down into five departments: roadways, fleet maintenance center, buildings and maintenance, snow and ice removal, and traffic control.

The roadways budget is \$1,454,566.00; the budget for fleet maintenance is \$319,103.00; the budget for buildings and maintenance is \$272,276.00; the budget for snow and ice removal is \$38,539.00; the budget for traffic control is \$164,750.00. The performance metrics provided by Anne Arundel County help us determine how to outward-face the positions between Anne Arundel County and the City of Annapolis after combining the highways/roadways programs. The performance metrics for highways/roadways include: roadways and sidewalks repaired, and potholes repaired.

Year 20XX	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
Public Works										
Roadways and sidewalks										
Potholes repaired	1,552	1,582	1,834	1,579	1,005	1,241	820	1,431	2,671	2,214
Water Fund										

**Department of Public Works**

**FY2015 Approved Budget**

**Bureau of Highways**

**Program Statement**

Highway Administration – plans, designs, administers and provides budgetary oversight of all activities related to road and drainage maintenance within County rights of way, and all programs within the bureau.

Pavement Maintenance – manages the inventory, inspection and program development for maintenance of the County’s highway infrastructure. Performs, through management of both contractual and County forces, various patching, sealing, surfacing and road construction activities.

Roadside Maintenance – maintains drainage, safety, appearance, shoulders, mowing, trimming, cutting or removing vegetation to eliminate safety hazards and control impediments to visibility, road sweeping, and litter pickup. Also repairs and upgrades guardrail, concrete curb, and sidewalk.

Storm Water Maintenance – manages the inventory, inspection and program development for maintenance of the County’s storm drain/storm water infrastructure. Activities to include pipe cleaning and repair, machine cleaning drainage structures, and ditch cleaning by hand and machine.

Other Programs – manage snow and ice control operations, streetlights, County participation in State gypsy moth control, right of way management (space permit program), weeded lots, and work for others.

Support Services – performs regular maintenance and minor repairs, paints and services equipment, and maintains district buildings and grounds.

Traffic Engineering – provides technical analysis of the County’s road network, evaluating the need for new signals through traffic counts, and the resolution of neighborhood traffic control problems.

Traffic Maintenance – manufactures and installs all street name and traffic signs, and maintains all pavement markings and traffic signals.

**Budget Summary**

General Class of Expenditure	Actual FY2013	Original FY2014	Estimate FY2014	Budget FY2015	Inc (Dec) from Orig.
<b>Fund</b>					
General Fund	27,873,308	25,812,500	32,718,300	27,107,100	1,294,600
Watershed Protectio	0	3,315,800	3,395,900	4,999,100	1,683,300
Total by Fund	27,873,308	29,128,300	36,114,200	32,106,200	2,977,900
<b>Object</b>					
Personal Services	12,988,767	13,812,900	14,850,200	15,103,200	1,290,300
Contractual Services	12,317,431	12,505,800	16,795,800	13,029,300	523,500
Supplies & Materials	1,620,313	1,571,400	3,215,400	1,578,400	7,000
Business & Travel	10,370	25,700	18,100	27,800	2,100
Capital Outlay	936,428	1,212,500	1,234,700	2,367,500	1,155,000
Total by Object	27,873,308	29,128,300	36,114,200	32,106,200	2,977,900

- The increase in Personal Services is attributable to Countywide increases to the pay package and restores funding of positions in Highways section of the WPRF.
- Included in Contractual Services is \$6.2 million for electricity and other costs related to the operation and maintenance of streetlights. Also included is approximately \$2.6 million for the operation and replacement of the fleet, and approximately \$1.7 million for items such as permanent patch, storm drain design and repair, guardrails, permit inspections, masonry, as well as tree services and gypsy moth control.
- The Increase in Contractual Services is attributable to General Fund funding of \$200,000 for equipping highway vehicles with Automated Vehicle Location equipment and \$160,000 for tree services, as well as slight increase in the WPRF funding.
- The increase in Capital Outlay is due to \$250,000 additional funding for heavy equipment replacement in the General Fund and \$900,000 funding in the WPRF for the purchase of two vacuum rodder trucks.
- The considerable increase in the FY14 Estimate is due to approximately \$6 million of costs incurred for snow removal.

**Department of Public Works**

**FY2015 Approved Budget**

**Summary of Budgeted Positions in County Classified Service**

Category	Auth FY2013	Approved FY2014	Adjusted FY2014	Budget FY2015	Inc (Dec) from Orig.
<b>Fund</b>					
General Fund	268	241	241	241	0
Water & Wstwtr Op	350	376	376	378	2
Waste Collection Fu	88	88	88	90	2
Watershed Protectio	0	55	55	54	(1)
Total by Fund	706	760	760	763	3
<b>Character</b>					
Director's Office	1.00	1.00	1.00	1.00	0.00
Bureau of Engineeri	80.00	86.00	86.00	86.00	0.00
Bureau of Highways	187.00	203.00	203.00	202.00	(1.00)
Water & Wstwtr Op	330.00	337.00	336.00	337.00	1.00
Water & Wstwtr Fin	20.00	20.00	21.00	22.00	1.00
Waste Mgmt. Servic	88.00	88.00	88.00	90.00	2.00
Watershed Protectio	0.00	25.00	25.00	25.00	0.00
Total-Character	706.00	760.00	760.00	763.00	3.00
<b>Barg Unit</b>					
Labor/Maintenance	451.00	465.00	465.00	466.00	1.00
Non-Represented	205.00	244.00	244.00	247.00	3.00
Office Support	50.00	51.00	51.00	50.00	(1.00)
Total-Barg Unit	706.00	760.00	760.00	763.00	3.00

**Performance Measures**

Measure	Actual FY2012	Actual FY2013	Estimate FY2014	Estimate FY2015
<b>Bureau of Highways</b>				
Customer requests (roads)	8,541	8,023	8,500	9,000
Miles of roadway (centerline)	1,783	1,790	1,820	1,830
Right of way permits (individual)	1,806	2,358	2,200	2,200
Right of way permits (maintenanc	14,800	13,292	15,000	15,000
Signals - routine & emergency call	1,103	1,125	1,150	1,300
<b>Water &amp; Wstwtr Operations</b>				
Calls received to dispatch unit (uti	64,000	62,500	62,900	63,500
Preventive Maint Work Orders (uti	7,474	6,741	6,798	7,000
Corrective Maint Work Orders (util	2,121	2,714	2,938	3,026
Millions of gallons of water produc	12,709	12,948	13,000	14,000
Millions of gallons of water purcha	678	522	506	400
Millions of gallons of wastewater t	11,826	11,569	11,600	11,700
<b>Waste Mgmt. Services</b>				
Customers at curbside	151,825	153,097	155,252	156,527
% trash of waste stream	60%	57%	55%	53%
Curbside recycling rate	40%	43%	45%	47%



**Department of Public Works  
General Fund**

**FY2015 Approved Budget**

**Personnel Summary - Positions in the County Classified Service**

Job Code - Title	Plan	Grade	FY2013	FY2014	FY2014	FY2014	FY2015	Variance
			Approved	Request	Approved	Adjusted	Budget	
2311 Traffic Analyst I	LM	10	3	3	3	3	3	0
2312 Traffic Analyst II	LM	12	1	1	1	1	1	0
2333 Assistant Director Public Work	NR	24	1	1	1	1	1	0
2341 Engineer I	NR	16	2	0	0	0	0	0
2343 Engineer III	NR	18	13	9	9	9	9	0
2344 Senior Engineer	NR	19	15	7	7	7	7	0
2345 Engineer Manager	NR	21	6	4	4	4	4	0
2346 Engineer Administrator	NR	22	2	1	1	1	1	0
2383 Utility Systems Technician III	LM	10	1	0	0	0	0	0
2401 Mason	LM	7	3	3	3	3	3	0
2411 Maintenance Worker I	LM	3	14	14	14	14	14	0
2412 Maintenance Worker II	LM	5	34	34	34	34	34	0
2414 Traffic Maintenance Technician	LM	8	1	1	1	1	0	-1
2418 Roads Maintenance Crew Leader	LM	10	7	7	7	7	8	1
2419 Roads Maintenance Supervisor	NR	14	10	10	10	10	10	0
2420 Roads Maintenance Mgmt Admin	NR	17	1	1	1	1	1	0
2431 Sign Fabricator	LM	10	2	2	2	2	2	0
2432 Sign Fabrication Supervisor	NR	15	1	1	1	1	1	0
2441 Traffic Signal Technician	LM	11	3	3	3	3	3	0
2442 Sr Traffic Signal Technician	NR	16	1	1	1	1	1	0
2455 Road Operations Supervisor	NR	16	4	4	4	4	4	0
2462 Urban Roads Superintendent	NR	19	4	4	4	4	4	0
2465 Asst Chief, Road Operations	NR	20	1	1	1	1	1	0
2471 Chief, Road Operations	NR	21	1	1	1	1	1	0
2472 Asst Chief, Bureau of Highways	NR	19	1	1	1	1	1	0
<b>Fund Summary</b>			268	241	241	241	241	0

Plan and Pay Grade Salary Breakdown

**LABOR, MAINTENANCE, TRADES, AND INSPECTION EMPLOYEES (LM) PAY SCHEDULE**

<b>Grade</b>	<b>Minimum</b>	<b>Maximum</b>
LM-1	\$11.96	\$17.90
LM-2	12.55	18.84
LM-3	13.18	19.77
LM-4	13.86	20.77
LM-5	14.56	21.80
LM-6	15.29	22.92
LM-7	16.10	24.08
LM-8	16.89	25.30
LM-9	17.76	26.57
LM-10	18.64	27.92
LM-11	19.58	29.35
LM-12	20.57	30.82

grades are designated 1-12.

**NON-REPRESENTED EMPLOYEES (NR) PAY SCHEDULE**

<b>Grade</b>	<b>Minimum</b>	<b>Maximum</b>
NR-1	\$23,810	\$38,187
NR-2	25,013	40,126
NR-3	26,289	42,154
NR-4	27,615	44,287
NR-5	29,013	46,528
NR-6	30,481	48,890
NR-7	32,028	51,365
NR-8	33,649	53,960
NR-9	35,344	56,700
NR-10	37,139	59,572
NR-11	39,023	62,582
NR-12	40,998	65,749
NR-13	43,068	69,075
NR-14	45,250	72,572
NR-15	47,543	76,248
NR-16	51,195	86,270
NR-17	55,130	92,901
NR-18	59,374	100,046
NR-19	63,940	107,744
NR-20	68,856	116,027
NR-21	74,148	124,950

COPYRIGHT © 2005  
ANNE ARUNDEL COUNTY, MARYLAND 76

Anne Arundel County Code, 2005

<b>Grade</b>	<b>Minimum</b>	<b>Maximum</b>
NR-22	79,851	134,557
NR-23	83,845	144,645
NR-24	88,144	152,238

For FY15, Anne Arundel County budgeted for 241 positions in the Highways/Roadways division with an expense of \$14,850,200.00. The job codes, titles, plans, and pay-grades can be seen for each specific position in the images above. The multiple jobs with more than one pay grade are areas of potential cuts to personnel salary when combining services:

- Traffic Analyst (x2)
- Engineer (x2)
- Roads Maintenance Worker (x4)
- Maintenance Worker (x2)
- Traffic Signal Technician (x2)
- Sign Fabricator (x2)

Under these positions, the traffic analyst pay ranges between \$18.64-\$27.92/hr for LM10 and \$20.57-\$30.82/hr for LM12. The engineer pay ranges between \$51,195-\$86,270/yr for NR16 and \$59,374-\$100,046/yr for NR18.

The road maintenance worker pay range is more complicated because they hire LM- and NR-grade employees. At the LM10 grade, pay ranges between \$18.64-\$27.92/hr. At the NR14 grade, pay ranges between \$42,250-\$72,572/yr. At NR17 the pay ranges between \$55,130-\$92,901/yr.

Maintenance worker pay ranges between \$13.18-\$19.77/hr for an LM3 and \$14.56-\$21.80/hr for an LM5. The traffic signal technician pay ranges between \$19.58-\$29.35 for an LM11 and between \$51,195-\$86,270/yr for an NR16. Finally, the sign fabricator pay ranges between \$18.64-\$27.92/hr for an LM10 and \$47,453-\$76,248/yr for an NR15.

There are also six different job positions (at the same pay grade) with more than five employees. These are positions that of outward-facing personnel that must be addressed in combining the city and county highway/roadway services.

- Engineer (x9)
- Senior Engineer (x7)
- Maintenance Worker I (x14)
- Maintenance Worker II (x34)
- Roads Maintenance Crew Leader (x8)
- Roads Maintenance Supervisor (x10)

After-combining: The City doesn't provide detailed job descriptions for the 60 available positions, but information from the

County can be extrapolated to estimate the appropriate ratios of personnel to service needs. With this in mind, combining services should eliminate the pay grade differences for the following positions.

- Traffic Analyst (x2)
- Engineer (x2)
- Roads Maintenance Worker (x4)
- Maintenance Worker (x2)
- Traffic Signal Technician (x2)
- Sign Fabricator (x2)

Assigning a fixed salary to the average of the salary ranges per pay grade can minimize cost differentials for employees serving the same job and saves \$103,963.00 annually. The same approach for hourly workers is saves \$21.02 per hour, which amounts to an additional \$33,884.24 annually (based on the average of 1612 billable hours per year in the United States). The total amount of expenditures that can be reduced amounts to \$137,847.24.

Moreover, combining the services should reduce or maintain the number of employees in the following roles.

- Engineer (x9)
- Senior Engineer (x7)
- Maintenance Worker I (x14)
- Maintenance Worker II (x34)
- Roads Maintenance Crew Leader (x8) ●  
Roads Maintenance Supervisor (x10)

Combining services between the City and County can save in operating expenses by reducing the number of employees and by eliminating the difference in pay for jobs that serve similar functions.

### Services

#### Anne Arundel County

Anne Arundel County's Bureau of Highways is responsible for providing the following services:

- Reporting and repairing potholes
- installing rain gardens
- providing right-of-way permits
- providing Road Abandonment and Acceptance programs

- performing road drainage maintenance and roadside maintenance
- providing road resurfacing and reconstruction
- snow and ice removal
- traffic engineering and maintenance
- weeded lots/overgrown grass.

### City of Annapolis

Annapolis Public Works provides services that overlap with the services provided by the county.

- street repairs and paving
- sidewalk maintenance and repairs
- snow and ice removal

An efficient way to reduce costs is to shift responsibilities of overlapped services to the Anne Arundel Department of Public Works, specifically, the Bureau of Highways. In this way, the Annapolis can reduce expenses.

In the city, street repair, paving, and snow and ice removal are supported by the General Fund; sidewalk maintenance and repairs are supported by the enterprise fund (specifically, the Sidewalk Revolving Fund). The budget summary is shown below.

**BUDGET SUMMARY: ALL DIVISIONS**

General Fund Divisions:

<b>Budget Summary</b>	<b>FY 2013 Actual</b>	<b>FY 2014 Actual</b>	<b>FY 2015 Actual</b>	<b>FY 2016 Adopted</b>	<b>FY 2017 Adopted</b>	<b>% of Total (FY 17)</b>
Administration	\$ 720,620	\$ 678,920	\$ 683,229	\$ 844,986	\$ 702,381	8.99%
Engineering & Construction	\$ 805,665	\$ 764,403	\$ 820,219	\$ 818,313	\$ 1,061,057	13.57%
Streets	\$ 3,492,662	\$ 3,074,239	\$ 3,022,262	\$ 2,909,514	\$ 2,722,985	34.84%
Snow & Ice	\$ 63,355	\$ 215,377	\$ 230,623	\$ 79,608	\$ 82,676	1.06%
Traffic Control & Maint'nce	\$ 299,351	\$ 291,248	\$ 283,278	\$ 297,388	\$ 306,872	3.93%
Fleet Maintenance	\$ 476,581	\$ 437,745	\$ 497,391	\$ 1,050,179	\$ 1,045,571	13.38%
General Gov't Buildings	\$ 1,562,354	\$ 1,599,068	\$ 1,539,870	\$ 1,760,948	\$ 1,895,193	24.25%
<b>Total</b>	<b>\$ 7,420,588</b>	<b>\$ 7,061,001</b>	<b>\$ 7,076,871</b>	<b>\$ 7,760,936</b>	<b>\$ 7,816,734</b>	<b>100%</b>
<b>% Change from Prior Year</b>		<b>-4.85%</b>	<b>0.22%</b>	<b>9.67%</b>	<b>0.72%</b>	

\* Non-allocated expenses are not listed here as they charged to the General Fund collectively (as opposed to per department/division).

Enterprise Divisions:

<b>Budget Summary</b>	<b>FY 2013 Actual</b>	<b>FY 2014 Actual</b>	<b>FY 2015 Actual</b>	<b>FY 2016 Adopted</b>	<b>FY 2017 Adopted</b>	<b>% of Total (FY 17)</b>
Water Fund	\$ 3,351,921	\$ 3,110,959	\$ 3,491,971	\$ 3,856,628	\$ 3,525,283	17.84%
Wastewater Fund	4,245,792	4,831,650	4,808,504	5,108,312	5,464,006	27.65%
Market House**	57,170	151,903	159,094	-	-	0.00%
Stormwater Management	470,233	255,008	235,365	532,669	672,733	3.40%
Solid Waste	1,694,573	1,370,585	1,372,476	1,511,726	1,557,063	7.88%
Sidewalk Revolving	-	388,804	382,748	669,212	677,568	3.43%
Non-Allocated *	7,392,545	8,232,882	8,028,281	6,643,320	7,867,018	39.81%
<b>Total</b>	<b>\$ 17,212,234</b>	<b>\$ 18,341,791</b>	<b>\$ 18,519,819</b>	<b>\$ 18,321,867</b>	<b>\$ 19,763,672</b>	<b>100%</b>
<b>% Change from Prior Year</b>		<b>6.56%</b>	<b>0.97%</b>	<b>-1.07%</b>	<b>7.87%</b>	

Expenditures for street repair and maintenance:

<b>Roadways</b>		
<b>Salaries and Benefits</b>		
Salaries		1,289,136.49
Overtime		22,000.00
Attrition (Contra Expenditure)		(78,648.36)
Benefits		697,386.39
Non-Salary Insurance		0.00
<b>Subtotal; Salaries/Benefits</b>		<b>1,929,874.52</b>
<b>Operating</b>		
Supplies		164,067.05
Fuel and Oil		40,740.50
Telephone		291.72
Electricity - Street Light		415,905.00
Training and Education		1,785.00
R & M - Street		78,547.14
R & M - Equipment		71,207.22

Combining the city and county street repair and maintenance services, could reduce city operating expenses by \$ 78,547.14.

Expenditures for snow and ice removal:-

1265	<b>Snow &amp; Ice Removal</b>	
1266	<b>Salaries and Benefits</b>	
1268	Overtime	38,350.00
1269	Benefits	3,068.00
1270	<b>Subtotal; Salaries/Benefits</b>	<b>41,418.00</b>
1271	<b>Operating</b>	
1272	Supplies/salt	15,880.00
1273	Fuel and Oil	4,750.00
1274	R & M - Equipment	5,658.00
1275	Contract Services	14,970.00
1277	<b>Subtotal; Operating</b>	<b>41,258.00</b>
1278		<i>Crossfoot error</i>
1279	<b>Total; Snow and Ice</b>	<b>82,676.00</b>
1280		<i>Crossfoot error</i>

Combining snow and ice removal services, could save the city at least \$14,970.

Expenditures from Sidewalk Revolving Fund revenue:

<b>SIDEWALK REVOLVING* Fund Balance</b>	<b>Actual FY 2015</b>	<b>Adopted FY 2016</b>	<b>Adopted FY 2017</b>
<b>Beginning Balance</b>	<b>\$ 194,104</b>	<b>\$ 194,169</b>	<b>\$ 196,805</b>
<b>Revenues</b>			
Charges for Service	-	-	-
Transfers In	382,814	671,848	680,848
<i>Total Revenues</i>	<i>382,814</i>	<i>671,848</i>	<i>680,848</i>
<b>Expenses</b>			
Salaries	303,408	413,268	457,122
Utilities	-	93,757	73,446
Repairs and Maintenance	-	33,558	26,427
Materials and Supplies	-	23,486	18,810
Contractual Services	-	5,104	3,629
Administrative Charges / Transfers Out	79,340	100,039	98,133
Depreciation	-	-	-
Debt Expense	-	-	-
<i>Total Expenditures</i>	<i>382,748</i>	<i>669,212</i>	<i>677,568</i>
<b>ENDING BALANCE</b>	<b>\$ 194,169</b>	<b>\$ 196,805</b>	<b>\$ 200,086</b>

<b>Ending Balance without Prior Year's Adopted Surplus</b>	<b>\$ 3,280.09</b>
------------------------------------------------------------	--------------------

\* The Sidewalk Revolving Fund was newly established for FY 2013. See Enterprise Funds section and Department of Public Works section for more information.

Combining sidewalk services would shift that responsibility to the county, saving the city \$26,427.

## **Equipment**

The city and county's interconnected highways, roads, and bridges will be much better managed under a shared equipment program, which will decrease fuel expenditures from overlapping equipment, and increase overall efficiencies.

Equipment costs are a large portion of a county or city's highways, roads, and bridges budget. Proper maintenance is imperative for citizen safety and well-being and the repair and maintenance of the equipment itself is essential to its proper operation. Equipment repair and maintenance for the city cost \$5,658. A combined city and county equipment repair and maintenance program, would save the city \$5,658.

Anne Arundel's Department of Public works was recently funded with \$1 million to replace old heavy equipment in the highways department. This investment will ensure that old equipment is phased out, and newer, longer-lasting equipment will be purchased.

Annapolis and Anne Arundel should take a current equipment inventory to identify equipment and resource overlap. Also, the Annapolis non-city tax differential for FY17 for equipment rental expenditures was \$325,000. A combined program could promote shared rentals and purchase of equipment that both the city and county could use. Shared purchases would be an investment that could eventually eliminate the need for equipment rentals.



Anne Arundel

<b>Anne Arundel County, Maryland</b>						
<b>Capital Assets (net of depreciation)</b>						
	Governmental Activities		Business-type Activities		Total	
	2015	2014	2015	2014	2015	2014
Land and easements	\$ 212,116,689	\$ 207,812,068	\$ 12,640,178	\$ 12,109,239	\$ 224,756,867	\$ 219,921,307
Historical property and works of art	4,166,465	4,166,465			4,166,465	4,166,465
Land improvements	121,224,664	123,220,281	-	-	121,224,664	123,220,281
Landfills	-	-	15,253,966	12,583,658	15,253,966	12,583,658
Buildings	197,319,214	199,603,191	21,991,653	21,975,524	219,310,867	221,578,715
Roads, bridges and signals	167,186,833	165,653,727	-	-	167,186,833	165,653,727
Sidewalks, curbs and gutters	28,828,259	28,987,510	-	-	28,828,259	28,987,510
Storm drains and culverts	127,346,064	122,430,280	-	-	127,346,064	122,430,280
Water and sewer plants and line:	-	-	851,756,026	859,023,767	851,756,026	859,023,767
Automobiles and rolling stock	21,263,415	19,551,718	3,028,386	3,085,720	24,291,801	22,637,438
Furniture and equipment	31,741,645	36,202,161	12,159,056	12,363,531	43,900,701	48,565,692
Software	1,519,158	1,116,127	-	-	1,519,158	1,116,127
Construction in progress	187,445,296	166,320,590	557,911,713	465,687,697	745,357,009	632,008,287
Total	<u>\$ 1,100,157,702</u>	<u>\$ 1,075,064,118</u>	<u>\$ 1,474,740,978</u>	<u>\$ 1,386,829,136</u>	<u>\$ 2,574,898,680</u>	<u>\$ 2,461,893,254</u>

Anne Arundel County has \$167,186,833.00 in capital assets in roads, bridges, and signals operations. The operating indicators by function (streets and highways as seen below) provide valuable metrics that help determine the appropriate amount of capital equipment to outward-face yearly trends in repairs. This includes resurfacing roadways, which in 2015, amounted to 54 miles.

## **Public Works and Utilities Services**

### **Waste Management**

In Anne Arundel County, Waste Management provides day-to-day for curbside collection of residential recyclables, yard waste, and trash including bulk metal collection (curbside collection of appliances and other metal items). They also provide community cleanup with dumpsters in neighborhoods, and recycling centers in Glen Burnie, Severn, and Deale.

In the City of Annapolis, the Solid Waste Division is responsible for collecting and transporting solid waste and yard trimmings from 8,600 residential households to a disposal site. The Curbside Recycling division is responsible for curbside collection of mixed recyclables, and the Street Division is responsible for street cleaning, loose litter collection, and street-side refuse container collection.

These services overlap and can be combined to reduce overall costs. Resource optimization reduces operating costs by streamlining operations and increasing process efficiency. By pinpointing opportunities to use technology, combining processes and aligning the right level of workforce with the right positions, the Public Works department can reduce the total cost of personnel and services.

The following County data is from Proposed Current Expense Budget and Budget Message of Fiscal Year 2017. City data is from Approved Budget of Fiscal Year 2017 and Adopted Operating Budget of Fiscal Year 2017.

**Personnel: before combination**

Anne Arundel County

**Department of Public Works  
Waste Collection Fund**

**FY2017 Proposed Budget**

**Personnel Summary - Positions in the County Classified Service**

Job Code - Title	Plan	Grade	FY2015 Approved	FY2016 Request	FY2016 Approved	FY2016 Adjusted	FY2017 Budget	Variance
0212 Office Support Assistant II	OS	4	6	6	6	6	6	0
0213 Office Support Specialist	OS	6	1	1	1	1	1	0
0223 Secretary III	OS	6	1	1	1	1	1	0
0224 Management Aide	NR	12	1	1	1	1	1	0
0242 Management Assistant II	NR	17	1	1	1	1	1	0
0261 Deputy Director, Public Works	NR	24	1	1	1	1	1	0
0265 Program Specialist I	NR	15	5	5	5	5	5	0
0712 Storekeeper II	LM	6	1	1	1	1	1	0
2002 Equipment Operator II	LM	7	9	9	9	9	9	0
2003 Equipment Operator III	LM	9	5	5	5	5	5	0
2004 Senior Equipment Operator	LM	10	8	8	8	8	8	0
2021 Automotive Mechanic I	LM	7	1	1	1	1	1	0
2022 Automotive Mechanic II	LM	9	1	1	1	1	1	0
2023 Automotive Mechanic III	LM	11	1	1	1	1	1	0
2032 Welder	LM	10	1	1	1	1	1	0
2342 Engineer II	NR	17	1	1	1	1	1	0
2411 Maintenance Worker I	LM	3	10	10	10	10	10	0
2412 Maintenance Worker II	LM	5	12	12	12	12	12	0
2481 Solid Waste Collection Inspect	LM	8	6	6	6	6	6	0
2483 Environmental Technician	LM	10	2	2	2	2	2	0
2485 Solid Waste ScaleHouse Operatr	LM	5	3	3	3	3	3	0
2486 Solid Waste Supervisor	NR	15	3	3	3	3	3	0
2487 Landfill Manager	NR	19	1	1	1	1	1	0
2491 Solid Waste Disposal&Maint Mgr	NR	21	1	1	1	1	1	0
2492 Solid Waste Community Svcs Mgr	NR	20	1	1	1	1	1	0
2494 Solid Waste Operations Admin	NR	22	1	1	1	1	1	0
2495 Solid Waste Crew Supervisor	NR	14	3	3	3	3	3	0
2496 Solid Waste Equip Maint Superv	NR	16	1	1	1	1	1	0
2497 Scale House Supervisor	NR	15	1	1	1	1	1	0
2498 Solid Waste Recycling Manager	NR	20	1	1	1	1	1	0
<b>Fund Summary</b>			<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>0</b>

**Annapolis**

**Streets:**

Superintendent - Public Works Services.....	1
Public Works Supervisor .....	1
Mason I.....	1
Mason II .....	1
Equipment Operator III.....	2
Equipment Operator II.....	3
Equipment Operator I.....	15
Office Associate IV.....	1
Public Works Dispatcher.....	1
Public Works Maintenance Worker I.....	6

**Solid Waste:**

Public Works Supervisor .....	1
Office Associate IV .....	1

Combining services will eliminate the need for an Equipment Operator II (x3) and Equipment Operator III(x2) in Annapolis. It will also eliminate the Public Works Supervisor in Annapolis because the duty can be performed by the county's Public Works Deputy Directors. Combining these positions would ensure maximum efficiency from employees, while providing the same quality of services.

City of Annapolis before-combination expenditures:

2254		<b>Expenditures</b>	
2255		<b>Waste Collection</b>	
2256		<b>Residential</b>	
2257		<b>Salaries and Benefits</b>	
2258		Salaries	121,689.79
2259		Overtime	2,000.00

3			<b>FY 2017 City Council Budget</b>
2260		Benefits	41,991.22
2261		<i>Subtotal; Salaries/Benefits</i>	165,681.01
2262		<b>Operating</b>	
2263		Supplies	59,200.00
2264		Fuel and Oil	3,800.00
2265		Telephone	700.00
2266		Electricity	0.00
2267		Training and Education	150.00
2268		R & M - Equipment	7,700.00
2269		Misc. Services and Charges	0.00
2270		Contract Services	1,319,832.00
2271		Fleet Replacement	0.00
2272		<i>Subtotal; Operating</i>	1,391,382.00
2273			
2274		<b>Total; Residential Expenses</b>	1,557,063.01

2293		<b>Curbside Recycling</b>	
2294		<b>Salaries and Benefits</b>	
2295		Salaries	0.00
2296		Overtime	0.00
2297		Benefits	0.00
2298		<i>Subtotal; Salaries/Benefits</i>	0.00
2299		<b>Operating</b>	
2300		Supplies	50,000.00
2301		Fuel and Oil	0.00
2302		Telephone	0.00
2303		Training and Education	0.00
2304		R & M - Equipment	0.00
2305		Contract Services (Bates Contract)	262,570.00
2306		Fleet Replacement	0.00
2307		<i>Subtotal; Operating</i>	312,570.00
2308			
2309		<b>Total; Curbside Recycling Expenses</b>	312,570.00

After combination, the city's salaries and benefits expenditures will be reduced. The equipment expenditures will be reduced as well.

## **Public Works and Utilities Service**

### **Stormwater Management**

In Anne Arundel County, the Bureau of Highways is responsible for stormwater maintenance. It manages the inventory, inspection and program development for maintenance of the County's storm drain and stormwater infrastructure. Activities include pipe cleaning and repair, machine cleaning drainage structures, and ditch cleaning by hand and machine.

In the City of Annapolis, the division of Stormwater Management is responsible for the maintenance of public storm drainage systems including pipes, inlets, manholes, drainage ways, and stormwater management facilities.

These services overlap and can be combined. The County could take responsibility for stormwater management in Annapolis. Combined services will lead to a change in personnel and equipment expenditures in both the county and city, thus reducing costs. The new personnel arrangements will allow the Public Works department to maximize the impact of their staff by helping to identify critical skill needs, determining the most effective staffing and talent mix, and designing a cost-effective organization through ideal workforce use. This planning can also be used to predict staff retention and identify staff progression options with the greatest yield from investment.

The following County data is from the Approved Current Expense Budget and Budget Message of Fiscal Year 2017. City data is from the Approved Budget of Fiscal Year 2017 and Adopted Operating Budget of Fiscal Year 2017.

**Personnel before combination**

Anne Arundel County

**Department of Public Works  
General Fund**

**FY2017 Approved Budget**

**Personnel Summary - Positions in the County Classified Service**

Job Code - Title	Plan	Grade	FY2015 Approved	FY2016 Request	FY2016 Approved	FY2016 Adjusted	FY2017 Budget	Variance
0212 Office Support Assistant II	OS	4	3	3	3	3	3	0
0213 Office Support Specialist	OS	6	1	1	1	1	1	0
0222 Secretary II	OS	4	4	4	4	4	4	0
0223 Secretary III	OS	6	4	4	4	4	4	0
0241 Management Assistant I	NR	15	3	3	3	3	3	0
0242 Management Assistant II	NR	17	1	1	1	1	1	0
0261 Deputy Director, Public Works	NR	24	2	2	2	2	2	0
0264 Program Manager	NR	19	3	3	3	3	3	0
0266 Program Specialist II	NR	17	2	2	2	2	2	0
0463 Financial Clerk II	NR	11	2	2	2	2	2	0
0541 Title Abstractor	NR	9	1	1	1	1	1	0
0551 Property Acquisition Agent	NR	15	3	3	3	3	3	0
0571 Chief, Rights-Of-Way	NR	19	1	1	1	1	1	0
0872 GIS Technician	NR	11	9	9	9	9	9	0
0873 GIS Specialist	NR	15	3	3	3	3	3	0
1105 Space Permits Facilitator	OS	7	1	1	1	1	1	0
2001 Equipment Operator I	LM	6	36	36	36	36	36	0
2002 Equipment Operator II	LM	7	20	20	20	20	20	0
2003 Equipment Operator III	LM	9	1	1	1	1	1	0
2004 Senior Equipment Operator	LM	10	3	3	3	3	3	0
2006 Vacuum/Rodder Operator	LM	8	2	2	2	2	2	0
2022 Automotive Mechanic II	LM	9	5	5	5	5	5	0
2205 Survey Technician	NR	14	1	1	1	1	1	0
2210 Survey Field Technician	LM	8	3	3	3	3	3	0
2211 Survey Crew Chief	NR	14	4	4	4	4	4	0
2212 Assistant Chief, Surveys	NR	16	2	2	2	2	2	0
2221 Chief, Surveys	NR	19	1	1	1	1	1	0
2270 Quality Control Inspector	NR	16	1	1	1	1	1	0
2272 Construction Inspector	LM	12	4	4	4	4	4	0
2275 Construction Inspection Supvsr	NR	17	1	1	1	1	1	0
2311 Traffic Analyst I	LM	10	3	3	3	3	3	0
2312 Traffic Analyst II	LM	12	1	1	1	1	1	0
2333 Assistant Director Public Work	NR	24	1	1	1	1	1	0
2343 Engineer III	NR	18	9	8	8	8	8	0

**Annapolis**

*Stormwater Management:*

Equipment Operator III .....	1
Equipment Operator I .....	1
PW Maintenance Worker I .....	1

The county and city each have one Equipment Operator III. After combining services and personnel, there will be no need to hire an Equipment Operator I in Annapolis, reducing the Salaries and Benefits Expenditures. By eliminating a grade 6 salary, the county can take total control of the machinery use, which means the city will reduce its equipment operating expenditures.

Before-combination expenditure in Annapolis City:

2359	<u>Expenditures</u>		
2360	<b>Stormwater Management</b>		
2361	<b>Salaries and Benefits</b>		
2362	Salaries		458,321.00
2363	Overtime		1,000.00
2364	Benefits		143,308.62
2365	<i>Subtotal; Salaries/Benefits</i>		602,629.62
2366	<b>Operating</b>		
2367	Supplies		12,555.53
2368	Copier		715.31
2369	Postage		1,050.00
2370	Fuel and Oil		6,427.33
2371	Telephone		3,325.37
2372	Training and Education		1,702.27
2373	R & M - Equipment		5,699.02
2374	Contract Services		36,489.61

Detailed salary information for Anne Arundel County and Annapolis city is not available, but the expenditures reduction are expected to be considerable.

**Public Works and Utilities Service**  
**Water and Wastewater Operations**  
 Anne Arundel County

**Department of Public Works**  
**Water & Wstwtr Operations**

**FY2015 Approved Budget**

**Program Statement**

Utility Operations Administration – manages the overall Bureau and plans, designs, and administers the various operational divisions.

Wastewater Operations Division – operates and maintains 7 water reclamation facilities, 252 sewage pumping stations, and the Bio-Solids Program.

Infrastructure Division – maintains 1,463 miles of sanitary sewer system infrastructure and 1,260 miles of water distribution system infrastructure, 1,000+ valves (sanitary sewer system) and more than 200,000 water/sewer service connections countywide.

Water Operations Division – operates and maintains 120 water production, distribution, and storage facilities throughout the entire county. This includes 12 water treatment plants, 4 self-contained wells, 55 production wells, 17 water booster pump stations, and 32 water storage tanks. This division also maintains 12,000+ water distribution valves and 13,000+ fire hydrants.

Technical Support Division – is comprised of several programs, including Meter Services, Line Location, SCADA (Supervisory Control and Data Acquisition) System Operations, which monitors the status of Bureau facilities within the county 24/7/365, Emergency Services, and the Bureau's Dispatch/Control Center Operations.

Business Management – this division is comprised of the Safety Program, Security Program, and Pretreatment Program, which regulates more than 1,500 commercial and industrial dischargers into the County's sanitary sewer system, Backflow Prevention Program, Technology Coordination Program, Regulatory Compliance Program, and the EXCEL/ Training Program.

**Budget Summary**

General Class of Expenditure	Actual FY2013	Original FY2014	Estimate FY2014	Budget FY2015	Inc (Dec) from Orig.
<b>Fund</b>					
Water & Wstwtr Op	78,908,095	76,732,000	75,338,600	70,569,100	(6,162,900)
Total by Fund	78,908,095	76,732,000	75,338,600	70,569,100	(6,162,900)
<b>Object</b>					
Personal Services	26,269,913	28,030,100	27,251,800	29,741,000	1,710,900
Contractual Services	23,164,777	26,949,700	26,039,100	27,218,800	269,100
Supplies & Materials	6,909,619	6,752,200	7,035,100	7,587,500	835,300
Business & Travel	133,806	160,900	141,900	176,800	15,900
Capital Outlay	1,282,418	1,276,100	1,231,100	1,248,400	(27,700)
Grants, Contribution	21,147,563	13,563,000	13,639,600	4,596,600	(8,966,400)
Total by Object	78,908,095	76,732,000	75,338,600	70,569,100	(6,162,900)

- The increase in Personal Services is attributable to Countywide increases to the pay package, decrease in turnover, and addition of two new positions.
- The bulk of the \$28 million in Contractual Services consists of items such as \$8.5 million in electricity, \$9.2 million in sludge disposal and \$2.3 million in vehicle related expenses. The increase is mainly attributable to the increase in sludge disposal.
- The increase in Supplies & Materials is due primarily to increased cost and volume of chemicals associated with water and wastewater treatment, and increased cost in equipment repair parts.
- The Grants and Contributions object includes contributions to the Capital Projects Fund of \$3.9 million (i.e., PayGo), and to the Self-Insurance Fund of \$717,000. Decrease is attributable for less PayGo funding in FY15.

Water and Wastewater Operations is nested within the County's Department of Public Works. The Water and Wastewater Operations program is made up of six divisions. The Anne Arundel County Water Infrastructure division maintains 1,463 miles of sanitary sewer system infrastructure, 1,260 miles of water distribution system infrastructure, 1,000+ valves (sanitary sewer system) and more than 200,000 water/sewer service connections.

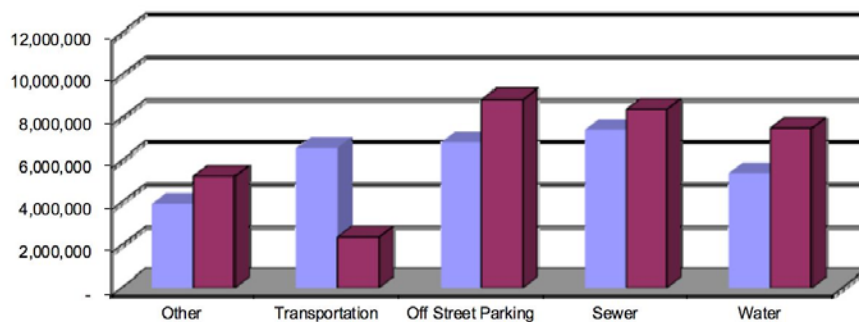
The Water Operations division operates and maintains 120 water production, distribution, and storage facilities. This includes 12 water treatment plants, four self-contained wells, 55 production wells, 17 water booster pump stations, and 32 water storage tanks. This division maintains 12,000+ water distribution valves and 13,000+ fire hydrants.

The Technical Support division comprises Meter Services, Line Location, SCADA System Operations, Emergency Services, and the Bureau's Dispatch/Control Center Operations.

Finally, the Business Management division is made up of the Safety Program, Security Program, Pretreatment Program, Backflow Prevention Program, Technology Coordination Program, Regulatory Compliance Program, and the EXCEL Training program.

## City of Annapolis

**Expenses and Program Revenues - Business-type Activities**  
For the year ended June 30, 2015



	Year Ended June 30,									
	2006	2007	2010	2009	2010	2011	2012	2013	2014	2015
<b>Expenses</b>										
Governmental Activities:										
General government	\$ 9,185,792	\$ 11,755,114	\$ 15,268,543	\$ 55,326,356	\$ 14,756,325	\$ 8,664,250	\$ 12,671,330	\$ 17,077,490	\$ 18,584,460	\$ 18,601,875
Public safety	28,729,951	28,184,653	31,342,576	33,404,602	40,104,232	41,748,358	41,135,150	39,836,041	41,476,687	39,413,113
Community services	3,089,425	3,052,359	3,165,891	3,414,055	2,215,107	4,720,789	3,736,659	5,564,895	5,181,130	6,452,677
Community development	781,479	583,811	363,854	727,629	979,789	439,922	219,690	824,734	1,054,349	404,147
Public works	3,187,758	3,217,373	4,879,609	4,421,246	9,315,202	4,638,091	6,329,310	9,586,648	8,288,399	8,253,040
Interest and bond issuance costs	1,104,761	1,055,341	1,805,649	2,014,351	2,312,840	1,572,589	2,596,205	3,427,064	1,575,089	2,059,337
Total Governmental Activities Expenses	46,079,166	47,848,651	56,826,122	99,308,239	69,663,495	61,783,999	66,688,344	76,316,872	76,160,114	75,184,189
Business-type Activities:										
Water	4,447,491	4,234,208	4,929,463	5,503,247	5,382,155	4,961,399	5,168,567	5,847,584	5,409,175	5,387,428
Sewer	6,169,051	5,756,560	4,165,147	3,908,503	7,129,192	6,696,317	5,332,369	6,365,592	7,040,536	7,411,281
Off Street Parking	3,581,840	2,520,940	2,534,905	2,335,706	2,273,503	2,701,164	2,208,652	4,377,612	6,757,682	6,802,623
Transportation	5,532,211	5,693,685	7,621,068	5,500,129	6,362,112	4,784,164	5,960,986	7,446,284	6,963,900	6,544,919
Dock	1,306,603	646,473	1,486,440	1,517,822	1,683,535	1,228,289	1,446,831	1,151,363	1,004,113	1,148,449
Market	115,877	347,774	455,998	828,273	449,267	171,670	224,104	165,198	232,218	355,867
Stormwater Management	273,606	275,661	368,468	914,961	703,710	382,467	315,056	528,573	326,889	320,909
Refuse	3,075,860	2,981,228	3,114,282	3,453,800	3,393,676	2,817,924	2,713,064	2,486,351	2,205,751	2,068,024
Total Business-type Activities Expenses	24,502,539	22,456,529	24,695,771	23,962,461	27,377,350	23,743,394	23,369,629	28,368,547	29,940,264	30,059,620
Total Primary Government Expenses	\$ 70,581,705	\$ 70,305,180	\$ 81,521,893	\$ 123,270,700	\$ 97,060,845	\$ 85,527,393	\$ 90,057,973	\$ 104,685,419	\$ 106,100,378	\$ 105,243,809



The City of Annapolis supports these services with two funds: the water fund, and the sewer fund. The water fund accounts for all financial activity associated with the operation of the City's water plant and water distribution system. The water plant is responsible for the production, treatment, testing, storage, and initial distribution of potable water for City customers. The water distribution division is responsible for meter reading, operating, maintaining and repairing the distribution system.

The sewer fund accounts for all financial activity associated with the operation of the City's sewage collection and treatment program. The sewer fund consists of two divisions: sewer plant and sewer collection. The sewer collection division is responsible for operating, maintaining, and repairing the sewage conveyance system. Sewage treatment is performed at a single, jointly-owned plant site controlled and operated by Anne Arundel County. The City has a fifty percent ownership of the property, plants, and equipment, but does not have joint control of the financial or operating policies, thus the arrangement is not considered a joint venture. The current agreement calls for the City to share in actual costs for fifty percent of capital improvements and a flow-based percentage of operational costs.

## Personnel Before Combining

Anne Arundel County

### Department of Public Works

### FY2015 Approved Budget

Summary of Budgeted Positions in County Classified Service					
Category	Auth FY2013	Approved FY2014	Adjusted FY2014	Budget FY2015	Inc (Dec) from Orig.
<b>Fund</b>					
General Fund	268	241	241	241	0
Water & Wstwr Op	350	376	376	378	2
Waste Collection Fu	88	88	88	90	2
Watershed Protectio	0	55	55	54	(1)
Total by Fund	706	760	760	763	3
<b>Character</b>					
Director's Office	1.00	1.00	1.00	1.00	0.00
Bureau of Engineeri	80.00	86.00	86.00	86.00	0.00
Bureau of Highways	187.00	203.00	203.00	202.00	(1.00)
Water & Wstwr Op	330.00	337.00	336.00	337.00	1.00
Water & Wstwr Fin	20.00	20.00	21.00	22.00	1.00
Waste Mgmt. Servic	88.00	88.00	88.00	90.00	2.00
Watershed Protectio	0.00	25.00	25.00	25.00	0.00
Total-Character	706.00	760.00	760.00	763.00	3.00
<b>Barg Unit</b>					
Labor/Maintenance	451.00	465.00	465.00	466.00	1.00
Non-Represented	205.00	244.00	244.00	247.00	3.00
Office Support	50.00	51.00	51.00	50.00	(1.00)
Total-Barg Unit	706.00	760.00	760.00	763.00	3.00

### Performance Measures

Measure	Actual FY2012	Actual FY2013	Estimate FY2014	Estimate FY2015
<b>Bureau of Highways</b>				
Customer requests (roads)	8,541	8,023	8,500	9,000
Miles of roadway (centerline)	1,783	1,790	1,820	1,830
Right of way permits (individual)	1,806	2,358	2,200	2,200
Right of way permits (maintenanc	14,800	13,292	15,000	15,000
Signals - routine & emergency call	1,103	1,125	1,150	1,300
<b>Water &amp; Wstwr Operations</b>				
Calls received to dispatch unit (uti	64,000	62,500	62,900	63,500
Preventive Maint Work Orders (uti	7,474	6,741	6,798	7,000
Corrective Maint Work Orders (util	2,121	2,714	2,938	3,026
Millions of gallons of water produc	12,709	12,948	13,000	14,000
Millions of gallons of water purcha	678	522	506	400
Millions of gallons of wastewater t	11,826	11,569	11,600	11,700
<b>Waste Mgmt. Services</b>				
Customers at curbside	151,825	153,097	155,252	156,527
% trash of waste stream	60%	57%	55%	53%
Curbside recycling rate	40%	43%	45%	47%

**Position Summary**

**FY2015 Approved Budget**

	<b>FY2013 Approved</b>	<b>FY2014 Request</b>	<b>FY2014 Approved</b>	<b>FY2014 Adjusted</b>	<b>FY2015 Budget</b>	<b>Variance</b>
<b>General Fund</b>						
Positions in the County Classified Service	3,226	3,216	3,216	3,329	3,368	39
Positions Exempt from the County Classified Service	289	289	289	289	290	1
<b>General Fund Total</b>	<b>3,515</b>	<b>3,505</b>	<b>3,505</b>	<b>3,618</b>	<b>3,658</b>	<b>40</b>
Rec & Parks Child Care Fund	9	9	9	9	9	0
Water & Wstwtr Operating Fund	350	376	376	376	378	2
Waste Collection Fund	88	88	88	88	90	2
Wastewater Protection and Restoration Fund	0	66	66	66	65	-1
Self Insurance Fund	14	14	14	14	14	0
Garage Working Capital Fund	66	67	67	67	67	0
Reforestation Fund	4	5	5	5	5	0
<b>All Funds</b>	<b>4,046</b>	<b>4,130</b>	<b>4,130</b>	<b>4,243</b>	<b>4,286</b>	<b>43</b>

**Department of Public Works**

**FY2015 Approved Budget**

**Water & Wstwtr Operating Fund**

**Personnel Summary - Positions in the County Classified Service**

<b>Job Code - Title</b>	<b>Plan</b>	<b>Grade</b>	<b>FY2013 Approved</b>	<b>FY2014 Request</b>	<b>FY2014 Approved</b>	<b>FY2014 Adjusted</b>	<b>FY2015 Budget</b>	<b>Variance</b>
0211 Office Support Assistant I	OS	2	1	1	1	1	1	0
0212 Office Support Assistant II	OS	4	13	13	13	13	13	0
0213 Office Support Specialist	OS	6	5	5	5	5	5	0
0222 Secretary II	OS	4	2	2	2	2	2	0
0223 Secretary III	OS	6	4	5	5	5	5	0
0224 Management Aide	NR	12	6	7	7	7	7	0
0241 Management Assistant I	NR	15	0	0	0	0	3	3
0242 Management Assistant II	NR	17	7	7	7	7	7	0
0243 Sr Info Syst Support Specialis	NR	15	1	1	1	1	1	0
0244 Info System Support Specialist	NR	14	2	2	2	2	1	-1
0246 Senior Budget Mgmt Analyst	NR	21	1	1	1	1	1	0
0255 Public Services Dispatcher	LM	7	7	7	7	7	7	0
0256 Manager PW Personnel Admin	NR	19	1	1	1	1	0	-1
0256 Manager PW Personnel Admin	NR	20	0	0	0	0	1	1
0261 Deputy Director, Public Works	NR	24	1	1	1	1	1	0
0263 Emergency Services Manager	NR	18	2	2	2	2	1	-1
0264 Program Manager	NR	19	5	5	5	5	5	0
0265 Program Specialist I	NR	15	7	7	7	7	7	0
0266 Program Specialist II	NR	17	1	1	1	1	1	0
0296 Manager PW Customer Relations	NR	17	1	1	1	1	1	0
0361 Systems Programmer I	NR	17	2	2	2	2	2	0
0404 Meter Technician I	LM	4	12	7	7	6	7	1
0405 Meter Technician II	LM	6	0	5	5	6	6	0
0406 Meter Technician III	LM	7	2	2	2	2	1	-1
0416 Meter Services Manager	NR	18	1	1	1	1	1	0
0422 Utility Assessments Technician	OS	9	2	2	2	2	1	-1
0425 Financial Analyst	NR	16	2	1	1	1	1	0
0711 Storekeeper I	LM	4	1	1	1	1	1	0
0716 Warehouse Manager	NR	14	1	1	1	1	1	0
0873 GIS Specialist	NR	15	0	2	2	2	2	0
2002 Equipment Operator II	LM	7	1	1	1	1	1	0
2003 Equipment Operator III	LM	9	11	11	11	11	11	0
2004 Senior Equipment Operator	LM	10	1	1	1	1	1	0
2022 Automotive Mechanic II	LM	9	1	1	1	1	1	0

**Department of Public Works  
Water & Wstwtr Operating Fund**

**FY2015 Approved Budget**

**Personnel Summary - Positions in the County Classified Service**

Job Code - Title	Plan	Grade	FY2013 Approved	FY2014 Request	FY2014 Approved	FY2014 Adjusted	FY2015 Budget	Variance
2252 Laboratory Technician	LM	10	7	7	7	7	6	-1
2255 Chemist	NR	17	1	1	1	1	1	0
2256 Water Quality Compliance Spec	NR	18	1	1	1	1	1	0
2272 Construction Inspector	LM	12	3	4	4	4	3	-1
2275 Construction Inspection Supvrs	NR	17	1	1	1	1	1	0
2341 Engineer I	NR	16	0	2	2	1	1	0
2342 Engineer II	NR	17	1	1	1	2	2	0
2343 Engineer III	NR	18	2	2	3	2	3	1
2344 Senior Engineer	NR	19	1	8	8	8	8	0
2345 Engineer Manager	NR	21	0	3	2	3	3	0
2346 Engineer Administrator	NR	22	0	1	1	1	1	0
2381 Utility Systems Technician I	LM	6	4	4	4	4	4	0
2382 Utility Systems Technician II	LM	8	7	7	7	7	7	0
2383 Utility Systems Technician III	LM	10	3	4	4	4	4	0
2386 Util Emergency Response Tech	LM	9	7	7	7	7	7	0
2412 Maintenance Worker II	LM	5	1	1	1	1	1	0
2543 Wastewater Plant Supervisor	NR	16	1	1	1	1	0	-1
2577 Utilities Team Manager	NR	19	12	12	12	12	12	0
2580 Technical Support Prog Admin	NR	20	1	2	2	2	2	0
2583 Util Operations Administrator	NR	22	4	5	5	5	5	0
2607 Utilities Support Worker I	LM	6	5	5	5	5	5	0
2608 Utilities Support Worker II	LM	7	32	34	34	34	34	0
2610 Utilities Special Crew Leader	LM	9	4	5	5	5	5	0
2611 Utilities Maintenance Crew Ldr	LM	8	12	13	13	13	13	0
2612 Utilities Repair Crew Leader	LM	11	10	10	10	10	10	0
2615 Utilities Maint & Repair Suprv	NR	16	2	2	2	2	2	0
2621 Utility Lines Superintendent	NR	18	4	4	4	4	4	0
2623 Utilities Line Marking Tech	LM	7	4	4	4	4	4	0
2628 Electrical Technician II	FW	2	9	8	8	7	8	1
2629 Electrical Technician III	FW	3	3	3	3	4	4	0
2630 Senior Electrical Technician	FW	4	1	2	2	2	2	0
2638 Instrumentation Technician II	FW	2	6	4	4	4	5	1
2639 Instrumentation Technician III	FW	3	1	3	3	4	3	-1
2640 Senior Instrumentation Technician	FW	4	1	1	1	0	1	1

Page 216

**Department of Public Works  
Water & Wstwtr Operating Fund**

**FY2015 Approved Budget**

**Personnel Summary - Positions in the County Classified Service**

Job Code - Title	Plan	Grade	FY2013 Approved	FY2014 Request	FY2014 Approved	FY2014 Adjusted	FY2015 Budget	Variance
2642 Util Electrical Coordinator	NR	18	1	1	1	1	1	0
2647 Mechanical Technician I	FW	1	2	2	2	3	3	0
2648 Mechanical Technician II	FW	2	19	19	19	19	19	0
2650 Senior Mechanical Technician	FW	3	1	1	1	0	0	0
2657 Generator Technician I	FW	1	1	0	0	0	0	0
2658 Generator Technician II	FW	2	1	2	2	2	2	0
2659 Generator Technician III	FW	3	3	3	3	3	3	0
2671 Util Mechanical Maintenan Supt	NR	19	1	1	1	1	1	0
2681 Water/Wastewater Sys Tech I	FW	1	14	10	10	11	13	2
2682 Water/Wastewater Sys Tech II	FW	2	51	57	57	56	56	0
2683 Water/Wastewater Sys Tech III	FW	3	1	1	1	1	1	0
<b>Fund Summary</b>			350	376	376	376	378	2

For FY15, Anne Arundel County has budgeted for 378 positions within the Water and Wastewater Operations division with an expense of \$29,741,000.00. The job codes, titles, plans, and pay-grades for each specific position are shown above. There are multiple jobs listed with more than one pay grade and these are areas of potential cuts to personnel salary when combining services.

- Office Support Assistant (x2)
- Secretary (x2)
- Management Assistant (x2)
- Program Specialist (x2)
- Meter Technician (x3)
- Equipment Operator (x2)
- Engineer (x3)
- Utility Systems Technician (x3)
- Utilities Support Worker (x2)
- Electrical Technician (x2)
- Instrumentation Technician (x2)
- Mechanical Technician (x2)
- Generator Technician (x3)
- Water/Wastewater System Technician (x3)

There are also eight different job positions (at the same pay grade) with more than ten employees. These are the areas to address when determining how to outward-face personnel to the function they serve after combining water/wastewater operations services between Annapolis and Anne Arundel County.

- Office Support Assistant (x13)
- Equipment Operator (x11)
- Utilities Team Manager (x12)
- Utilities Support Worker (x34)
- Utilities Maintenance Crew Leader (x13)
- Utilities Repair Crew Leader (x10)
- Mechanical Technician (x19)
- Water/Wastewater Systems Technician I (x13)
- Water/Wastewater Systems Technician II (x56)

## City of Annapolis

	2015		Variance - positive (negative)
	Budget as revised	Actual	
<b>Water Fund</b>			
Salaries	\$ 2,362,677	\$ 2,395,606	\$ (32,929)
Utilities	329,600	292,950	36,650
Repairs and maintenance	374,970	362,280	12,690
Materials and supplies	306,890	299,817	7,073
Contractual services	181,984	182,062	(78)
Administrative charge from general fund	750,416	750,416	-
Depreciation	500,000	331,859	168,141
Interest expense	861,029	607,940	253,089
Operating transfers and subsidies	620,000	520,000	100,000
Other	1,074,537	208,084	866,453
<b>Total Water Fund</b>	<b>\$ 7,362,104</b>	<b>\$ 5,951,014</b>	<b>\$ 1,411,090</b>

<b>Sewer Fund</b>				
Salaries	\$	547,777	\$	726,009
Utilities		170,500		192,299
Repairs and maintenance		185,080		176,213
Materials and supplies		59,050		64,207
Treatment plant operations		3,100,000		3,591,727
Contractual services		70,926		69,707
Administrative charge from general fund		895,000		895,000
Depreciation		650,000		1,165,057
Interest expense		593,788		381,006
Operating transfers and subsidies		20,000		20,000
Other		621,231		150,056
<b>Total Sewer Fund</b>	<b>\$</b>	<b>6,913,352</b>	<b>\$</b>	<b>7,431,281</b>

### FULL TIME EQUIVALENT EMPLOYEES BY FUNCTION

Fiscal Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General Government	62	64	67	63	68	57	59	56	76	75
Public Safety	303	320	331	341	340	307	320	335	322	318
Public Works	50	50	48	51	49	46	45	40	42	60
Recreation & Parks	20	21	21	20	20	18	12	20	21	26
Water Fund	23	23	26	27	27	27	26	25	22	25
Sewer Fund	7	7	7	7	7	6	5	6	6	6
Dock Fund	3	3	3	3	3	3	2	3	3	2
Transportation Fund	49	49	49	55	55	49	37	38	50	55
Stormwater Mgmt Fund	3	3	3	3	3	3	3	3	3	3
Refuse Fund	22	22	22	22	22	21	23	1	2	2
<b>Total</b>	<b>542</b>	<b>562</b>	<b>577</b>	<b>592</b>	<b>594</b>	<b>537</b>	<b>537</b>	<b>527</b>	<b>547</b>	<b>572</b>

Source:

City of Annapolis - Finance Office

For FY15, the City of Annapolis has budgeted for 31 positions with an expense of \$3,121,615.00. The county's performance metrics can help determine how to outward-face the positions between the county and the City after combining the Water/Wastewater Operations programs. The performance metrics include: calls received to dispatch unit, preventive maintenance work orders, corrective maintenance work orders, millions of gallons of water produced, millions of gallons of water purchased, millions of gallons of wastewater treated.

Before-combining:

Anne Arundel County - 378 job positions @\$29.7 million/year

City of Annapolis - 31 job positions @3.1 million/year

After-combining:

While the City of Annapolis does not provide detailed job descriptions for each of the 31 available positions, county information can be used to extrapolate appropriate ratios of personnel to service needs. Combining services should eliminate the difference in pay grade for the following positions:

- Office Support Assistant (x2)
- Secretary (x2)
- Management Assistant (x2)
- Program Specialist (x2)
- Meter Technician (x3)
- Equipment Operator (x2)
- Engineer (x3)
- Utility Systems Technician (x3)
- Utilities Support Worker (x2)
- Electrical Technician (x2)
- Instrumentation Technician (x2)
- Mechanical Technician (x2)
- Generator Technician (x3)
- Water/Wastewater System Technician (x3)

Moreover, combining the services should reduce or maintain the number of employees in the following roles.

- Office Support Assistant (x13)
- Equipment Operator (x11)
- Utilities Team Manager (x12)
- Utilities Support Worker (x34)
- Utilities Maintenance Crew Leader (x13)
- Utilities Repair Crew Leader (x10)

- Mechanical Technician (x19)
- Water/Wastewater Systems Technician I (x13)
- Water/Wastewater Systems Technician II (x56)

Combining services in the city and county can save in operating expenses by reducing the number of employees, and eliminating the pay differences for jobs that serve similar functions.

## Equipment Before-Combining

Anne Arundel County

### Department of Public Works

FY2015 Approved Budget

#### Water & Wstwtr Operations

##### Program Statement

Utility Operations Administration – manages the overall Bureau and plans, designs, and administers the various operational divisions.

Wastewater Operations Division – operates and maintains 7 water reclamation facilities, 252 sewage pumping stations, and the Bio-Solids Program.

Infrastructure Division – maintains 1,463 miles of sanitary sewer system infrastructure and 1,260 miles of water distribution system infrastructure, 1,000+ valves (sanitary sewer system) and more than 200,000 water/sewer service connections countywide.

Water Operations Division – operates and maintains 120 water production, distribution, and storage facilities throughout the entire county. This includes 12 water treatment plants, 4 self-contained wells, 55 production wells, 17 water booster pump stations, and 32 water storage tanks. This division also maintains 12,000+ water distribution valves and 13,000+ fire hydrants.

Technical Support Division – is comprised of several programs, including Meter Services, Line Location, SCADA (Supervisory Control and Data Acquisition) System Operations, which monitors the status of Bureau facilities within the county 24/7/365, Emergency Services, and the Bureau's Dispatch/Control Center Operations.

Business Management – this division is comprised of the Safety Program, Security Program, and Pretreatment Program, which regulates more than 1,500 commercial and industrial dischargers into the County's sanitary sewer system, Backflow Prevention Program, Technology Coordination Program, Regulatory Compliance Program, and the EXCEL/ Training Program.

##### Budget Summary

General Class of Expenditure	Actual FY2013	Original FY2014	Estimate FY2014	Budget FY2015	Inc (Dec) from Orig.
<b>Fund</b>					
Water & Wstwtr Op	78,908,095	76,732,000	75,338,600	70,569,100	(6,162,900)
Total by Fund	78,908,095	76,732,000	75,338,600	70,569,100	(6,162,900)
<b>Object</b>					
Personal Services	26,269,913	28,030,100	27,251,800	29,741,000	1,710,900
Contractual Services	23,164,777	26,949,700	26,039,100	27,218,800	269,100
Supplies & Materials	6,909,619	6,752,200	7,035,100	7,587,500	835,300
Business & Travel	133,806	160,900	141,900	176,800	15,900
Capital Outlay	1,282,418	1,276,100	1,231,100	1,248,400	(27,700)
Grants, Contribution	21,147,563	13,563,000	13,639,600	4,596,600	(8,966,400)
Total by Object	78,908,095	76,732,000	75,338,600	70,569,100	(6,162,900)

- The increase in Personal Services is attributable to Countywide increases to the pay package, decrease in turnover, and addition of two new positions.
- The bulk of the \$28 million in Contractual Services consists of items such as \$8.5 million in electricity, \$9.2 million in sludge disposal and \$2.3 million in vehicle related expenses. The increase is mainly attributable to the increase in sludge disposal.
- The increase in Supplies & Materials is due primarily to increased cost and volume of chemicals associated with water and wastewater treatment, and increased cost in equipment repair parts.
- The Grants and Contributions object includes contributions to the Capital Projects Fund of \$3.9 million (i.e., PayGo), and to the Self-Insurance Fund of \$717,000. Decrease is attributable for less PayGo funding in FY15.

City of Annapolis

The net capital value of the equipment in the water and sewer fund amounts to \$42,820, 588.00. Sewage treatment is performed at a single, jointly-owned plant site controlled and operated by Anne Arundel County. The City has a fifty percent ownership of the property, plant, and equipment. The current agreement calls for the City to share in actual costs for fifty percent of capital improvements and a flow-based percentage of operational costs.

Water Fund										
Mains in miles	128	128	128	128	128	128	128	128	128	140
Storage tanks	4	4	5	5	5	5	5	5	5	5

CITY OF ANNAPOLIS, MARYLAND  
Statement of Net Position  
Proprietary Funds  
June 30, 2015

	Business-type Activities						Total	Governmental Internal Service Fund Total
	Water Fund	Sewer Fund	Off Street Parking Fund	Transportation Fund	Dock Fund	Non-Major Enterprise Funds		
<b>ASSETS</b>								
Current assets								
Cash and cash equivalents	\$ 8,411,732	\$ 6,411,601	\$ -	\$ 50	500	5,222,052	20,045,935	2,969,936
Restricted cash	787,725	-	-	-	-	-	787,725	-
Accounts receivable								
Service charges and penalties	1,258,480	1,600,026	183,192	548,487	46,162	853,908	4,490,255	-
Capital and other charges	1,109	1,275	-	-	-	-	2,384	-
Total accounts receivable, net	1,259,589	1,601,301	183,192	548,487	46,162	853,908	4,492,639	-
Inventories	91,426	-	-	29,718	-	-	121,144	-
Prepaid expenses	-	-	-	-	-	-	-	83,753
Total current assets	10,550,471	8,012,902	183,192	578,255	46,662	6,075,960	25,447,442	83,753
Noncurrent assets								
Restricted water and sewer capital facility assessments	3,630,541	3,503,821	-	-	-	-	7,134,362	-
Net capital assets	26,779,503	16,041,085	29,989,833	3,282,914	9,253,762	2,517,490	87,844,587	-
Total noncurrent assets	30,410,044	19,544,906	29,989,833	3,282,914	9,253,762	2,517,490	94,978,949	-
Total assets	40,960,515	27,557,808	30,173,025	3,841,169	9,300,424	8,593,450	120,426,391	3,053,689
<b>DEFERRED OUTFLOWS OF RESOURCES</b>								
Deferred outflows related to pensions	39,226	13,620	9,262	69,735	8,172	6,538	146,553	-
Deferred loss on refunding	454,893	223,597	1,867,064	308	254,368	32,923	2,833,153	-
Total deferred outflows of resources	494,119	237,217	1,876,326	70,043	262,540	39,461	2,979,706	-
<b>LIABILITIES</b>								
Current liabilities								
Accounts payable	2,115,936	553,137	141,261	55,489	126,075	405,174	3,397,072	63,973
Accrued expenses and other liabilities	75,260	31,219	93,261	260,613	16,389	12,986	489,728	-
Accrued self insurance costs - current portion	-	-	-	-	-	-	-	2,036,021
Accrued Interest	203,716	99,150	131,120	376	30,783	13,887	479,032	-
Due to General Fund	-	-	5,297,611	7,965,820	1,609,923	813,677	15,687,031	-
Compensated absences-current portion	9,250	1,969	-	12,717	1,056	1,055	26,047	-
Unearned revenue	55,000	339,158	-	15,505	46,162	75,344	531,170	-
Escrowed funds	-	95,384	-	-	-	18,835	114,219	-
Current portion of long-term debt	812,585	380,083	907,033	77,070	220,486	95,252	2,492,509	-
Total current liabilities	3,271,747	1,500,100	6,570,286	8,387,590	2,050,875	1,438,210	23,216,806	2,099,994
Noncurrent liabilities								
Compensated absences-net of current portion	106,370	22,639	-	146,247	12,145	12,140	299,542	-
Accrued liability for other post employment benefits	548,109	133,379	-	449,798	10,314	538,822	1,680,422	-
Accrued self insurance costs, net of current portion	-	-	-	-	-	-	-	4,326,544
Net Pension Liability	948,297	329,270	223,904	1,685,862	197,562	158,050	3,542,945	-
Long-term debt, net of current portion	24,358,786	9,374,948	25,518,939	27,501	8,644,902	1,307,103	69,232,179	-
Total noncurrent liabilities	25,961,562	9,860,236	25,742,843	2,309,408	8,864,923	2,016,115	74,755,088	4,326,544
Total liabilities	29,233,309	11,360,336	32,313,129	10,696,998	10,915,798	3,452,325	97,971,894	6,426,538
<b>DEFERRED INFLOWS OF RESOURCES</b>								
Deferred inflows related to pensions	103,797	36,040	24,507	184,529	21,624	17,299	387,796	-
<b>NET POSITION</b>								
Net investment in capital assets	10,212,187	10,791,893	5,493,041	3,159,229	6,723,487	1,279,275	37,659,112	-
Restricted for debt service	8,149,172	4,282,245	62,114	-	6,000,000	112,925	18,606,456	-
Unrestricted	(6,243,831)	1,324,511	(5,843,440)	(10,129,544)	(14,097,944)	3,771,087	(31,219,161)	(3,372,849)
Total net position	\$ 12,117,528	\$ 16,398,649	\$ (288,285)	\$ (6,970,315)	\$ (1,374,457)	\$ 5,163,287	\$ 25,046,406	\$ (3,372,849)

The accompanying notes to the financial statements are an integral part of this statement.



### **After-Combining**

In combining the services there are no immediate savings in equipment costs, however pooling the value of capital assets into a single fund allows the group to issue more debt to cover operating expenses. Further, it is logical to combine these services as the county currently owns 50% of Annapolis' plant, equipment, and property resources, shares 50% of the cost in capital improvement projects, and contributes a flow-based percentage of operational costs.

#### Services

##### Anne Arundel County

Anne Arundel County receives \$90,383,300.00 in annual revenue from charges for water/wastewater services. Annual water/wastewater operating expenses amount to \$88,142,000.00.

City of Annapolis

The City of Annapolis receives \$6,974, 657.00 in annual revenue for charges for water service, and \$8,382,345.00 in annual revenue from charges for sewer service. This amounts to an annual revenue of \$15,357,002.00 for Water and Wastewater Operations services. Annual water service operating expenses are \$4,794,719.00 and annual sewage service operating expenses are \$7,018,098.00.

**CITY OF ANNAPOLIS, MARYLAND**  
**Statement of Activities**  
Year Ended June 30, 2015

Functions/Programs	Expenses	Program Revenues			Net (Expense) Revenues and Change in Net Position		Totals
		Charges for Service	Operating Grants and Contributions	Capital Grants and Contributions	Primary Government		
					Governmental Activities	Business-Type Activities	
<b>Governmental Activities:</b>							
General government	\$ 18,601,875	\$ 23,698,890	\$ 268,626	\$ 503,516	\$ 5,869,157	\$ -	\$ 5,869,157
Public safety	39,413,113	2,475,978	3,234,785	-	(33,702,350)	-	(33,702,350)
Community services	6,452,677	1,718,270	21,088	-	(4,713,319)	-	(4,713,319)
Community development	404,147	-	317,661	-	(86,486)	-	(86,486)
Public works	8,253,040	1,171,131	8,531	-	(7,073,378)	-	(7,073,378)
Interest on long term debt	2,059,337	-	-	-	(2,059,337)	-	(2,059,337)
<b>Total Governmental Activities</b>	<b>75,184,189</b>	<b>29,064,269</b>	<b>3,850,691</b>	<b>503,516</b>	<b>(41,765,713)</b>	<b>-</b>	<b>(41,765,713)</b>
<b>Business-type Activities:</b>							
Water	5,387,428	7,201,826	-	283,950	-	2,098,348	2,098,348
Sewer	7,411,281	8,399,135	-	-	-	987,854	987,854
Off Street Parking	6,802,623	8,847,088	-	-	-	2,044,465	2,044,465
Transportation	6,544,919	938,100	1,266,491	171,913	-	(4,168,415)	(4,168,415)
Dock	1,148,449	909,174	43,345	-	-	(195,930)	(195,930)
Market	355,987	208,500	-	-	-	(147,487)	(147,487)
Stormwater Management	320,909	934,653	-	-	-	613,744	613,744
Refuse	2,088,024	3,137,892	-	-	-	1,049,868	1,049,868
<b>Total Business-type Activities</b>	<b>30,059,620</b>	<b>30,576,368</b>	<b>1,309,836</b>	<b>455,863</b>	<b>-</b>	<b>2,282,447</b>	<b>2,282,447</b>
<b>Total</b>	<b>\$ 105,243,809</b>	<b>\$ 59,640,637</b>	<b>\$ 5,160,527</b>	<b>\$ 959,379</b>	<b>(41,765,713)</b>	<b>2,282,447</b>	<b>(39,483,266)</b>
<b>General Revenues:</b>							
<b>Taxes</b>							
Real					38,976,909	-	38,976,909
Unincorporated					31,632	-	31,632
Public utility					1,737,240	-	1,737,240
Corporations					1,469,864	-	1,469,864
Penalties, interest and transfer fees					223,980	-	223,980
Interest and investment earnings					16,430	6,104	22,534
Transfers					569,520	(569,520)	-
<b>Total general revenues and transfers</b>					<b>43,025,575</b>	<b>(563,416)</b>	<b>42,462,159</b>
Change in net position					1,259,862	1,719,030	2,978,892
Net position as of beginning of year, as restated					8,103,699	23,327,377	31,431,076
<b>Net position as of end of year</b>					<b>\$ 9,363,561</b>	<b>\$ 25,046,407</b>	<b>\$ 34,409,968</b>

The accompanying notes to the financial statements are an integral part of this statement.

**CITY OF ANNAPOLIS, MARYLAND**  
**Statement of Cash Flows**  
**Proprietary Funds**  
**Year Ended June 30, 2015**

	Business-type Activities						Total	Governmental Internal Service Fund Total
	Water Fund	Sewer Fund	Off Street Parking Fund	Transportation Fund	Dock Fund	Non-Major Enterprise Funds		
<b>Cash flows from operating activities</b>								
Receipts from customers and users	\$ 7,967,970	\$ 8,642,676	\$ 6,478,702	\$ 964,879	\$ 908,523	\$ 4,235,589	\$ 29,198,339	\$ -
Receipts from contributions and other sources	511,125	16,790	2,243,888	1,266,491	43,996	-	4,081,890	994,023
Receipts from interfund services provided	-	-	-	-	-	-	-	-
Payments to suppliers for goods and services	(1,078,774)	(5,485,305)	(3,446,180)	(1,500,782)	(226,881)	(2,251,144)	(13,989,066)	-
Payments to employees for services	(2,243,776)	(676,743)	(401,300)	(3,507,088)	(244,795)	(285,557)	(7,359,259)	-
Payments for interfund services uses	-	-	-	-	-	-	-	-
Net cash provided by (used for) operating activities	5,156,545	2,497,418	4,874,710	(2,776,500)	480,843	1,698,888	11,931,904	994,023
<b>Cash flows from noncapital financing activities</b>								
Effect of change from Due From to Equity in Pooled Cash	10,292,456	6,061,655	(1,410,033)	433,184	(6,014,217)	4,080,355	13,443,400	1,975,913
Transfer from other funds	(520,000)	(20,000)	(2,339,505)	-	-	(450,000)	(3,329,505)	-
Net cash provided by (used for) noncapital financing activities	9,772,456	6,041,655	(3,749,538)	2,900,238	(5,775,617)	3,684,686	12,873,880	1,975,913
<b>Cash flows from capital and related financing activities</b>								
Acquisition of capital assets	(8,631,237)	(1,118,680)	(26,605)	(211,785)	(329,317)	(107,769)	(10,425,393)	-
Proceeds from issuance of long term debt	6,729,058	1,317,747	738,307	-	5,942,497	498,831	15,226,440	-
Principal payments of long term debt	(905,768)	(598,579)	(632,826)	(82,477)	-	(57,751)	(2,277,401)	-
Refunding and transfers of long term debt	(2,723,711)	(1,169,615)	(655,312)	-	-	(505,213)	(5,053,851)	-
Capital grant proceeds	-	-	-	171,913	-	-	171,913	-
Interest	(960,895)	(548,634)	(541,914)	(1,389)	(159,462)	15,158	(2,197,136)	-
Bond Issuance Costs	(28,355)	(12,176)	(6,822)	-	(158,944)	(4,785)	(211,082)	-
Net cash provided by (used for) capital and related financing activities	(6,520,908)	(2,129,937)	(1,125,172)	(123,738)	5,294,774	(161,529)	(4,766,510)	-
<b>Cash flows from investing activities:</b>								
Interest received	3,639	2,465	-	-	-	-	6,104	-
Net cash provided by (used for) investing activities	3,639	2,465	-	-	-	-	6,104	-
Net increase (decrease) in cash and cash equivalents	8,411,732	6,411,601	-	-	-	5,222,052	20,045,934	2,969,936
Cash and cash equivalents at beginning of year*	-	-	-	50	500	-	550	-
Cash and cash equivalents at end of year	\$ 8,411,732	\$ 6,411,601	\$ -	\$ 50	\$ 500	\$ 5,222,052	\$ 20,045,934	\$ 2,969,936
Reconciliation of operating income (loss) to net cash provided by (used for) operating activities								
Operating income (loss)	\$ 2,691,057	\$ 1,381,037	\$ 2,620,971	\$ (4,339,089)	\$ 197,316	\$ 1,530,327	\$ 4,081,619	\$ 396,419
Adjustments to reconcile operating income (loss) to net cash provided by (used for) operating activities:								
Depreciation	331,859	1,163,557	1,298,799	1,305,459	71,876	195,172	4,366,722	-
Effect of changes in non-cash operating assets and liabilities:								
Accounts receivable	638,690	(365,132)	(198,797)	57,283	(46,162)	(78,091)	67,791	-
Restricted cash	36,520	-	896,437	-	-	-	932,957	-
Restricted water and sewer capital facility assessments	304,629	291,239	13,899	-	-	-	609,767	-
Inventories	2,712	-	-	35,942	-	-	38,654	-
Prepaid expenses	-	-	-	-	-	-	-	(83,753)
Accounts payable	949,248	(331,753)	71,344	(14,966)	115,607	(21,317)	768,163	(1,806)
Accrued expenses and other liabilities	28,028	9,239	92,014	8,098	(3,925)	(11,375)	122,079	-
Compensated absences	(6,694)	(542)	-	12,937	11,510	(4,257)	12,954	-
Deferred revenue	50,000	334,224	-	(30,504)	46,162	32,636	432,518	-
Escrowed funds	-	(25,020)	-	-	-	(3,150)	(28,210)	-
Deferred outflows	(39,226)	(13,620)	(9,262)	(69,735)	(8,172)	(6,538)	(146,553)	-
Net pension liability	20,317	7,054	4,798	36,119	74,149	3,387	145,824	-
Deferred inflows	103,797	36,040	24,507	184,529	21,624	17,299	387,796	-
Other post employment benefits	45,608	11,095	-	37,427	858	44,835	139,823	-
Claims payable	-	-	-	-	-	-	-	683,163
Total adjustments	2,465,488	1,116,381	2,253,739	1,567,589	283,527	168,561	7,850,285	597,604
Net cash provided by (used for) operating activities	\$ 5,156,545	\$ 2,497,418	\$ 4,874,710	\$ (2,776,500)	\$ 480,843	\$ 1,698,888	\$ 11,931,904	\$ 994,023

The accompanying notes to the financial statements are an integral part of this statement.  
\*Amount changed due to reclassification.

## After-Combining

Combining the city and county's water/wastewater operations will implement a single-cost structure. Consolidating the services can reduce the price of administration charges for water and sewer service.

## Summary After-Combining

The biggest savings in combining the city and county services can be seen in the personnel department through the reduction of redundant job positions, and eliminating salary differences for similar positions. Increases in cost savings can be attributed to the combination of equipment and services as well. However, the immediate effects of combining the departments is more focused on an increase in total revenue to fund the operating expenses.

## **Conclusion**

The services discussed in this proposal would benefit from being combined with a focus on cost minimization and reduced expenditures. In alignment with our goals and with current environmental and economic constraints, we believe we have reallocated personnel, services, and equipment more efficiently.

### **ADDITIONAL ANNE ARUNDEL COUNTY BUDGET SOURCES**

Garrett, R. Current Budget. Retrieved November 29, 2016, from <http://www.aacounty.org/departments/budget-office/current-budget/>

<http://www.aacounty.org/departments/public-works/highways/>

### **ADDITIONAL ANNAPOLIS BUDGET SOURCES**

Mayor's 2016 Proposed Operating Budget. Retrieved November 19, 16, from <http://www.ci.annapolis.md.us/docs/default-source/finance-department-documents/2015-fy-comprehensive-annual-financial-report.pdf?sfvrsn=6>

### **BALTIMORE CITY INFO**

Baltimore City Fiscal 2016 Preliminary Budget Plan. Retrieved November 19, 16, from [http://finance.baltimorecity.gov/sites/default/files/Prelim Budget Book\\_0.pdf](http://finance.baltimorecity.gov/sites/default/files/Prelim%20Budget%20Book_0.pdf)

## Combining Police Department Services

Victor Carvajal, Ian Henderson, Scott Livingston, Rye McKenzie, Surjit Singh, Aaron Wong

### Introduction and Statement of Purpose

These proposed cuts are designed to help improve efficiency, provide officers with competitive compensation and benefits, and focus on community policing to help reduce crime rates in Anne Arundel County and the City of Annapolis.

Currently, Anne Arundel County officers are not adequately compensated. Starting salaries for most officers are \$13,000 lower than in Howard County and \$5,000 lower than in other counties across the state.

Recently, the county approved a proposal that would increase officers' starting salaries by \$1,000 (Yeager). This will take effect in the coming fiscal year, but this increase is still far from a competitive pay rate. Given their lower salaries and the county's high average housing prices, (\$329,400), most officers cannot afford to live in the community. This is an issue because Police Academy recruits are better off working in another county where the pay is higher and the cost of living is more reasonable.

By combining city and county services, significant costs can be reduced within the department. We propose that some of the savings be reallocated to developing a more competitive salary structure for Anne Arundel County officers.

Increasing the salary of County officers, and thereby the number of officers who can live in the county, also holds some social benefits. Resident police officers can improve community policing by creating a more harmonious relationship between the police and the public and by producing more committed, empowered, and analytical police officers (Gutierrez). With this shift of focus to community policing, the department's goal will likely move from crime suppression to crime prevention.

To make this a possibility, the county will need to approve further salary increases for officers, which can be supported by combining city and county services. Additionally, Congress authorized roughly \$9 billion in grants to local law enforcement agencies designed to pay for the direct costs of hiring and paying salaries for new officers over three years (Gutierrez). By focusing on community policing, the county will be eligible for these federal grants, which will help offset the costs of salary increases.

### Merger Recommendations

#### Patrol Services

In considering how to merge the patrol forces, we looked at crime rates and officer-to-civilian ratios to determine how many total officers would be needed on a new merged force. Currently, Anne Arundel County has a officer-to-civilian ratio of 1.25 officers/1,000 civilians, and a Total Part 1 Crime Rate of 2.56% (Anne Arundel County Police Department 2015). Annapolis has an officer-to-civilian ratio of 3 officers/1,000 civilians and an estimated crime rate of 2.96% for 2014. Crime in Annapolis has declined 49% between 2007 and 2014. (Annapolis Police Department 2014).

There are approximately 2.4 times as many officers per civilian population in Annapolis than in the county, while the City's crime rate is only 1.1 times higher. While it is assumed that the density and complexity of an urban area requires more thorough policing, this discrepancy between the county and city is fairly large.

We propose that, in a merged department, the concentration of officers should still be higher in the city than in the county. Similarly sized Frederick County has an officer-to-civilian ratio of 2.1/1,000, and Howard County (which polices Ellicott City much in the way that Anne Arundel would for Annapolis) has 1.5 officers/1,000 civilians.

We advocate lowering the city's officer-to-civilian ratio to 2.1/1,000. This will require layoffs in both the Anne Arundel County and Annapolis Police departments. Police staff would be cut from 119 to 82, depriving the community of experienced officers. Accordingly, some of the 37 officers would be laid off from the county and the city, and some would be relocated from the county to the city.

This process would be done over a period of seven years to analyze the impact of the cuts. For example, a spike in crime would force a reconsideration of lowering police staffing. The new number of officers in a merged department (720 + 82 from City) would result in an overall increase in the county's officer-to-civilian ratio, from 1.25 to 1.49, making it similar to Howard's merged police department.

As to senior command and leadership staff, the Anne Arundel Police Department would mostly replace Annapolis leadership, because they have more experience policing a larger area. Annapolis would be established as a separate fifth district and some of city leadership would be retained to oversee the new district. Some of the money saved from cutting city leadership positions would be used to give raises to the command staff whose responsibilities would be increased with the merger.

### **Administrative Services**

There is ample opportunity for cost savings through the consolidation of administrative and civilian personnel. Currently, the county employs 290 administrative staff. Roughly 80 percent of those employees appear to be civilian employees. In comparison, Annapolis employs 53 administrative staff, roughly 18.3 percent of the staff of the county.

Compared to the population in each jurisdiction, Annapolis is roughly seven percent of the county's total population. This further suggests that the Annapolis administrative department may be over-staffed.

Savings would be maximized by eliminating roughly half of the Annapolis administrative staff. The majority of layoffs would come from the Recruitment & Training, Staff Inspections, and Fleet Management/Building Maintenance. These three sub-departments are especially appropriate for cost cutting because of their involvement in the maintenance and recruitment for the Annapolis facilities, which may be eliminated to reduce capital expenditures.

### **Capital Expenditures**

In addition to the operating cost benefits of the proposed merger, there are capital expense reductions. One of the viable methods of reducing the county's capital expense budget would be to combine the headquarters and training facilities of the two police departments. Furthermore, establishing a centralized office in the county would allow for a more balanced distribution of police resources across the region, as opposed to some areas having a larger police presence than necessary.

Annapolis is a good example of the need redistribute police resources, as the officer-to-civilian ratio greatly exceeds the need for policing expressed by the city's crime rate. At the same time, however, the county suffers from inadequate housing for its teachers, firemen, and police officers (Ackerman). According to Ackerman, county officers are not paid enough to afford the relatively high prices of area homes. The city has made some efforts to rectify this issue by seeking to sell "\$50 million in tax-exempt general obligation bonds." (Ackerman)

Combining city and county training facilities is an effective cost-saving strategy, as officer training only occurs for a short period of time at the start of an officer's career. Furthermore, by removing the city's police station, the new county police station could serve both the city and county officers.

The extra funds to build a new training facility and station should go toward expanding the station's size so that it can accommodate more officers. This will alleviate the serious problems especially with housing affordability.

This combination of infrastructures can result in higher salaries for the officers who are part of the newly integrated department. This, of course, also alleviates the problem of having too many officers per civilian in Annapolis.



## **Cost-Benefit Analysis**

### **Patrol Services**

Laying off 37 officers will free up \$1,960,648 per year by the of the seven-year layoff period, based on a calculation of the average P1, P1A and P1B salaries of lower level officers, published by the counties. The calculation excluded Step 8-15 rankings to reflect that most layoffs would be of lower level officers so as to not lose experience during a transition period. The resulting average salary of \$52,990.50 per year was then multiplied by 37 officers.

### **Administrative Staff**

Reducing the Annapolis administrative staff by 50 percent would help a merged police department to significantly decrease costs. To determine the exact savings, we calculated the average annual salary of a Police Administrative Clerk to be approximately \$66,314. Assuming that the Annapolis department lays off 20 to 25 administrative employees, the merged county and city budget would save roughly \$1,326,280 to \$1,657,850.

### **Capital Expenditure**

A proposal is currently being drafted to build a new police station in Annapolis at a cost of \$8,804,000. There have also been proposals for a new city training facility. When studying recent data of new police training facility openings, a new facility would cost at least \$10,000,000. The current training facility opened in 1976, and upkeep and maintenance costs have been rising. Currently, the annual operating budget for the police department is \$1,118,572, and \$170,000 of that amount is allocated to police training.

One solution is to a new central training facility within Anne Arundel County, which would cost approximately \$14,868,000. Even though this cost is \$4 million more than the proposed budget, it would be more cost effective than opening up a single training facility. The added expense would be offset by having police training be more readily available and accessible to all police trainees, and the new facility would mitigate maintenance and upkeep costs from maintaining and old facility.

If the city of Annapolis opens their own separate police training facility, the costs is estimated to be at least \$18,000,000. By combining the city and county training facility and police departments, the project cost is estimated to be \$14,868,000. A centralized facility can serve more people, and there would be cost savings of at least \$3,132,000.

### **Overall**

Combining Annapolis and Anne Arundel Police forces would significantly cut operating and capital expenses. Specifically, cutting patrol service and administrative staff members could yield \$3,286,928 to \$3,618,498 in operating expenditure savings. Furthermore, combining training and operations facilities could save \$3,132,000 in capital expenditure.

In conclusion, this merger could result in total cost savings between \$3,599,288 and \$3,930,798.

## Appendix

The research explored examples of government mergers. It does not directly affect the recommendation or factor into the cost benefit analysis, but is designed to provide implementation guidelines for the county if it decides to move forward with a merger.

In the first example, the Hagerstown Police Department, employees have earned more than \$600,000 in overtime pay in the last year. However, data indicates that expense was still \$200,000 less than in the previous year. In the last fiscal year, employees made \$602,712 in overtime, roughly \$5,500 for each of the 109 officers.

According to Council member Lewis C, Metzner, overtime spending on roll call, about \$100,000 a year, should be addressed. Roll call is a 15-minute briefing session conducted before the start of an officer's shift. During this time each officer makes an additional \$900 to \$1,000/year. This is a much better way to implement budget cuts and a great way to reduce overtime pay. Additionally, the police department "had seven more officers on the street than in the previous year, which mean less overtime spending to cover staff shortage."(Kulin) To decrease overtime spending, the department implemented roll call, which has been shown to have a significant positive impact on budget cuts.

Next we looked at the approved budget for Hagerstown and identified an increase in the police spending from 2014 to 2016. In 2014 the department spending was \$99,995,355, whereas in 2015, it was \$105,749,022. The only prediction we can make by looking at the approved budget is that the county is spending more money on public safety and considering cost cutting. However, the FY16 general fund budget, shows a decrease of \$15.2 million from the FY15 budget. This was largely because the "Fiscal year 2015 budget had around \$43.7 million use of fund balance for one time initiatives." (Robbins)

The second example was the FY16 budget for Ellicott City, which provided around \$2.3 million in a new funding to the public safety agencies. This will help fund a new police department academy to offset attrition. Additionally, the funding to public safety agencies is set to increase over last year.

Overall, the data of Ellicott City shows a significant increase in the budget for the police department in 2016 and following years. However, there was a reduction in the total general fund budget in FY16. The Ellicott City Police Department budget increased from \$105,749,022 in 2015 to \$107,335,037 in 2016. This demonstrates that Ellicott City is working toward improving community safety and providing increased support to residents.

These examples demonstrate the feasibility of large-scale budget cuts in police departments that could have a positive, lasting impact in Anne Arundel County.

Ackerman, Andrew. "Maryland County Planning \$50M in GOs for New Work-Force Housing Program." *Bondbuyer.com*. SourceMedia, 15 Dec. 2005. Web. 15 Nov. 2016

Anne Arundel County Police Department 2015 Annual Report (n.d.): n. pag. Aacounty.org. Anne Arundel Police Department, 2015. Web. 20 Nov. 2016.

Bedford, Keith. "City Urging 5 Percent Cut in Overtime Costs for Major Departments - The Boston Globe." *BostonGlobe.com*. Boston Globe, 28 July 2016. Web. 20 Nov. 2016.

Crowe, Kevin, and Don Walker. "Better Management, Act 10 Cut City Overtime by Nearly 30%." *Better Management, Act 10 Cut City Overtime by Nearly 30%. MILWAUKEE NEWS*, 05 Aug. 2013. Web. 20 Nov. 2016.

Gutierrez, Ricky S. "Social Equity And The Funding Of Community Policing." New York: LFB Scholarly Publishing LLC, 2003. *eBook Collection (EBSCOhost)*. Web. 20 Nov. 2016

KULIN, DAN. "City Cuts Police Overtime Costs." *Schurz-herald-mail*. Herald-mail.com, n.d. Web. 06 Dec. 2016.

Robbins, Lonnie, Holly Sun, and Rushane Jones. "Howard County Approved Budget." *Www.howardcountymd.gov*. N.p., 16 July 2016. Web. 6 Dec. 2016.

Yeager, Amanda. "Starting salaries for Anne Arundel police to get a boost." *Capital Gazette*. June 13, 2016. Accessed on: 19 November 2016. Web.  
<<http://www.capitalgazette.com/news/government/ph-ac-cn-police-union-decision-0614-20160613-story.html>>

"Mission Statement of the Annapolis Police Department." *Annapolis.gov*. Annapolis Police Department, 2014. Web. 20 Nov. 2016.