

# State of Maryland

## Maryland Department of Planning (MDP)

### Executive Summary: Business Plan for Maryland Statewide Parcel Data Development & Maintenance

This *Business Plan for Maryland Statewide Parcel Data Development & Maintenance* was written by the Maryland Department of Planning (MDP) in fulfillment of a grant received from the United States Geological Survey (USGS) as part of the National Spatial Data Infrastructure Cooperative Agreements Program (NSDI CAP). The *Business Plan for* focuses on the activities to support the creation, expansion and widespread distribution of statewide parcel data throughout Maryland.

### Parcel Map Dataset Integration: Project Background

Maryland is unique nationwide in that State government is legislatively responsible for property assessment and tax mapping. The Maryland Department of Planning (MDP) is responsible for tax map maintenance and developing parcel based GIS products. The State Department of Assessments and Taxation (SDAT) is responsible for providing property valuation, assessment and revenue collection services.

Beginning in 1997, MDP developed the nation's first statewide GIS-based parcel map. Since 1997, MDP has also produced a series of products collectively referred to as **MDP's Property Map Products**. In addition to the State's parcel mapping activities, most of Maryland's 23 counties, Baltimore City and some local municipalities have developed independent digital vector parcel datasets. Many of these datasets were originally converted from MDP's tax maps. Unfortunately, these independent local government activities were not closely coordinated with the State, ultimately resulting in a wide variation in the level of detail, timeliness, dataset structure and a spatial mismatch. More recently the State, specifically MDP, has begun to coordinate with counties in order to integrate county parcel mapping data and operations into the State process.

### Maryland's Parcel Map Dataset – Vision for the Future

*The Business Plan for Maryland Statewide Parcel Data Development & Maintenance envisions a statewide parcel map dataset that contains the combined spatial and parcel attribute data needed to support State tax mapping and assessment activities, State and local land use planning and infrastructure management, the management of public health and safety and safety concerns and the sharing and dissemination of parcel data via State, local, county and federal GIS applications.*

## Parcel Map Dataset Integration: State and County Datasets

The exact tasks that need to be completed are dependent upon the content and quality of a given county's base data. As part of the process, a maintenance strategy is also defined for each county; typically ongoing maintenance has been based on one of three models. The table below outlines MDP's current plan for future integration work.

### Polygon Counties Workplan

	2011	2012	2013	2014	2015	2016
Allegany						
Anne Arundel						
Baltimore County						
Baltimore City						
Calvert						
Caroline						
Carroll						
Cecil						
Charles						
Dorchester						
Frederick						
Garrett						
Harford						
Howard						
Kent						
Montgomery						
Prince George's						
Somerset						
St. Mary's						
Talbot						
Queen Anne's						
Washington						
Wicomico						
Worcester						

#### Table Key:

	<b>Completed or underway</b>
	<b>New conversion county</b>

In addition to the Integration efforts, additional priority activities detailed in the business plan are highlighted below.

**Parcel Map Dataset Normalization:** From a longer term perspective, there is a need to further standardize or normalize the database design across jurisdictions.

**Parcel Map Dataset Integration: Funding a Future Edgematching Project:** In addition to the State/county parcel integration work, there is also a need to address edgematching across counties. This work should be supplemented with contract support services.

**Parcel Map Dataset Integration: Funding Large County Dataset Integration:** MDP has focused over the last several years on small to medium size counties in completing its parcel integration work. Over the next several years, integration activities for the largest counties in the State will be undertaken. Several counties, notably Anne Arundel, Baltimore, Montgomery, Frederick and Prince George's counties, will be particularly challenging to integrate due to the number of parcels to be reviewed; the amount of text annotation to be added; the frequency of updates; and county data distribution policies. This work should be supplemented with contract support services.

**Parcel Map Dataset Maintenance: GIS Software Migration:** MDP currently has eight licenses of AutoCAD and an enterprise license agreement through the State's Geographic Information Office (GIO) for ESRI's ArcGIS Version 10.1; both support parcel maintenance activities. The State should aggressively continue towards a single (ArcGIS) development environment. This will require additional training and development of a comprehensive parcel update procedures manual.

**Parcel Map Dataset Delivery: MDiMAP Parcel Data:** Parcel data has been aggregated and is hosted as part of a statewide web mapping service, the MDiMAP online mapping portal. The MDiMAP parcel map dataset update process is generally working well. Additional future MDiMAP parcel map dataset enhancements include:

- Add parcel points to the parcel map dataset
- Create the parcel point data as a Web Feature Service to support functionality for download, query and analysis of data
- Add annotation data for reference or add a tax map service
- Increase the refresh cycle to quarterly updates statewide for all counties

**Parcel Map Dataset Delivery: MDP Property Map Data Products:** MDP has produced a series of products collectively referred to as **MDP's Property Map Products**. The table below shows the details upcoming planned enhancements for each of MDP's Property Map Products described above:

<i>MdProperty View</i>	Add the NAIP 2013 Image Service Add the county Public Safety Address Points (PSAP) dataset Add building polygons
<i>FINDER Quantum</i>	Add same new datasets to this product as those added to <i>MdProperty View</i> Develop a training manual and presentation Conduct Subscriber training sessions
<i>FINDER Online</i>	Enhance navigation (parcel account number, tax map) functions Incorporate Google Earth Street View Develop a <i>FINDER Online Lite</i> version for use on mobile devices and iPads Develop more a more advanced query interface and/or preselect queries
Property (Tax) Maps	Support .pdf file format and availability statewide

**MDP’s Efforts to Refine the Parcel Delivery Business Model:** The most significant policy issue still to be addressed that greatly impacts the accessibility and use of the parcel map dataset is the existing MDP business model. The Maryland Department of Planning (MDP) currently provides parcel-based data to State, local and federal government agencies; to private sector and non-profit organizations; and to individuals on a licensed, subscription basis for *MdProperty View*, *FINDER Quantum* and *FINDER Online*, as described above. In many cases, agencies and organizations subscribe to more than one data product.

*MDP’s objective is for MDP and the Department of Information Technology (DoIT) to make to make the funding of parcel data maintenance a reimbursable fund expenditure – and to make the parcel map dataset and MDP’s resulting Property Map Products available a part of the open data initiative. MDP Budgets for parcel mapping would be then adjusted to reflect this change in policy.*

**Policy Benefits of Open Data**

- Establishes Maryland as a leader in open data initiatives
- Receives widespread support within the MSGIC Community

- Increases the distribution of parcel maps and data within State agencies and between the State and other organizations
- Allows the Governor's *One Map* vision to be fulfilled; as it currently stands, the parcel map dataset is the last major dataset to be excluded from *One Map*
- Ensures that the complete parcel map dataset would be available for open use on MDiMAP, Socrata, etc.
- Encourages additional local government entities to move toward open data sharing

### **Data Sharing Benefits of Open Data**

- All State agencies would gain access to consistent and uniform parcel data.
- Counties and other local government agencies would be able to use the parcel map dataset more broadly; currently only those counties with MDP data sharing agreements in place and a select subset of State municipalities have access to Property Map Products parcel data.
- The private sector and universities would be able to leverage the data more extensively

### **Technical Benefits of Open Data**

- Other State agencies would be able to access the parcel map dataset directly through MDiMAP or a Central Enterprise database.
- MDP would be able to develop desktop and mobile applications that provide full access to the parcel map dataset.
- MDP would be able to host a data download portal, eliminating the need to ship individual product DVDs to *MdProperty View* and *FINDER* Quantum Subscribers.
- MDP's Subscriber Database and most product invoicing activities could be eliminated or significantly reduced.

**Parcel Delivery: SDAT Real Property Website:** The State Department of Assessments and Taxation (SDAT) Real Property Database is a primary channel for public and private users to access real property data and maps. Tax map data are accessed on a routine basis via a view map button on the real property data page., Continuing support for this functionality is a critical component of the GIS user community's requirements.

## Data Sharing Agreements

The current status of data sharing agreements is shown below. New agreements should be developed for jurisdictions that do not have one currently in place.

Jurisdiction	Data Sharing MOU/Agreement	Jurisdiction	Data Sharing MOU/Agreement
Allegany	X	Harford	
Anne Arundel	X	Howard	Open Data
Annapolis	X	Kent	X
Baltimore City	Open Data	Montgomery	
Baltimore		Prince George's	
Calvert	X	Queen Anne's	X
Caroline	X	St. Mary's	
Carroll		Somerset	X
Cecil	X	Talbot	X
Charles	X	Washington	X
Dorchester	X	Wicomico	X
Frederick		Worcester	X
Garrett	X		

## Conclusions and the Way Forward

As a mandated legislative responsibility, the agency function of property (tax) map maintenance should continue to be a responsibility of the Maryland Department of Planning (MDP). Key to maintaining the viability of this function is the maintenance of MDP staffing and the maintenance and expansion of funding levels.

The movement to an open data sharing model will most likely require the addition of new MDP staff in support of parcel integration and ongoing data maintenance. Movement of these data out into the world will bring new requests for more and better data, and create new user support issues.

A budget summary that can be used as a foundation for future planning is below.

<b>Summary of Recommendations</b>				<b>Funding requirement above current baseline</b>	
<b>Priority</b>	<b>Target Start</b>	<b>Target Complete</b>	<b>Description &amp; Benefit (these are a start but should be better match with headings in document)</b>	<b>One-time</b>	<b>Annual</b>
High	2012	2016	Complete statewide parcel map that integrates state and local data reduces duplicate maintenance and providing more complete and accurate data to all users. This includes completing large counties that cannot be attempted at current funding levels.	\$ 200,000	Maintenance of existing staffing levels
High	2011	2014	Prepare MOUs to support data sharing between State (MDP) and other local agencies	NA	NA
Medium	2012	2014	Enhancement of MD Property View Products and tools - ArcGIS, Open Source, and Web Application. Develop FINDER Online Lite application and migrate FINDER Online to open development platform	\$40,000	Included as part of staff & maintenance operations
High	2013	2014	Open Parcel Map full and free distribution to other State Agencies via MDP. This eliminates need to sell and distribute data to other State Government agencies subscribers.	NA	\$ 350,000
High	2013	2014	Open Parcel Map full and free distribution on MD iMap. Meets the Governor's One Maryland One Map goal and allows data distribution to be greatly simplified. The data greatest value comes from its use not its sale.	NA	\$ 350,000
Medium	2014	2017	Parcel map normalization to a statewide minimum standard. This would allow for enhance cross-county analysis while permitting counties to maintain more than the minimum required attributes at their discretion.	NA	Included as part of staff & maintenance operations
Medium	2015	2016	Updated and improved tools for joint state/county maintenance including updated tools and procedures. This tools are needed to support the initiatives above.	\$40,000	Included as part of staff & maintenance operations
Medium		2014	County edgematching. This would also further cross-county analysis by improving data accuracy along county boundaries.	\$250,000	
Medium	2013	2014	MD iMap and SDAT basic distribution improvements. This will improve the usability of parcel data on MD iMap, but stop well short of fully open data.	NA	Included as part of staff & maintenance operations
<b>Total</b>				<b>\$ 530,000</b>	<b>\$ 700,000</b>