

Appendix G

Office of Planning



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1 Office of Planning

1.1 Agency Overview

The Baltimore County Office of Planning (OP) formulates policies, plans, and regulations to guide future growth and to preserve and enhance existing communities. The Baltimore County Charter gives OP broad responsibility for the County's master plan and zoning regulations. The Office of Planning is organized into three divisions and one section as follows: Community Planning Division, Development Review Division, Information and Planning Services Division, and the Preservation Services Section.

The County Charter gives the Planning Board a major role in recommending the content of the Capital Program and Budget. The Board's other advisory responsibilities are established in the County Code, State Code or by Executive Order. They include making recommendations or decisions on the following:

- The Baltimore County Master Plan
- Area and special plans and other amendments to the Master Plan
- The Comprehensive Zoning Map Process
- Amendments to zoning and related regulations
- Functional plans, such as the Master Water and Sewerage Plan and Basic Services Maps
- Planned Unit Developments
- Developments that conflict with the master plan or involve historic landmarks
- Renaissance Redevelopment Projects

Community Planning Division

The Community Planning Division serves as the principal citizen contact for matters related to planning. Each County Council District has an assigned community planner who works with residents and businesses, keeping them informed and seeking their input on local plans and projects. The Office of Planning maintains a list of community associations. The list is used to notify the association president of any planning meetings and other planning related events. The major duties of the Community Planning Division include the following: development of local community plans, administration of the Comprehensive Zoning Map Process (CZMP), and assisting the Development Review Division with the review of development plans. This division manages the County's legally authoritative digital layer for zoning.

The Comprehensive Zoning Map Process (CZMP) occurs on a four-year cycle as specified in the County Code and involves requests for zoning changes on any property in the county. The County Council uses the zoning data layer maintained by the agency to review and decide on zoning changes. Any changes made by the Council are added to the zoning data layer. There are an average of 550 issues per cycle, which take about a year and a half to update.



The following programs are associated with this division as they pertain to this study:

- Adequate Public Facilities
- Charrette and Urban Design Assistance Team (UDAT) Project Management
- Community Planning
- Rezoning

Development Review Division

The Development Review Division coordinates the Office's review of residential, commercial, and industrial development, including concept and development plans, planned unit developments, minor subdivisions, waivers, limited exemptions, undersized lots, assisted living facilities, variances and special exception petitions, and the cycle zoning process. The division develops guidelines and manuals to be used in the review of the development plans. This division coordinates the Design Review Panel (DRP). The goal of the DRP is to encourage design excellence through the application of design guidelines contained in the Master Plan, the Comprehensive Manual of Development Policies, adopted community plans, and/or Baltimore County Zoning Regulations, as applicable. Additionally, division staff monitor subdivision plans and building permits to prepare population forecasts and growth management analyses.

The following programs are associated with this division as they pertain to this study:

- Development Review
- Legislative Programs

The Information and Planning Services Division

The Information and Planning Services Division provides technical planning data and analyses to the Office of Planning staff, the Planning Board, and other agencies. The division provides two core services - GIS/Information Systems and Capital Programming.

Using computerized information systems, including the County's geographic information system (GIS), division staff are responsible for creating and maintaining a number of planning databases, including land use, zoning, and historic properties. The GIS mapping capability allows the data to be analyzed and displayed graphically for use in planning studies and presentations to the public. The staff coordinates with other County, State, and Federal agencies on a variety of matters relating to development and Census data. The division also maintains the office's computer network and provides computer support to the other divisions of the office.

The Capital Improvement Program is a six-year plan, updated annually, guiding the construction and maintenance of public facilities such as roads, parks, and schools. Working closely with other County agencies, division staff assists the Planning Board in the preparation of its recommended Capital Budget and Program. The County Executive uses these recommendations to prepare the Capital Budget and Program that is presented to the County Council for approval.



The following programs are associated with this division as they pertain to this study:

- Demographic Analysis
- Districting (re)

Preservation Services Section

The Preservation Services Section provides administrative and technical support to the Landmarks Preservation Commission, and serves as the main contact for citizens on matters concerning historic preservation. The staff of this section are involved in a variety of research projects pertaining to historic structures and districts throughout Baltimore County. This research keeps policy makers informed of issues pertaining to the County's historical legacy.

Established as a part of the County government in 1976, the Landmarks Preservation Commission approves the inclusion of historic properties on the Preliminary Landmarks List and the formation of County historic districts. The LPC also approves building proposals affecting any structures on the Preliminary or Final Baltimore County Landmarks List and all developments within County historic districts. It makes advisory comments on properties that are on the National Register and Maryland Historical Trust inventory.

The following programs are associated with this division as they pertain to this study:

- Historic Preservation

Baltimore County Master Plan

The Baltimore County Charter requires a master plan be adopted or updated at least every ten years. The master plan is an important document that provides policies and guidelines for sustaining livable communities and achieving balanced development in Baltimore County. The Baltimore County Council adopted Baltimore County's current master plan, Master Plan 2010, on February 22, 2000. This document reflects the County's continuing commitment to smart growth by directing future development to its designated growth areas and preserving its rural areas for agriculture and resource conservation. Baltimore County is also committed to the continual enhancement of its existing communities.

The following programs are associated with this division as they pertain to this study:

- Master Planning



1.2 Agency Public Access Programs

OP provides to the public a large volume of static information related to the County's planning activities on the County's web site. This includes the following publications and map series:

Publications:

- African American History
- Community Plans - Adopted
- Community Plan - In-Progress materials
- Census 2000 Newsletters
- Census 2000 Brochures
- Citizen's Guide to Planning and Zoning
- Comprehensive Manual of Development Policies
- CZMP historical information
- DRP Handbook
- Eastern Baltimore County Pedestrian and Bicycle Access Plan
- Historic Bibliographies of Baltimore County History and Industry
- History of Architecture in Baltimore County
- Landmarks Booklet
- Landmarks list
- Light Rail History and Scenery
- LPC Handbook
- Master Plan 2010
- Pikesville Commercial Revitalization Guidelines
- Planning Board Handbook
- Planning Pages Newsletter
- Polling Places List
- Quarterly Subdivision Reports

Maps:

- Adequate School Facilities series
- Baltimore County Historic Districts
- Community Planners by Councilmanic Districts
- Design Review Area Maps
- Historic Baltimore County Maps
- Land Management Area Maps
- National Register Historic Districts
- Priority Funding Area Map

Additionally, the internet map applications of MyNeighborhood tools for the Eastern County Bicycle Plan, Historic Districts, and Zoning are available to the public, allowing a user to see an address's location in relation to bicycle plans, historic properties and districts, and to see the zoning of parcels.



1.3 Agency Study Participants

Agency personnel contributed to the study by completing the short form online survey, participating in interviews, and providing miscellaneous data to support information provided throughout the report.

Twenty-five OP staff members completed the online short form survey, which was used to determine each person’s role within the department and determine if these individuals were using GIS to support their activities. Each of the short form responses has been included in the appendix of this document. The following personnel completed the online short form survey:

Short Form Respondents
Amy Mantay
Caren Beth Hoffberger
Dave Green
Dennis Wertz
Diana Itter
Donnell Zeigler
Jackie MacMillan
Jeff Mayhew
Jeffrey Long
Jennifer Meacham
Karin E. Brown
Kathy Schlabach
Kevin Gambrill
Kristopher Weaver
Kui Zhao
Lauren Hay Hooke
Louise Nelson
Marjorie Lynn Lanham
Ngone Seye
Nkechi M. Hislop
Pat Keller
Shannon McDowell
Teri Rising
Vicki Nevy
William Hughey

Table 1 - Short Form Respondents



A total of fifteen OP staff participated in interviews conducted on November 15, 2006 and December 20, 2006. These individuals are:

Interviewees
Caren Beth Hoffberger
Diana Itter
Donnell Zeigler
Jean White
Jeff Mayhew
Jennifer Meacham
Karin E. Brown
Kathy Schlabach
Kevin Gambrill
Kristopher Weaver
Kui Zhao
Lynn Lanham
Ngone Seye
Teri Rising
Vicki Nevy

Table 2 – Interviewees



2 Cost/Benefit Information

This section outlines the annual costs and benefits that are associated with GIS use and maintenance within OP. The total benefits and costs have been summarized in the table below, which are discussed in further detail in the remainder of this section.

Summary – Total Annual GIS Benefits	
Time Benefits:	\$672,294
Other Benefits:	\$0
Total Annual Benefits:	\$672,294
Summary - Total Annual GIS Costs	
Total Annual Costs:	\$295,576
Summary - Total GIS Cost/Benefit	
Total GIS Cost/Benefit:	+\$376,718

Table 3 – Annual Agency Cost and Benefit Summary

This table only includes benefits that are associated with capital returns and does not consist of other benefits such as more accurate information, improved decision making, higher quality mapping products, faster response times, etc. A detailed review of all qualitative benefits realized by GIS users will be documented and analyzed in the Enterprise volume of the report.

2.1 Annual Agency Cost

OP has several expenses that contribute to the cost of supporting the Enterprise GIS for Baltimore County. This agency maintains many GIS datasets, but has few operational costs and approximately 2.5 fulltime employee equivalents. The total annual agency cost to support each of these elements is \$295,576.

Total Agency GIS Cost: \$295,576

Details of each of the cost issues are discussed in the sections below.

2.1.1 Annual Operational Costs

OP supports the cost to send four employees to GIS-related conferences each year. This cost is recorded in the table below. All other training is performed in-house at no additional cost to the agency.



Type of Training	Estimated Cost	# of Staff Attending	Total Annual Cost
Towson GIS Conference	\$187.50	4	\$750

Table 4 – Annual GIS Training Costs

OP has GIS related administrative and supply expenses to include supporting the plotter and its related expenditures each year as follows:

Administrative/Supply Items	Annual Costs
Administrative Costs	\$1,796
Plotter Supplies, Paper and Ink	\$1,120
Total Administrative/Supply Cost:	\$2,916

Table 5– Agency Administrative/Supply Costs

2.1.2 Annual Resources (GIS Staff)

The agency currently contains seven staff member that perform activities that support GIS for the agency. This assistance includes GIS database development and maintenance efforts. OP spends \$164,464.00 annually to support the personnel associated with its GIS maintenance activities (these data layers are listed in section 3.1.4), which is based on the salary and overhead of this staff member multiplied by the percentage of time performing GIS maintenance activities. These individuals are listed in the table below, along with the percentage of time allocated to GIS maintenance activities.

GIS Personnel	% Allocated to GIS Maintenance Activities
Jennifer Meacham	20%
Kathryn Schlabach	20%
Ngone Seye	20%
Jean White	95%
Kristopher Weaver	20%
Jessie Bialek	20%
Kui Zhao	50%
Total GIS Personnel Cost:	\$164,464

Table 6 – Annual GIS Personnel Costs



2.1.3 Annual Enterprise Costs

Each of the costs for providing the enterprise GIS has been totaled for the County and distributed among each of the County agencies relative to the number of users in each agency. These costs have been categorized as operating cost, or the cost that is expended to provide GIS support and resources (such as database management, infrastructure, software licensing etc.), and capital costs, which reflect the cost of purchasing the GIS data (such as Orthophotography or Contours). The total annual operating cost for the County GIS enterprise is \$859,717.21 and the total annual capital cost is \$272,000.00. OP has 25 GIS users or approximately 11% of the total users in the County. Annual enterprise costs have been proportionately distributed to OP based on this 11.26% factor. These costs are calculated as \$96,815.00 in operating costs and \$30,630.63 in capital costs, totaling \$127,445.63. Each of these figures has been provided in the table below.

# of Users	% of Total Users	Factor of Operating Cost Applied to Agency	Factor of Capital Cost Applied to Agency	Total Annual Enterprise Cost Applied to Agency
25	11.26%	\$96,815.00	\$30,630.63	\$127,446.63

Table 7 – Annual Enterprise GIS Costs

2.2 Agency Benefit Assessment

GIS is effectively used across OP programs and it has been used for several years. Some OP employees use GIS daily as a tool to support decision making and other employees benefit from and utilize GIS products on a daily basis.

2.2.1 Existing GIS Benefits

The existing benefits realized by OP have been determined for each activity by analyzing the effort needed to perform a task with GIS in comparison to the time spent without GIS. This examination allows each activity to be measured in terms of time, which has been then recomputed to dollars that are realized annually. Each of the existing benefits that are currently being realized has been summarized by program below and has been aggregated to give an annual dollar figure. These benefits are discussed in more detail in section 4. All dollar amounts are based on a flat rate of \$33.95 per hour.



Program	Adequate Public Facilities
Description	County legislation requires the County to provide adequate schools, roads, sewer, and water facilities for Baltimore County. This program provides oversight of studies and reports prepared to assess the adequacy of the County's public facilities.
Activities	<ul style="list-style-type: none"> • Adequate Public Facilities – School Capacity Analysis
Time Benefits (Annual)	\$8,827 (260.0 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$8,827

Program	Charrette and UDAT Project Management
Description	An initiative of the County Executive to turn underused or neglected parcels of land into community assets. This "collaborative" design process involves full community participation in order to ensure certainty that what is planned is what will be built.
Activities	<ul style="list-style-type: none"> • Charrette and UDAT Project Management – Data and Map Production
Time Benefits (Annual)	\$14,259 (420.0 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$14,259

Program	Community Planning
Description	The Community Planning Division serves as the principal citizen contact for matters related to planning. Each County Council District has an assigned community planner who works with residents and businesses, keeping them informed and seeking their input on local plans and projects.
Activities	<ul style="list-style-type: none"> • Community Planning – Information Requests • Community Planning – General Activities
Time Benefits (Annual)	\$228,110.05 (6719.0 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$228,110.05



Program	Demographic Analysis
Description	Analysis of Census and development data for population forecasts and planning studies.
Activities	• Demographic Analysis
Time Benefits (Annual)	\$12,512.27 (368.55 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$12,512.27

Program	Development Review
Description	The Development Review Division coordinates the Office's review of residential, commercial, and industrial development, including concept and development plans, planned unit developments, minor subdivisions, waivers, limited exemptions, undersized lots, assisted living facilities, variances and special exception petitions, and the cycle zoning process. The division develops guidelines and manuals to be used in the review of the development plans.
Activities	• Development Review – Development Tracking
Time Benefits (Annual)	\$102,393.20 (3016.0 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$102,393.20

Program	Districting (re)
Description	This program manages the process of changing of County Council district borders, usually in response to periodic Census results. This takes place to prevent geographic malapportionment.
Activities	• Districting (re) – Council Districts
Time Benefits (Annual)	\$475.30 (14.0 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$475.30

Program	Historic Preservation
Description	This program oversees the preservation of historic districts, buildings, and their settings from erosion caused by neglect, abandonment, or the intrusion of incompatible designs and uses.
Activities	• Historic Preservation – Information Requests
Time Benefits (Annual)	\$183,330.00 (5400.0 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$183,330.00



Program	Land Use Analysis/Vacant Land Analysis
Description	This activity involves production of an accurate land use layer to help determine areas for possible development/redevelopment to forecast population projections based on different build-out scenarios.
Activities	<ul style="list-style-type: none"> • Land Use Analysis/Vacant Land Analysis
Time Benefits (Annual)	\$43,252.30 (1274.0 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$43,252.30

Program	Master Planning
Description	The Master Plan program consists of a comprehensive plan that must be adopted every 10 years, master plan updates, and community or local area plans that are adopted as amendments to the master plan.
Activities	<ul style="list-style-type: none"> • Master Planning – Ten Year
Time Benefits (Annual)	\$12,476.63 (367.5 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$12,476.63

Program	Rezoning
Description	Zoning is a legal mechanism by which local government is able to regulate an owner's right to use privately owned land for the sake of protecting the public health, safety, morals, and/or general welfare. Rezoning is the method used to change the current zoning to a new zone class. CZMP, In-Cycle, and Out-of-Cycle Rezoning are the methods that individuals can use to rezone properties in Baltimore County.
Activities	<ul style="list-style-type: none"> • Rezoning – CZMP • Rezoning – In-Cycle Requests • Rezoning – Out-of-Cycle Requests • Rezoning – Map Corrections
Time Benefits (Annual)	\$66,658.45 (1963.4 hours)
Other Benefits (Annual)	\$0
Total Benefits	\$66,658.45

Table 8– Existing GIS Benefits by Program



The table below summarizes the benefits realized from each of the programs presented above. These numbers represent the total hours and dollars that have been saved by the agency as a result of utilizing GIS.

Total Annual GIS Benefits Summary			
Time Benefits Summary (By Program):	Hours Saved	Labor Rate (Avg)	Annual Time Benefits
Adequate Public Facilities	260.0	\$33.95	\$8,827.00
Charrette and UDAT Project Management	420.0	\$33.95	\$14,259.00
Community Planning	6719.0	\$33.95	\$228,110.05
Demographic Analysis	368.55	\$33.95	\$12,512.27
Development Review	3016.0	\$33.95	\$102,393.20
Districting (re)	14.0	\$33.95	\$475.30
Historic Preservation	5400.0	\$33.95	\$183,330.00
Land Use Analysis / Vacant Land Analysis	1274.0	\$33.95	\$43,252.30
Master Planning	367.5	\$33.95	\$12,476.63
Rezoning	1963.4	\$33.95	\$66,658.45
Total Time Benefits:	19802.45	\$33.95	\$672,294
Other Benefits Summary (By Program):			Annual Other Benefits
N/A			N/A
Total Other Benefits:			\$0.00
Grand Total Annual Benefits:	\$672,294		

Table 9 – Total Annual GIS Benefits

Each of the benefits for these programs has been depicted in the figure below, which provides a clear picture of the areas that are receiving the most benefits from GIS usage.



OP GIS Benefits

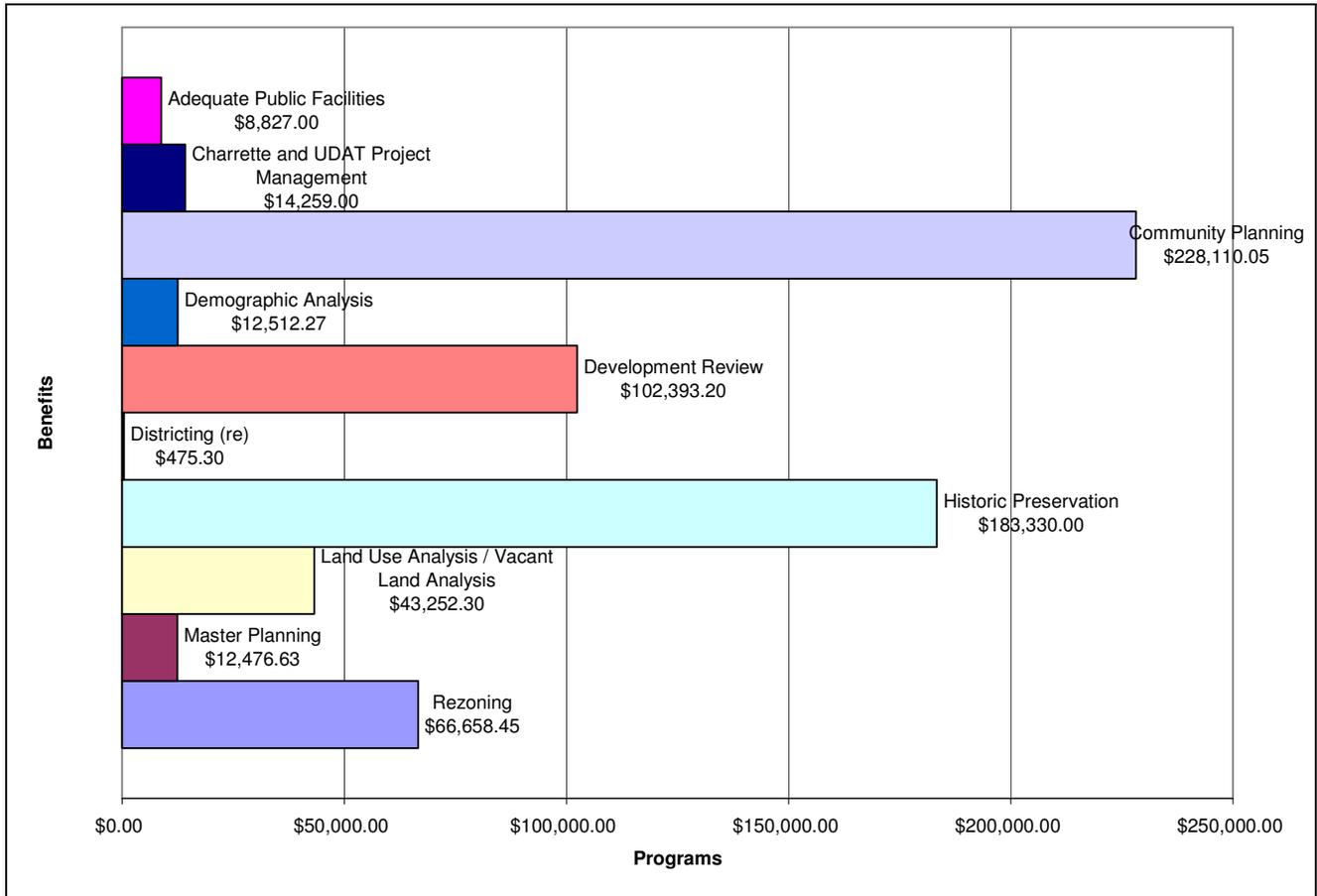


Figure 1 - OP GIS Benefits by Program



3 GIS Utilization and Recommendations

3.1 GIS Utilization Analysis

GIS is being used by all of the programs within OP. The OP staff appears to have appreciation for the power of GIS to support their mission and acknowledge that they could not effectively perform all of their current activities without it.

3.1.1 GIS Personnel

OP has a number of GIS-trained personnel within the agency. Some OP employees use GIS daily as a tool to support decision making and other employees benefit from and utilize GIS products on a daily basis. OP has already invested in providing GIS training through OIT’s Computer Training Center for several of its staff. The following shows a breakdown of the levels of training and the number of staff that have received training at that level:

Basic Training (DataQuery, ArcView)	Mid-Level (ArcGIS Intro)	Advanced (ArcGIS 8x or higher)
13	5	9

Table 10 – GIS Training

In the past, OP has performed in-house training to help with knowledge transfer of software capabilities and methods for using GIS. This is a minimal cost approach to enhancing skills of the staff. Also, a few members of the OP staff have attended ESRI based training that was delivered offsite and not sponsored by the Computer Training Center. These classes are not a standard, annual expenditure, and were not captured as an operating cost.

3.1.2 GIS Data Usage

OP uses many of the GIS datasets provided by OIT’s ArcSDE services via the County WAN. These datasets are used in a variety of ways. The datasets used by ten or more of the agency’s 12 programs are listed below. GIS data usage is discussed in more detail with each program in section 4.

GIS Data Layer	Used by # Programs
Buildings	12
Councilmanic Districts (2002)	12
County Boundary	12
Orthophoto (2005)	12
Reservoir	12
Street Centerlines	12



GIS Data Layer	Used by # Programs
Street Centerlines (View)	12
Tax Parcel	12
Chesapeake Bay Critical Area	11
Community Plans	11
Hydrology	11
Publicly Owned Land	11
Roads	11
Streams and Ponds	11
Transmission Lines	11
Wetlands	11
Zip Codes	11
Zoning - Legally Authoritative	11
Zoning Overlay Districts	11
AddressPoints (View)	10
County Facilities	10
Light Rail	10
Parks and Recreation	10
Renaissance Opportunity Areas	10
Right of Way (LACQ)	10
Urban Rural Demarcation Line (URDL)	10
Wetlands - NWI	10
Wetlands - Special Area Management	10
Zoning - 1999	10

Table 11 - Data Usage

The digital zoning feature class is the **legally, authoritative zoning layer** for Baltimore County. GIS is needed to maintain this feature class and keep the Office of Planning legally compliant with County Code.

3.1.3 GIS Applications Usage

OP has taken advantage of the applications provided by OIT. These applications appear to be effectively used and personnel are proficient with these programs. ArcGIS (Standard) is used by all of the programs within OP. ArcGIS version 9.0, service pack 3 (SP3) is the current County standard that is deployed throughout the various agencies. Additionally, ArcIMS and MyNeighborhood web mapping services, as well as ArcView 3.2 and MapInfo GIS applications, are used for a few activities. OP appears to have appreciation for the power of GIS to support its mission and acknowledges that they could not effectively perform all of their current activities without it.



3.1.4 GIS Database Maintenance

OP is responsible for maintaining the following layers in support of the enterprise GIS:

Dataset	Description	Update Frequency	Location	Complete	Programs Using Data
African American Survey Districts	Boundaries of African American Survey Districts	Annually	SDE	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Development Review • Historic Preservation • Master Planning • Rezoning
Census Blocks (1990 & 2000)	Boundaries of 1990 & 2000 Census Blocks	Every 10 years	SDE	In progress	<ul style="list-style-type: none"> • Adequate Public Facilities • Community planning • Demographic Analysis • Districting (re) • Master Planning
Census Block Groups (1990 & 2000)	Boundaries of 1990 & 2000 Census Block Groups	Every 10 years	SDE	In progress	<ul style="list-style-type: none"> • Adequate Public Facilities • Community planning • Demographic Analysis • Districting (re) • Master Planning
Census Designated Places (1990 & 2000)	Boundaries of 1990 & 2000 Census Designated Places	Every 10 years	SDE	In progress	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Master Planning
Census Tracts (1990 & 2000)	Boundaries of 1990 & 2000 Census Tracts	Every 10 years	SDE	In progress	<ul style="list-style-type: none"> • Adequate Public Facilities • Community planning • Demographic Analysis • Districting (re) • Master Planning
Community Associations	Boundaries of Community Associations	As needed	SDE	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Master Planning • Rezoning



Dataset	Description	Update Frequency	Location	Complete	Programs Using Data
Community Plans	Locations of Community Plans	On-going	Planning server	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning
Congressional Districts	Boundaries of 2002 Congressional Districts	Every 10 years	SDE	Yes	<ul style="list-style-type: none"> • Community planning • Master Planning
Councilmanic Districts	Boundaries of 2002 Baltimore County Councilmanic Districts	Every 10 years	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Districting (re) • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning
County Historic Districts	Boundaries of areas designated as County Historic Districts	N/A	Planning server	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Development Review • Historic Preservation • Master Planning • Rezoning
CZMP Zoning Issues (1996, 2000, & 2004)	Locations of CZMP rezoning Issues	Every 4 years	Planning server / R drive	Yes	<ul style="list-style-type: none"> • Community planning • Demographic Analysis • Legislative Programs • Master Planning • Rezoning
Design Review Panel Areas	Boundaries of Design Review Panel Areas	As needed	R drive	Yes	<ul style="list-style-type: none"> • Community planning • Development Review • Master Planning • Rezoning



Dataset	Description	Update Frequency	Location	Complete	Programs Using Data
Development Areas	Boundaries of Development Areas	On-going	Planning server	In progress	<ul style="list-style-type: none"> • Adequate Public Facilities • Community planning • Demographic Analysis • Development Review • Master Planning • Rezoning
Election Districts	Boundaries of Election Districts	N/A	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Community planning • Demographic Analysis • Master Planning
Historical Aerial Photos	Scanned images from the 1938, 53, 54, 58, 60, 61, 67, 72, 77, and 80 aerial photos	NA	External hard drives	Most Years have been scanned	<ul style="list-style-type: none"> • Community Planning • Historic Preservation
Historic Parcels	Locations of Historic Parcels	On-going	Planning server	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Development Review • Districting (re) • Historic Preservation • Master Planning • Rezoning
Land Management Areas	Boundaries of Land Management Areas	N/A	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Historic Preservation • Master Planning • Rezoning
Land Use Datasets (1994, 1997, 1998, & 2002)	Land use classification datasets	N/A	R drive	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Development Review • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning



Dataset	Description	Update Frequency	Location	Complete	Programs Using Data
Legislative Districts	Boundaries of Legislative Districts	Every 10 years	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Demographic Analysis • Master Planning
National Register Historic Districts	Boundaries of historic districts designated by the National Register	N/A	R drive	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Historic Preservation • Master Planning • Rezoning
Parcel Based Land Use	Land use designations for each parcel in Baltimore County. The parcels must be updated as land uses change.	Monthly	SDE	In progress	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning
Permits	Point file of the location of permits issued by PDM	Quarterly	Planning Server	Yes	<ul style="list-style-type: none"> • Land Use Analysis • Community Planning • Demographic Analysis • Development Review
Polling Places	Point file of polling locations	Bi-annually	SDE	Yes	<ul style="list-style-type: none"> • Community planning • Master Planning
Population Forecasts	Socioeconomic forecasts each year to reflect demographic changes and development activities throughout the county.	Yearly	BMC offsite	Yes	<ul style="list-style-type: none"> • Development Review
Priority Funding Areas	Boundaries of areas designated as Priority Funding Areas	N/A	R drive	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Historic Preservation • Master Planning • Rezoning



Dataset	Description	Update Frequency	Location	Complete	Programs Using Data
Proposed Land Use	Proposed Land Use as developed for the 2010 Master Plan	N/A	SDE	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Development Review • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning
Regional Planning Districts	Boundaries of Regional Planning Districts	Every 10 years	SDE	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Master Planning • Rezoning
Renaissance Opportunity Areas	Boundaries of areas designated as Renaissance Opportunity Areas	On-going	Planning server	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning
Scenic Routes	Locations of scenic routes	As needed	N/A	No	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Master Planning
School Districts (Elementary, Middle, High)	Boundaries of School Districts	Annually	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Master Planning • Rezoning
State Legislative District	Boundaries of State Legislative Districts	On-going	R drive	In progress	<ul style="list-style-type: none"> • Adequate Public Facilities • Community planning • Demographic Analysis • Master Planning



Dataset	Description	Update Frequency	Location	Complete	Programs Using Data
Traffic Analysis Zones	Traffic Analysis Zones	Every 10 years	R drive	Yes	<ul style="list-style-type: none"> • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning
Urban/Rural Demarcation Line (URDL)	Boundary of the URDL	Rarely	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Legislative Programs • Master Planning • Rezoning
Zoning Datasets	Zoning of each property that is updated with each change to the zoning data during CZMP, Cycle and Out-of-Cycle Zoning Hearings.	Quarterly	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning
Zoning Overlay Districts	Boundaries of Zoning Overlay Districts	Quarterly	SDE	Yes	<ul style="list-style-type: none"> • Adequate Public Facilities • Charrette and UDAT Project Management • Community planning • Demographic Analysis • Development Review • Districting (re) • Historic Preservation • Land Use Analysis/Vacant Land Analysis • Master Planning • Rezoning

Table 12 - Agency Data Maintenance



The digital zoning feature class is the **legally, authoritative zoning layer** for Baltimore County. GIS is needed to maintain this feature class and keep the Office of Planning legally compliant with County Code.

The costs of maintaining each of these data layers are discussed in section 2.1.2.

3.1.5 Assessment of Business Process with GIS

GIS is effectively used across OP programs. It has been used for several years and a mature and robust GIS program has evolved within OP. Many OP employees use GIS daily as a tool to support decision making and other employees use and benefit from GIS products on a daily basis.

GIS involvement in each of these programs' business processes are discussed in the table below.

Program	Business Process Assessment
Adequate Public Facilities	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, and • Supplement reports.
Charrette and UDAT Project Management	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Prepare targeted mailing lists, • Create project-specific maps, • Supplement reports, • Create web pages that provide information to the public, and • Create public presentations. It is also used on-site during the UDAT to review options, prepare data to support decision-making, present options, etc. and is a key ingredient ensuring the success of these intensive sessions.
Community Planning	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, • Supplement reports, • Provide information to citizens and other County agencies, and • Perform database maintenance.
Demographic Analysis	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, and • Supplement reports.
Development Review	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, and • Supplement reports, manuals, and handbooks.



Program	Business Process Assessment
Districting (re)	GIS is used to perform the spatial analyses needed to assure that County Council districts are re-apportioned appropriately when new Census data are released.
Historic Preservation	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, and • Supplement reports.
Land Use Analysis/Vacant Land Analysis	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, and • Supplement reports.
Master Planning	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, • Supplement reports, and • Perform database maintenance.
Rezoning	GIS is used to: <ul style="list-style-type: none"> • Perform spatial analyses, • Create project-specific maps, • Supplement reports, and • Perform database maintenance.

Table 13 - GIS Integration with Business Processes, by Program



3.2 GIS Needs Assessment

3.2.1 Applications

There are several custom applications that could be developed to support the business processes of OP that are discussed below.

- More Interactive Web-Based Information.** The priority need for future GIS applications needed by the agency is for additional MyNeighborhood ArcIMS sites. OP expends significant resources interfacing with land developers, SHPO, the public and permit applicants. These interactions typically revolve around a map or series of maps and information is exchanged and issues discussed in this spatial context. By making raw data available to stakeholders, the effectiveness of these interactions is maximized.
- CZMP Toolbar.** Create a new customized application to support the CZMP process. This need is further explored and discussed in Section 3.3.1.2. This application would provide the most benefits if it is fully implemented and tested by the next CZMP cycle that begins in August 2007.
- School Capacity Analysis Support.** Develop a customized application to automate the retrieval of current data regarding school capacity. Users would enter an address (a proposed new subdivision) of interest and the application would select the appropriate school district and adjacent school district. Users would then enter the number of proposed lots and the system would determine the results. In addition, the reporting function could be enhanced, as it currently just marries analytical data with polygons. A tighter integration would serve to improve analysis performance; all data entry and mathematical processing (currently done in Excel) could be done in GIS and the creation of a customized application to support this process would benefit OP.

3.2.2 Data

Five datasets were identified that would enhance OP's current business process. Creation of this data layer would yield new efficiencies for existing activities within OP. Likely, other agencies should be tasked to create and maintain these data since they are the authority for these data within the County. Two of the datasets are already in some level of compilation status, but require some additional work or do not meet all of the spatial accuracy requirements of the users. The data layers listed below could be enhanced or completed to provide benefits to OP:

Dataset	Status and Current Data Limitation	Program That Could Benefit From Data
Slopes	Not currently available	<ul style="list-style-type: none"> Master Planning Land Use Analysis
Permits	A permit layer is being maintained, however it is not historically complete and the data is not available through ArcSDE due to Quality concerns.	<ul style="list-style-type: none"> Development Review



Dataset	Status and Current Data Limitation	Program That Could Benefit From Data
Water & Sewer Plans	A layer indicating the plan designations for Water and Sewer Basic Services. This would be data compiled in the Master Plan geodatabase.	<ul style="list-style-type: none"> • Master Planning • Development Review • Community Planning
Soils	An accurate soils layer would provide better analysis to support the review process.	<ul style="list-style-type: none"> • Charrette and UDAT • Community Planning • Development Review • Land Use Analysis • Master Planning
Historical Aerial Photos	The photos were scanned and reside on external hard drives. Staff will not be able to streamline use until the images are georeferenced, indexed, compressed and available on a shared drive.	<ul style="list-style-type: none"> • Community Planning • Historic Preservation

Table 14 - Dataset That Needs to be Created

The Historical Preservation program needs more updated information to be posted to the MyNeighborhood application. At the time interviews were conducted, an estimated 3,000 properties shown in the MyNeighborhood application did not have tax identification numbers listed. By updating this site more frequently, the number of inquires forwarded to OP staff would be reduced. The parcel data is maintained daily and errors identified and reported by OP are processed into the database, pending priority and severity of the issue.

3.2.3 Training

Most OP personnel would benefit from training on GIS data and applications that are specific to each program. This training would include an overview of how applications can be used to support business processes and data that could be useful to activities. This training would have to be proceeded with a business process analysis, in order to determine how data and applications could be used and what gaps exist in GIS knowledge.

3.2.4 Best Practices

There are several areas where OP could take advantage of best practices that have been implemented by other agencies or counties with similar business processes. These areas include:

- **Decrease Reliance on Unsupported Software** - MapInfo and ArcView 3.2, two software packages that are not supported by the enterprise, are being used to support several business processes within the agency. The agency should try to incorporate the DataQuery or standard ArcGIS applications into these activities as at least a supplementary software package, if not a total replacement. Although MapInfo does provide several relatively insignificant benefits, these are outweighed by the expert training, support, and data provided by OIT for the ArcGIS software package.
- **Store GIS data in ArcSDE** – Several datasets are stored on local drives within the agency. These datasets should be migrated to the enterprise ArcSDE database provided by OIT, in order



to provided proper backup procedures and allow for the data to be accessed by the enterprise. These data layers include the historical environmental setting and permits shapefiles.

3.2.5 Communication and Agency Coordination

OP staff interacts daily with other County agencies on a wide variety of topics. GIS products and services are often exchanged as part of this interaction. For example, OP staff collaborates with DEPRM during master planning and zoning activities. Some of these activities are enhanced through the use of GIS and digital workflows.

Staff also coordinates with PDM regarding permitting issues. This coordination results in an over-reliance on PDM to support their business processes and constrains OP’s GIS use within the agency. This coordination should be limited to information sharing, allowing for dedicated personnel within PDM to handle their specific needs and freeing up resources within OP for other tasks.

3.3 Recommendations

OP could further benefit from GIS in several ways. This section outlines recommendations that can be implemented in the short-term and mid-term to enhance the agency’s GIS usage and further take advantage of the enterprise system provided by the County. These will in turn reduce time and money spent on activities performed by OP and increase the level of service provided to customers.

3.3.1 Short-term Recommendations & Potential Benefits

There are several undertakings that should be implemented in the near term to improve GIS usage within the agency and meet the needs that were outlined in the previous section. These recommendations are categorized by activities that can be quickly deployed with little effort and by activities that require a greater investment but are greatly needed. Each of these recommendations are discussed below. See section 4 for more detailed recommendations to support individual activities.

3.3.1.1 Quick Deployment

The following recommendations have the potential to provide additional benefits to the agency and can be implemented with few additional resources:

Opportunity 1: Steep Slopes

Opportunity 1: Steep Slopes	
Description:	Integrate use of a slopes feature class
Software Requirements:	ArcGIS
Hardware Requirements:	GIS computers
Data Requirements:	Slopes feature class (proposed for creation by DEPRM using LiDAR data)



Opportunity 1: Steep Slopes	
Training Requirements:	One hour introduction to the dataset for awareness training
Timeframe:	6 months
Additional Costs:	None
Potential Benefits:	Increased efficiency, accuracy and usability of the land use data layer and master planning efforts. This could be used to: <ul style="list-style-type: none"> • Determine development capacity for land. • Identify areas that are impractical for construction

Table 15- Opportunity 1: Steep Slopes

• **Opportunity 2: Historical Aerial Photographs**

Opportunity 2: Historical Aerial Photographs	
Description:	<p>Integrate use of digitized historical aerial photographs to various activities. Many OP staff unable to effectively utilize the images that have been scanned because they reside on an external hard drive. In order to fully integrate this dataset into use, each image should be georeferenced, compressed and stored on a shared network with an index grid for easy access. As another option, the georeferenced images could also be combined into an Image Catalog in ArcSDE.</p> <p>In addition, numerous requests are received each week from consultants who desire access to and copies of these photos. OP should consider creation of a web-based tool for viewing and/or ordering digital copies of these images.</p>
Software Requirements:	ArcGIS, ArcIMS, Internet Explorer
Hardware Requirements:	GIS computers
Data Requirements:	Scanned, georeferenced, and compressed historical aerial photographs available on a shared drive with associated flight line/tiling scheme indices.
Training Requirements:	One hour introduction to the dataset for awareness training
Timeframe:	Immediate



Opportunity 2: Historical Aerial Photographs	
Additional Costs:	<p>Estimated Cost to georeference, compress and upload to a Shared Drive: 4 images per hour x 5,864 images = 1,466 hours 1,466 hours x \$33.95 = \$49,770.70 (if work is performed in-house)</p> <p>Additional hours and cost would be required to develop an index grid.</p> <p>Possibly the work could be performed by a college intern to minimize costs.</p>
Potential Benefits:	<p>Increased efficiency in retrieval of these data to handle customer requests (internal and external). Integration of historical data into existing analyses. Reduced staff time answering questions from consultants and assisting them with retrieval of these data. A detailed benefits evaluation should be performed in order to assess the opportunity.</p>

Table 16- Opportunity 2: Historical Aerial Photographs

- **Opportunity 3: School Capacity Analysis Support**

Description:	<p>Every development plan reviewed by the Office of Planning must be analyzed for its impact on school capacity. A small customized application to assist planners in determining this impact will reduce staff time and potential for errors. The application would display the impacted school districts and perform the required calculations based on input by the planner of the proposed number of residential units and location by address.</p>
Potential Benefits:	<p>A customized ArcGIS application to assist with this business process would ensure consistency of the analysis based off the enterprise GIS database layers available in ArcSDE. The process would also be quicker to implement and would allow flexibility for Planners to perform “what if” scenarios quicker and easier.</p>

Table 17 – Opportunity 3: Capacity Analysis Support

3.3.1.2 Additional Investment Opportunity

The following recommendation has the potential to provide additional benefits to the agency and can be implemented with few additional resources:

Opportunity 1: Create a CZMP Toolbar

Description

The existing CZMP process begins with a petitioning process where requestors complete a hardcopy form with a hardcopy drawing (sketch) that describes their proposed zoning change. OP staff typically begin the review process by mapping the issue boundary with the County GIS features, extracting the existing zoning and creating a new polygon representing the proposed change. In addition, during the zoning change review process, OP staff expends a



great deal of effort transferring data from the GIS to an Access database. The Access database is used to support report generation; these reports are then integrated with mapping data from the GIS. This process is tedious, repetitive and creates duplicate data maintained in separate applications.

A new custom application could be created to enhance this workflow and implemented to save time and improve the quality of the analysis and output. This new application would include six basic customized functions within ArcGIS to create a GIS-centric reporting/tracking tool. The functions would likely be managed through a series of buttons on a custom CZMP toolbar integrated into ArcGIS developed using Visual Basic, or a similar language..

The CZMP toolbar would be a series of tools that provide functionality to enhance the process. Below is a synopsis of the functionality provided by each tool component:

- **Tool #1 – Mapping the Request** - will help the OP staff map the issue boundary and requested zoning. It will set up an edit environment in SDE and allows OP staff to use the boundaries of current feature classes (parcel, stream, existing zoning, street centerlines, etc.) to create the boundary of the issue. It will also allow the staff to map requested zoning for each issue through each stage of review (petitioner request, staff recommendation, planning board recommendation, county council decision).
- **Tool #2 – Automatic Zoning Determination & Acreage** - will use the boundary of the issue to extract existing zoning and existing zoning acreages and requested zoning and requested zoning acreages which will be used in reports.
- **Tool #3 – Notifications** - will select impacted and adjacent properties owners for notification. The owner data must contain the standard address fields and fields stating if they are impacted or adjacent to an issue and which issues they are affected by. This information will be used to create a form letter giving current zoning and requested zoning conditions, and mailing labels. This functionality should be shared with the DataQuery mail merge module.
- **Tool #4 – Mapping Sign Locations** - will set up an edit environment so that sign locations for each issue can be mapped in SDE.
- **Tool #5 – Layout & Plotting** - will be needed to created a map layout (PDF) of each issue boundary, a zoning recommendation for each of the 4 decision points for each issue, null property owners, and sign locations.
- **Tool #6 – Reporting** - Each function would serve to analyze a feature or set of features and generate a custom report (using Crystal Reports, or similar). This report would then be automatically integrated with a map that was created using a custom template and standard data layers. The report would also track the petition and request through the analysis and approval process.



This application would provide the most benefits if it is fully implemented and tested by the next CZMP cycle that begins in August 2007.

Preliminary Cost/Benefit Analysis

A preliminary estimate of the costs and anticipated benefits resulting from creation of a CZMP toolbar is summarized in the table below. This includes the cost to develop the customized applications and the anticipated benefits over a four-year cycle; a four-year cycle was used to coincide with the CZMP update cycle. No maintenance costs were assumed. Additional details regarding costs and benefits are broken out in the subsequent subsections.

Preliminary Cost/Benefit for CZMP Toolbar Development				
Development Costs (1 year)	Maintenance Cost (3 years)	Total Cost (4 years)	Benefits (4 years)	Cost/Benefit Difference
\$28,518	\$0	\$28,518	\$78,085	+\$49,567

Table 18 - Preliminary Cost/Benefit for CZMP Toolbar Development

Preliminary Cost Estimate

Development costs have been estimated based on a general understanding of the basic functionality described above. Each level of effort was multiplied by a rate of \$33.95 to give the cost associated with developing the layer within the county agency (as opposed to having the work performed by a contractor). These development costs have been broken down by task according to the table below:

CZMP Toolbar Development Costs		
Task	Hours	Cost
Develop Requirements	35	\$1,188
Online Mapping Tool	280	\$9,506
CZMP Reporting Tool	490	\$16,636
Project Management, Meetings	35	\$1,188
	Total Cost	\$28,518

Table 19 – CZMP Toolbar Development Costs

Preliminary Benefit Estimate

Benefits for developing and utilizing the CZMP Toolbar would primarily be realized within the Rezoning program. These benefit estimates were created based on the assumption that each zoning request currently takes approximately 5.5 hours to process and an average of 575 requests are received each CZMP cycle. It is anticipated that the new toolbar would save 4 hours processing time from each request. The anticipated benefits are shown in the table below.



CZMP Toolbar Benefits Details						
Task	Staff Hours w/o Layer	Staff Hours with Layer	Difference	Annual # Iterations Per Year	Total Hours Saved Using Layer	Annual Time Savings Benefit (Based on \$33.95/hr)
Review and process petitions	5.5	1.5	4	575	2300	\$78,085
Total Benefits Anticipated Over Four Years						\$78,085

Table 20 - CZMP Toolbar Benefits Details

There are other activities within OP that would likely benefit from having the CZMP toolbar available; however, these benefits are mostly intangible and difficult to quantify in terms of efficiencies gained, dollars saved or costs avoided. Even if these other benefits were quantified, it is unlikely that they would contribute sufficiently to offset the initial data capture investment significantly.

This application would also allow for quicker processing of the petitions, faster and more accurate information for the County Council, integrated tracking of the process with the feature, and seamless updating of SDE's authoritative zoning layer.

Recommendation

Based on the estimates detailed above, it is expected that, over a four-year cycle, the proposed CZMP toolbar would pay for itself in time savings resulting from increased operational efficiency. In addition to the cost/benefit preliminary results, this tool will provide OP with the capability to quickly interact with County Council on CZMP issues and will enable their staff to more effectively manage the CZMP process with GIS. Based on this information, it is recommended that further investigation into this proposed project be conducted. Performance of a more-detailed needs assessment and requirements analysis would result in a usable scope of work. In addition, a more-detailed cost/benefit analysis could be performed, the four-year benefit cycle examined and a final decision rendered.

3.3.2 Mid-term Recommendations & Potential Benefits

There are several undertakings that can be implemented in the mid-term to improve GIS usage within the agency. These are summarized below. See section 4 for more detailed recommendations to support individual activities.

Opportunity 1: Streamline the permit mapping process and Implement a digital permit submission and review process. Integrate with Land Management Application.

Currently, OP has taken on the responsibility to develop and maintain a point layer representing all permits issued and approved by PDM. OP has approximately 1 FTE responsible for managing the mapping of permits and OP is already supporting the maintenance process. In order to streamline this cumbersome process, PDM should initiate a process to allow new permit applications be submitted electronically. This process would aid in associating permits



with an address to represent the permit location. The point feature could be created based on the new Address Point feature class or by joining to the tax parcel layer and validated as each permit is ingested. This permit feature class should be made available in ArcSDE for the enterprise GIS community with documented metadata and a routine database maintenance cycle, as currently exists on the local version of this database.

This functionality would be provided by a complete Land Management application solution. A current and complete digital permit layer, along with an application to be easily track and route a permit for review within a GIS context would benefit PDM, OP and all agencies involved in the review and approval process. A website could be established to facilitate the application process, where on-line forms are completed and application files uploaded. Having permit application and associated mapping electronically would facilitate some reviews and enable an all-digital permit review file, with digital as-built records (if applicable) set as hyperlinks. Also, if the permit is approved and it affects GIS data, the impacted feature classes could be updated with increased accuracy and efficiency. Ownership and maintenance of this permit GIS layer should be the responsibility of PDM.

Opportunity 2: Create an integrated GIS/Oracle CZMP application.

The 2012 CZMP process can be further enhanced and streamlined with the extension of the functionality provided by the ArcGIS CZMP toolbar functionality by incorporating applicant and agency comments into an Internet/Intranet enabled ArcGIS application. Creating an integrated application will save time and money from moving data from one software application to another, without having to correct, edit or manipulate the data. Having a web based application that will allow county employees and the general public to query for zoning issues will also reduce the number of public inquires the Office of Planning handles and provide information in a more timely fashion. It will also lead to better coordination among county agencies.

The system could include the following functionality:

- The system will allow a petitioner to complete an application form over the Internet. The data typed into the form would be linked to an Oracle database and stored with the GIS property information related to the zoning request in ArcSDE.
- The system will generate zoning issue numbers, fees, owners of the impacted property and adjacent properties, sign locations and allow input of comments, recommendations and decisions from reviewing agencies, planning staff, Planning Board and County Council.
- The system will allow OP staff and other agencies to overlay and intersect various data layers against the issues to help determine whether the zoning should be changed or modified.
- The system will track the status of the zoning request as it moves through the process. It would send emails to alert reviewers of issues, provide deadlines for comments and reminder notices. The system would also generate advanced reporting of a log of issues and other special reports using Crystal Reports.



Opportunity 3: Improve WAN performance and reliability.

Several staff indicated that GIS performance was a frustration. This would likely take a variety of forms, including new PCs, increased WAN bandwidth, higher-performance servers and migration to ArcServer and Image Server. The performance issues should be analyzed and tested to try to isolate and identify the root cause of the network performance issues.

Opportunity 4: Integrate 3D visualization and animation for planning.

Most planners are integrating 3D visualizations and simulations during the consensus building process, particularly when presenting to the public and decision makers. Using ArcScene or Sketch-Up, 3D models can be constructed with relative ease. In addition, animation sequences (showing an area over time or a 'fly through' of a proposed development) can be created with standard ArcMap functionality (in version 9.2). Presentations can be prepared to help understand the proposed development's impact to viewshed, skylines, traffic flow and architectural detail. These techniques are effective in helping stakeholders understand what is being proposed and get a good idea of what future development may look like. These tools are becoming increasingly common because they are significantly less expensive and more portable than scale models or artist's renderings and help achieve buy-in. Buildings provided with height attributes would help support this effort.



4 Programs and Activities

Each of the interviews conducted with agency officials and personnel were used to compile information about the business processes used for each program within the agency, as well as look at how GIS is being used and benefits are being realized.

Each program is described below, listed with GIS-related funding and mandates, as well as any social or political benefits that are being seen as a result of using GIS. The associated products, customers served, and data/ applications used are also discussed. Activities have also been included under their associated programs, along with the process with and without GIS used to complete this activity, benefits that have been realized, and recommendations for additional GIS implementation where appropriate.



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4.1 Adequate Public Facilities

Program: Adequate Public Facilities
Primary Point of Contact:
Jeff Mayhew
Overview:
County legislation requires the County to provide adequate schools, roads, sewer, and water facilities for Baltimore County. This program provides oversight of studies and reports prepared to assess the adequacy of the County's public facilities.
Funding:
There is no external funding for this program.
Mandates:
Code of Baltimore County Regulations (COBAR)
Political Benefits:
<ul style="list-style-type: none"> • Maintain healthy communities with good schools. • Manages perception that one community might be more desirable over another. • Ensures compliance with legislation passed to ensure the schools are healthy and delivery of educational services is manageable. • Schools are not overcrowded and enrollment levels are equalized. • Legal compliance.
Social Benefits:
<ul style="list-style-type: none"> • Safe and desirable neighborhoods exist, supporting a high quality of life. • Quality educational opportunities exist for County children. • Seniors and the community have access to a functional institution that supports activities beyond grade school education.
Products/Services:
<ul style="list-style-type: none"> • An annual report mapping school enrollment levels, highlighting overcrowded schools is produced and made available to interested parties. • A set of maps is posted throughout the County for agencies involved in the approval process for development. • A report produced for each proposed development (as part of development approval process) including major subdivisions, planned refinements (adding units), renaissance projects and planned unit and limited exemption developments. • Maps identifying where County dollars are spent to relieve overcrowding are produced on a regular basis (about 10 sets of maps each year). The school system provides stream of projected enrollments and this is mapped and compared to where capital funds will be spent.



Customers:		
<ul style="list-style-type: none"> • County Council • County Executive • Other County agencies • Schools • Developers • County citizens 		
Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • Buildings • Capital Projects • Census Block Groups (1990) • Census Block Groups (2000) • Census Blocks (1990) • Census Blocks (2000) • Census Tracts (1990) • Census Tracts (2000) • Chesapeake Bay Critical Area • Community Plans • Conservation Easements • Councilmanic Districts (2002) • County Boundary • Development Plans • Easement • Election Districts • Enterprise Zones • Facilities • Fire Hydrants • Fire Stations • Flood Insurance Maps (FEMA) • Forest Conservation Management Areas 	<ul style="list-style-type: none"> • Forest Corridors • Geology • Golf Courses • Government Lands • Greenways • Hydrology • Index Grid - ADC Map • Junkyards • Land Management Areas • Landfills • Legislative Districts (2002) • Orthophoto (2005) • Parcel Based Landuse • Parks and Recreation • Pipelines • Playgrounds • Police Precincts • Priority Funding Areas • Publicly Owned Land • Renaissance Opportunity Areas • Reservoir • Roads • School Districts - Elementary 	<ul style="list-style-type: none"> • School Districts - High • School Districts - Middle • Schools—Point Location • Sewer Service Areas • Sewer Subsheds • State Legislative District • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • TaxParcel • Transmission Lines • Urban Rural Demarcation Line (URDL) • Watersheds - Major • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning Overlay Districts
Applications Used:		
<ul style="list-style-type: none"> • ArcGIS (Standard) 		
Associated Activities:		
4.1.1 Adequate Public Facilities – School Capacity Analysis		



4.1.1 Adequate Public Facilities – School Capacity Analysis

Activity: Adequate Public Facilities – School Capacity Analysis					
Primary Point of Contact:					
Jeff Mayhew					
Overview:					
Legislation requires the OP to study and report on the enrollment capacity of County schools. Areas where schools are over capacity are subject to a building moratorium unless mitigated by spare capacity in adjacent schools or by plans for school expansion.					
Interviewee(s) Providing Information:					
Jeff Mayhew					
Process with GIS:					
Enrollment figures are mapped for Elementary, Middle and High schools along with district boundaries and capacities. These figures are compared other data including SLIST to identify the location of approved subdivisions, in combination with school capacity, to identify potentially overcrowded schools. Mapping products are produced and used to illustrate and convey results.					
Process without GIS:					
Process was essentially performed as a mathematical/statistical analysis without the benefit of a spatial component. Only elementary schools were evaluated and each school had an individual spreadsheet that detailed current enrollment numbers and projections. It did not consider proposed or recently-approved development projects, took approximately 2.5 times the level of effort and did not include mapping output products.					
Benefits Assessment: (H, M, L) Identify confidence level					
<ul style="list-style-type: none"> • Medium 					
Benefits to Using GIS for this Activity:					
Analysis has a spatial component and includes mapping products that effectively communicate results. Results serve to identify where school construction funding should be spent and problems are anticipated. Capitol improvements are targeted at priority areas and with sufficient lead time to allow for funding approvals and construction.					
Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
8	3	5	52	260	\$8,827.00
Total Annual Benefits: \$8,827.00					



Areas for Improvement:

Reporting function could be enhanced, as it currently just marries analytical data with polygons. A tighter integration would serve to improve analysis performance; all data entry and mathematical processing (currently done in Excel) could be done in GIS.

New Opportunities:

- Develop a customized application to automate the retrieval of current data regarding school capacity. Users would enter an address (a proposed new subdivision) of interest and the application would select the appropriate school district and adjacent school district. Users would then enter the number of proposed lots and the system would determine the results.

Benefits of Pursuing New Opportunities:

- Increased efficiency. The application could be potentially posted on-line so that interested parties (typically, developers who are considering land purchases for new housing construction) could make their own determinations and reduce the time OP staff spend answering these types of questions.



4.2 Charrette and UDAT Project Management

Program: Charrette and UDAT Project Management
Primary Point of Contact:
Jackie MacMillan
Overview:
<p>An initiative of the County Executive to turn underused or neglected parcels of land into community assets. This "collaborative" design process involves full community participation in order to ensure certainty that what is planned is what will be built.</p> <p>UDAT stands for Urban Design Assistance Team, a group affiliated with the American Institute of Architects (AIA). Most teams range in size from 6-12 members. They are made up of seasoned professionals in architecture, landscape architecture, planning, economics, land development, and related disciplines. UDATs only go where they are invited. Their job is to work very closely with community residents to learn about the community's challenges and then devise a plan for solutions. They often focus on large-scale physical improvements. They look closely at a community's culture and history, the health of its commercial centers, its road network, public and private institutions, parks, and open spaces. They do address social issues, though their primary expertise is land use and the built environment.</p>
Funding:
There is no external funding for this program.
Mandates:
None noted.
Political Benefits:
<ul style="list-style-type: none"> • County Council and County Executive are involved in planning initiatives • State recognition • Drives future planning and redevelopment activities within the County • Fast-track process for development of community revitalization projects
Social Benefits:
<ul style="list-style-type: none"> • Community revitalization • Aesthetic improvements (e.g., storefronts, streetscaping, etc.) • Pedestrian and transportation improvements • Business resurgence • Community involvement • Long-term plans devised and implemented • Development opportunities • Direct access to subject matter experts who assists with plan creation



Products/Services:		
<ul style="list-style-type: none"> • Maps • Reports • Project plans • Outreach mailings • Presentation materials 		
Customers:		
<ul style="list-style-type: none"> • County staff • County executive and elected officials • Steering committee members • Non-profit partners • Public at large for public presentations, publications • Business owners • Community Associations • Interested Communities • Institutions (churches, hospitals, school organizations, etc.) • Developers 		
Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • Abandoned Railroads • AddressPoints (View) • African American Survey Districts • Agricultural Preservation • Athletic Fields • Basic Services - Transportation (Intersections) • Basic Services - Water • Basic Services -Sewer • Bridges • Buffers with forest cover-1996 • Buildings • Business Parks • Capital Projects • Cell Tower Sectors • Cell Towers • Cemetery • Census Designated Place (1990) • Census Designated Place (2000) • Chesapeake Bay Critical Area • Commercial Pools • Commercial Revitalization Districts • Communication Towers 	<ul style="list-style-type: none"> • Forest Corridors • Geology • Golf Courses • Government Lands • Greenways • Health Centers • Historic Districts • Hydrologic Facilities • Hydrology • Index Grid - Phase I • Index Grid - Phase II • Index Grid - Phase III • Junkyards • Land Management Areas • Land Use 1994 • Land Use 1997 • Land Use 1998 • Land Use 2002 • Landfills • Legislative Districts (2002) • Light Rail • Master Plan - Sewer • Master Plan - Water • Metro Railroad • Metropolitan District Line • Movie Theaters • National Register Historic 	<ul style="list-style-type: none"> • Railroads • Regional Planning Districts • Renaissance Opportunity Areas • Reservoir • Right of Way (LACQ) • Roads • Rural Legacy • Scenic Overlooks • Scenic Routes • School Districts - Elementary • School Districts - High • School Districts - Middle • Schools—Point Location • Sewer • Sewer Service Areas • SimComFrstDiv • SimCon • Soil Type • Soils • Spot Elevations • Storm Water Management Facilities • Stormwater (Geodatabase) • Streams and Ponds • Street Centerlines • Street Centerlines (View)



<ul style="list-style-type: none"> • Community Associations • Community Conservation Sectors • Community Plans • Conservation Easements • Contours • Councilmanic Districts (2002) • County Boundary • County Facilities • County Historic Districts • Cycle Amends Sewer • Cycle Amends Water • Dams • Digital Elevation Models • Enterprise Zones • Facilities • FEMA Maps • Fire Stations • Fire Stations Boundary • Flood Insurance Maps (FEMA) • Forest – 1996 Image Polys • Forest Conservation Management Areas 	<p>Districts</p> <ul style="list-style-type: none"> • Orthophoto (1995) • Orthophoto (1996) • Orthophoto (1997) • Orthophoto (1998) • Orthophoto (2000) • Orthophoto (2001) • Orthophoto (2002) • Orthophoto (2005) • PAL Centers • Parcel Based Landuse • Park Points • Parks and Recreation • Pipelines • Playgrounds • Police Stations • Post Offices • Priority Funding Areas • Proposed Land Use • Publicly Owned Land • Pumping Stations • Quarries • Racetracks 	<ul style="list-style-type: none"> • Tax Parcel • Tennis Courts • Traffic Analysis Zones • Traffic Calming • Traffic Signal and Calming Layers • Traffic Signals • Trails • Trails - Walkways • Transmission Lines • Tree Cover • Urban Rural Demarcation Line (URDL) • Watersheds - Major • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning – 1999 • Zoning Overlay Districts
<p>Applications Used:</p>		
<ul style="list-style-type: none"> • ArcGIS (Standard) 		
<p>Associated Activities:</p>		
<p>4.2.1 Charrette and UDAT Project Management – Data and Map Production</p>		



4.2.1 Charrette and UDAT Project Management – Data and Map Production

Activity: Charrette and UDAT Project Management – Data and Map Production
Primary Point of Contact:
Jennifer Meacham
Overview:
Provide data and GIS assistance for/to the design teams.
Interviewee(s) Providing Information:
Kathy Schlabach, Kristopher Weaver, Ngone Seye, Jennifer Meacham
Process with GIS:
<p>GIS is used to prepare mailings and maps of the study area prior to the UDAT. GIS is used on-site during the UDAT to review options, prepare data to support decision-making, present options, etc. Due to the intensive and iterative nature of the real-time interactions and decision making process, GIS is considered a key ingredient to the success of these charrettes. About one per year is currently performed; however, this is expected to double in the near future as a result of their success, popularity and effectiveness in quickly creating an urban in-fill/revitalization development plan. Post-UDAT, GIS is used to refine the proposed options, prepare recommendations and implementation plans, prepare presentation materials, etc.</p> <p>Some of the UDAT GIS products have been distributed to implementation committee meeting and have served as the basis for identifying potential capital projects involving improvements/alterations to intersections, pedestrian crossings, sidewalks, alleys and streetscape sections. UDAT maps have appeared in full-color report booklets that have been released to the greater communities at large. GIS analyses performed in support of UDATs includes items such as exploration of potential locations for open space/green space; scrutiny of aerial photography, property lines, and ownership; and calculating square footages. Detailed property identification maps for private sector interests exploring property acquisition and redevelopment have been prepared. UDAT maps are also used to foster public communication in meetings, in printed reports, and in briefing papers for County executives.</p>
Process without GIS:
<p>Without GIS, it would be much more difficult, or it would not be done. The intensive nature of these planning meetings has been constructed around the expectation that GIS would feed into and support the iterative, fast-paced process. Without GIS, it could take 6-7 months (of calendar time, not all direct OP staff time) to develop the revitalization plans, coordinate community input, refine options, and prepare final plans needed to seek funding. Assuming this was attempted without the use of GIS technology, it would take about 2.5 times the amount of effort and the quality of the decisions and output (maps) would suffer.</p>
Benefits Assessment: (H, M, L) Identify confidence level
<ul style="list-style-type: none"> • Medium



Benefits to Using GIS for this Activity:

GIS saves time and money performing the analyses and creating mailings, maps, and reports. GIS is an integral part of the on-site charrette and planning process and is one of the reasons these efforts are so successful. GIS is the perfect medium for the types of what-if scenarios that are explored during the UDAT exercises, since changes can be made quickly and the impact of those changes examined immediately.

Annual Savings from Use of GIS:

Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
700	280	420	1	420	\$14,259

Total Annual Benefits: \$14,259

Areas for Improvement:

None noted; this is a cutting-edge GIS application.

New Opportunities:

None noted

Benefits of Pursuing New Opportunities:

None noted



4.3 Community Planning

Program: Community Planning
Primary Point of Contact:
Jeff Mayhew
Overview:
The Community Planning Division serves as the principal citizen contact for matters related to planning. Each County Council District has an assigned community planner who works with residents and businesses, keeping them informed and seeking their input on local plans and projects.
Funding:
There is no external funding for this program.
Mandates:
The County Charter requires OP to update the Master Plan once every 10 years.
Political Benefits:
This is a very politically charged program and the majority of requests for community plans in the last few years have come from the County Council and other political officials. Political benefits include creating healthy, vibrant, and desirable communities and neighborhoods, as well as the identification and revitalization of distressed communities. Also, legal requirements are met.
Social Benefits:
<ul style="list-style-type: none"> • Healthy, vibrant, and desirable communities and neighborhoods. • Revitalization of distressed communities.
Products/Services:
A report that documents the items studied, the process OP went through with the communities, any issues identified, and a proposal with recommendations to solve the problems. Since February 2000, (the last time master plan was accepted), OP adopted 19 plans (3 per year). Currently, OP has eight active plans in process.
Customers:
<ul style="list-style-type: none"> • Community Associations • Interested Communities • Institutions (churches, hospitals, school organizations, etc.) • Legal community to protect clients • Developers • County residents • County Council • County Executive • Other County agencies



Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • Abandoned Railroads • AddressPoints (View) • African American Survey Districts • Agricultural Preservation • Athletic Fields • Basic Services - Transportation (Intersections) • Basic Services - Water • Basic Services -Sewer • BCMD Grid • Billiard Clubs (View) • Bridges • Buffers with forest cover-1996 • Buildings • Business Parks • Capital Projects • Cell Tower Sectors • Cell Towers • Cemetery • Census Block Groups (1990) • Census Block Groups (2000) • Census Blocks (1990) • Census Blocks (2000) • Census Designated Place (1990) • Census Designated Place (2000) • Census Tracts (1990) • Census Tracts (2000) • Chesapeake Bay Critical Area • Commercial Pools • Commercial Revitalization Districts • Communication Towers • Community Associations • Community Conservation Sectors • Community Plans • Congressional Districts (2002) • Conservation Easements • Contours • Councilmanic Districts (2002) • County Boundary • County Facilities 	<ul style="list-style-type: none"> • Fire Stations • Fire Stations Boundary • Flood Insurance Maps (FEMA) • Forest – 1996 Image Polys • Forest Conservation Management Areas • Forest Corridors • Geology • Golf Courses • Government Lands • Greenways • Health Centers • Historic Districts • Hydrologic Facilities • Hydrology • Index Grid - 200 Scale (BCMD) • Index Grid - 200 Scale (MCS) • Index Grid - 600 Scale • Index Grid - ADC Map • Index Grid - Phase I • Index Grid - Phase II • Index Grid - Phase III • Junkyards • Land Management Areas • Land Use 1994 • Land Use 1997 • Land Use 1998 • Land Use 2002 • Landfills • Light Rail • Master Plan - Sewer • Master Plan - Water • Metro Railroad • Metropolitan District Line • Movie Theaters • National Register Historic Districts • Orthophoto (1995) • Orthophoto (1996) • Orthophoto (1997) • Orthophoto (1998) • Orthophoto (2000) • Orthophoto (2001) 	<ul style="list-style-type: none"> • Publicly Owned Land • Pumping Stations • Quarries • Racetracks • Railroads • Regional Planning Districts • Renaissance Opportunity Areas • Reservoir • Right of Way (LACQ) • Roads • Rural Legacy • Scenic Overlooks • Scenic Routes • School Districts - Elementary • School Districts - High • School Districts - Middle • Schools—Point Location • Sewer • Sewer Service Areas • SimComFrstDiv • SimCon • Skating Rinks • Soil Type • Soils • Solid Waste Facilities • Spot Elevations • State Legislative District • Storm Water Management Facilities • Stormwater (Geodatabase) • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • Tennis Courts • Traffic Analysis Zones • Traffic Calming • Traffic Signal and Calming Layers • Traffic Signals • Trails • Trails - Walkways • Transmission Lines



<ul style="list-style-type: none"> • County Historic Districts • Cycle Amends Sewer • Cycle Amends Water • CZMP Zoning Issues (1996) • CZMP Zoning Issues (2000) • Dams • Design Review Panel Areas • Development Plans • Digital Elevation Models • Election Districts • Enterprise Zones • Facilities • Fire Boxes • Fire Hydrants 	<ul style="list-style-type: none"> • Orthophoto (2002) • Orthophoto (2005) • PAL Centers • Parcel Based Landuse • Park Points • Parks and Recreation • Pipelines • Playgrounds • Police Precincts • Police Stations • Polling Places • Post Offices • Priority Funding Areas • Proposed Land Use 	<ul style="list-style-type: none"> • Tree Cover • Urban Rural Demarcation Line (URDL) • USGS Quadrangle Index Grid • USGS Quadrangles (Images) • Watersheds - Major • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning - 1999 • Zoning Overlay Districts
Applications Used:		
<ul style="list-style-type: none"> • ArcGIS (Standard) • ArcIMS • ArcIMS MyNeighborhood 		
Associated Activities:		
4.3.1 Community Planning – Information Requests		
4.3.2 Community Planning – General Activities		



4.3.1 Community Planning – Information Requests

Activity: Community Planning – Information Requests					
Primary Point of Contact:					
Jeff Mayhew					
Overview:					
This activity supports responding to calls or walk-ins from customers (internal or external) requesting information on current projects, zoning, meetings, etc.					
Interviewee(s) Providing Information:					
Jeff Mayhew, Diana Itter, Kevin Gambrill					
Process with GIS:					
Inquiries regarding the master plan for a certain area or property are directed to OP staff. The area is called up in the GIS, a determination is made and the question answered. Periodically, maps are output to support a meeting or request for such.					
Process without GIS:					
Without GIS, areas would be manually identified by first examining an index and then retrieving the relevant detailed maps from multiple sources. It would take three times as long to find the map, answer the question and make copies.					
Benefits Assessment: (H, M, L) Identify confidence level					
• High					
Benefits to Using GIS for this Activity:					
GIS saves time and money creating the maps and providing the requested information. 15-day response time is mandated by law and GIS makes this realistic. Higher quality output is created using customized maps that can be distributed electronically if desired. Follow up questions to other agencies are avoided or minimized (for example, a requestor may be interested in planning and traffic; OP can usually answer the traffic question while examining the GIS instead of sending the requestor to the traffic engineering department). Customers get quick answers and no longer need to make advanced appointments or wait a long time; walk-in and call-in questions are handled rapidly.					
Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
165	55	110	52	5720	\$194,194.00
Total Annual Benefits: \$194,194.00					
Areas for Improvement:					
None noted					



New Opportunities:

Publish data through a MyNeighborhood application to reduce customer data inquires and make project information readily available.

Benefits of Pursuing New Opportunities:

- Stakeholders have ready access to program data and are empowered to:
 - Perform their own analyses
 - Make their own maps
 - Answer questions without directly impacting OP staff time
 - Understand program priorities



4.3.2 Community Planning – General Activities

Activity: Community Planning – General Activities
Primary Point of Contact:
Jeff Mayhew
Overview:
This activity supports the mapping of data for community plans and the creation of map products for meetings and final plans, assessment of sites for development/redevelopment potential based on current zoning and development guidelines, and special studies used in the community planning process. Some examples of special studies include walkability studies, parking studies, and streetscapes.
Interviewee(s) Providing Information:
Jeff Mayhew, Diana Itter, Kevin Gambrill, Jennifer Meacham
Process with GIS:
Typically, a request to participate in a community meeting is made to OP who performs some basic research and generates some basic thematic maps to facilitate discussion. Then the kickoff meeting produces maps for the area analysis, to put the area in context with the adjacent community (orthos, land features, etc.). After a consensus building iteration, analysis using GIS and maps begins. Issues that are examined include traffic volume, traffic signals (level of service), accident rates, proposed road improvements, sidewalk improvements, greenway connections, zoning changes, development potential, stream valley connections and level of development. Results are presented and decisions made. Final mapping products are output and used to facilitate plan implementation.
Process without GIS:
Maps would be drawn by hand and used less frequently due to the time required for preparation. Base mapping data would be derived from multiple hard-copy sources such as aerial photographs and tax maps. Scales, dates and quality would vary and require reduction/enlargement on a photocopier and transference using a light table and manual cartographic techniques. Results would be less aesthetically pleasing, professional and accurate than those developed using GIS.
Benefits Assessment: (H, M, L) Identify confidence level
<ul style="list-style-type: none"> • Medium
Benefits to Using GIS for this Activity:
Multiple “what-if” scenarios are examined due to the relative simplicity, yielding better final decisions and improved stakeholder buy-in. Increased stakeholder satisfaction and program successes using quality cartographic products and timely, accurate GIS data. Improved communication of program goals and accomplishments.



Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
555	222	333	3	999	\$33,916.00
Total Annual Benefits: \$33,916.00					
Areas for Improvement:					
None noted					
New Opportunities:					
Publish data like bike and pedestrian routes through a MyNeighborhood application to reduce customer data inquires and make project information readily available.					
Benefits of Pursuing New Opportunities:					
<ul style="list-style-type: none"> • Stakeholders have ready access to program data and are empowered to: <ul style="list-style-type: none"> ○ Perform their own analyses ○ Make their own maps ○ Answer questions without directly impacting OP staff time ○ Understand program priorities 					



4.4 Demographic Analysis

Program: Demographic Analysis
Primary Point of Contact:
Kui Zhao
Overview:
Analysis of Census and development data for population forecasts and planning studies. Complex statistical analyses are performed and customized to meet a variety of needs.
Funding:
Baltimore Metropolitan Council (BMC) funds and Metropolitan Planning Organization (MPO) provide approximately \$12,000. An annual forecast report is required to be created with these dollars; if the forecast is not completed and delivered to BMC by the deadline, funding is reduced for following fiscal year.
Mandates:
Contract between BMC and the County for the Unified Planning Work Program (UPWP). Even if no funding was provided, the County must comply with forecasting to receive federal transportation funding.
Political Benefits:
UPWP lists the transportation studies and tasks to be performed by the regional planning agency and local member jurisdictions. UPWP reflects local priorities and contains primarily all federally funded studies as well as all relevant state and local planning activities conducted without federal funds.
Social Benefits:
Under federal regulations and requirements, studies and planning activities will assist to enhance personal mobility for all population groups, enhance quality of life, expedite goods movement, promote orderly growth, improve regional air quality, and protect the environment.
Products/Services:
<ul style="list-style-type: none"> • Master Plan support data • Community Plan support data • Research Reports (social and economic well-being of the County) • Regional Transportation Planning (Transportation Improvement Plan & Long Range Plan). This information is provided as tabular data that can be incorporated into maps. • Socioeconomic trend analysis • Air Quality improvement plan support data



Customers:		
<ul style="list-style-type: none"> • Church groups • Non-profit organizations • Elected officials • County agencies • College staff • Media • Citizens • Planning Groups and Community Planners • Planning Board 		
Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • AddressPoints (View) • Agricultural Preservation • Buildings • Business Parks • Capital Projects • Census Block Groups (1990) • Census Block Groups (2000) • Census Blocks (1990) • Census Blocks (2000) • Census Designated Place (1990) • Census Designated Place (2000) • Census Tracts (1990) • Census Tracts (2000) • Chesapeake Bay Critical Area • Commercial Revitalization Districts • Community Plans • Councilmanic Districts (2002) • County Boundary • County Facilities • CZMP Zoning Issues (2000) • Development Plans 	<ul style="list-style-type: none"> • Election Districts • Enterprise Zones • FEMA Maps • Forest Conservation Management Areas • Historic Districts • Land Management Areas • Legislative Districts (2002) • Light Rail • Master Plan - Sewer • Master Plan - Water • Metropolitan District Line • Orthophoto (2002) • Orthophoto (2005) • Parcel Based Landuse • Park Points • Parks and Recreation • Pipelines • Playgrounds • Priority Funding Areas • Publicly Owned Land • Railroads • Recreation and Parks Council Boundaries • Regional Planning Districts 	<ul style="list-style-type: none"> • Renaissance Opportunity Areas • Reservoir • Roads • School Districts - Elementary • School Districts - High • School Districts - Middle • Sewer Service Areas • State Legislative District • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • TaxParcel • Traffic Analysis Zones • Transmission Lines • Urban Rural Demarcation Line (URDL) • Voter Precincts • Watersheds - Major • Wetlands • Zip Codes • Zoning • Zoning - 1999 • Zoning Overlay Districts
Applications Used:		
<ul style="list-style-type: none"> • ArcGIS (Standard) 		
Associated Activities:		
4.4.1 Demographic Analysis		



4.4.1 Demographic Analysis

Activity: Demographic Analysis					
Primary Point of Contact:					
Kui Zhao					
Overview:					
Analysis of Census and development data for population forecasts and planning studies. Complex statistical analyses are performed and customized to meet a variety of needs.					
Interviewee(s) Providing Information:					
Kui Zhao					
Process with GIS:					
Demographic data from the census are processed and analyzed to meet a variety of specific needs. Kui is a full-time employee and the only supporter to this activity. She spends 50% of her time performing GIS database maintenance tasks (see Table 6). The balance of her time is spent supporting this activity which is mostly (estimated at 90%) performed using GIS. Customers (mostly County employees) seek her out to provide specific statistical analyses to support their activities and she produces complex demographic analyses and projections, output as database tables and mapping products.					
Process without GIS:					
Without GIS, this analysis would largely be non-spatial. Demographic analyses and projections would be performed as mathematical operations based on census data. Mapping products could be produced to transfer statistical analysis results to census maps through a manually intensive process that would take at least twice as long. The final output would be of a lower quality that is more difficult to reproduce and share.					
Benefits Assessment: (H, M, L) Identify confidence level					
• Medium					
Benefits to Using GIS for this Activity:					
GIS saves time and money performing the analysis and creating maps.					
Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
31.5	15.75	15.75	52	368.55	\$12,512.27
Total Annual Benefits: \$12,512.27					
Areas for Improvement:					
None noted					



New Opportunities:

None noted

Benefits of Pursuing New Opportunities:
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None noted



4.5 Development Review

Program: Development Review
Primary Point of Contact:
Lynn Lanham
Overview:
The Development Review Division coordinates the Office's review of residential, commercial, and industrial development, including concept and development plans, planned unit developments, minor subdivisions, waivers, limited exemptions, undersized lots, assisted living facilities, variances and special exception petitions, and the cycle zoning process. The division develops guidelines and manuals to be used in the review of the development plans.
Funding:
There is no external funding for this program, except for population projections and SLIST.
Mandates:
<p>COBAR and Baltimore County Zoning Regulations as follows:</p> <p><i>Baltimore County Code Sections:</i></p> <ul style="list-style-type: none"> • Duties of the Office of Planning and Zoning; limitation of powers: Division 2, Sec. 522.1(a) • Design Review Panel: 32.4.203 • Matters referred to the board: 32-2-101. • Planned Unit Development: 32.4.241, 242, 243, 244, 245 • Master Plan Conflict: 32-4-231 • Pre-concept plan conference: 32-4-212, • Concept plan: 32-4-214, 215, 216 • Development plan: 32-4-224, 226 • RC-6: 32.4.252, 253, 254 • Adoption of development manuals: 32-4-404. • Reclamation plan: 32-4-501, 502, 503, 504. • Variance Hearings: 32.3.302 • Overcrowded School Districts: 32.6.103 • Growth allocation review committee: 32-9-110. <p><i>Zoning Code Sections:</i></p> <ul style="list-style-type: none"> • Section 1A04, R.C.5 (Rural-Residential) Zone: findings required • Section 229, Performance Based Business Zones: C.B. and B.L.R. Zones: Compatibility Finding • Section 259.11.D, Development standards for MD 43 Overlay District • Section 260, Residential Performance Standards, Finding required • Section 304, Use of Undersized Single-Family Lots, Review and comments required • Section 419, Car Wash, Review and comments required • Section 426, Wireless Telecommunications Facilities, Member of Tower Review Committee • Section 430A, Renaissance Redevelopment Pilot Program, Office of Planning serves as Chair, etc... • Section 445, Bus Shelters, Office of Planning shall review and approve location of • Section 4A03, Growth Management Plan for Bowleys Quarters and Back River Neck Areas • Section 504, Furthering Policies and Procedures, Prepare and administer the Comprehensive Manual of Development Policies



Political Benefits:
<ul style="list-style-type: none">• Assurance that new development will be commensurate with community needs and lead to healthy, vibrant and growing communities and neighborhoods, as well as the revitalization of distressed communities.• Legal compliance.
Social Benefits:
<ul style="list-style-type: none">• Revitalization of neighborhoods and commercial areas to ensure that infill development is compatible with existing community needs and plans.• Assurance that development growth will be monitored and conform with the Comprehensive Manual of Development Policies.
Products/Services:
<ul style="list-style-type: none">• Responses to citizen or stakeholder inquiries regarding development plans.• Written comments and reports, manuals, policies, handbooks, and guidelines to interpret and implement legislation.
Customers:
<ul style="list-style-type: none">• County residents• County Council• County Executive• Other County agencies including the Zoning Commissioner, Zoning, DEPRM, Recreation and Parks• Developers• Boards and Commissions: Planning Board• Design Review Panel



Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • AddressPoints (View) • African American Survey Districts • Basic Services - Transportation (Intersections) • Basic Services - Water • Basic Services -Sewer • Bridges • Buildings • Business Parks • Capital Projects • Chesapeake Bay Critical Area • Commercial Revitalization Districts • Community Plans • Contours • Councilmanic Districts (2002) • County Boundary • County Facilities • County Historic Districts • Cycle Amends Sewer • Cycle Amends Water • Design Review Panel Areas • Development Plans • Digital Elevation Models • Enterprise Zones • Facilities • Flood Insurance Maps (FEMA) • Historic Districts • Hydrology • Index Grid - Phase I • Index Grid - Phase II 	<ul style="list-style-type: none"> • Index Grid - Phase III • Junkyards • Land Management Areas • Land Use 1994 • Land Use 1997 • Land Use 1998 • Land Use 2002 • Landfills • Light Rail • Master Plan - Sewer • Master Plan - Water • Metro Railroad • Orthophoto (1995) • Orthophoto (1996) • Orthophoto (1997) • Orthophoto (1998) • Orthophoto (2000) • Orthophoto (2001) • Orthophoto (2002) • Orthophoto (2005) • Park Points • Parks and Recreation • Pipelines • Proposed Land Use • Publicly Owned Land • Railroads • Renaissance Opportunity Areas • Reservoir • Right of Way (LACQ) • Roads • School Districts - Elementary 	<ul style="list-style-type: none"> • School Districts - High • School Districts - Middle • Schools—Point Location • Sewer Service Areas • SimComFrstDiv • SimCon • Soil Type • Soils • Spot Elevations • Storm Water Management Facilities • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • Traffic Analysis Zones • Traffic Calming • Traffic Signal and Calming Layers • Transmission Lines • Urban Rural Demarcation Line (URDL) • Watersheds - Major • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning - 1999 • Zoning Overlay Districts
Applications Used:		
<ul style="list-style-type: none"> • ArcView 3.2 • MapInfo • ArcGIS 9.0 		
Associated Activities:		
4.5.1 Development Review – Development Tracking		



4.5.1 Development Review – Development Tracking

Activity: Development Review – Development Tracking
Primary Point of Contact:
Jean White
Overview:
This activity involves collection of data about development projects as they are proposed and constructed for use in population forecasts, land use studies, and external market research. Also, development and occupancy permits are reviewed, approved and tracked.
Interviewee(s) Providing Information:
Jean White, Donnell Zeigler, Lynn Lanham
Process with GIS:
Proposed development plans are submitted to the County for review and approval. Submitted plans are reviewed against GIS data and validated (for example, school boundaries). Numerous GIS data layers are consulted including schools, demographics, zoning, census tracts and blocks, URDL, transportation zones, regional planning district, council, water, sewer, land management area, zip codes, cadastral, tax, building and orthophotography (current and historical). Results are output to a database (sometimes also a map) and used to support the balance of the review process.
For the permitting aspect of this activity, data is extracted from the mainframe quarterly, filtered to cull out new construction and razing permits and brought into MapInfo for geocoding. In order to improve geocoding results, permit street names from the mainframe are massaged. A point representing the permit location is created and then moved off the centerline into the actual lot. Approximately 6,000 points were mapped in the 3 rd quarter of 2006.
These efforts take approximately 80% of Jean’s time, plus an average of one hour per week support from others like Donnell.
Process without GIS:
New development was tracked by hand on tax maps. The process included enlarging the base map, highlighting project boundary and writing in project number (which would be the key link to a separate database). Changes were very difficult to accommodate and maps got messy, particularly in active areas with lots of development. Once a map got overloaded, it was replaced with a new clean map which made it difficult to track changes through time and rejected plan applications. It was also very difficult to perform the detailed planning assessment regarding other proximal restrictions and activities. This could cause legal problems; for example, where schools reached the overcrowding stage, then the County could get sued. Without GIS, it would take approximately three times as long to collect and map this information.
Benefits Assessment: (H, M, L) Identify confidence level
• Medium



Benefits to Using GIS for this Activity:

Historical and proximal development data is readily available to support the review process. GIS data layers are available to support the review and approval process. Quality mapping products are easy to create, output and share electronically.

Annual Savings from Use of GIS:

Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
87	29	58	52	3016	\$102,393.20

Total Annual Benefits: \$102,393.20

Areas for Improvement:

Limit use of MapInfo and ArcView 3.2; transition these licenses and workflows to ArcGIS. Begin use of newly scanned historical aerial photographs, once the images are georeferenced, compressed and available on a shared network drive for access. Permit points should be stored in an Enterprise SDE data layer instead of locally, until the process could be refined and improved (see New Opportunities below). These points could also be created against the new address point data layer (once complete) instead of geocoding against a street centerline.

New Opportunities:

Have PDM create a new permit data layer when permits are submitted and post these data to SDE.

Benefits of Pursuing New Opportunities:

Improved data sharing and ability to see what is currently and historically has occurred proximal to areas of interest.



4.6 Districting (re)

Program: Districting (re)		
Primary Point of Contact:		
County Council		
Overview:		
This program manages the process of changing of County Council district borders, usually in response to periodic Census results. This takes place to prevent geographic malapportionment.		
Funding:		
There is no external funding for this program.		
Mandates:		
COBAR - Based on population after the Census is released, redistricting occurs.		
Political Benefits:		
<ul style="list-style-type: none"> • Redistricting is required in order to hold elections. 		
Social Benefits:		
<ul style="list-style-type: none"> • The populous is equitably represented. 		
Products/Services:		
<ul style="list-style-type: none"> • Polling Places data layer • Councilmanic Districts data layer • Map Series - small scale 1"=1 mile and a series of seven council district maps at varying scales. 		
Customers:		
<ul style="list-style-type: none"> • County residents • County Council • County Executive • Other County agencies 		
Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • AddressPoints (View) • Buildings • Census Block Groups (1990) • Census Block Groups (2000) • Census Blocks (1990) • Census Blocks (2000) • Census Tracts (1990) 	<ul style="list-style-type: none"> • Census Tracts (2000) • Councilmanic Districts (2002) • County Boundary • Hydrology • Orthophoto (2005) • Reservoir • Right of Way (LACQ) 	<ul style="list-style-type: none"> • Roads • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Transmission Lines
Applications Used:		
<ul style="list-style-type: none"> • ArcGIS (Standard) • ESRI Extensions (Autobound) 		
Associated Activities:		
4.6.1 Districting (re) – Council Districts		



4.6.1 Districting (re) – Council Districts

Activity: Districting (re) – Council Districts					
Primary Point of Contact:					
County Council					
Overview:					
There are 7 contiguous and equally-populated councilmanic districts in Baltimore County. GIS tools and staff are used to help create the new boundaries every 10 years after the Census.					
Interviewee(s) Providing Information:					
Jennifer Meacham, Jeff Tirschman					
Process with GIS:					
Councilmanic Districts are mapped in the GIS based on census blocks and tracts. Using the legislation that defines the boundaries, the process involves using AutoBound (an ArcView 3.2 application) to associate and dissolve the census block/tracts into larger boundaries. The data was validated by confirming the dissolves were correct. A map series at 1" = 1 mile and larger scale E-size plots for each district are produced.					
Process without GIS:					
Using an E-size mylar sheet, the boundary layer would be drawn by hand and maintained at a small scale. The accuracy would be suspect and the information would not be available for overlay in GIS. To produce the map series for the citizens that are required by the Board of Elections for sale, the maps would be created using manual cartographic processes. Most likely, only a small-scale countywide map would be produced...not the district-only large-scale series with street names. This manual process without GIS would take about three times as long – 6 weeks.					
Benefits Assessment: (H, M, L) Identify confidence level					
• High					
Benefits to Using GIS for this Activity:					
Accuracy, ease of using AutoBound to generate the layers by dissolving the census blocks in an automated fashion based on the legislation. Quality mapping products are easy to create, output and share electronically.					
Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
210	70	140	0.1	14	\$475.30
Total Annual Benefits: \$475.30					



Areas for Improvement:
None noted
New Opportunities:
None noted
Benefits of Pursuing New Opportunities:
None noted



4.7 Historic Preservation

Program: Historic Preservation
Primary Point of Contact:
Caren Hoffberger
Overview:
This program oversees the preservation of historic districts, buildings, and their settings from erosion caused by neglect, abandonment, or the intrusion of incompatible designs and uses.
Funding:
There is no external funding for this program. The Preservation Services Division is budgeted through the general County budget for the Office of Planning.
Mandates:
Baltimore County Code and the mission and objectives set by the County Executive and the Department Head.
Political Benefits:
<ul style="list-style-type: none"> • Legal compliance
Social Benefits:
<ul style="list-style-type: none"> • Preservation of historic resources
Products/Services:
<ul style="list-style-type: none"> • Coordination of the Landmarks Preservation Commission • Coordination of the Historic Preservation Tax Credit program. • Research support and landmark nomination processing. • Review of demolition permits and development plans. • Response to routine historic inquiries.
Customers:
<ul style="list-style-type: none"> • Other County agencies • County residents • State Historic Preservation Office (SHPO) • County Council • County Executive



Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • Abandoned Railroads • AddressPoints (View) • African American Survey Districts • Agricultural Preservation • Bridges • Buildings • Capital Projects • Cemetery • Chesapeake Bay Critical Area • Community Plans • Contours • Councilmanic Districts (2002) • County Boundary • County Facilities • County Historic Districts • Digital Elevation Models • Government Lands • Historic Districts • Hydrology • Index Grid - ADC Map • Index Grid - Phase I • Index Grid - Phase II • Index Grid - Phase III • Land Management Areas • Land Use 1994 	<ul style="list-style-type: none"> • Land Use 1997 • Land Use 1998 • Land Use 2002 • Light Rail • Master Plan - Sewer • Master Plan - Water • Metro Railroad • National Register Historic Districts • Orthophoto (1995) • Orthophoto (1996) • Orthophoto (1997) • Orthophoto (1998) • Orthophoto (2000) • Orthophoto (2001) • Orthophoto (2002) • Orthophoto (2005) • Park Points • Parks and Recreation • Priority Funding Areas • Proposed Land Use • Publicly Owned Land • Railroads • Renaissance Opportunity Areas 	<ul style="list-style-type: none"> • Reservoir • Right of Way (LACQ) • Roads • Sewer Service Areas • Soil Type • Soils • Spot Elevations • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • Transmission Lines • Urban Rural Demarcation Line (URDL) • USGS Quadrangle Index Grid • USGS Quadrangles (Images) • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning - 1999 • Zoning Overlay Districts
Applications Used:		
<ul style="list-style-type: none"> • ArcGIS (Standard) • ArcIMS • ArcIMS MyNeighborhood 		
Associated Activities:		
4.7.1 Historic Preservation – Information Requests		



4.7.1 Historic Preservation – Information Requests

Activity: Historic Preservation – Information Requests
Primary Point of Contact:
Caren Hoffberger
Overview:
This activity involves responding to calls or walk-ins from customers (internal or external) requesting information on one or many historically significant entities; mapping of historic districts, sites, environments, landmarks, African American survey districts, and upkeep of the historic database; and assessing a property (building and surrounding environment) for its historic significance to Baltimore County, in order to protect it from neglect, abandonment, or the intrusion of incompatible designs and uses.
Interviewee(s) Providing Information:
Vicky Nevy, Terry Rising, Caren Hoffberger, Karin Brown
Process with GIS:
A request (about 450 have been received in the last six months, averaged to 900 per year) is made for a historic determination relative to a specific parcel or structure. The area of interest is called up in the GIS (typically by geocoding an address) and an ‘in/out’ determination is rendered. If a field visit is required, then a map is printed. Google Maps are sometimes used as a back-up to validate the information shown in MyNeighborhood. An inquiry can take between a few minutes using GIS to a few hours or days for complex research using the GIS tools. Therefore, we have averaged the time spent perform an information request “With GIS” to be 4 hours.
Process without GIS:
Google Maps would be consulted to identify a property of interest and manually compared with a database that tracks historical properties. This would take significantly longer and OP staff would be less confident in their determinations.
Benefits Assessment: (H, M, L) Identify confidence level
<ul style="list-style-type: none"> • Medium
Benefits to Using GIS for this Activity:
GIS provides a more accurate determination while saving time in creating maps and providing requested information. By rendering more accurate and defensible decisions, taxpayer dollars are saved. An example of this was discussed where a County-owned parcel (a park) that was thought to be historic. Prior to the implementation of GIS, the entire park would have been determined to be historic and the County would have incurred the associated cost to maintain and improve it as a historic landmark. Using GIS, a more legally-defensible determination was made and maintenance/improvement alternatives explored.



Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
10	4	6	900	5400	\$183,330.00
Total Annual Benefits: \$183,330.00					
Areas for Improvement:					
<p>The MyNeighborhood application is not up-to-date (typically lags updates by 3-6 months); there are 3,000 properties without Tax IDs. If MyNeighborhood was more up-to-date, it would reduce number of calls, especially those from realtors. Some PCs take a very long time (estimated at 10 minutes) to start up ArcMap and load data layers. A new data layer (shapefile) was recently created – historical environmental setting – and is stored on a local drive. These data should be moved to SDE. Begin using new address point feature class when complete.</p>					
New Opportunities:					
None noted					
Benefits of Pursuing New Opportunities:					
None noted					



4.8 Land Use Analysis/Vacant Land Analysis

Program: Land Use Analysis/Vacant Land Analysis
Primary Point of Contact:
Kathy Schlabach
Overview:
This program involves production of an accurate land use layer to help determine areas for possible development/redevelopment to forecast population projections based on different build-out scenarios.
Funding:
There is no external funding for this program.
Mandates:
Governor’s Executive Order
Political Benefits:
Good community planning leads to the creation of healthy, vibrant and desirable communities and neighborhoods. Also, legal compliance.
Social Benefits:
County areas are used to the maximum use and benefit of County citizens. A framework for long-term land use planning is established helping to ensure healthy, vibrant and desirable communities.
Products/Services:
<ul style="list-style-type: none"> • Land use data layer and associated mapping products
Customers:
<ul style="list-style-type: none"> • Every County agency • County Council • County Executive • Community Associations • Legal community • Institutions (church, hospital, etc.) • Development community • Citizens



Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • Abandoned Railroads • AddressPoints (View) • Agricultural Preservation • Athletic Fields • Billiard Clubs (View) • Buffers with forest cover-1996 • Buildings • Business Parks • Cemetery • Chesapeake Bay Critical Area • Commercial Pools • Community Plans • Conservation Easements • Contours • Councilmanic Districts (2002) • County Boundary • County Facilities • Digital Elevation Models • Facilities • Flood Insurance Maps (FEMA) • Forest – 1996 Image Polys • Forest Conservation Management Areas • Forest Corridors • Geology • Golf Courses • Government Lands • Greenways • Health Centers • Hydrologic Facilities • Hydrology • Index Grid - Phase I 	<ul style="list-style-type: none"> • Index Grid - Phase II • Index Grid - Phase III • Land Use 1994 • Land Use 1997 • Land Use 1998 • Land Use 2002 • Light Rail • Metro Railroad • Movie Theaters • Orthophoto (1995) • Orthophoto (1996) • Orthophoto (1997) • Orthophoto (1998) • Orthophoto (2000) • Orthophoto (2001) • Orthophoto (2002) • Orthophoto (2005) • PAL Centers • Parcel Based Landuse • Park Points • Parks and Recreation • Playgrounds • Police Stations • Post Offices • Proposed Land Use • Publicly Owned Land • Pumping Stations • Quarries • Racetracks • Railroads • Renaissance Opportunity Areas 	<ul style="list-style-type: none"> • Reservoir • Right of Way (LACQ) • Roads • Schools—Point Location • SimComFrstDiv • SimCon • Skating Rinks • Soil Type • Soils • Solid Waste Facilities • Spot Elevations • Storm Water Management Facilities • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • Tennis Courts • Traffic Analysis Zones • Transmission Lines • Urban Rural Demarcation Line (URDL) • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning - 1999 • Zoning Overlay Districts
Applications Used:		
<ul style="list-style-type: none"> • ArcGIS (Standard) 		
Associated Activities:		
4.8.1 Land Use Analysis/Vacant Land Analysis		



4.8.1 Land Use Analysis/Vacant Land Analysis

Activity: Land Use Analysis/Vacant Land Analysis
Primary Point of Contact:
Kathy Schlabach
Overview:
This activity involves production of an accurate land use layer to help determine areas for possible development/redevelopment and to forecast population projections based on different build-out scenarios.
Interviewee(s) Providing Information:
Jeff Mayhew, Kathy Schlabach, Jennifer Meacham, Kristopher Weaver, Ngone Seye
Process with GIS:
Property data (tax parcels) is combined with existing land use, planimetric and zoning data to analyze current land use and determine development capacity. A data layer and associated mapping products are output defining how land areas of the County are being used. This takes approximately 25 hours per week to accomplish.
Process without GIS:
Without GIS, this process would be quite different. The land use layer and development capacity analysis would likely be created at a much grosser resolution where large tracts of land are grouped and general boundaries manually created. Even with this less accurate and useful process, the level of effort would still be approximately twice the effort. In order to illustrate how improved the process is with GIS, the following procedure is offered describing the GIS process would be replicated if attempted manually. Of course, this is merely hypothetical; due to the inordinate burden of this time consuming process (an estimated 68,850 hours or approximately 38 person-years), it would be impractical to reproduce this process manually.
Create Land Use Map
<ul style="list-style-type: none"> • Draft a reproducible base map of existing parcels and roads for the entire county at a scale of 1" = 200'. This would be a compilation of planimetric and tax map information and record plats. Copies of each tax map and associated plats would be obtained, reduced or enlarged to 200 scale, and traced onto mylar sheets. Many adjustments would need to be made so that the property lines corresponded to the planimetric location. The property line information would not be highly accurate, but good enough for this use. The completed base maps would need to be reproduced to create a series of second originals. The base maps could also be used for other types of maps, including proposed land use, zoning, etc. • Provide prints of each base map to a community planner for coding. The planner could write a code number on each parcel based on their knowledge of the district, or by field investigation. Aerial photographs, tax account information, and conservation easement data would be used for reference.



- Using a set of second originals, apply zip-a-tone film to each parcel to depict the land use category.
- Return to planners to perform a final check for accuracy, and then re-drafting to correct any errors.
- Print each map, and render in color using markers for presentation.

Development Capacity Study:

- In order to perform the calculations needed to determine development capacity, the acreage of each parcel that is coded as vacant must be determined, and then multiplied by a) the density factor as permitted by zoning and b) the historical density factor. To do this, the tax account number and acreage of each parcel would be entered into an excel spreadsheet or database. It is assumed that there will be about 20 vacant parcels per map, and that the database would need to be created by researching the tax records and individually entering the data.
- To obtain the number of potential new units for underdeveloped and potential redevelopment parcels, the tax account number would be obtained and acreage and number of existing units for every single family detached parcel and redevelopment parcel would be entered into the database and calculated.
- Parcels with development capacity (vacant and underdeveloped) that are highly constrained by environmental factors are then dropped out. To do this, maps showing floodplains, stream buffers, hydric soils, wetlands, forest patches and steep slopes would be obtained. Assuming these maps existed, they would likely need to be reproduced at 200-scale so that they could be compared to the land existing land use map. Tax account numbers of constrained parcels would need to be identified, the information entered into the database and calculations performed.
- Using another set of base maps, the following parcels would be depicted: vacant parcels, redevelopment parcels, parcels with spare development capacity, parcels that were dropped out because of environmental constraints. For parcels with spare capacity, the drafter would need to match tax account numbers to parcel numbers from the tax maps to identify the parcels on the new map. Zip-a-tone would be applied to each parcel contain in each category. Prints of each map would be made for checking and redrafting if needed. Another set of prints would be made for rendering in color for presentation.
- The last level of analysis is to factor in development potential from parcel assembly. The tax account numbers of adjacent parcels with development potential would be identified in the database, and calculations performed. Another set of map originals and rendered prints would be created, using the same procedure as above.

Benefits Assessment: (H, M, L) Identify confidence level

- Medium



Benefits to Using GIS for this Activity:

See detailed discussion under the “without GIS” section above. Vastly improved accuracy, currency and data resolution. The land use data layer in a GIS format is also significantly more useable and transferable than as a hard copy; it can be readily ingested by other users and applied to a wide-variety of other programs and activities (master plan development being a key example). By having an accurate development capacity analysis, a proper balance is struck between encouragement of new development and restricted growth, i.e., “smart growth”. In addition, all the ancillary infrastructure associated with new development (fire stations, schools, libraries, open space, roads, utilities, community centers, parks, police stations, etc.) can be considered along with the proposed development. “What-if” scenarios can be iterated easily.

Annual Savings from Use of GIS:

Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
49	24.5	24.5	52	1274	\$43,252.30

Total Annual Benefits: \$43,252.30

Areas for Improvement:

Integration of steep slopes data to help identify areas that are impractical for construction.

New Opportunities:

Maintain historical land use data layers and integrate into future analyses and applications.

Benefits of Pursuing New Opportunities:

A better understanding of the rate of development activity over time would be interesting for demonstration purposes and would assist in future planning activities.



4.9 Master Planning

Program: Master Planning
Primary Point of Contact:
Caren Hoffberger
Overview:
The Master Plan program consists of a comprehensive plan that must be adopted every 10 years, master plan updates, special plans (such as a bicycle and pedestrian facility plan) and community or local area plans that are adopted as amendments to the master plan.
Funding:
There is no external funding for this program. Funding to conduct the creation of the Master Plan is budgeted through the general County budget for the Office of Planning
Mandates:
Mandates for the Master Planning program include the rules outlined in the Baltimore County Code and the mission and objectives set by the County Executive and the Department Head. State law requirements also mandate the Master Planning program.
Political Benefits:
<ul style="list-style-type: none"> • Good community planning leads to the creation of healthy, vibrant and desirable communities and neighborhoods. • Legal compliance. • Citizens expect the Master Plan to be created and used for future planning decisions.
Social Benefits:
<ul style="list-style-type: none"> • County areas are used to the maximum use and benefit of County citizens. • A framework for long-term land use planning is established helping to ensure healthy, vibrant and desirable communities.
Products/Services:
<ul style="list-style-type: none"> • A document outlining the Master Plan for Baltimore County. • Special plans, such as bicycle and pedestrian facilities plans. • Community or local plans that fall out of and roll up into the Countywide Master Plan.
Customers:
<ul style="list-style-type: none"> • County Council • County Executive • County employees • Citizens



Data (Enterprise Layers are Listed in Bold):		
<ul style="list-style-type: none"> • Abandoned Railroads • AddressPoints (View) • African American Survey Districts • Agricultural Preservation • Athletic Fields • Basic Services - Transportation (Intersections) • Buffers with forest cover-1996 • Buildings • Business Parks • Capital Projects • Cemetery • Census Block Groups (1990) • Census Block Groups (2000) • Census Blocks (1990) • Census Blocks (2000) • Census Designated Place (1990) • Census Designated Place (2000) • Census Tracts (1990) • Census Tracts (2000) • Chesapeake Bay Critical Area • Commercial Revitalization Districts • Community Associations • Community Plans • Congressional Districts (2002) • Conservation Easements • Contours • Councilmanic Districts (2002) • County Boundary • County Facilities • County Historic Districts • Cycle Amends Sewer • Cycle Amends Water • CZMP Zoning Issues (1996) • CZMP Zoning Issues (2000) • Design Review Panel Areas • Development Plans • Digital Elevation Models • Election Districts • Enterprise Zones • Facilities 	<ul style="list-style-type: none"> • Geology • Golf Courses • Government Lands • Greenways • Health Centers • Historic Districts • Hydrologic Facilities • Hydrology • Index Grid - 200 Scale (BCMD) • Index Grid - 200 Scale (MCS) • Index Grid - 600 Scale • Index Grid - ADC Map • Index Grid - Phase I • Index Grid - Phase II • Index Grid - Phase III • Land Management Areas • Land Use 1994 • Land Use 1997 • Land Use 1998 • Land Use 2002 • Legislative Districts (2002) • Light Rail • Master Plan - Sewer • Master Plan - Water • Metro Railroad • Metropolitan District Line • Movie Theaters • National Register Historic Districts • Orthophoto (1995) • Orthophoto (1996) • Orthophoto (1997) • Orthophoto (1998) • Orthophoto (2000) • Orthophoto (2001) • Orthophoto (2002) • Orthophoto (2005) • PAL Centers • Parcel Based Landuse • Park Points • Parks and Recreation • Pipelines • Playgrounds • Police Precincts 	<ul style="list-style-type: none"> • Racetracks • Railroads • Regional Planning Districts • Renaissance Opportunity Areas • Reservoir • Right of Way (LACQ) • Roads • Rural Legacy • Scenic Overlooks • Scenic Routes • School Districts - Elementary • School Districts - High • School Districts - Middle • Schools—Point Location • Sewer • Sewer Service Areas • SimComFrstDiv • SimCon • Soil Type • Soils • Spot Elevations • State Legislative District • Storm Water Management Facilities • Stormwater (Geodatabase) • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • Traffic Analysis Zones • Traffic Calming • Traffic Signal and Calming Layers • Traffic Signals • Trails • Trails - Walkways • Transmission Lines • Tree Cover • Urban Rural Demarcation Line (URDL) • USGS Quadrangle Index Grid • USGS Quadrangles (Images) • Watersheds - Major



<ul style="list-style-type: none"> • Fire Stations • Fire Stations Boundary • Flood Insurance Maps (FEMA) • Forest – 1996 Image Polys • Forest Conservation Management Areas • Forest Corridors 	<ul style="list-style-type: none"> • Police Stations • Polling Places • Post Offices • Priority Funding Areas • Proposed Land Use • Publicly Owned Land • Pumping Stations • Quarries 	<ul style="list-style-type: none"> • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning – 1999 • Zoning Overlay Districts
Applications Used:		
<ul style="list-style-type: none"> • ArcGIS (Standard) 		
Associated Activities:		
4.9.1 Master Planning – Ten Year		



4.9.1 Master Planning – Ten Year

Activity: Master Planning – Ten Year
Primary Point of Contact:
Caren Hoffberger
Overview:
The Baltimore County Charter requires a master plan be adopted or updated at least every ten years. The master plan is an important document that provides policies and guidelines for sustaining livable communities and achieving balanced development in Baltimore County. Also, there are other, smaller scale and more-frequently created plans such as community or local plans and special plans, such as bicycle and pedestrian facilities plans. These other plans are generated based on the Countywide Master Plan and will be incorporated with the subsequent Master Plan.
Interviewee(s) Providing Information:
Caren Hoffberger
Process with GIS:
Mapping is a critical component of the planning process and GIS is used to create all of the existing conditions, exploratory (“what-if”), interim and final mapping products. All relevant data layers and displayed in the GIS, proposed changes digitized, areas computed, analyses performed and hard copy maps printed. Alternatives are discussed and the final maps are output for inclusion with the official Countywide Master Plan; there are 39 maps included in the current (2010) Plan. This process takes approximately 35 hours/week for 8 months and is accomplished once every decade. Other plans (special and local plans) follow a similar process where existing condition maps are printed and used to facilitate discussions of what changes are desired. Proposed changes are digitized and new maps are created; this process is iterated until a final determination is made, at which point final maps are output.
Process without GIS:
Prior to the use of GIS, two graphic artists were employed on a full-time basis. They spent a total of approximately four times the current effort to create the mapping products used to support the Master Plan creation effort. Low-resolution maps were created manually and the results were generalized. Few, if any, iterations of exploratory or “what-if” maps were created; the focus was largely on the proposed updated planning boundaries and creation of a map to be included in the final Master Plan document.
Benefits Assessment: (H, M, L) Identify confidence level
• Medium
Benefits to Using GIS for this Activity:
Digital input and feedback from other agencies and other OP activities (land use, development capacity, zoning, for example) is easily integrated into the planning process. Vastly improved accuracy, currency and data resolution. “What-if” scenarios can be iterated easily. High quality mapping products are output.



Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
4900	1125	3675	0.1	367.5	\$12,476.63
Total Annual Benefits: \$12,476.63					
Areas for Improvement:					
None noted					
New Opportunities:					
None noted					
Benefits of Pursuing New Opportunities:					
None noted					



4.10 Rezoning

Program: Rezoning
Primary Point of Contact:
Jeff Mayhew
Overview:
Zoning is a legal mechanism by which local government is able to regulate an owner’s right to use privately owned land for the sake of protecting the public health, safety, morals, and/or general welfare. Rezoning is the method used to change the current zoning to a new zone class. CZMP, In-Cycle, and Out-of-Cycle Rezoning are the methods that individuals can use to rezone properties in Baltimore County. The digital zoning layer is legally authoritative for Baltimore County.
Funding:
There is no external funding for this program.
Mandates:
The County Code requires comprehensive rezoning every 4 years. Any person can request a rezoning for any property. The digital zoning layer is legally authoritative for Baltimore County.
Political Benefits:
<ul style="list-style-type: none"> • Legal compliance. • Good community planning leads to the creation of healthy, vibrant and desirable communities and neighborhoods, as well as the identification and revitalization of distressed communities.
Social Benefits:
<ul style="list-style-type: none"> • Healthy, vibrant and desirable communities and neighborhoods. • Revitalization of distressed communities.
Products/Services:
<ul style="list-style-type: none"> • The authoritative County zoning layer • A log of new zoning requests/issues • PDFs (at 1”=200- and 1000-foot scale) of the Zoning layer (soft and hardcopies for customers)
Customers:
<ul style="list-style-type: none"> • Every County agency • Developers • County residents • County Council • County Executive • Community Associations • Legal community • Involved Communities • Institutions (church, hospital, etc.) • Development community • Citizens



Data (Enterprise Layers are Listed in Bold):

<ul style="list-style-type: none"> • Abandoned Railroads • AddressPoints (View) • African American Survey Districts • Agricultural Preservation • Basic Services - Water • Basic Services -Sewer • BCMD Grid • Billiard Clubs (View) • Buildings • Business Parks • Cemetery • Chesapeake Bay Critical Area • Commercial Pools • Commercial Revitalization Districts • Community Associations • Community Plans • Conservation Easements • Contours • Councilmanic Districts (2002) • County Boundary • County Facilities • County Historic Districts • Cycle Amends Sewer • Cycle Amends Water • CZMP Zoning Issues (1996) • CZMP Zoning Issues (2000) • Design Review Panel Areas • Development Plans • Digital Elevation Models • Enterprise Zones • Facilities • Fire Boxes • Fire Stations • Fire Stations Boundary • Flood Insurance Maps (FEMA) • Forest – 1996 Image Polys • Forest Conservation Management Areas • Forest Corridors • Geology • Golf Courses • Government Lands 	<ul style="list-style-type: none"> • Greenways • Health Centers • Historic Districts • Hydrologic Facilities • Hydrology • Index Grid - 200 Scale (BCMD) • Index Grid - 200 Scale (MCS) • Index Grid - 600 Scale • Index Grid - ADC Map • Index Grid - Phase I • Index Grid - Phase II • Index Grid - Phase III • Junkyards • Land Management Areas • Land Use 1994 • Land Use 1997 • Land Use 1998 • Land Use 2002 • Landfills • Light Rail • Master Plan - Sewer • Master Plan - Water • Metro Railroad • Metropolitan District Line • Movie Theaters • National Register Historic Districts • Orthophoto (1995) • Orthophoto (1996) • Orthophoto (1997) • Orthophoto (1998) • Orthophoto (2000) • Orthophoto (2001) • Orthophoto (2002) • Orthophoto (2005) • Parcel Based Landuse • Park Points • Parks and Recreation • Playgrounds • Police Precincts • Police Stations • Post Offices • Priority Funding Areas • Proposed Land Use 	<ul style="list-style-type: none"> • Publicly Owned Land • Pumping Stations • Quarries • Racetracks • Railroads • Regional Planning Districts • Renaissance Opportunity Areas • Reservoir • Right of Way (LACQ) • Roads • Rural Legacy • School Districts - Elementary • School Districts - High • School Districts - Middle • Schools—Point Location • Sewer • Sewer Service Areas • SimComFrstDiv • SimCon • Soil Type • Soils • Spot Elevations • Storm Water Management Facilities • Streams and Ponds • Street Centerlines • Street Centerlines (View) • Tax Parcel • Taxmaps (Images) • Traffic Analysis Zones • Trails • Trails - Walkways • Transmission Lines • Urban Rural Demarcation Line (URDL) • Watersheds - Major • Wetlands • Wetlands - NWI • Wetlands - Special Area Management • Zip Codes • Zoning • Zoning - 1999 • Zoning Overlay Districts
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Applications Used:

- ArcGIS (Standard)
- ArcIMS
- ArcIMS MyNeighborhood

Associated Activities:

- 4.10.1 Rezoning – CZMP
- 4.10.2 Rezoning – In-Cycle Requests
- 4.10.3 Rezoning – Out-of-Cycle Requests
- 4.10.4 Rezoning – Map Corrections



4.10.1 Rezoning – CZMP

Activity: Rezoning – CZMP
Primary Point of Contact:
Diana Itter
Overview:
<p>The Comprehensive Zoning Map Process (CZMP) takes place every four years on an exact schedule specified in the County Code. The zoning data layer is required by County Code to be maintained in the GIS. Any citizen may request a zoning change on any property in the County. The CZMP covers a period of approximately 12 months and results in zoning decisions that are reflected in a log of issues. Ultimately, the County Council decides on each issue whether to retain the existing zoning or to enact a different zone(s) or district(s). Generally, each issue is a single property, but an issue may cover many adjoining properties and might even cover many hundreds of acres. The zoning on all properties that were not issues is re-enacted without change.</p>
Interviewee(s) Providing Information:
Jeff Mayhew
Process with GIS:
<p>The rezoning review process is tightly integrated with GIS, largely a consequence of the legal mandate to create and maintain zoning boundaries as a GIS data layer. About 575 petitions are typically received each four-year review cycle. The review process includes a six-step process:</p> <ol style="list-style-type: none"> 1. Map existing boundaries. An application is received and the area where a change is identified in the GIS. This takes an average of one hour per petition. 2. Map proposed boundaries. The proposed change is digitized in the GIS. Relevant impacted features (roads, streams, tax parcels, wetlands, etc) are identified and quantified. This takes an average of one hour per petition; some are very simple and can be complete in a matter of minutes, others cover large land areas and are quite complex, taking several hours. 3. Map staff recommendations. The proposed change is reviewed in the GIS by OP staff. Roughly half of the received requests are proposed for modification by OP staff. A new proposed boundary is then created in the GIS to reflect this proposed modification. This takes an average of one hour per petition. 4. Map Planning Board recommendations. The proposed change and OP recommendation is reviewed by the Planning Board. Roughly a quarter of the received requests are proposed for modification by the Planning Board. A new proposed boundary is then created in the GIS to reflect this proposed modification. This takes an average of one hour per petition. 5. Map final decision rendered by County Council. All proposed changes are reviewed and considered by the County Council and a final determination is made. Approximately 10% of the requests are modified by the County Council and these modifications are digitized in the GIS to create a final approved boundary. This takes an average of one hour per petition.



6. Integration of approved boundaries. Using ArcSDE, separate versions are created for each proposed change or iteration along the way. Once a final determination is made, the appropriate version is posted and integrated with other features. This is a database maintenance task, since the necessary line work has already been created at an earlier stage; OP staff are able to complete this task very quickly.

GIS data (acreage by zoning) from each step is documented in an Access database and used for internal management of the process. Also, a MyNeighborhood Zoning application is used over the web to inform citizens about the CZMP process. In addition, an internal ArcIMS application is used to coordinate the review process among other County agencies. Email review requests are sent and the reviewing agency can access the ArcIMS application at their leisure to review and provide feedback to the proposed change. Once a determination is made, there is a legal requirement to notify all adjacent neighbors and petitioners of the proposed change; approximately 31,000 notifications were sent in 2004. In addition, each modified property has to be posted and GIS is used to create hard copy maps indicating the location of where signs are to be placed.

Process without GIS:

Theoretically, this process could not be performed without GIS, since maintenance of the zoning data layer as a GIS feature class is required by law. However, this activity was accomplished prior to the implementation of GIS and that workflow is used to describe this ‘without GIS’ process.

Prior to GIS, the interim decisions were very rarely mapped and the initial application was not mapped. Written descriptions of the proposed change and implications were routed and used as the basis for review. Planning staff would only map the final result by incorporating the decisions onto a mylar sheet at 1”=200’ scale, with no cadastral data. This took approximately 210 hours to accomplish. Considering this effort and the effort required to notify adjacent land owners and determine locations to set signage, it is estimated to be approximately 3.5 times the level of effort to complete this activity without using GIS.

Benefits Assessment: (H, M, L) Identify confidence level

- Medium

Benefits to Using GIS for this Activity:

Legal compliance is maintained. Vastly improved decisions are rendered. “What-if” scenarios and various recommendations can be considered easily. High quality mapping products are output.

Annual Savings from Use of GIS:

Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
2650.80	757.37	1893.43	1	1893.43	\$64,281.95

Total Annual Benefits: \$64,281.95

Areas for Improvement:

None noted



New Opportunities:

Enhance the existing petitioning process. Create an online submission form that includes a digital mapping component so petitioners could create a GIS feature that represents their proposed zoning change. This would then feed into a digital submission review process. Also, create a reporting application that operates inside of ArcGIS. Currently, dbfs are exported from the GIS, imported to Access, massaged and reports are generated; these data are then married with maps. Move this workflow inside of ArcGIS and create a new CZMP toolbar that automates and simplifies these tedious and duplicative processes.

Benefits of Pursuing New Opportunities:

Increased efficiency, improved stakeholder experience and collaboration, duplicative processes are eliminated.



4.10.2 Rezoning – In-Cycle Requests

Activity: Rezoning – In-Cycle Requests					
Primary Point of Contact:					
Jeff Mayhew					
Overview:					
During the years between the quadrennial "comprehensive" process, the zoning map can be changed through the "cycle" process. This opportunity arises twice a year, on a specified schedule, with the ultimate decision made by the Baltimore County Board of Appeals instead of the County Council. Only the property owner is entitled to petition in the cycle process.					
Interviewee(s) Providing Information:					
Jeff Mayhew					
Process with GIS:					
Using GIS, the existing zoning data is mapped and compared with the requested zoning and information provided by the Development Review activity. A recommendation is offered and submitted to higher authorities (Planning Board, County Council, and the Board of Appeals) for review and final determination. The final decision is then integrated with the authoritative GIS zoning layer and PDF of the change is posted to the web. This process takes about one day of effort (7 hours) for a GIS analyst to process each request and an average of three requests are received each year.					
Process without GIS:					
Before GIS was used to facilitate this activity, a manual process was used. Existing zoning maps were copied, edited by hand and routed for review. Each request took about two days to prepare mapping data for. The final mylar copy of the zoning boundaries would be updated manually.					
Benefits Assessment: (H, M, L) Identify confidence level					
<ul style="list-style-type: none"> • Medium 					
Benefits to Using GIS for this Activity:					
Legal compliance is maintained. Vastly improved decisions are rendered. "What-if" scenarios and various recommendations can be considered easily. High quality mapping products are output.					
Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
14	7	7	3	21	\$712.95
Total Annual Benefits: \$712.95					
Areas for Improvement:					
None noted					



New Opportunities:

None noted

Benefits of Pursuing New Opportunities:
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None noted



4.10.3 Rezoning – Out-of-Cycle Requests

Activity: Rezoning – Out-of-Cycle Requests					
Primary Point of Contact:					
Jeff Mayhew					
Overview:					
The out-of-cycle variation provides for expedited scheduling of the Board of Appeals hearing and decision. This option is set in motion if the Planning Board agrees to certify that a quicker decision is in the public interest or because of emergency and if the County Council also approves the certification.					
Interviewee(s) Providing Information:					
Jeff Mayhew					
Process with GIS:					
Using GIS, the existing zoning data is mapped and compared with the requested zoning and information provided by the Development Review activity. A recommendation is offered and submitted to higher authorities (Planning Board, County Council, and the Board of Appeals) for review and final determination. The final decision is then integrated with the authoritative GIS zoning layer and PDF of the change is posted to the web. This process takes about one day of effort (7 hours) for a GIS analyst to process each request and an average of three requests are received each year.					
Process without GIS:					
Before GIS was used to facilitate this activity, a manual process was used. Existing zoning maps were copied, edited by hand and routed for review. Each request took about two days to prepare mapping data for. The final mylar copy of the zoning boundaries would be updated manually.					
Benefits Assessment: (H, M, L) Identify confidence level					
<ul style="list-style-type: none"> • Medium 					
Benefits to Using GIS for this Activity:					
Legal compliance is maintained. Vastly improved decisions are rendered. “What-if” scenarios and various recommendations can be considered easily. High quality mapping products are output.					
Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
14	7	7	3	21	\$712.95
Total Annual Benefits: \$712.95					
Areas for Improvement:					
None noted					



New Opportunities:

None noted

Benefits of Pursuing New Opportunities:
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None noted



4.10.4 Rezoning – Map Corrections

Activity: Rezoning – Map Corrections					
Primary Point of Contact:					
Jeff Mayhew					
Overview:					
When errors to the GIS zoning layer are noted and reported to OP, a process is implemented to review and make corrections.					
Interviewee(s) Providing Information:					
Jeff Mayhew					
Process with GIS:					
Using GIS, the erroneous zoning data is mapped and compared with the details of the indicated error. The error is researched and a recommendation is offered and submitted to higher authorities (Planning Board, County Council, and the Board of Appeals) for review and final determination. The final decision is then integrated with the authoritative GIS zoning layer and PDF of the change is posted to the web. This process takes about one day of effort (7 hours) for a GIS analyst to process each request and an average of four requests are received each year.					
Process without GIS:					
Before GIS was used to facilitate this activity, a manual process was used. Existing zoning maps were copied, edited by hand and routed for review. Each request took about two days to prepare mapping data for. The final mylar copy of the zoning boundaries would be updated manually.					
Benefits Assessment: (H, M, L) Identify confidence level					
<ul style="list-style-type: none"> • Medium 					
Benefits to Using GIS for this Activity:					
Legal compliance is maintained. Vastly improved decisions are rendered. “What-if” scenarios and various recommendations can be considered easily. High quality mapping products are output.					
Annual Savings from Use of GIS:					
Staff Hours w/o GIS (Manual)	Staff Hours with GIS	Difference	Annual # Iterations Per Year	Total Hours Saved Using GIS	Annual Time Savings Benefit (Based on \$33.95/hr)
14	7	7	4	28	\$950.60
Total Annual Benefits: \$950.60					
Areas for Improvement:					
None noted					
New Opportunities: None noted					
Benefits of Pursuing New Opportunities: None noted					



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5 Short-form Online Questionnaires

Agency Office of Planning

Name Amy Mantay

Job Title Community Planner

Briefly, what activity(s) do you perform within your department?

Development review, community plan development, meet with constituents, some graphic design/mapping

Approximately what percentage of your work week do you spend for each activity identified in question #8?

30,20,20,30

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, mostly for small maps either to illustrate issues in question or for identification purposes

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

Yes, same as #11

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes, same as #11

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes, same as #11

Do you perform any GIS data maintenance activities? If yes, please provide an example.

NO

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Making small maps for general purposes Make maps for presentations Make maps for print documents Look at GIS on computer to answer phone questions

What activities do you think could benefit from use of (or increased use of) GIS?

Everything

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

None



Agency Office of Planning
Name Caren Beth Hoffberger
Job Title Master Plan Coordinator

Briefly, what activity(s) do you perform within your department?

Section Chief for Preservation Services. Provides supervisory functions and staff support to the Landmarks Preservation Commission (LPC) and citizens requesting help regarding possible or existing historic structures.

Approximately what percentage of your work week do you spend for each activity identified in question #8?

Supervises - 50% LPC meeting support - 25% Citizen support - 25%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, for both LPC and citizen support. I couldn't possibly look up a property and find out its various zoning and historic information without the GIS system.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

Yes, people call & write and e-mail and want to know the status of their property and I go on the GIS system to find out.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes, but we ask for a lot of help from our wonderful info. & planning services staff to generate the correct maps. We print out the property on the GIS system as well as the newest county code required historic environmental settings for each property.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes, to Permits and Development Mgmt. and Community Conservation. If they have a property the community wants demolished, we have to look it up on our GIS to determine its designation and whether or not it needs to go to the LPC for approval or denial.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Look up the properties and find out the zoning, historic designation, design review area and print out for citizens and for use by PDM and Comm Conserv. or at LPC meetings.

What activities do you think could benefit from use of (or increased use of) GIS?

This should be available to the public - including the historic environmental setting designation. It is useful and vital information for the development, redevelopment and

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

This has been a phenomenal tool for preservation services and our information and planning services staff have been available to us and extremely helpful.



Agency Office of Planning

Name Dave Green

Job Title Planner III

Briefly, what activity(s) do you perform within your department?

I review and comment on proposed new development proposals and zoning change request. I facilitate and write community plans. I explain various County Land use processes to the public and I represent the County at community meetings.

Approximately what percentage of your work week do you spend for each activity identified in question #8?

Review and write comments- 40% Facilitate and write community plan 25% Represent County at community meetings 10 % Explain development process to citizen , attorneys and

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

I use GIS to determine zoning, lot size , topo and other relative characteristics of land being considered for change.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

I direct citizens to this website when they need to know zoning.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. I take hard copies to meetings or when interested parties walk in I used hard copies to identify properties and zoning via property line in Arcview.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

I assist community associations upon request with maps and community plans

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

I use GIS to identify features relevant to the task being performed. Is the property is a community conservation area? Is public water and sewer available? Are there streams or steep slopes, or forests on the site?

What activities do you think could benefit from use of (or increased use of) GIS?

GIS does all I need it to do.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

The information provides by Gis is very helpful in fulfilling the requirements of my job.



Agency Office of Planning
Name Dennis Wertz
Job Title Senior Planner

Briefly, what activity(s) do you perform within your department?

Serve as project manager for preparation of the Carney-Cub Hill-Parkville Community Plan. Serve as liaison to the First District Councilman. Serve as a member of the Baltimore County Commission on Disabilities and the Universal Access Work Group. Review and comment on concept plans, development plans, minor subdivision plans, zoning related applications and petitions, and DRC applications. Respond to internal and external inquiries. Perform other planning related duties as necessary.

Approximately what percentage of your work week do you spend for each activity identified in question #8?

35% 5% 5% 25% 20% 10%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes. I use GIS data to answer citizen inquiries requesting desired information regarding properties.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

I generally use the GIS data rather than MyNeighborhood websites, however I often advise citizens to use the MyNeighborhood websites.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. I frequently produce these to take to meetings or to take on site visits.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes. I provide data products to my citizen advisory committee for the Carney-Cub Hill-Parkville Community Plan.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No.

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Use orthophotos and various GIS layers to review development proposals and citizen inquiries. Request GIS maps and data from the Planning Office GIS analysts for the Carney-Cub Hill-Parville Community Plan.

What activities do you think could benefit from use of (or increased use of) GIS?

GIS is particularly well-suited to provide planning services to communities in Baltimore County.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

We need more GIS analysts in the Planning Office.



Agency Office of Planning

Name Diana Itter

Job Title Assistant Chief of Community Planning

Briefly, what activity(s) do you perform within your department?

Assist the division chief in the management of the daily operations of the division. 2.Performs delegated duties in division chief's absence. 3.Faciliates community planning efforts and comprehensive and cycle zoning items in the 2nd councilmanic district. 4.Is part of a development review team that consists of community planners and development review staff. Reviews and writes comments on concept and development plans, zoning hearings, limited exemptions, undersized lots, assisted living facilities and road closing hearings. 5.Meets with community groups, developers, design professionals, Planning Board and County Council to discuss zoning and development issues. Resolves outstanding issues using collaboration between various groups. 6. Provides info to the public involving master plan, community plans, zoning and development matters. 7. Testifies before the Zoning Commissioner and Board of Appeals as needed. 8. As delegated by the Director, researches and drafts proposed legislation in response to County Council resolutions.

Approximately what percentage of your work week do you spend for each activity identified in question #9?

1.15% 2.15% 3.20% 4.20% 5.12% 6.10% 7.5% 8.3%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes. Whether responding to a citizen inquiry about a specific property or reviewing a site plan for a minor or major subdivision, I routinely use GIS data layers to produce work maps that may show roads, buildings layer, zoning, property lines, growth management areas, historic resources and ortho photos. I often use the ability to gather info to understand a site prior to making a site visit. I have occasionally used a triage approach on some simpler requests and have eliminated the need for a field visit. Sometimes re do a 'panhandle review'. The ortho is an easy way to determine whether panhandles are the pattern in a neighborhood or an aberration

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

One of our community planners, Kevin Gambrell has developed an application that contains data layers that are of most use to community planners and secretarial staff. I routinely used My Neighborhood Zoning during CZMP 2004

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No I do not do geocoding.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. I produce hard copy maps up to 11' x 17' as part of my daily job. For example, a site which was within a residential Design Review Panel area and also required a zoning hearing is within my Planning area. I produced a small map showing cadastral, roads, ortho to assist in the review. While it doesn't show the quality of the vegetative cover, it shows the size location of the dwellings and driveways on adjacent lots and the existing tree/vegetative cover. Having this capability to verify info shown on the site plan prepared by the engineer of landscape architect

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

We get requests from the public for info that sometimes can be best depicted graphically. Most major requests and requests for official maps are referred to OIT. If a community group wants to know the boundary of a school district or a traffic shed and cannot locate the info on the county's website, we may produce a map and send them as a pdf. During the 2004 CZMP, the ability to send pdfs of zoning issue maps was very helpful and reduced mailing costs/ time.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No.



Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.) is very helpful.

Create maps of properties that are subject to proposed development. Ranges from citizen inquiries of can I subdivide my property to minor and major subdivisions, special exceptions, special hearings, variances, undersized lots, assisted living facilities, etc. Works with more experienced GIS analyst like Jen Meachan, Ngone Seye, Kristopher Weaver on community planning projects. For example, the Planning Director wanted to staff to evaluate parcels within different acreage categories for development potential in the RC6 zoning. A color coded map was produced showing four different acreage ranges in an effort to better understand how much acreage in each category existing and then understand the potential for redevelopment if there was a change in way allowed development density was calculated.

What activities do you think could benefit from use of (or increased use of) GIS?

I think community planning, development review, historic preservation and information and planning services utilize GIS in the long range planning and day to day business of the respective divisions. Increased training and access for the medium and light users would be useful. I think the Permit process could benefit from more use of GIS by Permits and

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

I think the Office of Planning makes a very good use of the GIS technology and applications. Our management was very far-sighted and has encouraged the growing use of GIS resources for over 10 years. I think the DEPRM reviewers make good use of the GIS resources. One of our sister agencies, Permits and Development Management could benefit from increased access and training to better utilize GIS resources. Their office technology has not been updated and they are using the same paper maps, microfilm cards and paper resources that they have been using since the 1960's and 1970's. I think a strong county commitment to bring all agencies up to speed as far as GIS is concern needs to be made both in terms of skilled personnel, and dollars for software and training.



Agency Office of Planning

Name Donnell Zeigler

Job Title Planner II

Briefly, what activity(s) do you perform within your department?

I review development plans and help with the development process. I attend meetings with the public and other agencies to resolve development questions or problems. I also have various other duties such as working on community plans

Approximately what percentage of your work week do you spend for each activity identified in question #9?

I spend 80% of my time working on development plans or the development process I spend 20% on other duties

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, I use GIS on a daily basis. I use GIS for the orthos layer, to check zoning, ownership, property lines, historic properties, school boundaries. I also perform queries, make my own databases and create maps for community meetings.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No, I create my own GIS applications, DataQuery and My Neighborhood are very unreliable in my opinion. For general information about a neighborhood it may be fine but for specific information on a property it is not useful.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

Not on a daily basis but maybe every month or so.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes, for every development plan that I review I create a hard copy orthos map. I probably review close to 200 development plans a year. I also plot out several community map plots for community meetings every month.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes, I have organized all the historic data and parcels on GIS which the county uses to determine whether or not a property is historic.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

Yes, I help organize the historic GIS shapefile layer

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Create maps for development plans, determine ownership of land, locate historic properties, check properties for school info, agricultural preservation info, community plan info. Also create large map plots for community plans, create personal databases to track development, create various different databases for various projects.

What activities do you think could benefit from use of (or increased use of) GIS?

For me, I use GIS on all phases of my job. I think others in my office could benefit from GIS if they used the program as much as I do.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

Not enough people in my department are trained on GIS. There needs to be more training for everyone on GIS. I know there are some supervisors that could benefit greatly if they had more training on GIS.



Agency Office of Planning

Name Jackie MacMillan

Job Title Planner III

Briefly, what activity(s) do you perform within your department?

Special plans and projects, speaker series, training seminars for staff

Approximately what percentage of your work week do you spend for each activity identified in question #9?

About half for special plans and projects, half for speaking/training. Varies over a period of months.

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes. Current example is an interagency study of potential redevelopment nodes on Pulaski Highway, Rte 40 E.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No. But I would like to.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. Pulaski example above, and Towson UDAT implementation.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

No

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Use maps prepared by others for various planning projects

What activities do you think could benefit from use of (or increased use of) GIS?

Ability to view maps and query mapped data on desktop

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

GIS system is a great resource. I would like to be able to work more directly with GIS at my desk but lack the software.



Agency Office of Planning

Name Jeff Mayhew

Job Title Planner IV

Briefly, what activity(s) do you perform within your department?

1. Directs and supervises the update of the County Master Plan 2. Directs and supervises the development of Community Plans 3. Directs and supervises various zoning processes 4. Coordinates planner comments on development matters 5. Develop and implement new policies and programs 6. Manage and execute existing growth management policies 7. Respond to internal and external inquiries 8. Supervise and develop 10 planning employees

Approximately what percentage of your work week do you spend for each activity identified in question #3?

1. 5% 2. 30% 3. 10% 4. 5% 5. 10% 6. 15% 7. 5% 8. 10%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Identify a specific piece of property, then use other spatial data to convey information to an end user. Examples include what is the zoning, what school district, can this property get water and sewer service, how does this property relate to county property and capital projects

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

In reviewing building permits, a gis application is used to identify why the office of planning is reviewing the permit and to pinpoint the resource needed to review and approve the permit.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes zoning in relation to a specific property

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

The location of the URDL and growth management areas

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

maps for community plans maps for revitalization areas specific property information maps to used in presentations

What activities do you think could benefit from use of (or increased use of) GIS?

the development process identifying county owned land issuing building permits mapping variances, special exceptions & special hearings generating automated reports for property owners locating all county structures & deficiencies - storm drains, fire hydrants, playgrounds, street lights,

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

talk to you soon



Agency Office of Planning

Name Jeffrey Long

Job Title Deputy Director

Briefly, what activity(s) do you perform within your department?

I have an administration position as deputy director of the office.

Approximately what percentage of your work week do you spend for each activity identified in question #9?

100%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

No

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

No

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

No, not directly.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

None

What activities do you think could benefit from use of (or increased use of) GIS?

GIS is widely used in the office as a planning tool. Any increase in usage would benefit the public and our office.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

None



Agency Office of Planning

Name Jennifer Meacham

Job Title GIS Analyst

Briefly, what activity(s) do you perform within your department?

I am currently a Geographic Information Systems (GIS) Analyst for the Baltimore County office of Planning. I supervise three full time employees and 1 intern. I coordinate inter-agency GIS projects with GIS Analyst form other agencies. I work closely with the other divisions within my office, providing them with data analysis and mapping needs. I also function as the LAN Admin which requires attending monthly LAN Admin meetings, creating logins, passwords and privileges to certain files and folder on our server. I provide technical support and work with the Office of Information Technology (OIT) to solve computer related problems with members of our office. I also update sections of the Planning Office website and work with OIT, web services division, to adhere to the county policies regarding web content.

Approximately what percentage of your work week do you spend for each activity identified in question #9?

GIS = 90%. LAN Admin = 8% Website Updates = 2%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes. I work to create and maintain the planning office data. We use this data on a daily basis for analysis and cartographic purposes.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

I have helped to produce the data necessary to run My Neighborhood: Historic, My Neighborhood: Zoning, and My Neighborhood: Bicycle Plan. I do not use DataQuery. I do use ArcGIS 9.0 and have used ArcIMS. I use an Aerial Photo GIS Application to located Aerial

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. I provide hard copy maps to planners for presentations at meetings. I provide digital maps for sale to the public. Some of these include the 200 scale zoning maps and Master Plan 2010 maps.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

I provide data for sale to the public and for usage by other agencies. Some of the data layers include zoning, historic data, historic aerial photos, development data, census data, etc.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

Yes. Our office maintains a number of geodatabases, aerial photos, and data layers.

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Create maps for Master Plan, Community Plans, and public or inter-agency meetings. Locate addresses for GIS analysis (SS query, historic, zoning, development review, aerial photos). Maintain Data layers.

What activities do you think could benefit from use of (or increased use of) GIS?

Development Review - Better Inter Agency Coordination, Aerial Photos - Easier to find and view by public if registered.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

photos for the public.



Agency Office of Planning

Name Karin E. Brown

Job Title Planner

Briefly, what activity(s) do you perform within your department?

Review all development plans, ZAC, demolition permits, perc plans for historic impact. Administer the Baltimore County Historic Tax Credit program. Draft minutes to the BC Landmarks Preservation Commission and the Historic Preservation Task Force. Answer citizen inquiries regarding various issues pertaining to historic preservation

Approximately what percentage of your work week do you spend for each activity identified in question #8?

Dev. Plan review, approx. 30% Tax Credits 30% Minutes 15% Answering questions 25%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, I use a data base specifically created for preservation services, showing historic buildings, County districts and National Register Districts. The overlays are super imposed over an orthographic layer.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

No

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Sometimes the Landmarks Preservation Commission, or citizens.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Locate historic buildings or districts.

What activities do you think could benefit from use of (or increased use of) GIS?

No comment

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

It would be helpful if the identifier/zoom to function would actually zoom in on the property in question - sometimes the indicator function is far off target.



Agency Office of Planning
Name Kathy Schlabach
Job Title Chief, Information and Planning Services Division

Briefly, what activity(s) do you perform within your department?

Supervise GIS/analytical staff within the Office of Planning, perform special planning studies, manage planning board's review of the capital improvement process and the water and sewer master plan process.

Approximately what percentage of your work week do you spend for each activity identified in question #8?

supervise-50% special studies-50%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, information relating to properties are critical to planning activities.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

no

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

no

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

I use GIS maps daily as I develop plans, and review previously prepared plans. For example, I am working now on producing a plan for a streetscape design to be used in a grant application.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

My staff does more than I do, but occasionally I provide both data or maps to the public or other agencies. An example is showing a planning recommendation on an ortho photo.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

no

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Assist with coding/review of coding of land use information. Create GIS maps to assist in planning activities. Look up information about properties--owners, topography, aerials.

What activities do you think could benefit from use of (or increased use of) GIS?

Our agency has always been map-oriented. GIS makes it fairly easy to compile information into a map for both analytical and presentation purposes. Our map production has increased dramatically over what we could do by hand. In fact, GIS allows us to do things that we couldn't do by hand, such as superimposing information over aerial photos. One thing that would be helpful would be to have the capital improvement program in GIS, so the geographic distribution of projects could be identified easily.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

I would like to see GIS more available to the public via the internet. It is also sometimes difficult to find the information--it could be more user friendly. (I haven't tried the new DataQuery.) My Neighborhood could be a good tool, but confusing for the public to use.



Agency Office of Planning
Name Kevin Gambrell
Job Title Community Planner

Briefly, what activity(s) do you perform within your department?

Review development plans, subdivision requests, and zoning petitions for compliance with planning and zoning policies/regulations. Develop strategic/comprehensive community plans that address a multitude of issues (growth management, sub-division connectivity, water and sewer amendments). Respond to internal and external inquiries regarding land use and zoning policy as well as ongoing development activity. Serve as County liaison to a variety of local community and stakeholder groups through attending regular meetings.

Approximately what percentage of your work week do you spend for each activity identified in question #8?

Development/Subdivision/Zoning Review = 35% Strategic/Comprehensive Planning = 30% Liaison to Stakeholder Groups = 20% Respond to Inquiries = 15%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes; The County GIS data is quite useful in a variety of planning applications. Using time lapsed aerial photography can help identify past land uses and development activity. Sub-division 'layers' can identify where existing projects have been approved so that proper road connectivity planning can be conducted. Cadastral data and zoning data prove very useful when conducting zoning outreach efforts and petitioning for re-zoning requests through the

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

Yes; I have gained familiarity with the County GIS system and it's associated data products to effectively create a multidisciplinary 'map project' using ArcGIS version 9.0 software on my desktop. Persons of varying degrees of sophistication can use this application since it incorporates many different data types (e.g. watershed, zoning, permits data, topography, historic designations, property lines, design review panel areas, etc). I believe this application is far superior to the County DataQuery and My Neighborhood Websites. However, the MyNeighborhood products are useful due to the fact that the County GIS system is only available to County Employees.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

Yes; I have performed a spatial 'cluster analysis' to determine how dispersed certain zoning classes are versus others. I have performed similar analysis on the property assessment figures

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes; when reviewing zoning petitions, hard copies of the Planning Offices' GIS application is very useful. These are often printed on a case-by-case basis during building permit review as well as field preparation for site visits. Larger format (small scale) maps are printed during the Offices' strategic and comprehensive planning initiatives. In many instances, walk in customers are shown their property in relation to the existing zoning and lot lines to help determine subdivision or development feasibility.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes; The Office of Planning has used the County GIS system to analyze specific areas or simply create base maps for concerned stakeholder groups. Planning Staff often uses the County GIS system to develop reports or recommendations to the County Council and other support agencies (Dept. of Economic Development, Community Conservations, Recreation and Parks,

Do you perform any GIS data maintenance activities? If yes, please provide an example.

Yes; I perform maintenance on the Planning Office GIS mapping application only. I do have a copy of this application on my hard disc, which I manipulate; create my own 'customized'



Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

County CZMP. DEPRM) Comprehensive Zoning Map Process (CZMP) Petition Maps; Zoning requests through Cycle Zoning or through comprehensive planning. Locate district planner for walk in/telephone clients based on street address. Prepare maps for field work, zoning hearings, community meetings. Examine slopes and site relationships from existing structures to proposed development concepts.

What activities do you think could benefit from use of (or increased use of) GIS?

Using ArcIMS could dramatically enhance community involvement and information dissemination. While this application has been created to help end users select tiles for data/mapping requests from OIT, such an application should also be used to display sub-division or project status as well as permit status to the public. Similar applications have been created by other local jurisdictions (e.g. Howard County Planning and Zoning, St. Mary's County

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

Development Plans submitted to the County for review should be done electronically. Most engineering firms are sophisticated enough to use computer drawing systems. Such systems can submit plans as a CADD or MapInfo file. CAD files can be imported into desktop GIS systems for a more in depth, comprehensive and detailed review based on not only the site conditions, but on surrounding conditions.



Agency Office of Planning
Name Kristopher Weaver
Job Title Planner 2

Briefly, what activity(s) do you perform within your department?

1) Create various maps requested by planners 2) Update databases (Land Use, Zoning, URDL, Etc.) 3) Provide the required site information to developers/engineers 4) Help people locate and retrieve historic air photos

Approximately what percentage of your work week do you spend for each activity identified in question #9?

1) 65% 2) 25% 3) 5% 4) 5%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes - I use lots of data from SDE when editing the Land Use data.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

Yes - I use geocoding (and map/parcel #) to locate sites when asked for site info.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes - I usually work on-screen most of the day. we print small and large maps for planners pretty regularly, also.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes - Engineers (usually) regularly come to me for the 'ss_query'/site information required on development plans.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

Yes - Land Use

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

see #9

What activities do you think could benefit from use of (or increased use of) GIS?

Everything, really... GIS ROX!

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

I hope to see more cross-agency communication via GIS.



Agency Office of Planning

Name Kui Zhao

Job Title Senior Planner

Briefly, what activity(s) do you perform within your department?

I am responsible for planning research including data analysis, forecast development, school impact analysis, regional growth study, and development database maintenance (while a co-worker is on the leave).

Approximately what percentage of your work week do you spend for each activity identified in question #8?

25%, 25%, 20%, 25%, and 20%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes. I use GIS to conduct land use and land capacity analysis, development database maintenance, school impact analysis, and thematic mapping.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

Yes. I use GIS to review and modify employment records.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

No.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Not GIS data but demographic data, which can be demonstrated as GIS maps.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No.

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Please refer to Question 9.

What activities do you think could benefit from use of (or increased use of) GIS?

land use and LAN capacity analysis; development database maintenance; forecast development; and growth management.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

None.



Agency Office of Planning
Name Lauren Hay Hooke
Job Title Community Planner 111

Briefly, what activity(s) do you perform within your department?

develop community plans review development proposals

Approximately what percentage of your work week do you spend for each activity identified in question #9?

75% 25%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

yes, to research zoning and land use issues on particular parcels

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

yes, to review development plans

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

no

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

no

Do you perform any GIS data maintenance activities? If yes, please provide an example.

no

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

produce maps for community plans research properties for community plans

What activities do you think could benefit from use of (or increased use of) GIS?

providing information to citizens regarding zoning and land use information

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.



Agency Office of Planning

Name Louise Nelson

Job Title Office Assistant

Briefly, what activity(s) do you perform within your department?

Answer phones and typing for planners

Approximately what percentage of your work week do you spend for each activity identified in question #9?

100%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

no

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

no

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

no

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

no

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

no

Do you perform any GIS data maintenance activities? If yes, please provide an example.

no

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

use Arc Map to determine the council district an address is in.

What activities do you think could benefit from use of (or increased use of) GIS?

There is a lot of information the planners get from arc map. One day I will start incorporating this into what I do

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.



Agency Office of Planning
Name Marjorie Lynn Lanham
Job Title Planner IV

Briefly, what activity(s) do you perform within your department?

Supervise staff and manage review of development proposals Supervise planning staff Supervise and manage Boards and Commissions Provide customer Service (meetings, phone, email requests) Provide input and Office representation for Special projects Interpret and implement legislation

Approximately what percentage of your work week do you spend for each activity identified in question #8?

40% 10% 10 25 5 10

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

One of the planners has developed a user friendly application with layers that are most commonly used by this office: aerial photos, zoning, property lines, topography, overlay districts, historic districts and properties, Design Review Panel (DRP) areas, SLIST layer etc. I will pull an aerial to determine property information such as zoning or in response to a request from an applicant or to verify the accuracy of the information being reviewed. In reviewing permits we must determine whether the address is subject to DRP review. We also use GIS to create base maps for feasibility studies.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

I may refer a customer to the MyNeighborhood but the information is not specific enough.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

NO

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

We provide an aerial photo of the neighborhood with zoning and property lines and addresses and street names for the Design Review Panel residential submittals. If we are asked to prepare a PowerPoint presentation we often include aerial photos from GIS. I use the Adequate public facilities maps for schools and traffic sheds.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

I update a database for the Development Review Committee and produce an activity report each week which is transmitted to various people in PDM and this agency.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No, unless it is to update maps of layers that this office is responsible for such as the DRP areas and land use. I do not input the data but check hard copy maps.

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Produce ortho photos with property lines and zoning

What activities do you think could benefit from use of (or increased use of) GIS?

Additional Geocoding to link properties with ongoing and/or pending activities and past history such as development history and zoning relief. This tracking system should be available to the public as well as the county.



Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

The ability to link information spatially has enabled us to analyze multiple layers of data without multiple layers of paper, to improve customer service and accuracy of response. This office has gone from a manually produced and rendered Master Plan 2000 to a digitized Master Plan 2010, from hand drawn zoning maps in 2000 to digitized zoning maps in 2004, from an AS400 system of tracking development to a spatial system that is available to anyone with GIS. The county has grown and staff numbers have not. The difference is the technology, availability and the knowledge to use it. Training is lacking throughout the county. This agency has been fortunate to have staff who are willing to pass along their knowledge to improve everyone's use of GIS.



Agency Office of Planning

Name Ngone Seye

Job Title Planner II

Briefly, what activity(s) do you perform within your department?

Map production and GIS support.

Approximately what percentage of your work week do you spend for each activity identified in question #9?

80%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

yes. Use GIS data and databases to produce maps for staff and others and also to analyze data.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

yes, use for instance Myneighborhood zoning for customer assistance.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

Use geocoding to analyze and produce maps.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

yes use both as I produce maps.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes. Map production and data analysis.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

Yes. Landuse Coding

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

#NAME?

What activities do you think could benefit from use of (or increased use of) GIS?

All activities could benefit from use of GIS.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

Planning rely on GIS technology to better take/make decisions. GIS technology is a life saver to planners.



Agency Office of Planning

Name Nkechi M. Hislop

Job Title Planner

Briefly, what activity(s) do you perform within your department?

Research properties, communities, variance requests, development research and demographic reports.

Approximately what percentage of your work week do you spend for each activity identified in question #8?

80%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, to look up property lines, ownership of properties, topography of land etc...

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

I use query to find addresses.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

No

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

No

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Locating customer addresses, looking at property lines, ownership and aerial of sites.

What activities do you think could benefit from use of (or increased use of) GIS?

More coaching for non-GIS analysts.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.



Agency Office of Planning

Name Pat Keller

Job Title Director

Briefly, what activity(s) do you perform within your department?

Manage and supervise agency/ department.

Approximately what percentage of your work week do you spend for each activity identified in question #9?

Over 115+% based upon a 35 hour work week, our base work for the office management is 40 hours min. per week.

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Personally yes, all of the above are used daily with some occurring at least every other day. Examples - 1. responses to legislation, 2. community, business, or resident requests dealing with development or zoning, 3. presentations using graphic tools involving the orthophotos and property maps.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

Personally, the most widely used is My Neighborhood because I can get aeriels, roads, and zoning. Secondly GIS if I need more site detail such as topo, property lines etc. Examples include requests from business folks about a possible development proposal they may have in mind, would get this info. in preparation for a meeting. Development review - would get information in response to meeting with a developer or community person.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

Personally, no. Would rely on staff to prepare this type of information which is quite extensive related to schools, development, basic services, infrastructure issues etc.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. In all of the examples listed in 11. etc. would in most cases 90% print out a map and perhaps in 75% of the cases use email.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Personally, no. Staff, yes.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

Personally, no. Staff, yes.

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

As previously stated. 1. legislation e.g. schools, APFO, cell towers etc, you name it. 2. Business or community e.g. requests to comment on a development, or a plan, or a proposal for capital facilities, lighting etc. 3. Presentations - every presentation from the Planning Office regardless of topic uses a whole host of mapping.

What activities do you think could benefit from use of (or increased use of) GIS?

There is very poor if non-existent interface with PADM and the permitting process. Ideally, one should be able to take up a permit, locate an address and determine if the address ever has another permit, special exceptions, variances, hearings, rezonings etc. All of this information should be accessible and available.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

GIS is an invaluable tool that has allowed the Planning Office not only unprecedented mapping, yet unbelievable analysis as well.... as the system nears it's maturity it is becoming a great and indispensable tool!!!!!!



Agency Office of Planning
Name Shannon McDowell
Job Title Office Assistant

Briefly, what activity(s) do you perform within your department?

1. To answer the telephone. 2. Faxing. 3. To direct or help all walk-ins. 4. Write up receipts for whoever purchases merchandise from our office. 5. Reserve mtg. rooms for co-workers. 6. Pick up stamp and deliver mail to the appropriate divisions.

Approximately what percentage of your work week do you spend for each activity identified in question #9?

1.50% 2.5% 3.15% 4.10% 5.5% 6.15%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes. I use these to find the geographical area served by the community planners.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. I use these to find the geographical area served by the community planners.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

No.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No.

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

I type applicants addresses into the computer to find out exactly what community their properties are located in.

What activities do you think could benefit from use of (or increased use of) GIS?

No.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

I believe this helps to expedite the permitting process as far as our office is concerned. In addition, more employees are encouraged to learn how to work with GIS technology.



Agency Office of Planning

Name Teri Rising

Job Title Historic Preservation Planner

Briefly, what activity(s) do you perform within your department?

Serve as historic planner and works with the Landmarks Preservation Commission. Conducts historic research as requested and for LPC projects. Processes permits as requested.

Approximately what percentage of your work week do you spend for each activity identified in question #8?

LPC: 35% Research: 50% Permits: 15%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, to identify whether a structure mentioned on a permit application is historic or not.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

Yes, to identify if a property is located within a county historic district

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes, to identify historic properties that fall within a community plan's boundaries

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes, permit processing

Do you perform any GIS data maintenance activities? If yes, please provide an example.

Yes, provide updated historic information so that GIS reflects accurate parcel information

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Locate historic properties Verify tax ID and owners View subdivision plans

What activities do you think could benefit from use of (or increased use of) GIS?

More accurate historical information would be useful so that questions can be answered quicker

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.

The system is slow and the pc's do not seem to have the memory to multitask when GIS is open. I often have to reboot when I am trying to lookup something because my pc freezes.



Agency Office of Planning

Name Vicki Nevy

Job Title Office Assistant

Briefly, what activity(s) do you perform within your department?

Secretarial

Approximately what percentage of your work week do you spend for each activity identified in question #9?

100%

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes. During the course of reviewing a permit, you need to know if a property is in a historic district or is individually noted as being historic or has the possibility of being noted as historic.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

No.

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No.

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

Yes. In the event a permit is not a cut and dry matter, you need the hardcopy for reference.

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

Yes. Inquiries are received continuously through the day about whether a property is historic or potentially historic or not. Also use to find out which councilmatic district a property is in.

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No.

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

Inquiries and permits as stated previously.

What activities do you think could benefit from use of (or increased use of) GIS?

The program takes what seems to be a long time to load and the program is frustrating because it does not take you directly to the specific property you are looking for. It puts in the general vicinity and you then have to guess until you find the specific property yourself. Also, you have to be aware that from time to time the layers may unintentionally readjust.

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.



Agency Office of Planning

Name William Hughey

Job Title Community Planner III

Briefly, what activity(s) do you perform within your department?

Assigned community Planning tasks in the 3rd Councilmanic District: represent the office, executive office and county council at community meetings; provide planning and zoning information to interested citizens; provide comments for zoning and development petitions

Approximately what percentage of your work week do you spend for each activity identified in question #9?

about 20% for each activity

Do you use GIS data or databases (e.g., orthophotos, topography, property maps) to perform your daily job? If yes, please provide an example.

Yes, to property information and confirm zoning classification for citizens. Use orthophotos to determine existing built conditions on properties.

Do you use GIS applications (e.g., DataQuery, MyNeighborhood websites) to perform your daily job? If yes, please provide an example.

Yes, to verify zoning of properties

Do you use spatial analysis (e.g. geocoding, routing) to perform your daily job? If yes, please provide an example.

No

Do you use or produce hardcopy or digital maps to perform your daily job? If yes, please provide an example.

yes, hardcopy maps to take to community meetings

Do you provide data products or services to other agencies or the public? If yes, please provide an example.

yes, see #14

Do you perform any GIS data maintenance activities? If yes, please provide an example.

No

Briefly list the activities that you perform using GIS? (create maps for master plan, locate water customer addresses for work orders, etc.)

create various maps for property information and to provide zoning, aerals and master plan maps for community meetings

What activities do you think could benefit from use of (or increased use of) GIS?

improve accuracy of my neighborhood maps make them as user friendly(for citizens) as possible

Please provide any additional comments you have regarding the use of GIS technology by your department, agency or the County as a whole.