
FISCAL IMPACT ANALYSIS REPORT

Anne Arundel County, Maryland



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Report on Phases I and II Fiscal Impact Analysis conducted for
Anne Arundel County, Maryland

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APPENDIX B: LEVEL OF SERVICE/COST & REVENUE ASSUMPTIONS	<i>(issued under separate cover)</i>

INTRODUCTION

BACKGROUND

TischlerBise is under contract with Anne Arundel County, Maryland, to conduct a two-phase Fiscal Impact Analysis, portions of which are anticipated to be incorporated into the County's update to its General Development Plan. **Phase I** is a Fiscal Impact Analysis Study (FIAS) of four future growth scenarios. **Phase II** of the project is an evaluation of capital needs and revenue strategies to address the fiscal impact of (1) combining current demands from the County's existing population and employment base with those from growth and (2) addressing the backlog of capital infrastructure needs. The results of these evaluations are included herein as well as in supporting documents.

In general, a fiscal impact evaluation analyzes revenue generation and operating and capital costs to a jurisdiction associated with the provision of public services and facilities under a set of assumptions. The Phase I Anne Arundel Fiscal Analysis included the development of growth scenarios and determination of current service levels and capacities and associated revenues and costs. The development scenarios evaluated in the analysis are represented by numerical projections of population, housing units, employment, and nonresidential building area through the year 2025. *The fiscal impact shows direct revenues and costs from new development only and does not include revenues or costs generated from existing development.* This analysis was done through on-site interviews and follow-up discussions with Anne Arundel staff and a review of applicable budgets and other relevant documents. The results of the level of service/capacity analysis were used to develop a fiscal impact model for the County to determine the fiscal impact of each County Growth Scenario. The fiscal analysis essentially looks at revenues and expenditures separately. It does not project expenditures based on revenues available—unlike the annual budget process where a budget is balanced with the resources available.

The Phase II analysis takes the results from Phase I of the fiscal impact of growth in Anne Arundel County under trends development assumptions and (1) adds the revenues and costs from the existing base and (2) then adds the costs to correct the estimated backlog of infrastructure projects. Phase II also includes a discussion of revenue strategies to address the resulting capital needs and concludes with a framework for evaluating revenue options.

The Phase II analysis essentially takes the same approach as Phase I but emphasizes capital needs. In particular, Phase II analyzes ongoing capital costs to serve existing development and the costs to correct the County's estimated infrastructure backlog. Embedded in the infrastructure backlog estimate is a cost estimate to prevent further deterioration.

The approach of the Fiscal Impact Analysis is to project future needs based on *current levels of service*. No judgment is made as to whether the levels of service are adequate, inadequate, or better than adequate. Nor are any assumptions made regarding future changes in levels of service or types of services offered due to existing deficiencies, different policies or requirements, demographic shifts, technological changes, etc. Furthermore, it is important to acknowledge that fiscal issues are one aspect of evaluating development and growth trends. Environmental, land use, housing, jobs/housing balance, transportation, and other issues should also be taken into consideration when determining what is best for the County.

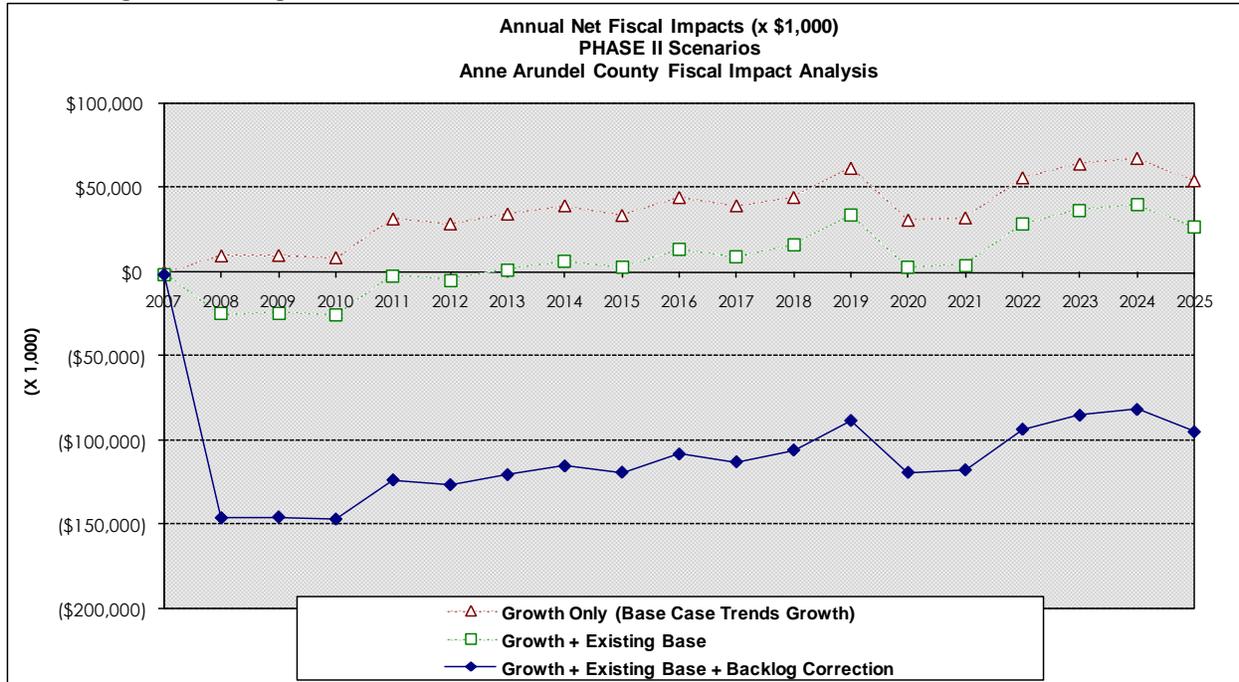
Documentation for the Fiscal Impact Analysis is provided in four reports: (1) *Executive Summary of Phases I and II of the Fiscal Impact Analysis*; (2) *Fiscal Impact Report: Report on Phases I and II Fiscal Impact Analysis* (this document); (3) *Appendix A: Revenue and Expenditure Detail of the Phase I Fiscal Impact Analysis*; and (4) *Appendix B: Level of Service / Cost & Revenue Assumptions*.

FINDINGS

The four County Growth Scenarios evaluated in Phase I produce net surpluses to the County over all years of the 18-year projection period. That is, the revenue projected from growth is sufficient to cover expenditures projected to serve that growth. The annual surpluses are due mainly to the County's revenue structure, including ongoing annual sources of revenue from property taxes and local income taxes as well as one-time recordation and transfer taxes, compared to the level of expenditure for operations and capital infrastructure needed to serve growth. Given the amount of growth projected relative to existing population and employment base in the County—representing only a 15 percent increase over 18 years—the results tend to reflect the effect of economies of scale.

The County and TischlerBise developed two additional scenarios for analysis in Phase II focusing on infrastructure needs. Figure 1 provides the overall results of the Fiscal Analysis depicting annual net fiscal results for (1) growth (Base Case Trends scenario) (2) growth plus the existing base; and (3) growth, existing base, plus the estimated costs to correct the backlog in infrastructure. Annual results are shown where each year reflects total revenues generated minus total expenditures incurred in the same year. Backlog costs are significant totaling over \$2 billion. *The overall finding is that the net surpluses generated by growth in the Phase I analysis are insufficient to cover the estimated costs to correct the existing backlog of infrastructure needs.*

Figure 1. Annual Net Fiscal Results – County Base Case Growth Scenario Plus Existing Base Plus Correcting the Backlog (x\$1,000)



As shown in Figure 1, revenues projected from growth (under the Phase I assumptions) are sufficient to cover operating and capital costs generated by growth. Annual results from new growth plus the existing base generate net deficits for the first several years of the projection period and net surpluses generally toward the middle and end. The net surpluses from growth overall are sufficient to cover the estimated costs to serve the existing base producing essentially fiscally neutral results. As noted above, given the amount of growth projected relative to the existing population and employment base of the County—representing only a 15 percent increase over 18 years—the results tend to reflect the effect of economies of scale.

The third scenario includes growth, the existing base, plus the estimated costs to correct the backlog in infrastructure including Schools, Parks, Roads, Community College, and County Facilities. The Backlog correction is assumed to be spread over the 18-year time period, thus annual deficits are generated over the entire time frame. The backlog costs not covered by projected revenues are significant totaling over \$2 billion for the 18-year period. The projected cumulative net surplus generated from growth of almost \$700 million represents only about 30 percent of the backlog costs.

Part 1. PHASE I FISCAL IMPACT ANALYSIS

PHASE I INTRODUCTION

TischlerBise is under contract with Anne Arundel County, Maryland, to conduct a two-phase Fiscal Impact Analysis, portions of which are anticipated to be incorporated into the County's update to its General Development Plan. The FIAS includes General Fund activities including Schools, Community College, and Libraries. Revenues and costs are in current dollars.

A fiscal impact evaluation analyzes revenue generation and operating and capital costs to the County associated with the provision of public services and facilities under a set of assumptions. *The fiscal impact shows direct revenues and costs from new development only and does not include revenues or costs generated from existing development.* The development scenarios evaluated in the analysis are represented by numerical projections of population, housing units, employment, and nonresidential building area through the year 2025.

TischlerBise worked with County staff¹ to identify four scenarios to evaluate for the FIAS. The scenarios represent a number of "what if" situations given the County's recent development trends, potential impacts of BRAC, and other factors. Four scenarios are evaluated using six Fiscal Analysis Zones (FAZ) for all services except Schools, which use the current seven School Impact Fee Zones.

After scenarios are identified, the next major step of the fiscal impact analysis is to determine current service levels and capacities and associated revenues and costs. This was done through on-site interviews and follow-up discussions with Anne Arundel staff and a review of applicable budgets and other relevant documents. Additionally, our local fiscal experience with Maryland jurisdictions as well as our national experience conducting over 600 fiscal impact analyses was beneficial. The results of the level of service/capacity analysis were used to develop a fiscal impact model for the County to determine the fiscal impact of the County Growth Scenarios. The assumptions are based on information provided by County staff through interviews, follow-up discussions, and written correspondence. The results of this step have been approved by the County and are issued as an Appendix to this report (under separate cover) in a document entitled, *Level of Service / Cost and Revenue Assumptions (LOS Document)*.

As noted above, a fiscal impact analysis determines whether revenues generated by development are sufficient to cover the resulting costs from that development for service and facility demands placed on the County under current levels of service. It is intended to be used to help guide policy decisions regarding levels of service and revenue enhancements. It should not be viewed as a budget-forecasting document. A fiscal analysis essentially looks at revenues

¹ The Fiscal Impact Analysis Study was guided by a County Project Management Team (PMT) comprised of representatives from Planning, Budget, Public Works, and Schools.

and expenditures separately. It does not project expenditures based on revenues available—unlike the annual budget process where a budget is balanced with the resources available.

It should also be noted that the level of capital expenditures assumed in the analysis and the resulting costs are projected independent of certain policy-making decision points such as capital improvement plans, debt capacity guidelines, or expectations for levels of service. Rather, the costs projected in this analysis *reflect the costs to serve new growth, regardless of whether the resources are available to cover the costs*. The County will continue to balance its budget each year, considering financial guidelines and policies, applicable operating impacts, and available resources.

PHASE I SCENARIOS & FISCAL ANALYSIS ZONES

SCENARIOS

The County in consultation with the TischlerBise team developed four growth scenarios to be analyzed in the FIAS. The scenarios are evaluated using six Fiscal Analysis Zones (FAZ) for all services except Schools, which use the current seven School Impact Fee Zones. (See Appendix A or B for zone maps.) Each scenario is summarized below and more detailed information is included in the *LOS Document (Appendix B)*.

- *Scenario 1: Base Case Residential and Nonresidential.* This scenario assumes current trends continue in both residential and nonresidential development, as identified in the Baltimore Metropolitan Council's (BMC) Round 7 Forecast.
- *Scenario 2: Base Case Residential and High Employment Growth at Fort Meade.* This scenario assumes Base Case Residential development (the same as Scenario 1) with more employment growth than recent trends. Specifically, it assumes 15,000 more jobs (above the Base Case) by 2025. The jobs are added to the Fort Meade FAZ with 5,000 new jobs added in each five-year increment (2015, 2020, and 2025).
- *Scenario 3: High Employment Growth with High Residential Growth.* This scenario assumes higher growth in both residential and nonresidential development than current trends. For nonresidential development, the same assumptions as Scenario 2 hold for this scenario. In addition to the 15,000 additional jobs from Scenario 2, it is assumed in this scenario that housing development in the County will keep pace with the projected increase in nonresidential development, thus maintaining the County's current jobs to housing ratio. This results in an additional 9,000 housing units (above the Base Case) locating in the County by 2025, which are then allocated based on available land and zoning. The additional units are added in 3 equal five-year increments (2015, 2020, and 2025). Projected housing unit types were determined by the County based on the existing mix of housing types in each FAZ and available land and zoning.
- *Scenario 4: Accelerated Growth Scenario.* This scenario represents an accelerated pace of growth where thirty years of projected development is condensed into the 20-year projection period to be analyzed in the FIAS. Projections were developed assuming that the Round 7 forecasts for 2035 occur by 2025. This equates to an additional 10,303 housing units and 34,265 jobs over the Base Case. Growth is

redistributed in five-year intervals starting in year 2010 through 2025, keeping the same traffic analysis zone distribution and then aggregating to the study's FAZs.

For all of the above scenarios, the County provided housing unit and employment data for 2005 through 2025 in five-year intervals. TischlerBise interpolated between 2005 and 2010 to generate a 2007 estimate that is used as the base year for the FIAS. TischlerBise also projected population growth based on household sizes by type of unit. (See the section, "Demographic & Data Assumptions," of the *LOS Document* for further discussion.)

As noted above, this study also includes a Phase II. This second-phase effort may evaluate such topics as growth management techniques, revenue strategies, existing deficiencies, levels of service, or land use assumptions.

Summary of Projected Growth by Scenario

Growth for each scenario for 2008-2025 is provided below in Figure 2. Data is shown for the *projected net increases* in population (in housing units), housing units, employment, and public school enrollment for each scenario. As shown, population growth varies from an increase of 68,995 in Scenarios 1 and 2; 89,082 in Scenario 3; and 94,898 in Scenario 4. (It should be noted that population increases reflect population residing in the types of housing units shown as opposed to group quarters.) Increases in housing units vary from a low of 27,265 in Scenarios 1 and 2; to 36,265 in Scenario 3; and 37,568 in Scenario 4. The distribution of housing types in Scenario 3 differs from the other scenarios with a higher percentage of single family attached and multifamily units. Projected increases in employment are also shown for each scenario. Employment growth in Scenario 1 is projected at 92,571 jobs. Scenario 2 and 3, representing higher employment growth at Fort Meade, include a total of 107,571 jobs with the additional jobs concentrated in office and office/institutional. Employment growth in Scenario 4 is projected at 126,836 jobs. Finally, public school enrollment growth is shown for each scenario. Scenarios 1 and 2, representing Base Case residential projections, generate 10,011 new students; Scenario 3 projects 12,929 students and Scenario 4 projects 13,790 students.

Figure 2. Countywide Comparisons: Net Increases 2008-2025

	SCENARIO S			
	1. Base Case Res & Empl	2. Base Case Res & High Empl	3. High Res & High Empl	4. Accelerated Res & Empl.
Population	68,995	68,995	89,082	94,898
Housing Units				
Single Family Detached	16,996	16,996	19,133	23,141
Single Family Attached	5,540	5,540	8,240	7,764
Multifamily	4,730	4,730	8,893	6,664
Net Increase in Housing Units	27,265	27,265	36,265	37,568
Employment				
Industrial	20,925	20,925	20,925	29,533
Retail	17,333	17,333	17,333	23,796
Office	16,084	28,084	28,084	22,388
Office/ Inst.	38,229	41,229	41,229	51,119
Net Increase in Jobs	92,571	107,571	107,571	126,836
School Enrollment*				
Elementary	4,608	4,608	5,951	6,348
Middle	2,263	2,263	2,922	3,117
High	3,140	3,140	4,055	4,326
Net Increase in Enrollment	10,011	10,011	12,929	13,790

* Based on Student Generation Rate per dwelling unit.

Sources: Anne Arundel County; TischlerBise

Note: Industrial employment assumed in Business Parks.

FISCAL ANALYSIS ZONES

Fiscal Analysis Zones (FAZ) are areas within the County that share similar characteristics and that allow the analysis to reflect differences due to geography. The Anne Arundel County Project Management Team (PMT) and TischlerBise designated the following six Fiscal Analysis Zones based on recent and projected development trends and fiscal considerations:

1. *Annapolis City*
2. *East:* East/Peninsulas/Annapolis urban influence area (includes community planning areas Lake Shore, Severna Park, Broadneck, Crownsville, Annapolis Neck, and Edgewater/Mayo)
3. *North:* North/BWI/Baltimore urban influence area (includes community planning areas Brooklyn Park, Glen Burnie, BWI/Linthicum, and Pasadena/Marley Neck)
4. *South:* South/Rural/Preservation area (includes community planning areas South County and Deale/Shady Side)
5. *West:* West/Fort Meade/DC urban influence area (includes community planning areas Severn, Odenton, Jessup/Maryland City, and Crofton)
6. *Fort Meade Base*

The above zones allow the fiscal analysis to reflect differences in property values, the tax differential for Annapolis, and assumptions regarding tax exempt property at Fort Meade. Additionally, the zones are used to model capital needs to account for existing capacity.

Additionally, to sufficiently project the demand for new Schools and associated operating costs, the County and TischlerBise determined that using the existing County School Impact Fee Zones would be beneficial. TischlerBise created a component to the model to reflect the seven School Impact Fee Zones, and the County provided land use data for each scenario by these seven districts. Maps for both sets of zones are provided in Appendix A and B.

PHASE I APPROACH AND MAJOR ASSUMPTIONS

A fiscal impact analysis determines whether revenues generated by new growth are sufficient to cover the resulting costs for service and facility demands placed on a jurisdiction. The fiscal impact analysis conducted by TischlerBise incorporates the case study-marginal cost approach wherever possible. The case study-marginal methodology is the most realistic method for evaluating fiscal impacts. This methodology takes site or geographic-specific information into consideration. Therefore, any unique demographic or locational characteristics of new development are accounted for, as well as the extent to which a particular infrastructure or service operates under, over or close to capacity. Available facility capacity determines the need for additional capital facilities and associated operating costs.

Many of the costs that are impacted by general growth, regardless of location, are projected using a marginal/average cost hybrid methodology that attempts to determine capacity and thresholds for staffing but projects non-salary operating costs using an average cost approach.

The service level, revenue, and cost assumptions are based on TischlerBise's on-site interviews and follow-up discussions with Anne Arundel County staff, a detailed analysis of the *Fiscal Year 2008 Anne Arundel County Approved Budget*, and other relevant documents. Additionally, our local fiscal experience with Maryland jurisdictions as well as our national experience conducting over 600 fiscal impact analyses was beneficial.

The assumptions outlined in the *LOS Document* are utilized along with the growth projections developed for this analysis to calculate the fiscal impact on the County over the 18-year projection period. Calculations are performed using a customized fiscal impact model designed specifically for this assignment.²

The following major assumptions regarding the fiscal impact methodology should be noted. (See the *Level of Service (LOS) Document*, issued under separate cover as Appendix B, for further detail on projection methodologies.)

² A general note on rounding: Calculations throughout this report are based on an analysis conducted using Excel software. Results are discussed in the report using one-and two-digit places (in most cases), which represent rounded figures. However, in some cases the analysis itself uses figures carried to their ultimate decimal places; therefore the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to rounding).

MARGINAL, GROWTH-RELATED COSTS AND REVENUES

For this analysis, all costs and revenues directly attributable to new development—by type of development—are included. Personnel and other operating costs are projected, as are expenditures for capital improvements. Where appropriate, costs reflect those services provided Countywide versus subareas of the County such as outside of Annapolis and Fort Meade.

The General Fund, Component Units (Schools, Community College, and Library), and Capital Projects Funds are included in this analysis. Enterprise funds (e.g., utilities) are not included in this analysis as they are assumed to be self-sufficient.

Some costs and revenues are not expected to be impacted by demographic changes, and are therefore considered “fixed” in this analysis. To determine those costs and revenues that should be considered fixed, TischlerBise reviewed the FY2008 Budget and available supporting documentation as well as interviewed staff. Based on this review, preliminary assumptions were developed that were reviewed and discussed with appropriate staff and are documented in the *LOS Document* issued as an appendix to this report.

LEVEL OF SERVICE

The cost projections are based on a “snapshot approach” in which it is assumed the current level of service, as funded in the County budget and as provided in current capital facilities, will continue through the 18-year analysis period. The current demand base data was used to calculate unit costs and service level thresholds. Examples of demand base data include population, dwelling units, employment by type, vehicle trips, etc. In summary, the “snapshot” approach does not attempt to speculate about how levels of service, costs, revenues and other factors will change over time. Instead, it evaluates the fiscal impact of new growth to the County as conducted under the budget used in this analysis. The *LOS Document* provides further detail on levels of service assumptions.

REVENUE STRUCTURE

Revenues are projected assuming that the current revenue structure and rates, as defined by the County FY2008 Budget, will not change during the analysis period. Impact fees are based on the rates as passed by County Council on November 5, 2008, which amended rates for Roads, Schools, and Public Safety.

INFLATION RATE

The rate of inflation is assumed to be zero throughout the projection period, and cost and revenue projections are in constant 2007 dollars. This assumption is in accord with budget data and avoids the difficulty of speculating on inflation rates and their effect on cost and revenue categories. It also avoids the problem of interpreting results expressed in inflated dollars over an extended period of time. In general, including inflation is complicated and unpredictable. This is particularly the case given that some costs, such as salaries, increase at different rates than other operating and capital costs such as contractual and building construction costs. And these costs, in turn, almost always increase in variation to the appreciation of real estate, thus affecting the revenue side of the equation. Using constant dollars avoids these issues.

NON-FISCAL EVALUATIONS

It should be noted that while a fiscal impact analysis is an important consideration in planning decisions, it is only one of several issues that should be considered. Environmental and social issues, for example, should also be considered when making planning and policy decisions. The above notwithstanding, this analysis will enable interested parties to understand the fiscal implications of future development.

PHASE I FISCAL IMPACT ANALYSIS RESULTS

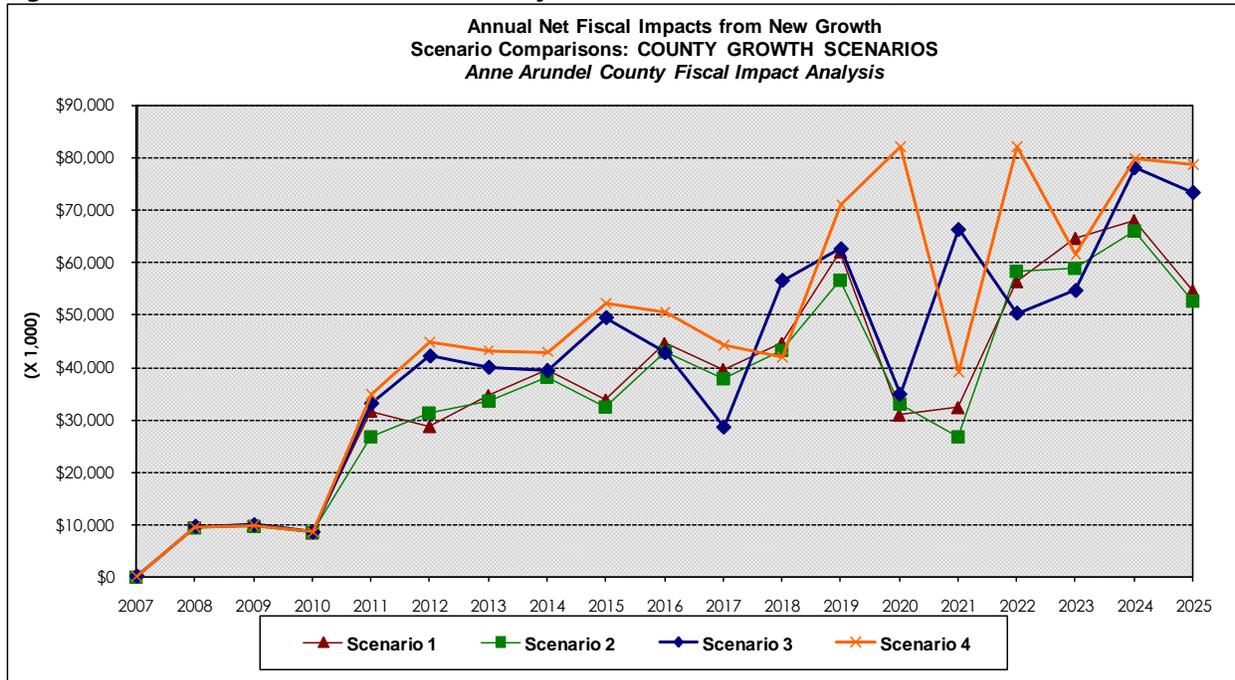
The following section provides further discussion on the fiscal impact analysis results for development in Anne Arundel County. Fiscal impact results are shown in a number of different ways. First, *annual* net results are discussed and show the fiscal impacts (annual revenues minus annual expenditures) from one year to the next over the 18-year projection period. *Average annual* results are then shown over different time intervals to provide an easy way to compare multiple scenarios and summarize the general fiscal impacts over time. Finally, *cumulative* results are shown reflecting total revenues, expenditures, and net fiscal results over the 18-year development timeframe.

ANNUAL NET RESULTS

Figure 3 shows the *annual* (year to year) net results to the County for each of the four scenarios over the study time horizon. Each year reflects total revenues generated minus total expenditures incurred in the same year. Both capital and operating costs are included. By showing the results annually, the magnitude, rate of change, and timeline of deficits and revenues can be observed over time. The “bumpy” nature of the annual results during particular years represents the opening of capital facilities and/or major operating costs being incurred.

On the following figure, data points above the \$0 line represent annual surpluses; points below the \$0 line represent annual deficits. Each year’s surplus or deficit is *not* carried forward into the next year. This enables a comparison from year-to-year of the net results without distorting the revenue or cost side of the equation. In reality, those surpluses would be carried forward or deficits would be funded through other revenue sources or means, such as debt financing for capital improvements, or levels of service would decrease. Figures are shown in \$1,000s.

Figure 3. Annual Net Fiscal Results – County Growth Scenarios (x\$1,000)



As shown in Figure 3, all scenarios produce annual net revenues to the County over the projection period in every year. The annual surpluses are due mainly to the County’s revenue structure, including ongoing annual sources of revenue from property taxes and local income taxes as well as one-time recordation and transfer taxes, compared to the level of expenditure needed to serve growth. Given the amount of growth projected relative to existing population and employment base—representing a 15 percent increase over 18 years—the results tend to reflect the effect of economies of scale where serving new development can be absorbed by existing capacity. For those services and facilities where expansions or improvements are needed, the revenues generated by new development at higher than average market values, is adequate to cover the related expenditures.

Through 2010, all scenarios generate the same results due to the same development projections. After 2010, results diverge, although still generating net surpluses. The decreases in the net surpluses for Scenarios 1 and 2 in 2015 are due to Fire Station construction and related marginal operating costs as well as Community College capital costs; and in 2020 and 2021, the decreases are due to school construction and related operating expenditures. While all scenarios generate a need for additional Fire stations, the cost relative to the revenues generated in the early years, produces a more pronounced decrease in surpluses for Scenarios 1 and 2 in 2015, than for other scenarios.

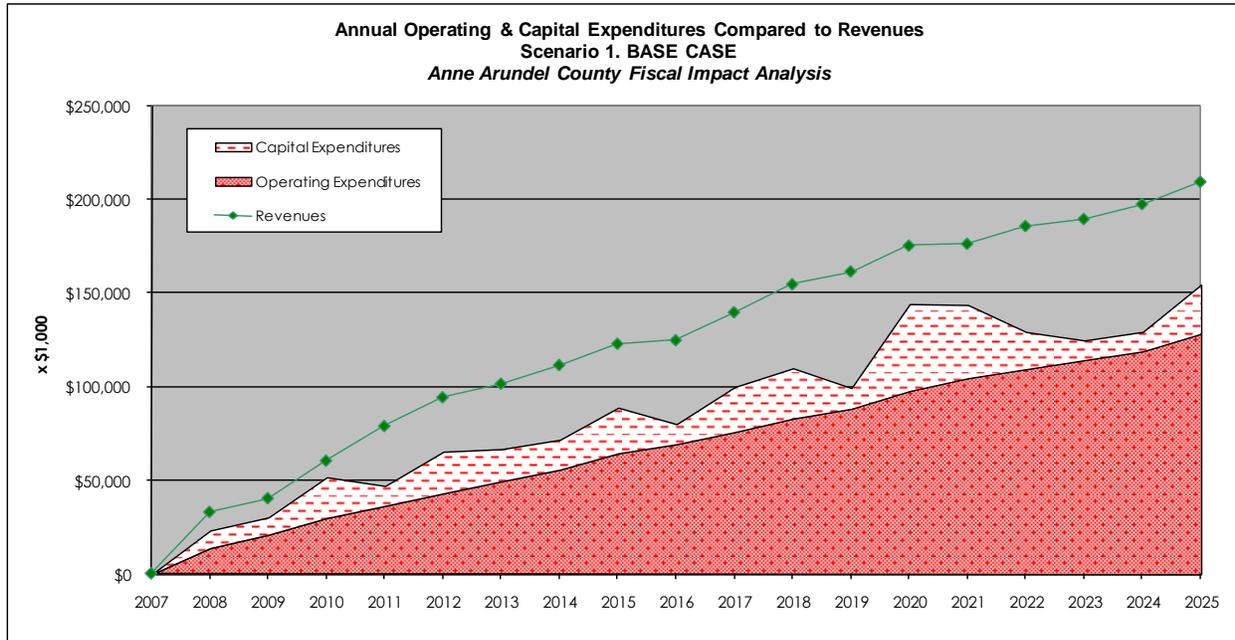
For Scenario 3, the decreases in year 2017 and 2020 are due to school construction and related operating cost, which occur sooner than the Base Case residential growth due to higher and faster enrollment increases. And for Scenario 4, the decreases in 2017 and 2018 are also due to school construction and related operating costs—with a high school expansion projected in 2017 and an elementary school projected in 2018. The increases in net surpluses in 2020 and 2022 are due to minimal capital expenditures and increased annual revenues from property and income taxes as well as a second influx of recordation and transfer taxes due to assumed turnover of residential properties after year 10.

In all scenarios, other marginal capital costs are included where appropriate. For Roads, annual capital costs are included for capacity expansions to serve growth. Other frequent major capital expenditures are Park improvements, Parkland acquisition, and Community College expansions.

Annual Operating and Capital Expenditures Compared to Revenues

Further detail on annual results is provided in Figure 4, depicting annual expenditures delineated between operating and capital along with annual revenues for the Base Case Scenario (Scenario 1). (Results for the other scenario are not shown, but the same general relationship occurs.) As shown in the figure, annual revenues generated are sufficient to cover annual operating and capital expenditures in each year of the projection period with some years coming closer than others in producing net deficits. It should be noted that some operating expenditures are tied directly to the opening of capital facilities. That is, when a new capital facility is “built” by the model, annual operating expenditures for that facility are triggered. (Appendix A provides further detail on revenue and expenditure outputs for each scenario.)

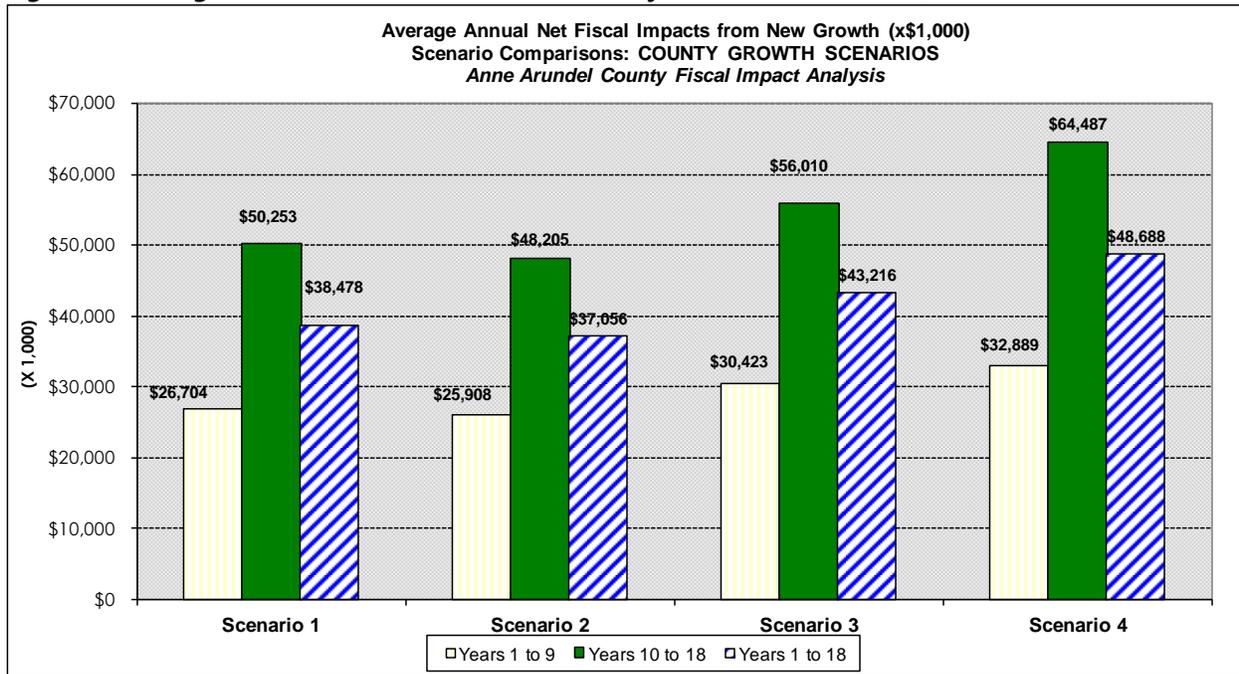
Figure 4. Annual Operating & Capital Expenditures Compared to Revenues: Scenario 1. Base Case (x\$1,000)



AVERAGE ANNUAL NET RESULTS

Figure 5 below shows the *average annual* net fiscal results (average revenues minus average operating and capital expenditures) for the County Growth Scenarios. The results shown are for three time periods—(1) Years 1-9; (2) Years 10-18; and (3) Years 1-18, representing the entire 18-year development period. The costs and revenues included are those that are defined and discussed throughout this report (and the *LOS Document*). All operating and new capital costs are included in the net fiscal results and represent those accruing from new development under each of the growth scenarios. Figures are shown in \$1,000s.

Figure 5. Average Annual Net Fiscal Results – County Growth Scenarios (x\$1,000)



As shown in Figure 5, average annual results show net surpluses over each time period with the first time period generating the lowest amount for all scenarios. Over the 18-year time frame, Scenario 4, the Accelerated Growth Scenario, produces the highest overall net surplus of almost \$49 million per year on average. Scenario 3 produces the next best results with an average of \$43 million per year. Scenarios 1 and 2 follow with \$38 million and \$37 million, respectively. Scenario 2 generates the worst relative results due to the assumption of additional jobs at Ft. Meade, which generate costs but not commensurate revenues due to non-taxable development at Ft. Meade.

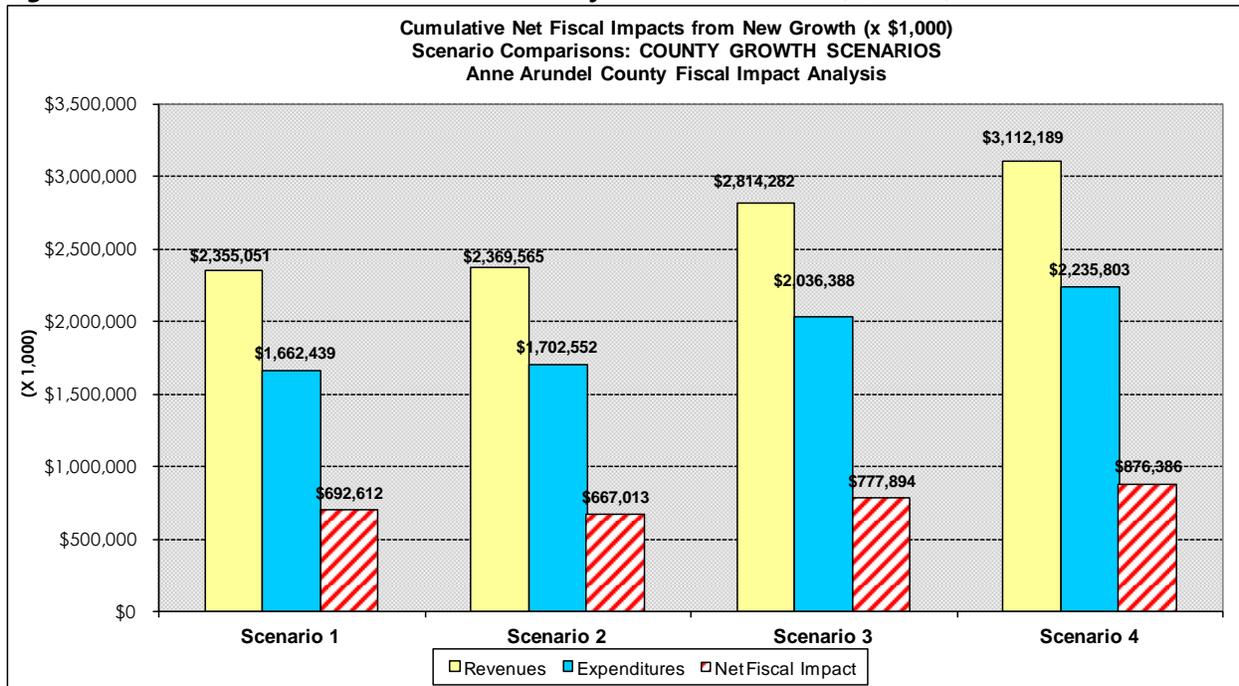
Smaller net surpluses are generated in the first 9 years of the scenarios due to a tax base that is not as robust as it is in the later years due to the aggregating nature of property and income taxes as well as the secondary influx of recordation and transfer taxes after year 10 due to turnover of housing units.

Overall, the average annual net surpluses generated by each scenario represent approximately 2.5 percent of the County’s current General Fund budget. However, because the projected revenues and expenditures in the fiscal analysis include revenues from Component Units as well (Schools, Community College, and Library), the share is effectively lower than 2 percent.

CUMULATIVE NET RESULTS

Cumulative figures reflect total revenues generated minus operating and capital expenditures over the 18-year development timeframe. Cumulative revenues, expenditures and net results are shown in Figure 6. Figures are shown in \$1,000s.

Figure 6. Cumulative Net Fiscal Results – County Growth Scenarios (x\$1,000), 2008-2025



Cumulative net fiscal surpluses are generated in all scenarios with Scenario 4 generating the highest amount of all scenarios. The cumulative net surpluses range from a high of approximately \$876 million for Scenario 4 to a low of \$667 million in Scenario 2. Scenario 2 produces worse results than the other scenarios due to the assumption of additional jobs at Ft. Meade, thus generating costs to serve the growth without commensurate revenues due to non-taxable development at Ft. Meade. However, in all scenarios, total revenues generated from new development over the projection period are sufficient to cover the resulting costs for operating and capital needs.

As noted previously, the results indicate that the County’s revenue structure, with substantial annual revenue sources including property and income taxes and one-time revenue from recordation and transfer taxes, is sufficient to cover the costs to serve growth projected in each scenario. Revenue from property taxes, local income tax, and recordation and transfer taxes combined represent approximately 90 percent of projected General Fund operating revenues

(and approximately 70 percent of total revenues when State funding is included). Because these sources are all derived based on property values for new development, the values assumed in this analysis are a main determinant of the results.

Further Detail on Operating and Capital Results

Analyzing operating and capital results separately reveals net surpluses for both but much lower net surpluses for capital. Cumulative revenues and expenditures for operating and capital are shown below in Figure 7. Capital revenues are those that are restricted for capital purposes (i.e., impact fees, State funding) for specific types of infrastructure (e.g., schools, parks, etc.) and capital expenditures shown are for all types of infrastructure projected. As shown, the projected revenues for capital needs are sufficient to cover the projected level of infrastructure needs, however the net surpluses are relatively small. (For further detail on operating and capital expenditures, see Appendix A.)

As noted earlier and discussed under the Capital expenditure section, Storm Drainage capital costs are not included as part of the calculations herein due to ongoing analysis by the County. However, to provide an order of magnitude estimate, County staff provided a representative cost (\$1.50 per impervious square foot) to serve development for growth-related improvements, based on analyses to date. Assuming this cost factor, the potential costs over the 18-year projection period for storm drainage improvements from new development range from approximately \$300 million for Scenario 1 to \$420 million for Scenario 4 over the 18-year projection period. This represents 40 to 50 percent of the net surpluses generated, depending on the scenario.

Figure 7. Cumulative Net Fiscal Results – Operating and Capital Detail (x\$1,000), 2008-2025
GROWTH SCENARIOS
Anne Arundel County, Maryland, Fiscal Impact Analysis

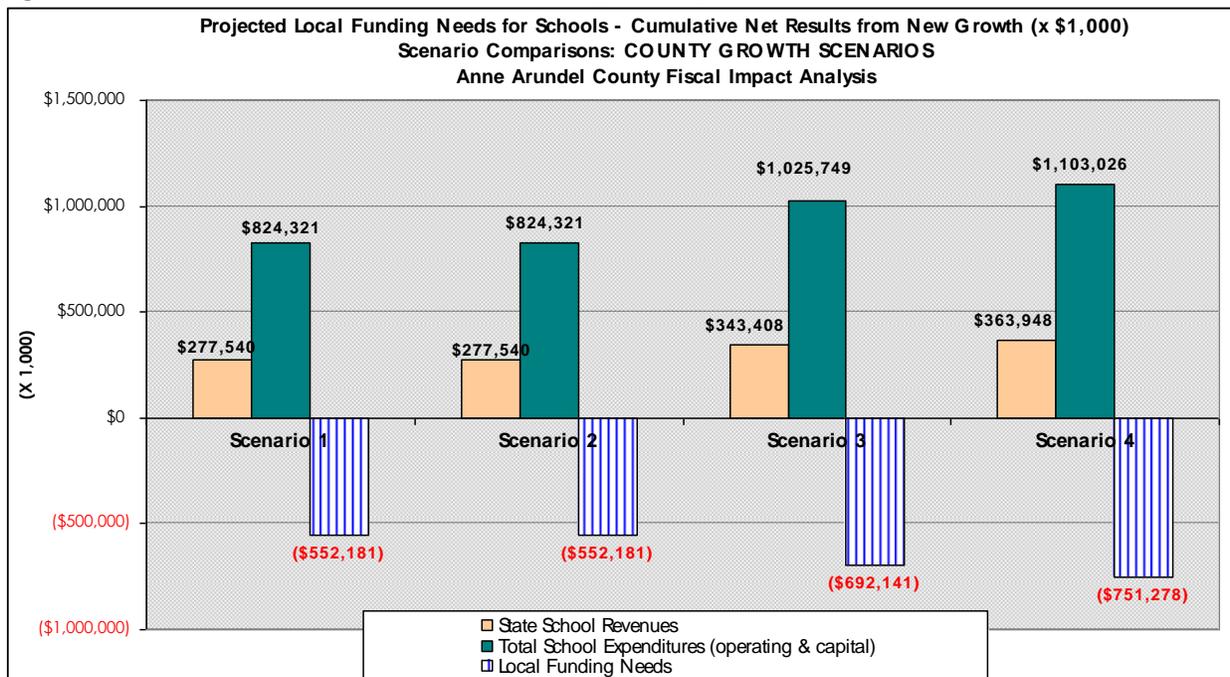
Category	SCENARIO			
	Scenario 1. Base Case	Scenario 2. Base Case Res / High Empl.	Scenario 3. High Res & Empl.	Scenario 4. Accel. Growth
Operating Revenues	\$1,959,933	\$1,972,048	\$2,313,443	\$2,540,654
Operating Expenditures	\$1,305,735	\$1,325,266	\$1,573,525	\$1,690,383
NET OPERATING IMPACT	\$654,198	\$646,782	\$739,918	\$850,271
Capital Revenues	\$395,117	\$397,517	\$500,839	\$571,535
Capital Expenditures	\$356,704	\$377,286	\$462,863	\$545,420
NET CAPITAL IMPACT	\$38,413	\$20,232	\$37,977	\$26,115
NET FISCAL IMPACT	\$692,612	\$667,013	\$777,894	\$876,386

FURTHER DISCUSSION ON SCHOOLS

School expenditures, both operating and capital, reflect approximately 50 percent of the projected total expenditures generated by new growth in each scenario. While overall net surpluses are generated for all services, it is interesting to look specifically at Schools to compare the amount of revenue projected from non-County sources (i.e., State) relative to projected expenditures. This provides further detail on the projected need for County funding over the projection period.

As shown in Figure 8, dedicated revenues from the State cover only a portion of Schools expenditures. The chart below shows total School expenditures for operating and capital as projected in this analysis. As shown, the cumulative net deficits generated range from \$552 million for Scenarios 1 and 2 to a high of approximately \$751 million in Scenario 4. On an average annual basis, the figures are \$31 million to \$42 million. This net deficit represents the amount of local funding necessary for education services and facilities to support new growth over the projection period, given the assumptions on which this analysis is based. On a cumulative basis over the projection period, non-local funding covers approximately 33 percent of total School expenditures.

Figure 8. Schools Cumulative Net Fiscal Results (x\$1,000), 2008-2025



Impact of Changes to School Capacity Thresholds

The Fiscal Impact Analysis is based on a school capacity threshold of 120 percent. This is based on the assumption that the State will not provide funding to the County for capital improvements until that level is reached. To project the need for new schools, enrollment is projected by school level (elementary, middle, and high) for each scenario and then compared to capacities on an annual basis. If the utilization percentage (enrollment divided by capacity) is over the 120 percent threshold, the model “builds” a new or expanded school and the capital cost is triggered along with accompanying operating costs.

Altering this assumption to a capacity threshold of 100 percent yields different results. Shown below in Figure 9 are fiscal results for Schools capital. As shown, the net fiscal result for Schools capital needs is a **net deficit** of \$190 million assuming construction at 100 percent capacity.

Figure 9. School Capital Results at 100 Percent Capacity (x\$1,000) (Cumulative)

Category	Scenario 1. Base Case
<i>Schools Capital Net Results</i>	
Capital Revenues	\$206,939
Capital Expenditures	\$397,007
Net Result	(\$190,068)

With this changed assumption to a threshold of 100 percent capacity, the overall net fiscal results for all County revenues and expenditures are still net surpluses, but are significantly reduced. Results are shown in Figure 10. Because school operating expenditures are projected on a case-study marginal approach with operating costs being triggered when a new school is built, projected operating costs countywide are significantly increased as well when compared to the 120 percent capacity assumption. The projected cumulative net surplus to the County of close to \$700 million assuming a 120 percent school capacity threshold is reduced to \$129 million under the 100 percent assumption. This is an average annual net surplus of \$7 million instead of an average annual surplus of \$38 million.

Figure 10. Cumulative Net Fiscal Results (Countywide Revenues and Expenditures) – Operating and Capital Detail at 100 Percent School Capacity (X\$1,000)

Category	Scenario 1. Base Case
Operating Revenues	\$1,959,933
Operating Expenditures	\$1,564,918
NET OPERATING IMPACT	\$395,015
Capital Revenues	\$428,917
Capital Expenditures	\$694,704
NET CAPITAL IMPACT	(\$265,787)
NET FISCAL IMPACT	\$129,228

PHASE I RESULTS AND CONCLUSIONS

- All County Growth Scenarios produce *annual* net surpluses to the County over all years of the 18-year projection period. The annual surpluses are due mainly to the County's revenue structure, including ongoing annual sources of revenue from property taxes and local income taxes, compared to the level of expenditure for operations and capital infrastructure needed to serve growth. Given the amount of growth projected relative to existing population and employment base in the County—representing only a 15 percent increase over 18 years—the results tend to reflect the effect of economies of scale.
- *Average annual* fiscal results show net surpluses over each time period with the first time period generating the lowest amount for all scenarios. Over the 18-year time frame, Scenario 4, the Accelerated Growth Scenario, produces the highest overall net surplus of almost \$49 million per year on average. Scenario 3 produces the next best results with an average of \$43 million per year. Scenarios 1 and 2 follow with \$38 million and \$37 million, respectively. Smaller net surpluses are generated in the first 9 years of the scenarios due to a tax base that is not as robust as it is in the later years due to the aggregating nature of property and income taxes as well as the secondary influx of recordation and transfer taxes after year 10 due to turnover of housing units. On average, the net surpluses generated represent about 2.5 percent of the County's current General Fund budget.
- *Cumulative* net fiscal results—total revenues minus total operating and capital costs over the 18-year development timeline—are positive for all scenarios. Scenario 4 generates the highest amount of all scenarios with a high of approximately \$876 million for Scenario 4 to a low of almost \$667 million in Scenario 2. Scenario 2 produces worse results than the other scenarios due to the assumption of additional non-taxable jobs at Ft. Meade, thus generating costs to serve the growth without commensurate revenues. However, in all scenarios including Scenario 2, total revenues generated from new development over the projection period are sufficient to cover the resulting costs for operating and capital needs.
- The Phase I results indicate that higher or faster growth of both residential and nonresidential development as represented in Scenarios 3 and 4 generate better fiscal results than trends development.
- The results indicate that the County's revenue structure, with substantial annual revenue sources including property and income taxes, is sufficient to cover the costs to

serve growth projected in each scenario. Revenue from property taxes, local income tax, and recordation and transfer taxes combined represent approximately 90 percent of projected General Fund operating revenues. Because these sources are all derived based on property values for new development, the values assumed in this analysis are a main determinant of the results.

- The results shown reflect all variable revenues, including State funds for Schools, Community College, and Human Services, for example. To the extent these non-County funds remain flat or decrease, the County's financial obligation to maintain levels of service will increase and the surpluses projected in this analysis would decrease or be eliminated. Alternatively, levels of service will decrease.
- School costs are significant. Combined operating and capital costs to serve the projected growth in each scenario represent approximately 50 percent of the overall costs projected. For Schools, as well as for the Community College and Libraries, the costs (and revenues) are based on the total current FY08 budget, a portion of which is funded through non-County sources. As noted above, to the extent State funding for Schools does not keep pace with growth, the County share of funding would increase, or levels of service would decline. Further detail is provided in this report regarding the County's projected share of Schools costs.
- The Fiscal Impact Analysis is based on a school capacity threshold of 120 percent. Altering this assumption to a capacity threshold of 100 percent yields different fiscal results on both the capital and operating sides. A capacity threshold of 100 percent capacity reduces the net surpluses from close to \$700 million (in Scenario 1) to \$129 million under the 100 percent assumption. This is an average annual net surplus of \$7 million instead of an average annual surplus of \$38 million.
- Roads capital costs are another major expenditure for the County. Cumulatively, projected Roads *capital* costs represent approximately 10 percent of total operating and capital expenditures projected in each scenario. This reflects the assumption that the County will fund 50 percent of improvements on State roads.
- When looking at fiscal results for operating and capital separately, surpluses are generated on the operating side with net deficits generated for capital in some categories. Earmarked revenues for capital expenditures (e.g., impact fees and State funding in some cases) are insufficient for some categories to cover growth-related infrastructure costs. Recent increases to impact fee rates have mitigated some of the shortfalls. Surpluses on the operating side adequately cover the remaining capital shortfalls.

- One capital cost that was discussed with the County and is not included in the net fiscal result totals (but is addressed as an “off-model” calculation) is Storm Drainage. An analysis is underway by the County to analyze, determine, and further refine growth-related Storm Drainage costs. A representative cost estimate was provided for the Fiscal Impact Analysis, which results in a total capital cost to serve new development that represents 40 to 50 percent of the net surpluses generated, depending on the scenario.
- All capital costs included in the analysis are shown as Pay-Go. By showing Pay-Go funding for all capital improvements, the true costs of capital impacts are depicted. If bond financed were assumed, debt service would continue beyond the last projection year and therefore would not adequately be captured in this analysis. Furthermore, the interest cost associated with bond financing is largely offset by the time value of money gained by the County.
- The fiscal impact analysis is based on the *Anne Arundel County Fiscal Year 2008 Approved Budget* and assumes the levels of service as funded in the FY08 budget are maintained in the future. Projection methodologies for revenue and expenditure assumptions were reviewed and confirmed by County staff. (Further detail is provided in the *Level of Service Document*.)
- Results include both operating and capital expenditures from new development over the 18-year period. Operating expenditures generated from the growth scenarios represent almost 80 percent of total expenditures in each scenario, and capital expenditures account for the remaining 20 percent.
- The capital expenditures assumed in this analysis are based on maintaining current levels of service for all government services, as opposed to including only those costs approved in the *County Capital Improvements Program*, master plans, or other facility plans. This approach is representative of the costs of growth because it does not include costs to remedy existing deficiencies (which would result in a higher level of service for future residents), nor is it fiscally constrained.
- As discussed throughout this report and as detailed in the *LOS Document*, the approach of the Fiscal Impact Analysis to project future capital needs is to base those needs on *current levels of service*. No judgment is made as to whether the levels of service are adequate, inadequate, or better than adequate, nor are any assumptions made regarding future changes in levels of service. It should be noted that in some discussions with County staff, it was expressed that current levels of service may not be adequate to serve existing development. However, the analysis does not make any judgment regarding improved levels of service and commensurate costs, therefore the results reflect a continuation of current practices.

- Additionally, it should be noted that a fiscal impact analysis, while projecting specific capital facilities, is different from a facility plan. Particularly, the results shown and discussed below reflect needs due to *new growth only* and are projected based on current levels of service. This may be different from a facility plan where needs may be due to existing deficiencies, different policies, demographic shifts, technological changes, etc.
- It is important to acknowledge that fiscal issues are one aspect in evaluating development and growth trends. Environmental, land use, housing, jobs/housing balance, transportation, and other issues should also be taken into consideration when determining what is best for the County.

Part 2. PHASE II FISCAL EVALUATION & REVENUE STRATEGIES

PHASE II APPROACH AND MAJOR ASSUMPTIONS

For the Phase II evaluation, it was decided in consultation with the County that it would be beneficial to examine two main areas: (1) The overall fiscal impact to the County by adding the revenue and costs from **existing development** to the fiscal impact of growth and (2) The fiscal impact to correct the **backlog of capital needs** that have not yet been addressed.

The Phase II analysis uses “Scenario 1: Base Case Residential and Nonresidential” from Phase I for the growth scenario. All fiscal results from new growth discussed herein reflect the set of assumptions and the approach taken in the Phase I Fiscal Impact Analysis. As noted in Part One of this report, the fiscal impact analysis of growth conducted by TischlerBise incorporates the case study-marginal cost approach wherever possible. The case study-marginal methodology is the most realistic method for evaluating fiscal impacts. This methodology takes site or geographic-specific information into consideration. Therefore, any unique demographic or locational characteristics of new development are accounted for, as well as the extent to which a particular infrastructure or service operates under, over or close to capacity. Available facility capacity determines the need for additional capital facilities and associated operating costs.

The assumptions on which the Phase I analysis are based are outlined in the *Level of Service (LOS) Document*, which is issued as Appendix B. The assumptions outlined in the *LOS Document* are utilized along with the growth projections developed for the analysis to calculate the fiscal impact on the County over the 18-year projection period. Calculations are performed using a customized fiscal impact model designed specifically for this assignment.

The following major assumptions regarding the Phase II fiscal impact methodology should be noted:

- Growth-related revenues are included in the analysis including the three main growth-related sources: property taxes, income taxes, and recordation and transfer taxes. Current revenue structure and rates, as defined by the County FY2008 Budget, are assumed throughout the analysis period. Impact fee schedules adopted as of November 5, 2008, are included.
- The General Fund, Component Units (Schools, Community College, and Library), and Capital Projects Funds are included in this analysis. Enterprise funds (e.g., utilities) are not included as they are assumed to be self-sufficient.
- Where appropriate, costs reflect those services provided Countywide versus subareas of the County such as outside of Annapolis and Fort Meade.

- Some costs and revenues are not expected to be impacted by demographic changes, and are therefore considered “fixed” in this analysis. To determine those costs and revenues that should be considered fixed, TischlerBise reviewed the FY2008 Budget and available supporting documentation as well as interviewed staff. Based on this review, preliminary assumptions were developed that were reviewed and discussed with appropriate staff and are documented in the *LOS Document* issued as an Appendix.

- Revenues and costs from **existing development** are added to the Phase I results from growth. It is assumed that the base year level of revenues and expenditures continue into the future to serve the existing base with the following exceptions:
 - There will be turnover in housing units and therefore recordation and transfer tax revenue will be generated from the existing base. These revenue sources are projected separately.
 - Base year property tax revenues from the existing base are assumed to be constant from year to year. The County’s Property Tax Revenue Limit, the “Tax Cap,” limits the increase in the amount of property tax revenue that can be derived from existing properties to the change in the Consumer Price Index (CPI) or 4.5 percent (whichever is greater). Therefore, increase in existing property values does not increase property tax revenue linearly. Instead, those increased values are used to determine a new tax rate, which may be lower than the previous year. This analysis assumes the FY08 (base year) tax rate over the projection period, therefore no assumptions are made regarding changes in assessed values to the existing base.

- As noted in Part One, growth-related cost projections are based on a “snapshot approach” in which it is assumed the **current level of service**, as funded in the County budget and as provided in current capital facilities, will continue through the 18-year analysis period. In summary, the “snapshot” approach does not attempt to speculate about how levels of service, costs, revenues and other factors will change over time. Instead, it evaluates the fiscal impact of new growth to the County as conducted under the budget used in this analysis.

- Levels of service for existing development are reflected in base year expenditures for operating costs and information provided by County staff for average annual capital expenditures. For capital expenditures serving existing development, the following changes were made in Phase II:
 - The FY08 debt service and PayGo expenditures included under the Finance Non-Departmental, Schools, and Community College budgets were netted out. To

capture capital costs serving existing development, County staff provided annual costs for each major capital category: County Facilities, Parks, Roads, Bridges, Culverts and Storm Drains, Schools, and Community College.

- Like Phase I, the rate of **inflation** is assumed to be zero throughout the projection period, and cost and revenue projections are in constant 2007 dollars. This assumption is in accord with budget data and avoids the difficulty of speculating on inflation rates and their effect on cost and revenue categories. It also avoids the problem of interpreting results expressed in inflated dollars over an extended period of time. In general, including inflation is complicated and unpredictable. This is particularly the case given that some costs, such as salaries, increase at different rates than other operating and capital costs such as contractual and building construction costs. And these costs, in turn, almost always increase in variation to the appreciation of real estate, thus affecting the revenue side of the equation. Using constant dollars avoids these issues.

PHASE II SCENARIOS

The County and TischlerBise developed two additional scenarios for analysis in Phase II focusing on infrastructure needs.

- *Baseline: Total Countywide Fiscal Impacts:* This scenario assumes current growth trends in both residential and nonresidential development (Phase I, Scenario 1, which is the Baltimore Metropolitan Council’s (BMC) Round 7 Forecast) coupled with the existing development base. This scenario makes adjustments for capital and assumes turnover in the residential market thus impacting recordation/transfer tax revenues.
- *Correcting the Infrastructure Backlog:* This scenario adds to the above scenario by layering estimated costs to correct the County’s backlog of infrastructure needs for the following categories: County Facilities; Park Renovation; Roads; Bridges; Culverts and Storm Drains; Schools; and Community College. Costs were provided by County staff assuming a ten-year time period.

A summary of estimated costs for each scenario is provided below in Figure 11, including capital costs projected for the Growth scenario (Base Case), which was Scenario 1 in the Phase I analysis.

Figure 11. Estimated Capital Costs Assumed in Phase II

Category	SCENARIO								
	Growth (Base Case)			Existing Base		Correct the Backlog			
	Cumul. \$ (18 Yrs)	Avg Annual \$	%	Annual \$	%	Total Estimated	Annual \$**	%	
County Facilities*	\$47,571,246	\$2,642,847	13%	\$3,800,000	3%	\$70,909,260	\$3,939,403	3%	
Recreation & Parks	\$36,000,000	\$2,000,000	10%	\$900,000	1%	\$15,110,000	\$839,444	1%	
Roads	\$166,125,554	\$9,229,197	47%	\$17,000,000	14%	\$447,370,000	\$24,853,889	20%	
Bridges	na	na		\$1,509,000	1%	\$15,090,000	\$838,333	1%	
Culverts and Storm Drains	na	na		\$2,416,000	2%	\$45,000,000	\$2,500,000	2%	
Schools	\$59,007,407	\$3,278,189	17%	\$89,140,143	73%	\$1,491,403,000	\$82,855,722	68%	
Community College	\$48,000,000	\$2,666,667	13%	\$8,000,000	7%	\$109,800,000	\$6,100,000	5%	
TOTAL	\$356,704,207	\$19,816,900	100%	\$122,765,143	100%	\$2,194,682,260	\$121,926,792	100%	

* County Facilities includes Libraries, Public Safety, and General County.

** Assumed over a 18-year period

Shown above are the following estimated capital costs:

- **Growth (Base Case):** Cumulative (18 year) and average annual capital costs to serve projected growth in the Base Case (trends) Scenario from Phase I. As shown, \$357

million in capital costs are projected to be needed to serve growth over the next 18 years, or an average annual cost of almost \$20 million.

- **Existing Base:** Annual costs to serve the Existing Development Base. These costs are assumed in each year as a representation of average annual costs necessary to serve existing development. These costs reflect rehabilitation and renovation of existing facilities and do not include expanded or additional facilities. Annual costs are approximately \$122 million.
- **Correct the Backlog:** Total estimated costs to correct the backlog in capital improvement needs. These costs represent deferred improvements as well as the estimated total cost to prevent further deterioration. Total estimated costs by category were provided by the County and have been assumed over the 18-year time period. Total estimated costs are \$2 billion with average annual costs of approximately \$122 million.

PHASE II FISCAL EVALUATION

CAPITAL COSTS

A summary of the costs assumed for this analysis are provided in Figure 12. In this figure, the costs are provided in a layered manner, with the previous costs being added to the next scenario's set of costs. As shown, Growth capital needs for Roads reflect the largest share of the total projected capital expenditures at almost 50 percent followed by Schools at 17 percent. The situation is essentially flipped when adding in existing development and the costs to correct the backlog, where Schools account for 65 percent of the estimated costs and Roads approximately 20 percent. See Figure 12 for further detail by infrastructure category.

Figure 12. Capital Costs Summary (x\$1,000) 2008-2025

Category	SCENARIO									
	Growth: Cumulative Costs (Detail)	SUMMARY Growth: Cumulative Costs	Growth: Avg Annual Costs	%	Growth + Existing Base Cumulative Costs	Growth + Existing Base: Avg Annual Costs	%	Growth + Existing Base + Backlog Cumulative Costs	Growth + Existing Base + Backlog: Avg Annual Costs	%
Schools	\$59,007	\$59,007	\$3,278	17%	\$1,663,530	\$92,418	65%	\$3,154,933	\$175,274	66%
Recreation and Parks	\$36,000	\$36,000	\$2,000	10%	\$52,200	\$2,900	2%	\$67,310	\$3,739	1%
Roads*	\$166,126	\$166,126	\$9,229	47%	\$542,776	\$30,154	21%	\$1,050,236	\$58,346	22%
Community College	\$48,000	\$48,000	\$2,667	13%	\$192,000	\$10,667	7%	\$301,800	\$16,767	6%
Library	\$994									
Aging (Senior Centers)	\$0									
Health (Health Centers)	\$2,250									
Police	\$11,427									
Fire	\$20,975									
Detention	\$5,925									
General County	\$6,000									
Summary County Facilities**		\$47,571	\$2,643	13%	\$115,971	\$6,443	5%	\$186,881	\$10,382	4%
TOTAL		\$356,704	\$19,817	100%	\$2,566,477	\$142,582	100%	\$4,761,159	\$264,509	100%

* For Existing Base and Backlog, the Roads category includes Bridges and Culverts/ Storm Drains.

** County Facilities includes the above shaded categories

The shaded facility categories shown above in the Growth scenario are included in the County Facilities category for the other two scenarios.

As shown, average annual costs to serve growth are estimated at approximately \$20 million. When the Existing Base is added to Growth, the annual capital costs are projected at approximately \$143 million per year. Finally, adding on the Backlog estimates, the annual cost rises to \$265 million.

PHASE II FISCAL RESULTS

The following section provides further discussion on the fiscal results in Anne Arundel County. Fiscal impact results are shown in a layered manner:

- First, the fiscal results from the Growth Scenario (Scenario 1: Base Case) are shown (Figure 13).
- Second, the results from Existing Base are added to the Growth scenario, to reflect the complete County picture (Figure 14).
- Finally, the Backlog capital costs are added to the fiscal results (Figure 15).

Annual Results

Results are shown annually. Each year reflects total revenues generated minus total expenditures incurred in the same year. Both capital and operating costs are included. By showing the results annually, the magnitude, rate of change, and timeline of deficits and revenues can be observed over time. The “bumpy” nature of the annual results during particular years represents the opening of capital facilities and/or major operating costs being incurred. On the following figure, data points above the \$0 line represent annual surpluses; points below the \$0 line represent annual deficits. Figures are shown in \$1,000s. Figure 13 shows results from new growth only (revenues minus expenditures from new growth from 2008-2025). As noted previously, revenues projected from growth (under the Phase I assumptions) are sufficient to cover operating and capital costs generated by growth.

Figure 13. Annual Net Fiscal Results – County Base Case Growth Scenario (x\$1,000)

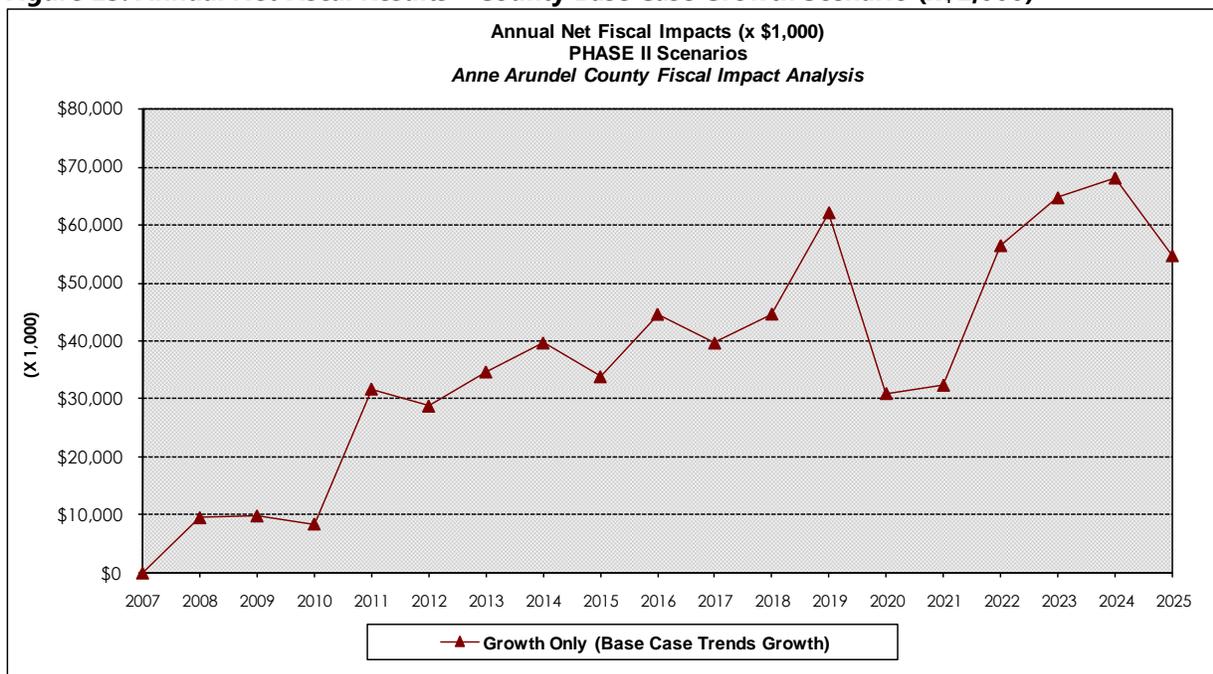


Figure 14 shows annual results from new growth plus the existing base (revenues generated minus expenditures from new growth (2008-2025) and the existing base (2007). As shown, net deficits are generated for the first several years of the projection period and net surpluses generally toward the middle and end. This is due to the aggregating nature of property and income taxes as well as increased impact fee rates that take effect in 2011. The net surpluses from growth are sufficient to cover the estimated costs to serve the existing base producing essentially fiscally neutral results (see Figure 17 below for cumulative results). Given the amount of growth projected relative to the existing population and employment base of the County—representing only a 15 percent increase over 18 years—the results tend to reflect the effect of economies of scale.

Figure 14. Annual Net Fiscal Results – County Base Case Growth Scenario Plus Existing Base (x\$1,000)

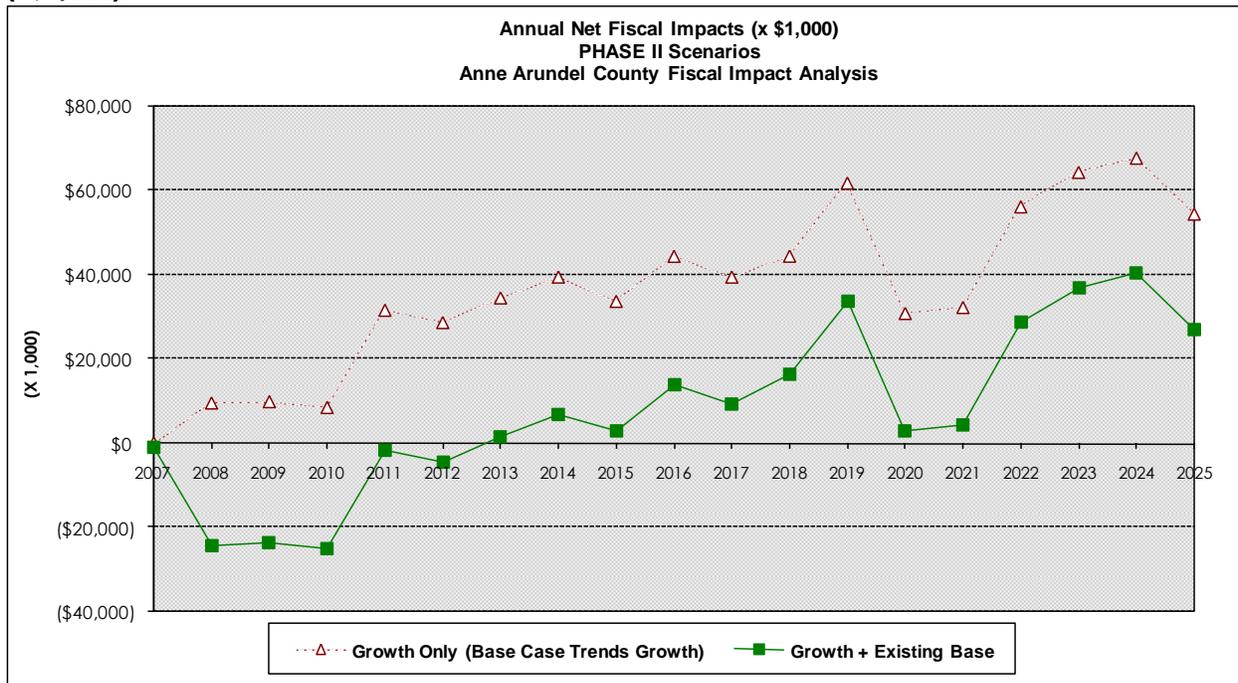
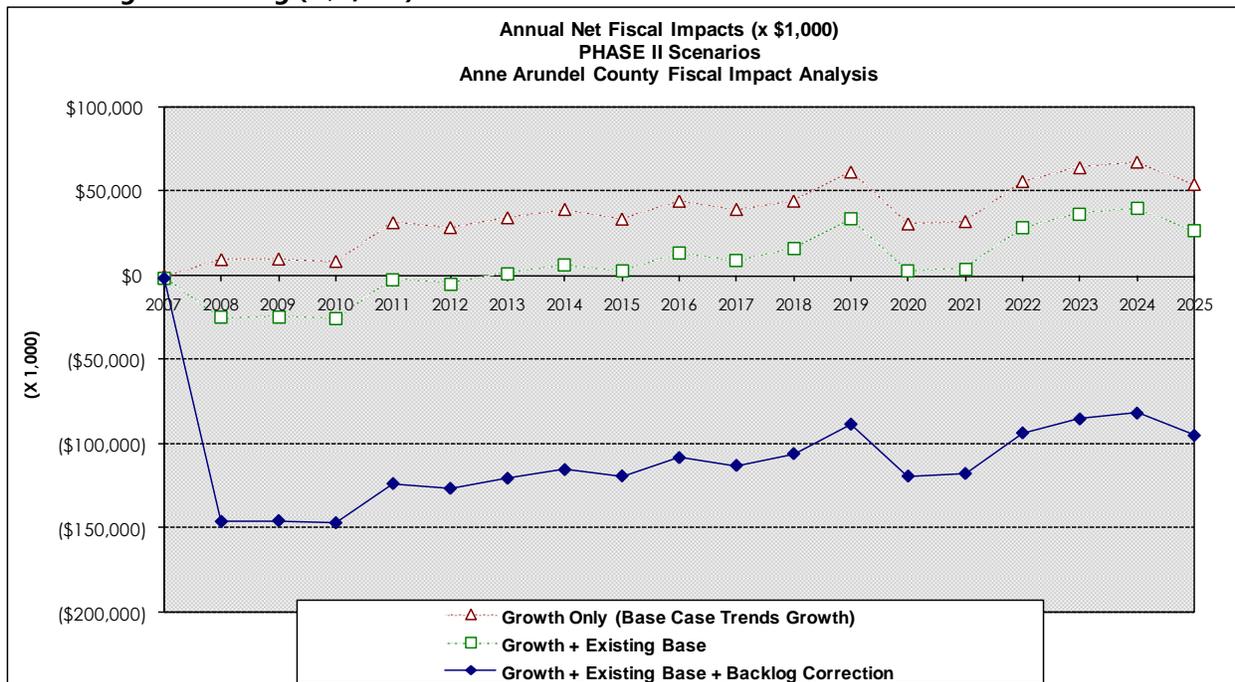


Figure 15 provides the results from above—growth and the existing base—and adds the estimated costs to correct the backlog in infrastructure including Schools, Parks, Roads, Community College, and County Facilities. The Backlog correction is assumed to be spread over the 18-year time period, thus annual deficits are generated over the entire time frame. The backlog costs not covered by projected revenues are significant totaling over \$2 billion for the 18-year period. The projected cumulative net surplus generated from growth of almost \$700 million represents only about 30 percent of the estimated backlog costs of almost \$2.2 billion.

Figure 15. Annual Net Fiscal Results – County Base Case Growth Scenario Plus Existing Base Plus Correcting the Backlog (x\$1,000)



Average Annual Results

Average annual results are shown for the Phase II scenarios. Three time periods are shown: Years 1-10, Years 11-18, and the entire projection period, Years 1-18. It should be noted, that the time periods used here differ from those shown in the Phase I results. For the Phase II results, the first 10 years are grouped together to fit the timeframe of the County Growth Management Plan portion of the General Development Plan.

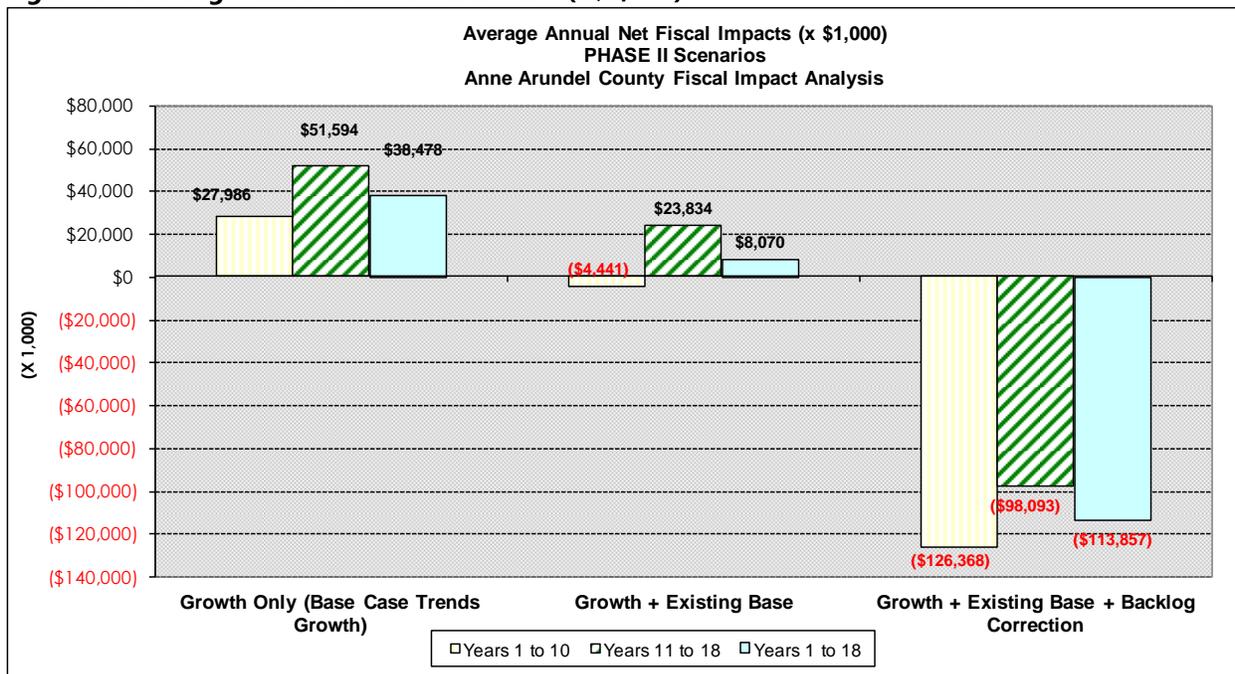
As shown in Figure 16 and discussed above, the Growth scenario generates average annual net surpluses over all time period with the latter part of the projection period generating a higher

amount. This is due to aggregating nature of property and income taxes as well as the assumed turnover of property thus generating additional recordation and transfer tax revenues.

Growth and Existing Base scenario generates net deficits in the first ten years and net surpluses in years 11-18. The surplus generated from growth is not sufficient to cover existing development's capital needs in the early years. In years 11-18, the amount of net surplus, including the net surplus from growth plus revenues generated from the existing base from recordation and transfer taxes, is enough to cover existing development's expenditures. However, over the 18-year projection period, the result is essentially fiscally neutral.

The Backlog scenario assumes that the backlog capital costs are spread over the 18-year period; therefore significant average annual net deficits are generated in both 10-year periods. Overall, the average annual net deficit is \$114 million over the projection period.

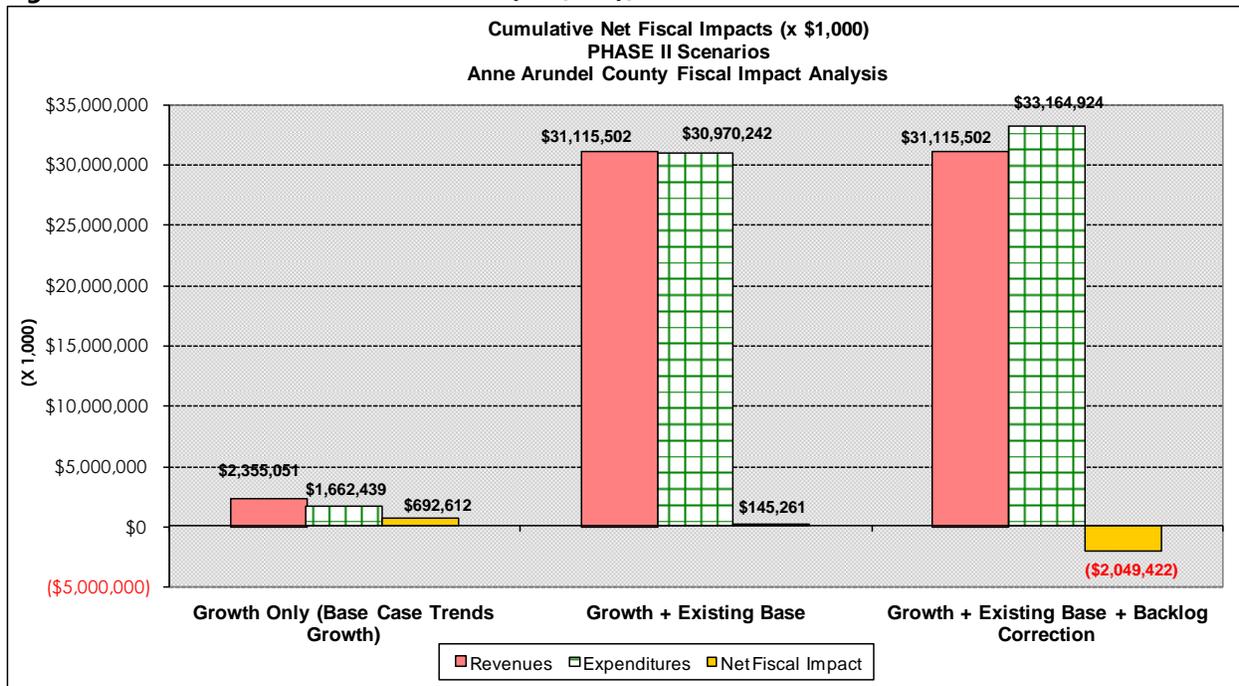
Figure 16. Average Annual Net Fiscal Results (x\$1,000)



Cumulative Net Results

Cumulative figures reflect total revenues generated minus operating and capital expenditures over the 18-year development timeframe. Cumulative revenues, expenditures and net results are shown in Figure 17. Figures are shown in \$1,000s.

Figure 17. Cumulative Net Fiscal Results (x\$1,000), 2008-2025



Cumulative net fiscal surpluses are generated in the Growth scenario. As noted previously, the results indicate that the County’s revenue structure, with substantial annual revenue sources including property and income taxes and one-time revenue from recordation and transfer taxes, is sufficient to cover the costs to serve growth under the assumptions of Phase I. When the existing base is added to the Growth scenario results, the net surplus decreases significantly to \$145 million. When the backlog of capital expenditures is then added to the results from the Growth and Existing Base scenario, the result is a cumulative net deficit of over \$2 billion.

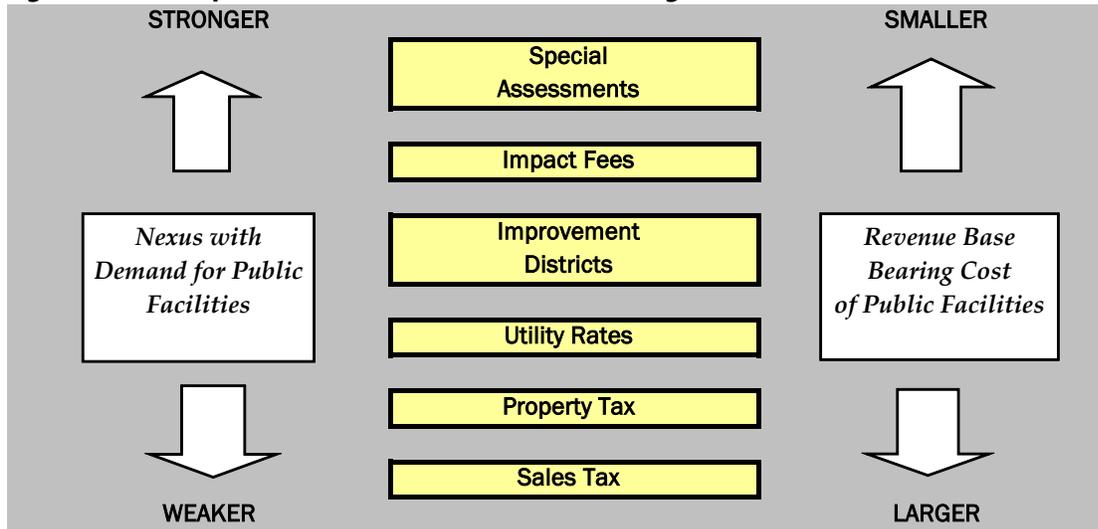
POTENTIAL CAPITAL REVENUE STRATEGIES

This chapter of the report is dedicated to revenue strategies potentially available to address the infrastructure needs and revenue gaps identified and discussed above. In addition, a framework is presented for analyzing financing approaches according to relevant criteria. It should be noted that this is not a legal analysis, which should be conducted prior to implementation of any of the mechanisms discussed below.

Infrastructure funding alternatives force decision-makers to wrestle with a dynamic tension between two competing desires. As shown on the left side of Figure 18, various funding options have a strong to weak connection between the source of funds and the demand for public facilities. For instance, area-specific assessments are based on known capital costs in a specific location and are paid by those directly benefiting from the new infrastructure. In contrast, property tax revenue may be used by a locality to fund infrastructure with very little, if any, connection between those paying the tax and the need for capital improvements.

It is unfortunate that the funding options with the closest nexus to the demand for public facilities also have the smallest demand base to bear the cost of the public facilities (see the right side of the diagram). Using utilities as an example, only new utility customers pay capacity fees, which are similar to impact fees. In contrast, all existing customers, plus the new customers that are added each year, pay sewer user charges. Therefore, the base of utility user charges continues to increase over time, but the increase in new development is relatively constant from year to year.

Figure 18. Conceptual Framework for Revenue Strategies



Source: TischlerBise: P. Tischler, D. Guthrie, and N. Mishkovsky, "Introduction to Infrastructure Financing," ICMA IQ Service Report

CURRENT CAPITAL REVENUE SOURCES

Revenues currently available for capital purposes in Anne Arundel County are from impact fees and the State. Where available, these funds augment and leverage other general revenue funds to pay for capital improvements in the County. Impact fees³ are assessed on new development only, therefore fee revenue is generated only within the Growth scenario. State funding is also assumed in the Growth scenario when the fiscal model “builds” or “acquires” a particular facility and where State funding is anticipated. Further information by infrastructure category is provided below:

- Schools: Capital revenues are available from impact fees on residential development and State funding from the Inter-Agency Committee for Schools.
- Parks: Capital revenues from the State’s Program Open Space are used to fund land acquisition and park development, with the priority being acquisition.
- Transportation: Capital revenues are available from impact fees generated from new residential and nonresidential development.
- Public Safety: Capital revenues from impact fees generated from new residential and nonresidential development are available for capacity-related needs.
- Community College: Capital funds are available from the State through the Maryland Higher Education Fund.

³ Impact fees are based on adopted rates as of November 5, 2008, and revenue is projected from the development projections assumed in the growth scenario.

POTENTIAL REVENUE STRATEGIES

To address the funding gaps identified in the previous sections, new and enhanced revenue sources will need to be identified. The following list of potential revenue mechanisms are discussed in this section:

- Income Taxes
- Transfer and/or Recordation Taxes
- Property Taxes
- Special District Property Tax
- Local Sales and Service Taxes
- Hotel/Motel Tax
- Bonds
- Impact Fees
- Excise Taxes
- Charges for Service and Other Fees
- Utilities (for Stormwater and Transportation)

Income Taxes

The County's current income tax rate is 2.56 percent of net taxable income with FY08 budgeted revenues of \$369 million. The State maximum allowable rate is 3.2 percent. According to the latest (FY08) survey by the Maryland Association of Counties, only two counties have a rate that is lower than Anne Arundel's (Talbot and Worcester) and two are at the maximum rate of 3.2 percent (Howard and Montgomery). Of the 20 remaining counties, eight are above 3 percent.

In Anne Arundel County, it is estimated that an increase of .25 percent would yield an estimated \$36 million; an increase of .5 percent would yield an estimated \$72 million; and at the maximum allowable rate of 3.2 percent (an increase of .62 percent), the increase in revenue is estimated at \$92 million. This revenue is significant not only because of the potential to use it for PayGo capital expenditures, but because of the additional debt this revenue could support. Based on level annual principal and interest payments assuming a 6 percent interest rate and a 20-year term, an additional \$36 million annually could support approximately \$400 million in additional debt. However, as discussed under the Bonds section below, the County's existing debt guidelines would need to be modified to support this endeavor. Order of magnitude revenue estimates are provided below in Figure 19.

Figure 19. Potential Revenue Yield from Change to Income Tax Rate

Income Tax	Rate (%)	FY08 Estd Revenue Yield	Net Increase Over Current
Current	2.56%	\$368,700,000	
Increase of .25%	2.81%	\$404,700,000	\$36,000,000
Increase of .5%	3.06%	\$440,700,000	\$72,000,000
Max Allowable (Increase of .64%)	3.20%	\$460,900,000	\$92,200,000

Transfer and/or Recordation Taxes

Anne Arundel County current levies both Transfer and Recordation Taxes. The County's Transfer Tax is currently 1 percent of the value of the property transaction with a FY 2008 revised budget amount of \$38 million. Three counties in the State have rates higher than 1 percent (Baltimore and Prince George's counties and Baltimore City) with two at 1.5 percent. Montgomery County ranges from .25 to 6 percent.⁴ An increase of .5 percent would yield an estimated additional \$19 million annually. Order of magnitude revenue estimates are provided below in Figure 20.

Figure 20. Potential Revenue Yield from Change to Transfer Tax Rate

Transfer Tax	Rate (% of value)	FY08 Estd Revenue Yield	Net Increase Over Current
Current	1.00%	\$38,000,000	
Increase of .25%	1.25%	\$47,500,000	\$9,500,000
Increase of .5%	1.50%	\$57,000,000	\$19,000,000

The County's Recordation Tax is at a current rate of \$3.50 per \$500 value of the property transaction. Eight counties have rates above \$3.50 per \$500, with six of those with rates of \$5 or higher.⁵ If the rate were to increase by \$.50, estimated additional revenues are \$6 million; an additional \$1.00 would yield an estimated \$12 million; and an additional \$1.50, bringing the rate to \$5 per \$500 in value, would yield approximately \$18 million. Order of magnitude revenue estimates are provided below in Figure 21.

Figure 21. Potential Revenue Yield from Change to Recordation Tax Rate

Recordation Tax	Rate (per \$500 in value)	FY08 Estd Revenue Yield	Net Increase Over Current
Current	\$3.50	\$42,000,000	
Increase of \$.50	\$4.00	\$48,000,000	\$6,000,000
Increase of \$1.00	\$4.50	\$54,000,000	\$12,000,000
Increase of \$1.50	\$5.00	\$60,000,000	\$18,000,000

⁴ Maryland Association of Counties, Budget, Tax Rates, and Selected Statistics-FY 2008.

⁵ Maryland Association of Counties, Budget, Tax Rates, and Selected Statistics-FY 2008.

It should be noted that to be conservative, the above estimates have been derived using the revised Fiscal Year 2008 revenue estimates (per the FY09 Budget) as the base year estimate. Given current real estate and financial market conditions, the short-term potential for these revenue sources may be limited, however in the long-term these sources may be viable options to assist in addressing the backlog.

Property Taxes

Anne Arundel County is limited in its ability to raise revenues through increased property taxes by the Property Tax Revenue Limit (“Tax Cap”), approved by voters in 1992. Under the Tax Cap, **property tax revenue derived from existing development** cannot increase by more than the change in the CPI or 4.5 percent, whichever is lower. (In FY 2008, the allowable percentage increase was based on the CPI at 2.9 percent; in FY 2009, the allowable percent was 4.5 percent.) However, property tax revenues from **new development** are not included in the Cap, therefore increase in property tax revenues can be greater than the percentage increase discussed above. Each fiscal year, the County calculates the allowable revenue increase, compares it to the change in the County’s assessable base, and determines property tax rates that maximize property tax revenue under the Tax Cap. In FY 2008, the allowable revenue increase was \$13.1 million from existing development. (New development was projected to generate \$5.8 million.) The tax rates were decreased because assessed values increased at a greater rate than CPI.

An increase of one cent on property tax rates is estimated to yield approximately \$5.5 million outside Annapolis and approximately \$500,000 in Annapolis. An additional \$5 million would allow for approximately \$45 million additional borrowing.

Special District Property Tax

Counties are authorized to levy special district property taxes for specific services. Anne Arundel County currently uses this mechanism for subarea improvements in the County. This could be further expanded to fund significant local or regional infrastructure improvements by geographic area of the County.

However, in addition to subarea assessments, other jurisdictions in the State use this tool to finance services that are more countywide in nature. Examples include Fire District Tax in Charles, Frederick, Howard, and Montgomery counties and Stormwater or Drainage taxes in Montgomery and Prince George’s counties. Rates may vary by area of the county. This tool may be an option for Anne Arundel if allowed by County and State law.

Local Sales and Service Taxes

Items under this type of tax are: telephone, energy, parking lots/boat slips. The County current taxes telephone, certain types of energy, and parking lots. An expansion of this category would be: **wireless phones, energy taxes on residential uses, and boat slips**. As of FY 2008, Baltimore City and Montgomery and Prince George's counties telephone tax includes wireless devices. For illustrative purposes, Montgomery's tax is \$2 per line per month with a FY08 yield of approximately \$30 million (less than one percent of the operating budget). Prince George's tax is 8 percent sales tax, with a FY08 estimated yield of approximately \$48 million (approximately 1.5 percent of the operating budget).⁶ For comparison purposes, Anne Arundel's current telephone tax revenue is approximately \$8 million (.7 percent of the budget).

Currently energy taxes in Anne Arundel are levied only on nonresidential properties with revenues from these taxes representing approximately .5 percent (less than one percent) of the General Fund budget. In comparison, some jurisdictions in Maryland charge residential as well. Those jurisdictions include Baltimore City, Montgomery, Prince George's, and St. Mary's counties. Prince George's revenue yield from these taxes represents almost 2 percent of its operating budget and Montgomery County's yield represents almost 3 percent.

Finally, given Anne Arundel's waterfront, a tax on boat slips may be an option. Per the Maryland Association of Counties, three counties currently levy this tax: Caroline, Somerset, and Wicomico. Revenue yields are relatively small from this source in these counties, representing less than .1 percent of each budget.

Hotel/Motel Tax

The Hotel/Motel Tax in Anne Arundel County is currently 7 percent. As of November 2007, rates in Maryland's counties range from a low of 3 percent (1 county) to a high of 10 percent (1 county) with the majority at between 5 and 7 percent.⁷ This revenue source is often an attractive option given that the payers are typically from outside the County. An increase to 10 percent in Anne Arundel County (based on assumptions as of Fiscal Year 2009), would generate an additional \$6.3 million annually. Based on level annual principal and interest payments assuming a 6 percent interest rate and a 20-year term, this annual revenue stream could support approximately \$70 million in additional debt.

⁶ *Maryland Association of Counties, Budget, Tax Rates, and Selected Statistics-FY 2008.*

⁷ *Maryland Association of Counties, Budget, Tax Rates, and Selected Statistics-FY 2008.*

Bonds

The costs shown throughout the fiscal analysis do not assume any debt financing. That is, all capital costs are exactly that—the actual costs to serve growth, serve the existing base, or to correct the estimated backlog of capital needs. This is useful to show the true costs of infrastructure, however, it is not necessarily realistic in that the County will issue debt to finance a portion of these costs.

The County issues General Obligation bonds, revenue bonds, installment purchase agreements (IPA) bonds, and impact fee-backed bonds. The County's debt affordability guidelines are as follows:

- Debt service as a percent of County operating revenues: 9.0%
- Amount of debt to personal income: 3%
- Amount of debt to full value assessment: 1.5%
- Amount of debt per capita: \$1500

Per projections in the FY08 and FY09 budgets, the County can afford approximately \$100 million in new debt per year. This level of affordability conforms to the above guidelines. The *legal* limit, however, imposed by the County Charter is much higher, at 5.2 percent of the assessable base or real property and 13 percent of the assessable base of personal property. As of the end of FY07, general County bonded debt was approximately \$720 million, which represents approximately 21 percent of the available debt capacity.

For additional debt to be deemed affordable, additional revenue sources (such as the ones discussed in this chapter) would need to be identified and implemented and County guidelines would need to be modified. As noted above, the County is well below the legal debt limit, with additional debt capacity of over \$2 billion. Additional revenue from General Fund sources (e.g., increases in income taxes or transfer and recordation taxes) or from targeted funding (e.g., implementation of excise taxes or new utilities) would provide an ongoing revenue stream to back additional debt but would likely not meet three of the four guideline measures—namely, debt to personal income, debt to assessed values, and debt per capita.

As a point of reference, an additional \$1 million in annual revenues would allow for approximately \$12 million in additional debt. This estimate is based on level annual principal and interest payments (i.e., principal plus interest in each year equals approximately \$1 million), an interest rate of 6 percent, and a loan term of 20 years. In addition, with increases in impact fees (where appropriate; see below), this would allow for additional impact fee-backed bond capacity.

Impact Fees

Anne Arundel currently has impact fees for Schools, Transportation, and Public Safety. Impact fees, also known as development or development impact fees, are one-time payments used to fund capital improvements necessitated by new growth. Impact fees have been utilized by local governments in various forms for at least fifty years. Three requirements must be met with an impact fee: (1) *Demand* (or Impact)—a particular type of development causes the need for a particular type of infrastructure. (2) *Proportionality*—the fees are proportionate to the demand created by development for infrastructure; and (3) *Benefit*—the payer of the fee must receive a benefit (i.e., the construction of infrastructure for which the fees were paid that accommodates their impact on capital facilities). Other requirements are as follows:

- Impact fees can only be used to finance capital infrastructure and cannot be used to finance ongoing operations and/or maintenance costs;
- Impact fees cannot be deposited in the local government’s General Fund. The funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected; and
- Impact fees cannot be used to correct existing infrastructure deficiencies unless there is a funding plan in place to correct the deficiency for all current residents and businesses in the community.

The County recently updated its impact fees for the current categories of Schools, Transportation, and Public Safety (Police and Fire). In addition, consideration was given to implementation of a Stormwater impact fee.⁸ Regular updates to the impact fee program are important to ensure the above requirements are met and that new growth is paying its fair share of capital improvements.

The update to the impact fee schedule and increases in fee amounts increases the net surplus in the Growth Scenario (i.e., the results from Phase I). Updating fees to cover growth-related capital costs frees up other revenues to address the backlog costs. For example, with the recent increase to the Transportation impact fees, the revenues generated from new development (projected in the Phase I Base Case development scenario) are sufficient to cover the projected growth-related expenditures (under the transportation expenditure assumptions in the Phase I fiscal analysis). Therefore, the “operating” surplus can be directed to backlog needs as opposed to growth-related capital needs.

⁸ Bill 71-08 was passed by the Anne Arundel County Council on November 5, 2008, which amended the County’s impact fee schedule for Roads, Schools, and Public Safety. It decreases current rates for years 2009 and 2010 and then increases the rates in 2011. A Stormwater impact fee was not adopted. Both Phases I and II of the Fiscal Impact Analysis use the rate schedules adopted as of November 5, 2008.

In addition to the abovementioned categories, other categories may be appropriate for impact fees in Anne Arundel County such as Parks and Recreation, Libraries, Detention Facilities, and County Facilities. These facilities will be impacted by growth and impact fees could be used to help pay for necessary facility expansions. The Phase I Fiscal Analysis projected growth-related costs (over 18 years) for these categories under the growth assumptions of the Base Case Scenario (Scenario 1) as well as potential non-local funding. Projected costs and revenues are shown below in Figure 22.

Figure 22. Other Potential Impact Fee Categories

Category	Cumul. (18 yrs) Costs to Serve Growth (Base Case Scenario)	Estimated Non-Local Funding	Shortfall
Recreation & Parks	\$36,000,000	\$18,000,000	(\$18,000,000)
Library	\$994,000	\$0	(\$994,000)
Detention Facilities	\$5,925,000	\$0	(\$5,925,000)
County Facilities	\$8,250,000	\$0	(\$8,250,000)

Recreation and Parks growth-related capital needs include park development, parkland acquisition, and trail development; non-local funding is assumed from the State’s Program Open Space program. Library growth-related expenditures for Scenario 1 include only expansion of the collections and materials. Faster growth scenarios projected a need for additional library space (under current level of service standards). Detention Facilities represent the cost for expanded jail space based on current service levels, and County Facilities reflect Human Service and General County facility space needs also based on current service levels. Impact fees could address this shortfall, which would then free up other funds to be used for backlog infrastructure costs.

Excise Taxes

Similar to impact fees, excise taxes are one-time revenues often used to fund infrastructure improvements. Excise taxes typically differ from impact fees in that they are primarily a tool for raising revenue, as opposed to a land use regulation (i.e., an exercise of local government police power) designed to finance growth-related facilities. In addition, excise taxes typically do not have to be earmarked or segregated or accounted for separately from a locality’s general revenue, do not have to specifically benefit new growth, and can be used in and calculated in a more flexible manner than impact fees. Excise taxes can be applied in several ways. Some communities apply a rate to the construction value of the land use; others use a flat fee per acre of development, while other communities apply a straight fee by type of housing unit or square-foot.

In Maryland, a number of counties have Excise Taxes instead of Impact Fees and one, Frederick County, has **both impact fees and excise taxes**.⁹ In Frederick County, impact fees are assessed for Schools and Libraries, and an Excise Tax is collected for Roads. Frederick County's "Building Excise Tax" was passed in 2001 and is used for PayGo and Debt Service for roads, bridges, and highway capital projects. The rates are assessed per gross square foot of development. For *residential* development, the first 700 square feet is exempt from the tax, the second 700 square feet pays \$.10 per square foot, and over 1,400 square feet, the rate increases to \$.25 per square foot. The nonresidential rate is \$.75 per square foot. The County has collected approximately \$2 million per year on average.

The use of excise taxes for capital improvements such as transportation is an attractive option because of the flexibility and fewer requirements relative to impact fees. Anne Arundel County would need to obtain authority from the Maryland General Assembly to enact an excise tax and would have to alter its impact fee program. This may not be an attractive option for transportation given the recent efforts to update the County's fees. However, other non-impact fee infrastructure categories may be feasible (e.g., stormwater, parks).

Charges for Service and Other Fees

The County should continue to ensure that charges for service, fees, and other user-generated revenues are current and updated regularly. As of Fiscal Year 2009, a new Ambulance Transport Fee has been enacted and other fees have been increased to recoup costs of service provision (updated fees are: Health, Permit and Review, and Recreation and Parks). In addition, charges to Enterprise Funds have been increased to adequately cover applicable retiree health costs, and applicable Solid Waste transfer station host fees have been transferred back to the General Fund. These changes have resulted in an estimated increase of \$14.8 million to the General Fund.

Charges for service and fees that are intended to cover all or a portion of the costs to provide services should be updated annually using a cost index to account for inflation. This approach is beneficial to keep pace with rising personnel and operating costs as well as to prevent "sticker shock" when fees are updated after several years.

⁹ Excise taxes and impact fees in Maryland tend to be somewhat interchangeable with some excise tax enabling legislation requiring impact fee-type standards. Since authority is granted by the Maryland General Assembly, requirements differ from county to county. As of FY 2006, Maryland counties with Excise Taxes are: Calvert, Caroline, Carroll, Charles, Dorchester, Frederick, Howard, Montgomery, Prince George's, and Washington (*Maryland Local Government: Legislative Handbook Series Volume VI, 2006*; Maryland General Assembly Department of Legislative Services).

Utilities (for Stormwater and Transportation)

Stormwater Management

Stormwater capital costs were not modeled as part of the Phase I Fiscal Impact Analysis due to ongoing in-depth analysis by the County. The fiscal analysis did provide an order of magnitude estimate of approximately \$300 million for Scenario 1 over the 18-year projection period for storm drainage improvements necessitated by new development. This cost represented approximately 40 percent of the net surpluses generated in that Scenario. Other estimates for growth-related costs provided by the County are as high as \$800 million, given a set of assumptions regarding buildout of the County, which is not likely to occur within the 18-year projection period assumed in the fiscal analysis.

Backlog improvements costs have been estimated at \$675 million, which also has not been included in this analysis due to the separate modeling effort and approach by County staff. This cost is in addition to the \$45 million estimated for backlog needs in culverts and storm drains (which is included in the above calculations). The backlog improvement costs reflect County estimated costs to meet NPDES permit compliance in the County's twelve watersheds.

In total, the costs related to Stormwater Management are significant. One potential funding option is a Stormwater Utility. Stormwater utilities are becoming more common nationally as most stormwater problems are due to existing development rather than new development. Therefore capital funding tools like impact fees become less desirable to deal with the significant costs that have accrued over time. A Stormwater Utility could operate like a sewer or water system with annual charges levied to customers that would then be used to fund necessary improvements to the stormwater management system. The rates could be assessed based on the amount of impervious surface area on the payer's property or per equivalent dwelling unit. Incentives could be developed as part of the system that would encourage property owners to better manage stormwater runoff. Jurisdictions in Maryland that have a stormwater utility are: the cities of Takoma Park and Rockville and Montgomery County.

Transportation

Another potential candidate for a utility is transportation. While utility charges for water and sewer facilities have been widely used since the beginning of the 20th century, on-going charges for transportation represent a relatively new application of the utility concept. The establishment of a utility to address transportation needs allows funding of capital improvements but also could include operations and maintenance. Utility charges may address all cost aspects, including debt service, operation, maintenance, repair and replacement of facilities. Unlike impact fees that are imposed on new development, utility revenue would be generated from all development, existing and new. Unlike impact fees, which have a relatively unstable revenue stream based solely on the amount and timing of new development, utility

charges have a stable and secure revenue stream that enables the issuance of bonds backed by the anticipated utility revenue.

Other Mechanisms

Anne Arundel County is not alone in the need to address significant infrastructure improvements. Both the Urban Land Institute (ULI) and the American Planning Association (APA) have identified infrastructure as a key priority (not to mention the efforts at the Federal level to address these issues as part of an Economic Stimulus Plan). The cover story in the October 2008 issue of APA's *Planning* magazine, "Our Daunting To-Do List," discusses the state of the nation's infrastructure and provides the following observation: "The infrastructure crisis keeps popping up on public issues agendas because it never gets solved. By now, the shopping list of what needs fixing is a long one."¹⁰

The next generation of public financing for infrastructure will have to be bold and innovative. Financing tools being discussed with more and more frequency are **toll roads** and **congestion pricing** to fund new road construction and ongoing maintenance. In addition, other innovative approaches and ideas are emerging such as¹¹:

- Implementation of carbon emission taxes and cap and trade programs where revenues generated from these programs would be redirected to transportation options such as transit and other multimodal options that reduce carbon emissions;
- Redirection of federal policy and spending to reflect a more objective approach to distributing federal funds to improve infrastructure, particularly transportation, in geographic areas with national economic importance (with commensurate increase in available federal funds through higher gas taxes or other means);
- Creation of a national infrastructure bank;
- Increased private investment in public infrastructure through public-private partnerships and expanded use of infrastructure funds.
- Use of performance data from infrastructure to improve performance and therefore extend the useful life of the improvement.
- Realization that other types of improvements not yet identified in certain locales may be part of the solution, such as high-speed and light rail.
- Other non-financial tools such as land use planning and growth management that encourages infill and higher density development that makes use of existing infrastructure with available capacity. Admittedly this may contribute to the overall problem when existing facilities are aging and in need of substantial and expensive renovations.

¹⁰ *Planning Magazine*, October 2008, p. 7; American Planning Association.

¹¹ The following discussion is derived in part from "Our Daunting To-Do List," by James Krohe, Jr., and "Good News, Bad News," by Jason Jordan, *Planning Magazine* (October 2008); and ULI and Ernst & Young, *Infrastructure 2008: A Competitive Advantage*.

EVALUATION OF REVENUE STRATEGIES

EVALUATION CRITERIA

Potential revenue strategies and planning approaches addressed in this report are considered according to a defined set of evaluation criteria. The evaluation criteria include:

- a. Revenue Potential
- b. Proportionality
- c. Technical Ease
- d. Public Acceptability

All criteria listed above are evaluated for each potential financing source and provide a framework for discussion of alternative approaches. It should be noted that this discussion does not include a legal review, which should be conducted before implementation to determine whether appropriate authority exists as well as limitations and requirements. The evaluation criteria listed above are described in more detail as follows:

Revenue Potential: This evaluation criterion addresses the relative magnitude of funding from each financing mechanism.

Proportionality: This evaluation criterion relates to striking a balance between the tax or fee burden being considered relative to the demand generated. For example, communities sometimes choose to require developer contributions or exactions for growth-related facilities because the public perception is that existing residents are unfairly paying the costs of new growth. In another example, in order to make a school impact fee “roughly proportionate and reasonably related to service demands,” the fee should vary by type of housing unit as each housing unit generates a different number of school age children.

Technical Ease: Each of the potential revenue strategies requires some technical expertise and administrative effort to implement. They may require, for example, that additional accounting and reporting requirements are necessary. Furthermore, a funding mechanism may require that a technical study be prepared to justify the fee or charge.

Public Acceptability. This evaluation criterion often varies by jurisdiction and the type of facility to be funded. It reflects how the majority of *existing residents* are expected to accept each financing or planning mechanism.

RESULTS OF EVALUATION

A general evaluation was conducted of the potential revenue strategies using the four main criteria discussed above.

Figure 23. Evaluation of Potential Revenue Strategies

	Revenue Potential	Technical Ease	Proportionality	Public Acceptance
Income Taxes	High	Positive	Negative	Negative
Transfer and/or Recordation Taxes	High/Moderate	Positive	Negative	Negative
Property Taxes	Moderate	Positive	Negative	Negative
Special District Property Tax	High/Moderate	Neutral/Negative	Positive/Neutral	Negative
Local Sales and Service Taxes	Moderate	Neutral	Negative	Negative
Hotel/Motel Tax	High/Moderate	Positive	Negative	Positive
Bonds	High	Neutral	Negative	Negative
Impact Fees	High/Moderate	Negative	Positive	Positive
Excise Taxes	High	Negative	Positive/Neutral	Positive
Charges for Service and Other Fees	High	Positive	Positive	Positive
Utilities (for Stormwater and Transportation)	High	Negative	Positive	Negative/Neutral

Revenue Potential

The mechanisms with the greatest potential for revenue yield are income taxes, transfer and recordation taxes, impact fees, excise taxes, hotel taxes, charges for services and utilities. While bonds are a vehicle for financing, rather than a revenue source, it is ranked positively under revenue yield due to the potential for an influx of funds to address a portion of the costs at one time provided that debt capacity is available and it is affordable in light of County policies and guidelines. However, as noted above, a general obligation bond does not provide a *new revenue source*. Instead, it would have to be backed by a predictable revenue stream sufficient to support the issued debt. This could be from the increase in the income tax, hotel tax, or transfer and recordation tax rates. In addition, increased revenues due to an increase in impact fees or implementation of an excise tax could also be used to back additional debt for the facilities for which those fees or taxes were collected. Finally, revenue bonds could be a possibility in conjunction with implementation of a utility.

Impact fees are ranked high to moderate in revenue yield due to the County's current activities to update the fees and the resulting projected yield. In addition, other infrastructure categories such as Parks, Libraries, Detention Facilities, and County Facilities are not included in the impact fee program and those facilities will have growth-related capital needs in the future. Updating and adding to the fee program would greatly enhance the revenue potential.

A Special District Property Tax is ranked high to moderate with several caveats. If used for local or sub-county purposes, the revenue potential is likely low. However, if a countywide tax is allowed under current County and State law, this could be a significant source for a specific purpose thus freeing up other General Fund monies.

A Hotel/Motel tax is also ranked high to moderate in revenue yield. An increase in the rate from 7 to 10 percent would yield an estimated \$6.3 million to the General Fund, which could be used to back additional debt.

Technical Ease

Most of the mechanisms shown are currently used in the County, therefore continuation should not present technical or implementation issues (identified as "positive" impact on the above figure). Implementation of new sources such as excise taxes, new utilities, and special property tax districts would likely present initial technical and administrative issues and are therefore ranked negative in this category. However, ongoing administration would be similar to existing programs and should not present additional burdens.

Proportionality

In terms of proportionality, impact fees, excise taxes, charges for service, special district taxes, and utilities generally relate the amount paid to the direct impact on facilities. The proportionality decreases for special district taxes with larger geographic areas (e.g., countywide), however the tax rate would be based on costs to provide services or facilities, thus maintaining some proportionality. Excise taxes are ranked positive to neutral because the calculation and use of funds is dependent on enabling authority and program design. In some cases, the tax functions like a tax with the amount not necessarily derived from a rigorous analysis and revenues deposited in the General Fund. In other cases, an excise tax may function more like an impact fee, with similar requirements with regard to proportionality. The remaining mechanisms are ranked as negative. Income taxes, transfer and recordation taxes, property taxes, local sales and service taxes, hotel tax, and bonds are based on applicable values—income, property, goods, or services—and not necessarily reflective of benefit received or demand placed on the facility.

Public Acceptance

Typically, revenue sources that rank high on proportionality also tend to rank high on public acceptance (and even more so when those sources are directed toward new residents and businesses). Therefore, impact fees, excise taxes, and charges for service tend to be ranked high on public acceptance. Impact fees and excise taxes place costs of growth on new development and therefore are often supported by existing residents. Furthermore, impact fees and excise tax are typically met with high public acceptance to ensure that new growth pays its way and existing revenue sources can be spent on addressing infrastructure backlog. Charges for service may also garner support because those paying are receiving a direct benefit and the payment assessed is proportionate to the benefits received. Hotel taxes typically receive local support because payers are usually from outside the County.

The other mechanisms are rated either negative or neutral. While utilities and special districts are derived for specific purposes and targeted to those receiving the benefits, the magnitude of the infrastructure needs in Anne Arundel County is likely to require implementation on existing development Countywide. However, with these mechanisms, rates and fees would likely vary by area of the County or service to reflect needs, thereby reinforcing the proportionality and perhaps increasing public acceptance.

The other revenue sources (income, transfer and recordation, property, and local sales and service taxes) are all ranked negative due to their impact on existing residents and in particular residential development. There is likely to be very little, if any, public support for these options especially in the short-term due to the current economic and housing downturn. However, long-term solutions are needed to solve current and future problems. One option to garner public support may be to adopt a policy that uses the revenues generated through tax increases to pay for the infrastructure backlog improvements. While this decreases flexibility in use of funds, it may be a trade-off to realize additional revenues.

PHASE II RESULTS AND CONCLUSIONS

- The net surpluses generated by growth are insufficient to cover the capital needs from existing development and the backlog of infrastructure improvements on a Pay Go basis.
- Growth capital needs for Roads reflect the largest share of the projected expenditures at almost 50 percent of the total followed by Schools at 17 percent. The situation is essentially flipped when adding in existing development and the costs to correct the backlog, where Schools account for 65 percent of the estimated costs and Roads approximately 20 percent.
- The County is constrained in its ability to issue additional debt above the amounts issued on an annual basis due to existing guidelines and the property tax cap. Additional sources of revenue to back the debt as well as changes to current guidelines would be necessary to debt finance additional infrastructure needs.
- Potential additional revenue sources with the highest revenue potential, such as an increase in the income tax rate, unfortunately are likely to have the lowest level of public acceptance. An increase of .25 percent to the rate is estimated to yield an additional \$36 million annually. This would provide a source of PayGo funding and revenue to support additional debt. Based on level annual principal and interest payments, \$36 million in additional annual revenue could support approximately \$400 million in additional debt.
- Impact fees should be updated for those categories where fee revenues are not covering growth-related improvement costs (e.g., public safety). In addition, other categories not currently implemented (parks, libraries, detention, County facilities) should be explored. Revenue generated through fees would free up other General Fund revenue that could then be used to pay for a portion of the infrastructure backlog.
- Excise taxes are frequently used to pay for growth-related capital improvements. Several jurisdictions in Maryland use excise taxes and one County has both impact fees and excise taxes. Excise taxes are frequently more attractive than impact fees due to their flexibility and less stringent requirements. For Anne Arundel, use of an excise tax would likely require a change in the impact fee program (depending on the categories implemented) and would require State enabling authority.

- While Stormwater costs are not included in the fiscal analysis, a Stormwater Utility may be an attractive option for the County due to the significant stormwater costs both to serve growth as well as to correct existing deficiencies.
- This analysis was limited to the costs to serve all development and to correct the backlog in infrastructure needs for the categories discussed above. It did not address other needs that have been identified by staff or through studies such as those that reflect changes to levels of service (either adopted or otherwise); stream restoration projects to meet water quality standards; park and recreation needs identified in the Land Preservation, Parks and Recreation Plan; transit needs; changes to delivery of services—both operating and capital (e.g., current Fire needs study); or needs due to changes in demographics or social conditions (e.g., additional senior services and facilities due to an aging population; additional jail space for female inmates due to recent trends). These costs would be in addition to the costs outlined in this report.