

Bay Crossing Study Public Comments

June 1, 2018 – June 30, 2018

DATE	MEDIUM	COMMENT (Personally Identifying Information Removed)
6/1/2018	Email	<p>Dear Maryland,</p> <p>RE M.D.E. excellent work: Any time.</p> <p>On another topic, I have not joined the "No Bay Bridge to Kent" (NIMBY) alliance, because they are opposed to ANY Bay Bridge Crossing Study results that include any new bridge (or TUNNEL...who said bridge is the only alternative?) in any of the corridors. I write from the farm that my grandmother left us because her boss told her "Eleanor, you do not sell your family farm." He, on the other hand, apparently GAVE a portion of HIS family farm to the State of Maryland. My grandmother was Louis Goldstein's personal secretary for 40+ years. There is picture in the "Eleanor Burwell Fooks Faculty Office" in Goldstein Hall at Washington College. It shows her, the only woman in the room, taking dictation at a summer time meeting of the Maryland Board of Public Works held at his Calvert County farm.</p> <p>We have the Blackwater Swamp being over run with water. Take two problems and come up with a positive Maryland! Borrow the UK London tunnel borer and put in 8 lanes and a r.r. connection between Calvert County (Route 4 extended) and U.S. 50 below Cambridge.</p> <p>No reason in the world Kent County should be connected to Dundalk....do the Cost-Benefit (benefit to MARYLAND) and we will see that that route promotes Rhehobeth Beach not Ocean City.</p> <p>Also, read anything written by one of my mentors at UWMilwaukee...Alan Horowitz, PE/AICP....here is his c.v.: This is right up Dr. Horowitz's alley...we'd use this Bay Crossing Study as an exercise...you contact him, he MAY! Great guy:</p> <p>https://people.uwm.edu/horowitz/principal-publications-list/</p> <p>I can't just "say no"...but I am hoping we still have minds on the other side of the Bay Bridge that can do this right! Maybe hire Henry Kay on the private side.....big loss for Maryland that Henry!!</p>

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		BS Geology/Geography MURbanPlanning under employed farm mgr. [Personally Identifying Information Removed]
6/3/2018	Email	<p>In a word, Crisfield.</p> <p>As the crow flies, 75 miles north of the Bay Bridge Tunnel and 77 miles south of the Bay Bridge, lies Crisfield on the edge of the Chesapeake. Centrally located, Crisfield is ideally suited to receive a bridge from St. Mary's County onto SR 413. Salisbury Maryland, Richmond Virginia, and Washington D.C. would subsequently benefit from industry and tourism.</p> <p>* Wallops Flight Facility in neighboring Virginia is a mere 42 miles driving distance from Crisfield. It has surpassed Cape Canaveral as the International Space Station replenishment launch site. Serving Washington D.C., a crossing here would decrease travel time from the Pentagon to this strategic facility.</p> <p>* Somerset County is the poorest county in Maryland. It has the greatest need of new infrastructure and would welcome the bridge.</p> <p>* Long term planning suggests that population growth would be best supported in central Delmarva. Northern alternatives would serve only as temporary congestion relief.</p> <p>In conclusion, Crisfield is a beautiful place to receive an inspiring connection. We are central to the Eastern Shore, offering aquaculture, industry, and recreation. Instead of looking for a terminus, seek rather a destination: Crisfield, Maryland.</p> <p>Respectfully, [Name Removed] [Address Removed]</p>
6/6/2018	Web	<p>Please do not even think about an additional crossing in the vicinity of the existing bridges. Route 50 congestion is a nightmare for the local residents. We cannot access our homes along the Route 50 corridor without long waits on weekends (now Thursday through Sunday). Access for emergency vehicles is compromised by the heavy traffic, making quick passage impossible. Our lifestyle is seriously degraded by the current situation, which continues to worsen every beach season.</p> <p>Look at other options, such as ferries and tunnels, in addition to another bridge...and put them far from the current bridges so as to handle new traffic and divert some of the existing overload of traffic.</p>

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		Coordinate waterways use/impacts with the Port of Baltimore, the Chesapeake Bay Pilots, the Coast Guard and the Cove Point LNG terminal ops so that waterways traffic is not jeopardized by new solutions.
6/6/2018	Web	<p>Whatever option is considered feasible and affordable, it must be located far from the current two bridges. The traffic congestion for the local residents along the route 50 corridor is maddening. During the summer, we cannot access our homes or be assured of prompt emergency response to fire, accident or medical needs due to the extensive congestion. Despite signage to stay off the service road, everyone trying to work around the lines uses the service roads. The communities suffer tremendously on weekends, which now stretch from Thursday to Sunday, throughout the beach season, which can be May to late September or longer depending on the weather. We need a new alternative that will allow for traffic growth and syphon off the overload of existing traffic...which means a location far from the present two bridges.</p> <p>Look at other options, including ferries and tunnels, in addition to the feasibility of another bridge. Any of these must be located far from Annapolis!</p> <p>Coordinate with the Port of Baltimore, Ches Bay Pilots, Cove Point LNG ops, and Coast Guard to assess impacts to the waterways.</p>
6/8/2018	Email	<p>I attended the May 22 Bay Crossing Study at Chesapeake College. There was a poster presented by MDOT with incorrect information. It stated the number of vehicle crossings on weekends versus the number of vehicle crossings during week days as significantly higher.</p> <p>After being a resident of Anne Arundel County for more than 40 years, and currently a resident of Queen Anne's County for 3 years, it is obvious to me and others I have talked with that is not correct especially during the summer. Instead, Thursday and Friday traffic is every bit as heavy as Saturdays.</p> <p>I would like to suggest you do a study of traffic on each day of the Bay Bridge, going east and west. For those of us who cross the Bay Bridge on Thursdays and Fridays it is obviously no different than crossing on a Saturday. With many workers now working from home and having Fridays off because of a 9/80 work situation, it is no longer correct that weekend traffic is higher than week day traffic on the Bay Bridge. And,</p>

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		<p>I am sure there are no studies supporting that poster.</p> <p>Thank you for all you are doing to try to create easier transportation for all of us using the Bay Bridge. I surely hope you initiate the third bridge soon, it will certainly help the congestion I see almost every day when I go from Centreville, to Severna Park.</p> <p>Best, [Name Removed] (home: [Phone Number Removed])</p>
6/12/2018	Email	<p>June 12, 2018</p> <p>Dear Ms. Melissa,</p> <p>For the past 3 months, the 4th grade students at Pasadena Elementary School have been studying an important issue in Maryland: How do we deal with traffic on the Chesapeake Bay Bridge, and is a new third span the answer?</p> <p>Students began by analyzing newspaper articles and maps, but quickly learned that this information would not be enough to make any final decisions. To gain real world knowledge, students interviewed professionals, experts, and stakeholders throughout the state (and sometimes beyond!). These included Jay Falstad of the Queen Anne's Conservation Association, Wayne Gilchrest of the Eastern Shore Land Conservancy, Kevin Reigrut and Melissa Williams of the MTA, Erik Fisher of the Chesapeake Bay Foundation, Emily Stransky of the Chesapeake Bay Trust, and Jennifer Shivers of the Cape May-Lewes Ferry. The students also talked to school members who live in Kent Island, but come across the bridge to Pasadena for work every day. The students even went to a sailing trip on the Inner Harbor to study the health of the Chesapeake Bay with the Living Classrooms Foundation.</p> <p>As a capstone event to all of these experiences, on June 4, 2018, our students participated in the Pasadena Elementary Environmental Congress. This experience was a modified version of Model UN. To prepare, students had to write position papers about how they proposed to solve the problem of the Chesapeake Bay Bridge, and what evidence they had to support their solution. At the conference, following a variation of Robert's Rules of Order, the students shared their positions with each other. Then they</p>

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		<p>worked together in unmoderated caucuses to write working papers, turn them into draft resolutions, and review them before the entire congress. After voting down multiple resolutions, debating amendments and adding more detail to other draft resolutions, the students voted on and passed a final resolution.</p> <p>That final resolution is attached to this letter (we've done everything electronically to save paper!). The students wished to share their decision with not only the stakeholders they spoke to during their research, but the people who will be making the final decisions about the bridge as well. Our students also realize that three months is not nearly enough time to become experts on any topic, and invite feedback about the resolution that they have passed. Knowing that this is a long-term problem, and that their generation is directly affected by it, they would sincerely love to learn more so that they can continue being active citizens in their communities. Gaining more perspectives on the topic will allow the students to make more informed decisions, now and in the future!</p> <p>Thank you for your time, and we hope to hear back from you, [Name Removed] [Personally Identifying Information Removed]</p> <p>Attached:</p> <p style="text-align: right;">June 4, 2018</p> <p>The 4th Grade Environmental Congress of Pasadena Elementary,</p> <p><u>Deeply concerned</u> that the Chesapeake Bay Bridge has too much traffic; <u>Expecting</u> the traffic levels to increase in the future; <u>Realizing</u> that the Chesapeake Bay Bridge is getting very old and will need to be replaced; <u>Understanding</u> how much a bridge or ferry will cost; <u>Keeping</u> in mind how many years it will take to implement a new solution; <u>Aware</u> of the possible harmful environmental impacts of a new bridge;</p>

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		<p><u>Deeply concerned</u> that there will be a loss of habitat; <u>Realizing</u> the need to control pollution.</p> <p>I. <u>Supports</u> constructing a solar powered magnetic levitation train; <u>Notes</u> that the train will be built on a new bridge next to the current bridges; <u>Recommends</u> that the train make multiple Maryland stops, including Hagerstown, Frederick, Westminster, Bel Air, Baltimore City, Annapolis, Salisbury, and Ocean City; <u>Notes</u> that a partnership with Washington D.C., Virginia, Pennsylvania and Delaware could add more stops for the train; <u>Reminds</u> that a maglev train can move at speeds of up to 250 mph; <u>Draws attention to</u> the need for solar panels on top of the train and at each train station to keep the batteries charged; <u>Confident</u> that it will minimize harm to the environment; Emphasizes this because fuels like coal and gasoline are non-renewable resources. Solar panels are a one-time investment and use a renewable resource that will not harm the environment. It will also use LED lights to reduce the energy needed for the train; <u>Notes</u> the need to investigate the cost of this train with multiple engineer companies, as well as researching lightweight materials so that the train will take less energy to move.</p> <p>II. <u>Supports</u> also creating a Chesapeake Bay Car Ferry; <u>Notes</u> that it can be set up quickly to reduce traffic during bridge construction; <u>Encourages</u> having extra ferries in case one breaks down; <u>Notes</u> that it will should start at the Inner Harbor and go to Kent Island;</p> <p>III. <u>Recommends</u> putting money aside to make more habitats;</p>

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		<p>Recommends specifically investing in creating more oyster reefs, planting more bay grasses, planting 2 trees for every tree removed, funding beach cleanups, creating storm water ponds, and supporting planting on the shorelines. There should also be funding to teach Maryland students more about environmental conservation, including funding groups like Living Classrooms.</p> <p>IV. <u>Encourages</u> tourists and employees to leave early on their journeys to reduce traffic.</p> <p>V. <u>Notes</u> that security will be needed to protect the trains and ferries.</p> <p>VI. <u>Recommends</u> starting tolls or tickets high to cover construction, then lowering them over time.</p>
6/15/2018	Email	<p>Ms. Lowe, Please find the attached analysis and comments for submission to the Bay Crossing Study by Kent Conservation and Preservation Alliance. We request that this be entered into the record for comment received.</p> <p>Sincerely, [Name Removed] [Name Removed], Chair Board of Directors Kent Conservation and Preservation Alliance Kentalliance.org [Phone Number Removed]</p>



Kent Conservation & Preservation Alliance

861 Washington Avenue, Suite 256 · Chestertown, MD 21620

Heather Lowe, Project Manager
Maryland Transportation Authority's Bay Crossing Study
2310 Broening Highway
Baltimore, MD 21224

June 13, 2018

Dear Ms. Lowe:

Kent Conservation and Preservation Alliance (KCPA) submits the following comments to the Bay Crossing Study initiated by FHWA's notice of intent published on October 11, 2017. These comments are in part, but not wholly, in response to the recent Public Meetings that were held presenting the Purpose and Need and Screening Criteria for the Bay Crossing Study. We request that they be incorporated into the official document record that must be kept for the Bay Crossing Study.

The attached analysis that we are submitting focuses on the impacts of highways on population growth; loss of prime farmland; and the relationship that ease of travel and distance from major metropolitan population centers has on destruction of farmland.

We would like to register our concern that in the environmental section of the public presentation a map of prime soil was absent from all the other maps presented. In the NEPA process, along with wetlands, cultural & historic resources, and ecologically critical areas, all represented with maps, prime soil has an equivalent relevance in the process.

Sincerely,

Kent Conservation and Preservation Alliance Board of Directors

[Redacted] Chair

[Redacted] Vice-Chair

[Redacted] Treasurer

[Redacted]

[Redacted] Secretary

[Redacted]

[Redacted]

[Redacted]

cc: Governor Larry Hogan
Ms. Melissa Williams, Director, planning and Project Development,
Maryland Transportation Authority
Secretary Joe Bartenfelder, Maryland Department of Agriculture
Secretary Mark Belton, Maryland Department of Natural Resources
Secretary Pete K. Rahn, Maryland Department of Transportation
Mr. Robert McCord, Acting Secretary, Maryland Department of Planning
Commissioner William W. Pickrum, President, Kent County Commissioners
Commissioner Ronald H. Fithian, Kent County
Commissioner William A. Short, Kent County
Senator Steve Hershey
Delegate Jay Jacobs
Delegate Steve Arentz
Delegate Jeff Ghrist
Ms. Amy Moredock, Director of Planning, Zoning and Housing Development,
Kent County, Maryland
Ms. Jeannie Haddaway-Ricco, Director, Intergovernmental Affairs,
Office of the Governor, State of Maryland
Ms. Gail Owings, Executive Director of Stories of the Chesapeake
Senator Thomas M. Middleton, Chair, Senate Finance Committee
Mr. Michael Robotham, National Protection Policy Act Coordinator
Mr. Phil King, Maryland State Soil Scientist
Mr. Chuck Fry, President of Maryland Farm Bureau
Ms. Valerie Connelly, Executive Director, Maryland Farm Bureau
Mr. John Piotti, President, American Farmland Trust
Mr. Jay Falstad, Executive Director, Queen Anne's Conservation Alliance
Ms. Kimberley Brandt, Executive Director, 1000 Friends.

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Effects of a Bay Bridge to Kent County on Agricultural Land Use

"The National Environmental Policy Act is, as its name suggests, aimed at protecting the environmental health of the nation as a whole as well as that of each of its separate parts. In few areas is the importance of this broad policy as clear as it is in the area of highway construction, and in particular the area of major interstate and interurban highways. Such highways have a profound influence on "population growth, high-density urbanization, industrial expansion, (and) resource exploitation." 42 U.S.C. § 4331.

While highways of this type are often needed desperately by a population with a real and particular need to travel and expand, it is also true that such highways often create demands for travel and expansion by their very existence. Thus, almost any sponsor of a major four lane highway project can say with some assurance that if the highway is built it will be used and auto travel will be safer, faster, and more efficient because of it. In short, "need" is often a self-fulfilling prophesy in the area of major highway construction.

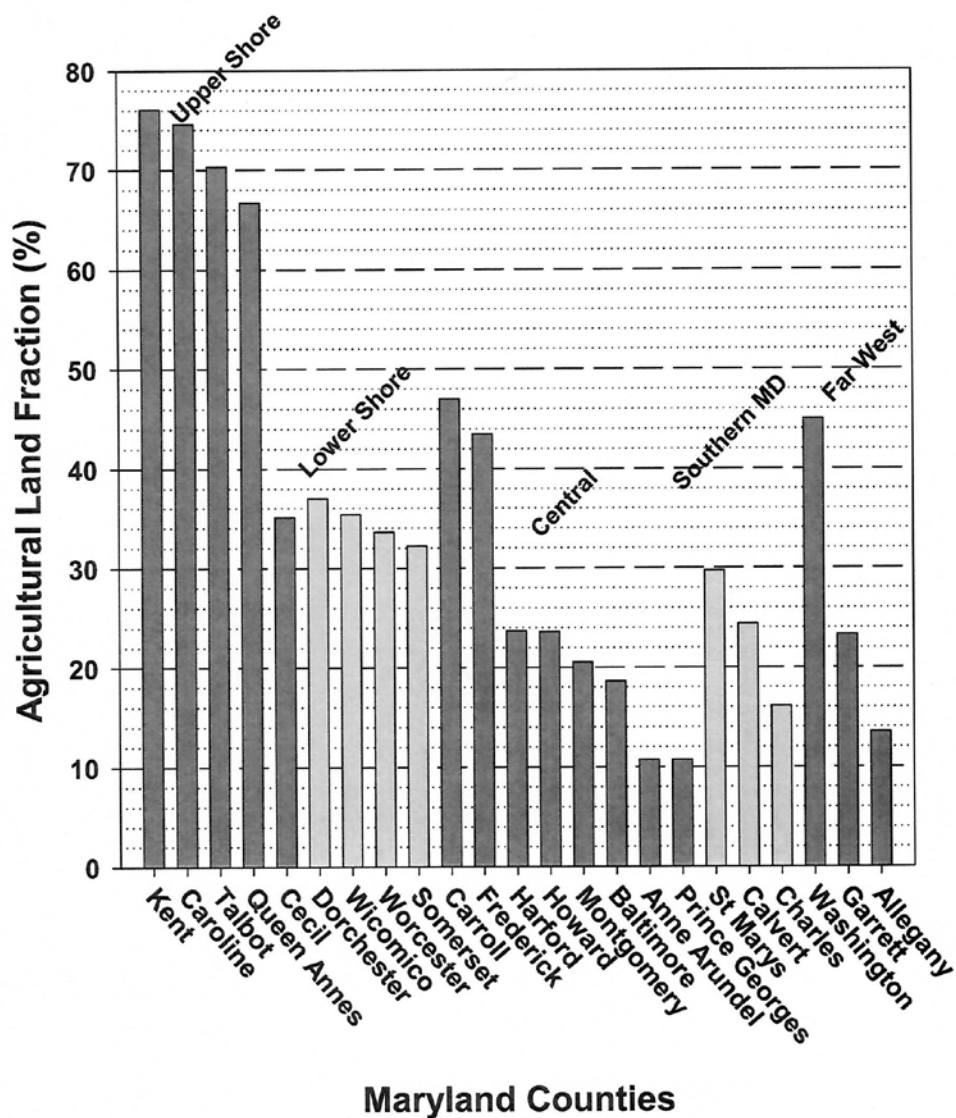
Swain v. Brinegar, 517 F.2d 766, 777 (7th Cir.1975); Def. 12(M) ¶ 86

Agriculture, Prime Farmland, and Kent County

Kent County, founded in 1642, is the second oldest county in Maryland, and is situated on the upper Eastern Shore of Maryland. It is part of the Atlantic Coastal Plain and can be characterized as a low-lying, broad, gently rolling landscape. Geographically Kent County is a peninsula bounded by the Sassafras and Chester Rivers on the north and south, the Chesapeake Bay on the west, and the Mason-Dixon Line on the east. It is one of the smaller counties in Maryland, at 175,108 acres, and is the smallest in population – 20,197 (2010 census). Farming has been the most central activity of Kent County residents since at least Revolutionary times; indeed during the Revolutionary War the upper Eastern Shore was known as the "breadbasket of the revolution

The importance of farming is reflected in the fact that Kent has the largest percentage of land devoted to agriculture (133,201 acres = 76%) of all counties in Maryland. **Figure 1** shows the agricultural land fraction of all Maryland counties, and is grouped by the five geographic regions of the state – upper Eastern Shore, lower Eastern Shore, Central Maryland, Southern Maryland, and the Far West counties of Maryland. It can be seen that the counties adjacent to Kent on the upper Eastern Shore – Queen Anne's, Caroline, and Talbot – all have similarly high percentages of agricultural land, near 70%, while all remaining counties in Maryland are markedly lower, generally in the 20-40% range. In addition to quantity of agricultural land, Kent can also boast of the quality of the soils, as 77% of the agricultural land (102,251 acres) is defined as prime farmland, which is also the highest of all Maryland counties, exceeding even that of Lancaster County, PA.

Figure 1
Agricultural Land Fraction in Maryland Counties
by Geographic Region (2012)



Prime land is defined by the U.S. Department of Agriculture as follows:

“the land that is best suited to producing food, feed, forage, fiber and oilseed crops. It has the soil quality, growing season and moisture supply needed to economically produce a sustained high yield of crops when it is treated and managed using acceptable farming methods. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment.”

Residents of Kent County have recognized their unique resource of prime agricultural land, and for several decades have worked assiduously to protect it. The land provides not only the livelihoods of a large fraction of residents, but also allows a unique rural lifestyle that is treasured by residents, sought after by large numbers of non-residents who have second homes here, and by thousands of tourists yearly. In an effort to control development and regulate growth in Kent County, the county government first developed a Comprehensive Plan in the late 1960s. This plan is updated at 10 year intervals, with the most recent update completed in 2017. The introduction to the present plan emphasizes the centrality of agriculture in the preservation of Kent County’s economy, culture, and lifestyle:

This Plan recognizes that agriculture is the keystone to Kent County’s heritage and its future. Agriculture is the lynchpin that buttresses the County’s economy, culture, history, and everyday experiences. Kent County cannot afford to have this key element damaged or displaced. Agriculture remains the County’s keystone land use and is the preferred land use for most of the County. It has served as the cultural foundation for the County and is planned to continue its important economic and cultural role. Kent County’s location enables it to retain its rural character. Its proximity to the mega- markets of the Mid-Atlantic Region and the nation’s capital place it strategically for compatible economic growth.

To preserve the County’s unique quality of life; growth is planned to occur slowly and deliberately at a manageable rate which would not exceed the County’s historic growth rate.

Kent County Comprehensive Plan, 2017

The second way in which Kent County and its landowners seek to preserve prime farmland is through conservation easements. The principal organization which purchases such easements is the Maryland Agricultural Land Preservation Foundation (MALPF), which was created in 1977 as a joint effort between the state and counties. The purpose is to preserve prime farmland and prevent development in perpetuity, and the program has been highly successful in Kent County. Currently 24% of the total land mass in Kent County is in protected easements, and additional land is added

yearly with much farmland waiting in agricultural districts for funding of easements to become available. In November 2017 Governor Hogan authorized the protection of an additional 2600 acres in 11 Maryland counties with an expenditure of \$9,223,000. In addition to MALPF there are several other organizations which acquire easements to protect prime agricultural land. Chief among these are the Maryland Environmental Trust, the Eastern Shore Land Conservancy, and the Maryland Rural Legacy Program. At the present time, the total land under easement in Kent County is 41,698 acres.

In summary, residents of Kent County, the government of Kent County, and multiple conservation organizations recognize that agriculture land and prime farmland are the essential lifeblood of Kent County, and have acted over several decades to protect it by comprehensive planning, protective zoning, and conservation easements. Kent County has the highest percentage of agricultural land and the highest percentage of prime farmland of all Maryland counties, and there is a broad commitment by citizens and government to continue this legacy.

Population Growth and Loss of Agricultural Land

To evaluate the effect of population growth on agricultural land, we have selected the 20-year period from 1990 to 2010 for population change, and 1992 to 2012 for change in farmland in Maryland, since these dates correspond to the data which is available. The population data comes from the US Census Bureau's Decennial Census data set, for each county in Maryland, and the agricultural land data comes from the USDA Census of Agriculture conducted, every five years, for each of the designated years. Although the dates for census and agricultural land data are not exactly congruent, they substantially overlap and allow us to develop meaningful conclusions regarding their relationship.

Urban economists have long realized that transportation can have a major impact on land use development patterns and in many situations improved accessibility can stimulate development location and type, - highway improvements tend to encourage lower-density, automobile-oriented development at the urban fringe.

Generated Traffic and Induced Travel November 2011 Todd Litman

Figure 2 shows the population of each Maryland county in 1990 and 2010. The total population in 1990 was 4,046,398, and in 2010 was 5,152,591, an increase of 27%. The enormous disparity in population among the counties can be easily seen, with the most populous, Montgomery, approaching 1,000,000 in 2012, while the smallest, Kent, was just over 20,000 at the same time, a ratio of 50:1. The relative changes in each county are also widely disparate, and these are shown in

Figure 2
Population of Maryland Counties
1990 and 2010

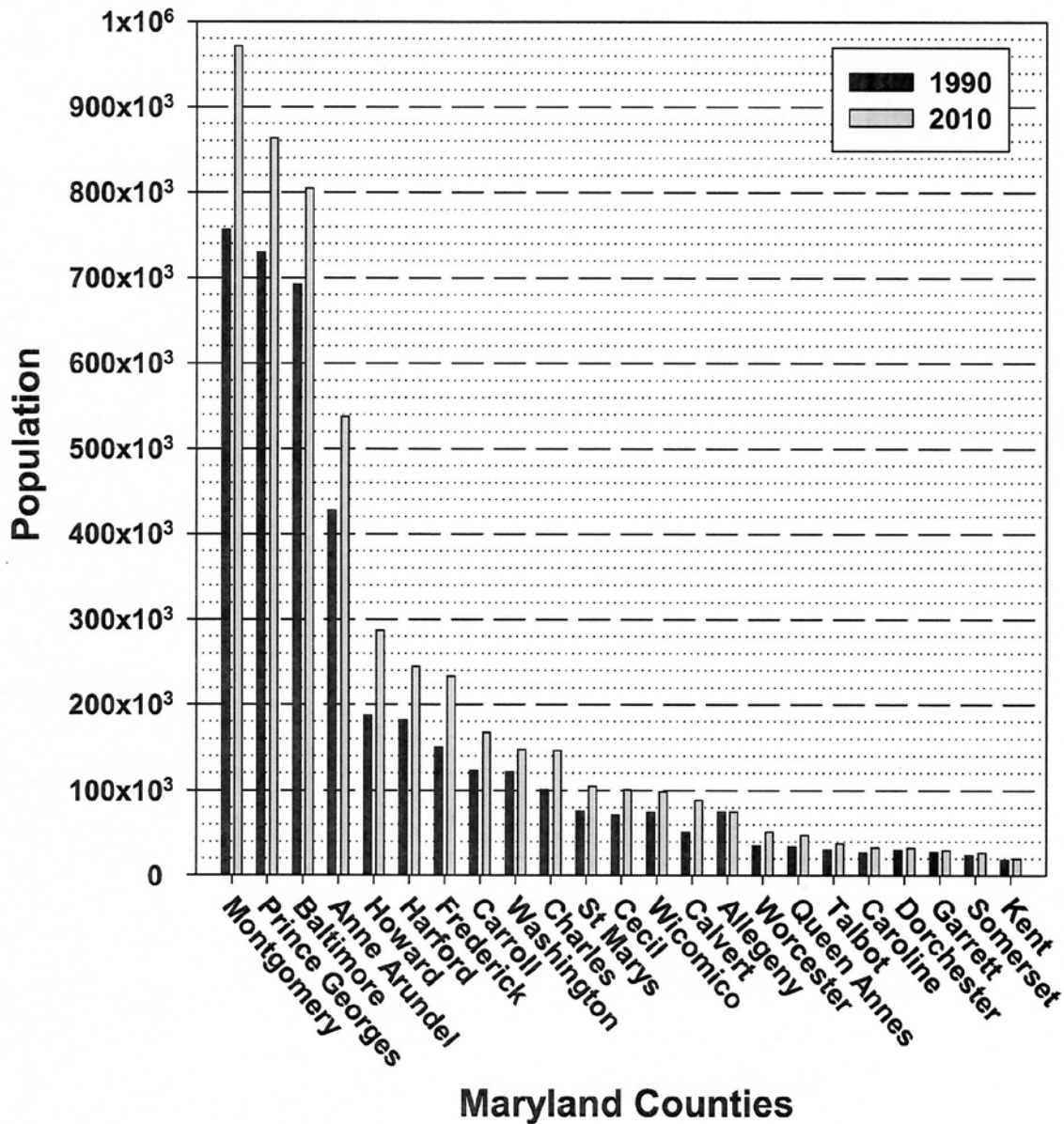


Figure 3, which describes population change for each of the 23 counties, grouped by the five regions of the state already described. The eight central counties surrounding Baltimore and Washington accounted for nearly 80% of overall population growth, while the three southern Maryland counties added another 10%. The upper Shore accounted for 5.3%, the lower Shore for 4.2%, and the three far western counties for 2.5%.

Next, we need to examine the agricultural land in each county in 1992 and 2012, and that data is shown in **Figure 4**. The changes which occurred in each county between these two dates are shown in **Figure 5**, and as with population, they are highly variable among the counties. The losses are greatest among the 8 central Maryland counties, and are much more modest in the other four regions, with some of the counties even showing a gain in agricultural land, which is almost certainly an error in reporting. Kent County shows almost no change during this twenty-year interval.

Lastly, we need to examine to what degree population changes correlate with the agricultural land loss. The data for all 23 counties is shown in **Figure 6**, with a relatively poor correlation coefficient of 0.27. However, the five data points on the right side of the graph correspond to counties which have agricultural land percentages of less than 25%. If we recognize that it is difficult to significantly decrease the percentage of agricultural land when you have very little to begin with, then the failure of these data points to show significant correlation is understandable. If we eliminate the seven counties which have less than 25% agricultural land relative to their total area, and replot the data, we obtain **Figure 7**, which shows an inverse linear correlation, with an $r^2 = 0.65$. The regression fit to this data shows that for these 16 counties, there is an average loss of 56,000 acres of agricultural land for every 100,000 population increase, a decrease of 0.56 acre for each new resident. Obviously, there will be significant differences among counties depending on the fraction of agricultural land they have at the outset, but the degree of correlation between these variables is striking, clearly indicating the toll which population growth takes on farmland.

In summary, then, using data for the majority of the counties in Maryland over a two-decade period from 1990 to 2010, a significant inverse correlation exists between increases in population and decreases in agricultural land. This is not particularly surprising, given that increases in population require new housing, new services, and a variety of new businesses to service the population, but we should be well aware that population increases are not innocuous in regard to agricultural preservation and production.

Figure 3
Population Change-Maryland Counties
1990-2010

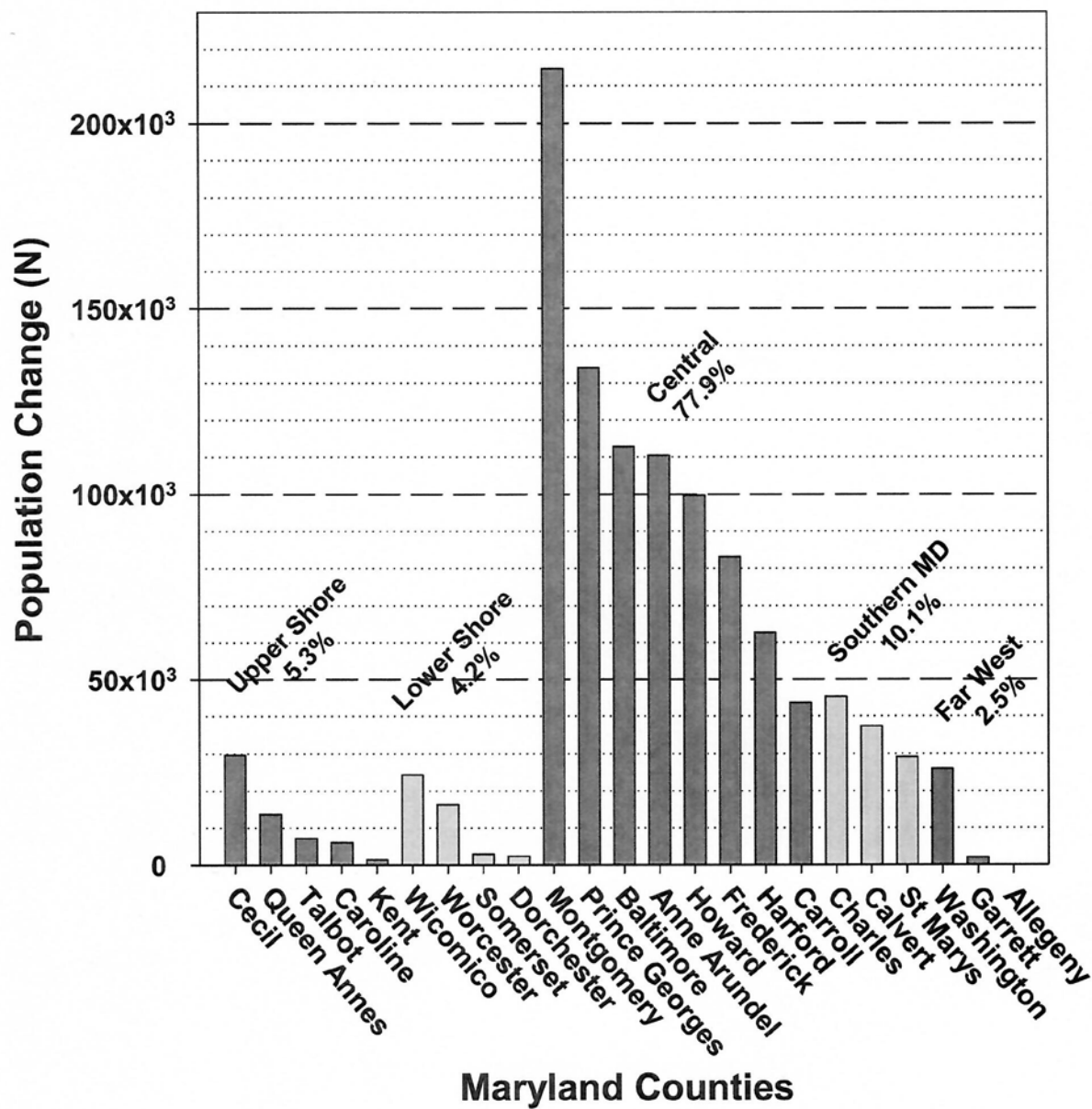


Figure 4
Maryland Agricultural Land
1992 and 2012 by Region

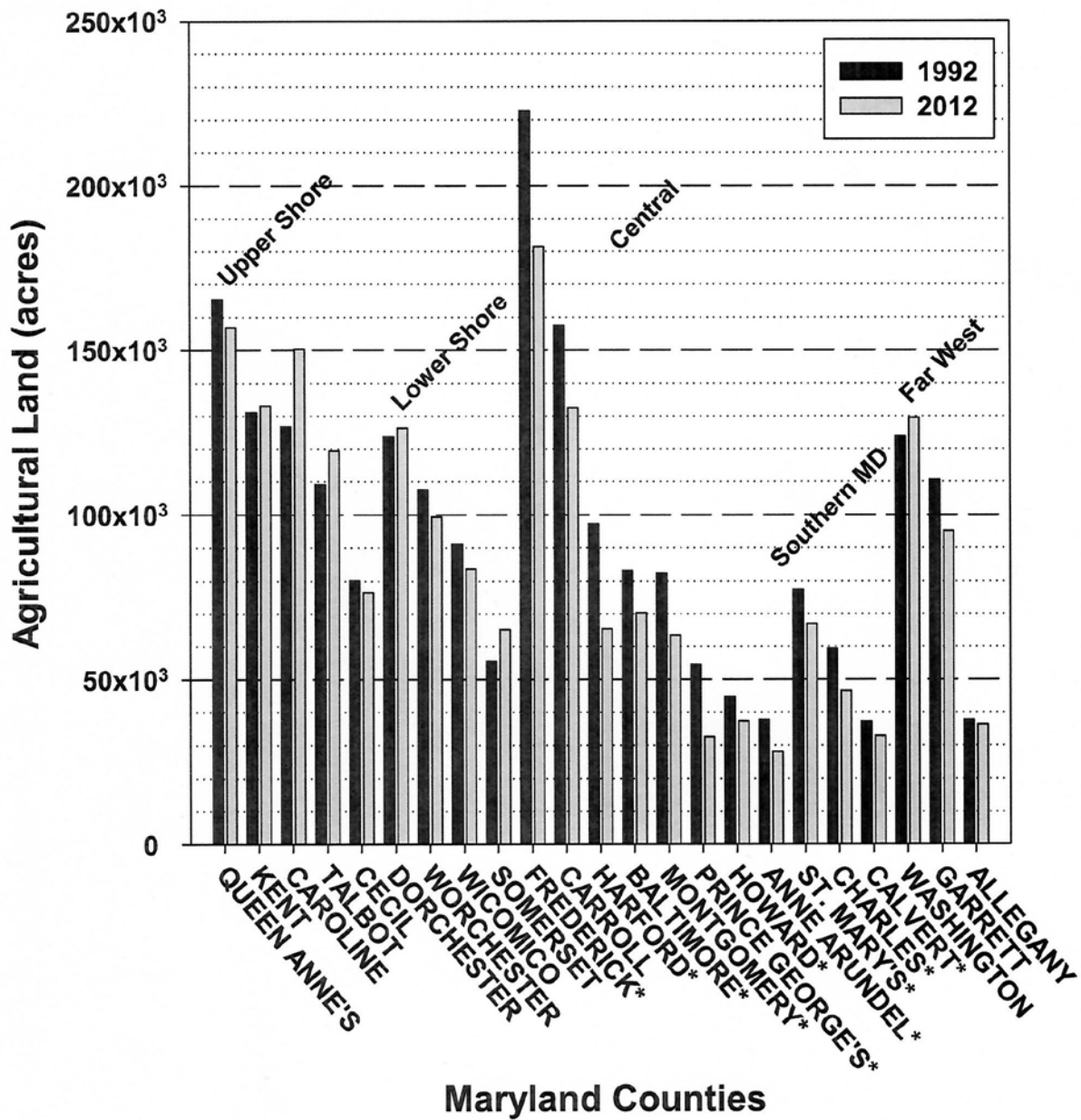


Figure 5
Loss of Maryland Agricultural Land
1992 - 2012

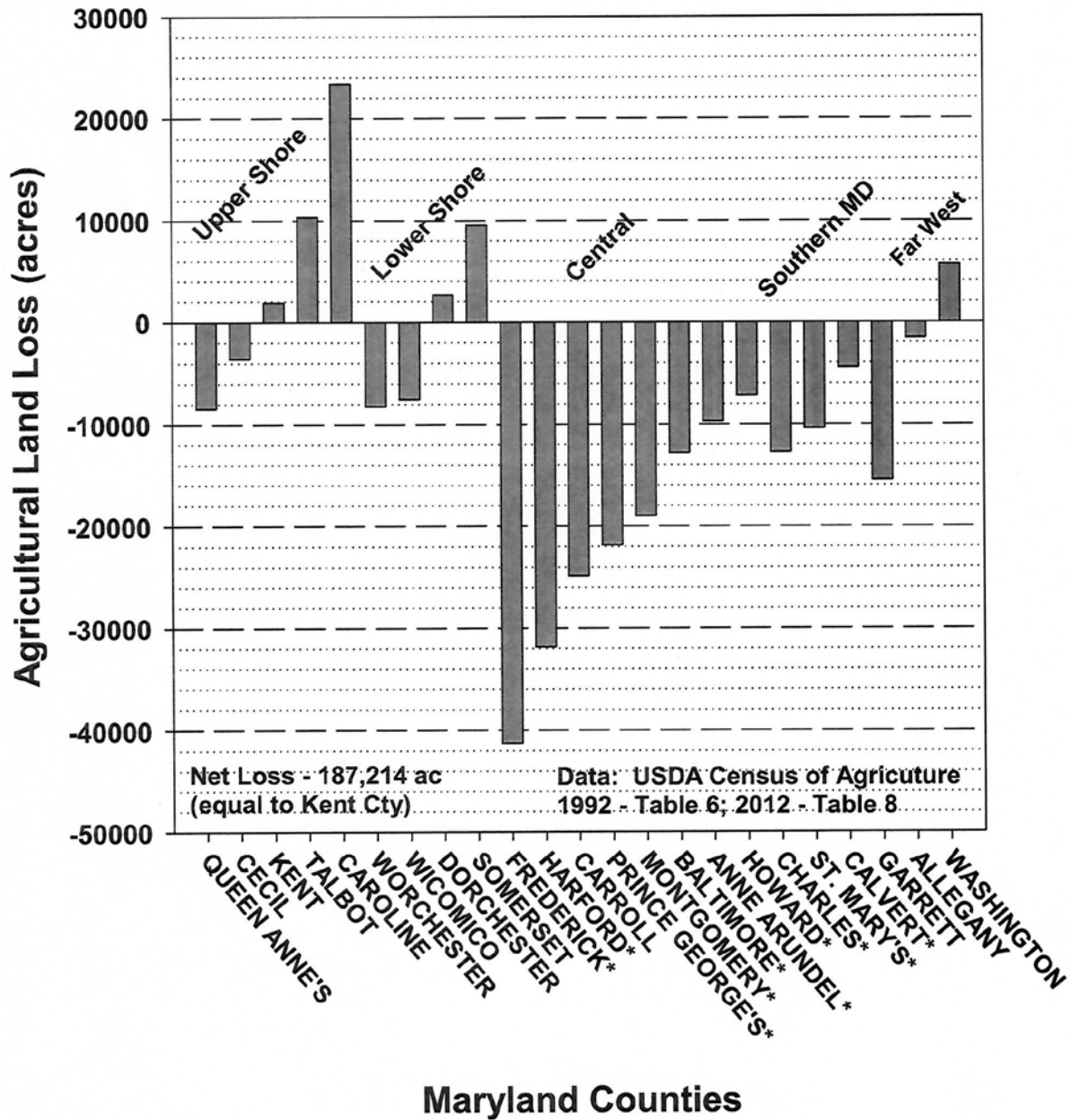


Figure 6
Population Change v. Land Loss
All Maryland Counties

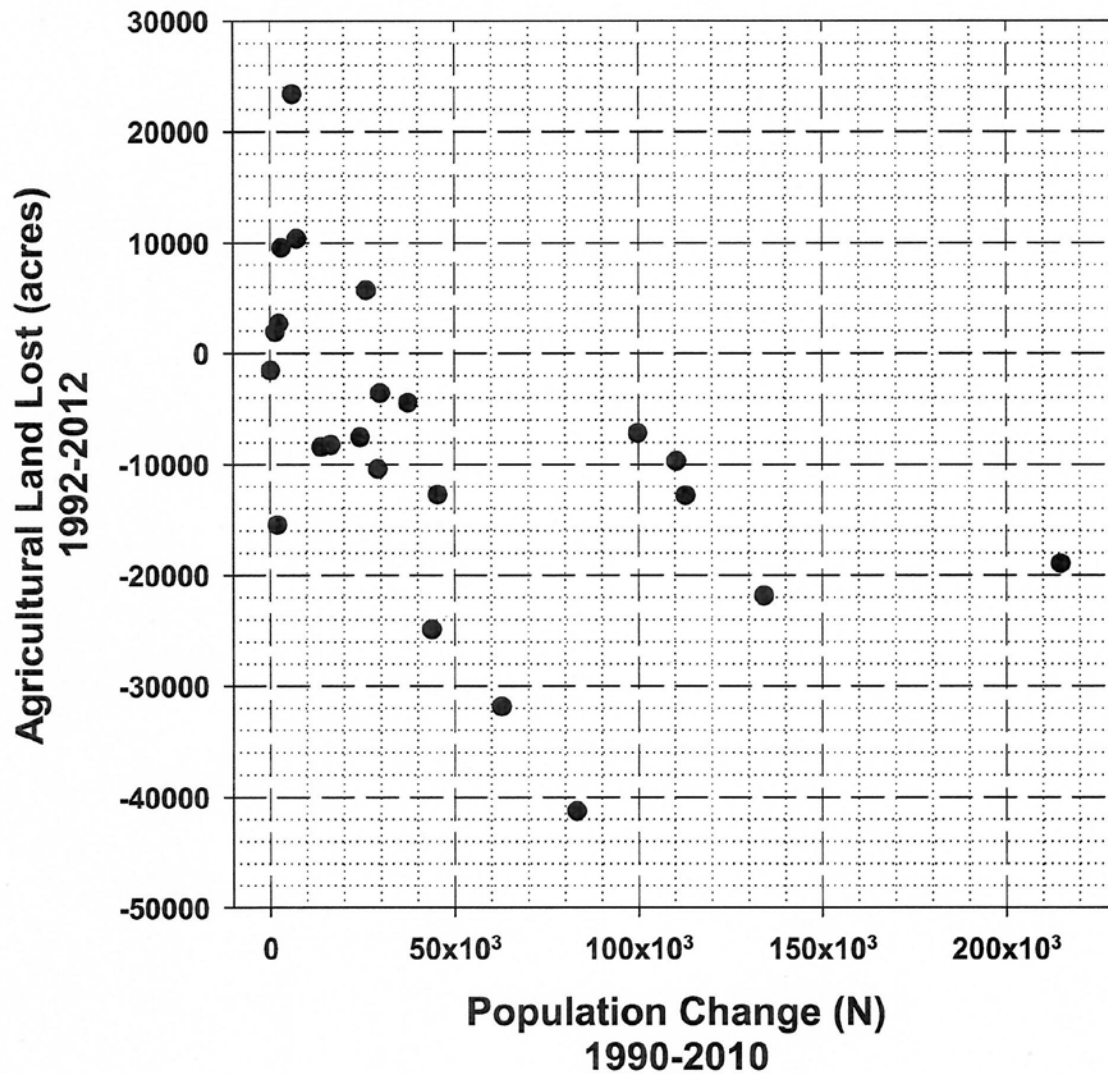
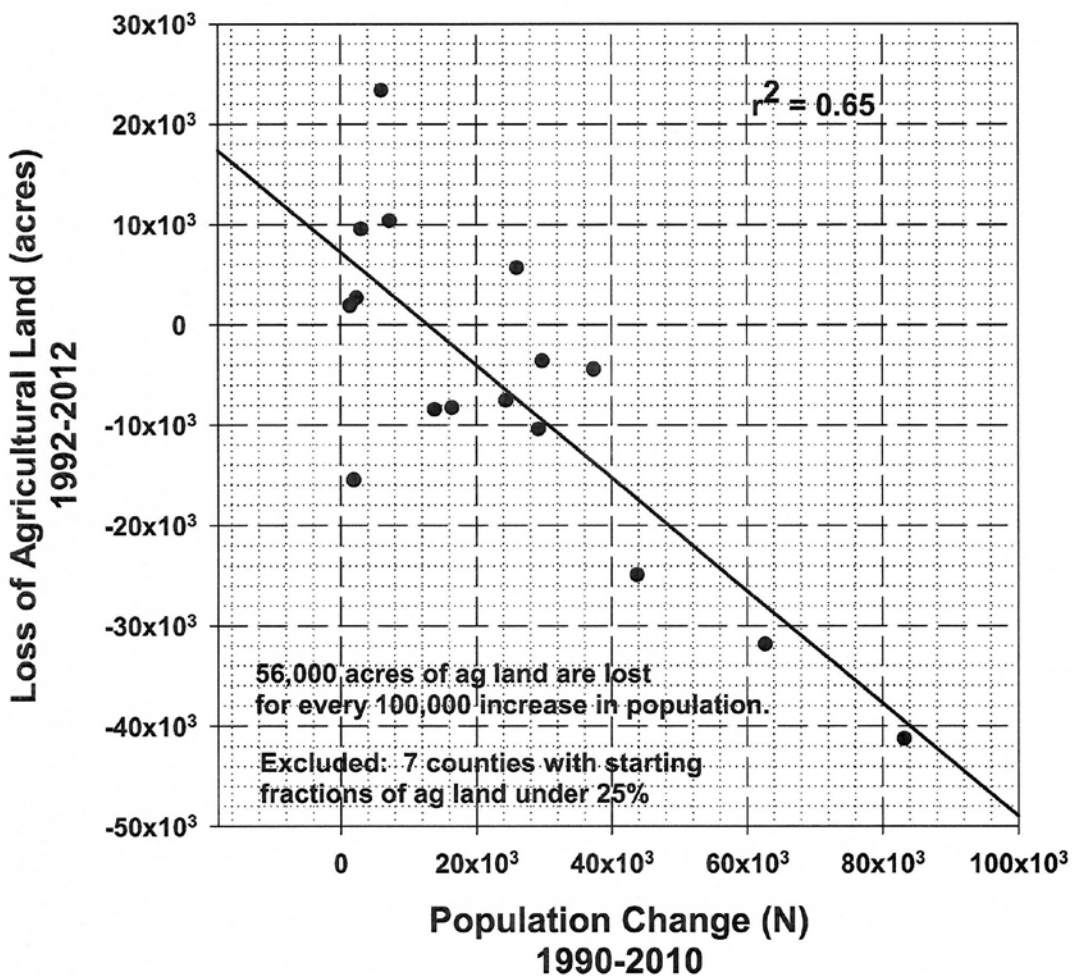


Figure 7
Population Change v. Land Loss
(Counties with <25% ag land excluded)



Effect of Improved Freeway Access on Population Growth in Outlying Areas

The preceding discussion dealt only with the effect of population growth on loss of agricultural land, but did not involve any issues relative to improved automobile access between areas of high and low population density. Markedly improved freeway access did not play a significant role in the changes described above, as residents of the eight counties of central Maryland commute largely on existing surface roads, and were not dependent on the development of a single road or bridge which dramatically improved their commuting distance or time during the period studied. An entirely different issue is involved when considering the effect of a potential new Chesapeake Bay bridge connecting eastern Baltimore to Kent County, since this would produce immediate dramatic improvements in commuting distance and time. We therefore need to examine the available data to see what can be learned from examples which have already occurred to see what can be predicted when new access roads or bridges are built.

The effect of a new freeway or bridge on commuting is that it markedly shortens either the time or the distance, or both, such that commuting distances between home and work that would formerly have been prohibitive in time suddenly become feasible. The effect is that population growth in outlying areas that were formerly inaccessible suddenly accelerates. Even with the new access, distance is still a variable that affects growth rate, such that the greatest growth is in the nearest areas. When the Chesapeake Bay bridge was built, it converted what had been a 1-2-hour total ferry experience to a 6-8-minute transit across the bridge. The effect was dramatic in opening up development on Kent Island, but much less so in Easton, which is 28 miles further on from Kent Island on Route 50. Any analysis of the effects of suddenly improved access therefore needs to also include the variable of total distance in regard to effects on population growth to better understand the whole picture.

In our analysis of this, we have three examples which can be examined to see what can be learned about the effects of markedly improved access:

1. The first and second Chesapeake Bay bridges relative to growth in Queen Anne's County.
2. The first and second Chesapeake Bay bridges relative to growth in Talbot County.
3. The effect of Delaware Route 1 which opened between Christiana and Dover in the late 1990's on growth in Middletown, DE.

In evaluating this data, the selection of starting and ending points for the analysis of commuting distance is somewhat arbitrary. There are myriad variables among commuters in starting and ending points, and trying to find a logical compromise for an average commute distance that will allow some quantitative analysis will always be controversial. After considerable thought, we have chosen the following:

1. For the starting point of a commute from Baltimore or Washington, we have chosen the Baltimore or Washington beltways respectively as the starting point for commuters coming from those cities. For the ending point in Queen Anne's County, we have chosen Kent Island as the end point, since approximately 80% of the population increase in Queen Anne's County after the bridge construction occurred on Kent Island, and not in more distant county destinations. The distance from the nearest point of either the Baltimore or Washington Beltway to Kent Island is 37 miles.
2. For the commute to Talbot County we have chosen Easton as the end point, which is an additional 28 miles beyond Kent Island, for a total of 65 miles from the Baltimore and Washington Beltways.
3. The distance from either Newark or Wilmington to Middletown, DE on Delaware Route 1 is 18 miles.

Figures 8, 9, and 10 show the population changes from 1900 to 2017 in Queen Anne's County, Talbot County, and Middletown, DE, respectively. The times at which the first and second Bay bridges were added are appended to the first two figures, and the time of the opening of Route 1 is considered to be 1996, although it opened in stages from 1993 to 2002. The total time for study is therefore 65 years for the first two figures, and 20 years for the third.

Figure 8, for Queen Anne's County, shows that population in the county had been slowly declining from 1900 to 1950, but dramatically accelerated after the opening of the first bridge, to nearly 2000 new residents per decade. Further acceleration occurred after the second bridge in 1973, with population growth increasing to more than 7000 new residents per decade. Between 1970 and 2010 the average population gain in Queen Anne's County was 734 per year.

Development pressure was increasing in the County in the 1960s as a result of the opening of the first Chesapeake Bay Bridge in 1952. By 1964, land speculators had already subdivided approximately 9,000 small lots in Queen Anne's County, of which 80 percent of those lots were on Kent Island. The completion of the second span of the Chesapeake Bay Bridge in 1973 was long awaited by the many travelers anxious to reach the beach. The second span also played an important role in the development of Kent Island as the commute became easier to employment centers on the Western Shore in Annapolis, Baltimore and Washington, D.C. As a result, Kent Island became much more of an attractive bedroom community and provided the catalyst for additional development pressures, such as retail services and marinas, which also necessitated new infrastructure.

Chapter Five: The Land Use Plan, Queen Anne's County, 2007

Figure 8
Queen Anne's County Population
1900-2017

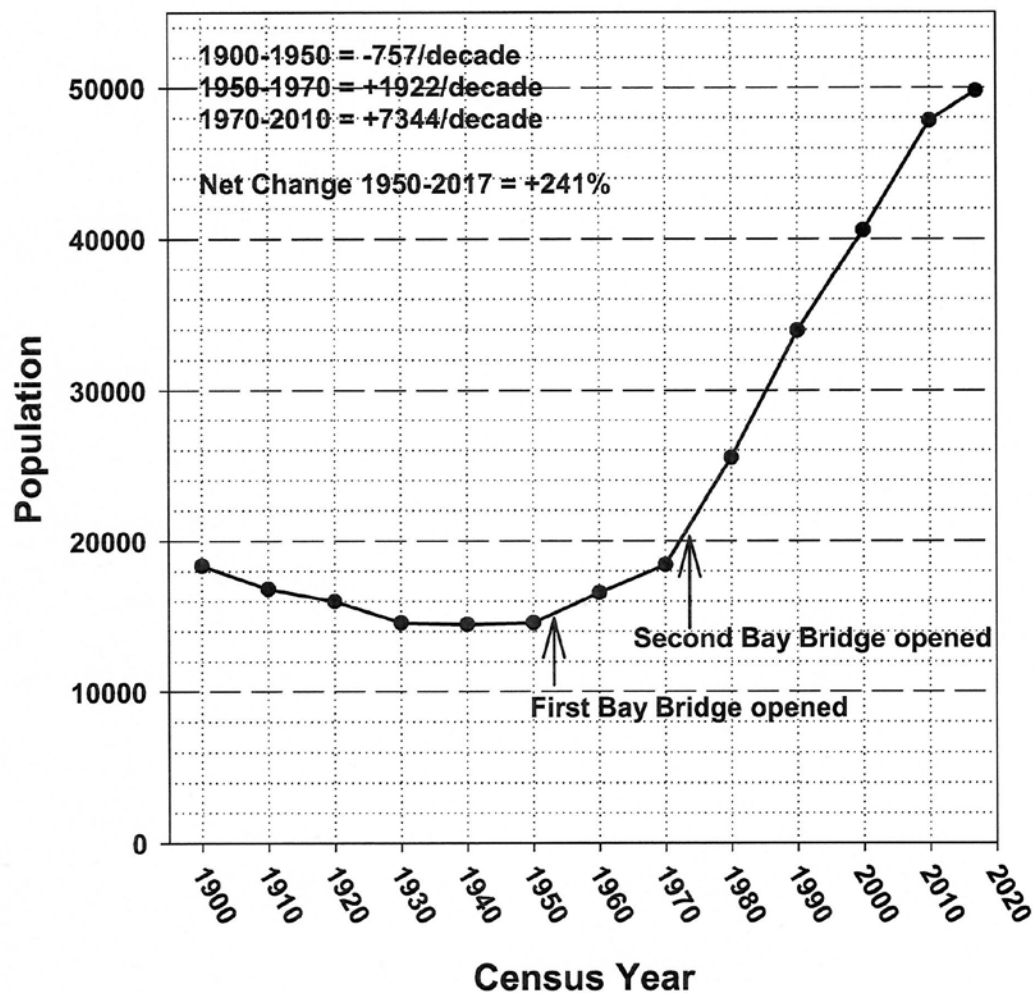


Figure 9, for Talbot County, shows a similar pattern, but with a lower rate of increase. Here, the gain in population from 1950 to 2017 is 91%. If we look at the years of most rapid increase, from 1970 to 2010, the average population gain per year was 352.

Middletown, **Figure 10**, represents a dramatically different picture. From 1950 to 1990 population had been increasing slowly, at about 500 residents per year, until Route 1 opened in the late 1990's, providing freeway access from Interstate 95 in Christiana to Middletown, and providing high speed access between these two points, where previously congested traffic with multiple stoplights on Route 13 had been the principal connection. Growth in Middletown showed an increase in the decade of the 1990's, but exploded after 2000, when Route 1 was fully completed, with a population rise to more than 20,000 at the present time, a fivefold increase in 20 years. Between the years of 2000 and 2016 Middletown's population increased by 919 per year. The rapid expansion in Middletown is in part a reflection of the fact that population growth in northern Delaware is markedly constrained on the east, north, and west by areas that are already heavily developed. Hence, southward expansion is the preferred remaining alternative.

Figure 11 shows the estimated average commuting distance for each of these examples, versus the population growth yearly immediately after opening of the bridge/freeway, and shows a clear relationship between the rate of population growth and the commuting distance over the newly accessible route, with a correlation coefficient of 0.992. Obviously, these are very general averages, but the strong dependence of population growth on commuting distance is undeniable.

In summary, these three examples, which are all we have in the local Maryland-Delaware environment, show that even with dramatically improved access either by freeway or bridge, the total commuting distance remains an important variable in determining the rate of population growth that will occur in the relevant outlying district to which the population center is connected.

Figure 9
Talbot County Population
1900-2017

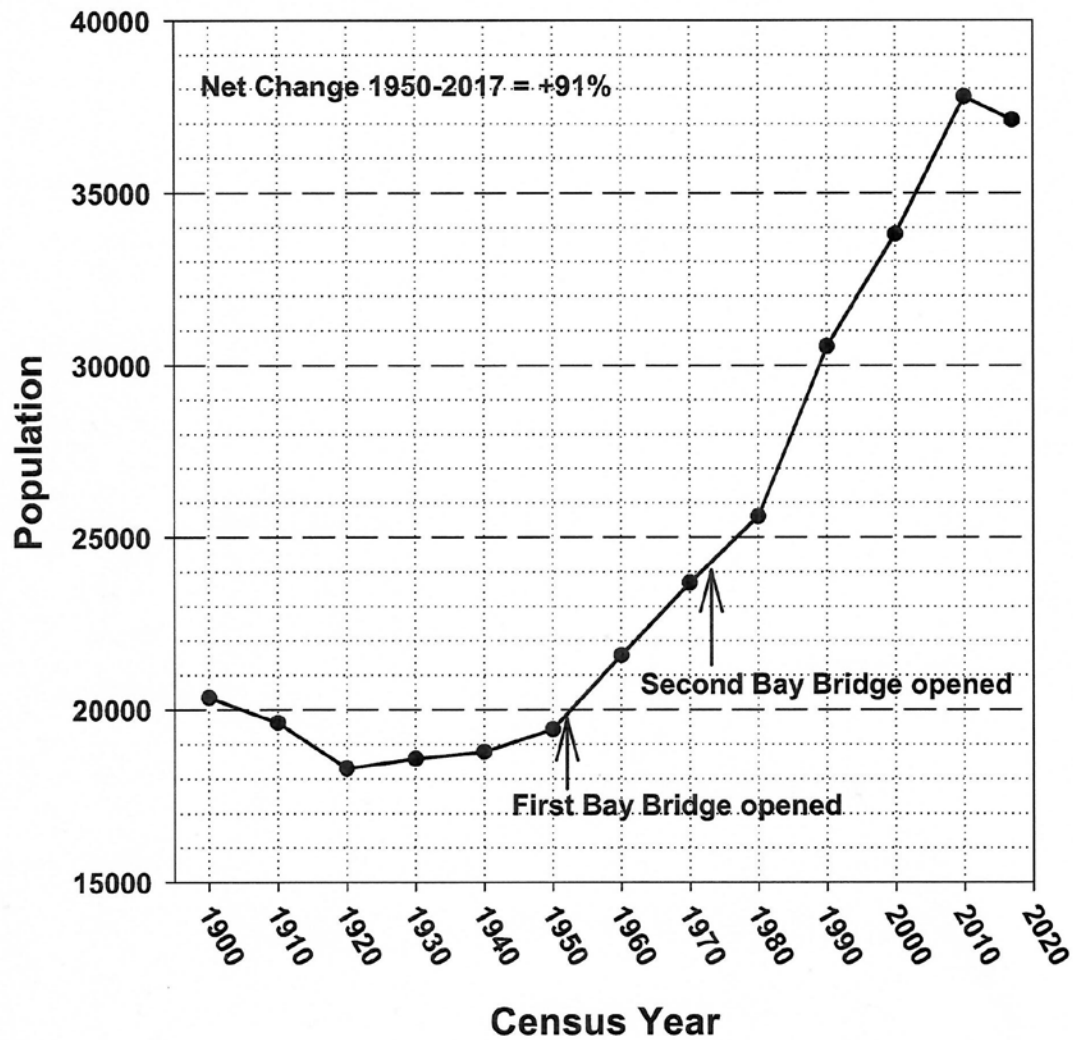


Figure 10
Middletown, DE Population
1950-2016

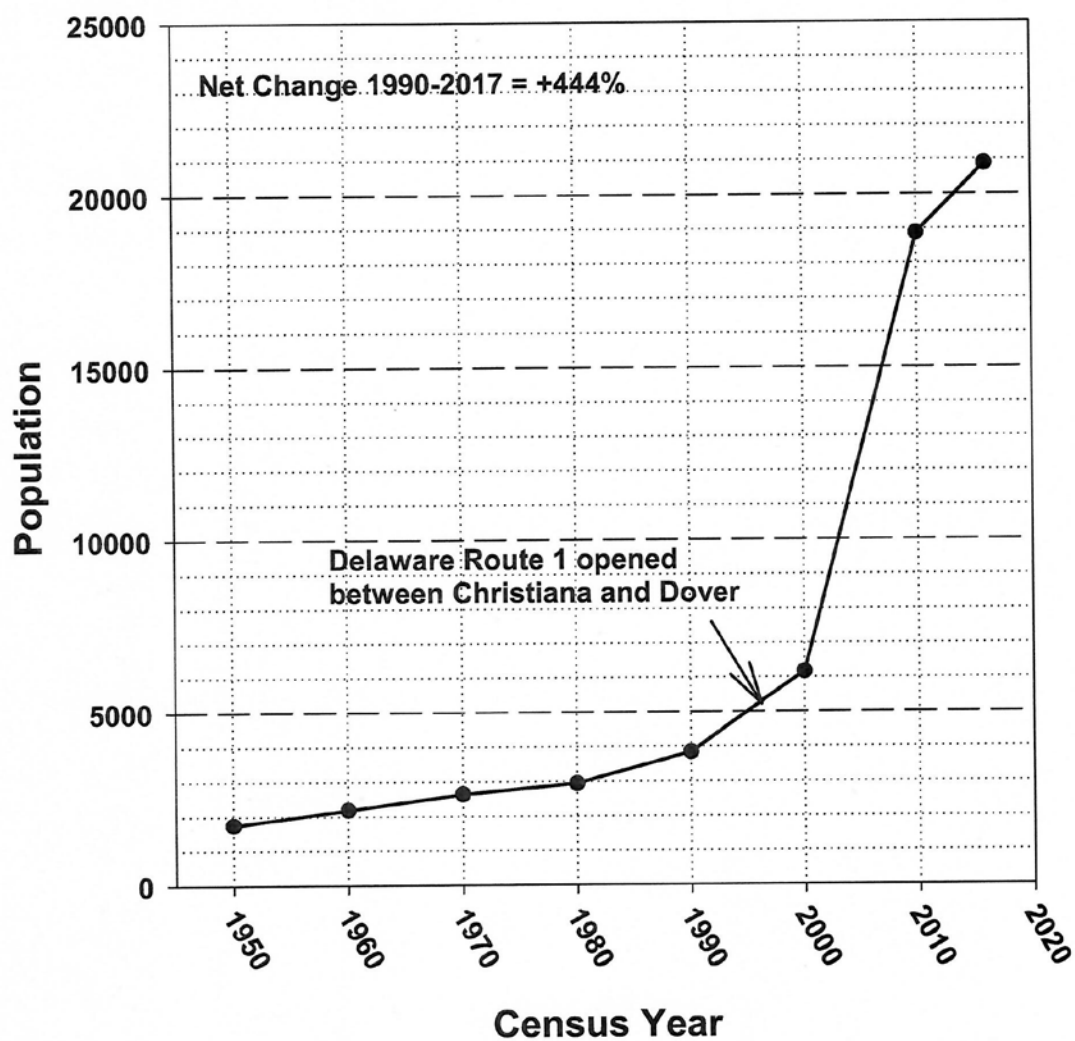
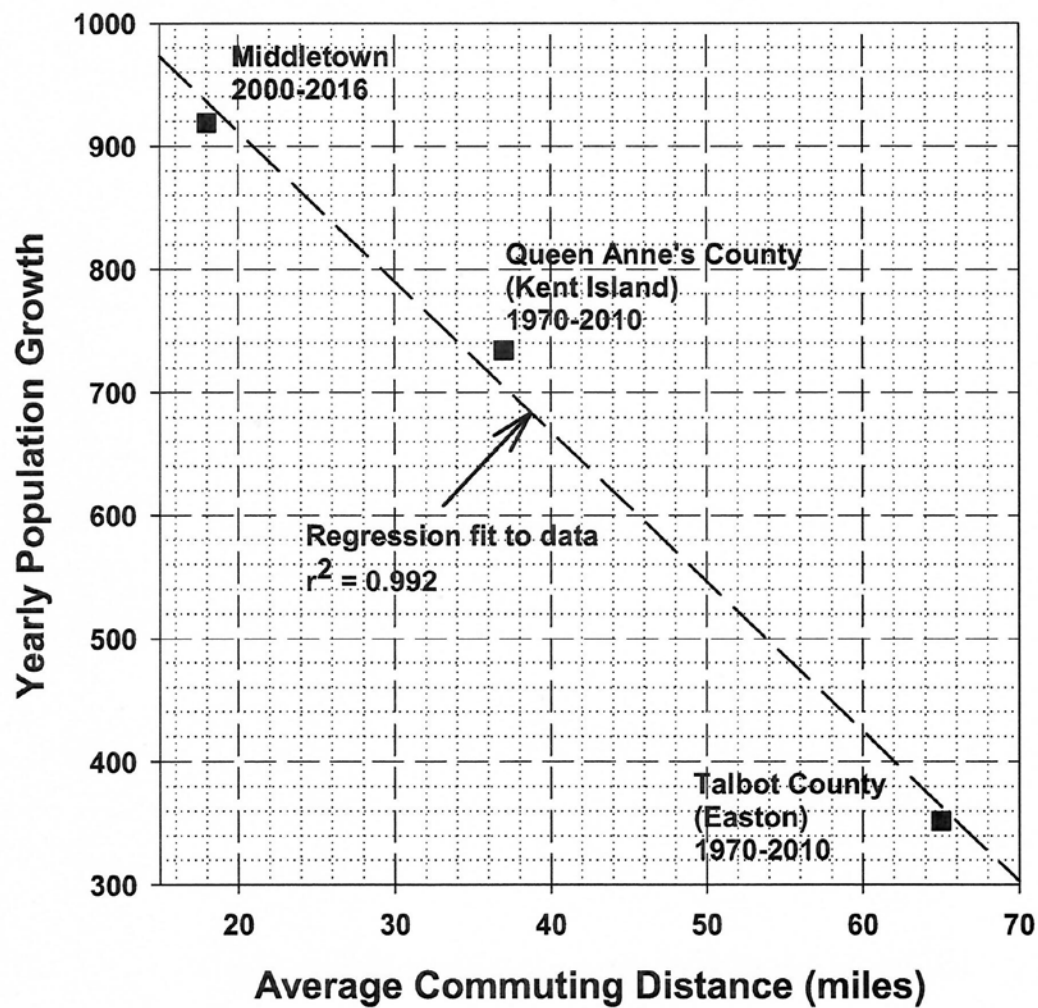


Figure 11
Population Growth v. Commuting Distance
after New Bridge/Freeway Access



Relevance to Kent County and Third Bay Bridge Crossing

The principal factor which has restricted growth in Kent County over the years and kept it from being a Baltimore suburb has been that it is not easy to get to. The commute from Baltimore to Chestertown via the Bay bridge is about 80 miles, and generally takes at least 90 minutes. Taking the northern route through Elkton is about 12 miles longer, and requires 105 minutes. Neither of these is compatible with a daily commute. If a bridge were built from the easternmost point of the Baltimore Beltway near Sparrows Point to Kent County, the distance from the Beltway to the Kent County coast at Tolchester is only 12 miles. Another 8 miles would reach Chestertown, and 15 miles on the other end would reach center city Baltimore. The total commute from Chestertown to most points in Baltimore would therefore be about 35 miles, or about 45 minutes, and access to shopping, medical care, and multiple other services would suddenly become feasible.

Rural. Transportation projects in rural areas have traditionally had a lower potential

to cause growth-related impacts than suburban areas, because population density and economic activity generates lower demands for conversion of undisturbed lands to developed uses. However, the likelihood of impacts can vary depending on factors such as the distance to existing population centers, the degree of growth pressure, and so on.

Accessibility is the most direct link between transportation and land use. Transportation projects may reduce the time-cost of travel, thereby enhancing the attractiveness of surrounding land to developers and consumers.

Guidance for Preparers of Growth-related, Indirect Impact Analyses,
Caltrans

If changes in accessibility is greater than 10 minutes the potential for land use change is very strong.

Forecasting Indirect Land Use Effects of Transportation, American
Association of State Highway and Transportation Officials

In the opposite direction, those living in eastern Baltimore could reach a second home in western Kent County in 20-30 minutes, which for many would be considered a short commute. It is likely that this would result in an explosion of growth and development in western Kent County, and a steady reduction in agricultural land. Since Kent County has such a large fraction of agricultural land relative to the total land area, there is relatively little non-agricultural land which could be used for development, and the estimates we derived earlier for the impact of population growth on agricultural land would likely be higher in Kent County, approaching 1 acre of land loss for each new resident. While many would say that Kent County could control this with local zoning, it is unlikely that it would be possible to hold the line on this given the massive financial incentives that would

drive development. Current experience with the development which has occurred on Kent Island, in the towns of Easton and Cambridge along Route 50, and in and around Middletown, DE, exemplify the ugly, haphazard and relatively uncontrolled nature of the development which follows suddenly improved access to rural areas. The zoning and political processes are ultimately driven by economics.

Sprawl in the Chesapeake Bay watershed, despite efforts at "smart growth," continues at an unprecedented rate. Growth occurs principally along transportation corridors; the main culprit is the federal highway system, which has been the silent ally of real estate development and urban sprawl.

The Chesapeake Watershed's Countryside is being Replaced with Mallside.
John Wennersten Emeritus Professor University of Maryland, January 6, 2017,
Washington Post.

Anyone who lives in Kent County and is familiar with local geography understands the above analysis and realizes that a Bay bridge to Kent County would inevitably destroy the agricultural predominance which we have had and the basic lifestyle and culture which is presently enjoyed. Population growth would increase dramatically, probably in a manner similar to Middletown, since the commuting distances involved are similar. It is likely that Kent County would most closely compare to the data for Kent Island or Middletown, with a population increase of 700-900 residents per year to be expected, since the distances are similar. In a period of 20 years the population could be expected to increase by 14,000-18,000, not quite doubling, and the land loss would be an equal number of agricultural acres - roughly a 10% decrease in agricultural land from presently.

A bridge would also need exit roads across the county, either extending east to Route 301 north of Millington, or southeast to the Centreville area and the Route 301/Route 50 connection. Any of these roads would over time bring the same sort of business development that is present on Route 50 across Kent Island. The MDTA has announced that a one to two-mile right of way is contemplated for the connecting road from the eastern end of the bridge to Routes 301 or 50, and no matter where the connecting road was situated in the county it would create a major barrier to travel from one side of the connecting road to the other. Since this will be a limited access freeway, one might have to travel several miles to find a crossing point. Since this route will randomly cross farms and not respect present property boundaries, the fragmentation of farming properties and the disruption to farming activities would be huge.

The administration and governance of Kent County have already recognized the above issues and taken stands against construction of the new bridge into Kent County.

Amy Moredock, the Kent County Planning Director, has stated:

“A northern bridge crossing will have a detrimental impact on the County’s rural landscape and natural-resource based economy. It will undermine the County’s efforts to preserve our agricultural industry and develop a tourism industry based on our cultural, historical, natural, and scenic assets. Limiting access to Kent County will discourage development resulting from urban expansion of the Baltimore region and, therefore, help maintain the County’s rural character. The County does not now or plan to have infrastructure to support such an expansion”.

The Kent County Commissioners have also registered their opposition to a bridge crossing into Kent County, but it is unclear if this will have any influence with the task force which is evaluating different sites for the bridge.

Relevant Federal Regulations

The Federal Government, over time, has clearly recognized the threat to the natural environment that growth can entail. Some of the more specific documents that relate to this are the following (emphasis added):

42 US Code 4331

The Congress, recognizing the profound impact of man’s activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

42 US Code 4371(b) (1)

The Congress declares that there is a national policy for the environment which provides for the enhancement of environmental quality. This policy is evidenced by statutes heretofore enacted relating to the prevention, abatement, and control of environmental pollution, water and land resources, transportation, and economic and regional development.

40 CRF 1508.27(b)(3) The following should be considered in evaluating intensity:

- (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
- (2) The degree to which the proposed action affects public health or safety.
- (3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
- (4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- (5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- (6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- (7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- (8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- (9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
- (10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Council on Environmental Quality Memorandum: Analysis of Impacts on Prime and Unique Agricultural Lands in Implementing the National Environmental Policy Act

Because prime and unique agricultural lands are a limited and valuable resource, the Council urges all agencies to make a particularly careful effort to apply the goals and policies of the National Environmental Policy Act to their actions and to obtain necessary assistance in their planning processes so that these lands will be maintained to meet our current needs and needs of future generations of Americans.

Relevance to Kent County

The federal regulations and policies listed above clearly mandate that prime farmlands must be considered a unique resource and that “it is the continuing policy of the Federal Government---to use all practicable means and measures---to foster and promote the general welfare” regarding maintenance of environmental quality. Because agriculture is so central to what Kent County is, and to the lifestyles of those who live here, the loss of farmland and the secondary changes which would occur would be devastating to the county and over a few decades would completely decimate the current ambience which is enjoyed by residents.

Conclusions

1. Agriculture is central to the culture of Kent County, and to the livelihoods and lifestyles of those who live here. The fraction of land in Kent County devoted to agriculture is the highest in the state (76%), and is generally double to triple the average of Maryland counties other than those immediately adjacent to Kent (Queen Anne’s, Caroline, and Talbot). The fraction of agricultural land which is considered prime farmland is also the highest in the state. The primacy of agriculture dates at least from Revolutionary times, and in the last 4-5 decades it has been explicitly recognized by the development of a Comprehensive Plan which prioritizes zoning and other measures in an effort to protect the agricultural land from excessive development.

2. Using data from all Maryland counties over a two-decade period from 1990 to 2010 we have shown that population growth inevitably results in loss of agricultural land, at a rate of approximately ½ acre per person. Since this rate is seen in areas with average agricultural land percentages of approximately 20%-40%, the loss is likely doubled in counties like Kent, Caroline, Queen Anne’s, and Talbot, which have agricultural percentages in excess of 70%.

3. Using three examples from Maryland and Delaware – the first and second Bay Bridges, and the freeway from Christiana, DE to Middletown, DE – we have shown that when high speed access is suddenly opened from a region of high population density to a rural area of low population density, there is an immediate rapid expansion of population which is inversely dependent on the commuting distance involved. During the 2-4 decades of most rapid expansion in the above 3 examples, the maximal expansion rate for commuting distances of 20-40 miles was 700-900 residents per year. Transportation and the ease of travel is the essential element that guides development and population growth.

New highway capacity will influence where growth occurs.

Smart Growth and the Transportation-Land Use Connection. What Does the Research Tell Us? Susan Handy, International Regional Science Review April 1, 2005

4. The geography of Kent County relative to eastern Baltimore and the Baltimore Beltway would create very short commuting distances and time compared to the present circumstances. This would approximate the situation which was seen with Middletown, and would likely result in a similar population influx, which over a two or three-decade period would approximately double the present 20,000 population of Kent County, and result in the loss of approximately the same number of agricultural acres, representing 10-15% of farmland in Kent County.
5. The accompanying connecting roads from the eastern terminus of a bridge to either or both Routes 301 and 50 would create major disruption to farming activities in Kent County and fragment many of the large farms.
6. The secondary businesses which would accompany a high-volume commuting corridor would quickly create a picture of urban sprawl similar to what currently exists along Route 50 on Kent Island or on the same route passing through Easton or Cambridge.
7. Multiple Federal Government policies and regulations have identified prime farmland as a unique resource which needs to be explicitly protected. No greater example of the need to apply this policy can be seen than the consequences that would follow in Kent County if a new Bay bridge were built connecting the county to eastern Baltimore.

Environmental laws are not arbitrary hoops through which government agencies must jump. The environmental regulations at issue in this case are designed to ensure that the public and government agencies are well-informed about the environmental consequences of proposed actions.

Sierra Club V. US Department of Transportation 962 F. Supp. 1037 US District Court for the Northern District of Illinois.

Bay Crossing Study Public Comments June 1, 2018 – June 30, 2018

6/19/2018	Email	<p>Heather, your response did not address my concern. I do not appreciate receiving a 'canned response' for all who contact you/MDTA. I, like most who reside on the Eastern Shore, are impacted daily by the consistent increase in traffic on Rte 50/30 -- we are not only impacted once yearly on our way to the ocean for a week of vacation. Instead, it is May through September and especially Thursday through Sunday. A seven mile backup (typical during the summer) is very difficult for an ambulance to navigate -- would you want someone you love to be facing that challenge? I would appreciate knowing more about the studies to track traffic numbers on both Bay Bridges. Until that is acknowledged and published an obvious end result of the Bay Crossing Study can and will result in doing nothing -- and will have been a waste of resources. So, I'll ask again -- do you know what studies are being done to track daily traffic and (most importantly) who is conducting those studies? Thank you.</p>
6/26/2018	Email	<p>Ms. Heather Lowe, Bay Crossing Study MD Transportation Authority 2310 Broening Hwy Baltimore, MD 21224 6/26/18</p> <p>Dear Ms. Lowe:</p> <p>Building another bridge to the Eastern Shore is the last thing the Eastern Shore needs. New highways encourage more travelers; more travelers encourage more development; and more development will destroy the very nature of the 'Shore that attracts people to visit.</p> <p>As the Baltimore Sun op-ed article said, "Let the Eastern Shore be." Don't build a new crossing over the Bay. The ironic thing is if you drew a straight line from Baltimore across the bay to Middletown, Del. that would darn near put you on the door step of the giant warehouse that Amazon has there. Is there a ulterior motive here?</p> <p>Do not let big business ruin the Eastern Shore!</p> <p>Sincerely, [Name Removed] [Address Removed]</p> <p>Sent from Mail for Windows 10</p>