Introduction

Maryland, as a smart growth frontrunner, needs to regularly assess its progress. The state has established twelve visions and ten smart growth principles that are widely accepted. The Maryland Department of Planning (MDP) has produced a strong argument through *PlanMaryland* that raw development trends need adjustment if the visions and principles above are to become Maryland’s future. Determining whether the Maryland Department of Planning’s residential growth trend maps foretell the future or reflect past policies’ legacy development remains an open question. Indicators or performance measures are one tool that can meet the assessment need and answer this question.

The National Center for Smart Growth in its white paper, “Indicators of Smart Growth in Maryland” cautioned:

“There are many limitations of any assessment based on indicators, no matter how well developed, and . . . Understanding the limitations of indicators is critical to interpreting their significance.”

The work group concurs with this statement and it has been reinforced by the technical and beta testing groups who assisted the work group in its review.

Maryland has embraced indicators by way of its BayStat Program and recent legislation requiring local jurisdictions to track development. In 2009 the state adopted the *Smart, Green, and Growing* Annual Report—Smart Growth Goals, Measures, and Indicators and Implementation of Planning Visions Act. This act among other things required local jurisdictions’ annual reports to the Maryland Department of Planning to include five measures and indicators of smart growth progress by July 1, 2011. If a jurisdiction processed more than 50 new dwelling building permits, it must calculate:

1. Amount and share of growth located inside and outside priority funding areas
2. Net density of growth inside and outside priority funding areas
3. New lots and number of residential and commercial building permits issued inside and outside of priority funding areas
4. Updated development capacity analysis every three years
5. Acres of locally funded agricultural land preserved
These required indicators provide an annual snapshot of the location and intensity of development in relation to the state’s identified investment areas, priority funding areas, along with remaining development potential and locally generated agricultural land preservation. While useful in assessing the location and intensity, several smart growth tenants go undetected, e.g., expanded transportation and housing choices.

The Maryland Department of Planning’s analysis of the 2010 annual reports, the first year results under the Act, shows that 14 of the 23 Counties provided full reports, while six provided partial reports. Of the 23 Counties, six had fewer than the required 50 permits required to report on indicators. Of the remaining counties, three failed to report on the indicators or goals, six reported on indicators but tabulated them based on their growth areas and not PFAs; four counties reported the indicators and goals properly using Priority Funding Area boundaries. Also, 12 of the 16 most populous municipalities (with 10,000-plus residents) produced reports. Overall, 62 of 110 municipalities produced annual reports, some with assistance from the Maryland Department of Planning staff.

County reports on the share of residential growth (new lots created) in and outside of the Priority Funding Areas demonstrated mixed results for the reporting year. This may be due in part to the unusual real estate market for the past few years. Anne Arundel, Howard and Montgomery all reported 1,500 or more residential building permits for the year. At the high end among counties, Anne Arundel reported an 89% share of growth in its Priority Funding Areas, Harford and 83% share and Carroll County 72%. At the low extreme, Frederick reported a 54% share, Charles a 50% share and Cecil County a 20% share. For all reporting entities including municipalities, 12,042 of 13,140 lots were created in PFAs for a rate of over 91%. The residential building permits reports showed that of the 9,856 residential permits reported, 7,119 were inside PFAs for a 71% share.

The *Smart, Green, and Growing – Annual Report Act* also provided:

> “the Task Force on the Future for Growth and Development. . .shall make recommendations on the efficacy of additional measures and indicators that the State, the national Center or a local jurisdiction should be required to collect in the following categories of information:

1. Housing choices, including affordability;
2. The impact of growth on the environment, including land, air, and water;
3. The fiscal cost of growth;
4. The job and housing balance;
5. The impact of transportation on growth;
6. The impact of growth on business, including job creation, fiscal impact, agribusiness, tourism, and forestry; and
7. The impact of growth on cultural and historic resources.”

In the spring/summer of 2009, the Task Force formed an Indicators Workgroup to address the legislation’s smart growth measures and indicators directive to the Task Force.
The workgroup evaluated the indicators literature, individual metrics and indicators for their relevance to smart growth, data availability, and the ability of local and state organizations to regularly collect and analyze them. The work group issued a list of available and potential indicators with a preliminary value assessment. In November of 2009 the Task Force on the work group’s recommendation, advised the General Assembly to cautiously approach additional mandatory indicators. At that time, it was clear smart growth indicators needed more study and vetting before thoughtful legislation could be proposed. The initial list, as well as the letter that was sent to the General Assembly, is contained in Appendix 1.

In 2010, the work group with the Task Force’s approval formed a technical team to “test” the potential indicators. This Technical Group refined the original indicator matrix and provided feedback on each of the proposed indicators. In December of 2010, this group presented fifteen indicators (see below) for consideration by the Task Force. The Task Force by this time had grown in size and morphed into the Maryland Sustainable Growth Commission via new state legislation. This group’s final report and matrix of indicators, is included in Appendix 2.

The work group and the Commission again recommended to the General Assembly a cautious approach towards adding mandatory indicators. While the Technical Group believed that the recommended indicators could be used to assess smart growth efforts, they also believed that field testing was needed. To this end, the group recommended to the Commission beta testing with several jurisdictions.

The fifteen indicators recommended for further consideration included:

1. Housing Choices, including affordability:
   a. Housing Vacancy Rate
   b. Housing production / growth
   c. Rental and Owner Affordability
   d. Home Sales and Affordability

2. The Impact of Growth on the Environment, including Land, Air, and Water:
   a. Development on septic systems
   b. Percentage of new development served by public sewer
   c. Acres of open space in permanent protection and the means of protection
   d. The amount of forest acres cleared, conserved, and planted
   e. Wastewater treatment plant capacity and reported flow
   f. Land Use Change—loss of agricultural resource lands

3. The Job and Housing Balance:
   a. Jobs-Labor Force Ratio

4. The Impact of Transportation on Growth:
   a. Mode shares of transit, walk and bike for work or non-work, telecommuting
   b. Transit ridership rates
   c. State major transportation investment inside or outside PFAs
The Impact of Growth on Cultural and Historic Resources—Number of projects reviewed for compliance with federal and State regulations

The Growth Commission concurred with the technical and work group’s recommendation that beta testing would be appropriate before further action could be recommended.

**Beta Testing**

In July 2011 a beta testing group was formed to field test the usefulness and feasibility of the fifteen proposed indicators. The testers volunteered from four jurisdictions:

1. Kathleen Freeman (Caroline County Planning),
2. Kathleen Maher (City of Hagerstown Planning),
3. Pamela Dunn (Montgomery County Planning), and
4. Lynn Thomas (Town of Easton).

The Beta Testing group met in July of 2011 to discuss the indicators and the collection process. Each tester received the fifteen indicators and a series of questions for each indicator. The questions included data availability, source information, feasibility of collecting an indicator if not currently available, and the testers’ thoughts on the usefulness of the proposed indicators. Participants were also asked to provide indicator results for their jurisdiction.

The Maryland Department of Planning staff assisted the data collection and calculation of most of the indicators. For each indicator, the beta testers responded to the questions and summarized each indicator’s degree of difficulty and other caveats they could provide. Appendix 3 contains these detailed results of the Beta Testing group’s work from 2011. Below the detailed results are summarized.

**Beta Test Results**

**Housing Choices, including affordability**—four indicators were reviewed in this category; they are discussed below

1. *Housing vacancy*—Beta testers agreed that Census/American Community Survey provides sufficient data at the county and municipal level. However vacancy rates are not available annually from public sources. The group recommended using Census data as a base with an update every three years using the American Community Survey.

   Testers noted that annual HUD data may be available in the future, once conflicts with United States Postal Service are resolved. Also vacancy rates are only available at the Census Tract level which would make reporting at the municipal level difficult for some jurisdictions.
2. **Housing growth/production**—this indicator became a required part of local annual reports to the Maryland Department of Planning on July 1, 2011. All beta testers did note that this information is readily available via building permit data.

3. **Rental/owner affordability**—Participants agreed that the Census/American Community Survey are the best sources for this information. Again this indicator would therefore only be available every three years.

4. **Home sales and affordability**—the ability to collect this metric varied across the group. For municipalities there is no publicly available source for this information. At the county level, the proposed data source is acceptable. Additional comments proposed the use of MLS (Multiple Listing Service) or BLS (Bureau of Labor Statistics) data to complete the computation.

The impact of growth on the environment, including land, air and water—Five indicators were indentified that could address this issue.

1. **Development on septic systems and sewer**—Testers noted that these two indicators could be collected. The data is available from permit data or from local health department records.

2. **Acres of open space in permanent protection**—Open space data are available for all jurisdictions. Most testers noted that if collected by the local jurisdiction, they could provide the data. It was suggested that if this indicator were proposed, a specific list of land types included be outlined in detail, as the level of detail and availability varies by types of easement.

3. **Amount of forest acres cleared, conserved, and planted**—Participant responses varied for this metric. Most noted that this information is required by the state’s Forest Conservation Act and is available in existing reports. However, not all jurisdictions maintain an active forestry database; therefore if historical data were needed it would be problematical.

4. **Wastewater treatment plant capacity**—this metric is available from local utilities.

5. **Loss of agricultural resource lands**—Data availability is a function of local needs and consistent records across jurisdictions is not the norm. Testers recognized the long lag time of the Agricultural Census (collected every five years), which would provide a uniform base for analysis. Therefore this indicator would only be reliably available every five years.

The job and housing balance—Most participants noted the difficulty in defining and collecting this indicator. Job and housing “sheds” cross multiple jurisdictions including states. The Technical group also found that this indicator too difficult to define in a meaningful way. The Technical Group had recommended calculating the jobs to housing ratio, but recommended not setting an “acceptable” standard for this measure as there is no currently accepted standard for this ratio.

The impact of transportation on growth—Three indicators were analyzed to address this area:

1. **Mode shares of transit, walk, bike for work and non-working**—Participants found data available and agreed with proposed data source.
2. **Transit ridership rate**—Data availability is a function of local system record keeping and data may not be available for all jurisdictions. Tester response for this metric varied; some noted that this information is available from local authorities, while for others it was unavailable. In some areas of the state, data is available from the council of governments.

3. **State and local major transportation investment by PFA**—most testers found that this is not collected at the local level. The state does collect this information, but this would need to be collated with local information to create a complete picture of transportation investment and its location. Transportation investment greatly influences development location, so tracking expenditures by location should be pursued.

**The impact of growth on cultural and historic resources**—The work group and technical group identified one potential indicator for this issue, which was the number of projects reviewed for compliance with Federal and State laws (Section 106). This program is administered by the Maryland Historic Trust. While it appears this data may be available at the County level, there is not currently a designation for such projects at the municipal scale.

**Observations**

In the overview, the work group recommends that existing required indicators for local jurisdictions should be judged on their value and usefulness before other mandatory indicators are added. After three years of work in the field of indicators, which included a literature review, examination of other jurisdictions indicator use and the work group’s indicator testing, the work group can make several observations about indicators. To begin, the logic of indicators is obvious, what you measure, you can tend to manage. However, the resources needed to gather data and analyze indicators must be weighed against the value they provide.

Several indicators have an obvious relationship to smart growth, e.g., the number of dwellings located in designated and appropriate locations, the number of dwellings using public sanitary services, the acreage of agricultural land permanently preserved. Others while related to smart growth are difficult to define logically; the best example is the jobs-housing balance. Still others while providing important information about what they measure tell us little about progress toward smart growth. In this last group, economic indicators give the observer an accurate read on the unit of analysis’ commercial and income generating activity, but provide little information about whether economic change relates to more livable settings (smart growth) or would have occurred regardless of the physical environment.

Some indicators have strong smart growth relationship but are collected infrequently or not at all. This lack of data at a minimum eliminates such indicators from consideration. Also current economic conditions and the resulting dearth of staff and fiscal resources would have to subside before new initiatives can be accommodated at the local level.

In addition to considering the workability and value of the indicators themselves, resource requirements must be assessed. In these times of fiscal austerity, additional required activities are simply beyond many jurisdictions’ resources. For many small jurisdictions, this has always been the case, while for others recent staff and budget losses make are causing local governments to focus on core responsibilities and make meeting current obligations a challenge. For both
situations, additional activities can only come at the expense of either quality or by reducing existing services.

The beta testing revealed that several of the workable indicators data resides with the Maryland Department of Planning’s data center or are based on Census or the American Community Survey. Of the 15 indicators tested, six indicators were completed by jurisdictions, the Maryland Department of Planning collected six, and two were deleted because of data collection issues, and one is already required in local annual reports.

The beta testing was completed in a short period of time, which would indicates that a portion of the data and ability to produce indicators exists at the state level either at the Department of Planning or the National Smart Growth Center at the University of Maryland. That said, the collection of such data and indicators cannot and should not rest solely with the state, local data, input and review is essential in verifying indicators’ usefulness as smart growth measures. For example, the Maryland Department of Planning or the Nation Center for Smart Growth would need to collect local water and sewer plan data to determine the number of dwelling units served by public sewer vs. septic, which should be followed by verification from the subject jurisdiction.

**Recommendations**

Tracking Maryland’s smart growth progress will aid the development of local and state growth policy. Indicators are the prime candidate for assessing the direction and character of growth. The Indicators Work Group efforts over the last three years along with current resource constraints indicate that a new mandatory indicator initiative for local jurisdictions is not necessary to address the majority of the Legislator’s directive to the then Task Force and now Sustainable Growth Commission. State level organizations, specifically the Department of Planning and the University of Maryland’s National Smart Growth Center, in cooperation with local governments, have access to much the data and these organizations have the capacity to calculate the indicators of interest. The Center has been working for several years to develop indicators to help guide state policy.

With this in mind, the Work Groups offers the following recommendation to the Commission for their consideration:

1. There is a growing lack of local resources to take on new initiatives like this alone. The state has some ability to produce many of the proposed indicators with local cooperation and input. This leads the work group to its primary recommendation, which is: in cooperation with local jurisdictions, the state should pursue any of the reviewed indicators it deems important for state policy through its resources. The state should work through its Department of Planning and/or the National Center for Smart Growth at the University of Maryland.

2. Local jurisdictions should commit (possibly via a memorandum of understanding) to providing base information to state agencies that will assist the agencies in developing the indicators. The local jurisdictions should also commit to reviewing indicator information that the state produces.
3. Submit recommendation(s) to the Legislature regarding the proposal of additional indicators. Specifically, that the Maryland Growth Commission does not propose any new additional mandatory indicators at this time. Local governments and the state shall work on developing a process for data collaboration to collect and verify those indicators identified throughout this process as well as new indicators that may provide meaningful smart growth indicators.

4. If additional indicators are deemed useful for state policy analysis, state agencies and local governments should work together to add this information to the Department of Planning’s annual report. These should not be limited to the indicators considered by this workgroup and could be information that is more qualitative in nature.

5. The current mandatory annual report indicators local submissions should be analyzed for:
   i. The received data’s value for state and local decision-making
   ii. Issues with the data received—what were they and how can they be addressed
   iii. Usefulness in judging statewide and local smart growth trends
   iv. Meaningful trends that are discernible for the state’s smart growth efforts

6. The current mandatory annual report indicators basic unit of analysis, the priority funding area should be expanded to include locally designated growth areas and potential PlanMaryland Planning areas.

7. Indicators of the impact of planning and implementation practices should be developed to assess their smart growth implications. These indicators would be designed to discern the likely smart growth effects of current local and state policies on the type and location of future development and could remove the data clutter created by legacy development.