

X. Future Conditions Scenarios

A. Introduction

The future conditions step of the comprehensive plan process is intended to provide an opportunity to test and compare different growth scenarios. Two different future conditions scenarios were developed for the Augusta County Comprehensive Plan Update. The scenarios are: 1) Density Based Controls and 2) Revised Planning Policy Areas. These growth scenarios are each based upon different assumptions about policy choices which, in turn, will result in different development patterns. Each of the scenarios, described in greater detail below, has been projected through the 20-year planning period in order to illustrate the different potential outcomes and impacts from each approach. The two scenarios are limited in scope in terms of modeling only those policy choices that are recommended for implementation of each scenario. This does not mean that the final plan, however, would be limited to only these policies. It is assumed that additional policies would be developed for other planning issues that are not addressed by these scenarios.

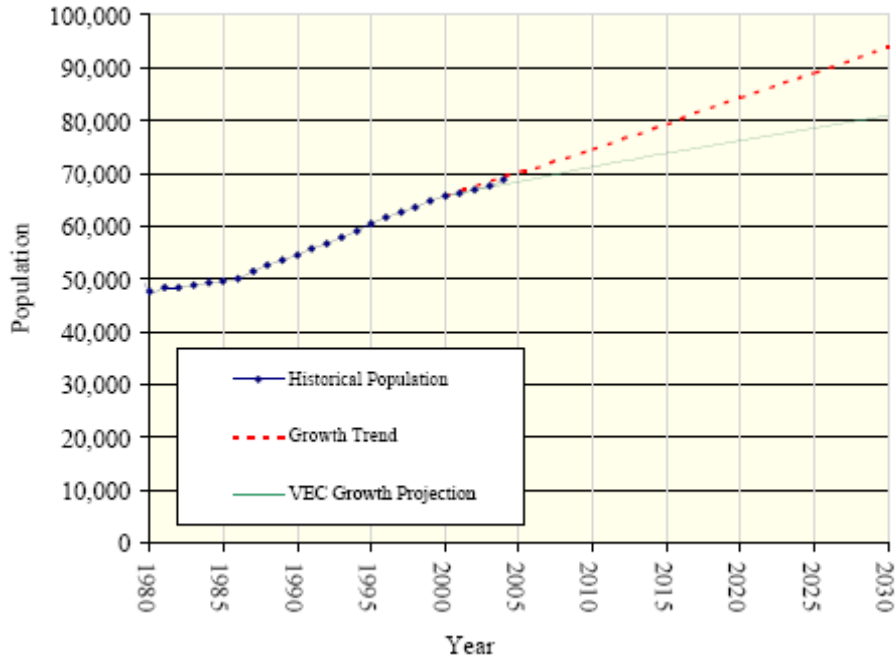
1. Assumptions

Each scenario assumes that growth will occur in the future in the County at the same rate. The scenarios are designed to influence the location, concentration, and type of the future growth.

Growth Rate

A constant future population and rate of growth was applied to each scenario. The growth rate was determined based on available historic population data which was used to project future population growth in the county over the 20-year planning period. A trend line analysis approach was selected due to the fact that the available population projections from the Virginia Employment Commission (VEC), the state population projection clearinghouse, have proven to be significantly lower than the actual growth experienced in the county. **Figure 5** shows the population projections based on the trend line analysis in comparison to the VEC projections. Updated population projections were produced, comparing VEC projections to extrapolated trends of Cooper Center and Census Bureau estimates, following the development of this study. These updated projections are considered the official projections for this Plan and can be found in Section II.

Figure 4. Augusta County Historical and Projected Population



Source: Kimley-Horn and Associates, Inc., 2005.

The population data used in the growth trend analysis also takes into account the population loss that occurred as the result of two annexations in the late 1980's. In 1985, 3,592 county residents were annexed by the City of Waynesboro and in 1986, 2,583 county residents were annexed by the City of Staunton. In order to account for this loss, the 1980 population figures were adjusted and the growth trend was based on that point forward.

Table 53 shows the projected populations according to the VEC and the trend line analysis results. For the purposes of the future conditions scenarios the growth trend projections were applied to both scenarios.

Table 53. Augusta County Historical and Projected Population, 2000-2030

Year	Growth Trend Projection	VEC Projection
2000	65,615	65,615
2010	74,580	71,300
2015	79,387	73,700
2020	84,195	76,100
2025	89,003	78,500
2030	93,811	80,900

Source: Kimley-Horn and Associates, Inc., 2005

Future Units

Projected future residential units were developed for 5-year, 10-year, and 20-year projection periods from the population growth trend analysis. The projected future units were calculated using the amount of population increase between each of the projection periods divided by the county’s average number of persons per household, 2.56⁴⁷ (see **Table 54**).

Table 54. Augusta County Projected Residential Development, 2010 – 2025

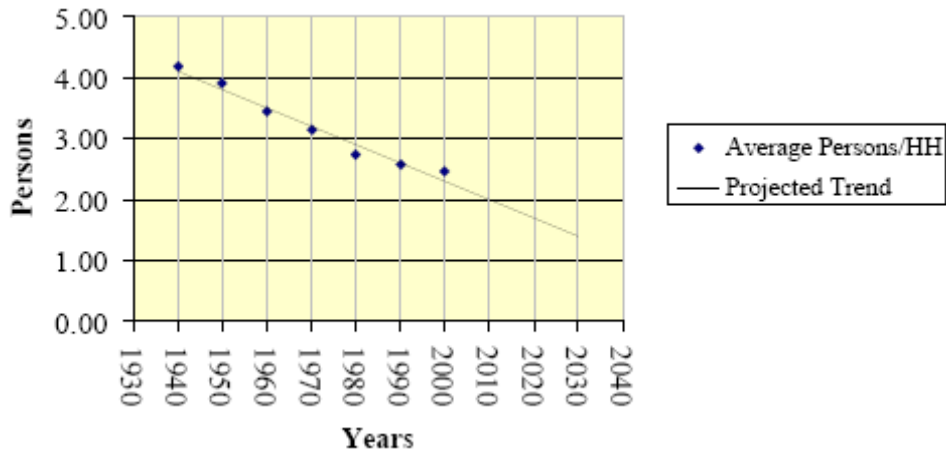
Period	Population Change	Average Persons Per Household	New Residential Units
2005-2010	4,808	2.56	1,878
2010-2015	4,808	2.56	1,878
2015-2025	9,616	2.56	3,756
Total	19,232		7,512

Source: Kimley-Horn and Associates, Inc., 2005

It is apparent from a review of the 1940 – 2000 Census results that the average number of persons per household has been declining in the county. As **Figure 6** indicates, it is not unlikely that the future average number of persons per household over the course of the planning period may be lower than 2.56. This fact may result in greater units than projected in the county. For the purposes of the future scenarios models, however, it was assumed that the application of the 2.56 average in order to determine future units was a reasonable approach due to the fact that projecting a future number based on trend line analysis would yield an unrealistically low average.

⁴⁷ 2000 U.S. Census.

Figure 5. Historic and Projected Average Persons Per Household



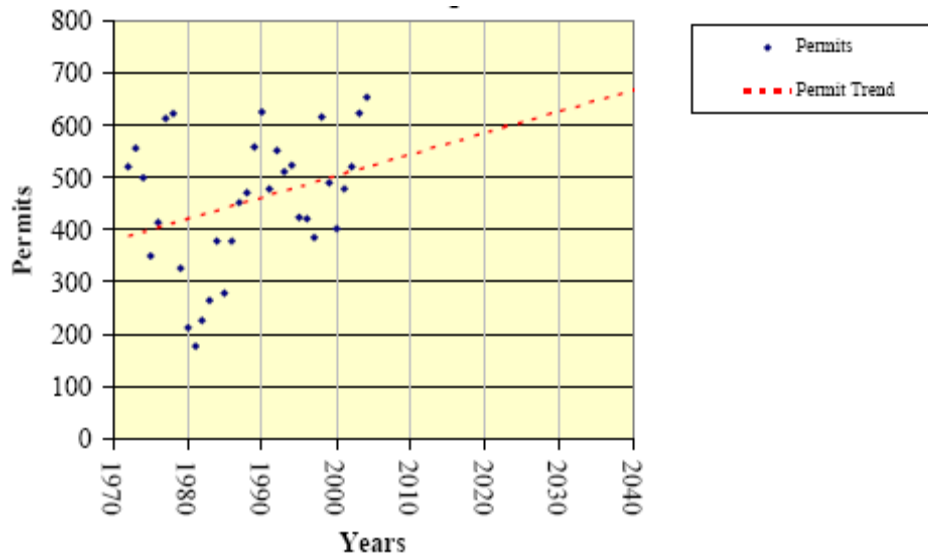
Source: Kimley-Horn and Associates, Inc., 2005.

Note: Calculations based on Census data for total populations and total housing units and do not consider group quarters populations and vacant housing units.

The use of the 2000 Census average persons per household was also considered preferable to future residential unit projections based upon permits. The number of permits issued is not an accurate indication of residential housing starts in a given year due to the fact that replacements are also included in the total number, which would artificially inflate the number of new units. Additionally, not all permits result in a new residential unit as some permits are issued without construction actually taking place.

Figure 7 shows the trend projection for annual residential permits based on the available historical data. The permit data, combined with the declining average number of persons per household in the county indicate that the number of future residential units will likely continue to increase. The rate at which that increase will occur however is difficult to model accurately with currently available information. For these reasons, it was determined that the average number of persons per household applied to a constant rate of population growth would be best for projecting future residential units.

Figure 6. Augusta County Historical and Projected Residential Building Permits



Source: Kimley-Horn and Associates, Inc., 2005.

Note: Permit data only includes single-family residential developments; manufactured home permits are not included.

Development Distribution

In each of the scenarios the projected new residential units were distributed geographically and by residential development type (*e.g.*, single-family, duplex, etc.). These assignments were made based on the methodologies and policy choices that were unique to each scenario. The distribution calculations are shown in tabular form in each scenario description. The results of these calculations are intended to show only what is being modeled in the scenario. It is assumed that in reality the amounts of development by residential type would vary greatly. It is also, therefore, not intended that any specific residential development types would be prevented from occurring in the county in the future due to their absence from this analysis.

Implementation

Each scenario’s description also includes discussions about scenario implementation. When possible, required policy choices and ordinance changes have been identified that may be necessary to successfully implement the approach modeled in the scenario. In some cases, however, there are several different implementation approaches that could yield results similar to what is modeled in the scenario. In such cases all of the potential implementation options are described and information on their respective advantages and disadvantages is provided.

Maps

Maps have been developed to show what development patterns may look like over the course of the 20-year planning period if the various policy choices were

implemented for each scenario. These maps are included at the end of each of the scenario descriptions. In each of the scenarios future development was limited to parcels that were identified as “vacant”.

Vacant parcels were defined as any parcel without a structure on it that is greater than 0.2 acres in size.⁴⁸ Parcels greater than 0.2 acres in size were targeted because they were assumed to be suitable for the development of at least one new unit if not more, depending on the parcel’s total size. A similar approach was also applied in the buildout analyses conducted under the Existing Conditions Analysis.

The amount of new development projected for each of the scenarios was held constant. The location of the new development, however, varied between scenarios based on the different policy choices that were being modeled. In each scenario, however, the distribution of the new development was intended to be random. This was due to the inability to predict exactly which parcels would be developed in the future. Therefore, these maps should be used for general illustrative purposes only.

B. Scenario 1 – Density Based Controls

The Density Based Controls scenario specifically evaluates the application of density increases and decreases as a means of reducing the amount of potential development in designated low-growth areas (*i.e.*, the Rural Conservation and Agricultural Conservation Areas) and increasing the development potential in areas better suited for growth (*i.e.*, the Urban Service and Community Development Areas).

Decreasing density reduces the allowable uses of land and/or increases the land area required to support a given development type or use. This strategy is often implemented in areas where density, intensity or type of use has created problems in the past, for environmentally sensitive areas, or for lands important for their natural resource, historic, scenic, or recreational values. Residential density decreases will reduce the county’s buildout potential in terms of the ultimate number of housing units and associated impacts. This approach alone may contribute to a lower density form of sprawl. It is, however, often a foundation to a successful open space preservation program, such as a Purchase of Development Rights (PDR) program.

Increasing density permits more intensive land uses and/or requires less land area to support a given development type or use. More housing types and mixes can be accommodated, and significant economies of scale are realized. The opportunity for increased density is an incentive to encourage development in appropriate areas for growth (e.g., public sewer/water service areas, population centers, land free from environmental or historic constraints), thereby lessening development pressures

⁴⁸ Parcels that met these criteria but are currently under conservation or riparian easements or participating in Agricultural/Forestral District (AFD) programs were not included in the analysis. AFD land was not considered for future development because, while not a permanent conservation program, landowners are expressing a desire to preserve these parcels through voluntary participation in the AFD program.

elsewhere. Density increases can be used hand in hand with density decreases to focus development in appropriate areas while limiting the amount of growth in sensitive areas.

This scenario was developed in order to address the following planning concerns:

- Prevention of further fragmentation and loss of agricultural land to residential development
- Development of a mix of housing types to meet future demands based on population age and income levels
- Retention of land development rights
- Creation of new development opportunities in Urban Service and Community Development Areas

1. Methodology

Density Decreases

The areas that were modeled for decreases in residential density in this scenario were the portions of the county that are currently zoned General Agriculture (GA) and Exclusive Agriculture (XA). In these areas, the current zoning ordinance allows for a maximum density of one single-family unit per acre. For this scenario, a density standard of one dwelling unit per 30 acres was modeled. This standard was selected based on similar standards applied in other parts of the U.S. It was also assumed that the lot size would be too large for the average person to maintain and therefore discourage the creation of nonagricultural residences.

There are some portions of the county, however, currently zoned as GA or XA that are located in Urban Service or Potential Urban Service Areas which are intended for much more dense development. These GA and XA areas were modeled in this scenario as priority areas for rezoning to encourage higher density single-family, duplexes, townhouses, and multi-family housing developments.

GA and XA lands that are currently within the Community Development and Potential Community Development Areas were modeled at the one unit to thirty acre density for this scenario. In reality this standard single-family residential development would likely be too low, yet higher density residential developments such as townhouses and duplexes may be out of character for these locations. Another factor that would further limit the potential for this density is the availability of public water and sewer. Further evaluation of the appropriate density standard would be required for these parcels.

Density Increases

Density increases were modeled for Rural Residential (RR) districts by increasing the density standard from one dwelling unit per two acres to one unit per acre. This was done as a way to create more locations in the county to absorb

development that is being shifted out of the GA and XA districts due to density decreases.

Density increases for Duplex (DR), Townhouse (TH), and Multifamily (MF) residential development types were achieved in this scenario by projecting more units for development in these districts.⁴⁹ Increasing the numbers of new units created in the DR, TH, and MF districts is recommended in this scenario because it serves two main goals; it provides a mix of housing types to address projected housing needs based on age and income levels, and it increases density in portions of the county that are designated for development under the current comprehensive plan. In order to achieve these goals, however, a significant amount of rezonings would need to occur each year in order to provide development opportunities for more dense residential uses. This is due to the fact that there is currently limited land zoned for the development of DR, TH, and MF units. Assumptions about the amount of rezoning that would occur based on this scenario are described in greater detail below.

2. Development Projection

The distribution of the projected new development in this scenario was based upon development patterns established from 2004-2005 data provided by the county. Proportions and percentages of new development by Planning Policy Area (PPA) were calculated (see **Table 55**) using this data. Assumptions were also made about how these percentages by PPA would translate to future development by zoning district. These assumptions included:

- The total percentage of recent residential development in the USA would become future DR, TH, MF, and SF development (evenly distributed among all four categories).
- Future SF development would be high density in the USA.
- The total percentage of recent development in the PUSA would become future SF development.
- The total percentage of recent development in the CDA would become future SF and RR development (evenly distributed among both categories).
- Future SF development in the PUSA, CDA, and PCDA would be low density.
- The total percentage of recent residential development in the PCDA would become future RR development.
- The total percentages of the recent RCA and ACA residential development would be equally distributed among GA and XA parcels for the total amount of future development within the agricultural areas.

⁴⁹ MHP development was not considered in the projection figures because it was assumed that no additional land would be rezoned for this use. It is expected that new manufactured homes will be developed during the planning period. These new units are assumed to be developed as replacements for existing units on land currently zoned for MHP or as new units in the GA or XA districts.

Table 55. Augusta County Development Patterns by PPA, 2004-2005

PPA (Residential Development Type)	Number of Units	Proportion of Total Units	Percentage of Total Units*
Urban Service Area (DR, TH, MF)	604	0.5571	55.7%
Potential Urban Service Area (SFR)	46	0.0424	4.2%
Community Development Area (SFR, RR)	113	0.1042	10.4%
Potential Community Development Area (RR)	67	0.0618	6.2%
Rural Conservation Area (GA, XA)	93	0.0857	8.6%
Agricultural Conservation Area (GA, XA)	161	0.1485	14.9%
Total	1084**		100.0%

* Percentages were rounded to nearest tenth.

** Includes only single-family residential units.

Source: Kimley-Horn and Associates, Inc., 2005.

The percentages were then applied for each of the residential zoning categories to the total projected number of future units based on the assumed constant growth rate.

Adjustments were also made in order to account for the density changes in the agricultural areas which would result in a shift in the future single-family residential development. It was assumed that this change would create decreases in the percentage share of total projected development in the agricultural areas (by an increment of 2% every five years). It was also assumed that this development would shift to the other areas that would attract single-family residential (i.e., USA and CDA) and that the distribution of the new development would be equal among these two areas. The projections are shown in 5, 10, and 20-year increments (see **Tables 56, 57, and 58**) in order to illustrate the shifts in single-family residential development based on these assumptions.

**Table 56. Allocation of Future Units by PPA –
1-5 Year Development Projection Period**

PPA	Projection	% of Total	Future Units*
USA	1,878	0.5571	1,046
PUSA	1,878	0.0424	80
CDA	1,878	0.1042	195
PCDA	1,878	0.0618	116
RCA	1,878	0.0857	162
ACA	1,878	0.1485	279
Total			1,878

* Future Units have been rounded to the nearest whole number.
Source: Kimley-Horn and Associates, Inc., 2005.

**Table 57. Allocation of Future Units by PPA –
6-10 Year Development Projection Period**

PPA	Projection	% of Total	Future Units*
USA	1,878	0.5571	1,046
PUSA	1,878	0.0524	98
CDA	1,878	0.1142	214
PCDA	1,878	0.0618	116
RCA	1,878	0.0757	143
ACA	1,878	0.1385	260
Total			1,878

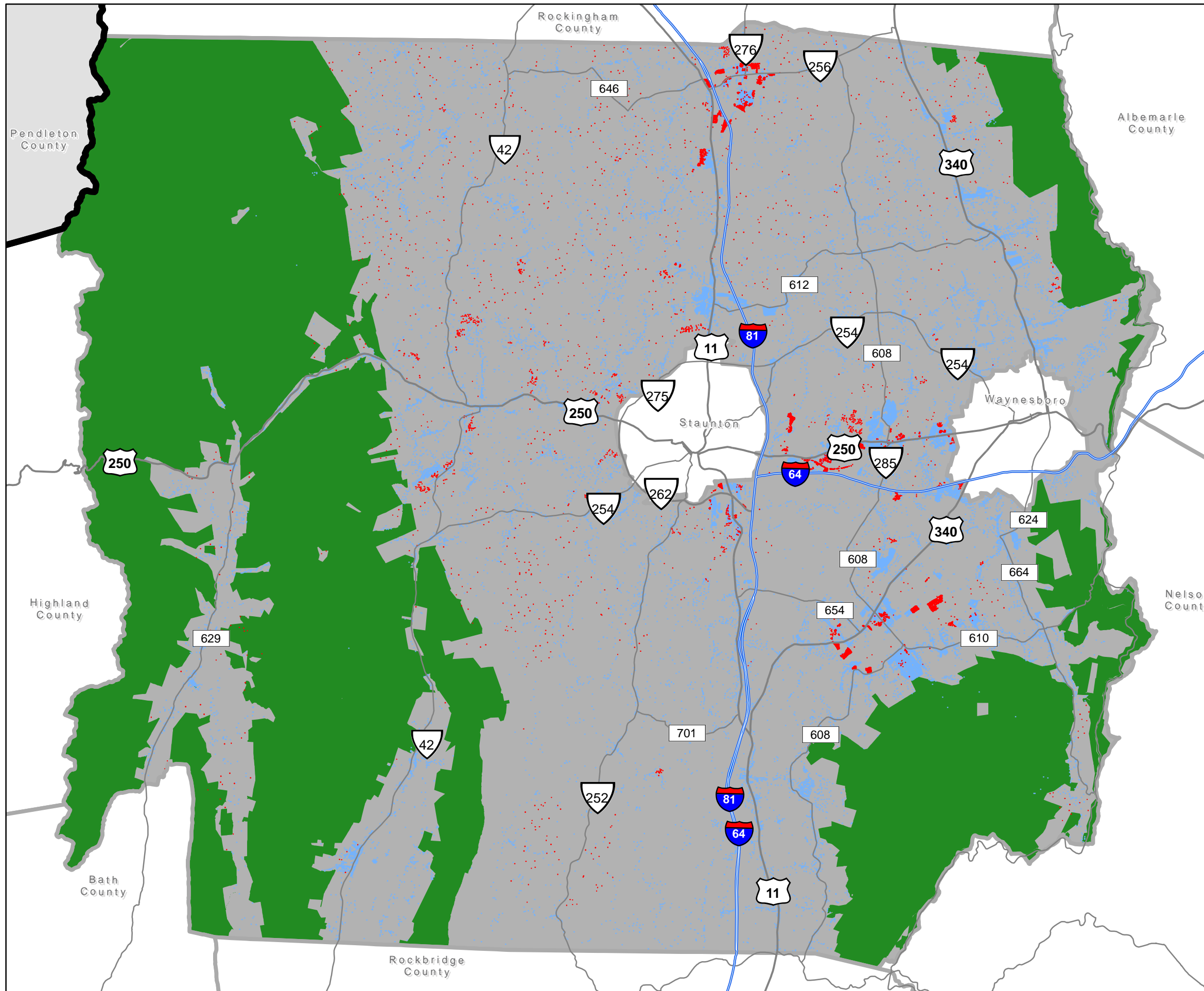
* Future Units have been rounded to the nearest whole number.
Source: Kimley-Horn and Associates, Inc., 2005.

**Table 58. Allocation of Future Units by PPA –
11-20 Year Development Projection Period**

PPA	Projection	% Applied	Future Units*
USA	3,756	0.5571	2,092
PUSA	3,756	0.0724	274
CDA	3,756	0.1342	503
PCDA	3,756	0.0618	232
RCA	3,756	0.0557	209
ACA	3,756	0.1185	445
Total			3,756

* Future Units have been rounded to the nearest whole number.
Source: Kimley-Horn and Associates, Inc., 2005.

The applicable density standards were then applied to the total number of units in each zoning category to determine the total amount of acreage that would be required for the projected development over the planning period (see **Table 59**). **Map 49** graphically depicts the results of this scenario.



LEGEND

- 1 Dot = 1 Unit
- New Units in 20 years
- Existing Units
- Interstate
- US Highway
- State Highway
- Public Land
- Augusta County
- West Virginia
- State Boundaries



Source: Augusta County

Map 49
Future Conditions Scenario 1:
Density Based Controls
20 Year Projection Period (2025)

Augusta County
 Comprehensive Plan
 2007-2027



Table 59. Allocation of Future Units by Zoning District, 2005-2025

Zoning District	New Units*	Density	Developed Acres*
DR**	1,047	5.19	202
TH**	1,047	17.29	61
MF**	1,047	16.00	65
SF** (High – USA only)	1,047	4.00	262
SF	907	1.00	907
RR	921	1.00	921
GA and XA	1,496	0.03	4,534***
Total	7,512		6,952

* New units and developed acres have been rounded to the nearest whole number.

** New SF, DR, TH, and MF units are assumed to require rezoning.

*** Assumes that 10% or less of the actual 30 acre lot would be developed due to clustering or other restrictions.

Source: Kimley-Horn and Associates, Inc., 2005.

3. Implementation

The following changes could be used to successfully implement this scenario:

Zoning Ordinance Revisions

The GA, XA, and RR zoning district densities will need to be revised so that the maximum allowable densities support those specified in this scenario. These changes would be required only in areas where the GA, XA, and RR districts intersect with the ACA and RCA policy areas.

Density decreases, used in conjunction with creative approaches for agricultural land preservation, such as sliding scale zoning or conservation zoning, can provide an even more effective approach. Sliding scale zoning and conservation zoning are described in further detail on the following pages.

Minor Subdivision and Family Member Exception

In order to simplify for modeling purposes, lots created through minor subdivision or family member exception were not considered in this scenario. Realistically, a substantial number of lots have already been created in the agricultural districts which would increase the number of future units projected for these districts. This is due to the fact that existing platted lots created through minor subdivision would be “grandfathered” and available for development. In order to reduce the overall numbers of future residential development in the agricultural districts the creation of lots will need to be addressed. In order to limit future lot creation the minor subdivision regulations and family member exceptions will need to be revised to include limits on numbers of lots, minimum/maximum sizes, and frequency.

Sliding Scale Zoning

Sliding scale zoning is another method that the county could use to decrease the density of development in the agricultural districts. Sliding scale zoning limits the number of times that a parcel of land can be split based on its size. As the acreage of the parcel increases, so does the number of splits that may occur, up to an established maximum. Experts view sliding scale zoning as particularly useful in agricultural areas where development pressures are significant. This approach is currently being used in Montgomery and Clarke Counties in Virginia. Sliding scale zoning was developed over 25 years ago and was first implemented in a township in York County, Pennsylvania. In the case of Clarke County, sliding scale zoning uses an established maximum gross density based on the maximum number of lots that can be created by a tract. The maximum number of lots that can be created would be determined by the amount of land in each tract. **Table 60** illustrates the numbers of permitted lots using the sliding scale established in Clarke County.

Table 60. Clarke County Sliding Scale Zoning

Size of Tract	Number of SF Dwelling Units Permitted
0.0 – 14.99 acres	1
15 – 39.99 acres	2
40 – 79.99 acres	3
80 – 129.99 acres	4
130 – 179.99 acres	5
180 – 229.99 acres	6
230 – 279.99 acres	7
280 – 329.99 acres	8
330 – 399.99 acres	9
400 – 499.99 acres	10
500 – 599.99 acres	11
600 – 729.99 acres	12
730 – 859.99 acres	13
860 – 1,029.99 acres	14
1,030 acres or more	15

Source: Clarke County, VA

The other critical component of the Clarke County sliding scale zoning is the use of minimum and maximum lot sizes in the agricultural zoning district. According to their regulations the maximum lot size allowed is four acres. The maximum average lot size is three acres. The minimum lot size is two acres with consideration given to exceptions and residual lots created from the subdivision of lots meeting the maximum average lot size requirements.

A sliding scale zoning ordinance could be developed for the agricultural districts which would determine the number of parcels that could be legally created through subdivision. This approach is like traditional zoning and would not

require any additional legislative authorization for the county to implement. It has been applied in limited areas in Virginia. If sliding scale zoning were to be implemented it would replace the minor subdivision and family member exception processes currently applied in the agricultural areas.

The benefit to this approach would be that it would preserve the development rights of current land owners while also helping to control the amount of subdivision in the agricultural areas. If designed properly, sliding scale zoning could also help to limit the overall number of parcels created in the agricultural districts. However, without the appropriate scale and clustering components, as used in Clarke County, this approach would not necessarily preserve land for agricultural use or prevent the fragmentation of agricultural land. It also would not prevent the conversion of all agricultural land to residential use over time.

Conservation Zoning

Another zoning change that could work well in the agricultural districts in combination with decreased density is conservation zoning. This is a concept that has been applied with great success in rural areas throughout the Northeast and Mid-Atlantic and was developed by Randall Arendt.⁵⁰ Conservation zoning allows the same overall amount of development that is already permitted. The key difference is that this technique requires new construction to be located on only a portion, typically half, of the parcel. The remaining open space is permanently protected. The preserved open space could be prime farmlands, riparian buffers, forests, or any other priority conservation lands. Greater set asides could also be encouraged through the use of density bonuses. Typical zoning densities used in this approach range from one dwelling unit per two acres to one unit per 3-4 acres and yield a clustered development pattern.

If the preserved open space is prime agricultural land it could be kept in active farming through a variety of ways:

- It could be sold “in fee” to the homeowner’s association, which could in turn lease it to local farmers.
- It could be protected through a permanent conservation easement.

The conservation zoning approach, in combination with decreasing density in the Agricultural Districts, would provide the following benefits:

- Preservation of open space and actively farmed agricultural land;
- Buffering between residential, agricultural, and environmentally sensitive areas;
- Preservation of development rights for farmers; and
- Density penalties to discourage land consumptive “farmettes”.

⁵⁰ Arendt, Randall; *Growing Greener – Putting Conservation into Local Codes*; Natural Lands Trust, Inc., November 1997

The creation of a conservation zoning ordinance would provide the county an opportunity to better manage the development patterns in the agricultural districts while retaining the development rights of current landowners and preserving critical land. This approach could be tailored to help ensure that preserved land remains in productive farming which would support future agricultural activity in the county. The use of conservation zoning would also help to promote the development of rural clusters or villages that are more consistent with the traditional development pattern of the county. This approach would also not require any additional legislative authority for the county to implement; however, it would require modification of the minor subdivision process and family-member exceptions in the agricultural areas by restricting new development to the conservation zoning standards.

Master Planned Community Districts

Another approach that would result in increased density and mix of housing types would be the increased use of Master Planned Community Districts (MPs). According to the current zoning ordinance MPs are intended to provide areas for development where conventional zoning may be inappropriate. MP project planning is performed for the entire development rather than on an individual lot basis. MPs are designed to achieve the following objectives:

- flexibility in design
- accumulation of large areas of open space
- creation of a variety of residential and compatible neighborhood arrangements
- clustering
- land use creativity and efficiency
- inclusion of compatible uses

These developments are commonly provided for by use of a specialized zone, as they might be appropriate in many areas of the county, but a finding to that effect is dependent on the specifics of the application and the site selected. MP zoning regulations take effect when someone applies for a rezoning that takes advantage of the design flexibility associated with this zone. Approval from the Board of Supervisors and the Planning Commission would then be required in order to “apply” the specialized zone to the proposed project.

Rezoning

Another option would be to establish an average rate of rezoning that must occur within the USAs each year in order for the high density residential development patterns projected in this scenario to occur. According to the policies expressed in this scenario approximately 328 acres would be required to be rezoned over the 20-year planning period, an average of 16 acres per year for SF, DR, TH, or MF uses.

Implementation Scorecard

One of the components of the comprehensive plan update will be the development of a scorecard to help the county evaluate the overall effectiveness of the plan. The most beneficial implementation scorecard elements are those that can be quantified. Measurable goals such as the number of rezonings by district, the number of new residential units created by type, the number of new lots created in the agricultural districts, and the average densities achieved are examples of implementation scorecard elements that would help to achieve the vision of the Comprehensive Plan under this scenario.

C. Scenario 2 – Revised Planning Policy Areas

This scenario evaluates the existing Planning Policy Area (PPA) boundaries and designations. The intent of this scenario is to acknowledge that there is currently large support for the PPA program in the county and that the concerns with PPAs reside primarily in the implementation of their policies. This scenario is an effort to make the current PPA program more successful by revising area boundaries, redefining policies for the different areas, creating a new PPA to address the unique needs of certain portions of the county, and creating stronger implementation tools.

This scenario was designed in order to address the following planning concerns:

- Location of new development adjacent to existing development
- Location of new development in areas with existing or identified future public services and facilities capacity
- Retention of land development rights
- Prevention of further fragmentation and loss of agricultural land to residential development
- Preservation and consideration of historic communities
- Identification of areas with development constraints or lack of future demand

1. Existing Planning Policy Areas

The current plan designates six different PPAs: Urban Service Areas, Potential Urban Service Areas, Community Development Areas, Potential Community Development Areas, Rural Conservation Areas, and Agricultural Conservation Areas. The following descriptions of these areas are from the existing Comprehensive Plan:

Urban Service Areas (USAs)

USAs are defined as areas which are appropriate locations for a full range of public and private land uses of an urban character on public water and sewer, in either the immediate or long term future.

The USAs are characterized by relatively substantial amounts of existing development and public utilities and facilities, substantial amounts of available developable land, good transportation access and a relatively central geographic location in the county.

Those areas designated as current USAs are those which are appropriate for urban development on public water and sewer within the 20 year timeframe of the plan.

Current USAs are priority locations for:

- Significant amounts of urban residential and employment growth
- Expansions of public water and sewer service
- Local and regional public facilities
- Most “one-of-a-kind” public facilities, such as hospitals
- Most industrial development – light, medium, heavy, with adequate facilities and buffers
- Larger scale urban residential and commercial developments

Potential Urban Service Areas (PUSAs)

Portions of the county that are not suitable for immediate development, but which would be expected to be eventually developed with urban uses in the long term future (probably beyond the 20 year planning period) are designated as potential USAs.

PUSAs will have the same land use planning policies as Community Development Areas (CDAs) until such time as the county changes their designation from potential to current.

Community Development Areas (CDAs)

CDAs are existing local community settlements which have existing public water or public sewer systems in place or which have relatively good potential for extensions of either of those utilities. Most of these areas are appropriate locations for a mixture of future low density, rural land uses based upon road access, existing land use pattern and proximity to existing public facilities and services, although they are planned to remain predominantly residential in character.

Most of the CDAs have only water or sewer but not both, and are therefore suitable only for relatively low density, rural uses. A few, however, are suitable for somewhat higher density urban development because they have both public water and sewer facilities.

As development occurs over the very long term, some CDAs may evolve to the point that they qualify for county designation as USAs.

CDAs are priority locations for:

- Moderate amounts of small scale, rural residential and employment growth at marginally higher densities than in the Rural Conservation Areas
- Limited expansion of public water and/or sewer service
- Local public facilities
- Small scale, low-intensity commercial and/or light industrial developments

Potential Community Development Areas (PCDAs)

CDAs are designated as potential if their location suggests a long term possibility for having either water or sewer extended to them. PCDAs will have the same land use planning policies as Rural Conservation Areas (RCAs) until such time as the county changes their designation from potential to current.

Rural Conservation Areas (RCAs)

These are rural areas which are substantially subdivided and/or developed with residential uses, which have no public water or sewer service and which have few existing intensive agricultural operations. They are therefore priority locations for moderate amounts of rural residential development.

RCAs are planned to remain rural and agricultural in character but to absorb most of the county's future rural residential development.

RCAs are priority locations for:

- Moderate amounts of low density rural residential development on individual wells and septic fields, including clustered development
- Non-intensive agricultural and forestry activities

Agricultural Conservation Areas (ACAs)

These are rural areas which have mainly farm or forest uses, have generally the lowest overall density of residential uses, which have no public water or sewer and which have most of the county's intensive agricultural operations. These areas are planned to remain in predominantly agricultural and forestal uses with very little additional residential development.

ACAs are priority locations for:

- Minimal, incremental amounts of very low density rural residential development on individual wells and septic fields
- A full range of long term agricultural, forestry and natural resource industry activities, including intensive agricultural operations

2. Methodology

Review of Existing Planning Policy Area (PPA) Boundaries

The first step in the development of this scenario was to compare the current PPAs to recent development patterns. This was done in order to understand where the most recent development has been occurring in relation to the established PPAs. Subsequently, the boundaries of the current PPAs were evaluated to determine if any of the recent growth areas should be reclassified into a different PPA category. In areas where growth trends indicated high demand for development, and water and sewer services were available, the PPA was reclassified to a higher category that would allow for more intense development.

The Planning Policy Areas were further evaluated in relation to the known or projected areas of water and sewer service. Information was provided by the Augusta County Service Authority (ACSA)⁵¹ which detailed areas of existing and potential future water and sewer capacity as well as portions of the county that have water or sewer constraints. Proposed boundary adjustments and/or changes in classifications to PPAs were made in areas that were projected to have adequate future capacity by the ACSA. Reclassifications also occurred in areas identified by the ACSA as having limited future development potential during the planning period (2005-2025) due to existing water or sewer system constraints. Assumptions were also made based on available information that water and sewer projects during the 20-year planning period would be limited primarily to those described by the ACSA that support the future water quality requirements for the Chesapeake Bay.

PPAs were then further refined to reconsider areas where pockets of land were designated for low density or conservation uses but surrounded by high density growth areas creating “islands” of land disconnected from other like areas. These areas were also reclassified into higher use categories that could be transition zones for the adjacent PPAs.

Revision of PPA Policies and Creation of New Planning Policy Areas

Upon evaluating the existing PPA designations, boundaries, and policy language it became clear that some portions of the county did not seem to fit the descriptions and policies of the existing PPAs. The creation of a new PPA to address these specific locations along with the revision of some of the existing PPAs (specifically the Community Development and Potential Community

⁵¹ ACSA Memorandum to Becky Earhart from William Monroe, August 22, 2005.

Development Areas) was therefore, incorporated into this scenario. The new hierarchy of PPAs as a result of these changes is:

1. Urban Service Areas
2. Potential Urban Service Areas
3. Community Development Areas (*redefined*)
4. Potential Community Development Areas (*redefined*)
5. Rural Community Development Areas (*new*)
6. Rural Conservation Areas
7. Agricultural Conservation Areas

Revisions to the existing PPAs and a description of the new PPA are provided below. The revisions as presented in this scenario will provide more than enough land to accommodate the projected growth within the 20-year planning period.

Urban Service Areas (USA)

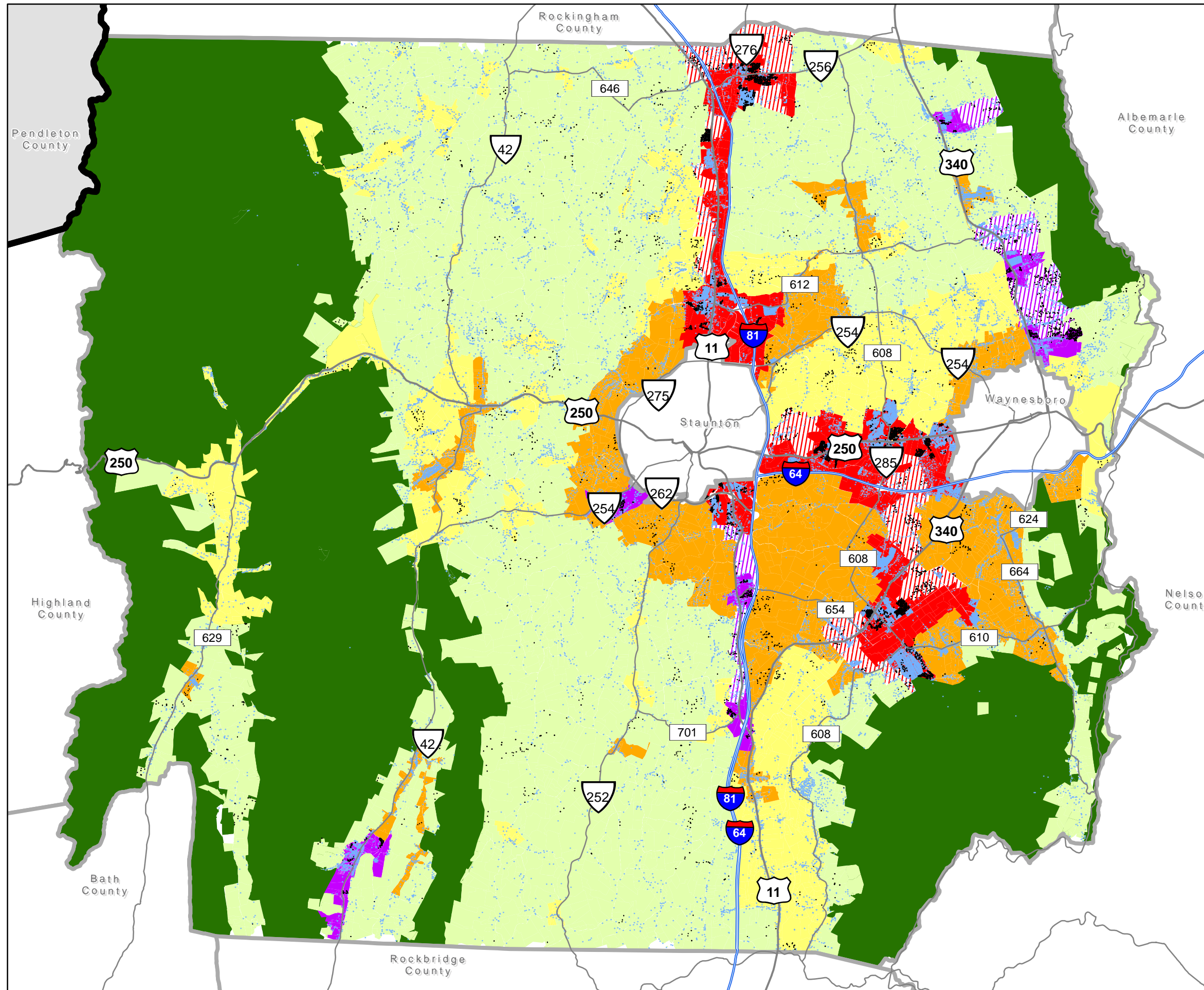
Definitions and policies for the USAs (shown as red on **Map 50**) will remain largely the same. All Urban Service Areas will be expected to accommodate 54 percent of future residential growth and at least 80 percent of future employment growth. A full range of urban land uses will be permitted with priority given to high density residential (*i.e.*, townhouse, duplex, multifamily, higher density single-family), commercial, and employment uses. Parcels zoned for agricultural use (*i.e.*, GA and XA) will be planned to convert to urban uses in the future through rezoning.

Parcels will continue to be designated for two residential density levels: high density areas will be developed at a density of 16 dwelling units per net acre for attached and multifamily units; and medium density areas will be developed at a density of four dwelling units per net acre.

Public water and sewer connections will be mandatory for new development and development of new construction on individual wells and septic fields will not be permitted in the USA. Priority will be given by the ACSA to water and sewer line extensions and treatment capacity expansion projects that serve the USAs.

Potential Urban Service Areas (PUSA)

PUSAs (shown as red stripes on **Map 50**) will be subject to the revised policies of the Community Development Areas until the designation of such areas is changed from PUSA to USA. This is due to the fact that all PUSAs do not currently have both water and sewer services. The evaluation of PUSA land for designation as USA should occur on a scheduled basis and could be influenced by such elements as development patterns, public service upgrades that would increase service areas and/or capacity, developable land needs, and citizen requests for changes.



LEGEND

- 1 Dot = 1 Unit
- New Units in 20 years
- Existing Units
- Revised Planning Policy Areas**
- Urban Service Area
- ▨ Potential Urban Service Area
- Community Development Area
- ▨ Potential Community Development
- Rural Community Development Area
- Rural Conservation Area
- Agricultural Conservation Area
- Public Land
- West Virginia
- ▬ State Boundaries
- ▬ Interstate
- ▬ US Highway
- ▬ State Highway



Source: Augusta County

Map 50
Future Conditions Scenario 2:
Revised Planning Policy Areas
20 Year Projection Period (2025)

Augusta County
 Comprehensive Plan
 2007-2027




 Kimley-Horn
 and Associates, Inc.

Community Development Areas (CDA)

The redefined CDAs (shown as purple on **Map 50**) were created to address portions of the county that currently have water and sewer service and are anticipated to accommodate new growth at a level which is greater than previously identified by the old CDA definition but not as high as what is described under the USA. Examples of areas that met this definition were west of Staunton on Route 254, Craigsville, and north of Waynesboro along Route 340, Mint Springs, and Greenville.

These areas of the county would not be considered as prime growth centers as in the case of the USAs and would be supportive of mostly new residential development with some convenience commercial (e.g., grocery stores). The CDAs would not be considered appropriate locations for directing large percentages of new employment.

CDAs will be expected to accommodate 20 percent of future residential growth. Residential development in the CDAs would largely be compact single-family residential with densities of an average of 4 dwelling units per acre. As these areas are defined by presence of water and sewer services, new residential hookups would be mandatory as in the USAs. These locations would also have greater potential for future water and sewer system upgrades and extensions.

Potential Community Development Areas (PCDA)

PCDAs (shown as purple stripes on **Map 50**) will be subject to the new policies of the Rural Community Development Areas until the designation of such areas is changed from PCDA to CDA. This is due to the fact that all PCDAs do not currently have both water and sewer services. The evaluation of PCDA land for designation as CDA should occur on a scheduled basis and could be influenced by such elements as development patterns, public service upgrades that would increase service areas and/or capacity, developable land needs, and citizen requests for changes.

Rural Community Development Areas (RCDA)

RCDAs (shown as orange on the **Map 50**) have many of the same defining elements and policies of the old CDAs. These consist mainly of current settlements that have existing water or sewer service, not both. RCDAs are suitable for the majority of the future low-density residential development and should be considered the prime location for the shift of rural residential development from the Rural Conservation and Agricultural Conservation Areas. Due to the fact that these locations are intended to remain residential and at a lower-density scale of one unit per two acres, the RCDAs are not prime locations for water and or sewer extensions, with possible exceptions in areas with public health concerns. RCDAs will be planned to accommodate only 10 percent of the total future residential growth.

RCDA locations also would include many of the historic villages that currently have either water or sewer service. Such locations would be suitable for additional future rural residential development but would also require additional development controls to help ensure that the traditional development patterns and styles are preserved. Zoning overlays for these areas could be developed to accomplish this.

Rural Conservation Areas (RCA)

Definitions and polices for the RCAs (shown as yellow on **Map 50**) will also remain largely the same. These locations will continue to be planned for only rural low density residential development on individual wells and septic systems and active agricultural or forestal operations. In keeping with the rural residential nature of this area there will be limited public facility improvements anticipated. Public water and/or sewer service extension will not be planned for RCA locations. Commercial and/or industrial uses will not be allowed in RCAs with the exception of limited home-businesses and agricultural and/or forestal related businesses.

These areas are considered independently however as they are projected to absorb a lesser amount of the overall future growth. RCAs will continue to be planned to accommodate only 10 percent of the total future residential growth at a rural residential density. In order to accommodate projected new single-family residential development that is rural in character an increased density of one dwelling unit per five acres was modeled in this scenario. RCAs are also not expected to have any residential rezonings and steps would be taken to limit the number of future residential lots created in these areas.

Agricultural Conservation Areas (ACA)

ACAs (shown as green on **Map 50**) continue to be planned to remain in agricultural and forestal uses for the long term future. Approximately 6 percent of the total future residential development is projected to occur in this area. This number is based on the amount of residential subdivision which has already occurred in the agricultural areas of the county as well as recent building trends, and future efforts to reduce residential development in the ACA.

The maximum allowable density for new residential units in the ACAs will be one dwelling unit per ten acres. The creation of new residential lots in these areas would be discouraged. Subsequently, no public service extensions and improvements are expected in the ACA and all new residential development will be required to be served by wells and septic systems. Commercial and industrial uses will be discouraged unless they are compatible with agricultural uses.

3. Projected Development

Under this scenario modified growth and development policies were modeled for each of the existing PPAs and new policies were suggested for the newly created PPAs. **Table 61** shows the existing plan policies and the revised policies used for

this scenario. The growth and development policies are based upon the percentage of new residential development that the area is expected to accommodate over the planning period.

Table 61. Planning Policy Area Growth and Development Policies and Densities

PPA	Existing Policy	Revised Policy	Density
USA	60-70%	54%	16.0 High
			4.0 Medium
PUSA	Up to 20%	20%	4.0 Medium
CDA			0.5 Low
PCDA	--	10%	2
RCDA			0.5
RCA	Up to 10%	10%	0.2
ACA	Less than 10%	6%	0.1

Source: Kimley-Horn and Associates, Inc., 2005.

The development policies and densities were then applied to determine the amount of future developed units and acres by PPA under this scenario (see **Table 62**). The constant rate of growth was used as in the previous scenario to determine the total number of new units developed during the planning period. The allocation of new units across the various PPAs was based on the application of the development policies. The developed acres were derived from the applied density standards in each of the PPAs.

Table 62. Projected Developed Acres and Units by Planning Policy Area, 2005-2025

PPA	Developed Acres	Projected Units
USA	406	4,057
PUSA	334	751
CDA	376	751
PCDA	750	375
RCDA	1,875	375
RCA	3,755	751
ACA	4,520	452
Total	12,016	7,512

Source: Kimley-Horn and Associates, Inc., 2005.

Map 50 shows the locations of the revised and new PPAs as well as the potential development pattern that would result from the utilization of the specified policies over the 20-year planning period. The individual parcels identified for future development were randomized and were not intended to predict specific development patterns at the parcel level.

4. Implementation

The comprehensive plan update will include the review and revision of the PPA boundaries and locations. If considered appropriate, the recommended policy changes to the future development percentages, densities, and PPA definitions as described in this scenario could be incorporated into the plan update.

The implementation of Scenario 2 would occur largely through the development of the comprehensive plan update and related ordinance changes. The challenge in making these policy changes is in finding the appropriate implementation tools to help carry them forward.

The following changes below could be used to successfully implement this scenario:

Density

The GA, XA, and RR zoning district densities will need to be revised so that the maximum allowable densities support those specified in the policies of the comprehensive plan. These changes would be required only in areas where the GA, XA, and RR districts intersect with the ACA, RCA, and RCDA policy areas. This is due to the fact that GA and XA parcels located in other PPAs would be priority parcels for rezoning.

SF densities should also be revised in order to provide higher density single-family uses in the USA and lower density uses in the other PPAs. Lower density uses should particularly be targeted to areas where the use of well and septic systems would be required.

Minor Subdivision and Family Member Exception

In order to simplify for modeling purposes, lots created through minor subdivision or family member exception were not considered in this scenario. Realistically, a substantial number of lots have already been created in the agricultural districts which would increase the number of future units projected for these districts. This is due to the fact that existing platted lots created through minor subdivision would be “grandfathered” and available for development. In order to reduce the overall numbers of future residential development in the agricultural districts the creation of lots will need to be addressed. In order to limit future lot creation the minor subdivision regulations and family member exceptions will need to be revised to include limits on numbers of lots, minimum/maximum sizes, and frequency.

Rezoning

Establish an average rate of rezoning that must occur within the USA areas each year in order for the high density residential development patterns projected in this scenario to occur.

Other critical rezoning policy decisions that would need to occur include:

- Allow only new high density residential development (*i.e.*, single-family, multifamily, duplex, townhouse) to occur in the USA.
- Allow single family residential development to occur primarily in PUSA, CDA, and PCDA.
- Consider allowing high density residential uses in CDA where compatible with existing development and infrastructure capacity is available.
- Allow rural residential zoning to occur primarily in the RCDA.
- Rural residential development on a lot-by-lot basis in the RCA and ACA would not be allowed.
- Increasing density in the ACA, RCA, and RCDA areas through rezoning would not be allowed.

Water and Sewer

Require mandatory water and sewer hookups for all new residential development in the USA and CDA. Limit the use of wells and septic systems to the PUSA, PCDA, RCDA, RCA, and ACA.

Prioritize future water and sewer upgrades and extensions to the USA, PUSA, CDA, and PCDA. Limit projects in other areas unless to address large-scale public health concerns.

Historic Overlay

In order to provide an additional level of land use controls that is geared towards preserving historic villages, the creation of historic overlay zones is recommended. The overlay zone could include land use and design standards that would ensure that new development is attentive to the existing historic context.

Implementation Scorecard

One of the components of the comprehensive plan update will be the development of a scorecard to help the county evaluate the overall effectiveness of the plan. The most beneficial implementation scorecard elements are those that can be quantified. Measurable goals such as the number of rezonings by PPA and the number of new residential units by type created by PPA are examples of implementation scorecard elements that would help to achieve the vision of the comprehensive plan under this scenario.

Phased Growth

The county could elect to designate areas of primary and secondary growth using a phased growth approach. Phased growth refers to the technique by which the speed and sequence of development is regulated in accordance with a comprehensive plan. Most often the allowable growth rate is based on the expansion rate of public services and utilities to new areas zoned for development. While traditional regulatory schemes such as zoning deal with land use, phased growth adds two additional dimensions: timing and sequencing —

reinforcing a determined planned sequence of development through a capital improvement schedule.

The designation of phased growth areas could be applied in place of, or in combination with, the existing Planning Policy Area boundaries and descriptions. The addition of phased growth areas would add a timing element to the PPAs that currently does not exist. This would help to encourage development in the designated growth areas and ensure that adequate capacity exists for new development.

The phased growth areas could also act as an overlay to the PPAs. The combination of the PPAs and the phased growth areas would determine which portions of the growth areas are best suited for different types of new development. For example, new DR, TH, and MF residential units would be directed towards the Urban Service Area portions of the short-range growth area.

Level of Service (LOS) Ordinances

Level of service ordinances are a form of growth management that tie or condition development approval to the availability and adequacy of public facilities and services, thus ensuring that new development does not take place unless the infrastructure is available to support it. LOS as a growth management tool is currently being successfully applied in the cities of Chesapeake and Suffolk, Virginia.

The level of service ordinances are linked to the Capital Improvement Program, which establishes a schedule of public facility construction over a five or six year period and details how they should be financed. The ordinances identify the types and levels of service that are needed to permit new development and establish a policy about when the infrastructure and public services must be in place relative to the impact of development. The developer must demonstrate that the required levels of public facilities and services are, or will be, available to the proposed project.

Potential benefits from this approach include:

- Allows a community to maintain control over the timing and sequence of new development.
- Forces the community to link its comprehensive land use plan with its capital improvement program, a principle of good planning that is often ignored.
- Can encourage contiguous or even infill development because of its proximity to existing urban infrastructure and services. To the extent that land in facility-provided areas is limited, it will encourage developers to build at higher densities.

The major limitation to the LOS is that it may increase the complexity of the development process and the cost of processing development proposals.

Urban Growth Boundaries

An urban growth boundary (UGB) is a "line in the land" drawn around an urban area outside of which development is prevented or highly discouraged. UGBs are usually considered long-term growth-management tools, often established for 15- or 20-year periods. Proponents suggest UGBs can accomplish at least six objectives:

- Preserve open space and farmland;
- Minimize the use of land generally by reducing lot sizes and increasing residential densities;
- Reduce infrastructure costs by encouraging urban revitalization, infill, and compact development;
- Clearly separate urban and rural uses;
- Ensure the orderly transition of land from rural to urban uses; and
- Promote a sense of unified community.

UGBs, however, have potentially negative, if unintended, side effects. By reducing the supply of developable land, for example, housing and land prices could increase, reducing housing affordability and production. According to some researchers, the effectiveness of growth boundaries has been constrained by:

- Persistent preferences for single-family, detached homes by prospective home buyers;
- Poor coordination among local public agencies;
- Housing price increases; and
- Political manipulation by antigrowth interest groups.

This approach is currently being applied in several localities in Virginia and many other areas nationally. Oregon, for example, has a stringent UGB measure that allows localities to prevent almost all development outside their designated urban-growth areas. Whereas some Virginia localities designate urban-growth districts, the implementation is not as restrictive as Oregon's measure. Virginia's urban-growth districts are areas where land-use controls and capital investments are focused.

One example of a stringent UGB in Virginia is Virginia Beach's "green line," which limits infrastructure and places strong development restrictions on the southern section of the city. The northern portion is designated as a growth area and all necessary infrastructure is provided. The "green line" is still in effect in Virginia Beach, but because of political manipulation caused by landowner discontent, the geographic location of the "line" has been altered which may ultimately weaken the UGB concept there.