

FINAL REPORT OF THE DEVELOPMENT CAPACITY TASK FORCE

JULY 2004

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July 1, 2004

The Honorable Robert L. Ehrlich, Jr., Governor
State of Maryland
State House
Annapolis, MD 21401-1925

Re: Final Report: Development Capacity Task Force

Dear Governor Ehrlich:

Per your Priority Places Executive Order last October, I am pleased to provide you with the final report of the Development Capacity Task Force.

As you know, the issue of development capacity analysis (i.e., buildout or buildable lot inventory) has been one of the top planning issues in Maryland for a long time. Key stakeholders have been at odds over this issue for years. Legislation requiring local governments to conduct such analysis almost passed through the General Assembly a few years ago. Since its first meeting, the Task Force (representing many stakeholders) has come a long way in addressing the development capacity issue.

The Task Force had great attendance and everyone worked diligently. A broad range of topics was covered, from the details of how to conduct this analysis, to specific examples from the pilot jurisdictions, to important policy issues that relate to the analysis.

Not only did the Task Force complete its mission and deliver its report on time, it went beyond the call of duty and also took significant steps towards implementation. Appendix E of the report contains a draft memorandum of understanding and a draft executive order—two items that should help implement the Task Force's recommendations. In addition, the Task Force agreed to continue to meet quarterly to track progress and assist in implementation.

I am certain that the hard work of the Task Force will lead to better planning in Maryland.

Sincerely,

A handwritten signature in black ink, appearing to read "Audrey E. Scott".

Audrey E. Scott
Secretary and Chair of the Task Force

Development Task Force Membership and Pilot Jurisdictions

The Priority Places Strategy Executive Order 01.01.2003.33 (October 2003) created the Development Capacity Task Force. The members represent the diverse interests and stakeholders related to the development capacity issue. MDP served as staff to the Task Force.

State of Maryland, Task Force Chair

Secretary Audrey E. Scott – Maryland Department of Planning

Municipal Representative

Ms. Dianne Klair – Manager, Community Development and Planning, City of Havre de Grace

County Representative

Mr. Arnold “Pat” Keller – Planning Director, Baltimore County

Homebuilders Representative

Mr. Frank Hertsch – President, Morris & Ritchie Associates, Inc.

Academic Representative

Dr. Gerrit Knaap – Executive Director, National Center for Smart Growth Research and Education, University of Maryland

Environmental Representative

Mr. George Maurer - Senior Planner, Chesapeake Bay Foundation

Planning Community Representative

Mr. Dirk Geratz – President, Maryland Chapter – American Planning Association

Economic Development Representative

Mr. John Savich – Director of Economic Development, St. Mary’s County

Historic Preservation Representative

Mr. Tyler Gearhart – Executive Director, Preservation Maryland

The Executive Order also directed the Task Force to evaluate capacity analyses for ten diverse pilot jurisdictions.

Municipalities

Chestertown
Havre de Grace
Salisbury
Frederick City
Hagerstown

Counties

Harford
Montgomery
Anne Arundel
Worcester
St. Mary’s

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1. Introduction and Background

1.1. Development Capacity Task Force Purpose

Governor Ehrlich called for the creation of a Development Capacity Task Force and corresponding pilot study in his Priority Places Executive Order 01.01.2003.33 (October 2003). This order also directs the Task Force to submit a report to the Governor on July 1, 2004. This report summarizes the Task Force's work (including the pilot study), findings, and recommendations.

The subject of development capacity analysis (i.e., buildable lot inventories and build-out analysis) has been a significant issue among Maryland's development, local government, and environmental interests for over four years. There have been attempts in the past at State legislation to require local governments to conduct capacity analysis. Key issues include:

- What is the need for development capacity information?
- What are the growth trends and their implications for development capacity?
- Who conducts capacity analysis?
- What methodology and data are used?
- What is the role and purpose of the analysis?
- Will the analysis be required in local government comprehensive plan updates or will it be a suggested addition?

There has been a range of opinions on the development capacity issue among key stakeholders over the years. However, these stakeholders have more recently come together in the Task Force to agree on the need for a capacity analysis, key data and methodology issues, and an approach for including residential capacity analyses in the comprehensive plan updates of local governments with planning and zoning authority (23 counties, Baltimore City, and 106 municipalities). This is a significant contrast to the lack of agreement on this issue just over a year ago. The Task Force included all of the key stakeholder groups associated with this issue. Together, they worked hard to review the detailed results of the pilot study and to create this report, especially in crafting its findings and recommendations. See Appendix A for a list of the Task Force members and pilot study jurisdictions.

1.2. Overview of the Task Force Report

The Executive Order creating the Task Force calls for a final report. Listed below is a description of this report's key components. The report not only focuses on the residential development capacity analysis output, data, and methodology, but also on the policy implications and use of this information.

I. Introduction and Background

II. Findings and Recommendations – The Task Force worked very hard to craft these items and to reach agreement on them. These address the data, methodology, output, and policy implications of residential capacity analyses.

III. Analysis Methodology and Examples – Provides an overview of the analysis used in the pilot study.

IV. The Pilot Study: Highlights and Findings – Provides an overview of the pilot study.

V. Appendices

- A. Priority Places Executive Order and Press Release
- B. Development Trends and Background Maps
- C. Residential Development Capacity Summary Tables
- D. Glossary
- E. Implementation: Draft Local Government MOU and Executive Order
- F. Pilot Study Presentation Summaries

1.3. Background: Development Capacity Analysis in Maryland

Maryland is the fifth most densely populated state in the country. For the most part, planning issues are addressed at the local government level. There are 23 counties in the State and 156 incorporated municipalities (Baltimore City functions as both a county and a municipality). Approximately two-thirds of the incorporated municipalities have planning authority, the remaining one-third defer planning authority to their respective counties. Maryland's 2002 population estimate is 5.5 million people, and it is expected to grow by approximately 1 million people in the next 20 years.

Several points can be made about development trends and issues across the State and their implications for development capacity in Maryland. See Appendix B for examples of maps related to this.

- Local governments have a diverse set of planning tools and they apply them in a variety of ways.
- In many places in Maryland, development capacity is being consumed quickly by low density development.
- This, coupled with high growth rates in much of Maryland, will lead to a shortage of raw buildable land in many parts of the State—especially in areas targeted for growth.
- Some jurisdictions with limited raw land available for development are experiencing increasing rates of infill development and redevelopment.

- Many jurisdictions in Central Maryland and beyond will likely reach or approach “build-out” (in the conventional sense of the term) within the next 25 years. This could lead to jurisdictions:
 - deciding to accept less development;
 - up-zoning their PFAs;
 - increasing infill and redevelopment rates;
 - further municipal annexation; and/or
 - rezoning rural lands for development.

In this context, development capacity analysis has been a hot topic among those interested in development-related issues. As mentioned above, in recent years there were previous attempts at State legislation requiring capacity analysis in comprehensive plan updates. In the past year or two a more cooperative approach emerged. Some of the key activities leading up to the creation of the Task Force included the following.

- The Maryland Association of Homebuilders convened a “Smart Growth Collaborative” effort that included key growth stakeholders. This was done partly in light of the 2002 elections, realizing that there would be a new administration at the State level and leadership changes at the local level as well. One of the recommendations of this project was that there is a need to do development capacity analysis in Maryland.
- In a technical assistance mode, MDP continued to work with local governments on its capacity analysis. MDP intensified this effort and improved its data and analysis by working with many local governments.
- Meanwhile, local governments’ interest in development capacity analysis increased. Presently, several jurisdictions have an analysis in place to track development capacity and several more are in the process of developing a working development capacity analysis.
- Both the Maryland Association of Counties and the Maryland Municipal League helped to coordinate review of MDP’s capacity analysis and to arrange for additional test sites.
- The timing of these activities was on track with Governor Ehrlich’s desire to take Maryland’s Smart Growth efforts a next step via his Priority Places Executive Order. This led to the creation of the Development Capacity Task Force.

1.4. Workings of the Task Force

The Task Force’s first meeting was in December 2003 and they usually met once a month (sometimes there were extra meetings) through June 2004. Their meetings were in both MDP’s Annapolis and Baltimore offices (most were in Annapolis). Attendance was always at or very close to 100%. In addition to the nine official Task Force members, staff from the ten pilot study jurisdictions

usually attended. In addition, other interested people regularly attended the meetings. It was rare that less than 25 people attended the meetings.

The Task Force held two advertised meetings for public comments (May 26th and June 2nd). In addition, all meetings were open to the public and agenda packets (including minutes) were posted in MDP's web site. A working draft of this report was also posted on the web site prior to the public meetings.

The Task Force spent most of its first meeting discussing background and introductions. They also were given an overview of MDP's capacity analysis and its application. Most of the following meetings focused on MDP's analysis results of the ten pilot study jurisdictions (see list on Page 2) that were part of the Task Force's charge. The Task Force reviewed in detail the data, analysis, methodology, and results for the jurisdictions. Part of this review included the work of two counties that had their own analysis and discussion on how it compared to MDP's. The May meeting focused on the Task Force's findings and recommendations related to the data, methodology, use, and role of the capacity analysis. The late May and June meetings were focused on the public meetings and completing the report which was delivered to the Governor on July 1, 2004.

The last few meetings also focused on the "should vs. shall" issue of whether local governments should be required vs. encouraged to conduct capacity analysis. For the purpose of helping to implement its recommendations, the Task Force crafted a draft local government Memorandum of Understanding (MOU) and a draft Executive Order (see Appendix E).

2. Findings and Recommendations

2.1. Introduction

The Development Capacity Task Force's primary tasks were to review the pilot study, to make recommendations about residential development capacity analysis (MDP's and jurisdictions that conduct their own) and related information, and to articulate recommendations about the role of development capacity analysis for planning in Maryland. While the Task Force focused on residential development capacity, it is recognized that non-residential capacity is an important issue that will need to be addressed in the future.

2.2. Findings and Recommendations

2.2.1. The Need For Capacity Analysis

Findings:

- Development capacity analysis (residential and non-residential) and related information are necessary for effective planning. It is important to have an estimate of the development supply (location, size, density type, etc.) in order to adequately plan for future growth.
- In general, development trend information is not readily available across the State.
- The 1997 Priority Funding Areas (PFAs) Act states, "The designation by a County of a Priority Funding Area under this section shall be based on:
 - An analysis of the capacity of land areas available for development, including infill and redevelopment; and
 - An analysis of the land area needed to satisfy demand for development at densities consistent with the Master Plan."
- Few local governments with planning authority currently conduct a formal development capacity analysis. Recently, however, more jurisdictions have been initiating such analyses on their own or with MDP's assistance.

Recommendations

- Local governments with planning authority should include the results of a development capacity analysis in each update of their comprehensive plans.
- At a minimum, these analyses should estimate residential development capacity in and out of the Priority Funding Areas (PFAs). Additional

geographic subsets of this analysis could include sewer service areas, development districts, zoning districts, etc.

- Based on the Priority Funding Areas Act, development capacity analysis should be completed with respect to new and expanded Priority Funding Areas in Maryland.
- Development capacity estimates from these analyses should be presented with the following subsets (could be customized for local jurisdictions) for land in and out of the PFA.
 - Capacity associated with parcels that are two acres or smaller.
 - Capacity estimated from redevelopment and on underdeveloped parcels.
 - Appendix C includes analysis summary tables that were used for the pilot study analysis with the Task Force. These provide a good guide for how to summarize the information.
- These analyses should be well documented (clear methodologies, listing of assumptions and caveats, etc.), publicly available, and comparable (not identical) to other jurisdictions. Methodologies and data used for these analyses should follow “best practices” that are generally accepted by the planning profession (see Chapters 3 and 4).
- Local governments are encouraged to develop their own analyses. However, the Maryland Department of Planning will provide analysis assistance as requested.

2.2.2. MDP’s Analysis and the Pilot Study

Findings:

- MDP’s capacity analysis provides a reasonable methodology for estimating residential development capacity within and across jurisdictions. This has been demonstrated by its performance in the ten pilot jurisdictions that were diverse in terms of size, location, type of development patterns, planning sophistication, and types of zoning and other planning tools.
- MDP’s analysis depends, in part, on local government data and staff input to be credible.
- When local governments and MDP work together, conducting a development capacity analysis is not an overly burdensome task. However, it does require a concerted effort by both MDP and local governments to share data, agree on key inputs and assumptions, and to review analysis outputs.
- MDP’s analysis works best in rural and suburban settings. Since it currently does not have an established methodology for estimating redevelopment (several potential approaches have been tested), it likely under-represents development potential in denser urban areas.
- Capacity analysis can be used for a variety of planning purposes beyond estimating build-out including infrastructure planning (school

planning, master water and sewer planning) as well as comprehensive planning (see Chapter 4 for pilot study examples).

Recommendations:

- MDP should continue to develop and improve its capacity analysis—especially for dense urban areas.
- MDP should provide development capacity analysis technical assistance to local governments.
- MDP should coordinate its analysis with jurisdictions that conduct their own to help provide a degree of comparability across the State.

2.2.3. Key Pilot Study Analysis Findings

Key pilot study and analysis findings include:

- In general, the Task Force and the 10 local governments that were analyzed agreed that MDP's analysis was sufficient for general planning purposes.
- Regardless of the sophistication level of planning and GIS functions at the local level, MDP can work with local governments to complete a development capacity analysis that is appropriate for planning purposes.
- Local governments that have their own development capacity analysis can do a more specific development capacity analysis than MDP.
- With local government input, MDP's development capacity analysis is greatly improved, especially when the local government has its own development capacity analysis.

2.2.4. Analysis and Methodology

The following are findings and recommendations about MDP's and the local governments' development capacity analyses. The recommendations are based on the Task Force's review of the pilot analyses of 10 jurisdictions. See Chapter 1 for a listing of the pilot jurisdictions, or Chapter 4 for details about the analyses.

2.2.4.1. Zoning Yield

This issue generated significant discussion at the Task Force meetings. Zoning yield is one of the most important inputs into a capacity analysis. It is the average density of development associated with a specific zoning district in a specific jurisdiction.

Findings:

- While zoning ordinances (and sometimes master plans) specify a maximum *allowable* density for each zone, the average rate at which development occurs on the ground is usually lower than the permitted (i.e., allowable) density. The average density of what is built in each zoning district is considered the yield.
- Yields are often lower than the maximum allowable density of zoning districts because land is needed to build roads, on-site environmental features (steep slope, wetlands, etc.), market conditions, etc.
- Much of the discussion about this issue centered on how to apply the zoning yields. MDP's approach is to use what the jurisdictions provide them for yields for each zone, or they use a default 25% reduction factor from the allowable density (if customized yields don't exist from the local government). This 25% reduction factor is based on MDP's experience with conducting capacity analysis across the State.
- MDP uses customized yields for rural zoning districts.

Recommendations:

- Local governments should calculate and report allowable density and average density of development in their zoning districts based on development review activities.
- There should be an explanation for analyses where yields are not used.
- Local governments should examine factors that prevent developments from obtaining a zoning yield of 100% of allowable density per zoning district.
- Local governments should also indicate whether yields are likely to change over time.
- In the absence of better information, a 75% yield rate (i.e., 25% reduction from the permitted density) is acceptable.

2.2.4.2. Estimating Infill Development and Underdevelopment

The Task Force had considerable discussion and analysis review of infill and underdevelopment. This type of development becomes more important as an area becomes more developed. In general, these terms mean the following.

- Infill Development – development that occurs on an undeveloped parcel or lot, in the PFA or development district, that is mostly surrounded by existing development. MDP's analysis treats such parcels as vacant.
- Underdevelopment – development on a parcel that, because of the zoning and the size of the parcel, can accommodate additional development over time (i.e., re-subdivision). MDP's analysis does have a routine in its model for such situations.

Recommendations:

- Capacity Analyses should account for infill and underdevelopment.
- Generally, MDP's model provides acceptable estimates of these types of development.
- MDP should continue to seek improvements and customizations to this methodology, including:
 - methods to account for platted lots and minor subdivisions that are not likely to be further developed;
 - methods to customize the underdevelopment part of the model—in a way similar to how zoning yields are developed.
- Output from the analysis should be organized by subsets of the capacity estimates so the reader can determine what portion is associated with small lots, underdeveloped lots, and other important subsets. Appendix C includes example tables that summarize analysis outputs.

2.2.4.3. Estimating Redevelopment

Findings:

- Accounting for potential redevelopment and estimating how much future growth such an area can accommodate is probably one of the most difficult and uncertain issues discussed by the Task Force. However, future growth associated with redevelopment is significant in some jurisdictions, and this will become more significant as our communities become older and buildable land becomes scarce.
- Few examples exist for estimating redevelopment capacity. The Task Force reviewed several from across the country, and two of the pilot jurisdictions included estimates (Frederick City and Montgomery County). Other jurisdictions are currently considering methods for providing such estimates.
- MDP's growth model estimated redevelopment capacity in several experimental projects. Frederick City (a pilot study jurisdiction) was one of these. In this case the analysis provided an indicator for future redevelopment.
- Montgomery County (a pilot study jurisdiction) developed estimates for redevelopment potential. See Chapter 4 for specifics on their methodology. If Montgomery County had only used historical trends in redevelopment to estimate future redevelopment, they would have significantly erred in estimating the current rate of redevelopment in locations such as Bethesda and Wheaton.
- Methods of evaluating redevelopment potential are likely to vary across jurisdictions and over time.

Recommendations

- Jurisdictions should include an estimate of, and discussions about, redevelopment potential.

- A methodology should be proposed identifying and addressing issues that should be taken into consideration in estimating redevelopment. The methodology should be tailored to each jurisdiction.
- MDP, local governments, researchers, and others should continue to coordinate to improve and implement data and methods to better account for this part of development capacity analysis. Among other things, this should include tracking redevelopment projects to see if better indicators can be developed based on trend information.

2.2.4.4. Environmental Constraints

The Task Force discussed different data and methods to account for the impact of environmental constraints on development capacity. See Chapters 3 and 4 for details on accounting for environmental features.

Findings:

- In general the Task Force felt that MDP's analysis addressed key environmental constraints; either via the yield estimate or through directly accounting for them in the model and data.
- Two counties in the pilot study that had their own analysis (Montgomery and Harford Counties) had better data to account for environmental constraints.
- MDP's ability to account for environmental constraints could be improved with parcel polygon data as well as more detailed site-level environmental constraints data.

Recommendations:

Capacity analyses should account for key environmental features. Many site-level and isolated environmental features may be accounted for in the applied zoning yield rates. However, broader key environmentally constrained lands should also be factored into the analysis, such as:

- protected lands (land preservation easements, parks, homeowner association lands, historic preservation easements, etc.);
- streams and their buffers;
- floodplains;
- Historic, cultural, or archeological areas;
- steep slopes; and
- other areas as deemed appropriate and measurable.
- Parcel polygon data should be obtained and integrated into the analysis since it allows better accounting of environmental constraints.

2.2.4.5. Information Availability and Development Trend Reporting

In addition to the output of the capacity analysis itself, the Task Force recognized that there are information and reporting needs. This

information will help to develop and track the analysis. Regular reporting will also help keep analyses current.

Findings:

- Development trend and projection information can be difficult to obtain and to understand. It often is not comparable across jurisdictions.
- Partly because of the Task Force's efforts, this information is easier to obtain.
- To develop, review, track, and improve capacity analysis, certain pieces of information and reporting are necessary.

Recommendations:

- Jurisdictions should make their zoning, sewer service areas, protected lands and related data available for capacity and other analyses.
- Jurisdictions, with MDP assistance, should issue an annual development report that highlights key development trends in and out of the PFAs. At a minimum these reports should include the following items:
 - Approved development plans and recorded lots in and out of the PFA;
 - Estimates of infill, development of underdeveloped parcels, and redevelopment;
 - Observed development yields per zone (gross and net); and
 - Development review pipeline information (approved development plans and recorded lots): number of units, type, zone, etc.

2.2.4.6. Types of Development Capacity Analysis and Scenarios

Findings:

- The Task Force discussed the following types of capacity analysis and their utility.
 - Current programs / trend estimates based on current zoning, land uses, etc. These essentially estimate land build-out based on current conditions (not necessarily factoring in infrastructure issues). This type of analysis was the focus of the Task Force.
 - Capacity estimates based on variations to the type of analysis mentioned above. These include scenarios to the base analysis that:
 - make different zoning assumptions (higher or lower densities / yields);
 - assume different levels of infrastructure (e.g., extending central sewer service);
 - assume additional purchase of lands for parks or land preservation;
 - municipal annexations; and

- simulating goal-based scenarios for comprehensive plans.

Recommendations:

- While various types of development capacity analyses may be helpful in different situations, jurisdictions should at least start with a base analysis that estimates capacity for current zoning and conditions.
- The use of scenario-based analyses may compliment a base analysis and be useful for a variety of planning purposes.

2.2.4.7. Including the Effects of Infrastructure Issues in Capacity Analysis

Findings:

- Infrastructure issues were not the focus of the Task Force's capacity analyses review.
- The adequacy of infrastructure and related public services (location and capacity) can affect development capacity, especially in the short term.

Recommendations:

- Capacity analyses should start with a straight-forward base analysis that focuses on the development capacity of the land and its zoning.
- Future work on enhancing development capacity analyses, especially for short-term development capacity studies, should incorporate adequate public facility issues.

3. MDP's Analysis Background and Examples

3.1. Background and History

Over the last decade the Maryland Department of Planning (MDP) has worked to create and improve a methodology to estimate residential development capacity. This work is part of a growth model that MDP uses for Priority Funding Area (PFA) analysis, technical assistance, watershed planning, land preservation program support, basic land use analysis, etc. The Growth Simulation Model (GSM) grew out of a watershed study for the largest river completely within Maryland: the Patuxent River. The Patuxent Watershed Demonstration Project was initiated from an U.S. Environmental Protection Agency grant to the State and the watershed's local governments. Its purpose was to integrate growth analysis into watershed restoration efforts.

With the increase in availability of data and the evolution of technology in computer software and hardware, MDP has made significant strides in its ability to measure how many new households could "fit" across the State. MDP has also worked extensively with local governments to improve its residential development capacity input, data assumptions, and output.

In the late 1990s, MDP worked to improve its ability to measure residential development capacity analysis because it was needed to help implement 1997 Priority Funding Areas Law. Luckily, this coincided with the model being upgraded for a Coastal Bays Alternative Futures analysis project. The major improvement was that MDP began integrating parcel level data into the growth model. MDProperty View became available in 1997, and provided a way to integrate parcel point GIS data with polygon data, like zoning, sewer service areas, protected lands, and land use/land cover.

In the last several years, the issue of residential development capacity has captured the attention of many different stakeholders across Maryland. As many suburban areas in Maryland face build-out in the foreseeable future, development capacity and the methods by which to analyze it have become important issues for State Agencies, local governments, and other entities.

3.2. MDP's Growth Management Simulation Model

The following paragraphs outline MDP's growth model along with its assumptions and caveats. It will also outline the types of data that are compiled and how they are synthesized to work with this Growth Management Simulation Model (growth model).

The growth model is basically a series of scripts in Paradox (currently being converted to Oracle) database software that project the existing landscape into a series of possible “future landscapes”, each a function of different land management scenarios. The model estimates land use change using population, household, and employment projections along with other inputs that are part of the growth scenarios. New development is calculated as a function of household demand (based on established projections), development capacity, existing or hypothetical management choices (e.g., clustering, transfer of development rights, growth areas, and agricultural land preservation), and other factors that simulate local concerns and policies that may influence the type and locations of future development. The Development Capacity Task Force focused on the development capacity portion of this model.

3.2.1. GIS Data and Associated Information

The model uses data from geographic information system (GIS) overlays. The GIS database includes information on land use, zoning, sewer service, and protected lands (e.g., agricultural easements, parks, etc.), and others. Figure 3.2.1 illustrates this GIS overlay process.

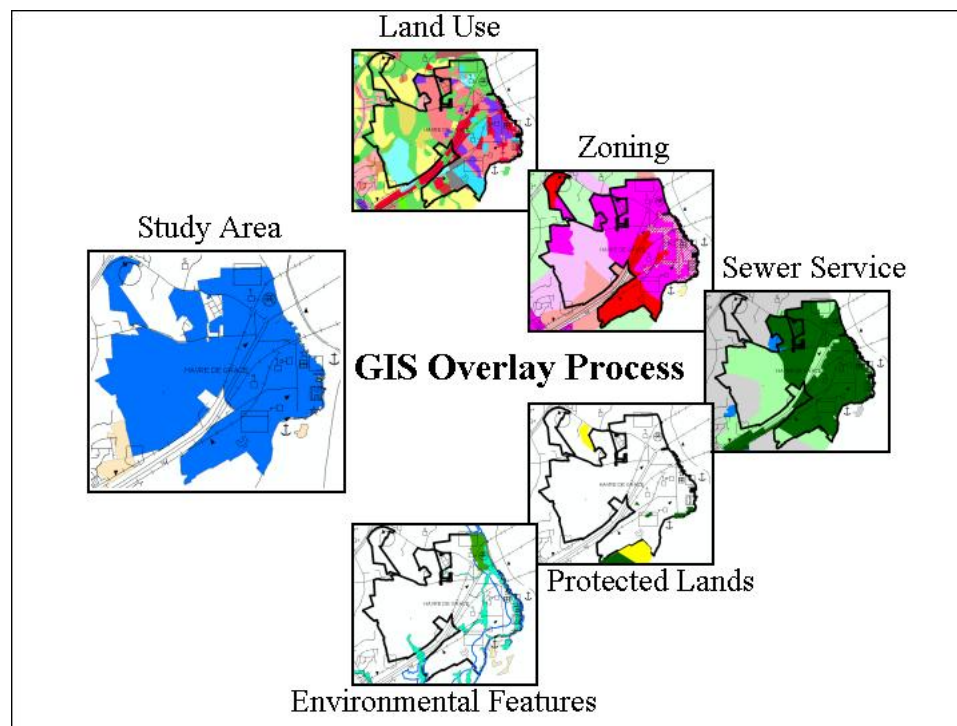


Figure 3.2.1 – GIS Overlay Process

All of this information is combined into an enhanced or master parcel database. The parcel data are extracted from MDProperty View, which is a

series of county level database and image collections that include State Property Maps and other databases. MDProperty View is done for the entire State of Maryland and is updated on an annual basis. The parcel information (acres, land use, legal description, owner name/address, etc) is obtained from the Maryland Department of Assessments and Taxation and geo-coded so that it shows up as a point feature in the GIS file. The parcel data are then intersected with the polygon data (illustrated in Figure 3.2.1). Once complete, this database includes (but is not limited to) the following data for every piece of land (i.e., parcel) in the study area:

- zoning;
- acreage;
- sewer service category;
- existing land use;
- 12 digit sub-watershed;
- topology;
- number and date of improvement(s) (i.e., major structures);
- value of parcel and improvement(s); and
- address and owner information.

In addition to the spatial GIS data, there are several key pieces of information that are critical to the development capacity analysis. Information about each zoning district helps to determine the allowable land uses, the mix of land uses, and the allowable residential density of each zone. These data are collected from the local governments' zoning ordinances. If customized yields are not available, MDP uses its default method. This method reduces the allowable density by 25% to derive a reasonable density yield per zoning district. This 25% reduction accommodates the need for roads, site level environmental constraints, under-build factors (i.e. parcels don't always get built at the maximum allowable density of a zoning district), and other subdivision issues.

This methodology for computing a residential density yield often reflects what is happening on the ground. There are, however, exceptions. In this case, MDP defers to the local government's yield factors for residential and mixed use zoning districts. This is a critical part of the analysis, since MDP's analysis assumptions are customized, and that the analysis only gets better with input from local government planners and other staff. Sewer service plan maps are also interpreted to determine which areas of the study area have existing sewer service areas, which areas are planned for service, and which areas are not planned for future service.

3.2.2. Residential Development Capacity

Land supply (i.e., capacity) is calculated using the parcel-specific information listed above. In this analysis, we use a number of assumptions

and formulas to determine the number of housing units that could fit on each parcel. Figure 3.2.2-1 illustrates the types of land supply that generally exist in the analysis.

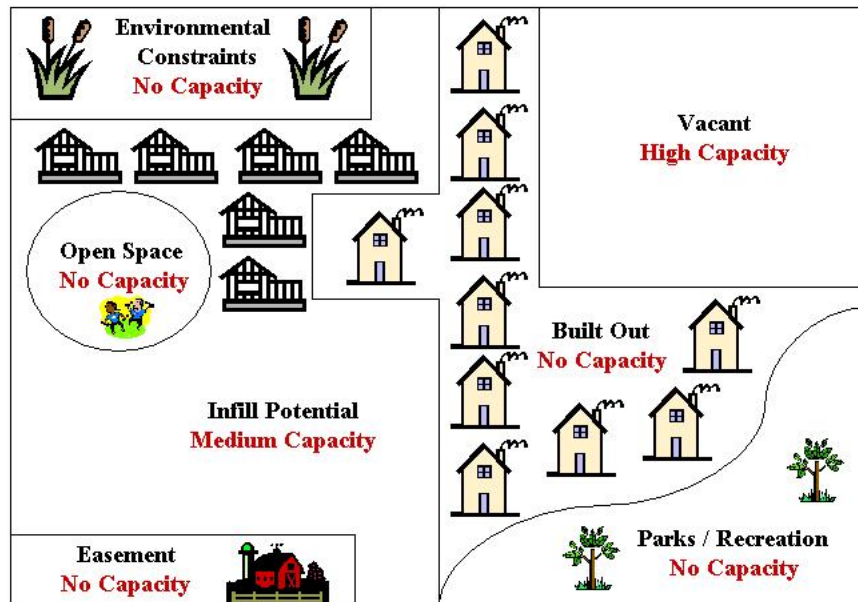


Figure 3.2.2-1 – Types of Land Supply

First, undevelopable parcels are removed from consideration for additional development capacity. Several sources of information are used to flag parcels as undevelopable including:

- **Protected Lands:** agricultural easements, parks, Federal lands, homeowners' associations' lands and other open spaces, and, in some cases, agricultural remainder parcels.
- **Environmental Features:** wetlands.
- **Tax-exempt Parcels:** These include schools, churches, cemeteries, etc. Although these parcels do occasionally get new development, we assume that more often than not these areas will be ruled out for new development. Figure 3.2.2-1 illustrates examples of unbuildable parcels.

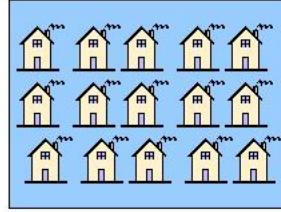
Second, it is assumed that parcels that are built-out do not have any additional development capacity. These are parcels that are improved, and are too small to receive any additional residential units.

For vacant land (unimproved parcels), the acreage of the parcel times the density yield will result in the development capacity of the parcel. The density yields should build in site-level constraints such as open space and road requirements. Figure 3.2.2-1 illustrates this portion of the model.

Development Capacity



5 acre parcel – undeveloped, no constraints, 4 du/ac zoning, with a 75% yield = 3 du/ac.



Capacity = 3 du/ac X 5 ac = 15 potential units.

Figure 3.2.2-2 – Capacity on Undeveloped Land

MDP also has a methodology to estimate development capacity on underdeveloped parcels. These are parcels that are developed (improvement value greater than \$10,000) and are 5 acres or smaller. Basically, if a parcel is improved and less than 5 acres, the Growth Simulation Model does a query that asks if the yield of the zoning district would allow additional units to be placed on the parcel. It assumes the current improvement will count as one lot in this calculation. It also assumes that only half of the development that could possibly fit on the parcel will actually get built. For example, if there is a 5 acre improved parcel in a zoning district that has a yield of 1 dwelling unit per acre, intuitively there would be room for 4 additional units on this parcel. In order to be more realistic, the MDP model reduces the capacity on this parcel to 2 additional units. When the number is divided in half it is not a whole number, the model will round the number down to the next whole number. This methodology is illustrated specifically in Figure 3.2.2-3.

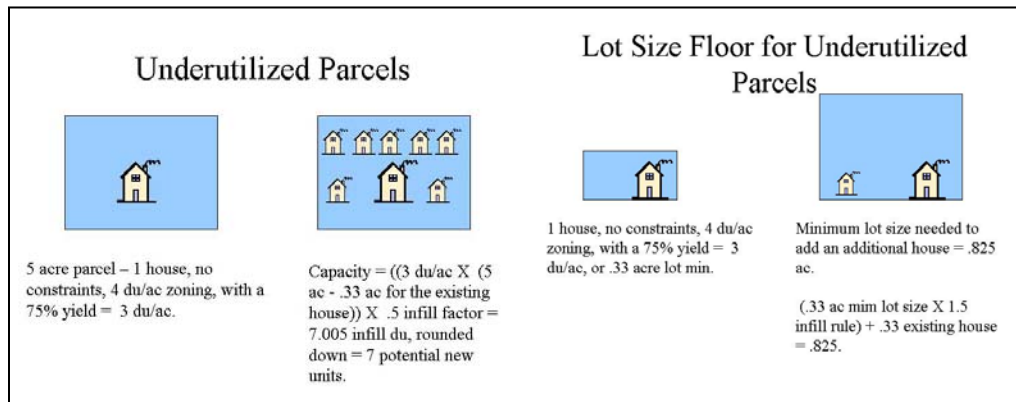


Figure 3.2.2-3 – Capacity on Underutilized Parcels

3.3. Key Issues and Caveats of MDP’s Growth Simulation Model

Development capacity (land supply) can be defined in many different ways, depending on the intent of the particular study. MDP’s capacity analysis is essentially an “intelligent build-out” study that does not measure development capacity in terms of infrastructure capacity, permitting, or APFO (adequate public facilities ordinance) considerations. Alternative approaches can include a focus on infrastructure capacity and current development capacity (i.e. what could be developed now vs. what could eventually be developed). The MDP methodology also accounts for some infill potential; an alternative is to study development capacity emphasizing development potential on raw land or rural areas (i.e., greenfields).

Another key issue with MDP’s current analysis is that it uses parcel point data. This means that MDP’s analysis cannot account for parcels that are “split zoned”, meaning they have more than one zoning district on the same parcel. Wherever the point “overlays” with the polygon is what the entire parcel is considered for the purposes of the analysis. This could be an issue with all of the polygon overlay data layers in the analysis. In some jurisdictions, parcel polygon data are available, which would essentially eliminate this issue. With some work, the MDP model could be adjusted to accommodate parcel polygon data, which is a potential future enhancement of the analysis.

MDP’s inability to separate “pipeline” development from the other capacity is another caveat to the analysis. If MDP works closely with a jurisdiction that has detailed information about the pipeline, this issue could be taken into consideration. However, on a statewide basis, this is not currently part of the MDP analysis.

MDP also uses a “realized density” per zoning district. This assumes that development densities that are currently being realized will most likely continue to be realized. This also assumes that the permitted density of a zoning district may not always be realized. An alternate approach would be to do a capacity

analysis that assumes that build-out will happen at permitted densities for each zoning district. The MDP Growth Simulation Model is flexible enough to run scenarios that would look at options for future development, and these scenarios could be for an entire study area, or subsets of the study area, such as one zoning district.

In general, the MDP approach to calculating development capacity has been found to be a useful way to analyze development capacity at many geographic scales. These include: Statewide, regional, county, and municipal scales. The MDP analysis should not be used at smaller geographic scales, such as at the parcel scale, since the distribution of development capacity between individual parcels is not always accurate. It implements a consistent methodology through Maryland's counties and municipalities, which becomes increasingly important when the study area of an analysis covers more than one jurisdiction.

4. The Pilot Study: Highlights and Findings

4.1. Introduction

The main activity of the Development Capacity Task Force was to conduct specific pilot studies of development capacity analyses. Ten pilot jurisdictions were selected by the Maryland Department of Planning (MDP) to represent a diverse geographic and demographic cross section of the State (see Figure 4.1). The jurisdictions include five Counties and five Municipalities within Maryland, listed below:

- Anne Arundel County;
- Town of Chestertown;
- City of Frederick;
- City of Hagerstown;
- Harford County;
- City of Havre de Grace;
- Montgomery County;
- City of Salisbury;
- St. Mary's County; and
- Worcester County.

Along with the geographic and demographic diversity, these 10 jurisdictions are extremely different in terms of planning staff, GIS and database capability, and growth-related issues and policies. With this in mind, the following sections outline the context of each jurisdiction in terms of demographics, important growth related issues and policies, planning presence, GIS presence, and important issues related to development capacity analyses. In some cases, the local governments have developed, or are in the process of developing, their own development capacity analysis. In these cases, the local governments' methodologies are generally explained, mostly as they compare with MDP's approach.

4.2. The Case Studies

MDP completed a development capacity analysis using its Growth Simulation Model (GSM, Chapter 3) for each of the ten pilot jurisdictions. In every case, input from the local jurisdiction enhanced the GSM's results. It did this by adding customization that would be impossible without having this critical source of information. In this section, the ten case studies are summarized based on MDP's experience, the local jurisdiction's perspective, the Task Force comments (based on minutes from meetings), and an overview of the analysis itself. The

case studies are presented in the same order in which the Task Force reviewed them.

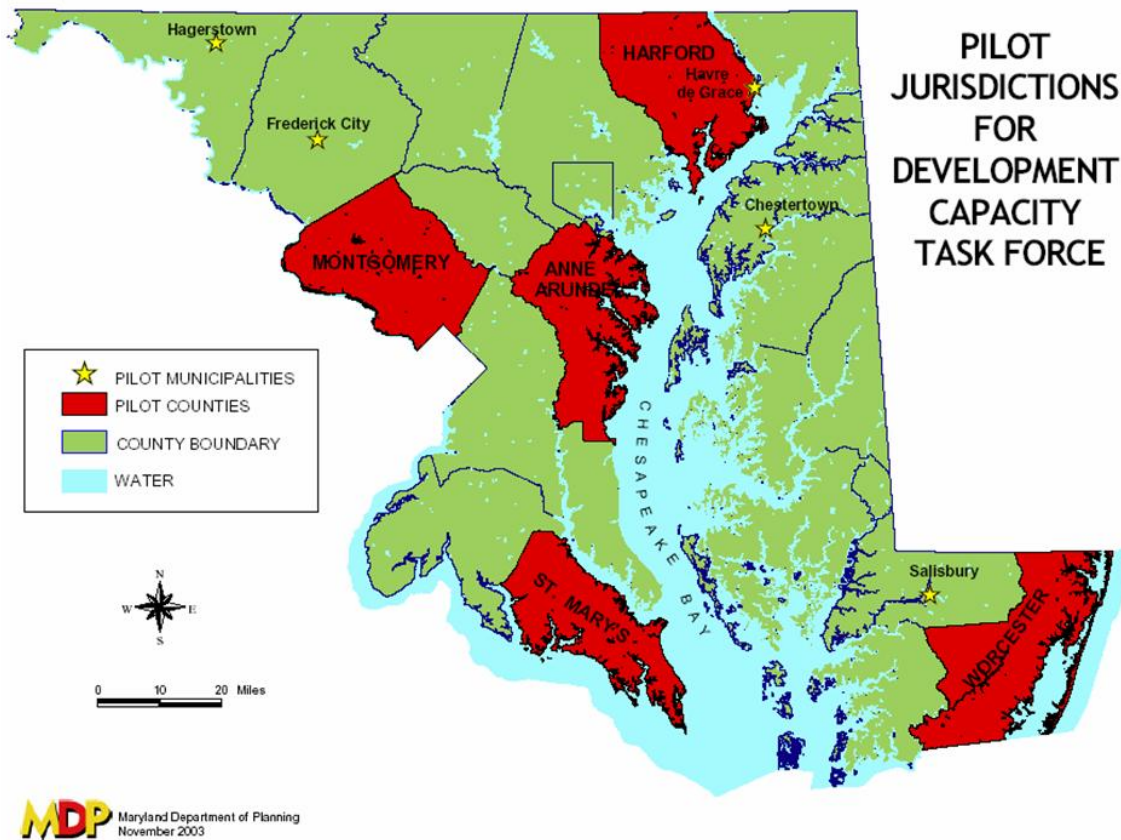


Figure 4.1 – Pilot Study Jurisdictions Map

4.2.1. Town of Chestertown

The Town of Chestertown is a small municipality located on the Eastern Shore of Maryland in Kent County. It is situated along the banks of the Chester River, which forms the border between Kent and Queen Anne's Counties. It is a historic town, with homes and buildings dating back to Colonial times. It also contains Washington College, a small, private Liberal Arts College. Chestertown's population in 2000 was approximately 4,746, making it the 40th most populated municipality in Maryland out of 157. Although Chestertown is a small municipality and is in a relatively slow-growth area of Maryland, it is likely to face many planning and growth related issues in the future as growth continues to creep across the Chesapeake Bay.

The Town of Chestertown has a very small staff, and has no distinct planning office. The Town Manager, who wears many hats, is also the

town planner. Chestertown does not have a geographic information system (GIS) in place, meaning the capacity analysis was started from scratch in terms of data inputs.

Since MDP's analysis is so heavily influenced by zoning, a GIS-based digital zoning map was needed. The Town Manager faxed a paper map, with hand written zoning district boundaries and labels (see Figure 4.2.1-1). MDP took this map and digitized the zoning districts, used a 75% yield of the zoned density as an input, and ran a first cut of the analysis. After meeting with the Town Manager and Mayor, MDP fixed a few minor GIS errors, enhanced the database by locating and mapping additional parks and other undevelopable land, changed the zoning yield to 50% of the zoned density (per the Town Manager), and reran the analysis.

The total residential development capacity in Chestertown is 1,183 based on MDP's analysis. Table 1 in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.



Figure 4.2.1-1 – Town of Chestertown Original Zoning Map

The Town Manager expressed that this type of analysis will be very valuable to Chestertown. Being able to have an estimate of residential development supply will help the Town Manager with basic planning functions such as; annexation analyses, justifications for tough or unpopular planning decisions, and as an added section of the Town's

Comprehensive plan. The Town Manager also indicated that MDP's analysis would work well in Chestertown, since the town has no GIS and very limited planning staff.

In general, there were two major lessons learned in this case study. First, MDP's analysis can work well even with crude GIS data sources (Figure 4.2.1-2. MD Property View is helpful in developing our analysis. It is not an overbearing undertaking to produce a fairly accurate GIS database that can produce an acceptable development capacity analysis. Second, MDP's analysis is greatly improved and enhanced with local government input and expertise. Chestertown is small enough that the Town Manager could look at individual parcels and have a fairly good idea if there is capacity for new development on a parcel. Based on this knowledge, MDP and the Town were able to work together to adjust the zoning density yield to reflect what is generally happening on the ground in Chestertown.

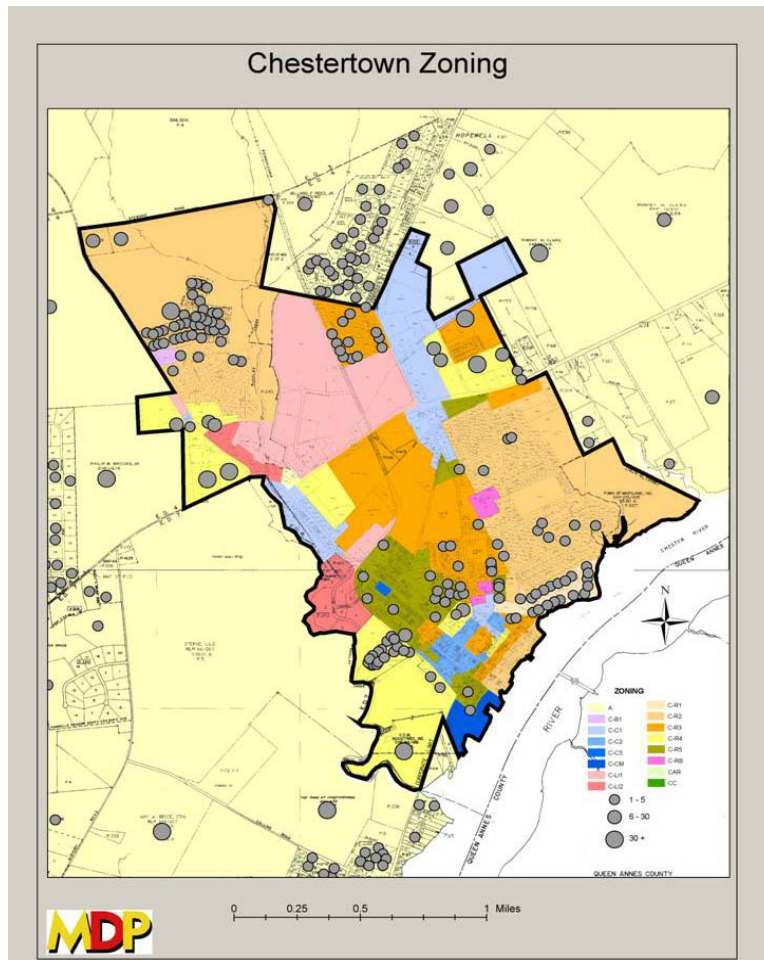


Figure 4.2.1-2 – Town of Chestertown Zoning and Capacity Map

The Task Force had a long discussion related to infill and redevelopment in Chestertown. In general, the discussion was related to how MDP measures infill versus how much infill is actually happening. The Town Manager explained that a significant amount of the Town's development is infill. He also discussed how, not long ago, there was vacant housing in the Town, and how most vacant housing is now occupied. There was a long discussion about large lot residential development in Chestertown and the potential for tenet housing to become full-time housing over time. They Task Force also discussed the issue of historic preservation in Chestertown. In the end, the Task Force was basically satisfied with MDP's analysis results, as well as the assumptions used in the analysis.

4.2.2. *City of Havre de Grace*

The City of Havre de Grace is a medium sized municipality in Harford County, Maryland. It is situated at the mouth of the Susquehanna River and the top of the Chesapeake Bay. Havre de Grace is one of three municipalities in Harford County (Aberdeen and Bel Air are the other two) and is the second largest of the three, with a population of 11,331 in the 2000 Census.

Havre de Grace has seen significant growth in recent decades. In the 1990s, Havre de Grace grew in population by approximately 27%. This is partially due to the fact that Havre de Grace is within 40 miles of two major metropolitan areas, is along Interstate 95, and is located within Harford County, a county that has seen significant population and household increases over the past decade or more.

Havre de Grace has also annexed significant acreage in recent years. The land area of Havre de Grace has increased by over 40% in the last five years. With recent population growth and expansion of the city boundary, Havre de Grace has been facing significant growth related issues in recent years.

The City of Havre de Grace has a small planning staff; the planning function is housed in the Department of Economic Development and Planning. The City does not have an established GIS in place, but Harford County has a robust GIS data system for the entire County, including its three municipalities. Havre de Grace has a data sharing agreement with Harford County, where the County shares all data with the City. These data include: zoning, protected lands, critical areas, water and sewer service areas and plans, as well as vectorized (polygon) parcel data. Even with these GIS data offered by the County, Havre de Grace planners rarely have the time to use the data in detailed analyses like a development capacity analysis.

Since MDP has a comprehensive data sharing agreement with Harford County, acquiring the necessary GIS data to develop a capacity analysis for Havre de Grace was not difficult. MDP worked closely with the City staff to derive zoning yields that reflected what is likely to happen in each residential zoning district. For the first cut analysis, MDP used its default 75% yield of the allowable density per zoning district. After working extensively with City staff, the realized densities ended up being customized numbers that accurately reflect current trends. As a result of fixing some GIS errors, adjusting average yields in certain zones, and accounting for a major planned development in a recently annexed parcel, MDP estimated the development capacity for Havre de Grace. It seemed reasonable to the local planners who have expertise in the town.

MDP's estimate for residential development capacity is 2,649. Table 2 in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.

MDP also worked with City planning staff to complete an annexation study. This study examined what the capacity could be if the City annexed its entire planned growth area. It estimated that an additional 847 residential units could fit in Havre de Grace if it annexed the remaining land in its growth area. Figure 4.2.2 shows the result of that analysis.

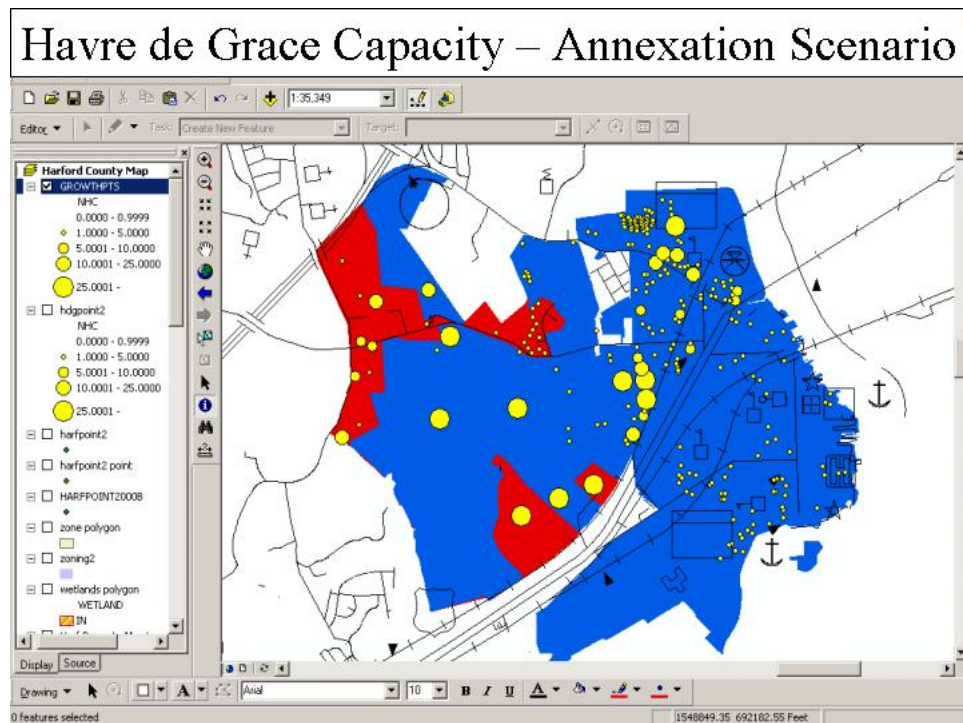


Figure 4.2.2 – City of Havre de Grace Capacity Map

There were several lessons learned from the development capacity analysis in Havre de Grace. First, MDP's analysis can be highly customized with input from local jurisdictions. The State would have a difficult time deriving average yields that were reasonable without the expertise of the local government. Local planners can also help identify specific parcels that may not be suitable for development for reasons not clearly identified in the protected lands layer or the parcel records in the Assessor's database. The second lesson was related to the annexation scenario. MDP can fairly easily incorporate different scenarios for the future of a jurisdiction. It can show that a potential change that may appear to be small can have a huge impact on development capacity. This could go the other way as well; a significant change in assumptions could end up being insignificant in the end when it comes to development capacity. The third important lesson from this analysis is the importance of data sharing and partnering. Since Havre de Grace does not have a GIS, they are greatly benefiting from the fact that Harford County maintains GIS data for the municipality.

The Task Force discussed several issues based on the capacity analysis for Havre de Grace. Recent and planned annexations were a significant part of this discussion. The planner from Havre de Grace discussed the analysis from the Town's perspective, and generally gave a positive review of the analysis. Other key issues discussed included:

- how to track development projects in the review pipeline;
- alternative assumptions to account for infill and redevelopment; and
- the role of municipalities in Harford County's future growth related to how much of the County's projected growth is to be directed to the towns.

4.2.3. Worcester County

Worcester County, Maryland is the eastern-most County in the State of Maryland. Wicomico and Somerset Counties border it to the West, Virginia to the South, Delaware to the North, and the Atlantic Ocean to the East. The Eastern half of Worcester County is the only portion of Maryland that drains to Coastal Bays, a unique estuarine environment in the Mid-Atlantic Region. Worcester County also includes a major tourist attraction, the Town of Ocean City. This resort town's population increases from approximately 7,200 to just over 300,000 during the peak summer season, which has a profound impact on the County as a whole.

The Coastal Bays region of Worcester County was the fastest growing area of the entire State of Maryland in the decade of the 1990s. The County as a whole grew from a population of 35,028 in 1990 to 46,543 in

2000. This adds up to be a 33% increase in population over this time period.

Worcester County's Department of Comprehensive Planning has worked with MDP on various projects and initiatives in recent years. They have internal GIS capabilities and are willing to share data with MDP for various projects. MDP has assisted the County in a transportation study of West Ocean City as well as to examine impacts of the Coastal Bays Critical Areas Legislation, passed in Maryland's 2002 Legislative Session.

The most comprehensive project that MDP was involved in with Worcester County was the "Maryland Coastal Bays Alternative Futures Report". This report examined several different growth scenarios for the Coastal Bays Watershed. MDP's Growth Simulation Model was used to model 5 different development scenarios that would be possible for the watershed from 2000 to 2020. The allocation of growth in these different scenarios changed because of different assumptions about growth that would impact the development capacity of each parcel in the region. Although the development capacity analysis was not the end product of the Alternative Futures report, it played a critical role in getting to the land use impacts of the different development scenarios. For this project, MDP did a lot of ground-truthing and used data from various sources to assess the landscape potential for new development. Figure 4.2.3 shows satellite imagery and parcel data working together resulting in a more completed picture of the landscape.

Since MDP has worked with Worcester County extensively in recent years, GIS data updates were minimal for the purposes of the development capacity analysis. MDP did work with County Planners to adjust zoning density yields to more accurately reflect what is happening on the ground. MDP sent Worcester County staff its lookup table for the county. They adjusted it based on their local expertise, sent it back to MDP, who then ran these updates through the Growth Simulation Model.

Based on MDP's analysis, the estimated residential development capacity in Worcester County is 23,013 new housing units. Table 3 in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.

Lessons learned by MDP and the county while working on this analysis include:

- MDP's analysis can be highly customized with input from local jurisdictions. The State would have a difficult time deriving zoning density yields that were reasonable without the expertise of the local government;

- from MDP's work in Worcester County, it was determined that the legal description field in the Tax Assessor's database could greatly enhance MDP's ability to rule out capacity on unbuildable land that the protected lands and environmental layers would not catch. These areas include Home Owners' Associations' open space lands, storm water management ponds, golf courses, etc; and a close working relationship between MDP and a jurisdiction can help to improve MDP's ability to complete a more reliable and accurate development capacity analysis.

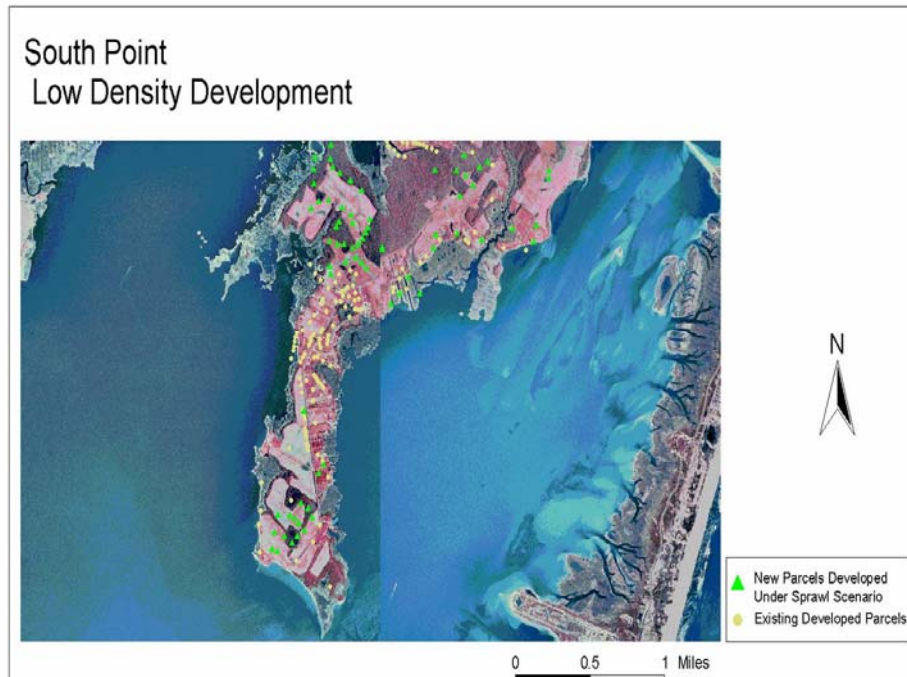


Figure 4.2.3 – Using Imagery with Parcel Data Resulting in More Complete Picture

The Task Force discussed several issues related to the Worcester County analysis. The County was supportive of MDP's development capacity analysis for general planning use. Other topics of discussion included:

- the issue that the past not always the best indicator for future growth patterns, especially in fast growing areas;
- reinforcing the need to fine-tune the zoning density yields used in the analysis with local expertise;
- considering making density yield information from projects going through the development review process available for these types of analyses; and
- the need to spell out the intended use of a capacity analysis, list all assumptions and caveats, and ensure the results of the analysis are being used appropriately.

4.2.4. *Harford County*

Harford County, Maryland is a medium-sized county in the Baltimore Region. It includes three municipalities: Aberdeen, Havre de Grace, and Bel Air. Harford County is also home to the Aberdeen Proving Ground, a 37,985-acre military installation that encompasses most of Harford County's shoreline of the Chesapeake Bay.

Growth related issues in Harford County stem from many things including the increased number of Marylanders leaving the City of Baltimore and older suburbs for newer suburban areas. The fact that Interstate 95 cuts through the County's growth area also contributes to high growth rates. Harford's population as of 2000 was roughly 218,000, and is expected to grow to roughly 286,150 by 2025, a 31% increase. The number of households in the County is expected increase from 79,667 to 115,375, or a 44% increase.

Despite the fact that it is not one of the largest Counties in Maryland, Harford County has been one of the leaders in Maryland in terms of GIS capabilities in the local planning department. Since the early 1990s, Harford County has worked to develop a GIS system that includes: detailed zoning, water and sewer service plans, protected lands, vectorized parcel data, etc. Harford County has also been one of the leaders in the state in terms of sharing GIS data. MDP and the Harford County Department of Planning and Zoning have a data sharing agreement that allows the free flow of data and analyses over time back and forth between agencies.

Harford County is unique in another way: they do their own development capacity analysis. This is an ongoing project that the County reports once every 6 months, so that it's consistently being updated and adjusted over time. In general the County approach similar to MDP's; however, the County has better data in some cases, and obviously has more first-hand knowledge of growth issues. In addition, there are several key differences between the County's and MDP's analyses. Harford County:

- does not include potential infill in their estimate;
- does not assign any capacity to parcels less than 2 acres;
- uses some additional layers (slope, soils) to rule out undevelopable lands; and
- has parcel polygon data, allowing them to complete a capacity analysis at a sub-parcel scale.

Based on MDP's analysis, the estimated residential development capacity in Harford County is 33,359 new housing units, 22,131 inside the Priority Funding Area (PFA), and 11,728 outside of the PFA. Table 4 in Appendix

C shows a detailed breakdown of the capacity number that MDP's analysis generated.

In general, Harford County's capacity estimate and MDP's estimate were fairly close. A critical reason for this is that the County worked closely with MDP to identify issues that may have been too specific for the MDP analysis to detect on its own. Also, the fact that the methodologies are very similar makes it logical that the results would be similar. The County also stated that, in some cases, their analysis has ruled out parcels that were subsequently developed. This proves that the conservative assumptions that the County uses in their analyses may not always reflect what happens on the ground. In general, the County is supportive of the MDP analysis, realizing that they could do a more detailed analysis than MDP.

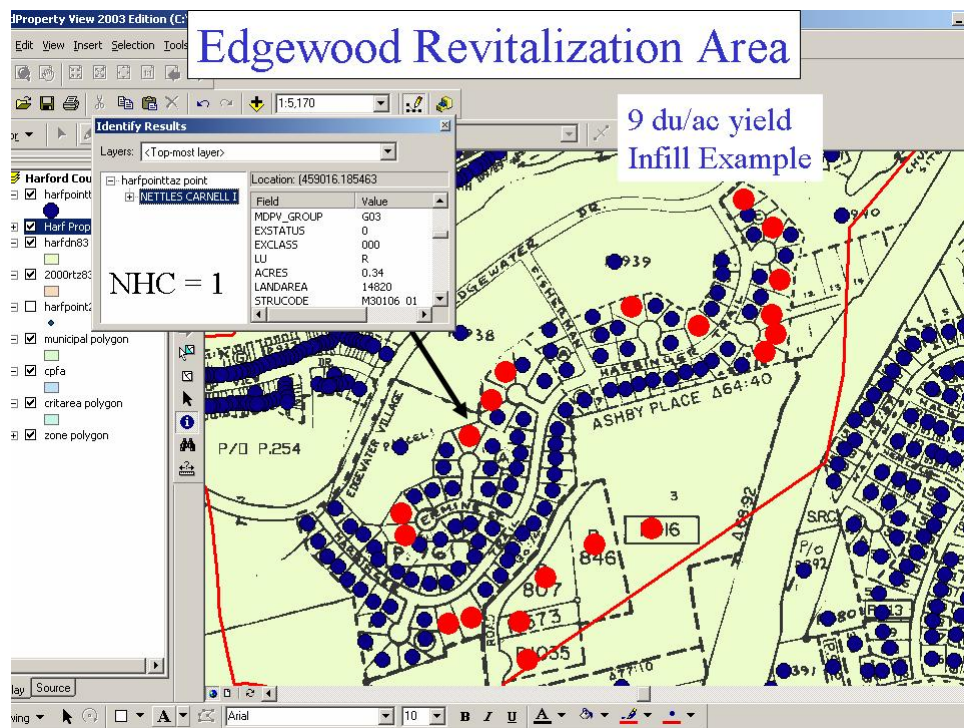


Figure 4.2.4 – Infill Example

The Task Force discussed details of the Harford County case study at length. Major issues that surfaced during the discussion include:

- the development of a “wish list” of information that local governments should provide to the public as well as the State, including development pipeline information;
- the overall issue of how often capacity analyses should be done for jurisdictions;
- customized analyses that would show development capacity in “stages”, following county sewer service plans;

- possible problems with MDP's assumptions related to infill, mostly because of HOA regulations against subdivision of existing lots. Figure 4.2.4 shows an example of this;
- redevelopment potential, and the fact that there is no current method to estimate it by MDP or Harford County; and
- the idea of the separation of the output from the capacity analysis into groups related to parcel size and type of capacity (large, undeveloped parcels, underdeveloped parcels, redevelopment, etc.).

In the end, the group agreed that MDP's analysis, while not perfect, was sufficient for arriving at a general number for planning purposes.

4.2.5. *St. Mary's County*

St. Mary's County, Maryland, is the southernmost of the counties in Southern Maryland. It is a peninsula, bordered on the west by the Potomac River and on the east by the Patuxent River and the Chesapeake Bay. Its major employer is the Patuxent River Naval Air Station, located just east of Lexington Park, the major development district in the County. It revised its comprehensive plan and adopted a comprehensive zoning ordinance in 2002.

It is a relatively small jurisdiction, with a fairly sharp increase in the rate of growth in recent years. In the 2000 Census, St. Mary's County population was roughly 86,211 and is projected to increase to 121,400 by 2025. In terms of households, this translates into 30,642 households in 2000, increasing to 46,950 by 2025, resulting in a 53% increase over the next 20 years.

Using its GIS capabilities, The St. Mary's County Department of Land Use and Growth Management provided MDP with digital layers for zoning, sewer service areas, and protected lands data. They also have preliminary vectorized parcel data, but do not do their own development capacity analysis. For this exercise, capacity was estimated for their relatively new mixed use zoning districts based on information such as allowable density, realized density, and mix of uses (residential vs. non-residential).

Two scenarios were analyzed by MDP: 1) default density yield of 75% of the allowable density by zone was used and 2) 100% of the allowable density of each zoning district. In addition to these scenarios, St. Mary's County requested an analysis of a current proposal to allow apartment construction in the Office and Business Park zone. The results could be shared with decision makers who could see what could potentially happen if the change was made.

Based on MDP's analysis of a 75% of zoned density scenario, the estimated residential development capacity in St. Mary's County is 34,494 new housing units, 9,400 inside the Priority Funding Area (PFA), and 25,094 outside of the PFA. Table 5A in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated

Based on MDP's analysis of a 100% of zoned density scenario, the estimated residential development capacity in St. Mary's County is 38,133 new housing units, 13,433 inside the Priority Funding Area (PFA), and 24,700 outside of the PFA. Table 5B in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.

Key issues that were discussed related to capacity in St. Mary's County include:

- the impact of the County's recent rezoning on development capacity;
- mixed use zones and their allowable uses;
- issues related to sewer service capacity, because of limits on the number of permits the County has vs. Leonardtown;
- areas targeted for infill and redevelopment;
- issues related to military housing, and the trend of more of it being located off-base;
- transfer of development rights, related to residential and non-residential land uses; and
- scenarios (100% vs. 75% of zoned density).

4.2.6. *City of Frederick*

The City of Frederick, Maryland, is often known as the gateway to Western Maryland. It is the State's second largest city, with a population in 2000 of 52,767. Frederick is a city with a rich history; it was the scene of some significant events in American history, especially related to the Civil War.

The opening of the National Road in 1808 and the construction of the C & O Canal gave Frederick's first boost in terms of population and economic growth. Transportation continues to be a major factor in the growth of Frederick City. Interstate 270, a major commuter road to Washington, DC, Interstate 70, the gateway to the West, and Route 15, a major north-south thoroughfare, all meet in Frederick. In recent years, as housing costs have risen in Montgomery County and people are willing to travel further to work, Frederick has seen a dramatic increase in population, growing by roughly 30% in the decade of the 1990s. Frederick is expected to continue to grow, roughly doubling its population by 2030.

The City of Frederick Planning Department has been working on an update to the City's Comprehensive Plan. They have also focused a lot of resources on their historic district recently, completing development guidelines in 2002.

Currently, the City of Frederick is working on an update to their Comprehensive Plan. MDP worked with the City and their consultant to produce a development capacity analysis related to this plan update. The City shared GIS data, such as zoning, and MDP integrated the data into their growth model to produce the capacity analysis. As part of this exercise, MDP worked with the City and their consultants on a non-residential capacity analysis based on current conditions and policies. This was a pilot study for commercial and industrial capacity that has not been done to date anywhere else in the State. This analysis has been used in the plan update to help construct the different growth scenarios used in the update.

In the Frederick City analysis, customized zoning density yields were used, as well as an estimate of mix of land uses for zoning that allows for mixed use development. The City completed a detailed analysis of recent development by zoning district and their respective densities.

Based on MDP's analysis, the estimated residential development capacity in the City of Frederick is 7,268 new housing units. Table 6 in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.

The City plans to use the capacity analysis in other ways including making links between traffic analyses with potential annexations. In general, the City stated that MDP's capacity number was very close to what they are projecting. Almost all land that is eligible for development in the City is in the pipeline (e.g. has a development plan). Most additional capacity could come from small lots, infill and redevelopment, and future annexations. MDP's method could help the City get a handle on an estimate for capacity related to infill. Figure 4.2.6 shows a breakdown of the City's residential capacity in a detailed map.

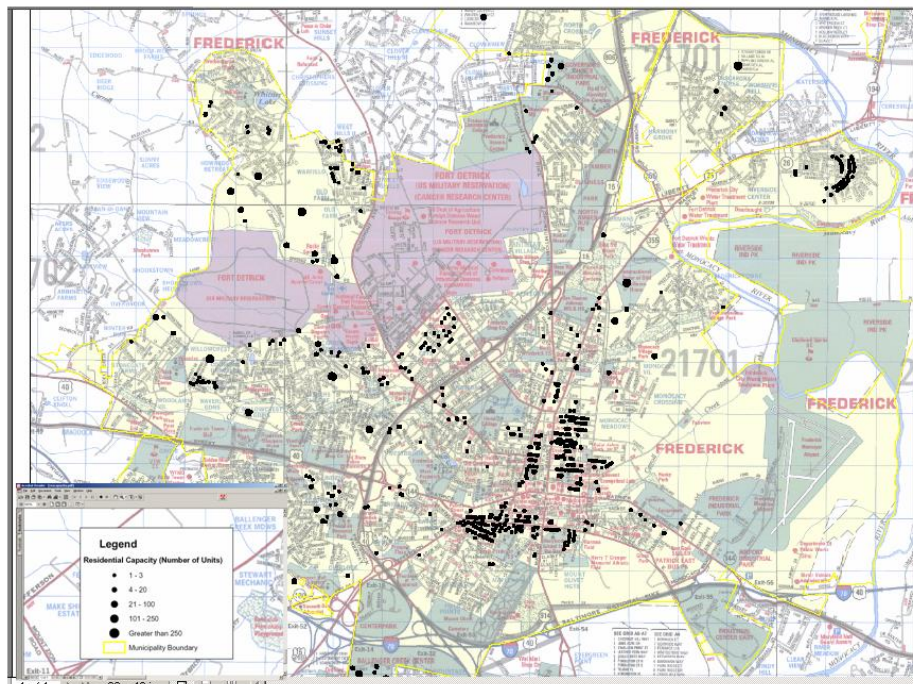


Figure 4.2.6 – Frederick City Capacity Analysis

The task force discussed in some detail the Historic District in Frederick and capacity for new development within and around the district. The City said that there are sometimes building restrictions related to the Historic District, mostly related to building height. The City also mentioned that, due to development pressure, there are areas adjacent to the historic district that will likely be redeveloped in the foreseeable future.

4.2.7. City of Salisbury

The City of Salisbury, known as the “Crossroads of Delmarva” is located on Maryland’s Eastern Shore in Wicomico County. It is the largest city on the Delmarva Peninsula, with a population of 23,743 in 2000. Salisbury sits at the intersection of the major thoroughfares of the Eastern Shore, Route 50 (East-West) and Route 13 (North-South).

Planning in the City of Salisbury is unique because the City and Wicomico County have a joint planning department. This allows for excellent coordination of planning efforts between the City and the County, and allows planning issues to be analyzed in terms of both entities. Residential development trends in the City of Salisbury can be characterized as being relatively stagnant. In the past, most of the new residential development in the area has happened in Wicomico County,

outside of the City limits, many on septic systems. The County is working on an update of its Master Water and Sewer Plan, which has not been updated since the 1970s. As the County has tightened restrictions on septic systems in recent years, the city has seen an increase in annexation activity for residential development on sewer. This trend is expected to continue into the foreseeable future.

The City-County Planning department has some GIS capabilities in-house. They maintain digital data on zoning, protected lands, and to some extent, water and sewer service areas. They shared this data with MDP as well as average yield information (of existing development) for all of the zoning districts in the City. The average yields of past developments in each zoning district were used in this case. MDP took this information, integrated it into the GIS system, and ran it through the Growth Simulation Model to come up with a residential development capacity number for the City.

Based on MDP's analysis, the estimated residential development capacity in the City of Salisbury is 7,899 new housing units. Table 7 in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.

At the March Task Force Meeting, city planners went over their experience in working with MDP on the development capacity analysis for Salisbury. Basically, they endorsed MDP's method, saying that the results gave a reasonable picture of development capacity for the City of Salisbury. They also discussed some potential uses of a capacity analysis for the City, especially related to the planned update of the Master Water and Sewer Plan.

There was a short discussion at the Task Force meeting related to uses of a development capacity analysis in local planning activities. These uses could range from completing an analysis during the comprehensive planning process to maintaining a "running total" of capacity over time.

4.2.8. City of Hagerstown

The City of Hagerstown is located in Western Maryland, specifically in Washington County. It is located at the intersection of Interstate 70 (East-West) and Interstate 81 (North-South), both major regional transportation features. The City of Hagerstown is one of the larger municipalities in Maryland, with a population of 36,687 in 2000. While the City of Hagerstown has been a slow growth jurisdiction, the surrounding areas in Washington County have seen a lot of recent residential growth. More

recently growth has accelerated in the City: 3,800 housing units are currently in the development pipeline.

In terms of GIS, the City has a centralized depository of GIS data. They were willing to share digital zoning data and assisted MDP in updating sewer service areas surrounding the City. The City also provided average yields for zoning districts within the City, as well as a mix of land uses for mixed use zoning districts. Once MDP integrated all of the GIS data into a central system, they ran it through the Growth Simulation Model, resulting in an estimate for development capacity in Hagerstown.

Based on MDP's analysis, the estimated residential development capacity in the City of Hagerstown is 6,780 new housing units. Table 8 in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.

The City commented that MDP's analysis gave a reasonably accurate picture of development capacity in the older, very dense, City of Hagerstown. They also said that, while this is true, additional customization of MDP's analysis would most likely be needed, especially related to infill and mixed use zoning districts. The City also commented that this analysis could be used for several planning processes in the City including planning related to sewer service issues.

Several issues were discussed at the Task Force meeting related to the Hagerstown analysis. These included:

- infill and redevelopment issues in downtown areas (an issue in several other pilot study areas);
- how to consider mixed use zoning in a capacity analysis, since it is often more flexible than traditional Euclidian Zoning;
- potential development of a hospital site in Hagerstown near downtown;
- the fact that historical trends may not be the best indicator of future development trends. As policies and attitudes towards urban areas change and evolve, past development patterns may be drastically different than future development patterns; and
- annexation – the City has adopted a more proactive annexation policy.

4.2.9. Montgomery County

Montgomery County, Maryland is the largest jurisdiction in Maryland. Its population as of the 2000 Census is 873,341. This grew from roughly 757,000 people in 1990. Montgomery County is one of two Maryland counties that border the District of Columbia. This location has been the main reason for Montgomery County's large population.

The Maryland National Capital Park and Planning Commission, specifically the Montgomery County Department of Park and Planning, does most of the planning function in the County. The Maryland National Capital Park and Planning Commission was created in 1927 to create a public park system and encourage land use planning for areas surrounding Washington, DC (Montgomery and Prince George's Counties). There are distinct planning agencies for each County that each fall under the umbrella of the MNCPPC. In this case, MDP worked with Montgomery County Department of Park and Planning.

The Montgomery County Park and Planning Department engages in a master planning process that is very detailed and is done for more than 20 small areas in the County. This is unusual, as most Counties' planning agencies do not have staff that concentrate on only small areas of the County. Given this approach, Montgomery has very detailed information about each policy area. This can create challenges, however. Since many plans include parcel-specific recommendations that affect potential yield (both higher and lower than current zoning), the development capacity analysis had to include a review of each individual plan. It was found that, many times, the plans are more relevant to development capacity than the zoning.

Despite the difficulties, Montgomery County has put together a countywide development capacity analysis. They have an excellent GIS system, including parcel polygon data for the entire County. These data are attributed with Tax Assessor's data, as well as other data, such as zoning, environmental constraints, etc. The main objective of the capacity analysis in Montgomery County is to provide a realistic, conservative estimate of residential development permitted by current zoning and plans. The main sources of data (besides the GIS data) for the Montgomery County analysis include:

- Tax Assessor's parcel polygon file;
- pipeline of approved development; and
- Master Plans.

The County's methodology derived an estimate for capacity by setting certain criteria. Basically, they used current policies and zoning to dictate what type of development could occur on any given parcel. They also considered the impacts of other programs and conditions like exclusions (undevelopable parcels), TDRs, and redevelopment. Examples of exclusions are: most tax exempt parcels, zoning restrictions, and irregular size and shaped parcels.

One major issue that Montgomery County's analysis considers that many other analyses (including MDP's) do not is redevelopment. Montgomery County uses two methods to estimate development capacity in terms of

redevelopment. One method is to collect data from small area planners who would be able to tell which specific parcels are being considered for redevelopment, and what land uses and how much of each use is planned for the redeveloped parcel. The second method is a more objective one and could be done in other places. This method sets a rule for determining parcels that are “ripe” for redevelopment. It assumes that if the value of the land of a parcel is more than the value of the improvement on the parcel, that parcel is likely to be redeveloped in the future. MDP has used a similar approach in an experimental status.

Montgomery County’s draft findings can be broken down into categories and can be compared with Montgomery County’s 20-year projections. They can also be compared with MDP’s findings, which use the statewide parcel point data as the basis for the analysis. Montgomery County estimates a countywide development capacity of around 75,000 new residential units, with 66,500 inside the PFA and 8,500 outside of the PFA. 40% of this capacity is in approved or pending plans, meaning each plan specifies exactly how many units will be going into these developments. Another 29% of the total capacity number is derived from “plan-specific” yields that reflect Master Plans, and not current underlying zoning. Only 31% of the number comes out of the model-generated analysis that uses average densities by zoning district.

Based on MDP’s analysis, the estimated residential development capacity in Montgomery County is 61,085 new housing units, 47,531 inside the Priority Funding Area (PFA), and 13,554 outside of the PFA. Table 9 in Appendix C shows a detailed breakdown of the capacity number that MDP’s analysis generated.

Compared to Montgomery County’s estimate of development capacity, MDP’s is significantly lower. There are several potential reasons for this difference. They include:

- Montgomery County estimates development capacity related to redevelopment, MDP does not;
- 70% of Montgomery County’s capacity number come from specialized information on parcels (approved or pending plans) or Master Plans (specialized yields): this information is not available in a form that is easily integrated into MDP’s model; and
- Montgomery County has parcel polygon data, while MDP does not.

The major issue that was discussed by the task force related to the Montgomery County analysis is the issue of redevelopment and methods to measure redevelopment. The task force agreed that the method used by Montgomery County seemed reasonable and should be tested in other jurisdictions in Maryland.

4.2.10. Anne Arundel County

Anne Arundel County, Maryland is the fifth largest jurisdiction in terms of population in the State. It is located in Central Maryland, specifically South of Baltimore and forming the Northern boundary of Southern Maryland. It contains two municipalities, including Highland Beach, a small municipality and Annapolis, the State Capital. Anne Arundel County contains approximately 515 miles of shoreline, most of which is on the Chesapeake Bay. Approximately 18% of the land in Anne Arundel County is under the Chesapeake Bay Critical Areas Act. Anne Arundel County is also a fast growing County. Anne Arundel County is projected to grow by approximately 30,000 households between 2005 and 2025, which results in Anne Arundel having the 4th most projected growth in Maryland.

The Anne Arundel County Office of Planning and Zoning has been working over the last several years on developing a development capacity analysis. They have deployed significant resources and are working towards having a working model in 2005. Progress to date includes working with MDP to develop a consolidated parcel polygon GIS database. MDP has vectorized parts of Anne Arundel County parcels, and the County has done some of this on their own. The current agreement between the County and the State basically directs both agencies to share data developed independently to come up with a countywide parcel polygon file. They have also been working to look at infill development capacity. Since Anne Arundel County has some specialized laws related to antiquated lots, this is a very significant part of Anne Arundel County's future capacity method. The County is also in the process of a zoning and subdivision ordinance rewrite, which will have an impact on some of the policy assumptions related to development capacity.

Based on MDP's analysis, the estimated residential development capacity in Anne Arundel County is 50,407 new housing units, 33,470 inside the Priority Funding Area (PFA), and 16,937 outside of the PFA. Table 10 in Appendix C shows a detailed breakdown of the capacity number that MDP's analysis generated.

During the time that MDP was working on the analysis with Anne Arundel County Planning and zoning, county planning staff worked very closely with MDP to assure that the result was as accurate as possible. Specifically, staff worked to calculate yields and impacts of overlay districts in the County, specifically in town centers as well as Planned Unit Development districts. After several renditions of MDP's Growth Simulation Model, both MDP and the County were confident that the analysis was acceptable for the pilot study. In the end, the estimate that

was presented to the Task Force was a combination of MDP's model and customization from Anne Arundel County planners.

The Task Force heard all of this information and the conversations were generally related to some specifics related to Anne Arundel County and how the antiquated lot law works, the merged lot laws, as well as family conveyance issues. They also discussed in some detail Anne Arundel County's future plans related to development capacity analysis.

4.3. Conclusions

The Development Capacity Task Force examined analyses in ten pilot jurisdictions. Generally, what they found was that MDP's methodology for estimating development capacity was basically good, given its assumptions and caveats. The pilot study provided the basis for many discussions in the Task Force meetings. Many of the issues and information in the Findings and Recommendations Chapter of this report come from Task Force discussions related to the pilot study.

In the end, the Task Force Members, as well as others who participated in the discussions, learned a lot about a variety of issues related to development capacity issues. These included data difficulties, barriers, and challenges, policy assumptions and their impact on a capacity analysis, including infill and redevelopment potential, techniques for presenting results of the analysis, and alternative perspectives on development capacity in general.

5. Appendices

Appendix A – Priority Places Executive Order and Press Release

EXECUTIVE ORDER
01.01.2003.33

Maryland's Priority Places Strategy

- WHEREAS, The State of Maryland has long been committed to sound land use policy;
- WHEREAS, Priority Places builds on three decades of State and local land use policy promoting sustainable development and maintaining Maryland's high quality of life;
- WHEREAS, Sound land use planning policies and planned growth activities contribute to fiscal responsibility of State government by fostering the most efficient and effective use of taxpayer dollars; and
- WHEREAS, The Administration finds it imperative that every agency work within a deliberate strategy to implement Priority Funding Areas and planned growth in order to develop long-term solutions to the complicated issues of economic growth, community revitalization, and resource conservation to achieve the best "public return" on State investments.

NOW THEREFORE, I, ROBERT L. EHRLICH, JR., GOVERNOR OF THE STATE OF MARYLAND, BY VIRTUE OF THE AUTHORITY VESTED IN ME BY THE CONSTITUTION AND LAWS OF MARYLAND PROCLAIM THE FOLLOWING EXECUTIVE ORDER, EFFECTIVE IMMEDIATELY:

A. Established. There shall be a Maryland Priority Places Strategy. The Strategy shall be developed and implemented by the Maryland Department of Planning.

B. Purpose. The Strategy shall be to identify specific State actions that will be undertaken and definitive procedures that will be instituted to accomplish the following objectives:

- (1) Achieve the established goals of State planning policy and local comprehensive plans for development, economic growth, community revitalization, and resource conservation;

(2) Accomplish these diverse goals through mutually supportive means; and

(3) Promote fiscal responsibility of State government to achieve the best “public return” on State investments in these goals.

C. The Maryland Priority Places Strategy shall be based on:

(1) The eight statewide visions of State Planning Policy for Economic Growth, Resource Protection and Planning established in the Economic Growth, Resource Protection and Planning Act of 1992;

(2) The Priority Funding Areas Act of 1997; and

(3) Existing State and local planning requirements, comprehensive plans, regulations, powers, and processes.

D. The Maryland Department of Planning shall implement the Maryland Priority Places Strategy by developing initiatives to accomplish the following:

(1) Ensure that State programs, regulations and procedures, and funds are used strategically to achieve the goals of local comprehensive plans and State planning policy and provide for the infrastructure necessary to support planned growth;

(2) Better enforce existing laws, regulations and procedures that are designed to ensure mutually supportive public investments and actions;

(3) Streamline State regulations and procedures to make quality, well designed growth easier to build inside Priority Funding Areas;

(4) Identify key plans and functions of State government that affect growth and development and make appropriate changes to those plans and functions to better support the goals of the Maryland Priority Places Strategy;

- (5) Encourage resource protection and production outside of the Priority Funding Areas for environmental protection, recreation, tourism, forestry, and agricultural purposes; and
- (6) Enhance existing brownfield cleanup and redevelopment, transit oriented development, and community revitalization efforts.

E. Reports. The Maryland Department of Planning shall:

- (1) Submit the Maryland Priority Places Strategy to the Governor by July 1, 2004; and
- (2) Report annually on the progress of the Maryland Priority Places Strategy to the Governor and General Assembly.

F. All State departments and agencies represented in State Government Article, § 9-1406(b) shall coordinate their activities in concert with the Maryland Department of Planning to:

- (1) Work with State and local stakeholders to complete and execute the Maryland Priority Places Strategy; and
- (2) Develop and execute the Maryland Priority Places Strategy through the following activities:
 - (a) Use the Priority Funding Area maps provided by the Maryland Department of Planning as a frame of reference for funding, regulatory strategies, and decisions regarding projects that impact land use and development activities;
 - (b) Ensure that State department and agency plans, programs, regulatory procedures, and funding decisions provide incentives for development, private investment, and economic growth in Priority Funding Areas;
 - (c) Participate in forums that discuss issues related to development and land use, Priority Funding Areas, and the Maryland Priority Places Strategy;
 - (d) Encourage federal agencies that provide funding for State and local programs to adopt flexible

regulations and standards that are more responsive to State and local policies and that can be used to support Priority Funding Areas and the objectives of State planning policy; and

- (e) Coordinate activities in Priority Funding Areas whenever possible by giving preference to projects in areas that support brownfield cleanup and redevelopment, transit oriented developments, community revitalization efforts, and affordable housing.

G. Established. There is a Development Capacity Task Force.

H. Membership.

- (1) The Task Force shall be composed of up to nine members, including:

- (a) The Secretary of the Maryland Department of Planning, who shall serve as Chairperson; and

- (b) Eight members with interest and expertise appointed by the Secretary of the Maryland Department of Planning. These members may include representatives of the land development community, the environmental community, the planning community, and local government.

- (2) Members of the Task Force serve at the pleasure of the Secretary of the Maryland Department of Planning until the submission of a final report by the Task Force.

- (3) Members of the Task Force may not receive any compensation for their services, but may be reimbursed for reasonable expenses incurred in the performance of duties, in accordance with the Standard State Travel Regulations, and as provided in the State budget.

I. Staffing. The Task Force shall be staffed by the Maryland Department of Planning.

J. Duties. The Task Force shall complete a Development Capacity Study to complement the Maryland Priority Places Strategy.

- (1) The Development Capacity Study shall:
 - (a) Provide State government with reliable measures of recent development activity and additional potential development within each jurisdiction;
 - (b) Be developed with direct involvement of local jurisdictions;
 - (c) Be provided to State and local governments and regional agencies as a planning tool;
 - (d) Be conducted in five counties selected with input from the Maryland Association of Counties and five municipalities selected with input from the Maryland Municipal League;
 - (e) Estimate development capacity in and outside of Priority Funding Areas in each of the jurisdictions; and
 - (f) Include the following factors in this analysis:
 - (i) Existing land uses;
 - (ii) Environmental constraints to development (e.g., wetlands);
 - (iii) Preserved lands or lands that otherwise cannot be developed;
 - (iv) The effects of growth policies and laws, such as zoning, subdivision regulations, and Priority Funding Areas;
 - (v) Projected growth in population, employment, and development;
 - (vi) Redevelopment and infill potential; and

- (vii) Consideration of future changes in development trends and growth policies.

K. Procedures.

- (1) A majority of the Task Force shall constitute a quorum for the transaction of any business and may adopt such other procedures necessary to ensure the orderly transaction of business.
- (2) The Task Force shall hold hearings around the State to receive public testimony on local development capacity and the effectiveness of current policies and programs.

- L. Reports. The Development Capacity Task Force shall submit a final report of the Study to the Governor on July 1, 2004.

GIVEN Under My Hand and the Great Seal of the State of Maryland, in the City of Annapolis, this 8th Day of October, 2003.

Robert L. Ehrlich, Jr.
Governor

ATTEST:

R. Karl Aumann
Secretary of State

Robert L. Ehrlich, Jr.
Governor



Audrey E. Scott
Secretary

Michael S. Steele
Lt. Governor

Press Release

Florence E. Burian
Deputy Secretary

FOR IMMEDIATE RELEASE
November 20, 2003

Contact: Charles Gates (410) 767-3370
Public Information Officer

Ehrlich Administration Names Development Capacity Task Force Members

Task Force to study pilot jurisdictions

BALTIMORE – Under direction from Governor Robert L. Ehrlich, Jr., Secretary of Planning Audrey E. Scott today announced the members of the Development Capacity Task Force. Secretary Scott will chair the Task Force, which was created under the “Priority Places” Strategy Executive Order and will consist of eight additional members from a cross-section of interests.

“We are pleased that the members of the Task Force represent the diverse interests of all stakeholders in the future development of the State of Maryland,” said Governor Ehrlich. “We considered many points of view as we prepare to analyze growth capacity.”

Secretary Scott added, “Continued growth in Maryland is inevitable. We must all come to the table to discuss how growth can most efficiently be directed to preserve the quality of life and natural resources of the State while maximizing the public investment in infrastructure.”

The Development Capacity Task Force was created by the Governor’s Priority Places Strategy Executive Order, signed last month. The Executive Order directs the Task Force to develop a Development Capacity Study that will outline reliable methods to estimate development capacity including the review of how various capacity analysis techniques apply to the ten local jurisdictions (five counties and five municipalities) that have agreed to participate in the pilot study. The Task Force is to submit its final report to the Governor by July 1, 2004.

The Maryland Priority Places Strategy also refocused State policy for land use and smart growth, which has a strong emphasis on restoring and protecting quality of life in

Maryland's existing communities. The Executive Order focuses resources on the revitalization of established communities across the State.

Through the Executive Order, Governor Ehrlich has directed State agencies to develop a strategy that identifies and concentrates their focus on community revitalization, brownfields redevelopment, Priority Funding Areas, and other techniques to maximize the effect of limited resources during the State's fiscal crisis.

"We need to revitalize our older communities across the State, bringing back an energetic quality of life," said Governor Ehrlich. "Responsible development is not a political issue. It affects everyone who cares about livable, attractive, vibrant communities."

The ten jurisdictions chosen to participate in the pilot study were selected based on degree and diversity of development, geographic diversity, and desire to participate. Both the Maryland Municipal League and the Maryland Association of Counties were consulted in the jurisdiction selections.

The first meeting of the Task Force will be held on December 3, 2003 at the Maryland Department of Planning. Copies of the agenda and a schedule of future meetings will be announced on the MDP website (www.mdp.state.md.us). As the results of the Development Capacity Study are formulated, public hearings will be held where the general public will be invited to share their comments.

Development Capacity Task Force Membership

State of Maryland

Secretary Audrey E. Scott – Maryland Department of Planning

Municipal Representative

Dianne Klair – Manager, Community Development and Planning, City of Havre de Grace

County Representative

Arnold "Pat" Keller – Planning Director, Baltimore County

Homebuilders Representative

Frank Hertsch – President, Morris & Ritchie Associates, Inc

Academic Representative

Gerrit Knaap – Executive Director, National Center for Smart Growth Research and Education, University of Maryland

Environmental Representative

George Maurer, Senior Planner, Chesapeake Bay Foundation

Planning Community Representative

Dirk Geratz, President, Maryland Chapter-American Planning Association

Economic Development Representative

Pam Ruff, Executive Director, MIDAS

Historic Preservation Representative

Tyler Gearhart, Executive Director, Preservation Maryland

Pilot Jurisdictions

Municipalities

Chestertown
Havre de Grace
Salisbury
Frederick City
Hagerstown

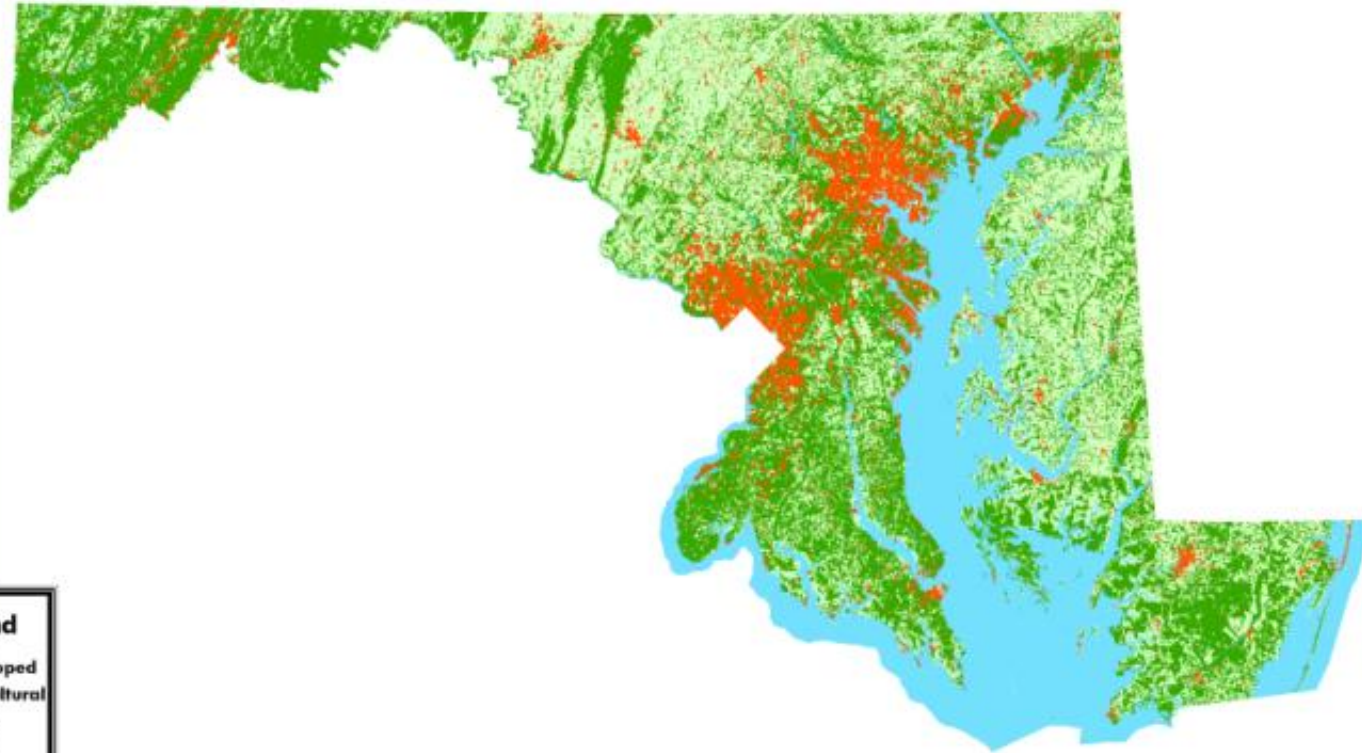
Counties

Harford
Montgomery
Anne Arundel
Worcester
St. Mary's



Appendix B – Development Trends and Background Maps

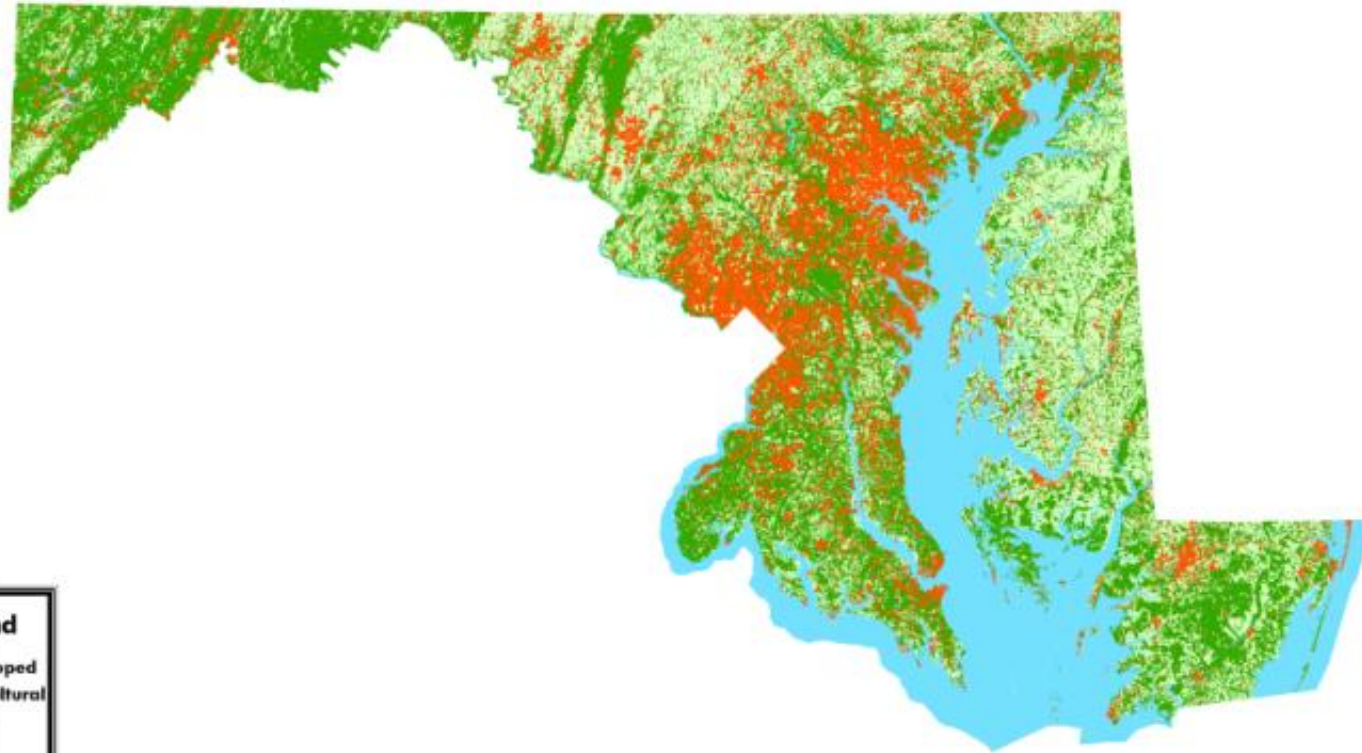
Maryland's 1973 Land Use/Land Cover



Legend

- Developed
- Agricultural
- Forest
- Water
- Roads

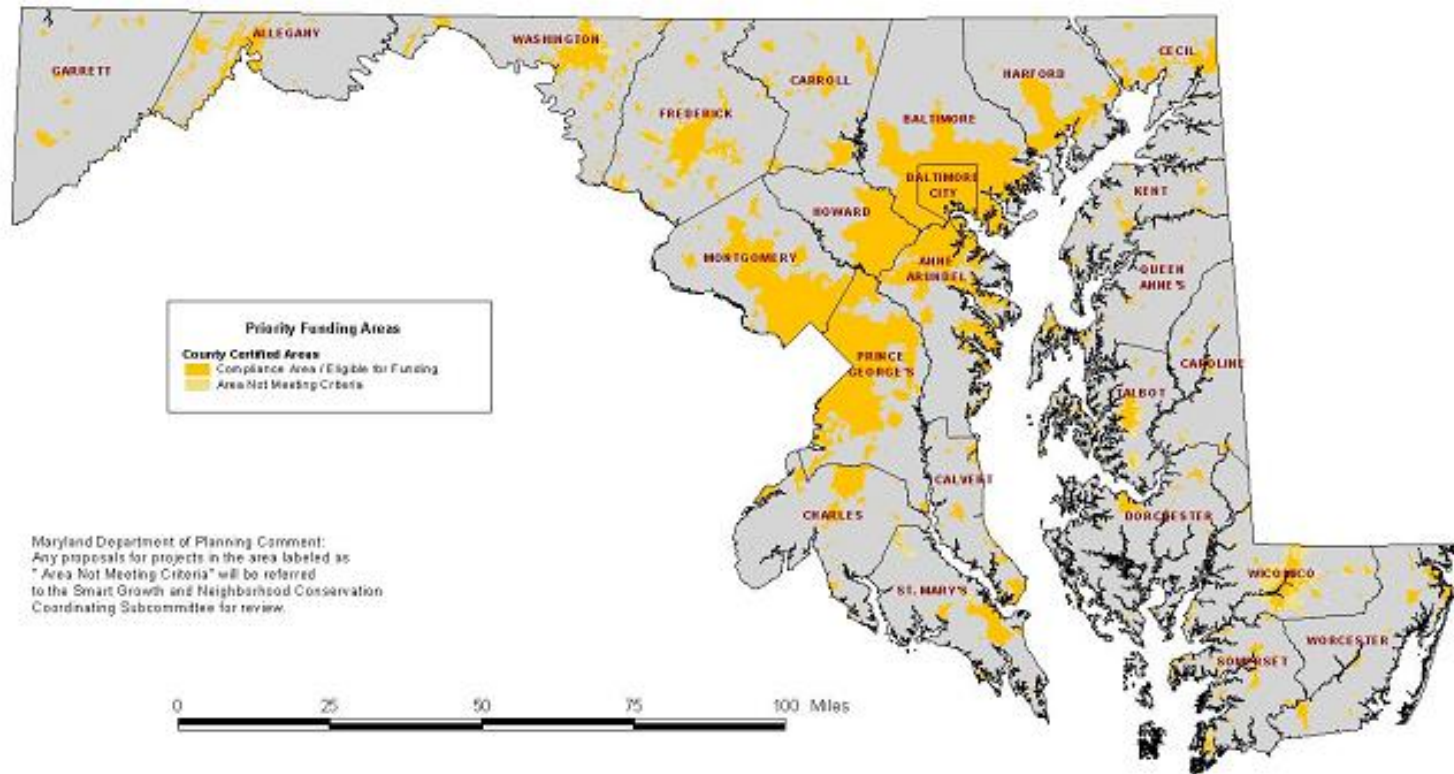
Maryland's 2002 Land Use/Land Cover



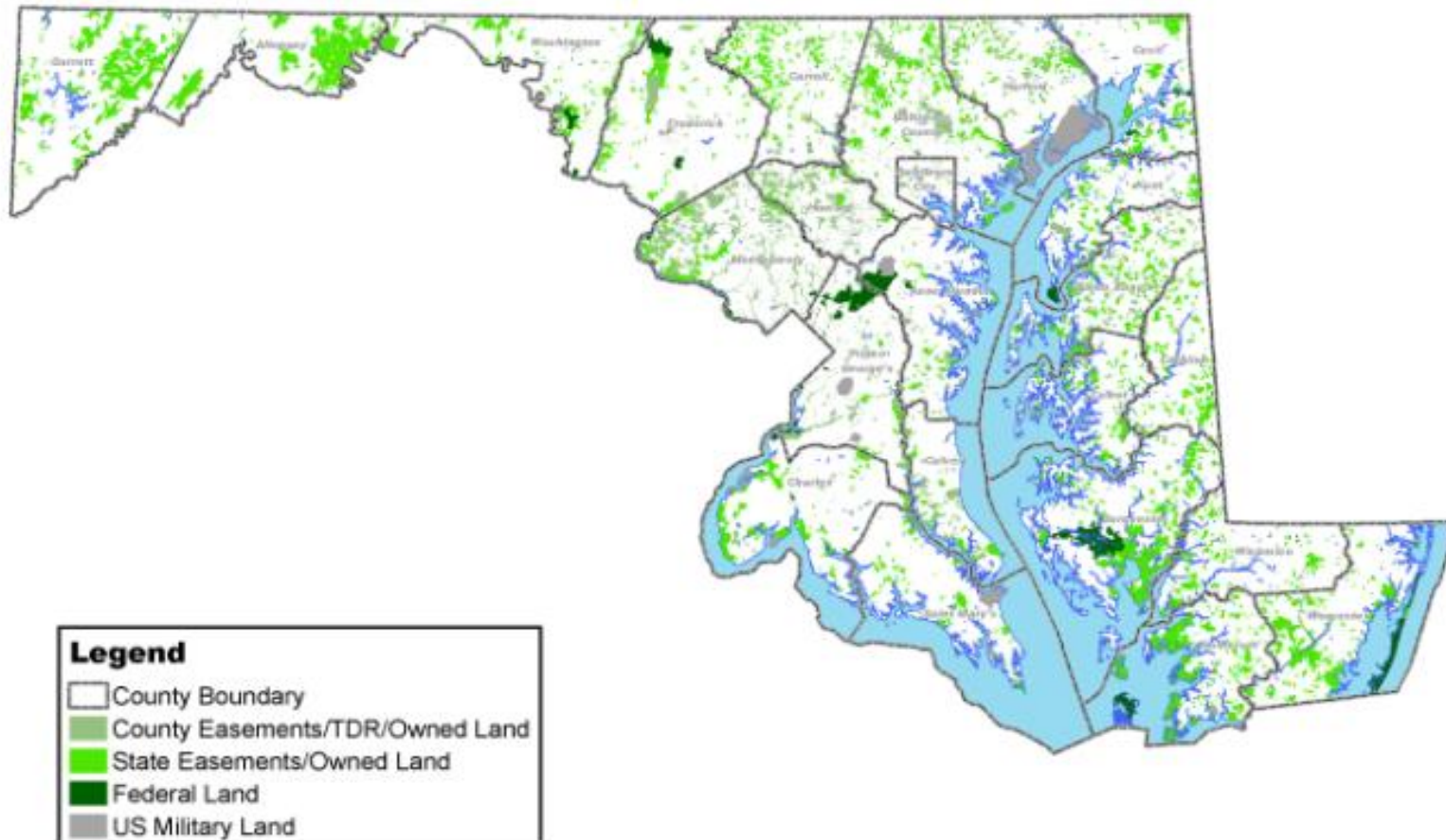
Legend

- Developed
- Agricultural
- Forest
- Water
- Roads

PRIORITY FUNDING AREAS OF MARYLAND



Maryland's Protected Lands



Appendix C – Residential Development Capacity Summary Tables

Table 1 – Town of Chestertown

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		1,405 acres	1,674	
	Subtract land zoned for nonresidential use (commercial, industrial)	384 acres	285	
Residential or Mixed Use Zoned Acres		1,021 acres	1,389	
	Subtract tax exempt land (tax exempt code)	216 acres	101	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	8 acres	13	
	Subtract already built-out areas	428 acres	1,181	
Acres and Parcels with Capacity	Total citywide capacity	369 acres	94	1,185
Capacity Inside PFA		369 acres	94	1,185
Capacity Outside PFA				
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels Associated with underdeveloped parcels.	Improved Parcels (>\$10,000), less than 5 acres.	15 acres	12	31
Acres and Parcels Associated with small parcels	Parcels <2 acres in size (improved or unimproved)	54 acres	82	103
Acres and parcels associated with larger, undeveloped lands (includes mixed use)	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	311	10	1,070

Table 2 – City of Havre de Grace

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		2,903 acres	4,264	
	Subtract land zoned for nonresidential use (commercial, industrial)	516 acres	91	
Residentially Zoned Acres		2,387 acres	4,173	
	Subtract tax exempt land (tax exempt code)	220 acres	159	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	149 acres	208	
	Subtract other parcels without capacity (built out areas, etc.)	1,379 acres	3,320	
Acres and Parcels with Capacity	Total capacity	700 acres	486	3,216
Capacity Inside PFA		700 acres	486	3,216
Capacity Outside PFA				
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	67 acres	343	140
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	122 acres	468	303
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	577 acres	18	2,913

Table 3 – Worcester County

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		288,693 acres	54,993	
	Subtract land zoned for nonresidential use (commercial, industrial)	5,951 acres	1,424	
Residentially Zoned Acres		282,742 acres	53,569	
	Subtract tax exempt land (tax exempt code)	46,160 acres	1,066	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	51,081 acres	2,323	
	Subtract other parcels without capacity (built out areas, etc.)	36,328 acres	43,495	
Acres and Parcels with Capacity	Total capacity	149,172 acres	6,685	23,002
Capacity Inside PFA		4,755 acres	2,481	10,053
Capacity Outside PFA		144,417 acres	4,204	12,949
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	389 acres	241	436
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	1,944 acres	3,512	3,760
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	147,044 acres	3,108	19,008

Table 4 – Harford County

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		314,959 acres	86,617	
	Subtract land zoned for nonresidential use (commercial, industrial)	12,110	3,119	
Residentially Zoned Acres		302,849 acres	83,498	
	Subtract tax exempt land (tax exempt code)	97,321 acres	1,375	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	50,162.acres	2,647	
	Subtract other parcels without capacity (built out areas, etc.)	54,468 acres	71,061	
Acres and Parcels with Capacity	Total capacity	106,270 acres	8,498	33,859
Capacity Inside PFA		9,324 acres	3,074	22,131***
Capacity Outside PFA		96,946 acres	5,424	11,728
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	1,435 acres	864	1,585
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	2,750 acres	4,004	4,530
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	102,680	4,214	28,528

***Note: MDP is working with Harford County to correct a few problem parcels that will result reduction of between 2,000 and 3,000 units of capacity.

Table 5A – St. Mary’s County 75% Zoning Scenario

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		221,742 acres	39,290	
	Subtract land zoned for nonresidential use (commercial, industrial)	3,778	809	
Residentially Zoned Acres		217,964 acres	38,481	
	Subtract tax exempt land (tax exempt code)	19,334 acres	576	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	33,466 acres	2,292	
	Subtract other parcels without capacity (built out areas, etc.)	36,614 acres	24,683	
Acres and Parcels with Capacity	Total capacity	128,550	10,573	34,494
Capacity Inside PFA				9,400
Capacity Outside PFA				25,094
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	220 acres	533	223
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	3,622 acres	6,204	6,336
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	124,796 acres	4,234	29,003

Table 5B – St. Mary’s County 100% Zoning Scenario

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		221,742 acres	39,290	
	Subtract land zoned for nonresidential use (commercial, industrial)	3,778	809	
Residentially Zoned Acres		217,964 acres	38,481	
	Subtract tax exempt land (tax exempt code)	19,334 acres	576	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	33,466 acres	2,292	
	Subtract other parcels without capacity (built out areas, etc.)	36,538 acres	24,722	
Acres and Parcels with Capacity	Total capacity	128,626	10,891	38,133
Capacity Inside PFA				13,433
Capacity Outside PFA				24,700
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	324 acres	652	454
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	3,698 acres	6,610	6,429
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	124,852 acres	4,560	32,685

Table 6 – City of Frederick

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		10,733 acres	18,542	
	Subtract land zoned for nonresidential use (commercial, industrial)	5,516 acres	1,204	
Residentially Zoned Acres		5,217 acres	17,338	
	Subtract tax exempt land (tax exempt code)	1,020 acres	490	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	158 acres	183	
	Subtract other parcels without capacity (built out areas, etc.)	2,281 acres	15,387	
Acres and Parcels with Capacity	Total capacity	1,758 acres	1,278	7,268
Capacity Inside PFA		1,758 acres	1,278	7,268
Capacity Outside PFA				N/a
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	172 acres	1,018	779
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	210 acres	714	1,090
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	1,531 acres	558	6,142

Table 7 – City of Salisbury

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		6,044 acres	8,734	
	Subtract land zoned for nonresidential use (commercial, industrial)	2,504 acres	1,748	
Residentially Zoned Acres		3,540 acres	6,986	
	Subtract tax exempt land (tax exempt code)	765 acres	259	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	147 acres	83	
	Subtract other parcels without capacity (built out areas, etc.)	1,370 acres	6,274	
Acres and Parcels with Capacity	Total capacity	1,258 acres	370	7,899
Capacity Inside PFA		1,258 acres	370	7,899
Capacity Outside PFA				N/a
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	83 acres	61	263
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	145 acres	291	418
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	1,073 acres	67	7,314

Table 8 – City of Hagerstown

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		5,901 acres	11,484	
	Subtract land zoned for nonresidential use (commercial, industrial)	2,321 acres	942	
Residentially Zoned Acres		3,580 acres	10,542	
	Subtract tax exempt land (tax exempt code)	959 acres	449	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	49 acres	77	
	Subtract other parcels without capacity (built out areas, etc.)	1,727 acres	9,651	
Acres and Parcels with Capacity	Total capacity	844 acres	365	6,780
Capacity Inside PFA		844 acres	365	6,759
Capacity Outside PFA				N/a
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	104 acres	203	445
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	210 acres	714	1,090
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	741 acres	162	6,314

Table 9 – Montgomery County

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots	Not including Rockville and Gaithersburg	278,833 acres	268,552	
	Subtract land zoned for nonresidential use (commercial, industrial)	7,578 acres	4,370	
Residentially Zoned Acres		271,255 acres	264,182	
	Subtract tax exempt land (tax exempt code)	72,312 acres	12,037	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	18,296 acres	1,132	
	Subtract other parcels without capacity (built out areas, etc.)	87,595 acres	237,370	
Acres and Parcels with Capacity	Total capacity (not including Rockville and Gaithersburg)	93,055 acres	13,643	47,889
Capacity Inside PFA	(not including Rockville and Gaithersburg)	13,078 acres	7,582	34,554
Capacity Outside PFA		79,974 acres	6,061	13,335
Capacity in Rockville and Gaithersburg	Number from Municipalities			13,196
Countywide Capacity				61,085
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	1,255 acres	815	1,330
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	4,240 acres	9,118	13,012
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	87,998 acres	4,245	34,332

Table 10 – Anne Arundel County

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels and Lots		243,833 acres	188,018	
	Subtract land zoned for nonresidential use (commercial, industrial)	12,961 acres	7,591	
Residentially Zoned Acres		230,872 acres	180,427	
	Subtract tax exempt land (tax exempt code)	49,326 acres	3,702	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	38,465 acres	6,392	
	Subtract other parcels without capacity (built out areas, etc.)	72,104 acres	152,156	
Acres and Parcels with Capacity	Total capacity	70,977 acres	18,177	50,407
Capacity Inside PFA		11,171 acres	8,986	33,470
Capacity Outside PFA		59,806 acres	9,191	16,937
Subsets of the Analysis of Interest (these are not additive)				
Acres and Parcels with capacity associated with Underdeveloped land.	Improved Parcels (>\$10,000), less than 5 acres.	2,247 acres	1,406	2,810
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	6,164 acres	13,974	16,612
Acres and parcels associated with larger, undeveloped parcels.	Includes unimproved parcels, greater than 2 acres with capacity and improved parcels greater than 5 acres with capacity.	63,387 acres	3,701	32,678

Appendix D – Glossary

- A -

adequate public facilities ordinance (APFO) – a local government ordinance that attempts to synchronize development with the availability of public facilities (schools, roads, water/sewer, emergency services, etc.) that serve the development

allowable density (permitted density) – density that is permitted by a zoning ordinance

average density (realized density, yield, average yield) – the density of development that actually gets built within a zoning district (this is usually lower than the **allowable density**)

annexation - to incorporate (land) into an existing political unit such as a municipality

- B -

buildable land (raw land) – undeveloped land suitable, or available for building

- C -

clustering – development of a subdivision that generally sites houses on smaller parcels of land, while the additional land that would have been allocated to individual lots is converted to common shared open space for the subdivision residents

comprehensive plan (master plan) - a plan for the long-term development of a local government jurisdiction such as a city or county

critical areas – in Maryland, all land within 1,000 feet of the Mean High Water Line of tidal waters or the landward edge of tidal wetlands and all waters of and lands under the Chesapeake Bay and its tributaries and the Atlantic Coastal Bays

Critical Areas Act – law passed in 1984 (Chesapeake Bay) and 2002 (Atlantic Coastal Bays) that created a statewide Critical Area Commission to oversee the development and implementation of local land use programs directed towards the Critical Area that met the following goals:

- Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or conveyances or that have run off from surrounding lands;
- Conserve fish, wildlife, and plant habitat in the Critical Area; and
- Establish land use policies for development in the Critical Area which accommodate growth and also address the fact that, even if pollution is controlled, the number, movement, and activities of persons in the Critical Area can create adverse environmental impacts.

- D -

development capacity analysis (development supply, build-out, land supply) – an estimate of the total number of housing units that can be built in an area under certain sets of assumptions, including land use laws and policy, environmental constraints, etc.

down-zoning - to change zoning classification to allow lower density development

- E -

environmental constraints – characteristics of land that make development impossible or illegal including: **protected lands**, steep slopes, stream buffer areas, wetlands, etc.

Euclidean Zoning (conventional zoning) – conventional zoning ordinances, where zoning districts fall into four distinct and separate categories: residential, commercial, industrial, and agricultural.

- F -

- G -

Geographic Information System (GIS) - computer software that links geographic information (where things are) with descriptive information (what things are like)

greenfields – see **buildable land**

Growth Management Simulation Model (GSM) – the Maryland Department of Planning’s model (set of scripts) that is used to complete land use analyses, including **development capacity analysis**

- H -

- I -

infill development - development that occurs on an undeveloped parcel or lot that is mostly surrounded by existing development

- J -

jurisdictions – all local governments in Maryland, consisting of 23 counties, 156 incorporated municipalities, and Baltimore City, which acts as both a county and municipality

- K -

- L -

land supply – see **development capacity**

- M -

MD PropertyView – a series of county level database and image collections (updated statewide annually) that include State Property Maps and other databases

minor subdivision - ??

- N -

- O -

overlay – a GIS analysis that integrates spatial data with attribute data by combining information from one GIS layer with another GIS layer to derive or infer an attribute for one of the layers

- P -

parcel point data – GIS data related to parcels, where each parcel of land is represented by a single point feature on a map, often including a database with related information about the parcel

parcel polygon data – data related to parcels, where each parcel of land is represented as a polygon (closed shape) feature on a map, often containing a database with related information about the parcel

pipeline (see also **platted lots**)– land that is in the process of being developed, but not yet developed

planned unit development (PUD) – zoning regulations that encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations, usually consists of mixed housing types or mixed land uses as well as open space requirements

platted lots (recorded lots)– parcels of land that are part of a common development (subdivision) plan (there does not have to be a building associated with a platted lot)

Priority Funding Areas (PFAs)- existing communities and places where local governments want State investment to support future growth (see www.mdp.state.md.us for more information about PFAs)

Priority Places – established in the Priority Places Executive Order 01.01.2003.33 (October 2003), the Maryland Department of Planning is charged with developing initiatives to accomplish the following:

- Ensure that State programs, regulations and procedures, and funds are used strategically to achieve the goals of local comprehensive plans and State planning policy and provide for the infrastructure necessary to support planned growth;
- Better enforce existing laws, regulations and procedures that are designed to ensure mutually supportive public investments and actions;
- Streamline State regulations and procedures to make quality, well designed growth easier to build inside Priority Funding Areas;
- Identify key plans and functions of State government that affect growth and development and make appropriate changes to those plans and functions to better support the goals of the Maryland Priority Places Strategy;
- Encourage resource protection and production outside of the Priority Funding Areas for environmental protection, recreation, tourism, forestry, and agricultural purposes; and
- Enhance existing brownfield cleanup and redevelopment, transit oriented development, and community revitalization efforts (see www.mdp.state.md.us for more information)

projected growth – population, household and employment growth that is projected to the year 2025 (generally compiled by county, mostly not available for municipalities)

protected lands – lands that are preserved in perpetuity including land preservation easements, parks, homeowner association lands, private open space, agricultural remainder parcels, etc.

- Q -

- R -

raw land – see **buildable land**

realized density – see **average yield**

recorded lots – see **platted lots**

redevelopment – revitalization or reuse of existing developed lands, mostly in urban areas.

re-subdivison – see **underdevelopment**

rezoning - to change the zoning classification of (a neighborhood or property, etc)

- S -

sewer service areas (sewer service plan) – areas, delineated by local governments, that illustrate locations of existing sewer service, planned sewer service and no planned sewer service.

Smart Growth – Maryland program, consisting of 5 pieces of legislation passed in 1997, that directs the State to target programs and funding to support established communities and locally designated growth areas, and to protect rural areas (see www.mdp.state.md.us for more information)

split zoning (split zoned) – in a zoning map, a single parcel being divided into more than one zoning district

- T -

Transfer of Development Rights (TDR) - a land preservation program where a community identifies an area within its boundaries which it would like to see protected from development (the sending zone) and another area where the community desires more urban style development (the receiving zone). Landowners in the sending zone are allocated a number of development credits which can be sold to developers, speculators, or the community itself. In return for selling their development credits, the landowner in the sending zone agrees to place a permanent conservation easement or reduce allowable density drastically on their land. Meanwhile, the purchaser of the development credits can apply them to develop at a higher density than otherwise allowed on property within the receiving zone.

- U -

underdevelopment - (underdeveloped, re-subdivision) – development on a parcel that, because of the zoning and the size of the parcel, can accommodate additional development over time

up-zoning – to change zoning classification to allow higher density development

- V -

vacant land – see **buildable land**

vectorized parcel data – see **parcel polygon data**

- W -

- X -

- Y -

yield – see **average density**

- Z -

zoning (zoning districts) – the basic means of land use control employed by local governments in the United States; divides a community into districts and imposes different land use controls on each district (allowed uses, intensity or density, and bulk of buildings)

Appendix E – Implementation: Draft Local Government MOU and Executive Order

Development Capacity Task Force

Drafts: Local Government MOU and State Executive Order

July 2004

Introduction

The following draft outlines the key components of a potential local government memorandum of understanding (MOU) and executive order. By committing the State and local governments to specific tasks and responsibilities, these documents help implement the recommendations of the Development Capacity Task Force Report. The Maryland Municipal League (MML) and the Maryland Association of Counties (MACo) are the vehicles for local government MOUs.

Local Government Memorandum of Understanding Regarding Residential Development Capacity Inventories

- (1) The Maryland Department of Planning (MDP) and local governments, (county and municipal), including their respective representative organizations the Maryland Association of Counties (MACo) and the Maryland Municipal League (MML), and the other members of the Development Capacity Task Force understand the importance and usefulness of land capacity inventories as a beneficial land-use planning tool. Recent efforts by MDP and selected local governments to establish capacity inventories have resulted in a renewed State and local government planning partnership to address this complex land-use planning tool. MDP's continued support, including technical assistance, is essential to maintaining this partnership and to further the interest of county and municipal governments to implement the capacity inventory planning tool.
- (2) MDP, MACo, and MML shall continue to work with county and municipal governments to encourage the creation of land capacity inventories and their inclusion in comprehensive plans and for Priority Funding Area changes. County and municipal governments will also further the other recommendations of the Governor's Development Capacity Task Force (DCTF). MACo and MML will continue to encourage local governments to share needed land-use information and work with MDP in creating capacity inventory inventories.

- (3) The commitment to the creation of land capacity inventories and their inclusion in comprehensive plans and for Priority Funding Area changes by local governments is contingent on MDP providing support as needed, including technical assistance, which is consistent with a recommendation of the Maryland Smart Growth Policy Collaborative that instructed “the Administration to provide funding to State and local governments to develop land capacity inventories.”
- (4) In developing the capacity inventories, MACo and MML will encourage local planning departments to use the analysis developed by MDP and used throughout the work of the DCTF that estimates development capacity in and out of Priority Funding Areas. However, it is expected that the inventory will be customized and enhanced according to best practices by local jurisdictions to the extent feasible, based on the availability of resources. Jurisdictions that currently have their own capacity inventories will share them with MDP.
- (5) For the purpose of reporting key development trends and to aid in the production and tracking of development capacity, local governments will develop annual development reports. As recommended in the Task Force Report, these annual reports should provide information on zoning yields, rates of infill and redevelopment, environmental constraints, and development trends.
- (6) MDP shall consult with the Maryland State Builders Association, MACo, and MML to develop a proposed schedule for conducting its capacity analysis with the local governments. Key considerations in the development of this schedule include a jurisdiction’s comprehensive planning cycle and its growth pressure. A local jurisdiction shall be notified of the estimated date of the commencement of the inventory analysis in collaboration with MDP.
- (7) Two years after the execution of this MOU, MDP will survey the progress of local government land capacity analyses for consistency with the Governor’s Development Capacity Task Force recommendations and the Governor’s Executive Order. This time period anticipates the uncertain fiscal realities facing both the State and local governments and also provides them sufficient time to demonstrate commitment towards developing this land-use planning tool. If this survey of progress is determined to be unacceptable, MML and MACo will work with the Administration and the members of the original Development Capacity Task Force to draft mutually agreeable legislation to remedy this lack of progress. Members of the Task Force will not introduce legislation related to development capacity until this time.
- (8) For the purpose of continuing progress in developing capacity analyses, representatives of MML and MACo will meet quarterly with MDP, the Homebuilders, and other members of the Task Force to track progress,

exchange information, and share lessons learned. These meetings will also help to track the progress of creating the capacity inventories per paragraph (7) above.

- (9) This MOU is contingent on the Governor signing the corresponding Executive Order that was also drafted by the Task Force, or a version that closely resembles this draft.

THE INTENT IS FOR ALL THE MEMBERS OF THE TASK FORCE TO SIGN THIS MOU.

Rough Draft Executive Order
Residential Development Capacity Task Force Report:
Implementation

The following key components should be included in an executive order to help implement the State's role in the Task Force's recommendations.

A. *Introduction*

This executive order will help implement the recommendations of the Development Capacity Task Force, created by the Priority Places Executive Order 01.01.2003.33 (October 2003). It also complements the Local Government MOU. The Task Force drafted both this executive order and the Local Government MOU in tandem. Taken together, these two items are intended to work in concert with each other to insure that State and local resources are deployed in a cooperative and coordinated way to implement the recommendations of the Task Force.

The Maryland Department of Planning (MDP) and local governments (county and municipal), including their respective representative organizations the Maryland Association of Counties (MACo) and the Maryland Municipal League (MML), and the other members of the Task Force understand the importance and usefulness of land capacity inventories as a beneficial land-use planning tool. Recent efforts by MDP and selected local governments to establish capacity inventories have resulted in a renewed State and local government planning partnership to address this complex land-use planning tool. MDP's continued support, including technical assistance, is essential to maintaining this partnership and to further the interest of county and municipal governments to implement the capacity inventory planning tool.

B. *Development Capacity Analysis Technical Assistance*

MDP shall provide technical assistance (e.g., data, analysis, examples, guidance) to local governments for the purpose of including the results of development capacity analysis in comprehensive plan updates and for Priority Funding Area changes. MDP's ability to provide this technical assistance is partially reliant on local government cooperation with data sharing and a modest amount of staff time to review and consult with MDP on draft analyses. MDP will continue to work with sister agencies, local governments, and others to update and improve its data and analysis. MDP shall also work with stakeholders to develop guidelines for development capacity analysis.

C. Scheduling Local Governments for Analysis

MDP shall consult with the Homebuilders Association, MACo, and MML to develop a proposed schedule for conducting its capacity analysis with the local governments. Key considerations in the development of this schedule include a jurisdiction's comprehensive planning cycle and its growth pressure. Affected local governments shall be notified of this proposed schedule.

D. MDP's Comprehensive Plan Update Reviews

In its review of comprehensive plans, MDP shall expect that the results of development capacity analyses are included and a factor in the plans' policies. Where such analyses are not a part of the plan and its policies, MDP shall note such deficiency to that jurisdiction directly and at public hearings related to the plan's adoption. In addition, MDP shall release its own capacity analysis for such jurisdictions. MDP will also expect capacity analysis for Priority Funding Area changes.

E. Reporting / Development Tracking / Indicators

For the purpose of reporting key development trends and to aid in the production and tracking of development capacity, MDP will expect local government annual development reports. As recommended in the Task Force Report, these annual reports should provide information on zoning yields, rates of infill and redevelopment, environmental constraints, and development trends. MDP will provide assistance where necessary.

F. Review of Progress

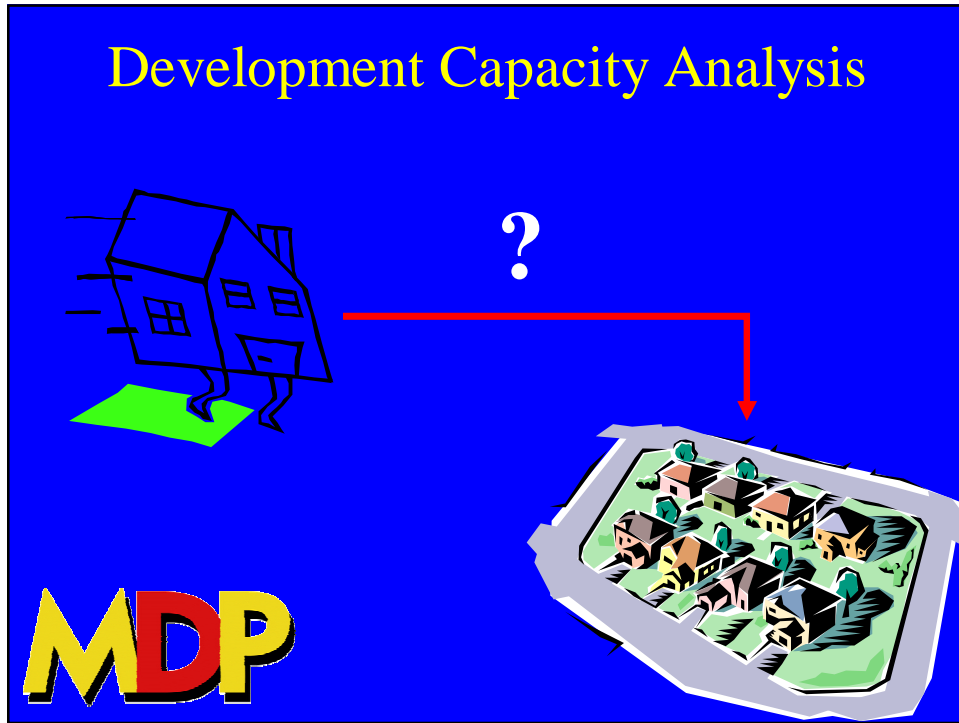
Two years after the execution of the Local Government Development Capacity MOU, MDP will survey the progress of local government land capacity inventories for consistency with the Governor's Development Capacity Task Force recommendations and this executive order. This time period anticipates the uncertain fiscal realities facing both the State and local governments and also provides them sufficient time to demonstrate commitment towards developing this land-use planning tool. If this survey of progress is determined to be unacceptable, MML and MACo will work with the Administration and the members of the original Development Capacity Task Force to draft mutually agreeable legislation to remedy this lack of progress. Members of the Task Force will not introduce legislation related to development capacity until this time.

G. Tracking Progress and Information Exchange

For the purpose of continuing the progress of developing capacity analyses, MDP will meet quarterly with representatives of MML and MACo, the Homebuilders, and other members of the Task Force to track progress, exchange information, and share lessons learned. These meetings will also help to track the progress of creating the capacity inventories per paragraph F. above.

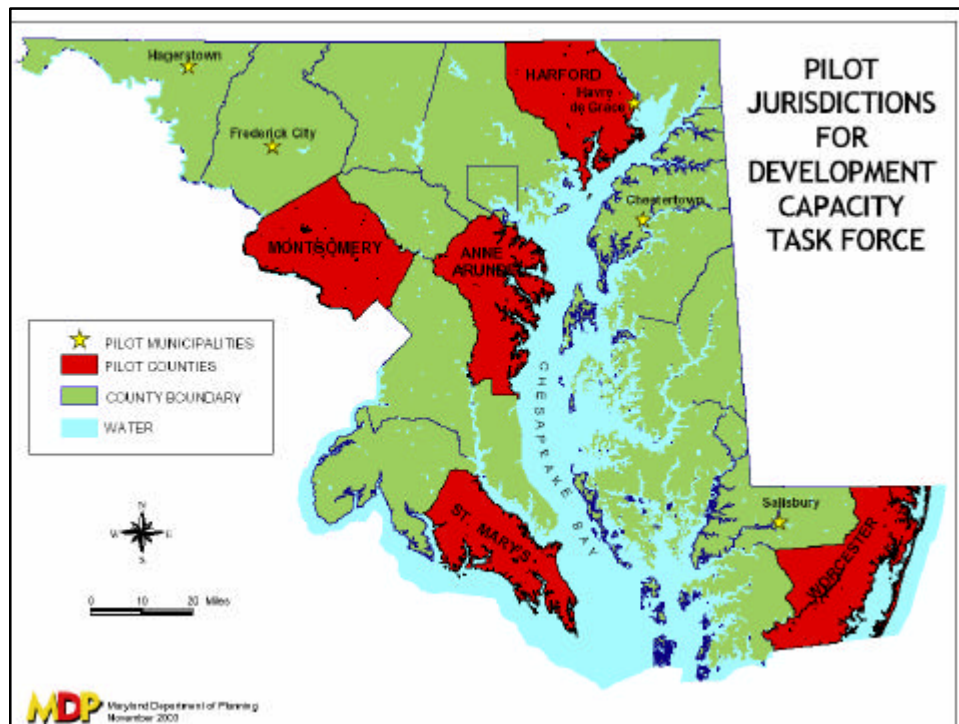
Appendix F – Pilot Study Presentation Summaries

Task Force Meeting 1



Priority Places Strategy

- Ehrlich Administration's approach to smart growth.
- Priority Places Strategy.
- Development Capacity Task Force.



What is development capacity and why should you care?

- Define capacity.
- Care because:
 - PFA Sizing;
 - Analysis can help smart growth efforts;
 - Annexation studies;
 - Public service impact analysis;
 - Basic planning purposes; and
 - Help justify tough planning decisions.

Very Brief Issue History

- Homebuilders pushed issue for several years (including legislation).
- Local governments resisted – concerned with unfunded mandate.
- More recently, MDP worked with local governments to collaborate on its analysis.
- This helped improve the analysis and showed that it may not be as difficult as originally thought.
- To continue this positive development, Governor Ehrlich signed the Priority Places Executive Order which created this task force.

Key Issues

- The issue isn't going away.
- Groups can define “capacity” in their own way.
- Greenfields vs. Infill vs. Redevelopment
- Current Conditions vs. Scenarios
- Local Needs and Capabilities:
 - Basic planning purposes;
 - Annexation Purposes;
 - Comprehensive Plans;
 - Zoning.

Key Things We've Learned So Far

- MDP's analysis greatly improves with local staff input and review.
- This isn't very hard if we work together and make efficient use of resources.
- Data development and acquisition issues vary greatly – via cooperation, can do a lot with a little.

MDP's Analysis Approach

- Basically an intelligent build-out analysis.
- Determines the capacity based on:
 - Zoning's realized density (probably somewhere between allowable and yield);
 - Areas getting sewer mostly where planned;
 - Allows for infill;
 - Accounts for most undevelopable lands (wetlands, parks, easements, HOAs, etc.).

MDP's Approach Does Not Account For:

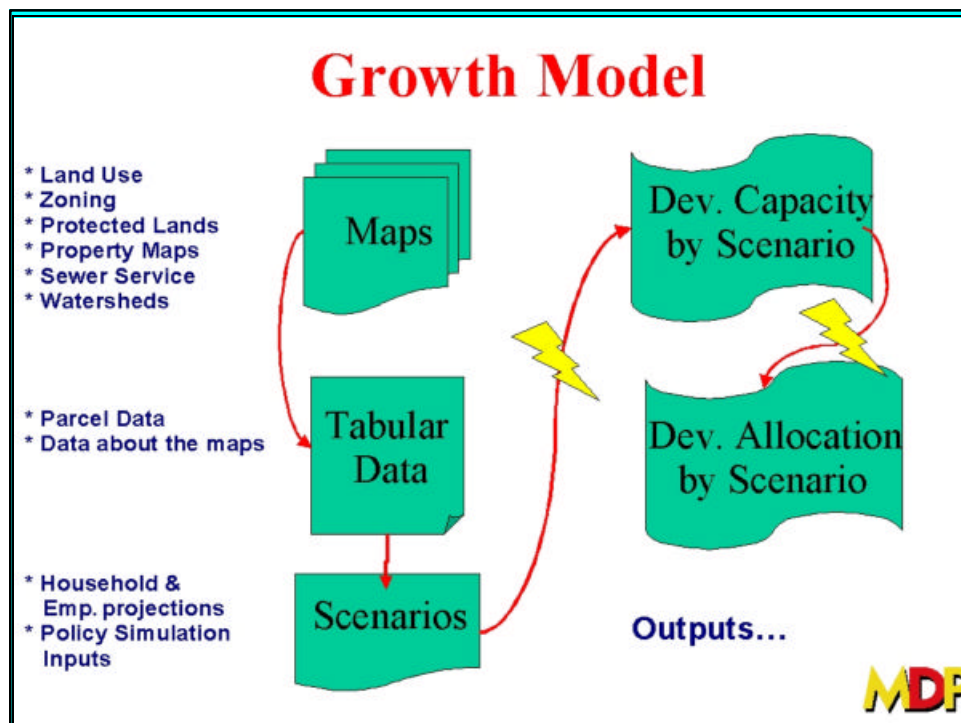
- Infrastructure capacity or permitting;
- Other APFO considerations;
- Much in the way of market considerations;
- All environmental constraints;
- NIMBYs.

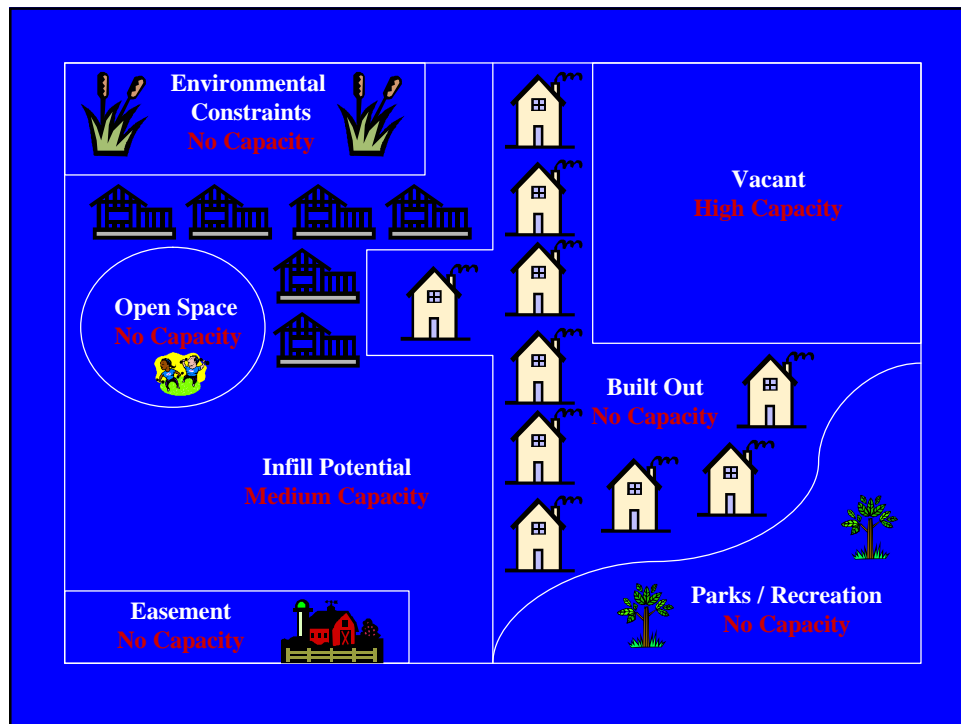
Our Analysis



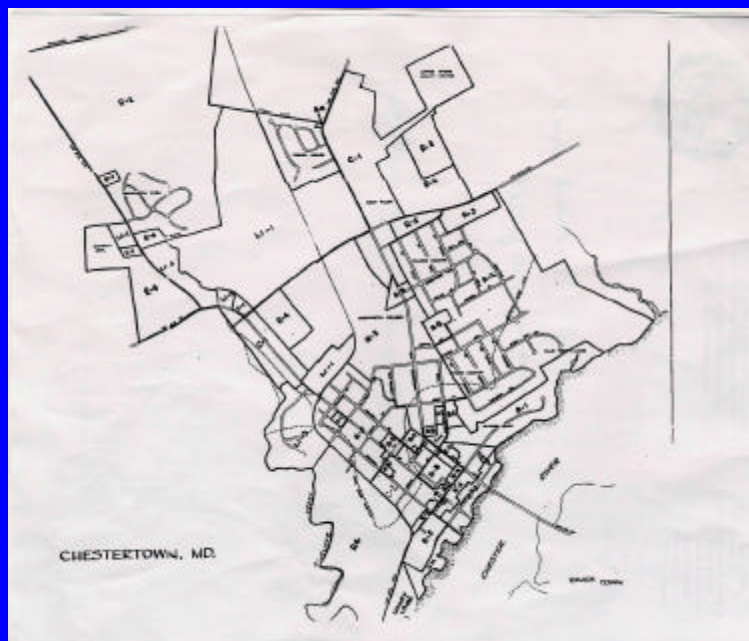
What goes into this work?

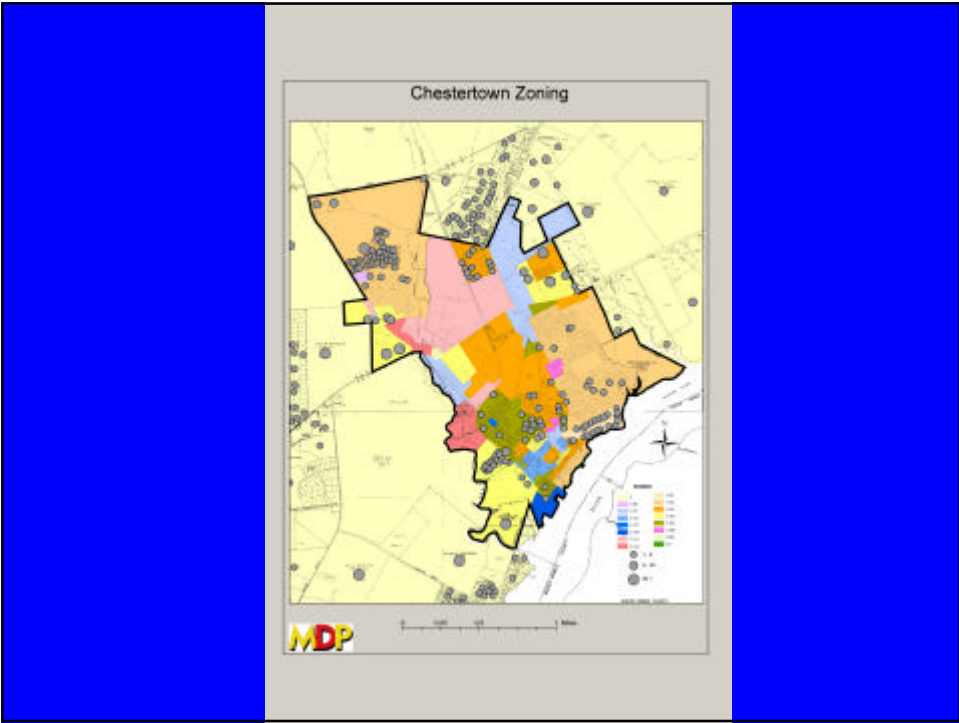
- MD PropertyView (parcel data)
- Aerial Photography
- Partnerships with Local Govs to get Data
- Data Development, Refinement, and Updating
- Geo-processing and Programming
- Growth Modeling
- State and Local Gov Planning Expertise
- Local Knowledge and Ground-truthing
- Hardware, Software, Training





Chestertown Example





**Rough Draft –
project still under
review and #s
being revised.**

Chestertown Capacity Analysis	
Zoning Ordinance	New Household Capacity
C-B1	0
C-C1	0
C-C2	0
C-C3	0
C-CM	0
C-LI1	0
C-LI2	0
C-R1	35
C-R2	629
C-R3	108
C-R4	1,051
C-R5	42
C-RB	0
TOTAL	1,865
8-Sep-03	

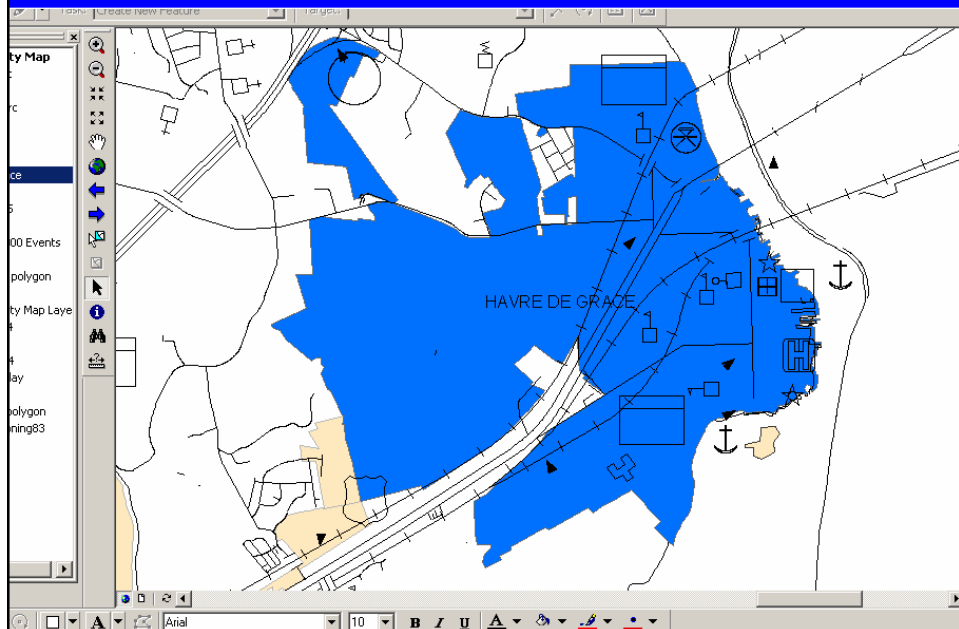
**Revised Numbers –
Based on Town
Input**

Chestertown Capacity Analysis	
Zoning Ordinance	New Household Capacity
C-B1	0
C-C1	0
C-C2	0
C-C3	0
C-CM	0
C-LI1	0
C-LI2	0
C-R1	0
C-R2	429
C-R3	54
C-R4	681
C-R5	19
C-RB	0
TOTAL	1,183
27-Oct-03	

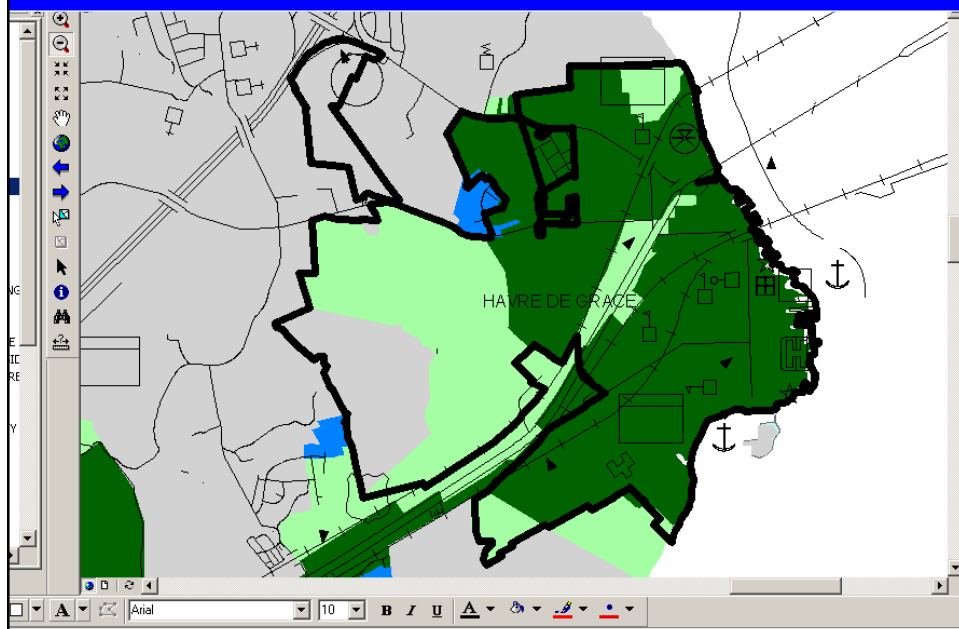
Havre de Grace Analysis

- Base Data Layers
- Zoning Assumptions
- Draft Output
- Annexation Analysis

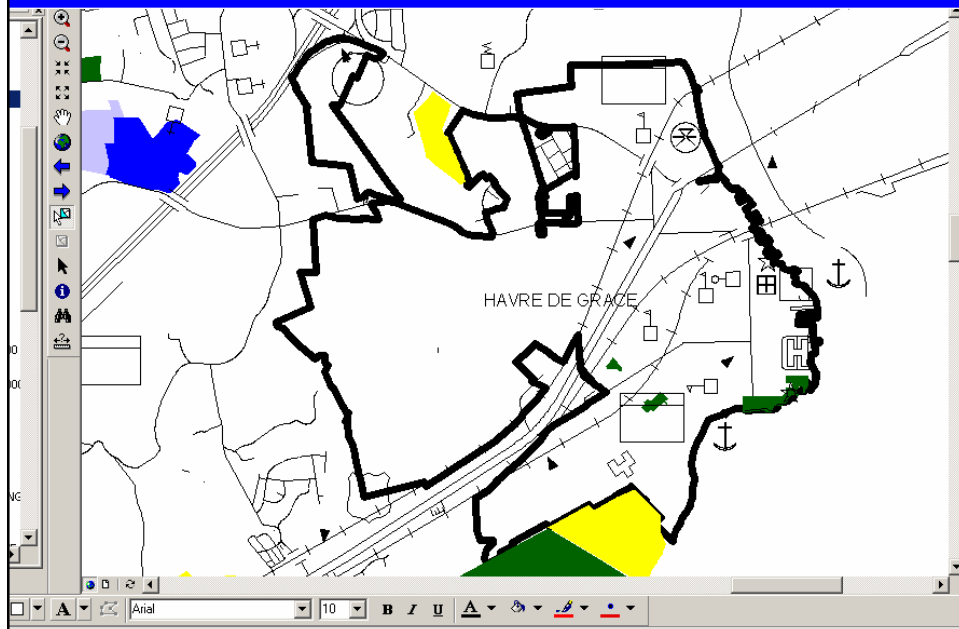
Havre de Grace – Current Boundary



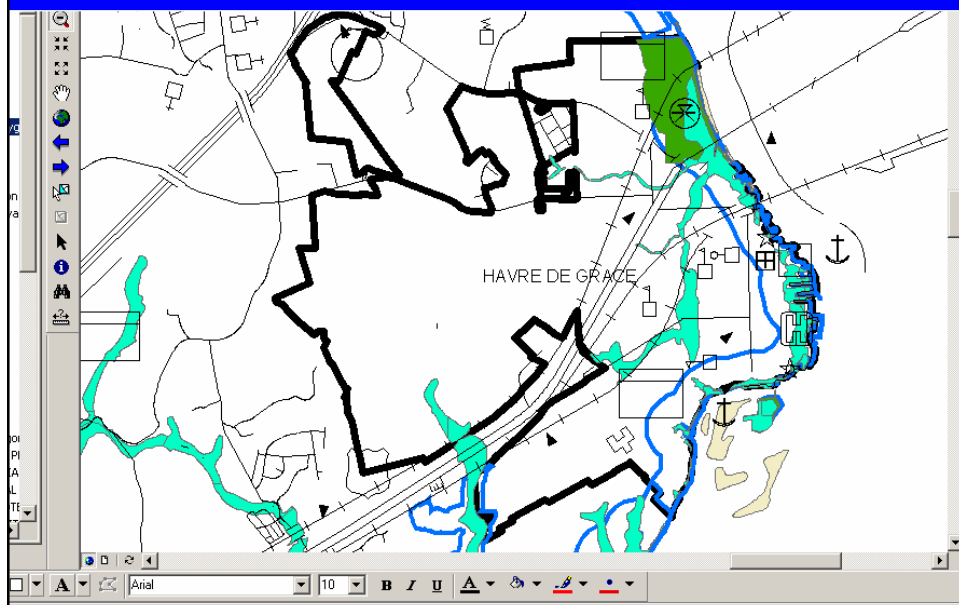
Havre de Grace – Sewer Service Areas

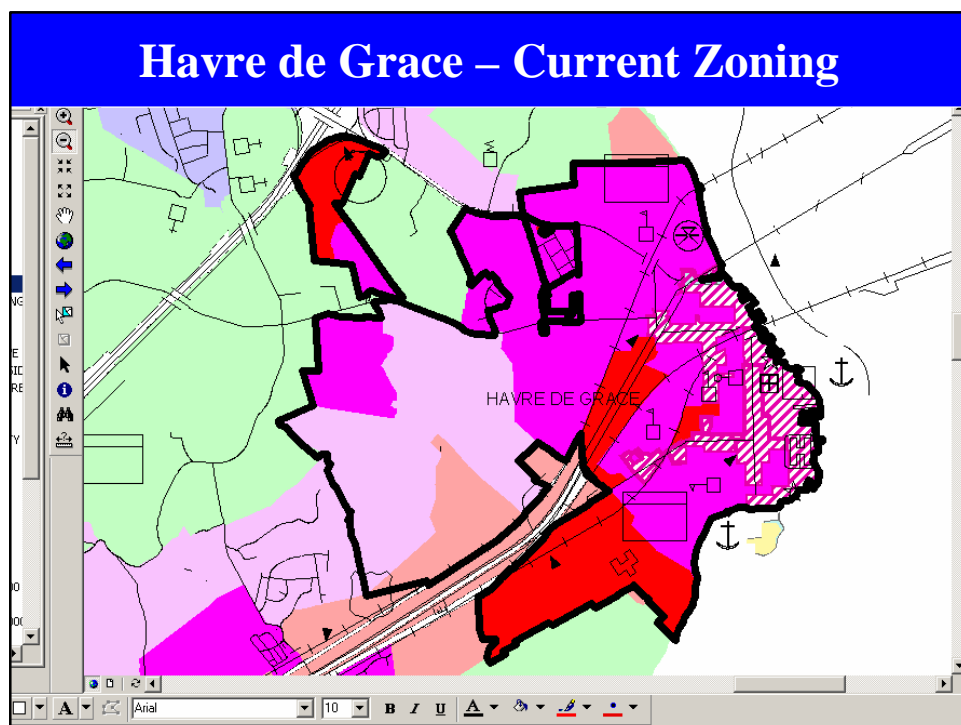
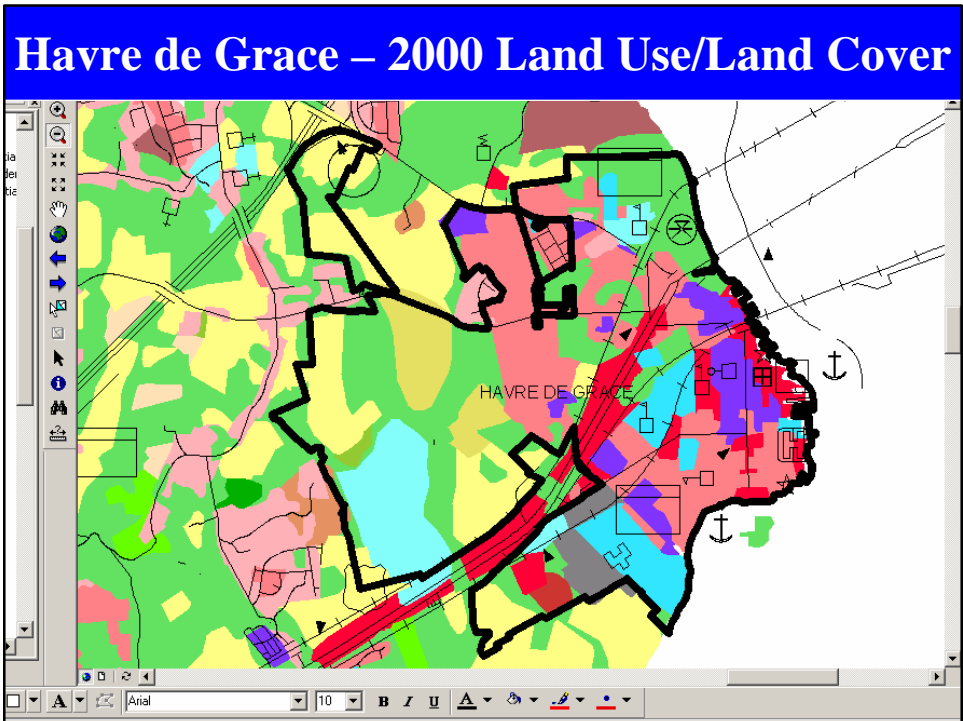


Havre de Grace – Protected Lands



Havre de Grace – Floodplains and Critical Area





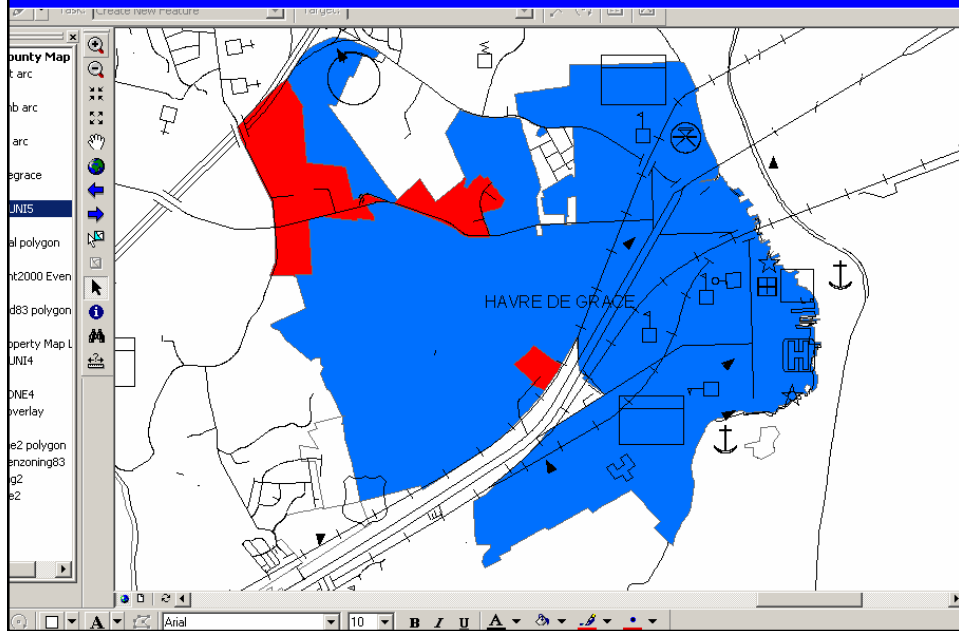
Zoning Lookup Table

Havre de Grace						
Zoning Ordinance	Zoning Map	Allowable Density and Notes	Generalized Zoning	Realized Density	Density Yield for areas with Sewer or Planned for Sewer*	Density Yield for areas without Sewer or NOT Planned for Sewer**
R	H-R	Residential District Min Lot. Size = 15,000 ft ²	Low Density Residential	2.90 du/acre	2.18 du/acre	0.5 du/acre
R1	H-R1	Residential District Min Lot. Size = 10,000 ft ²	Medium Density Residential	4.356 du/acre	3.267 du/acre	0.5 du/acre
R2	H-R2	Residential District SFD = 5,000ft ² Multi Family = 12du/acre	High Density Residential	10.36 du/acre	7.77 du/acre	0.5 du/acre
RO	H-RO	Residential Office District SFD = 5,000ft ²	Mixed Use	8.71 du/acre	6.53 du/acre	0.5 du/acre
RB	H-RB	Residential Business District SFD = 5,000ft ²	Mixed Use	8.71 du/acre	6.53 du/acre	0.5 du/acre
MOE	H-MOE	Mixed Office Employment District	Commercial			
C	H-C	Commercial District	Commercial			

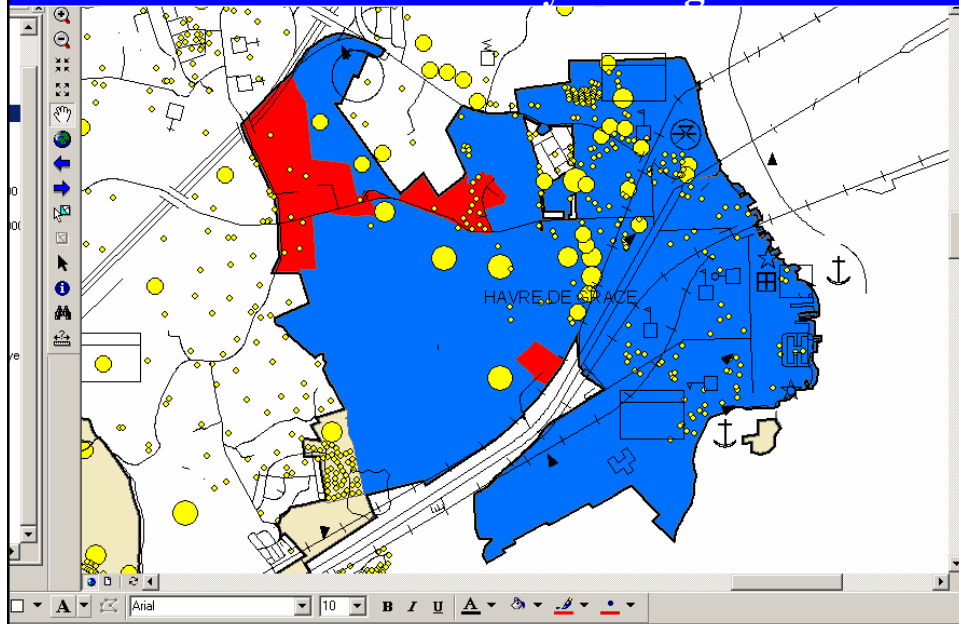
Draft New Household Capacity Table

Zoning District	New Household Capacity
H-C	0
H-MOE	0
H-PAC	1,990
H-R	5
H-R1	121
H-R2	626
H-RB	48
H-RO	5
	2,795

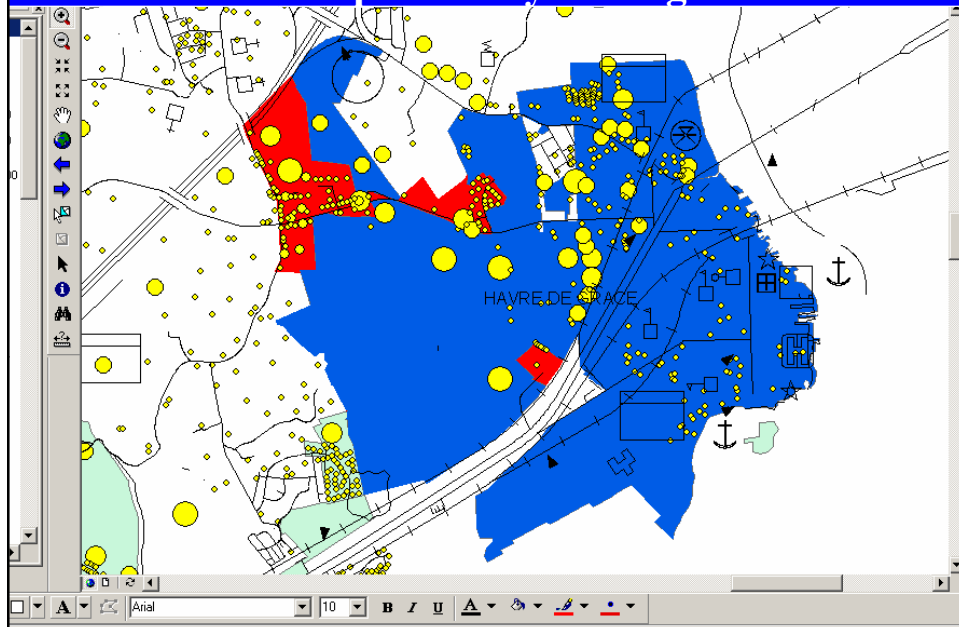
Havre de Grace – Potential Annexation Areas



Havre de Grace – New Household Capacity, Current County Zoning



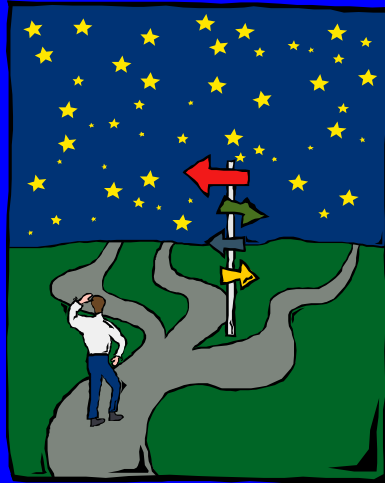
Havre de Grace – New Household Capacity, with Proposed City Zoning



Potential Enhancements

- Zero Out Low Value Parcels
- Redevelopment Potential (Ratio, lv/imp val)
- Floodplain Restrictions
- Non-Residential Piece

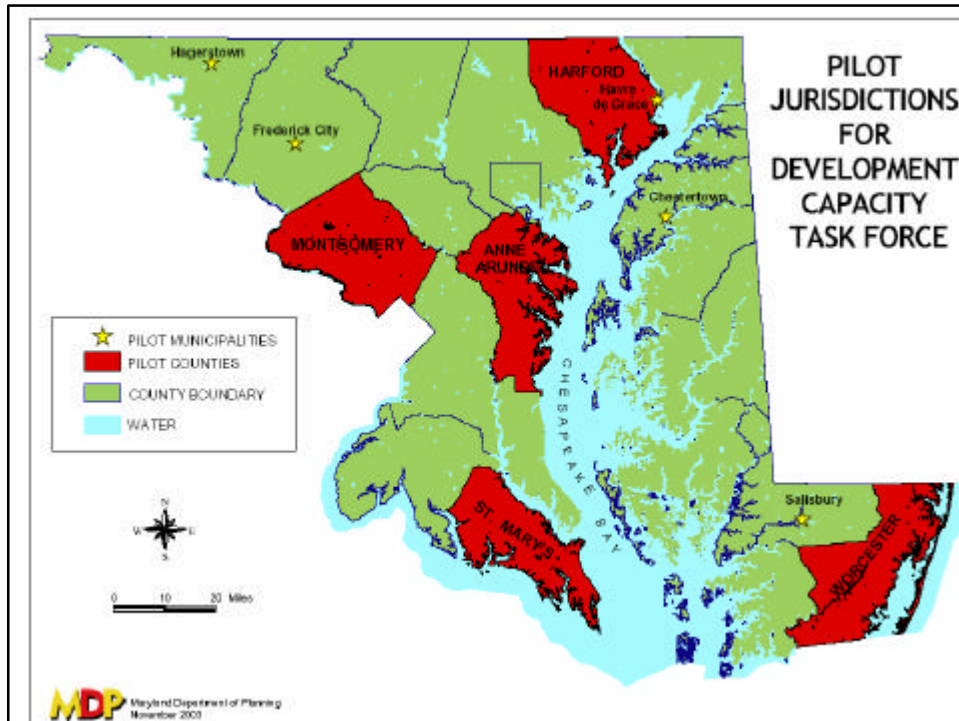
What Next?



How we do infill (example)

- 10 acre parcel
- 1 acre zoning
- 1 du on the parcel
- 9 du rights left?
- NO: $9 * \frac{1}{2} = 4.5$, rounded down = 4
- That's if there are no constraints on the parcel.

Task Force Meeting 2



Chestertown

- Adequacy
- Data Issues
- Technical Assistance Issues
- Intended Use and Frequency
- Lessons learned

Data/Technical Assistance Issues

- Town doesn't have GIS capability or data.
- MDP worked with faxed copy of zoning map.
- Town's input – Use 50% of maximum zoned density instead of 75% (MDP's default).

Intended Use, Lessons Learned

- Intended to be used by Town staff for plan updates, justification for tough planning decisions.
- Lesson 1 – Even with crude data sources, MDP analysis works for a small town like Chestertown.
- Lesson 2 – With local input, MDP's analysis can be customized easily.

Chestertown Example

A black and white map of Chestertown, MD, showing a grid of streets and numbered lots. The map is oriented with North at the top. The town is situated along a river or coastline on the right side. The map includes labels for 'CHESTERTOWN, MD.' and 'WATER'.



**Rough Draft –
project still under
review and #s
being revised.**

Chestertown Capacity Analysis	
Zoning Ordinance	New Household Capacity
C-B1	0
C-C1	0
C-C2	0
C-C3	0
C-CM	0
C-LI1	0
C-LI2	0
C-R1	35
C-R2	629
C-R3	108
C-R4	1,051
C-R5	42
C-RB	0
TOTAL	1,865
8-Sep-03	

**Revised Numbers –
Based on Town
Input**

Chestertown Capacity Analysis	
Zoning Ordinance	New Household Capacity
C-B1	0
C-C1	0
C-C2	0
C-C3	0
C-CM	0
C-LI1	0
C-LI2	0
C-R1	0
C-R2	429
C-R3	54
C-R4	681
C-R5	19
C-RB	0
TOTAL	1,183
27-Oct-03	

Havre de Grace

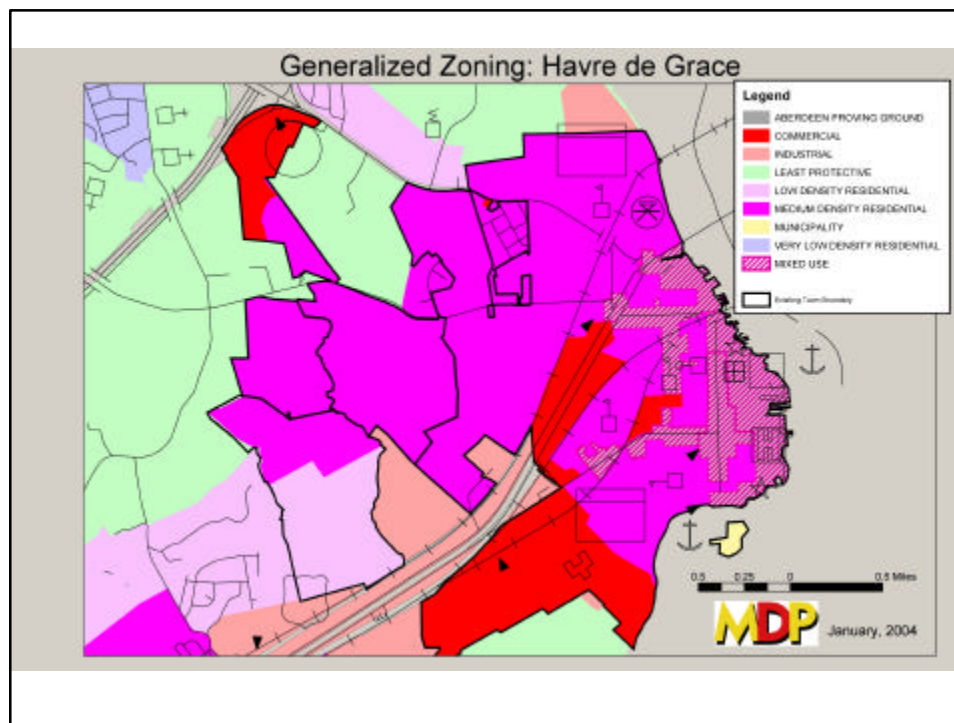
- Adequacy
- Data Issues
- Technical Assistance Issues
- Intended Use and Frequency
- Lessons learned

Data Issues

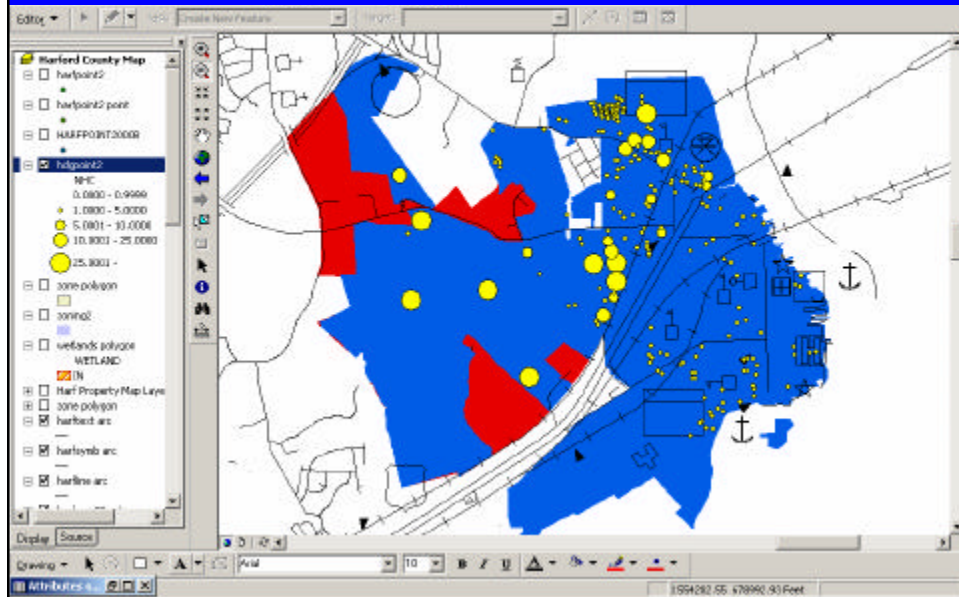
- City has an agreement with Harford County where County maintains GIS data (zoning, sewer, protected lands) for City.
- Data were easy to obtain from County.
- City planners customized density yields and made corrections to mapping mistakes
- MDP has data sharing agreement with County so we can easily update

Intended Use, Lessons Learned

- Intended to be used by City staff for plan updates, justification for tough planning decisions.
- Annexation analysis
- Lessons:
 - With local input, MDP's analysis can be customized easily;
 - Dev Capacity can increase significantly via annexation; and
 - Data Issues – good example.



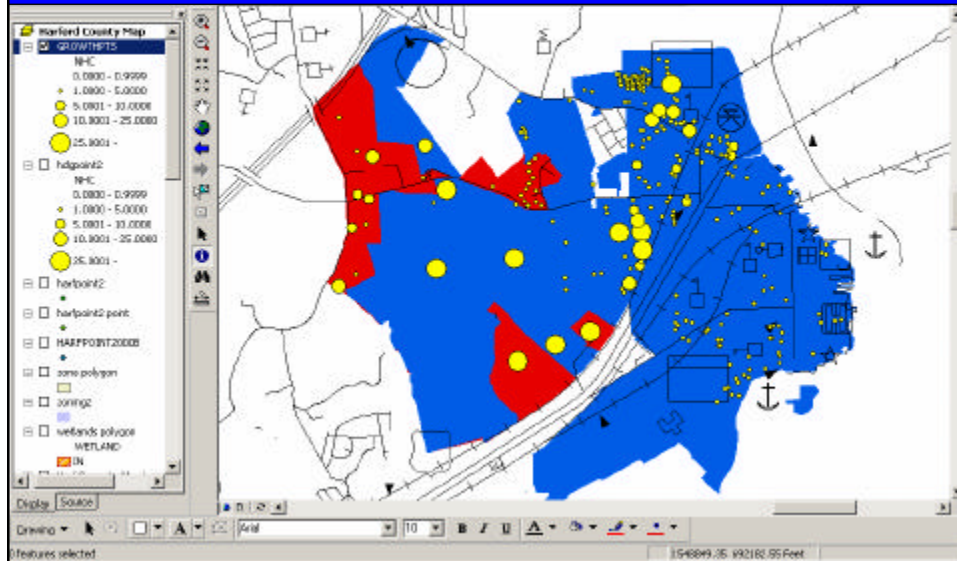
Current New Household Capacity (with no additional annexations)



Current New Household Capacity (with no additional annexations)

Zoning	New Household Capacity
H-C	0
H-MOE	0
H-PAC	1,958
H-R1	145
H-R2	493
H-RB	48
H-RO	5
Total	2,649

Potential New Household Capacity (with annexation of entire growth area)



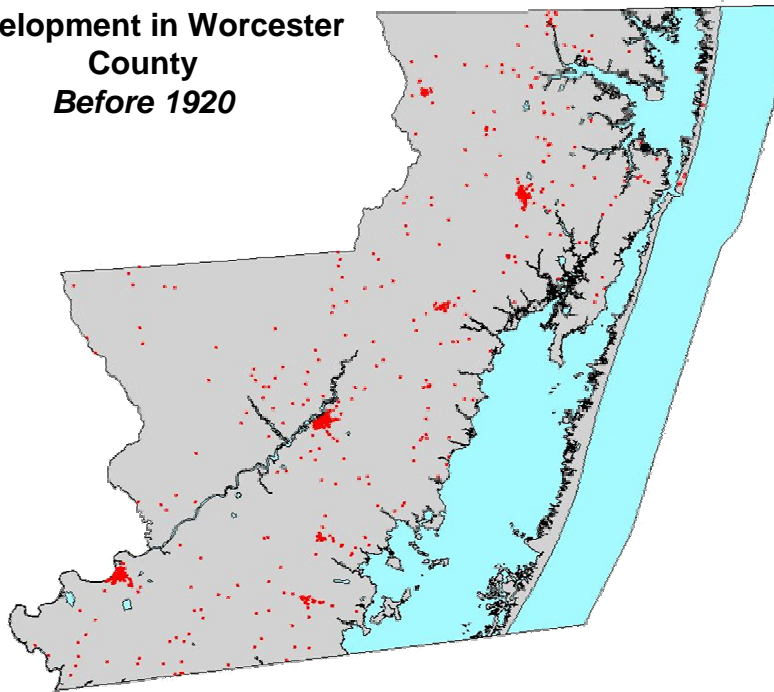
Potential New Household Capacity (with annexation of entire growth area)

Zoning	New Household Capacity
H-C	0
H-MOE	0
H-PAC	1,958
H-R1	145
H-R2	1,340
H-RB	48
H-RO	5
Total	3,496

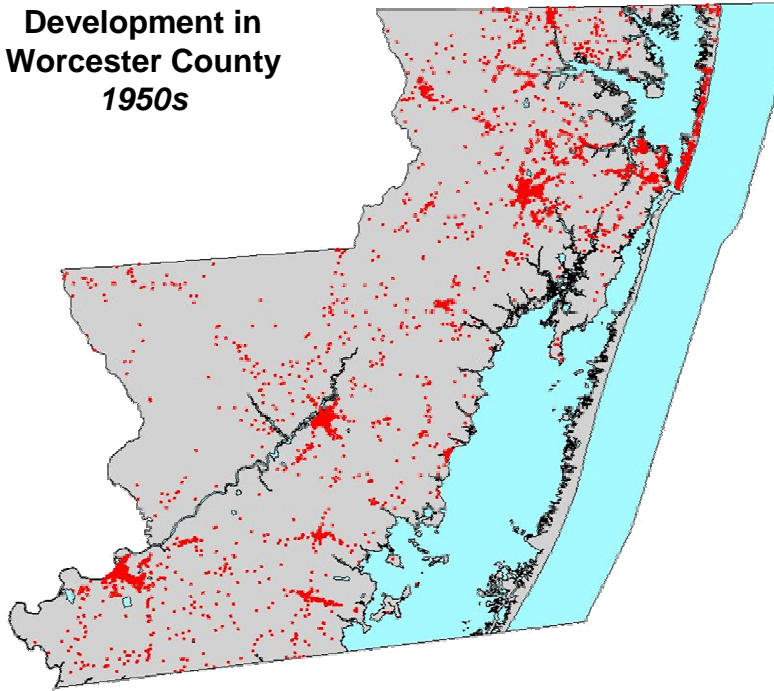
Maryland Coastal Bays Alternative Futures Project



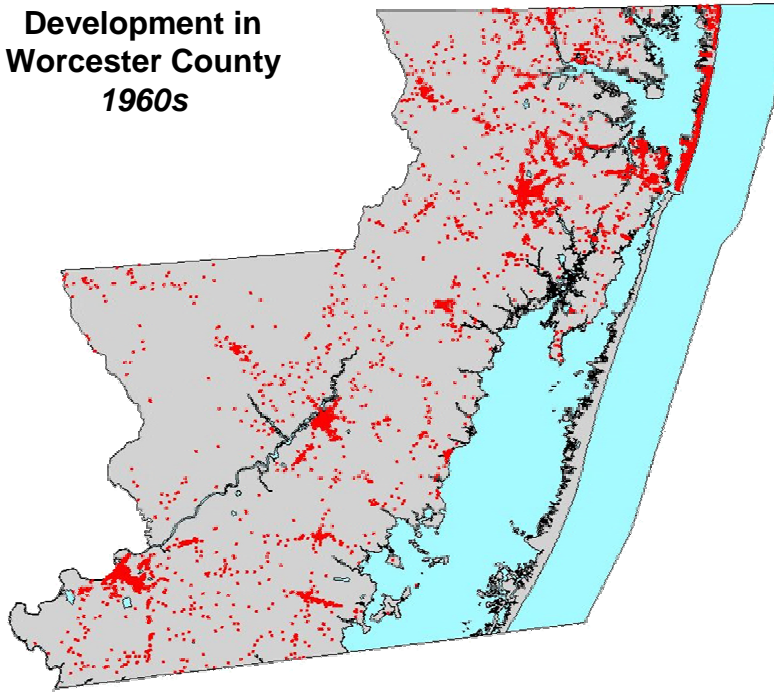
**Development in Worcester
County
Before 1920**



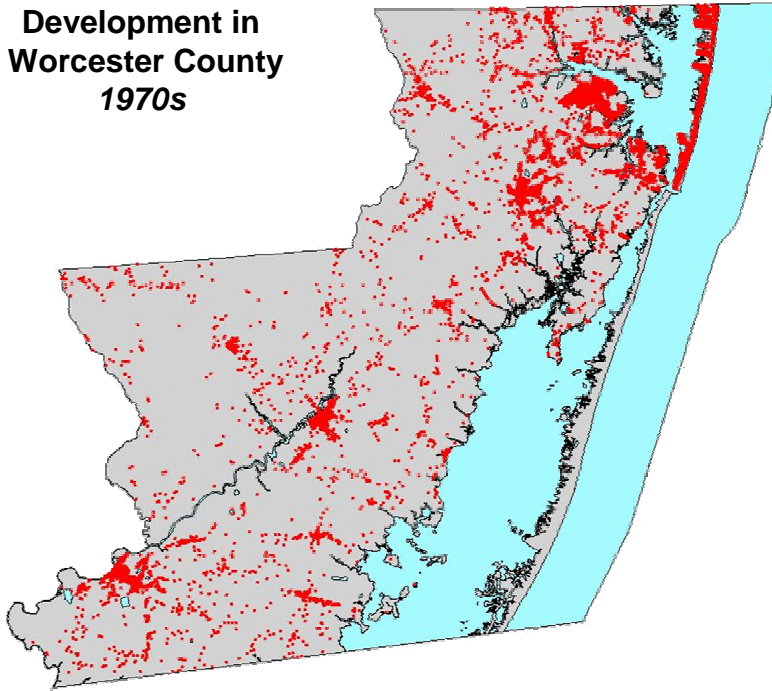
**Development in
Worcester County
1950s**



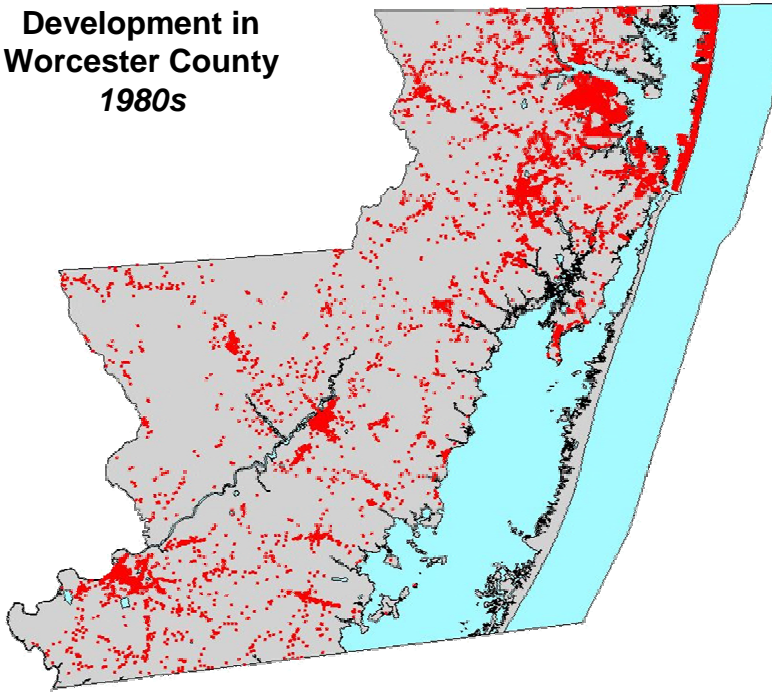
**Development in
Worcester County
1960s**

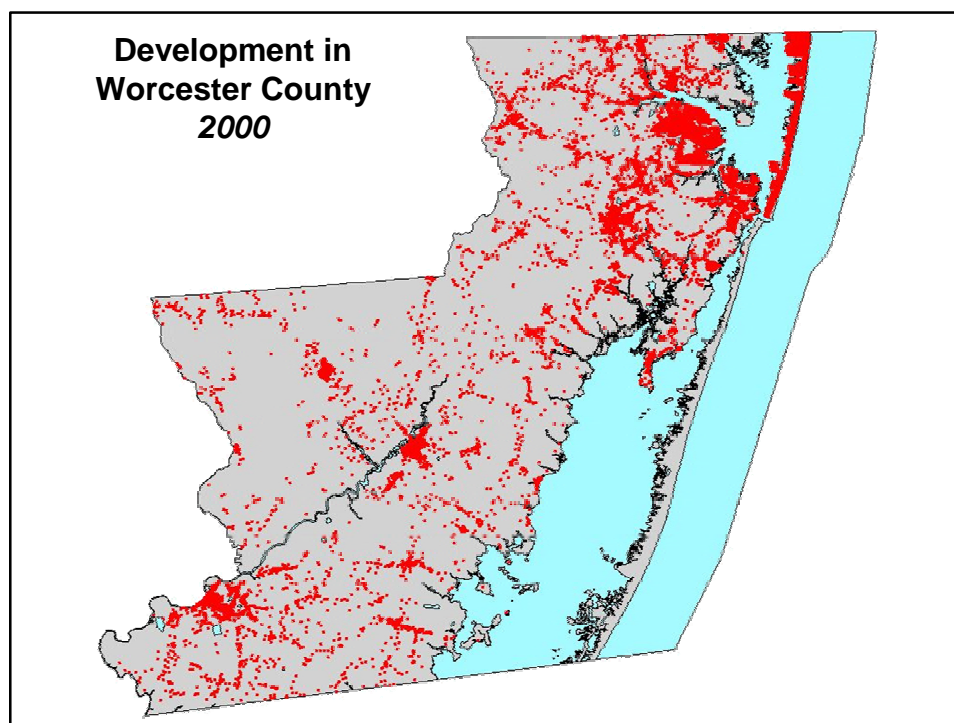


**Development in
Worcester County
1970s**



**Development in
Worcester County
1980s**



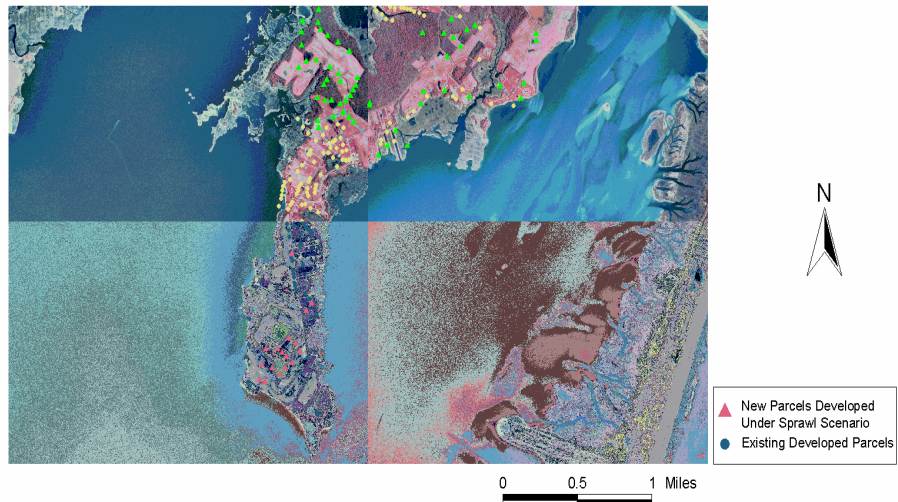


Key Development Trends

Table 3.1 (source: US Census)

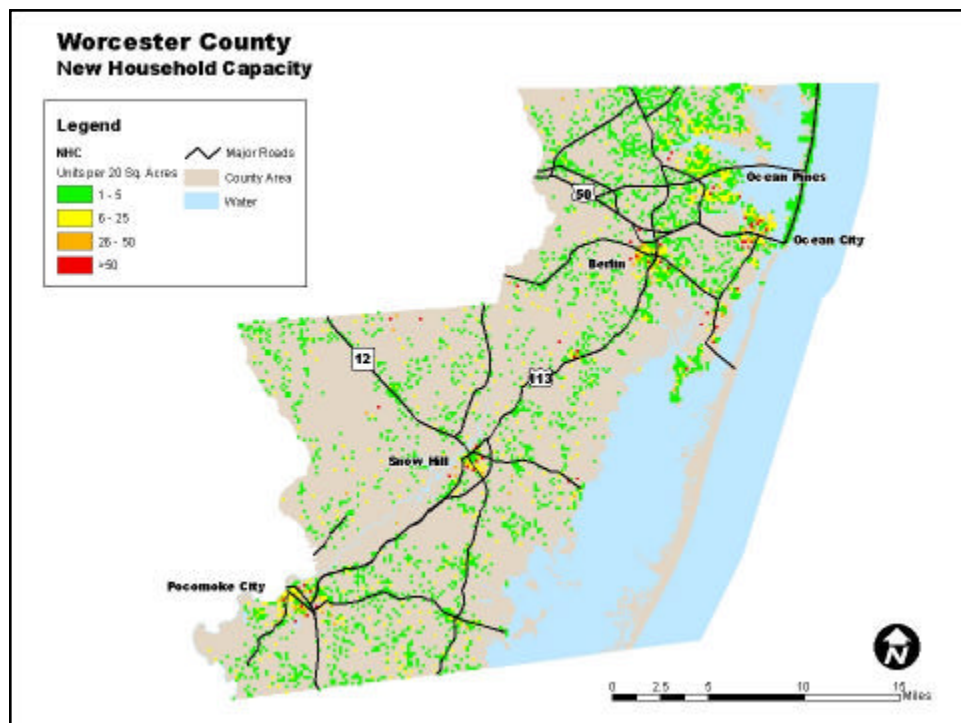
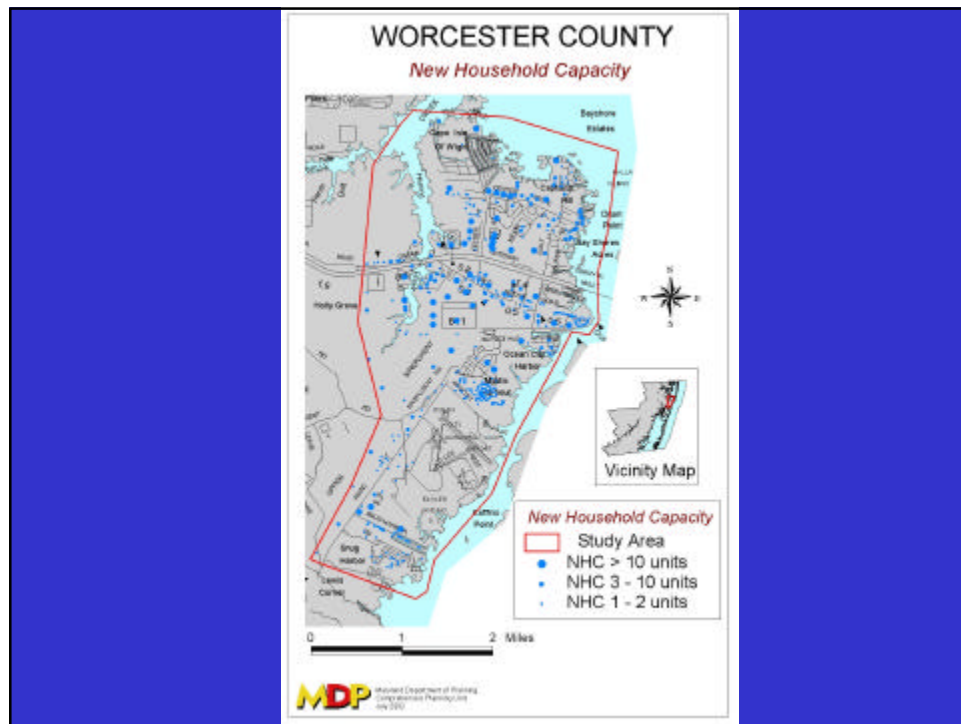
	1990	2000	% Change
Population	35,028	46,543	33%
Housing Units	41,800	47,360	13%
Occupied Housing Units	14,142	19,694	39%

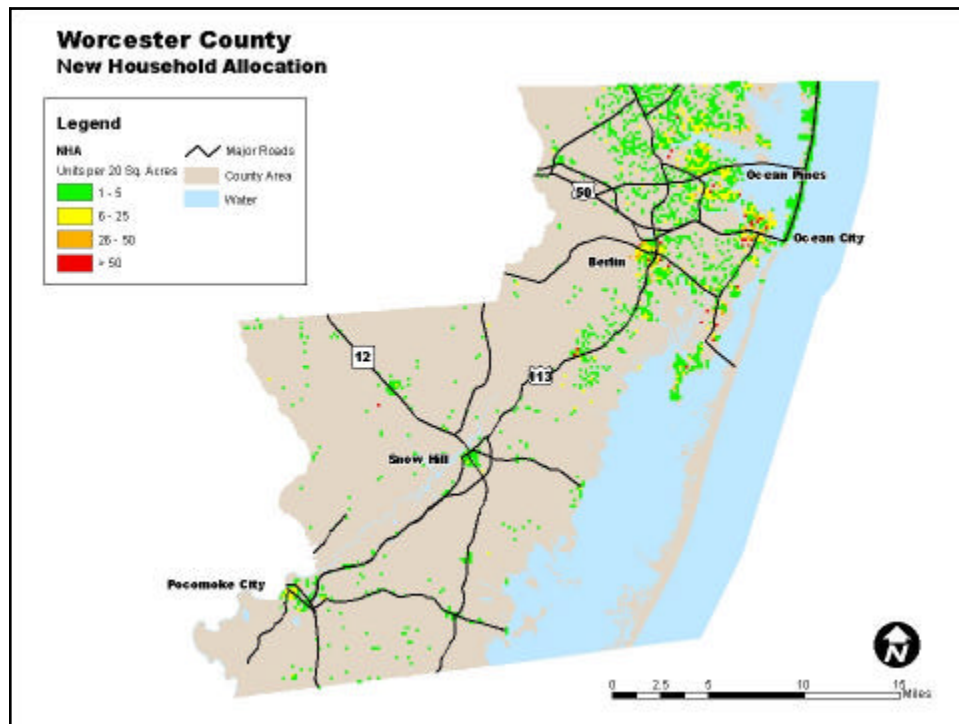
South Point: Developed and Undeveloped



South Point (on the ground)







Zoning District	New Household Capacity		Municipal Zoning District	New Household Capacity
A1	7,849		OC	268
C1	803		Poc	923
E1	2,969		SNH	838
R1	961		TwB	1,345
R2	4,302			
R3	1,678			
R4	476			
R5	275			
RO	0			
V1	326			
		Total	23,013	

Supply vs. Demand

- 2025 projection: 5,831 households (new).
- Alternative analysis included a projection bump-up to account for growth in seasonal units.
- Current Development Capacity Estimate: 10,053 units in the PFA and 12,960 (23,013 total).

Worcester County: Data Issues

- Cooperative county – basically data transfer, update, integration.
- Lack municipal data.
- Considering effects of seasonal growth.

Technical Assistance Issues

- Alternative Futures Project.
- Assistance with Maryland Coastal Bays Program.
- West Ocean City analysis.
- Coastal Bays Critical Area analysis.
- Septic system analysis.

Lessons Learned

- Improves with local staff input.
- Better use of the tax assessor info (legal description) for identifying unbuildable lots (e.g., out-lots, SWM, golf courses, HOA lands, etc.).
- Close working relationship with County over time.

Task Force Meeting 3

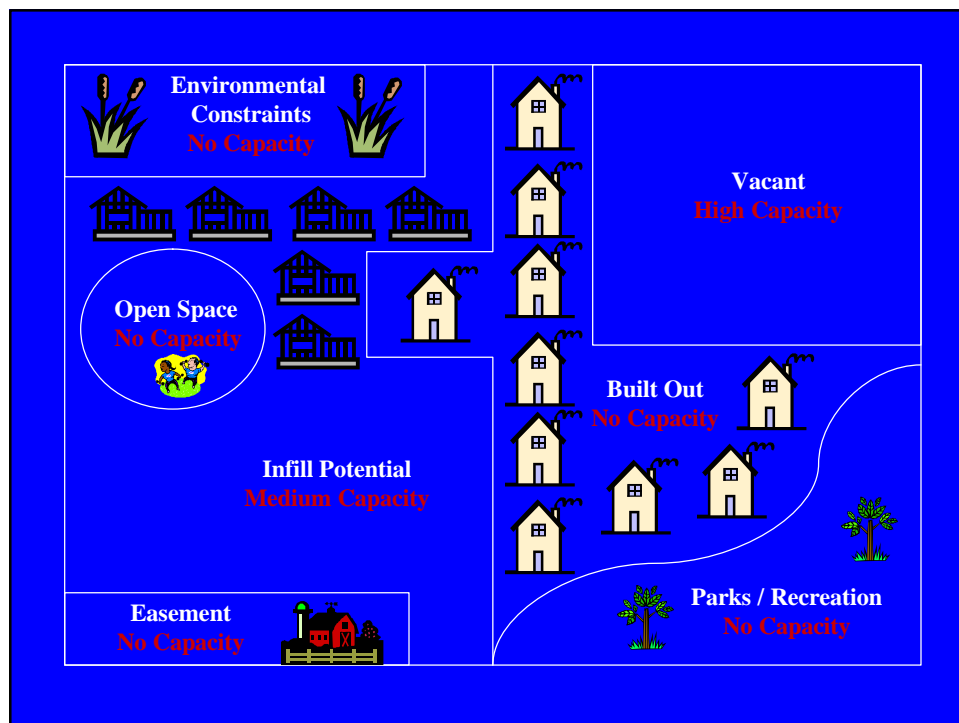
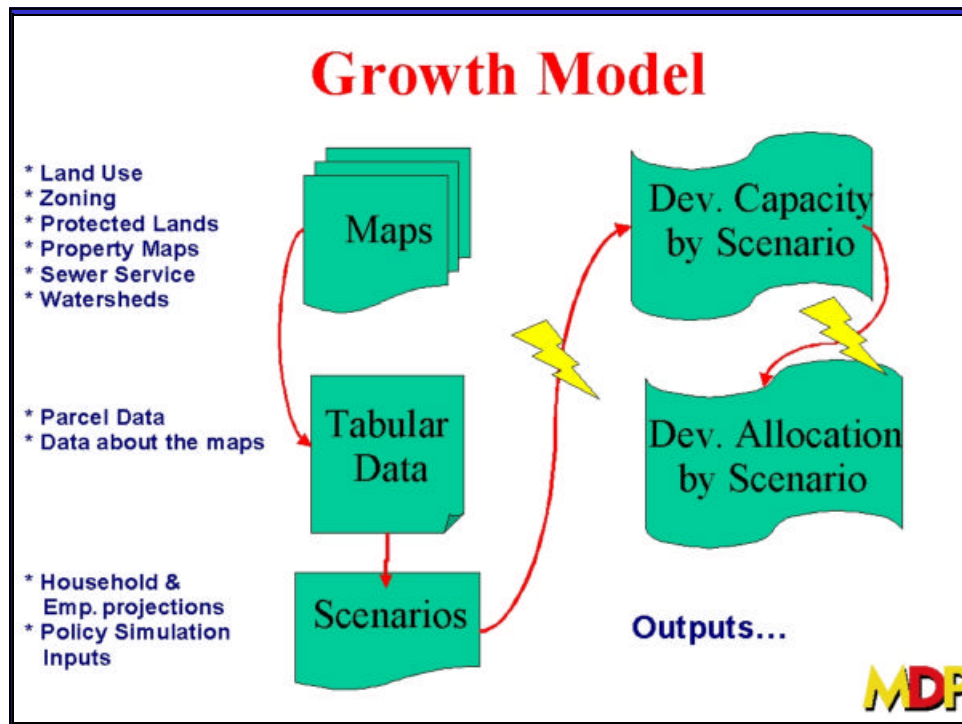
Development Capacity Task Force Meeting

February 4, 2004



Agenda

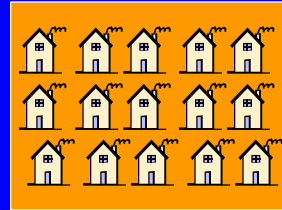
- MDP's Growth Model – Methodology
- Harford County's Analysis
- St. Mary's County Analysis



Development Capacity Examples

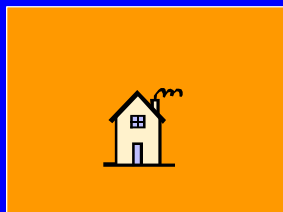


5 acre parcel – undeveloped, no constraints, 4 du/ac zoning, with a 75% yield = 3 du/ac.

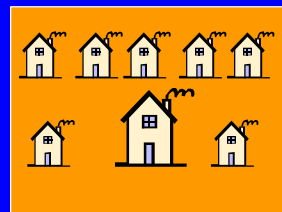


Capacity = 3 du/ac X 5 ac = 15 potential units.

Infill



5 acre parcel – 1 house, no constraints, 4 du/ac zoning, with a 75% yield = 3 du/ac.



Capacity = ((3 du/ac X (5 ac - .33 ac for the existing house)) X .5 infill factor = 7.005 infill du, rounded down = 7 potential new units.

Infill Floor



1 house, no constraints, 4 du/ac zoning, with a 75% yield = 3 du/ac, or .33 acre lot min.



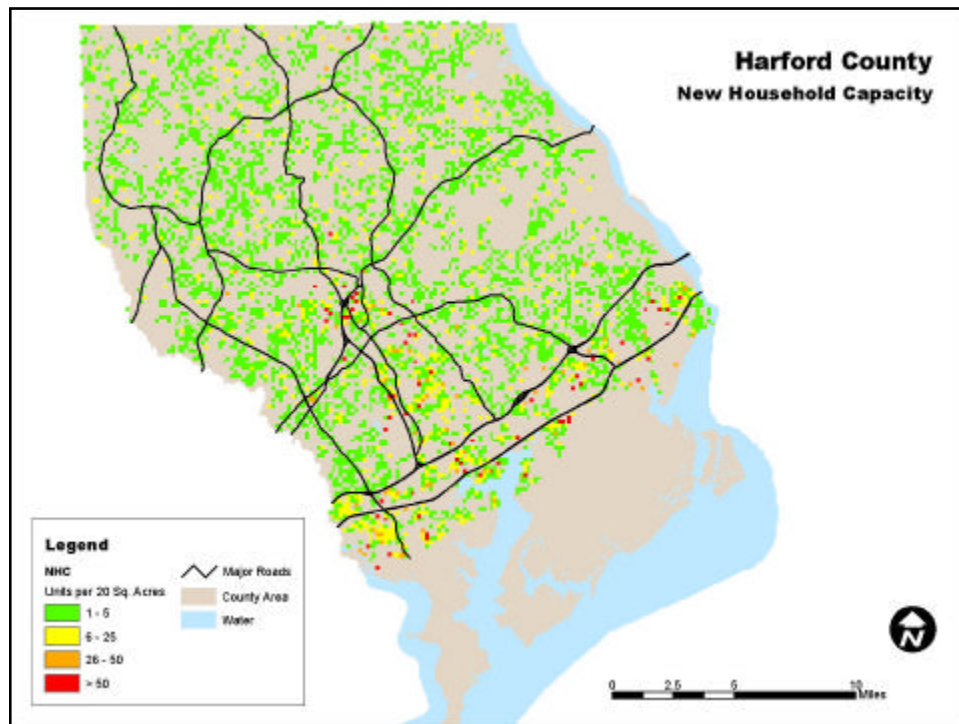
Minimum lot size needed to add an additional house = .825 ac.

(.33 ac min lot size X 1.5 infill rule) + .33 existing house = .825.

Undevelopable Parcel



Parcel is considered undevelopable if an easement, HOA parcel, wetland, park, graveyard, etc. Therefore no development capacity.



Harford County Key #s

- Year 2000 HHs = 79,667
- Projected 2025 HHs = 102,525

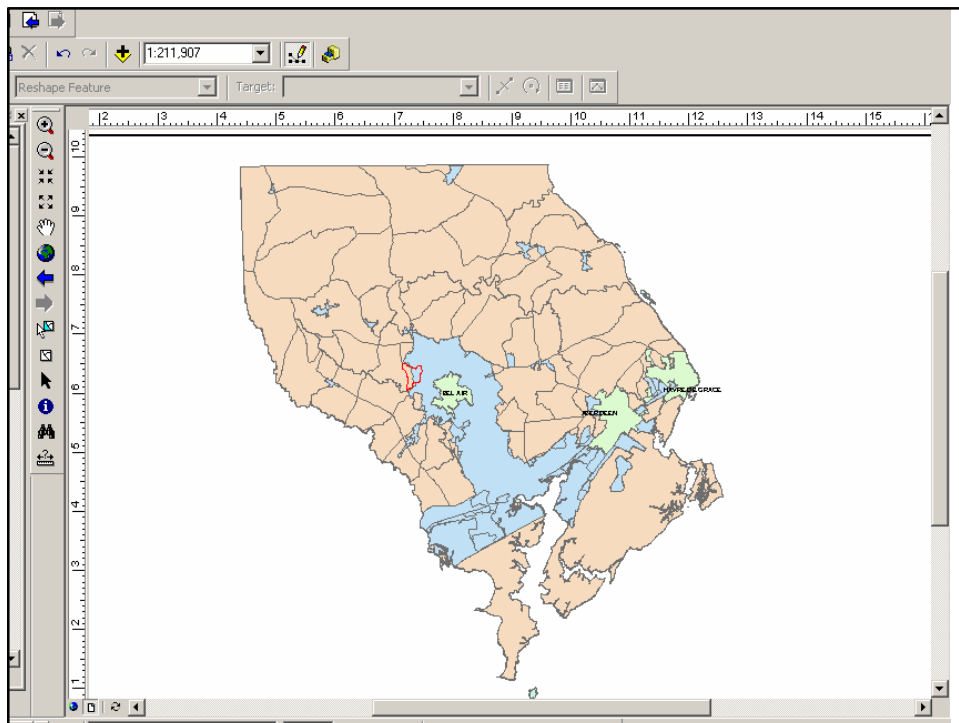
Key Differences in MDPs and Harford County's Analyses

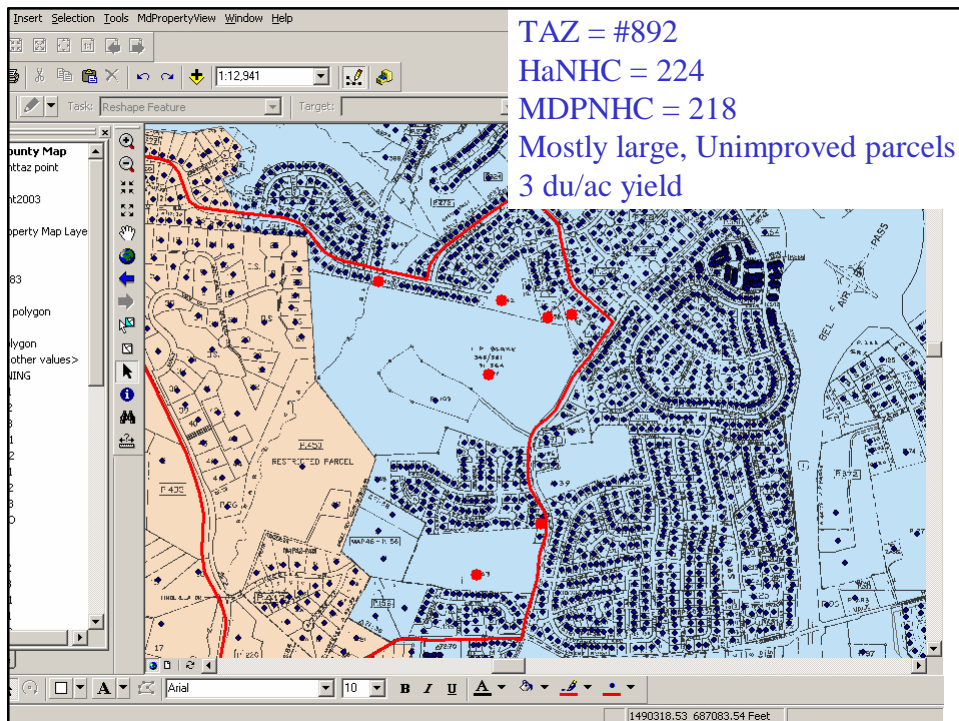
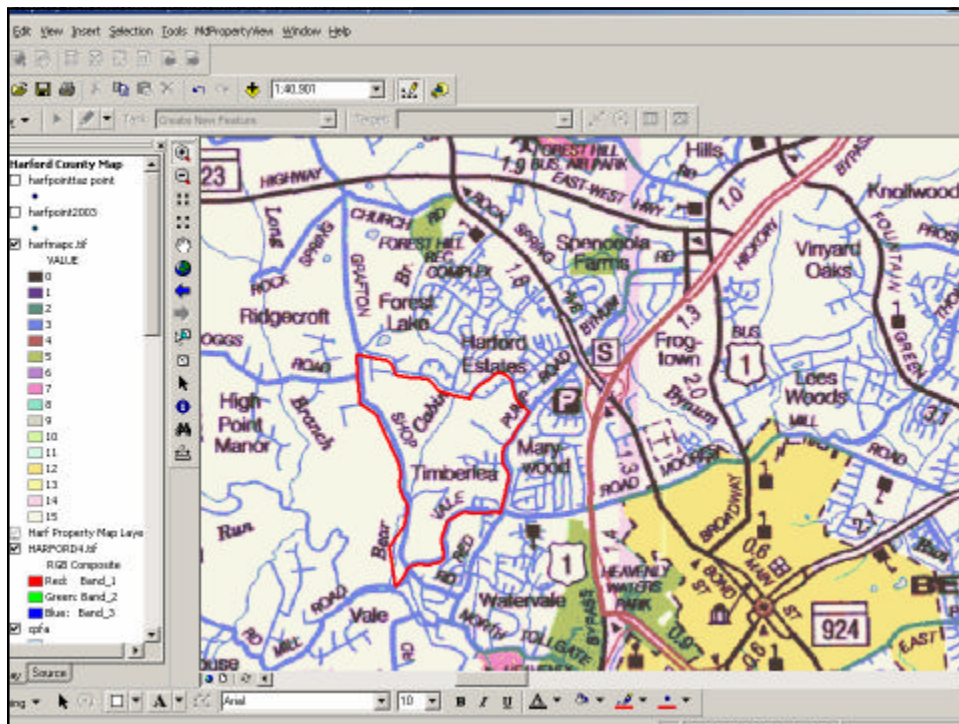
- They have parcel polygon data, us points.
- They don't include infill.
- County uses hydric soils for wetlands and has steep slope data.
- County does not further subdivide 2 acre or smaller parcels.

- ## Key Differences in MDPs and Harford County's Analyses
- They have parcel polygon data, us points.
 - They don't include infill.
 - County uses hydric soils for wetlands and has steep slope data.
 - County does not further subdivide 2 acre or smaller parcels.

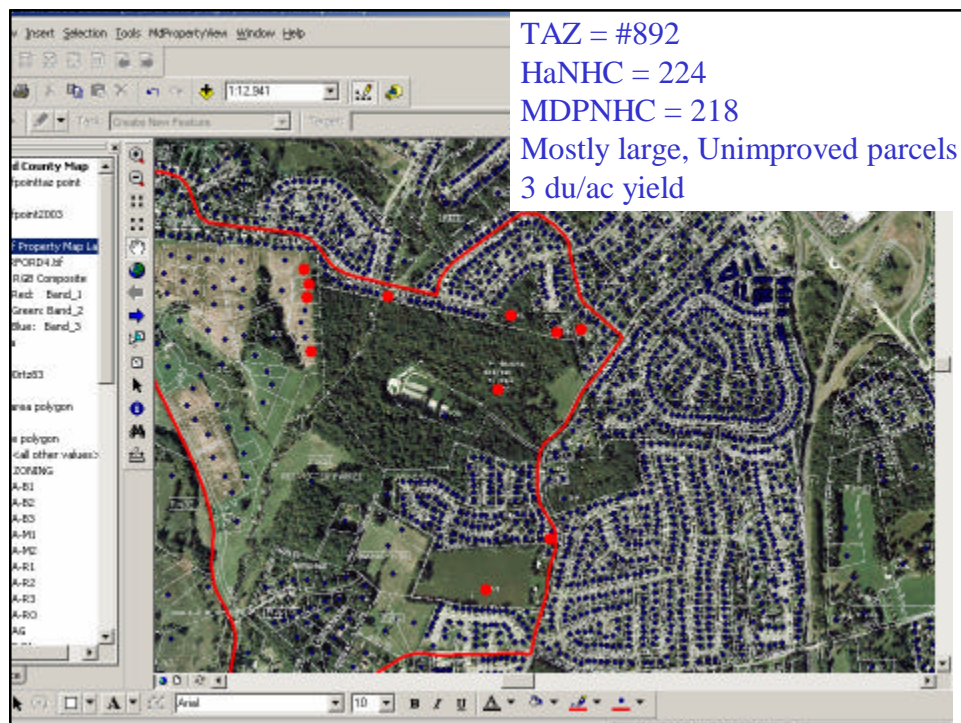
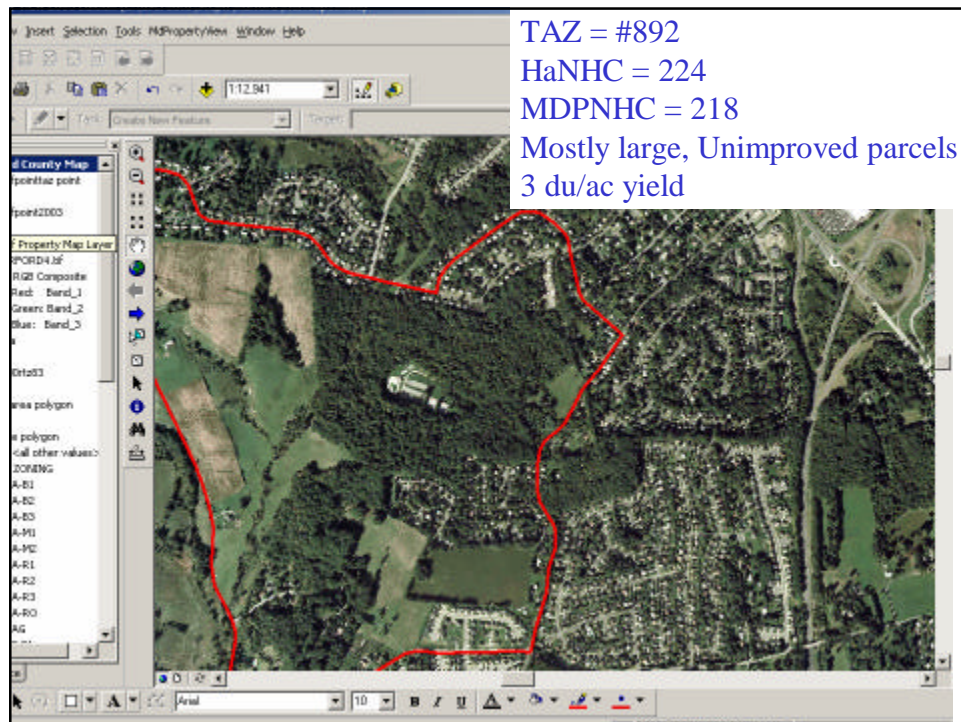
Harford County Capacity Analysis					
February 1, 2004					
Zoning District	Yield for Sewered Areas	New Household Capacity			
AG	0.1 du/acre	9,062	PFA	Capacity	
B1	0	0	Out	11,728	
B2	0	0	In	22,131	
B3	0	0	County Total	33,859	
C1	0	0			
G1	0	0			
L1	0.46 du/acre	0	PFA	Infill	
NONE	1.13 du/acre	0	Out	54	
R	0.75 du/acre	53	In	1,531	
R1	1.36 du/acre	4,024			
R2	3.19 du/acre	5,375			
R3	5.78 du/acre	6,275	PFA	<2 acres	
R4	8.13 du/acre	3,070	Out	1,697	
RO	3.26 du/acre	66	In	2,772	
ROW	0	0			
RR	0.4 du/acre	1,582			
VB	2.25 du/acre	39	Infill and <2 acres are subsets of total NHC.		
VR	3 du/acre	127			
Total		29,673			
Municipalities		New Household Capacity			
Aberdeen		1,020			
Bel Air		190			
Havre de Grace		2,976			
Municipalities		4,186			

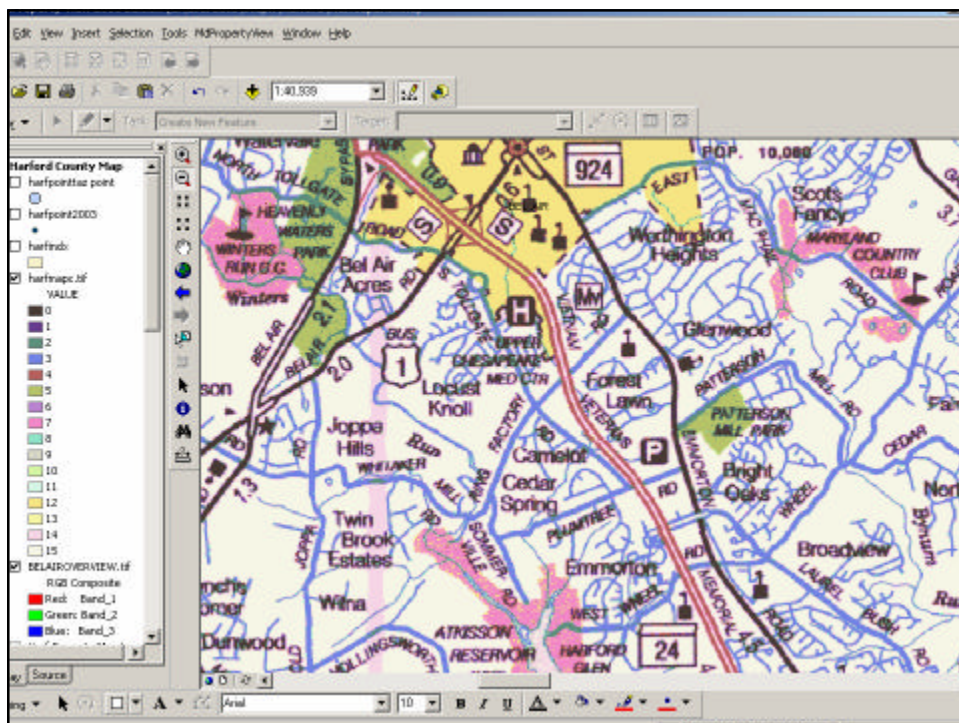
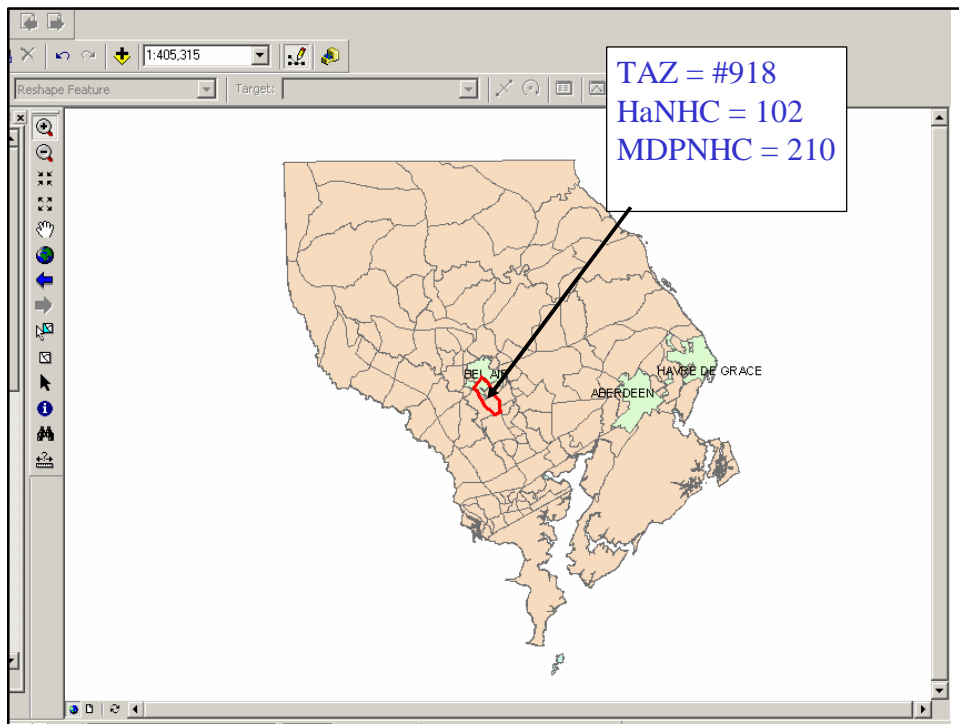
Rough Draft – For Discussion Only Steps in estimating development capacity – Harford County				
Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels		314,959 acres	86,617	
	Subtract land zoned for nonresidential use (commercial, industrial)	12,110	3,119	
Residentially Zoned Acres		302,849 acres	83,498	
	Subtract tax exempt land (tax exempt code)	97,321 acres	1,375	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA, etc)	50,162 acres	2,647	
	Subtract already built-out areas, as well as parcels constrained from development by Critical Areas	54,468 acres	71,061	
Acres and Parcels with Capacity	Total countywide capacity	100,897 acres	8,415	33,851
Capacity Inside PFA				22,131***
Capacity Outside PFA				11,728
Acres and Parcels Associated with In-Fill Development	Improved Parcels (>\$10,000), less than 5 acres.	1,435 acres	864	1,585
Acres and Parcels Associated with Small parcels	Parcels <2 acres in size (improved or unimproved)	2,750	4,004	4,530
Acres and parcels associated with Greenfield, undeveloped parcels*	(includes areas in and out of PFA)	99,461 acres	7,551	33,559
***Note: MDP is working with Harford County to correct a few problem parcels that will result reduction of between 2,000 and 3,000 units of capacity.				

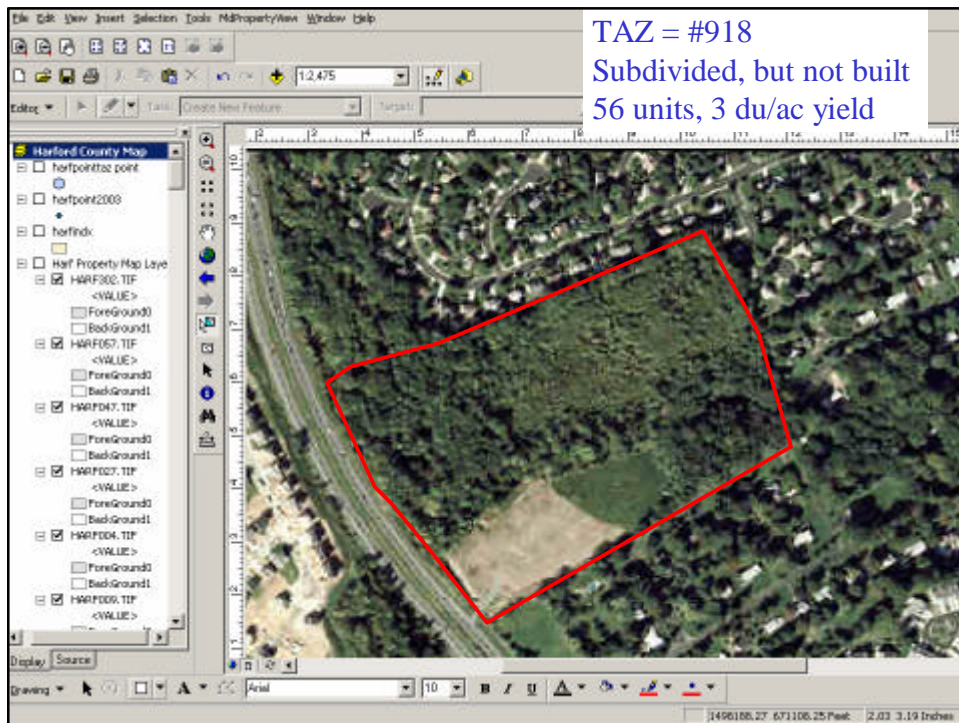


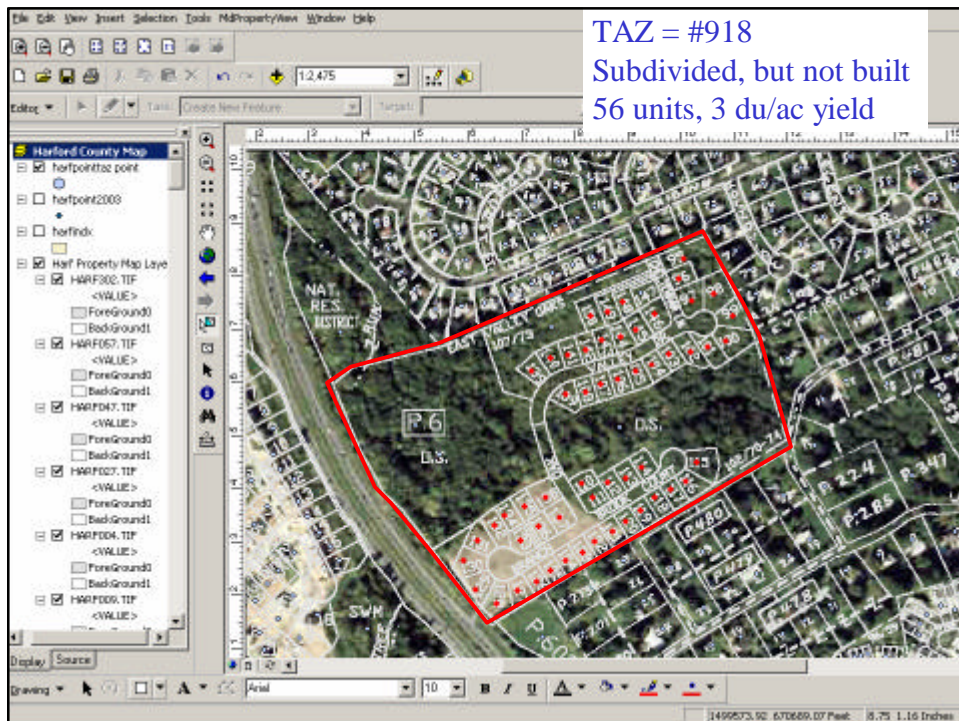
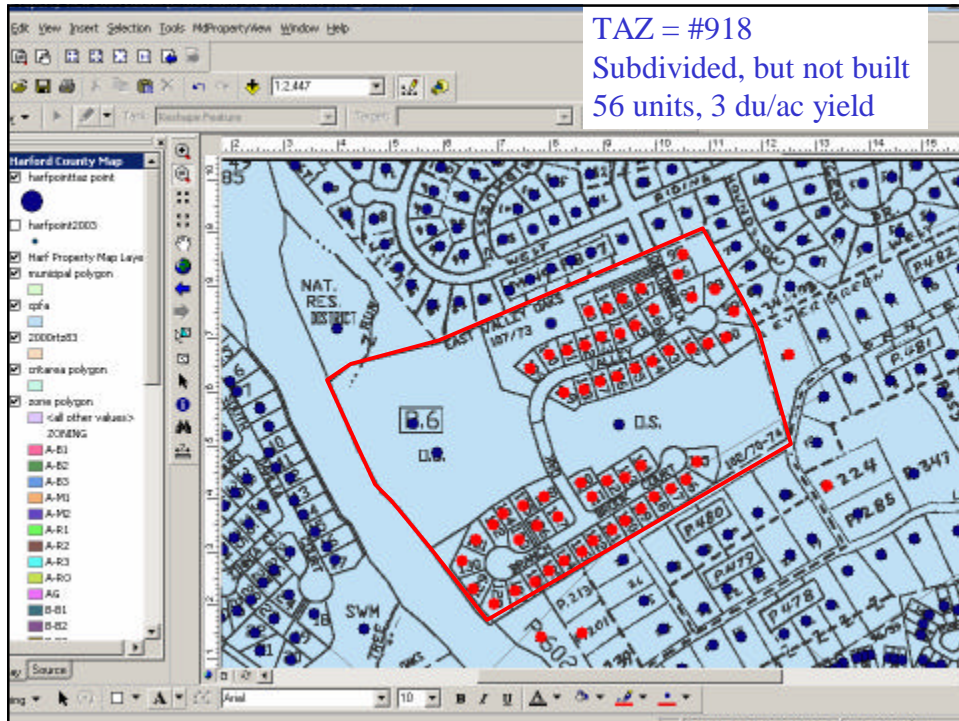


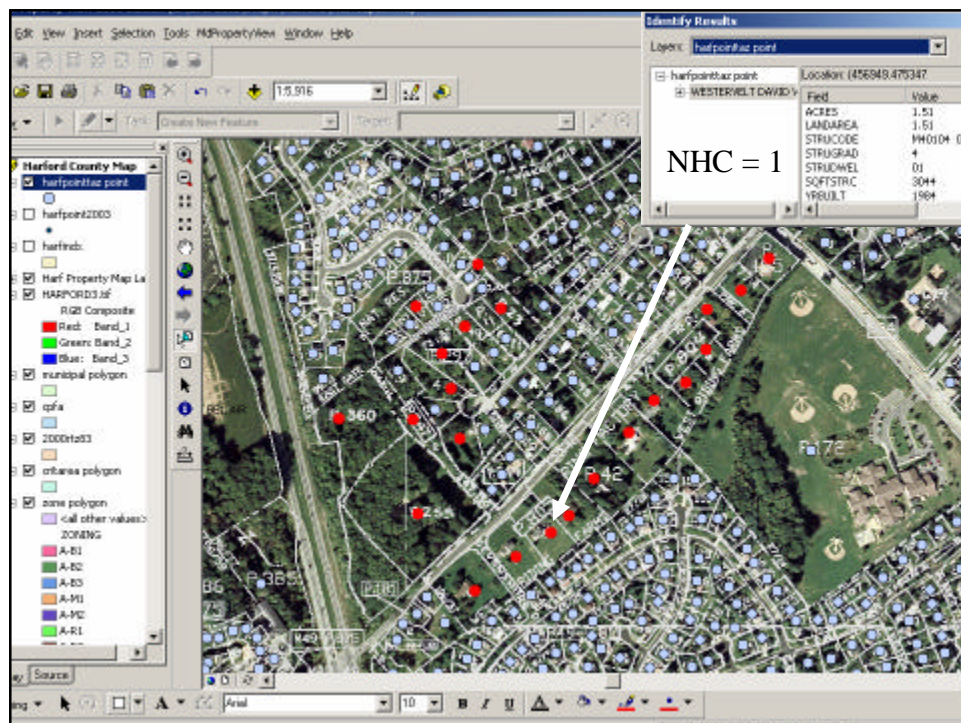
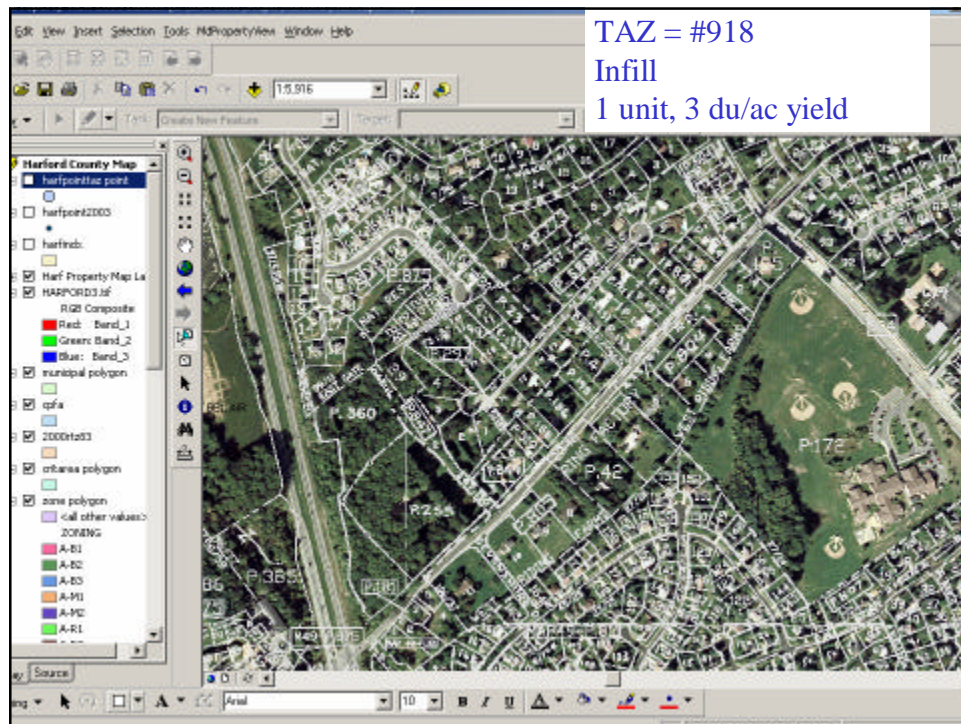
TAZ = #892
 HaNHC = 224
 MDPNHC = 218
 Mostly large, Unimproved parcels
 3 du/ac yield

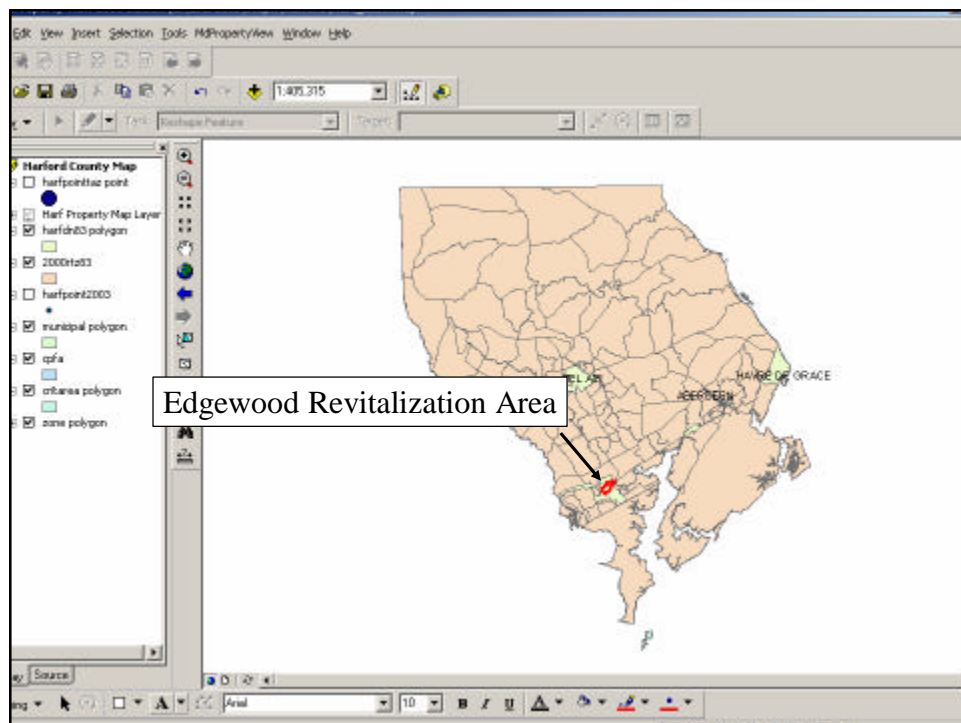
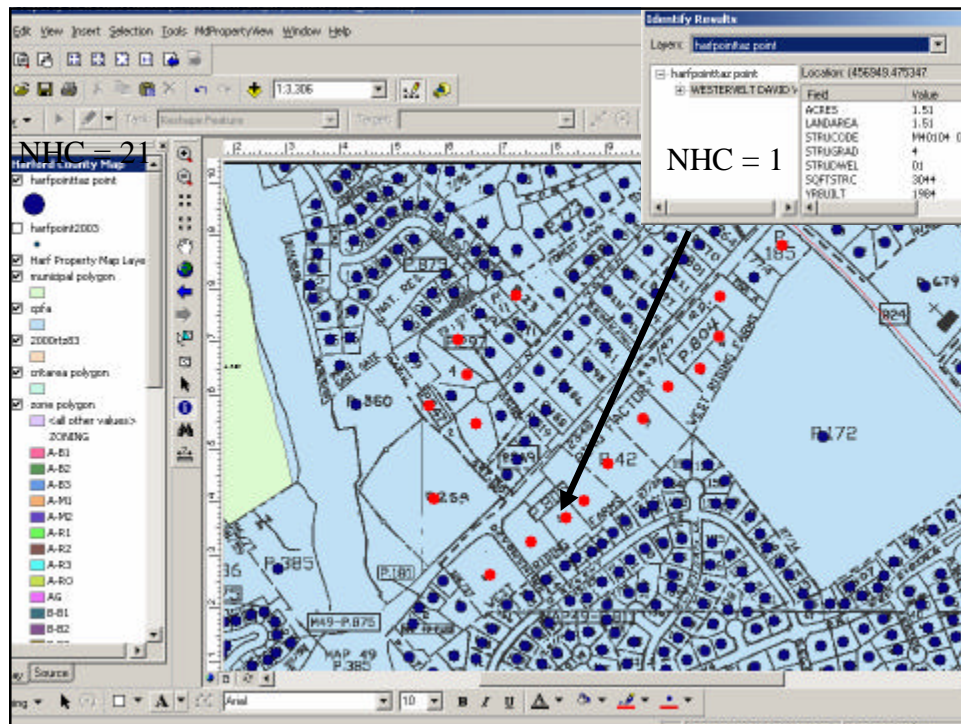


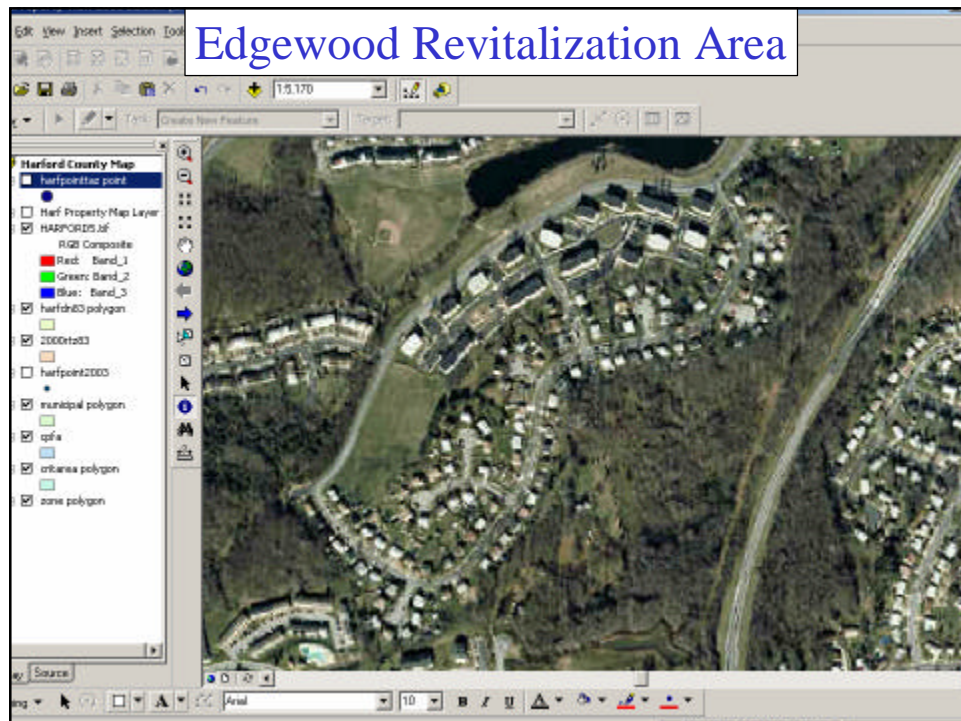
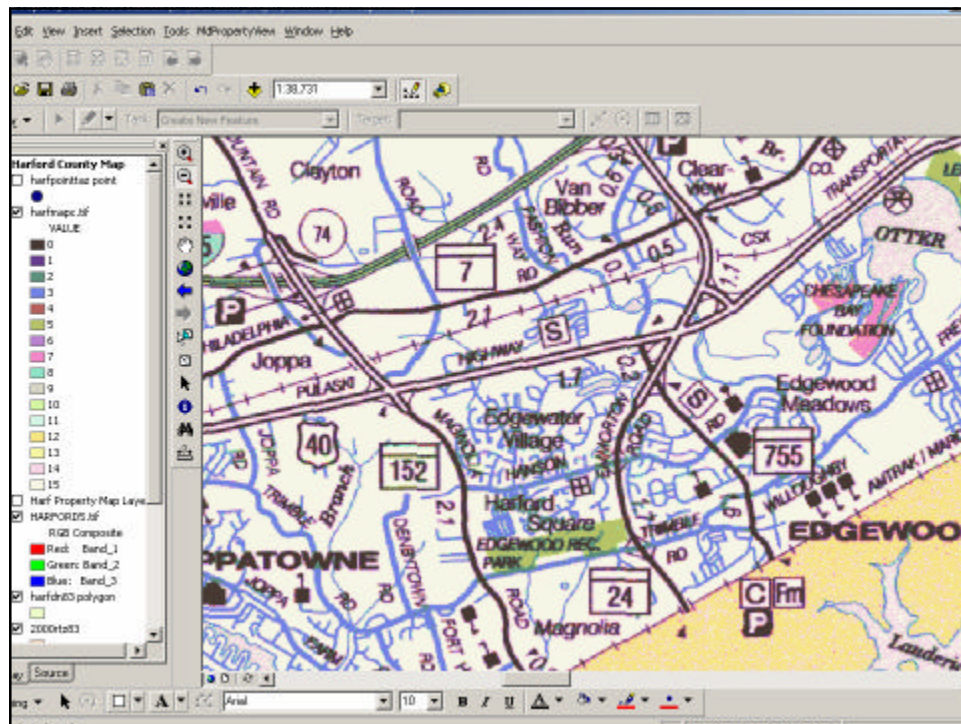


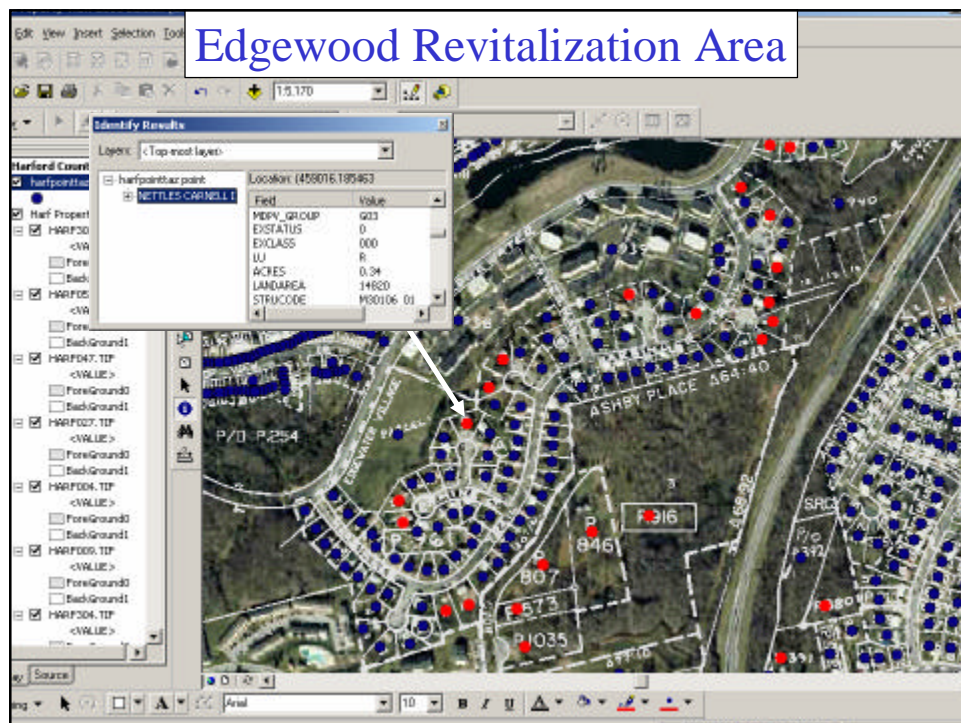
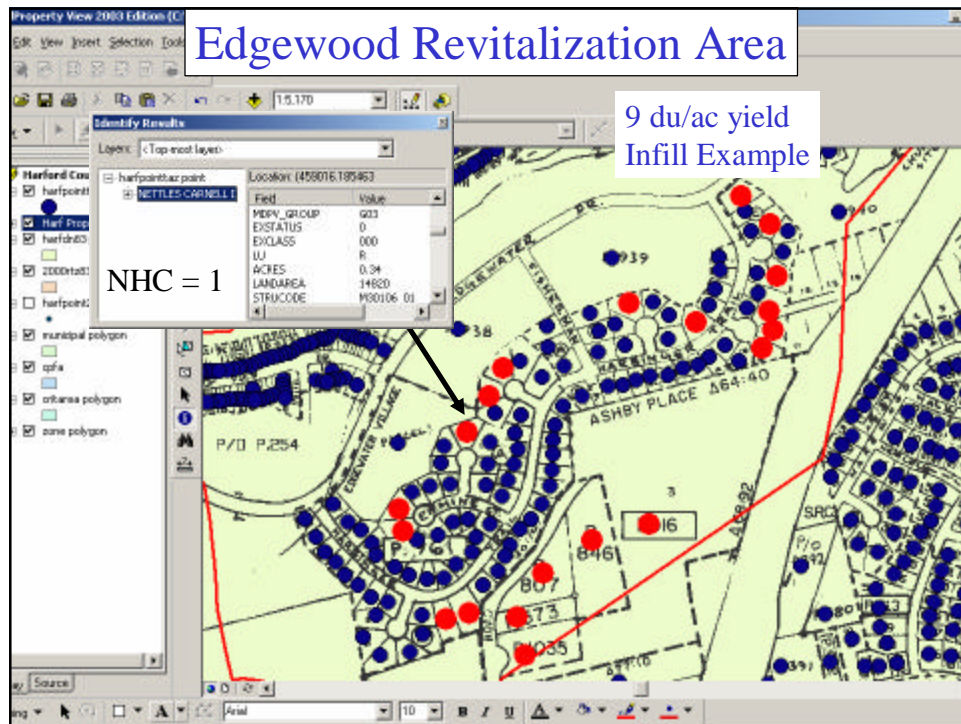


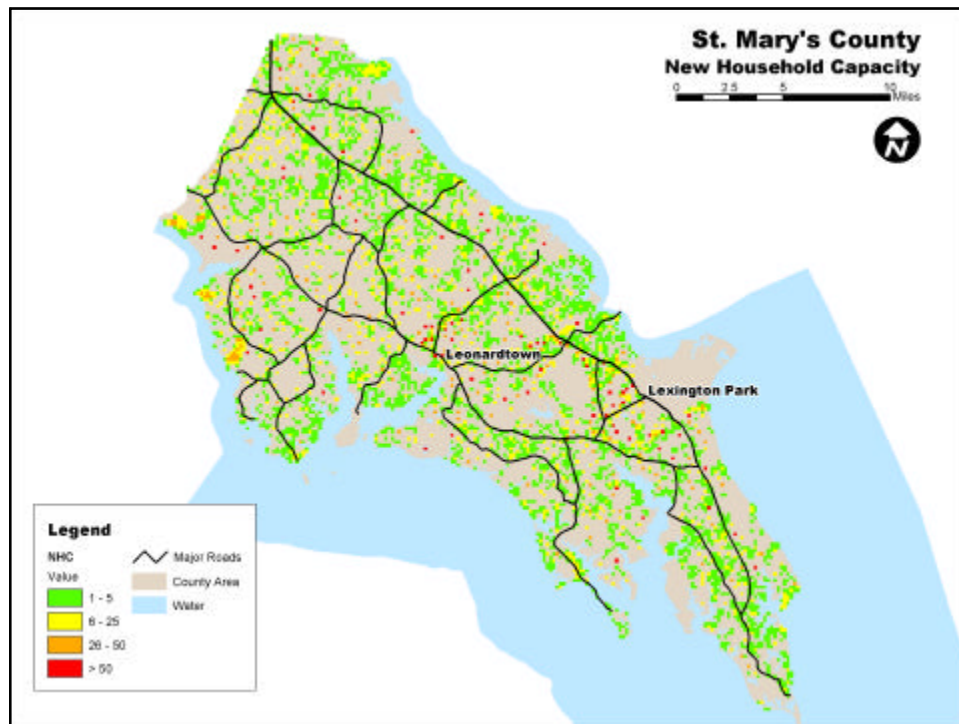












St. Mary's Key #s

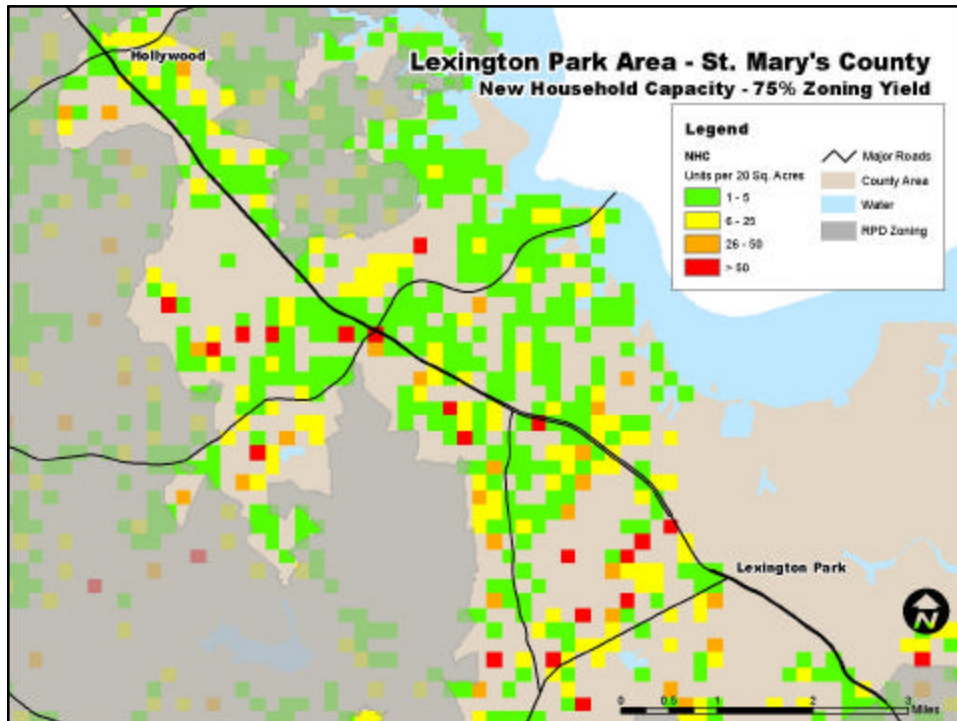
- Year 2000 HHs = 30,642
- Projected 2025 HHs = 46,950

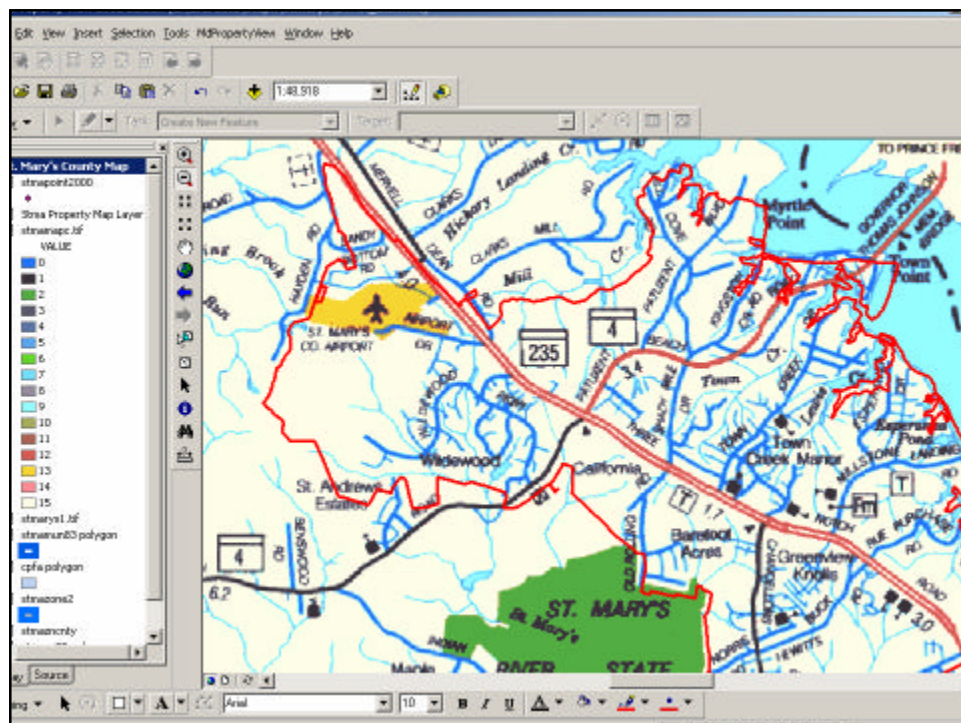
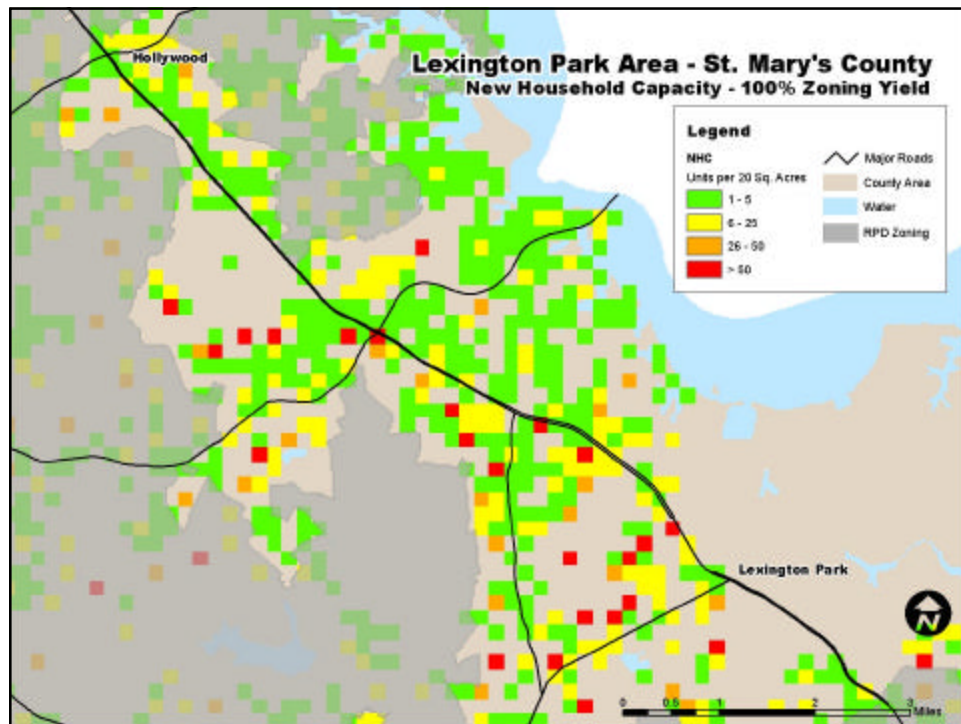
St. Mary's County Capacity									
January 30, 2004									
Zoning	Yield for Sewered Areas	Yield for Non-Sewered Areas	Percent of District that is Residential	New Household Capacity	Zoning	Yield for Sewered Areas	Yield for Non-Sewered Areas	Percent of District that is Residential	New Household Capacity
CC	0	0	0%	0	PUD-5.0	3.75 du/acre	0.50 du/acre	100%	356
CM	0	0	0%	0	PUD-CP	0	0	0%	0
CMX	3.75 du/acre	0.50 du/acre	10%	24	PUD-IP	0	0	0%	0
DMX	7.5 du/acre	0.50 du/acre	10%	35	PUD-R	3.50 du/acre	0.50 du/acre	100%	224
I	0	0	0%	0	PUD-X	3.75 du/acre	0.50 du/acre	100%	144
OBP*	FAR = 0.5	0	20%	1644	RCL	0	0	0%	0
PUD-0.615	0.46 du/acre	0.46 du/acre	100%	111	RH	7.50 du/acre	0.50 du/acre	100%	494
PUD-1.5	1.13 du/acre	0.50 du/acre	100%	126	RL	1.50 du/acre	0.50 du/acre	100%	4,973
PUD-2.0	1.50 du/acre	0.50 du/acre	100%	88	RMX	3.75 du/acre	0.50 du/acre	10%	30
PUD-2.83	2.10 du/acre	0.50 du/acre	100%	0	RNC	1.54 du/acre	0.50 du/acre	100%	3,549
PUD-3.0	2.25 du/acre	0.50 du/acre	100%	51	RPD	0.20 du/acre	0.20 du/acre	100%	20,622
PUD-3.5	2.62 du/acre	0.50 du/acre	100%	197	RSC	0	0	0%	0
PUD-4.1	3.075 du/acre	0.50 du/acre	100%	222	TMX	3.75 du/acre	0.50 du/acre	10%	27
PUD-4.28	3.15 du/acre	0.50 du/acre	100%	776	VMX	3.75 du/acre	0.50 du/acre	10%	30
*Note: For the OBP zone, an FAR of 0.5, 20% of the land was assumed Residential, and the sq. ft. per du was 1150 sq. ft. (average of range between 800 and 1500 sq. ft.)				Total					33,723
Leonardtown Zoning									
Zoning	Yield for Sewered Areas	Yield for Non-Sewered Areas	New Household Capacity						
L-CG	0	0	0						
L-CH	0	0	0						
L-CM	0	0	0						
L-CO	0	0	0						
L-IO	0	0	0						
L-PUDM	3.75 du/acre	0.50 du/acre	416						
L-RMF	9 du/acre	0.50 du/acre	197						
L-RP	0	0	0						
L-RSF	4 du/acre	0.50 du/acre	158						
Total			771						

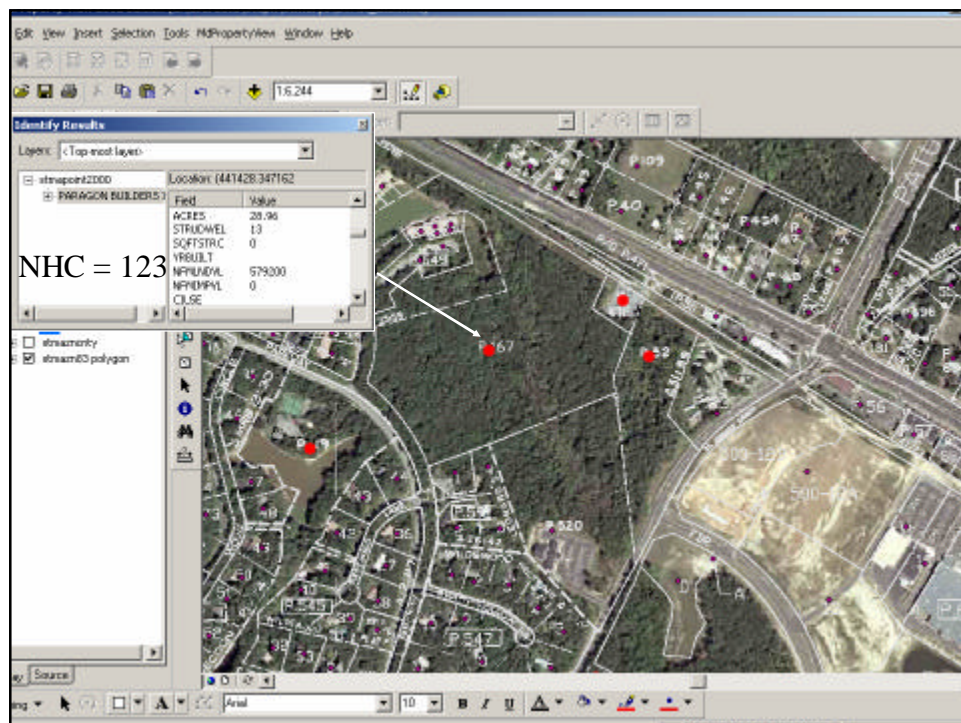
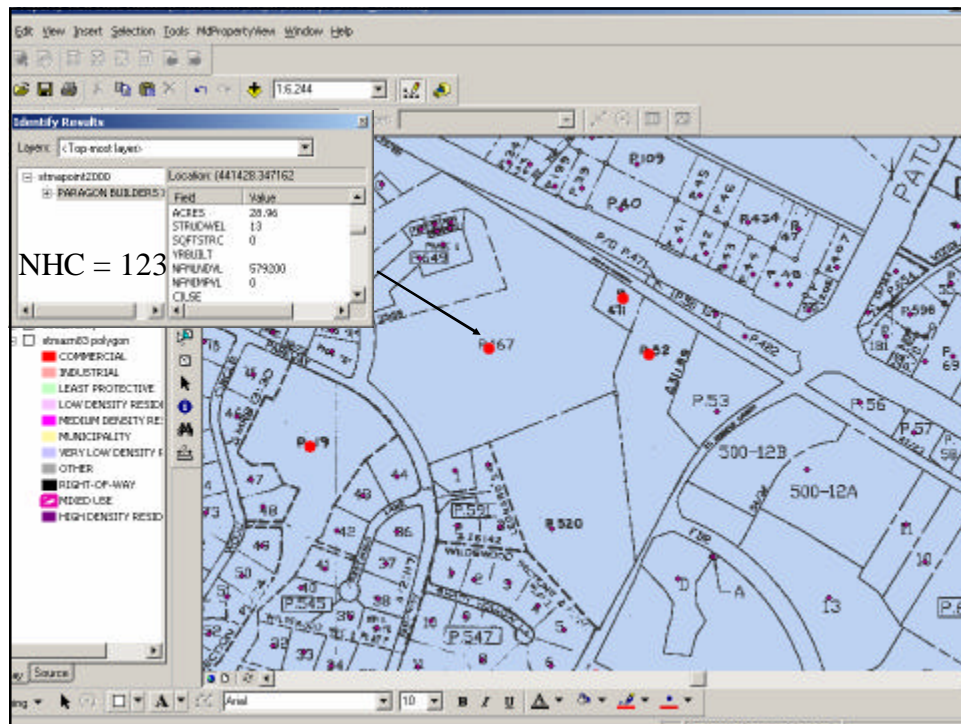
St. Mary's County Capacity - 100% of the allowable density									
February 1, 2004									
Zoning	Yield for Sewered Areas	Yield for Non-Sewered Areas	Percent of District that is Residential	New Household Capacity					
CC	0	0	0%	0					
CM	0	0	0%	0					
CMX	3.75 du/acre	0.50 du/acre	10%	30					
DMX	7.5 du/acre	0.50 du/acre	10%	48					
EXEMPT	0	0	0%	0					
I	0	0	0%	0					
OBP*	FAR = 0.5	0	49%	4058					
PUD-0.615	0.615 du/acre	0.5 du/acre	100%	121					
PUD-1.5	1.5 du/acre	0.50 du/acre	100%	126					
PUD-2.0	2 du/acre	0.50 du/acre	100%	104					
PUD-2.83	2.83 du/acre	0.50 du/acre	100%	0					
PUD-3.0	3 du/acre	0.50 du/acre	100%	51					
PUD-3.5	3.5 du/acre	0.50 du/acre	100%	108					
PUD-4.1	4.1 du/acre	0.50 du/acre	100%	288					
PUD-4.28	4.28 du/acre	0.50 du/acre	100%	837					

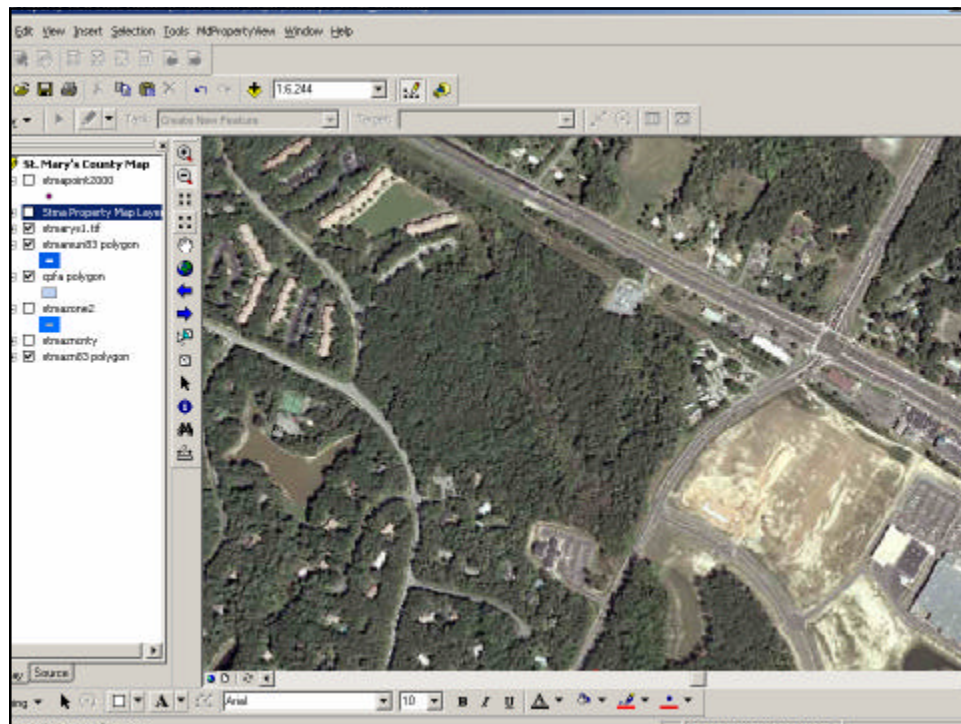
Steps in estimating development capacity – St. Mary's County

Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels		221,742 acres	39,290	
	Subtract land zoned for nonresidential use (commercial, industrial)	2,287	516	
Residentially Zoned Acres		219,455 acres	38,774	
	Subtract tax exempt land (tax exempt code)	19,441 acres	598	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	33,574 acres	2,303	
	Subtract already built-out areas, as well as parcels constrained from development by Critical Areas capacity	37,737 acres	24,937	
Acres and Parcels with Capacity		128,703	10,936	38,133
Capacity Inside the PFA				20,577
Capacity Outside the PFA				17,556
Acres and Parcels in OBP Zone with Capacity	49% residential, 51% non-residential	439.5	33	4,058
Acres and Parcels in Mixed Use Zone with Capacity	10% of land is residential, 90% is non-residential	1,451	394	178
Acres and Parcels Associated with In-Fill Development	Improved Parcels (>\$10,000), less than 5 acres.	260.3610	601	338
Acres and Parcels associated with capacity on small parcels	Parcels <2 acres in size (improved or unimproved)	6,197	3,726	6,554
Acres and parcels associated with Greenfield, undeveloped parcels		126,990	9,908	33,559









Task Force Meeting 4

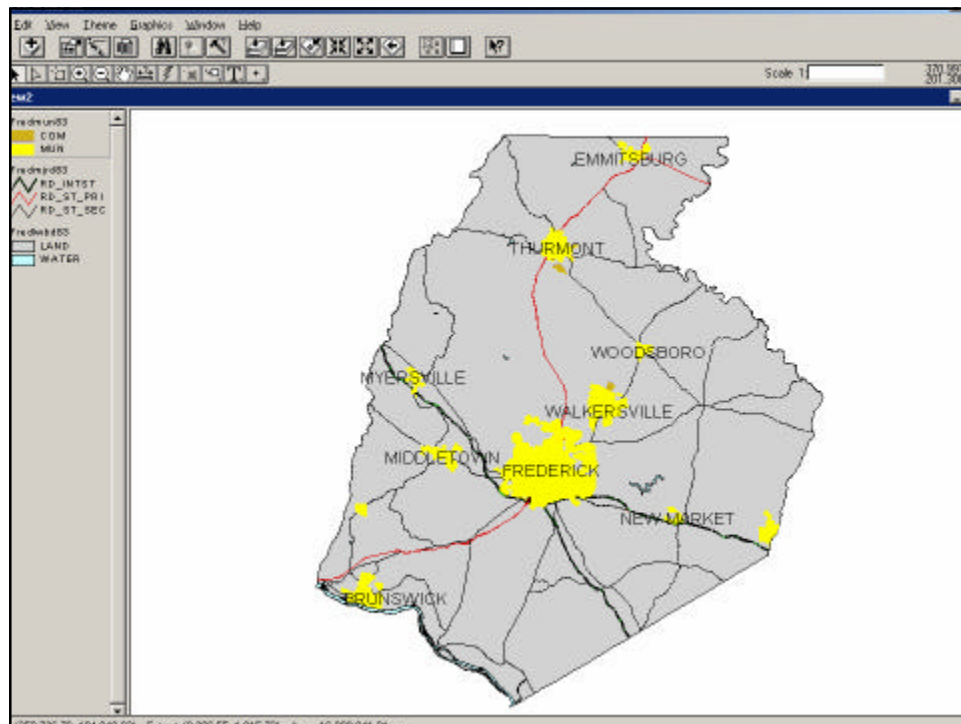
Development Capacity Task Force Meeting

March 3, 2004



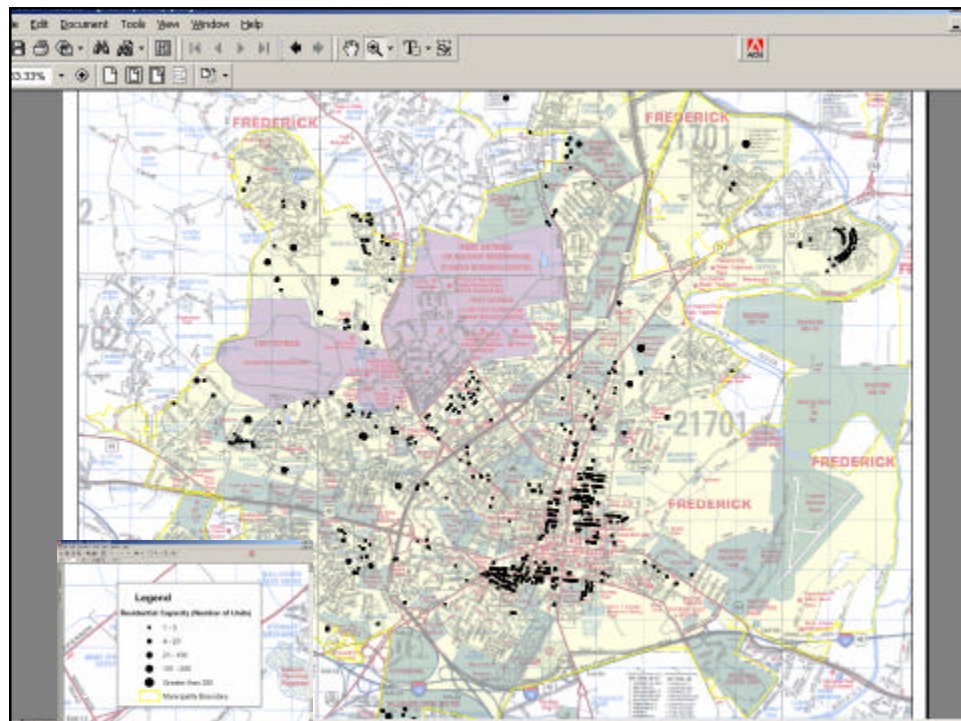
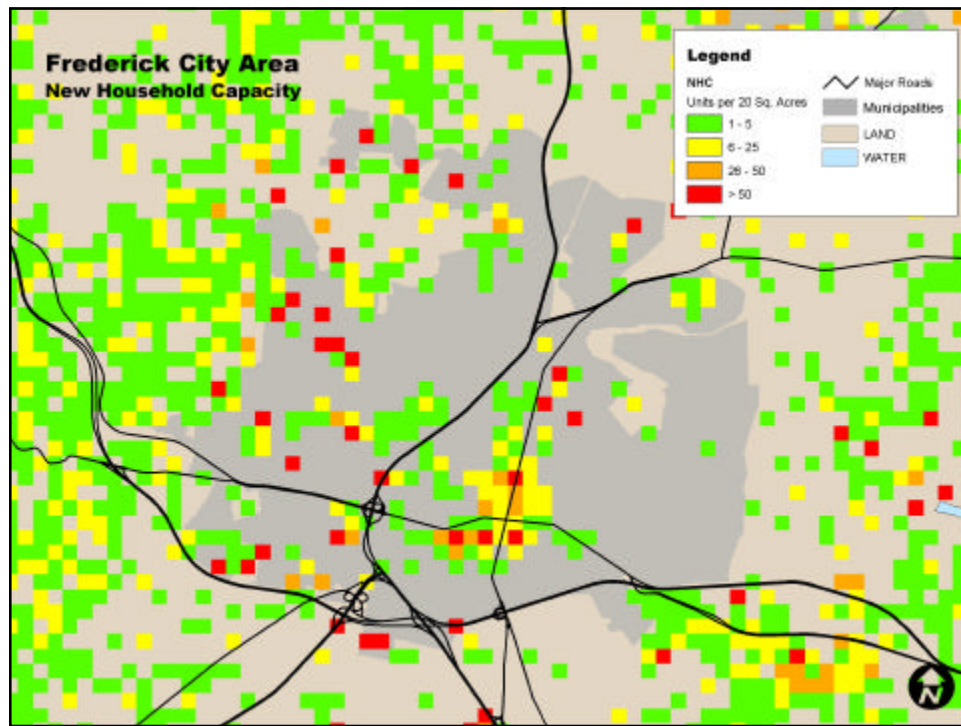
Agenda

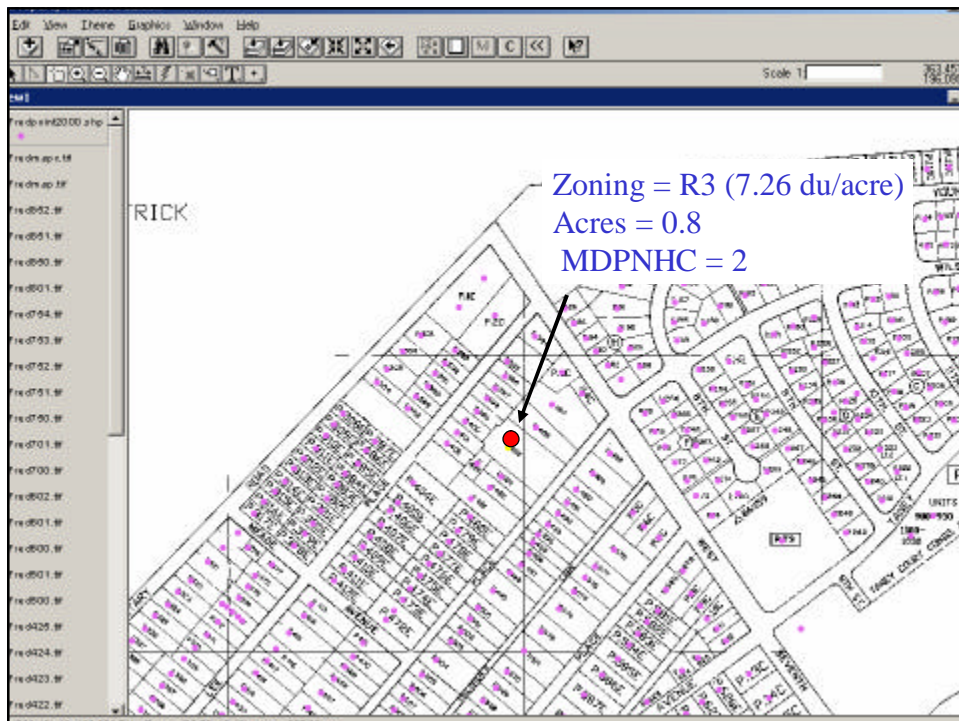
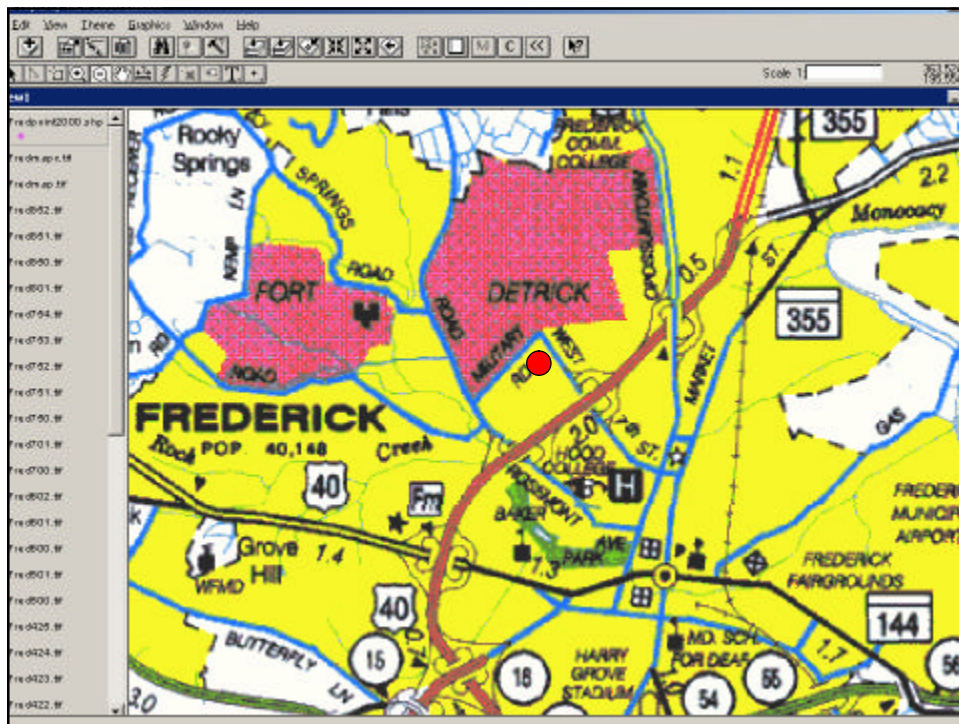
- City of Frederick Analysis
- City of Salisbury Analysis
- City of Hagerstown Analysis



City of Frederick – key numbers

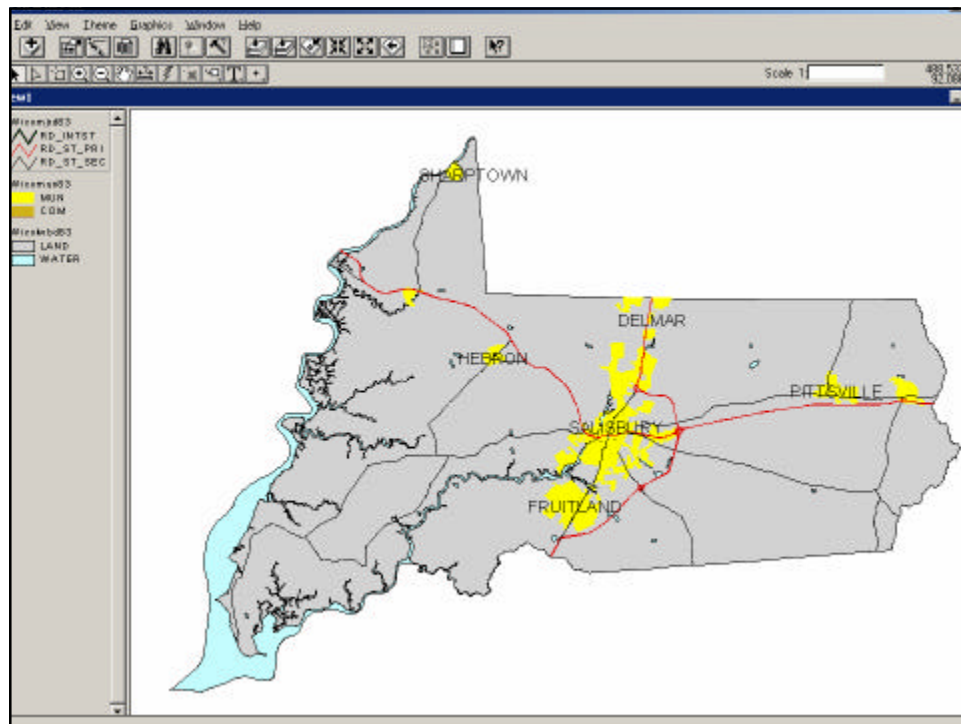
- Year 2000 Population = 52,767
- Year 2000 Households = 20,891





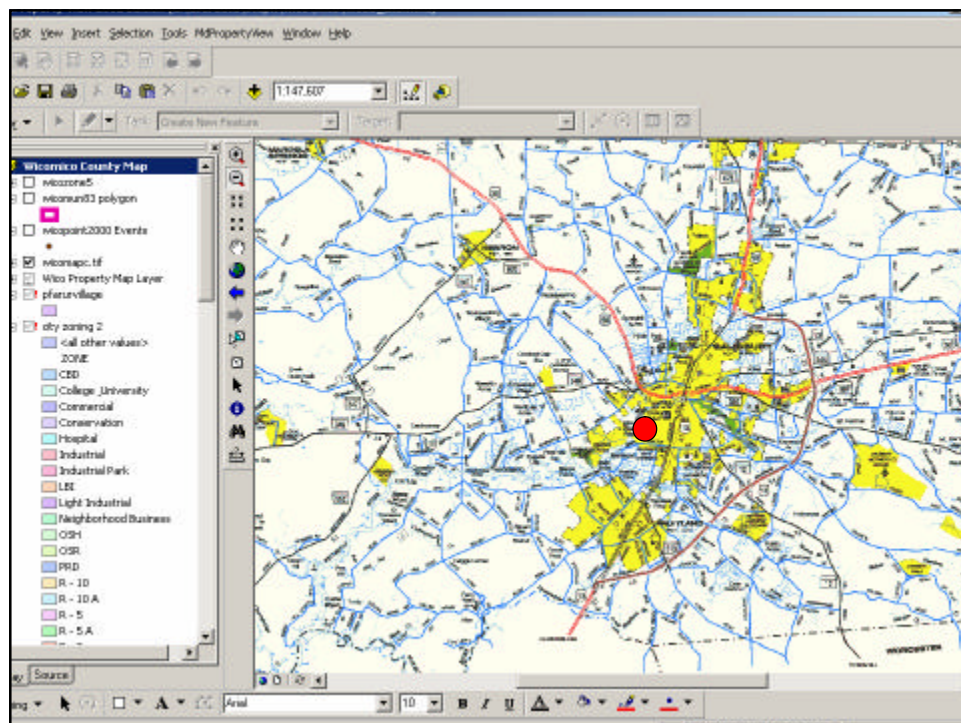
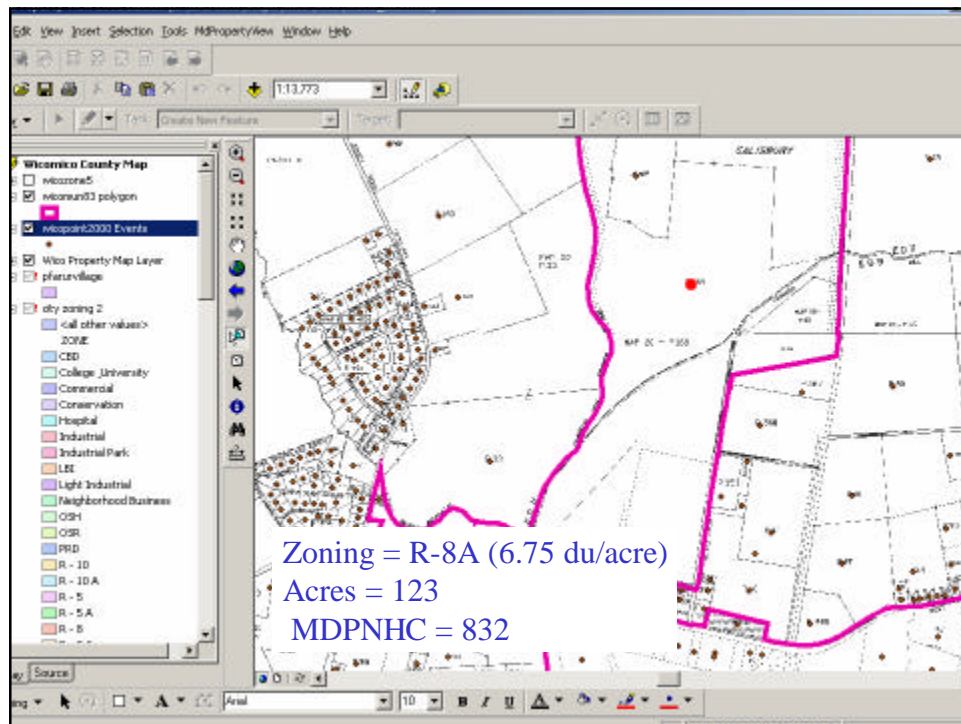
Rough Draft – For Discussion Only Steps in estimating development capacity – Frederick				
Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels		10,733 acres	18,542	
	Subtract land zoned for nonresidential use (commercial, industrial)	5,516 acres	1,204	
Residential or Mixed Use Zoned Acres		5,217 acres	17,338	
	Subtract tax exempt land (tax exempt code)	1,020 acres	490	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	158 acres	183	
	Subtract already built-out areas	2,281 acres	15,387	
Acres and Parcels with Capacity	Total citywide capacity	1,758 acres	1,278	7,268
Capacity Inside PFA				7,268
Capacity Outside PFA				N/a
Acres and Parcels Associated with In-Fill Development	Improved Parcels (>\$10,000), less than 5 acres.	172 acres	1,018	779
Acres and Parcels Associated with Small parcels	Parcels <2 acres in size (improved or unimproved)	210 acres	714	1,090
Acres and parcels associated with Greenfield, undeveloped parcels (includes mixed use)		1,531 acres	558	6,142

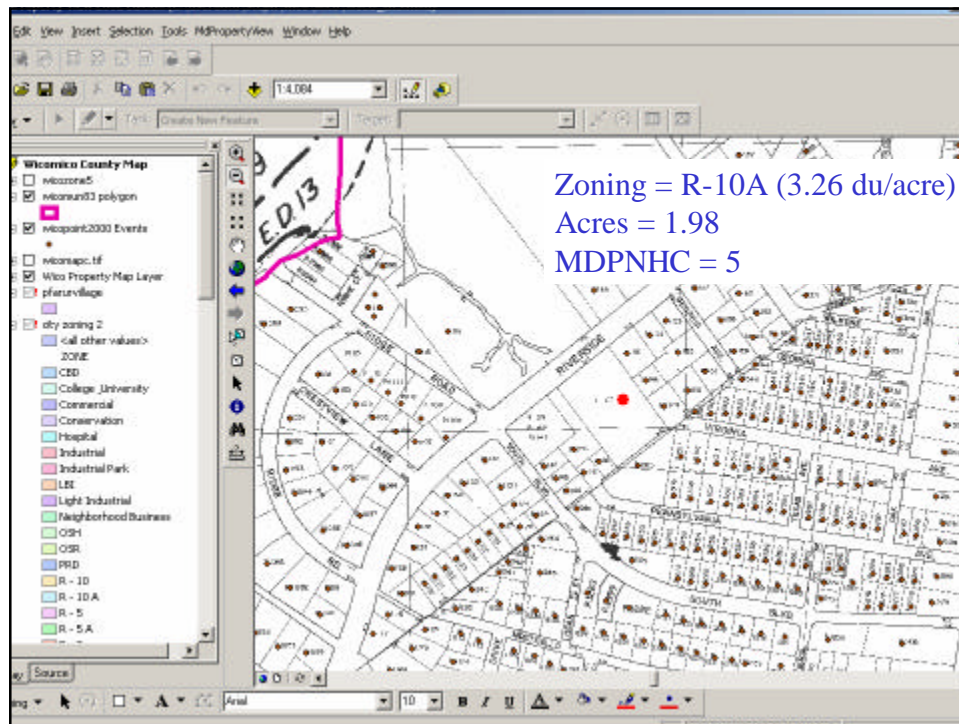
Zoning District	Description	Density Yield	New Household Capacity
B-1	Neighborhood Commercial		0
B-3	General Commercial		0
B-O	General Commercial		0
DB	Downtown Business/Mixed Use	31.5 du/acre	620
DB-O	Downtown Business/Mixed Use	31.5 du/acre	7
DR	Downtown Residential	31.5 du/acre	563
DR-B	Downtown Residential	31.5 du/acre	11
M-1	Light Industrial		0
M-2	Heavy Industrial		0
M-O	Planned Industrial District		0
R-1	Low Density Res.	2.91 du/acre	780
R-2	Medium Density Res	4.36 du/acre	2,895
R-3	Medium Density Res	7.26 du/acre	1,171
R-4	High Density Res.	10 du/acre	437
R-5	High Density Res.	13.75 du/acre	388
R-6	High Density Res.	17 du/acre	395
R-O	Residential Office	4.36 du/acre	1



City of Salisbury – key numbers

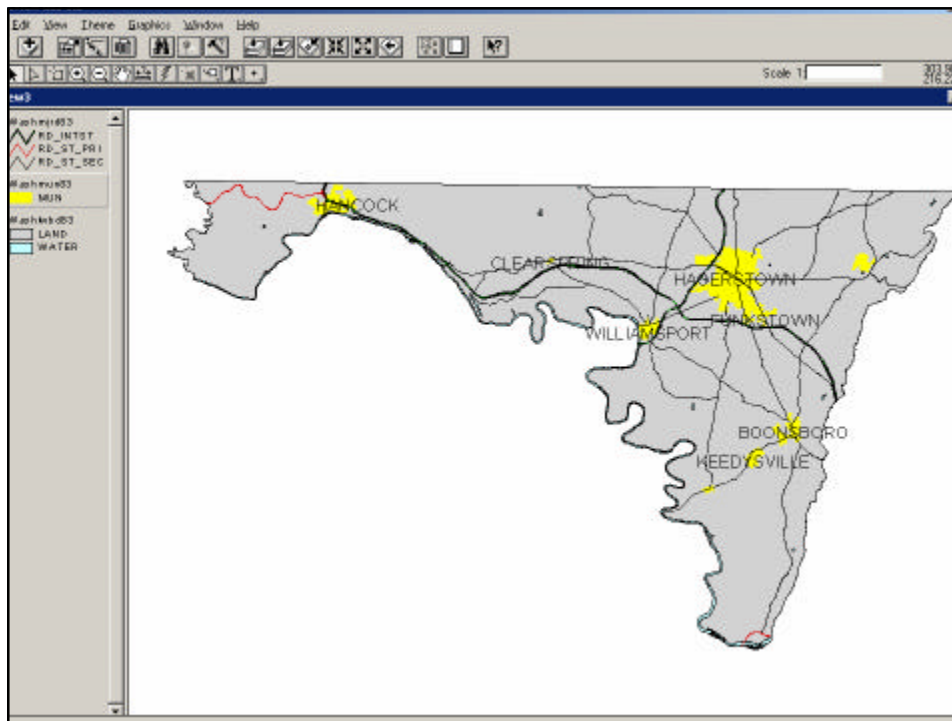
- Year 2000 Population = 23,743
- Year 2000 Households = 9,061





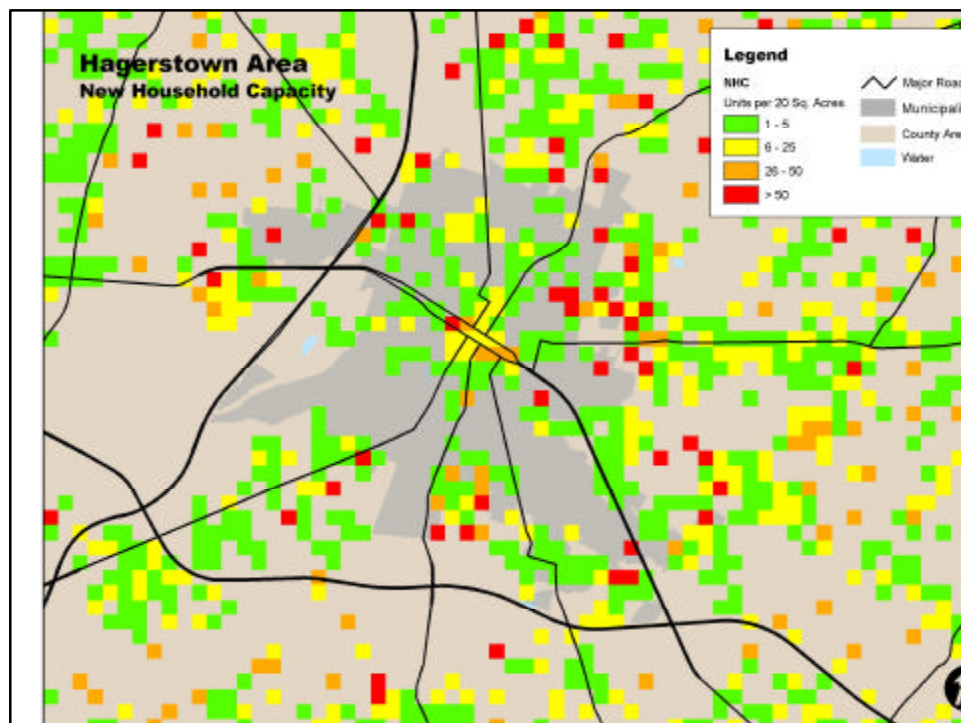
Rough Draft – For Discussion Only Steps in estimating development capacity – Salisbury				
Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels		6,044 acres	8,734	
	Subtract land zoned for nonresidential use (commercial, industrial)	2,504 acres	1,748	
Residential or Mixed Use Zoned Acres		3,540 acres	6,986	
	Subtract tax exempt land (tax exempt code)	765 acres	259	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	147 acres	83	
	Subtract already built-out areas.	1,370 acres	6,274	
Acres and Parcels with Capacity	Total citywide capacity	1,258 acres	370	7,899
Capacity Inside PFA				7,899
Capacity Outside PFA				N/a
Acres and Parcels Associated with In-Fill Development	Improved Parcels (>\$10,000), less than 5 acres.	83 acres	61	263
Acres and Parcels Associated with Small parcels	Parcels <2 acres in size (improved or unimproved)	145 acres	291	418
Acres and parcels associated with Greenfield, undeveloped parcels (includes mixed use)		1,073 acres	67	7,314

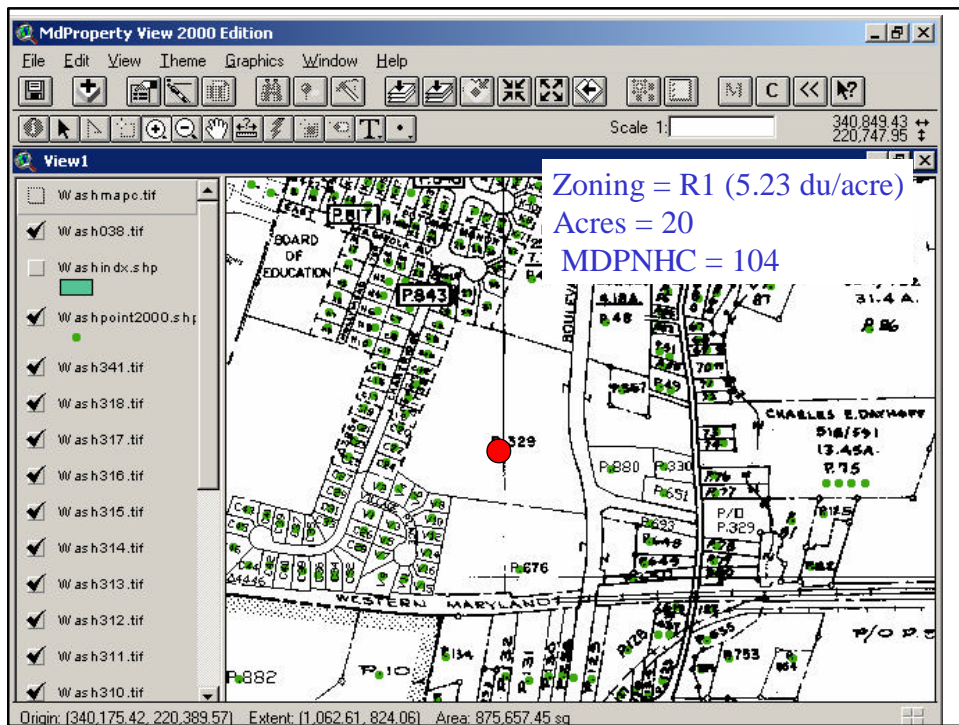
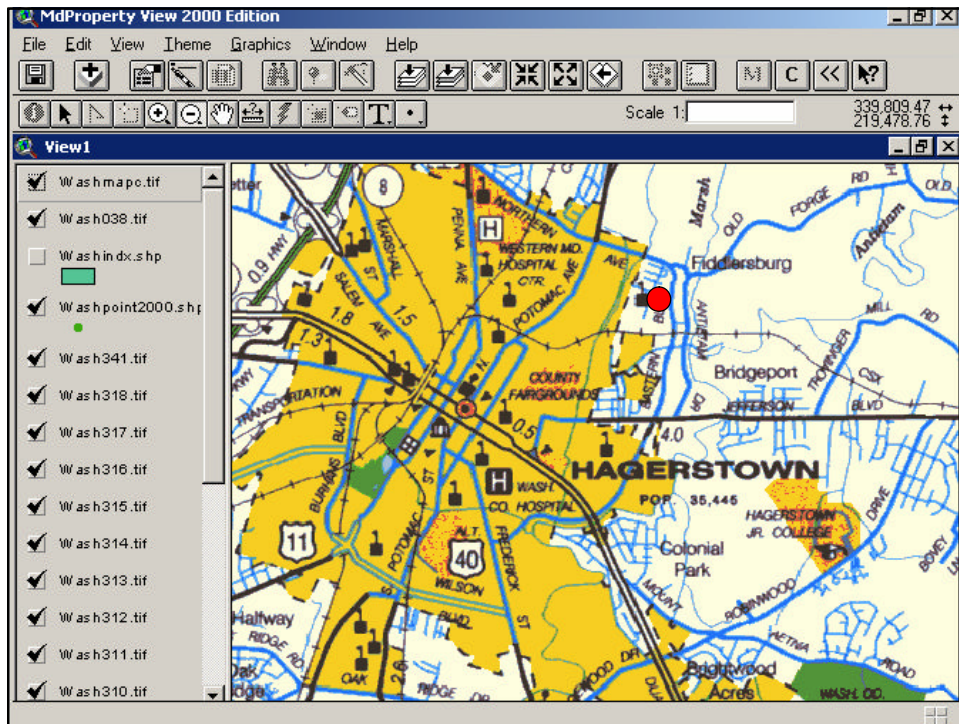
City of Salisbury			
3-Mar-04			
Zoning District	Description	Density Yield	New Household Capacity
S-C	Conservation Zone	0.00	0
S-CBD	Central Business District	10 du/acre	29
S-CU	College/University	3.26 du/acre	93
S-GC	General Commercial	0.00	0
S-H	Hospital	0.00	0
S-IP	Industrial Park	0.00	0
S-LBI	Light Business Institutional	0.00	0
S-LI	Light Industrial	0.00	0
S-NB	Neighborhood Business	9 du/acre (50%)	61
S-OSH	Office Service Highway	0.00	0
S-OSR	Office Service Residential	5.45 du/acre (50%)	3
S-PRD	Planned Residential Dev't.	9 du/acre	3173
S-R10	Single Family Residential	3.26 du/acre	259
S-R10A	apartments or townhouses	5.25 du/acre	15
S-R5	Single Family Residential	6.5 du/acre	14
S-R5A	apartments or townhouses	8.25 du/acre	799
S-R8	Single Family Residential	4.08 du/acre	135
S-R8A	apartments or townhouses	6.75 du/acre	3,282.00
S-RC	Regional Commercial Center	0	0
S-RR	Riverfront Redevelopment	30 du/acre (25%)	516
S-SC	Shopping Center	0	0



City of Hagerstown – key numbers

- Year 2000 Population = 36,687
- Year 2000 Households = 15,849





Rough Draft – For Discussion Only Steps in estimating development capacity – Hagerstown				
Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels		5,901 acres	11,484	
	Subtract land zoned for nonresidential use (commercial, industrial)	2,321 acres	942	
Residential or Mixed Use Zoned Acres		3,580 acres	10,542	
	Subtract tax exempt land (tax exempt code)	959 acres	449	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	49 acres	77	
	Subtract already built-out areas.	1,727 acres	9,651	
Acres and Parcels with Capacity	Total citywide capacity	844 acres	365	6,780
Capacity Inside PFA				6,759
Capacity Outside PFA				N/a
Acres and Parcels Associated with In-Fill Development	Improved Parcels (>\$10,000), less than 5 acres.	104 acres	203	445
Acres and Parcels Associated with Small parcels	Parcels <2 acres in size (improved or unimproved)	210 acres	714	1,090
Acres and parcels associated with Greenfield, undeveloped parcels (includes mixed use)		741 acres	162	6,314

Zoning District	Description	Density Yield	New Household Capacity
H-AT	Ag. Transition Zone	0	0
H-C1	Commercial Local	0.00	0
H-C2	Commercial General	0.00	0
H-C3	Central Business District	49.95 du/acre	313
H-C4	Regional Shopping Center	0.00	0
H-C5	Highway Commercial	0.00	0
H-IG	Industrial General	0.00	0
H-IR	Industrial Restricted	0.00	0
H-PUD	Planned Unit Development	11.25 du/acre	2,078
H-R1	Low Density Residential	5.23 du/acre	1,303
H-R2	Residential	8.71 du/acre	2,593
H-R3	Multi-Family Residential	16.34 du/acre	2,537

Task Force Meeting 5

Estimating Infill and Redevelopment Capacity

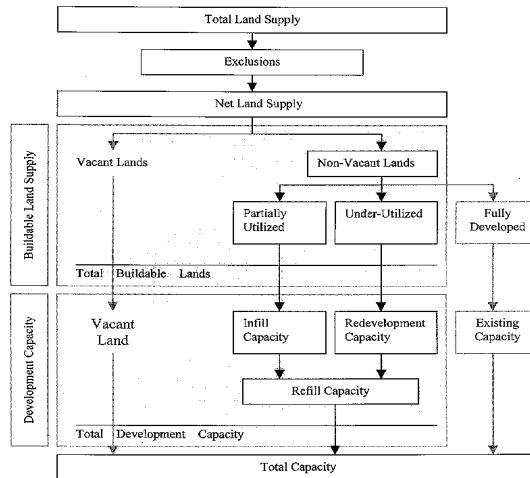
Gerrit Knaap
Executive Director
National Center for Smart Growth

Definitions

- ✍ For use in capacity analysis, infill and redevelopment must be defined in terms of the database and logical rules
- ✍ Infill: development on developed land
- ✍ Redevelopment: development minus demolition on developed land
- ✍ Definition of developed land is critical

Conceptual Framework

Figure 1: Steps in Identifying Refill Land Supply and Capacity



Redevelopment Indicators

- ✍ Lot value/Improvement value (.5-.9)
- ✍ Age of improvement (30 years)
- ✍ Minimum lot size threshold (10,000 sf)
- ✍ Local government designation (redevelopment zone)
- ✍ Professional judgment (educated guess)
- ✍ Key parameter: zoned density-existing density

Infill Indicators

- ✍ Existing density/zoned density
- ✍ Minimum lot size threshold
- ✍ Local government designation
- ✍ Professional judgment
- ✍ Key parameter: zoned density – existing density

Re-Fill Estimation Methods

- ✍ Financial Feasibility Analysis (Landis, UCB)
- ✍ Refill Rates (Portland Metro)
- ✍ Refill Capacity (NCSG, MDP)

Financial Feasibility Analysis

- ✍ Identify eligible parcels;
 - ✍ (all the usual, plus: size, IV/LV <.9; area > 2,000 sf)
- ✍ Estimate development costs
 - ✍ (Land value, hard costs, parking, soft cost, financing cost, operating cost)
- ✍ Estimate potential rents
- ✍ Estimate cash on cash return
- ✍ Determine: is ROR > 10%?

Refill Rates

- ✍ Geocode building permits
- ✍ Identify share of permits on developed land: (Refill Rate)
- ✍ Assume constant Refill Rate

Refill Capacity

- ✍ Identify developable parcels with usual filters
- ✍ Identify underdeveloped parcels
 - ✍ (zoned density – existing density)
- ✍ Select minimum lot size
- ✍ Estimate refill capacity:
 - ✍ Acres times (zoned density-existing density)
 - ✍ Subtract demolition
 - ✍ Adjust for underbuild
(divide by 2; apply yield rate, gross-to-net reduction)

Estimating Refill Capacity

- ✍ Critical element of development capacity
- ✍ No correct method
- ✍ Like estimates of capacity on vacant land, estimates reflect choice of critical parameters: thresholds, yields.
- ✍ Better parameter choices possible when parameter values monitored over time

Task Force Meeting 6

Development Capacity Task Force Meeting

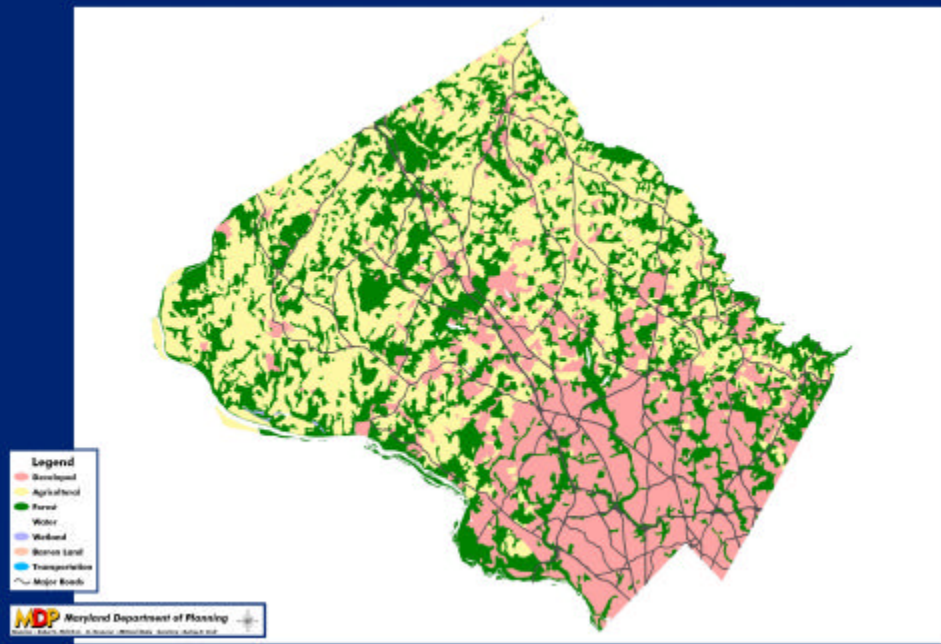
April 7, 2004



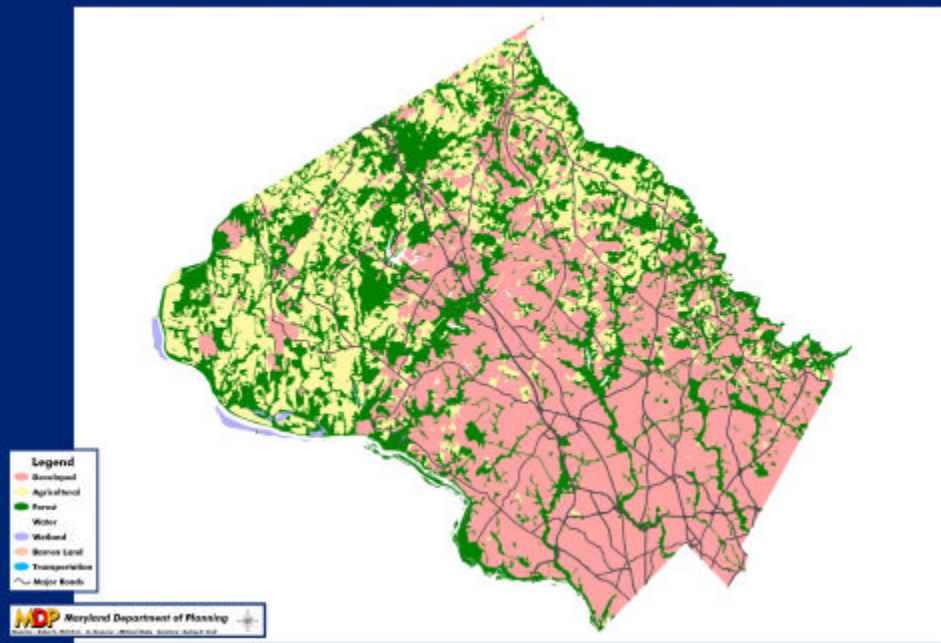
Montgomery County

	2000	2025	Difference
Population	873,341	1,070,000	196,659
Households	324,565	415,000	90,435

Montgomery County 1973 Land Use / Land Cover



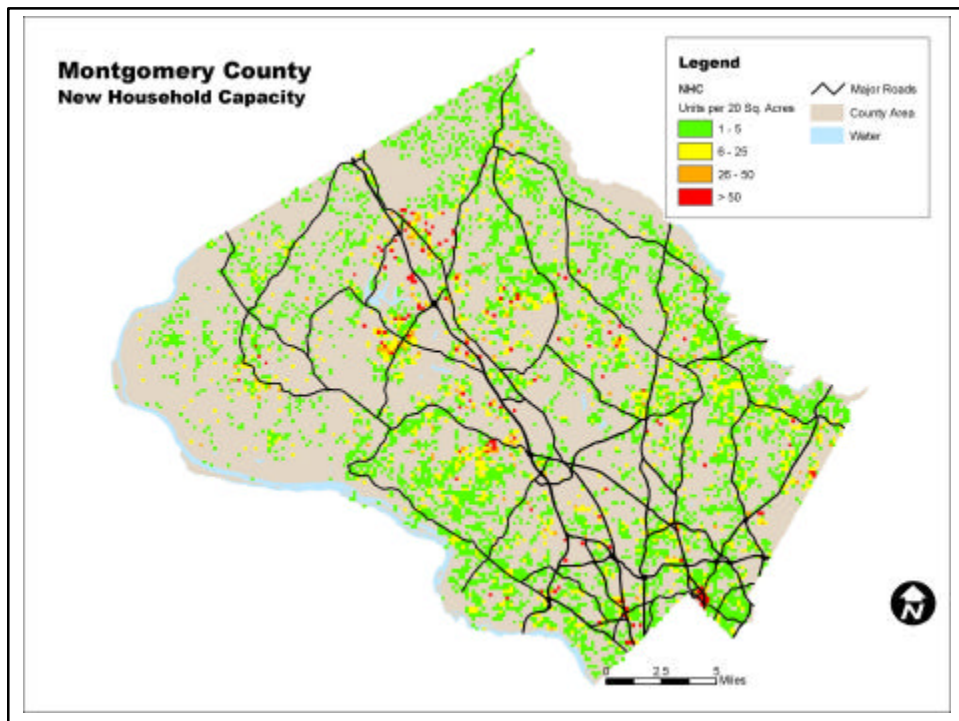
Montgomery County 2002 Land Use / Land Cover

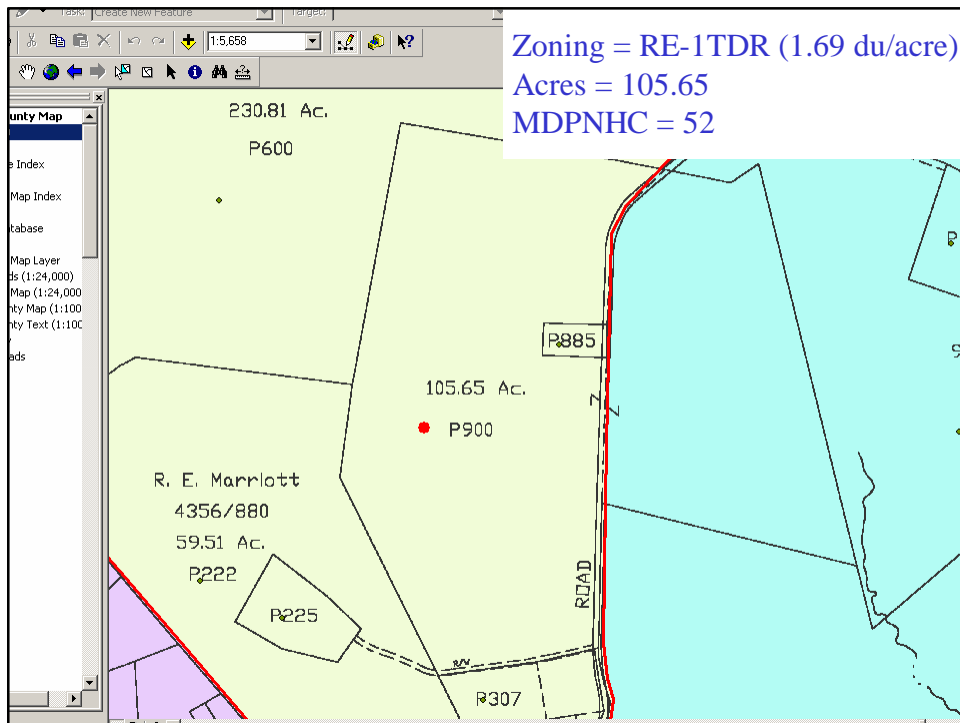
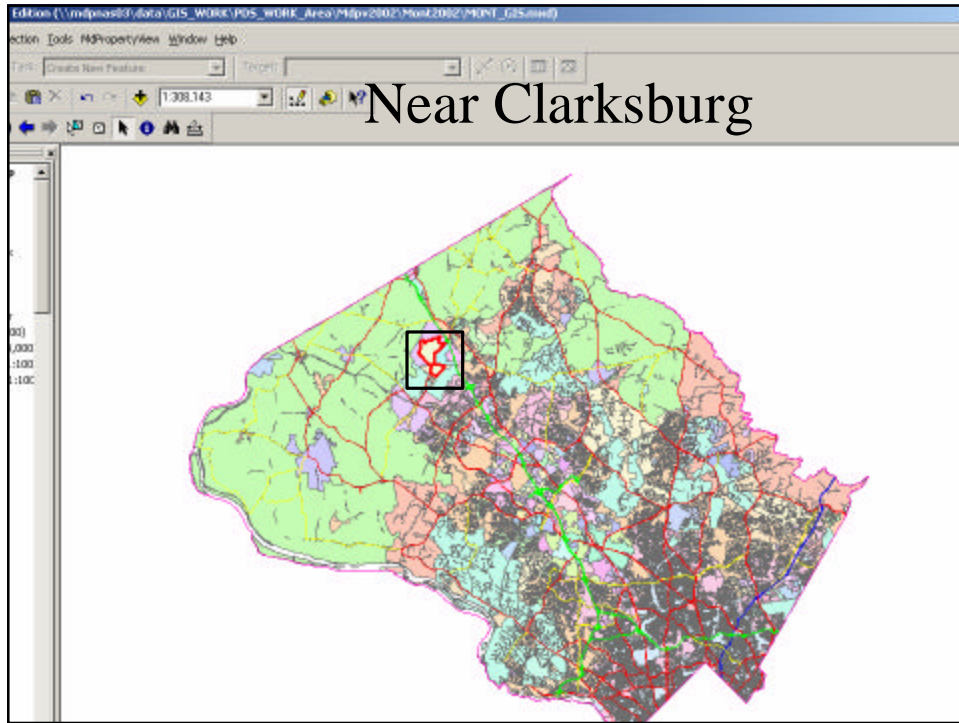


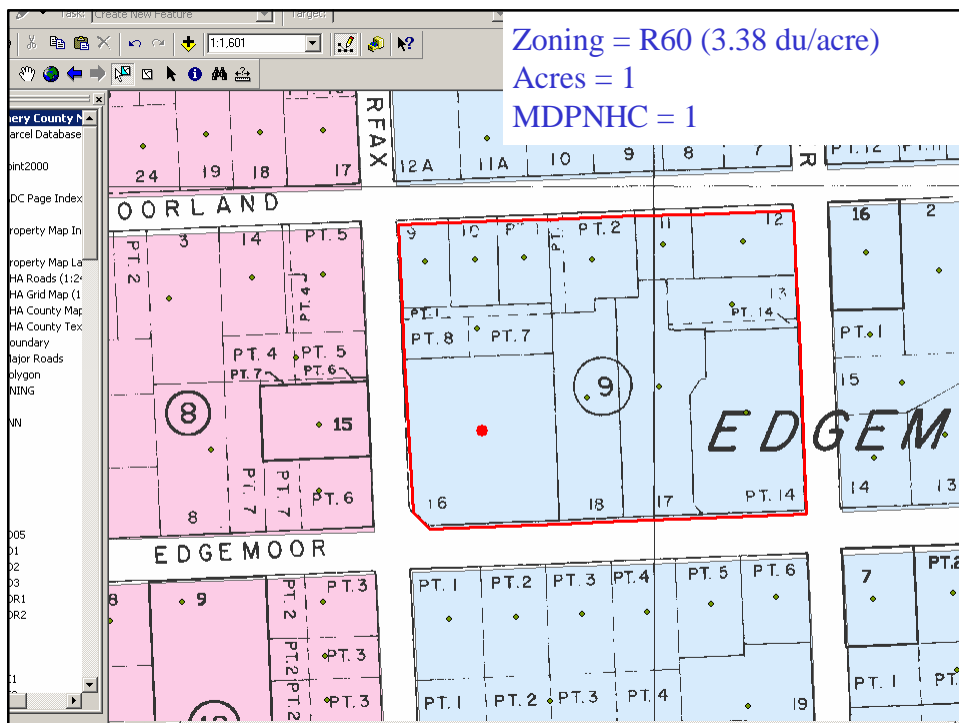
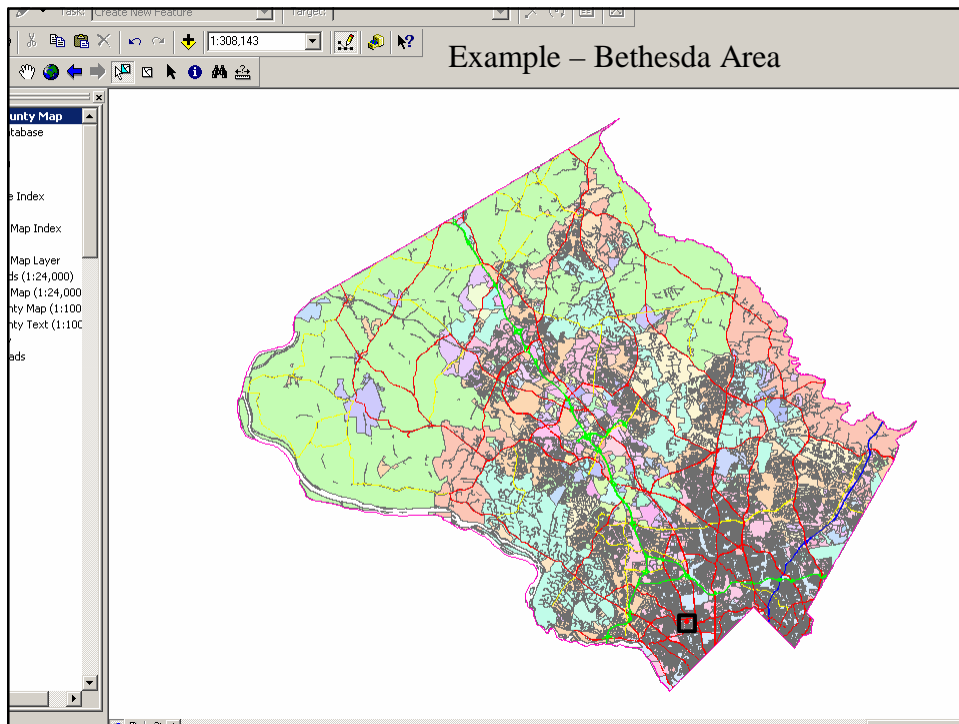
Result	Process	Acres	Number of Parcels	Capacity
Total Acres in Parcels	Not including Rockville and Gaithersburg	278,833 acres	268,552	
	Subtract land zoned for nonresidential use (commercial, industrial)	7,578 acres	4,370	
Residentially Zoned Acres		271,255 acres	264,182	
	Subtract tax exempt land (tax exempt code)	72,312 acres	12,037	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	18,296 acres	1,132	
	Subtract other parcels without capacity (built out areas, etc.)	87,595 acres	237,370	
Acres and Parcels with Capacity	Total capacity (not including Rockville and Gaithersburg)	93,055 acres	13,643	47,889
Capacity in Rockville and Gaithersburg	Number from Municipalities			13,196
Countywide Capacity				61,085
Capacity Inside PFA	(not including Rockville and Gaithersburg)	13,078 acres	7,582	34,554
Capacity Outside PFA		79,974 acres	6,061	13,335
Acres and Parcels with capacity associated with Underdeveloped Parcels.	Improved Parcels (>\$10,000), less than 5 acres.	1,255 acres	815	1,330
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	4,240 acres	9,118	13,012
Acres and parcels associated with larger, undeveloped parcels.	(includes areas in and out of PFA)	87,998 acres	4,245	34,332

Development Capacity Analysis - Montgomery County						
April 5, 2004						
Zoning District	Generalized Zoning Category	New Household Capacity		Zoning District	Generalized Zoning Category	New Household Capacity
C INN	COMMERCIAL	0		R10	HIGH DENSITY RESIDENTIAL	22
C1	COMMERCIAL	0		R10-T	MEDIUM DENSITY RESIDENTIAL	0
C2	COMMERCIAL	0		R150	LOW DENSITY RESIDENTIAL	34
C3	COMMERCIAL	0		R150-T	LOW DENSITY RESIDENTIAL*	35
C4	COMMERCIAL	0		R18	HIGH DENSITY RESIDENTIAL*	0
C5	COMMERCIAL	0		R20	HIGH DENSITY RESIDENTIAL	26
C6	COMMERCIAL	0		R200	RESIDENTIAL	5,829
CBD0.5	MIXED USE	179		R200-T	MEDIUM DENSITY RESIDENTIAL	4,083
CBD1	MIXED USE	1,989		R30	HIGH DENSITY RESIDENTIAL	123
CBD2	MIXED USE	1,495		R40	HIGH DENSITY RESIDENTIAL	32
CBD3	MIXED USE	367		R60	MEDIUM DENSITY RESIDENTIAL	2,956
CBDR1	MIXED USE	59		R60-T	HIGH DENSITY RESIDENTIAL	297
CBDR2	MIXED USE	438		R90	LOW DENSITY RESIDENTIAL	2,512
CO	COMMERCIAL	0		R90-T	HIGH DENSITY RESIDENTIAL	205
CP	COMMERCIAL	0		RC	VERY LOW DENSITY RESIDENTIAL	2,111
CT	COMMERCIAL	0		RD1	MOST PROTECTIVE	2,537
HM	COMMERCIAL	0		RE-2C	VERY LOW DENSITY RESIDENTIAL	1,016
I1	INDUSTRIAL	0		RE1	VERY LOW DENSITY RESIDENTIAL	1,916
I2	INDUSTRIAL	0		RE1-T	VERY LOW DENSITY RESIDENTIAL	1,102
I3	INDUSTRIAL	0		RE2	VERY LOW DENSITY RESIDENTIAL	3,447
I4	INDUSTRIAL	0		RE2-T	LOW DENSITY RESIDENTIAL	302
LSC	INDUSTRIAL	0		RE2C-T	VERY LOW DENSITY RESIDENTIAL	371

Zoning District	Generalized Zoning Category	New Household Capacity		Zoning District	Generalized Zoning Category	New Household Capacity
LSC	INDUSTRIAL	0		RE2C-T	VERY LOW DENSITY RESIDENTIAL	371
MUN	MUNICIPALITY	1,276		RH	HIGH DENSITY RESIDENTIAL	76
MXN	MIXED USE	651		RMH	RESIDENTIAL	88
MXPD	MIXED USE	1,284		RMX-3C	MIXED USE	0
OM	COMMERCIAL	0		RMX1	MIXED USE	0
PCC	COMMERCIAL	0		RMX1-T	MIXED USE	1,947
PD11	MEDIUM DENSITY RESIDENTIAL	45		RMX2	MIXED USE	1,491
PD13	HIGH DENSITY RESIDENTIAL	0		RMX3-T	MIXED USE	20
PD15	HIGH DENSITY RESIDENTIAL	255		RNC	LOW DENSITY RESIDENTIAL	352
PD18	HIGH DENSITY RESIDENTIAL	0		RS	MOST PROTECTIVE	8
PD2	LOW DENSITY RESIDENTIAL	785		RT10	HIGH DENSITY RESIDENTIAL	47
PD25	HIGH DENSITY RESIDENTIAL	0		RT125	HIGH DENSITY RESIDENTIAL	347
PD3	MEDIUM DENSITY RESIDENTIAL	42		RT6	MEDIUM DENSITY RESIDENTIAL	89
PD35	HIGH DENSITY RESIDENTIAL	0		RT8	MEDIUM DENSITY RESIDENTIAL	267
PD4	MEDIUM DENSITY RESIDENTIAL	1,234		RURAL	VERY LOW DENSITY RESIDENTIAL	229
PD5	MEDIUM DENSITY RESIDENTIAL	0		TS	MEDIUM DENSITY RESIDENTIAL	3,008
PD7	MEDIUM DENSITY RESIDENTIAL	19		TSM	COMMERCIAL	270
PD9	MEDIUM DENSITY RESIDENTIAL	12		TSR	HIGH DENSITY RESIDENTIAL	140
PNZ	MIXED USE	51				
PRC	MEDIUM DENSITY RESIDENTIAL	373				
R&D	COMMERCIAL	0				
Gaithersburg		4,956		Total		47,889
Rockville		8,240				
Total		61,085				



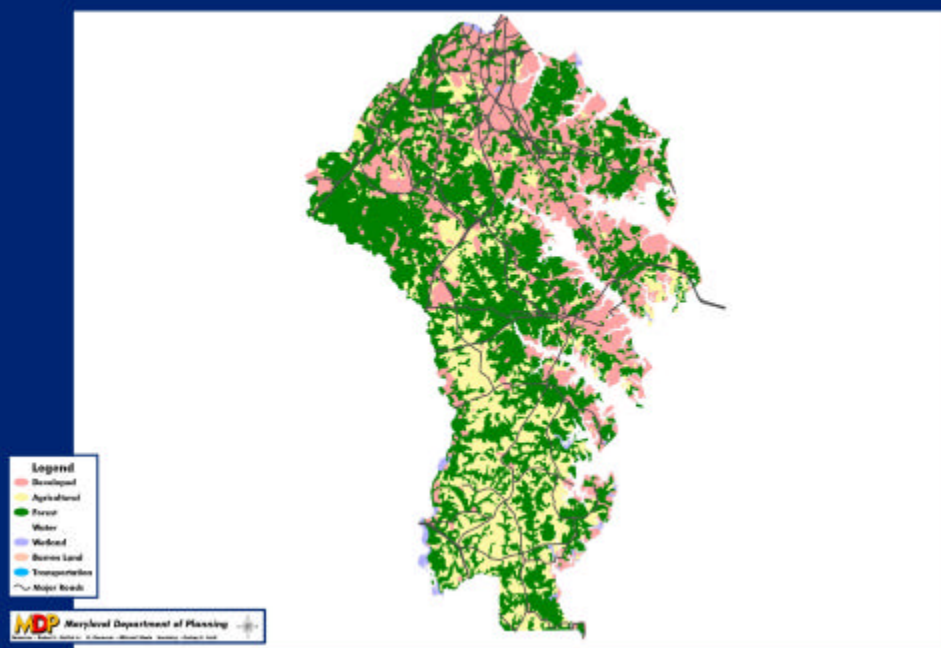




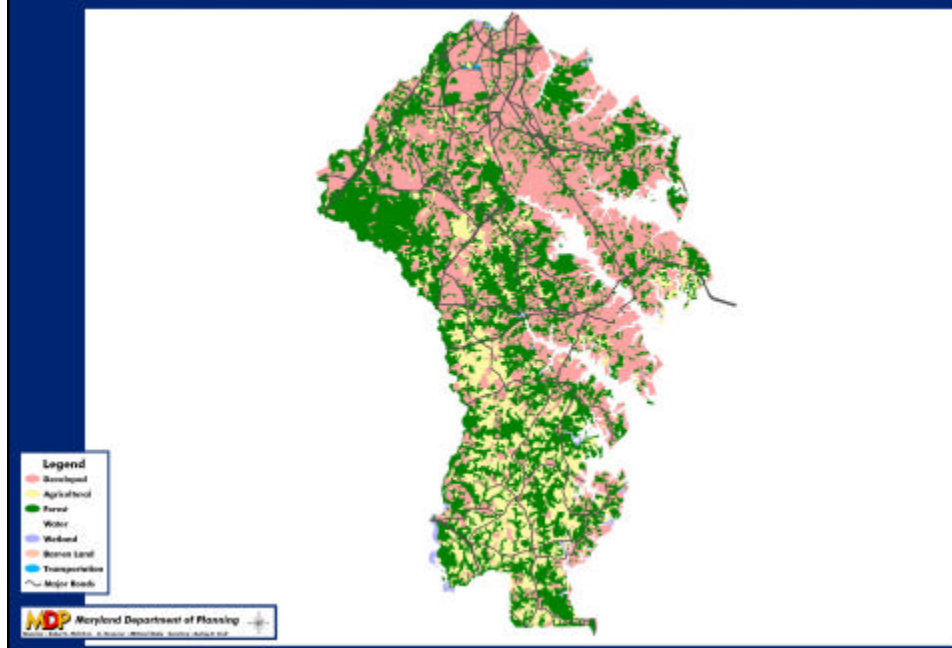
Anne Arundel County

	2000	2025	Difference
Population	489,656	563,000	73,344
Households	178,670	223,200	44,530

Anne Arundel County 1973 Land Use / Land Cover

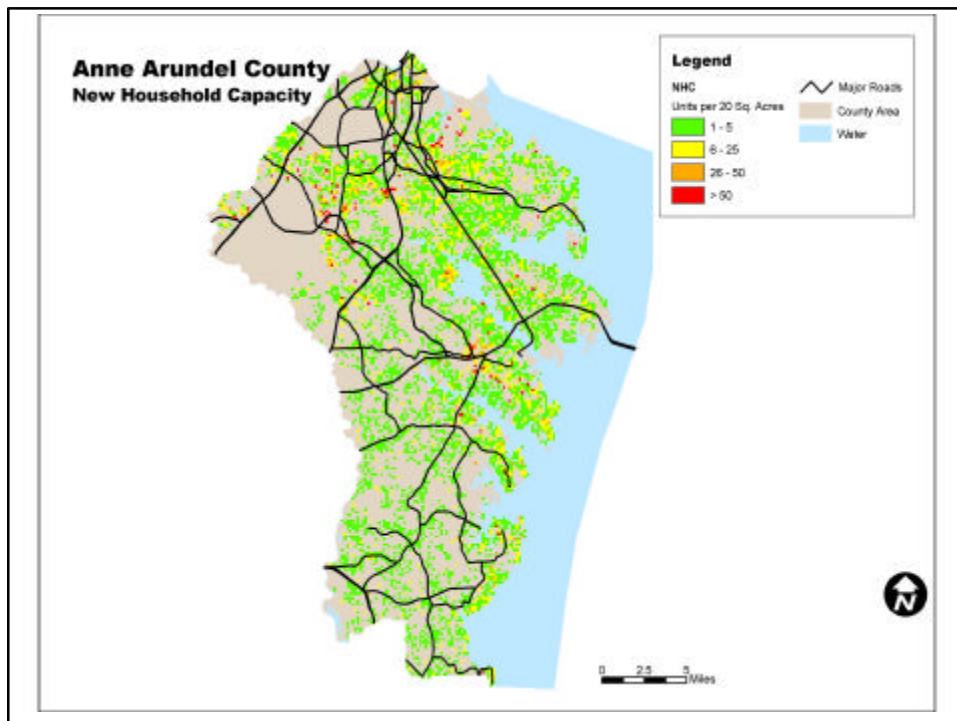


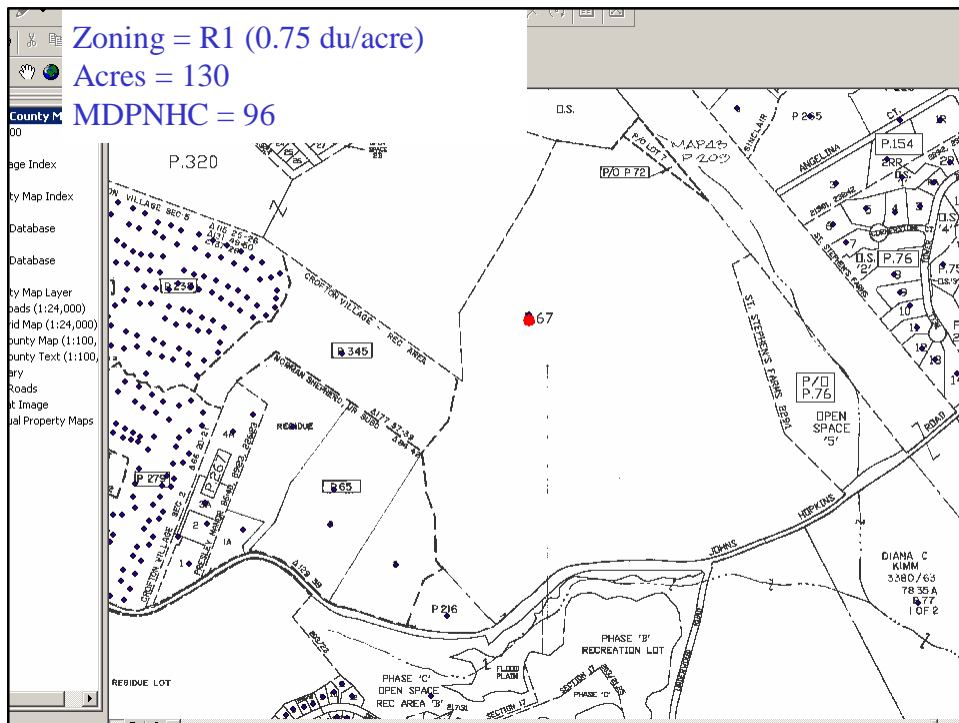
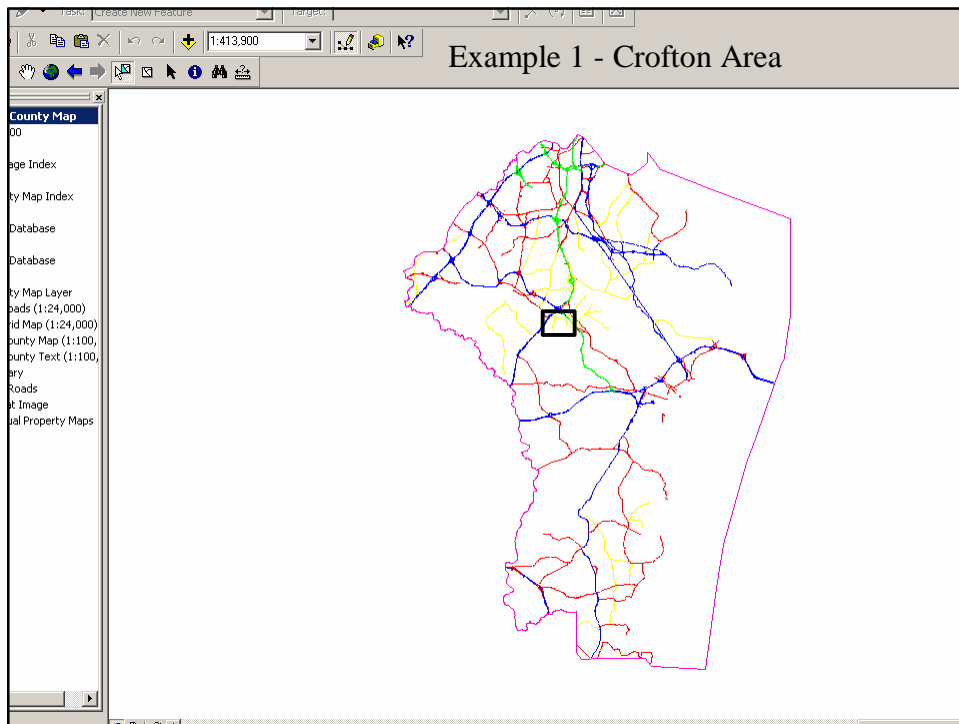
Anne Arundel County 2002 Land Use / Land Cover

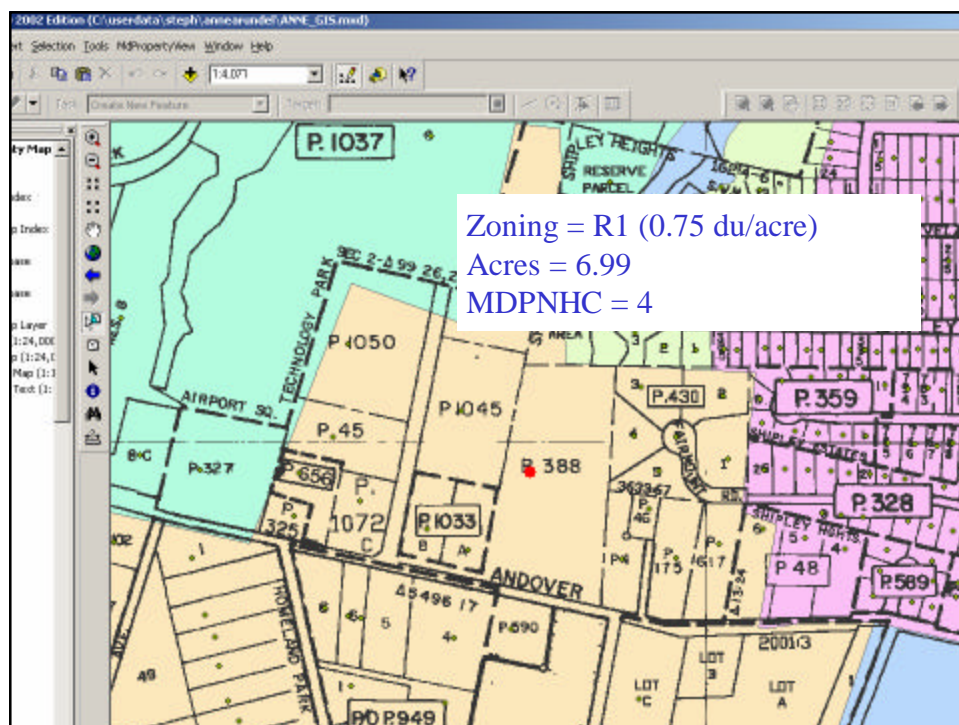
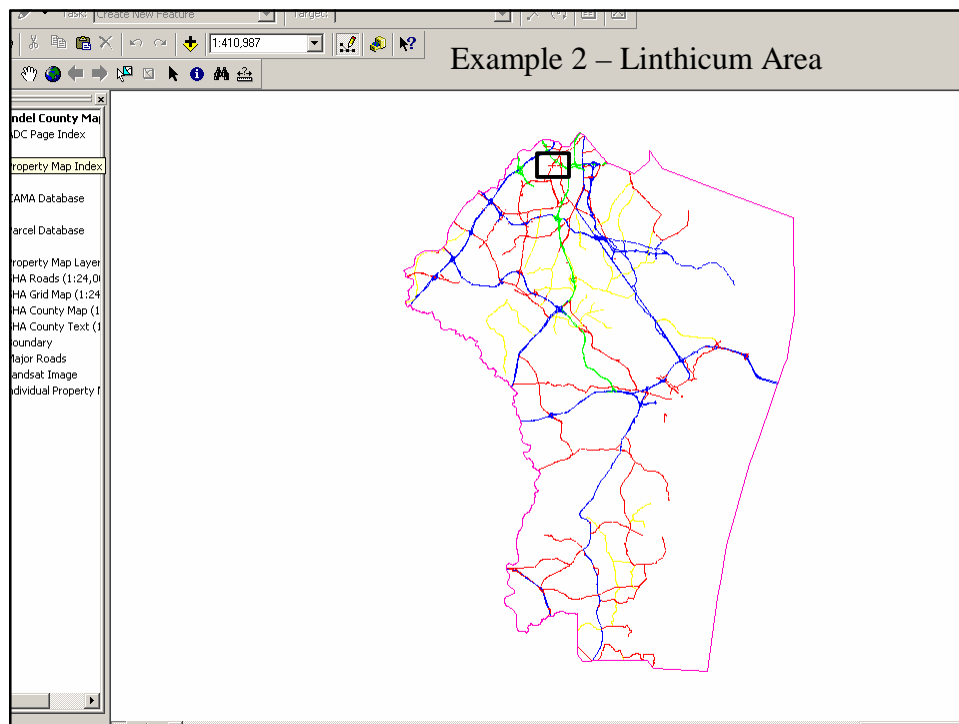


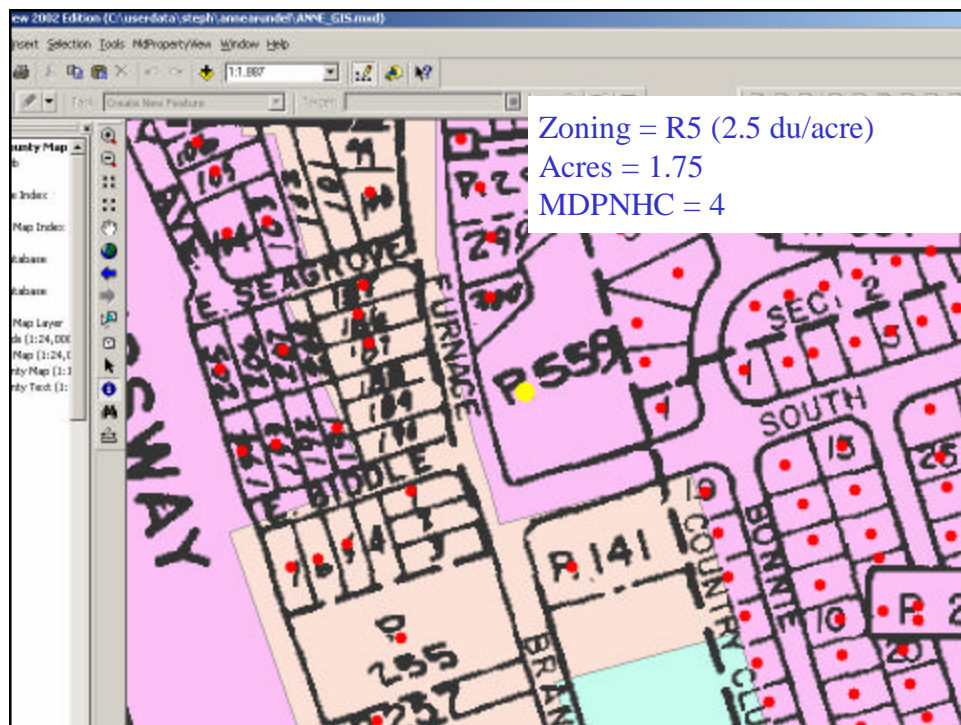
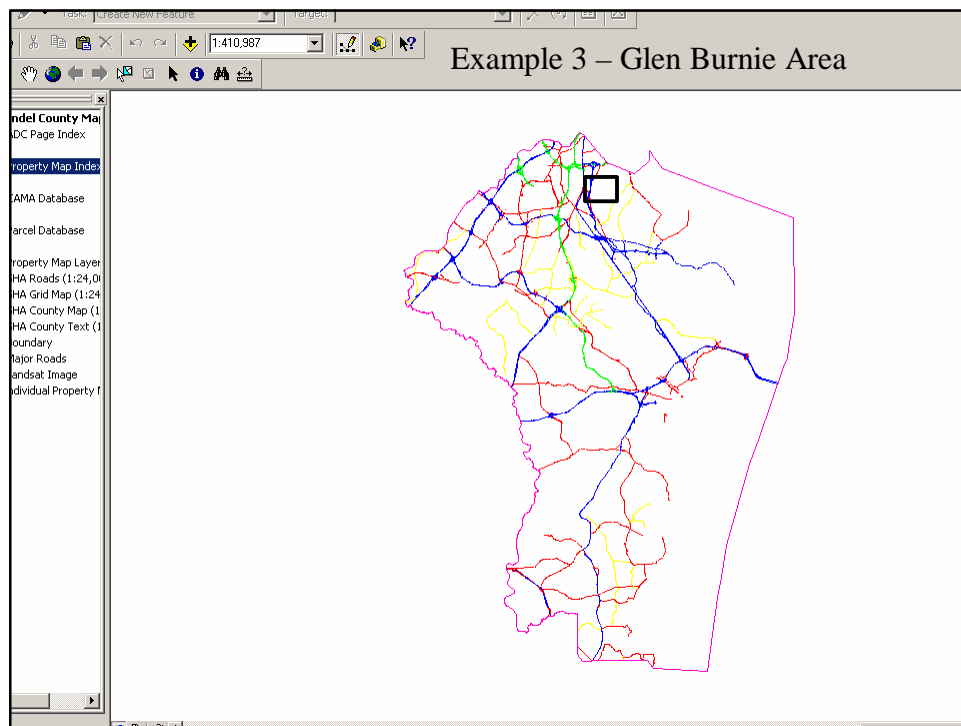
Result	Process	Acres	Number of Parcels (including lots)	Capacity
Total Acres in Parcels		243,833 acres	188,018	
	Subtract land zoned for nonresidential use (commercial, industrial)	12,961 acres	7,591	
Residentially Zoned Acres		230,872 acres	180,427	
	Subtract tax exempt land (tax exempt code)	49,326 acres	3,702	
	Subtract protected lands and environmentally sensitive parcels (ag easements, wetlands, HOA land, etc.)	38,465 acres	6,392	
	Subtract other parcels that have no capacity (built-out areas, etc.).	72,104 acres	152,156	
Acres and Parcels with Capacity	Total countywide capacity	70,977 acres	18,177	50,407
Capacity Inside PFA		11,171 acres	8,986	33,470
Capacity Outside PFA		59,806 acres	9,191	16,937
Acres and Parcels with capacity associated with Underdeveloped Parcels.	Improved Parcels (>\$10,000), less than 5 acres.	2,247 acres	1,406	2,810
Acres and Parcels Associated with Small parcels.	Parcels <2 acres in size (improved or unimproved)	6,164 acres	13,974	16,612
Acres and parcels associated with larger, undeveloped parcels.	(includes areas in and out of PFA)	63,387 acres	3,701	32,678

Zoning District	Generalized Zoning	New Household Capacity		Annapolis Zoning District	Generalized Zoning	New Household Capacity
C1	Commercial	0		A-B1	Commercial	0
C2	Commercial	0		A-B1A	Commercial	0
C3	Commercial	0		A-B2	Commercial	0
C4	Commercial	0		A-B3	Commercial	0
MA1	Commercial	0		A-BCE	Commercial	0
MA2	Commercial	0		A-BR	Commercial	0
MA3	Commercial	0		A-C1	High Density Residential	3
MB	Commercial	0		A-C1A	Commercial	0
MC	Commercial	0		A-C2	Mixed Use	3
MXDE	Mixed Use	1,175				
MXDR	Mixed Use	950				
OCOR	Mixed Use	1,781		A-C2A	Commercial	0
OEOD	High Density Residential	294		A-C2P	Commercial	0
OIND	Industrial	0		A-I1	Industrial	0
ONOD	Commercial	0		A-MX	Mixed Use	9
OS	Most Protective	0		A-P	Medium Density Residential	4
OTRA	High Density Residential	152		A-PM	Medium Density Residential	8
OVIL	High Density Residential	299		A-PM2	Commercial	0
R1	Low Density Residential	5,519		A-PT	Medium Density Residential	12
R10	High Density Residential	5,862		A-R1	Medium Density Residential	71
R15	High Density Residential	3,947		A-R1A	Medium Density Residential	159
R2	Low Density Residential	9,188		A-R1B	Medium Density Residential	0
R22	High Density Residential	610		A-R2	Medium Density Residential	392
R5	Medium Density Residential	12,441		A-R3	Medium Density Residential	1,082
RA	Moderately Protective	3,519		A-R4	Medium Density Residential	188
RLD	Very Low Density Residential	1,107		A-R5	Medium Density Residential	0
TC	High Density Residential	1,632		A-USM	Commercial	0
W1	Industrial	0		A-WMC	Commercial	0
W2	Industrial	0		A-WME	Commercial	0
W3	Industrial	0		A-WMI	Industrial	0
		0		A-WMM	Industrial	0
Total		48,476				1,931









Presentation by Montgomery County



Montgomery County Department of Park & Planning
Maryland-National Capital Park and Planning Commission

Montgomery County, MD Residential Capacity Study 2004

Presentation to the
Development Capacity Task Force
April 7, 2004



Montgomery County Department of Park & Planning
M-NCPPC

Presentation outline

- Goals & History of the Residential Capacity Study
- Methodology
- Findings & Perspective
- Cost/Future



Goals/history of study

- Objective: realistic, conservative estimate of residential development permitted by current zoning & plans.
- Residential Capacity Study will be used for:
 - Plan development & policy development
 - Zoning & regulatory analysis
 - Forecasting: demographics, transportation, environment
- Several earlier “holding capacity” studies, last in 1993



Methodology

- Preparation/data gathering
- Analysis approach & challenges



Preparation/data gathering

- Main data sources:
 - Tax assessor's parcel file
 - Pipeline of approved development
 - Master plans
- GIS:
 - Parcel layer
 - Planimetrics
 - Zoning layer



Analysis approach & challenges

- Data clean-up
- Set date: current as of....July, 2003
- Exclusions
- Approved & pending development plans
- Environmental constraints & easements
- TDRs
- Plans & policies
- Zoning yields
- Redevelopment



Analysis approach & challenges

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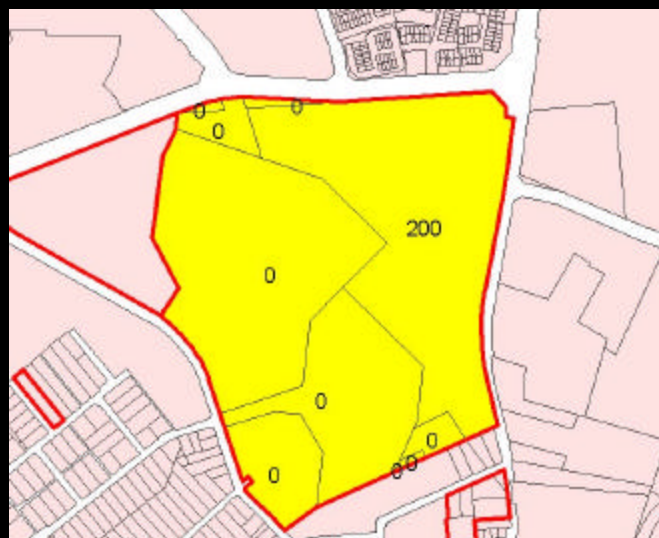


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Approved plans





Analysis approach & challenges

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Some exclusions

- Land use
- Many tax exempt: publicly owned, non-profits
- Zoning
- Residentially zoned:
 - Access
 - Size and shape
 - Compatibility
 - Dedicated – HOA
 - ROW
 - Conservation easement



Analysis approach & challenges

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Montgomery County Department of Park & Planning
M-NCPPC

Floating zone example

**35 Acres:
70 units or
385 Units?**

A map showing a yellow highlighted area, representing a floating zone example. The map is a street grid with a yellow highlighted area in the center. To the right of the map, the text "35 Acres: 70 units or 385 Units?" is displayed in a bold, serif font.



Analysis approach & challenges

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- Redevelopment



Zoning yields

- Most: average yield based on approved plans 1990-2002
- Tested sewer/septic difference
- Example: R-200
 - Max: 2 du/acre (2.44 du/acre with MPDUs)
 - Average on sewer 1990-2002: 1.48 du/acre
 - Average on septic 1990-2002: 0.49 du/acre
- What if few historical examples?
 - Yields in similar zones
 - Yields from previous study in 1994
 - Reasonableness: test: development review staff



Analysis approach & challenges

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- **Redevelopment**



Redevelopment in CBDs

Tested several approaches for estimating development capacity

- Parcel-specific estimates based on master plans.
- Apply range of yield factors to range of redevelopment scenarios
 - Yield factors based on 5, 10 and 15-year history
 - Maximum under standard/optional methods/MPDU density bonuses
 - “Redevelopable” is: Parcel is vacant, land value => improvement value, improvement is less than 25% of theoretical maximum.



Findings and perspective

- Residential capacity by estimation method, location, housing type
- Montgomery County's role in the development of Maryland



Findings and perspective

- Draft findings: Residential capacity is 75,000 housing units above current levels
- By estimation method:
 - 31% in approved plans and 9% in pending plans
 - 29% “assigned yields” based on adopted plans
 - 31% model-generated – average yields by zone
- By housing type
 - 27% single-family detached
 - 11% single-family attached (townhouse)
 - 62% multi-family units



Findings and perspective

	Capacity Study	20-Year Forecast
Inside PFA	66,500	61,200
Outside PFA	8,500	6,800
Total:	75,000	68,000



Findings and perspective

- Montgomery County will continue to have the largest and a still-growing share of state's households:
 - Currently 16.5%
 - By 2025: 16.7%
 - County will have 18% of state's household growth 2005-2025
- 40% of this growth is already approved.



Projected growth 2005-2025

1. Montgomery County	68,500
2. Prince George's County	61,000
3. Frederick County	35,925
4. Anne Arundel County	30,100
5. Charles County	26,375
6. Howard County	21,150
7. Baltimore County	18,850
8. Carroll County	18,000
9. Harford County	17,250
10. Baltimore City	16,550

Prepared by the Maryland Department of Planning, Planning Data Services, October, 2002.



Cost & future

- Basic data/GIS layers: 4-5 person years, necessary but used for other purposes.
- Residential capacity study itself:
 - One person full-time (1 FTE)
 - 2 interns half-time (1 FTE)
 - Planning advice/GIS assistance: (1 FTE)
 - Project management/coordination (0.5 FTE)



Updates

- Updating to take into account:
 - Approved preliminary plans are built
 - Pending preliminary plans are approved
 - New pending plans are submitted
 - Master plans are adopted/amended
 - Parcels are rezoned/zoning text amendments
 - Yield assumptions may be updated
- Exploring automation opportunities



Montgomery County, MD Residential Capacity Study 2004

Presentation to the
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April 7, 2004

Presentation by Anne Arundel County

Holding Capacity Presentation

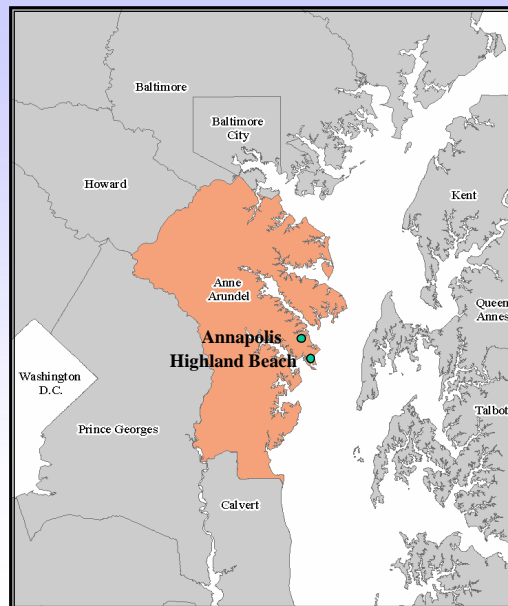
For The
Priority Places Task Force

April 7, 2004

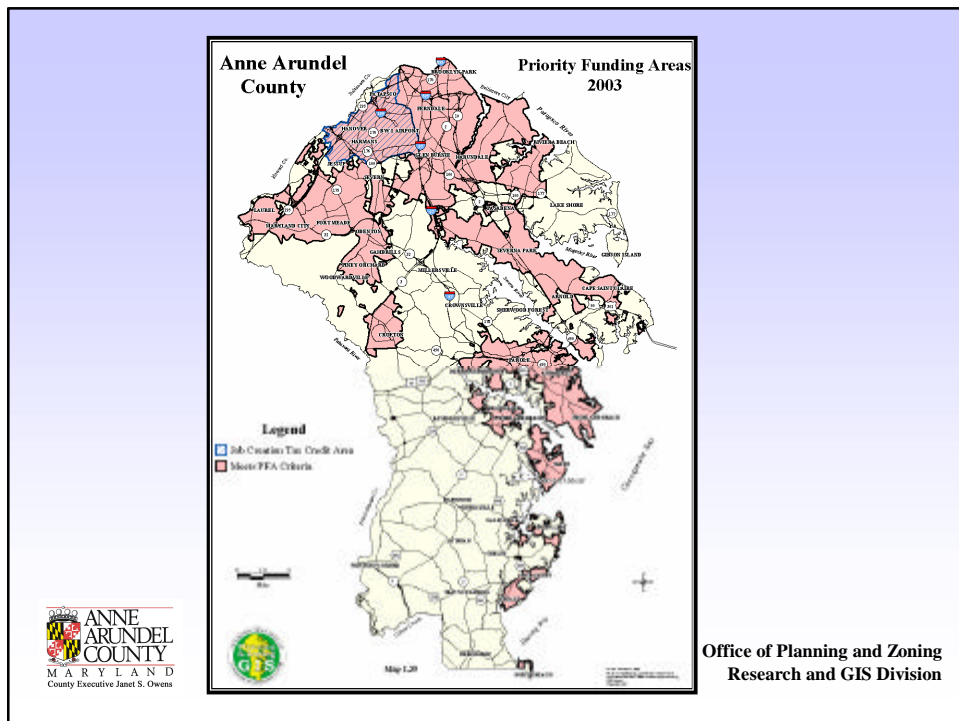
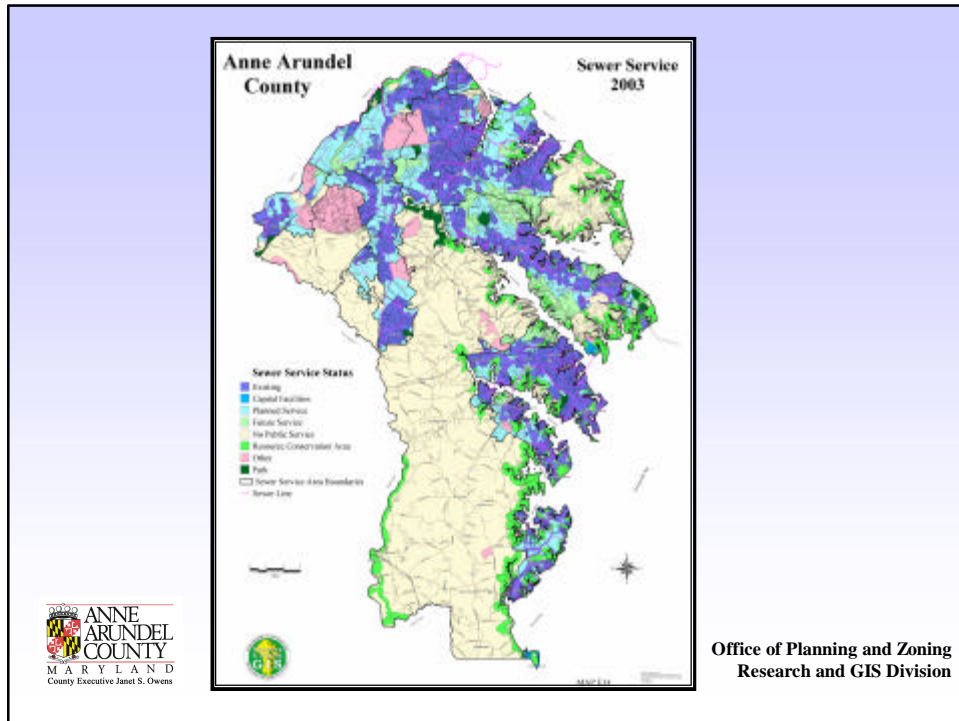


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Location Map



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Yield Factor Complications

- vacant**
 - PUD's – Allows density to be shifted from one zone to another
 - Antiquated Lot Law and Developer Interest Lots
 - Family Conveyances
- reuse**
 - Town Center Overlay – Takes precedence over underlying zoning
 - Merged Lot Law
 - Institutional Site Reuse



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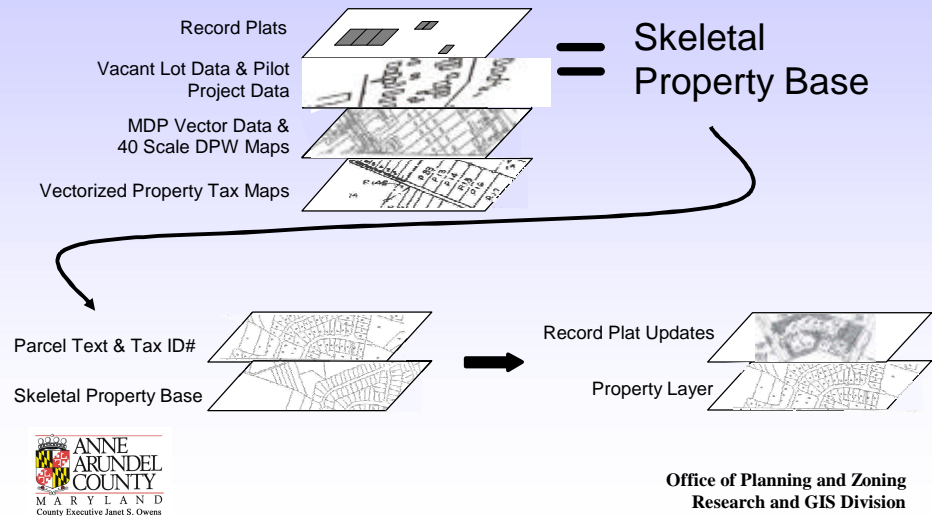
Progress On Refining Holding Capacity Numbers

- Consolidated Property Geodatabase Development
- Infill Development Studies
- Zoning Ordinance and Subdivision Regulations Rewrite



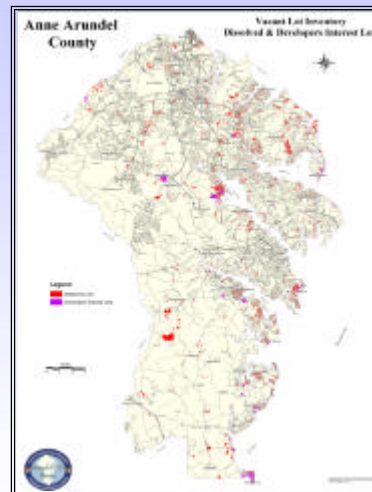
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Consolidated Property Geodatabase Development



Infill Studies

- Vacant Lot Study – Identifies lots of record affected by the Antiquated Lot Law and Developer Interest Lots
- Mayo Peninsula EDU Study
- Analysis of subdivisions created after 1987
- Analysis of vacant parcels



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Zoning Ordinance and Subdivision Regulation Rewrite

- Removes wetlands and steep slopes from density calculations
- Removes family conveyances
- Removes unused zones



**Office of Planning and Zoning
Research and GIS Division**