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M E M O R A N D U M

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Subject: Water Line Extensions beyond the Primary Service Area

Discussion: Following is a brief report that summarizes our research and recommendations on the experience of other Virginia Counties with water service extensions beyond their Urban Growth Boundaries and our recommendations for potential water line extensions in beyond James City County's Primary Service Area. We would be happy to answer any questions or discuss this material further with your staff.

cc: Milt Herd, Herd Planning and Design

Report On Water Line Extensions beyond the Primary Service Area

DRAFT – March 6, 2009

BACKGROUND/INTRODUCTION

This memo is in response to a request from James City County planning staff and the Comprehensive Plan Steering Committee about the experiences of other Virginia localities regarding the impacts of water line extensions beyond designated Urban Growth Area boundaries (termed the Primary Service Area, or PSA in James City County). In particular, the Steering Committee and staff inquired about the effect of such water line extensions on adjoining land values and densities and if water line extensions were maintained by public or private entities.

To respond to these questions, the consultant contacted several Virginia counties that are similar to James City County in population size and that have a development pattern that includes rural and suburban development and, in most cases, an urban growth boundary or similar growth management concept. The consultant also reviewed planning literature to determine if any localities in Virginia or other states had made a quantitative study of the impact of water line extensions on land values or development patterns. While the consultant found no specific research or reports that directly address the questions specifically raised by the Steering Committee, the experiences of other localities and some of the information obtained from the literature review is relevant and provides a potential framework for evaluating the implications of water line extensions outside the PSA in James City County.

General Policies on Water Line Extensions Outside Service Areas or Urban Growth Boundaries

The consultant contacted 10 Virginia localities with populations ranging from approximately 62,000 to 98,000:

- Albemarle
- Augusta
- Bedford
- Fauquier
- Frederick
- Hanover
- Montgomery
- Pittsylvania
- Rockingham
- York

Loudoun County was also contacted because of its specific policies for utility extensions outside Urban Growth Boundaries and because the Loudoun's rural development policies were studied as part of the James City County Rural Lands Committee work.

The comprehensive plans for all of these communities contain policy language indicating that the preferred location for new development is in areas served or planned for public utilities as opposed to areas that were to be maintained as rural, agricultural or open space lands. However, not all of the localities contacted had the same basic approach to growth management planning as James City County. The largely rural counties of Bedford and Pittsylvania, have not



historically used Urban Growth Boundaries or utility service areas in their comprehensive plans; utility extensions have occurred primarily case-by-case in response to development requests or to address inadequate facilities in existing communities. Both these counties, however, are working to strengthen the link between utility policies and land use through recent adopted or upcoming updates to their comprehensive plans. Some of their experiences with water and sewer line extensions do provide insights about potential impacts on adjoining properties and will be discussed later.

York County, although adjacent to James City County, is not directly comparable to James City County since most of it is already developed at generally suburban levels and the overwhelming majority of remaining open lands are owned by the Federal or State government. The recently adopted York County Comprehensive Plan focuses on encouraging low density residential development in rural residential areas (one unit per acre). It does not restrict the location of new development through utility extensions or a firm urban growth boundary. There is nothing equivalent to James City County's Rural Lands designation in the York County Comprehensive Plan, and the Conservation category in the plan mainly addresses environmentally constrained areas or publicly owned land and historic sites. According to planning staff, the county's sewer and water master plan calls for the majority of the County to be served by central utilities, including many older developments with individual well and septic systems that are scheduled for public utility service.

The following counties that were surveyed use urban growth boundaries and/or utility service areas to discourage the expansion of public utilities into rural areas:

- Albemarle
- Augusta
- Fauquier
- Frederick
- Hanover
- Montgomery
- Rockingham
- Loudoun

Many of these counties also restrict or prohibit the use of communal water and wastewater systems in rural areas. Although most of these counties would be considered to have firm Urban Growth Area boundaries and generally preclude the extension of public water service into rural areas to serve new development, there are situations where the extension of utility lines has been permitted outside a UGA. Generally, these extensions have fallen into one of the following categories:

Extensions to resolve an existing health hazard or environmental concern:

Counties including Loudoun, Fauquier, Augusta and Hanover have allowed the extension of public water beyond established urban growth area boundaries to serve existing communities or subdivisions whose individual wells or communal are running dry, are contaminated, or are at risk of contamination from pollution sources such as landfills, failing septic systems, toxic waste dumps and similar environmental hazards. As a policy, for example, Albemarle County states that it will consider the use of community water and



sewer systems outside its growth areas on a case-by-case basis to protect public health, water supply areas and groundwater supplies.

In the case of utility expansions for the purpose of environmental remediation, most counties subsequently or simultaneously changed the comprehensive plan designation on the subject properties to indicate that the properties were within a service district of some type. Augusta County generally designates such remediation areas as Community Development Areas, a designation typically reserved for existing villages or subdivisions with either public sewer or water service, but not both. Most of the Community Development Areas in Augusta are in rural areas and were developed prior to the established UGA. They were designated as Community Development Areas primarily so that utilities could be extended to these subdivisions to address failing systems and for environmental remediation. Land use designation and zoning did not change as a result of these types of water extensions.

Extensions to foster Economic Development or to serve an Institutional or Community Facility Use:

Several counties allow the extension of public sewer and water outside an Urban Growth Boundary for certain non-residential uses. Frederick County has a separate sewer and water service boundary that extends beyond its Urban Development Area boundary in some locations to promote commercial, industrial and institutional uses where residential land uses are not desirable. Hanover County is cited in the literature as a good example of a rationally phased utility service area extension policy. However, Hanover also allows changes in the scheduled Conservation and Phased Suburban Development Plan and/or expansion of the boundaries its Suburban Service Area for County public sites and facilities and for economic development purposes where a private applicant is willing to fund public improvements in advance of an area coming into phase. Rockingham County recently allowed utility expansions outside its UGA boundary to accommodate a hospital expansion and new wastewater treatment plant needed in part to serve the hospital. The County has not expanded its Urban Growth Boundary to reflect the change but will do so during its next Comprehensive Plan update. Frederick County recently approved utility extensions to a church located outside its Urban Development area but within its sewer and water service boundary. The utilities had, in that particular case, been extended beyond the UDA to serve a County site adjacent to the church property.

Extensions Intended to Encourage Preferred Development Types or Patterns:

When Loudoun County adopted its General Plan in 1991, the County allowed for the extension of central utility lines beyond established Urban Growth Areas around towns specifically to serve cluster development, including rural hamlets, in Rural Areas. This was done as part of its policy of supporting a more compact rural village and hamlet type development patterns as an alternative to rural sprawl development. A few cluster developments were approved in areas of the County adjacent to existing towns in accordance with these policies without expansions to the Urban Growth Areas. More specifically, the purpose of these policies was to promote a more compact development pattern adjacent to towns in areas that were already zoned for rural subdivisions at one unit per 3 acres. In most cases, the Urban Growth Areas were subsequently expanded to include these subdivisions. Two rural villages have also been approved for central water



service outside the County's Urban Growth Area, one in the County's Transition area and one in the Rural Area. In both cases, the provision of central water was allowed for environmental reasons. In general, the county's policy is that cluster development on central or communal water facilities may be supportable outside an Urban Growth Boundary in cases where open space and agriculture preservation in the area have been identified as important public priorities or where there are environmental constraints or concerns about groundwater quality.

Ownership and Maintenance of Water Lines

In each instance where central water service was provided beyond the urban growth boundary in the surveyed counties, the water lines are maintained by a municipality or by a service authority. In some cases, such as in Loudoun and Fauquier counties, developers funded the costs of the water line extensions or constructed the lines prior to turning them over to the service authority or municipality for maintenance.

One important consideration for the extension of central water lines outside a UGA is the functionality of the water line itself. Dead end water line extensions are generally discouraged since they present maintenance difficulties. Most central water lines are looped to improve water pressure and to avoid the expense of flushing lines. Some communities, like Bedford County, will not allow extension of a central line to serve a new subdivision unless it can be looped. This is an important consideration for water line extensions in general, whether or not they are beyond UGA boundaries.

Our research found that communal water systems serving rural residential development have been both publicly and privately owned. In Loudoun County, for example, where rural hamlets and villages with communal water systems are permitted outside Urban Growth Areas, the system must be owned and operated by the Loudoun County Sanitation Authority if it serves more than 15 houses. The ownership of water systems serving older subdivisions and villages in surveyed counties tended to vary. These systems typically pre-date established urban growth boundaries and many are too far from central lines to be served efficiently by central water systems. The high failure rate of small, older community water systems has led the state to adopt monitoring standards for such systems. Several counties with a commitment to strong urban growth areas discourage or prohibit the use of communal water systems for new development in rural areas. The James City County Service Authority (JCSA) currently manages and monitors six independent community water systems serving subdivisions. Three of these systems are located within the PSA and three are in the Rural Lands Areas.

Effect of Water Line Extensions beyond the PSA on Adjacent Land Values and Densities

There is no simple way to determine the specific impact of a water line extension on adjacent land values since comparative property value data for Virginia counties is not readily available or compiled in a way that would answer this question. The extension of utilities to an undeveloped area can be said to generally increase the value of property to the extent that zoned or planned development potential is enhanced or fully realized. Drawing an urban growth boundary has also been considered to drive up land values within the boundary as developers position themselves to take advantage of planned growth. This is borne out through anecdotal discussions with the current Albemarle County Assessor who formerly worked as a supervising appraiser in Loudoun



County during its rapid expansion. In cases where a water or sewer line is extended to address problems related to failing septic systems or contaminated wells, property values also tend to increase as formerly undevelopable subdivision or village lots become developable and as health issues that would negatively affect individual home values are eliminated.

Property values outside an urban growth area boundary can also be affected by land speculation and may intensify if expansion of the growth boundary is considered. A 1998 article on the Portland, Oregon growth boundary discusses the influence of Urban Growth Boundaries on land values:

“(The) effects of the UGB are clearly reflected in Portland’s real estate market...Starting at about the Central Business District, land for single family residential purposes is valued at about \$150,000 per acre. This amount falls slowly so that by the time we get to the edge of the present UGB, about 23 to 24 miles out, land values per acre are \$120,000. Once we cross the UGB land prices fall precipitously to about \$18,000 an acre reflecting its rural residential use and a bit of speculation. Clearly, the market takes the UGB boundary seriously and pays close attention to it. Pushing the UGB out two more miles results in the price of the newly included areas rising from \$18,000 per acre to about \$120,000. Even land being considered for inclusion in the UGB has jumped from under \$20,000 to over \$60,000 per acre in less than six months.”¹

It needs to be pointed out that this is one example and that individual cases will vary greatly based both on the real estate market in the area and on the densities and land uses allowed in the area.

A very limited water line expansion outside the PSA, for a very specific reason, such as isolated contamination of an existing private well, could be expected to have minimal or no impact on adjacent property values and development densities, particularly if the zoning and land use designation of the parcel does not change. However, if the water line extension involves a large amount of undeveloped acreage adjacent to other undeveloped parcels, a change in land use designation, a rezoning, or otherwise indicates a potential weakening of the PSA boundary concept, adjacent property values could be affected by speculative buying in anticipation of other potential utility extensions. Development densities would only be affected on adjacent parcels if the County agreed to change the land use designation to something more intensive or allow a rezoning of those properties.

The impact of water line extensions on development densities in the adjacent area is difficult to characterize definitively. Development yield on the parcel that is served by the water line extension might increase depending on underlying zoning and site conditions. In one case in Fauquier County, a waterline extension to a residentially zoned property outside a UGA increased the lot yield by 15 to 20%, even without a rezoning since some dimensional standards were automatically relaxed by the utility service provision and a reserve drainfield site was no longer required. The County Board considered this an appropriate trade-off since development of the property would allow for some local road connections to be made that the Board considered important.

¹ Richard Forester. “Capitalizing on the U.G.B.” Oregon’s Future, Winter, 1998, pp. 17-19.



CONCLUSIONS:

Other localities in Virginia have allowed individual water line extensions outside a designated Urban Growth Boundary without expanding the growth boundary designation itself. However, our research has also shown that – in most cases – these were done for specific and identified public purposes. The impact of these extensions on adjacent property values is hard to determine precisely. However, a generalization can be made that limited extensions for reasons such as environmental or health remediation will not tend to increase overall land speculation that might raise adjacent property values, as compared to wider extensions that encourage certain private development types, which could be expected to lead to speculative rises in adjacent land values. In other words, if the extension seems to signal a relaxing of the public policy of a firm utility boundary, it could lead to speculative property transfers and property value inflation. The impact of water line extensions on development densities or yields is similarly hard to generalize about. It depends entirely on the individual density standards for rural (i.e. without central utilities) development and how those standards are changed or relaxed by the extension of water service. This can be relatively easily influenced by the County proactively determining those standards and adjusting them as it sees fit to achieve the desired densities in the area.

James City County’s 2003 Comprehensive Plan established policies that underscored the importance of keeping a firm PSA boundary as a way of managing public costs and maintaining rural character. It is clear that other Virginia counties have considered the impacts of individual utility extensions outside their growth boundaries on their overall growth management policy and have proactively defined clear policies for those extensions so that they could be consistently applied and to minimize the potential for these extensions to undermine their overall growth boundary policies. If James City County is to consider water extensions outside the PSA, it should consider the potential impact for such extensions to weaken its goals for a firm PSA boundary.

If such extensions are to occur without weakening the overall PSA concept, the following should be considered:

1. One of the basic legal tenets of land use planning is that similarly situated parcels must be treated similarly. For this reason, allowing any extension of water lines outside the PSA must be carefully considered to avoid setting a precedent for other landowners to make a similar request. If the County elects to expand the PSA or allow for a utility extension outside the PSA, it must outline the unique reasons why such an extension is appropriate for a particular site and what public purpose is met by the extension.
2. A water line extension outside the PSA does not necessarily entail a change in land use designation or the PSA boundary. If an extension is considered, maintaining the current land use designation would most likely have the least impact on adjacent parcels or speculative property transfers.
3. Utility extensions for environmental or health reasons or to serve public facilities will generally have the least potential to weaken the PSA concept, while extensions for economic development or to encourage a specific private development have greater potential to weaken the PSA concept more because they can be extended more generally to adjacent, similarly situated properties.



JAMES CITY COUNTY COMPREHENSIVE PLAN UPDATE

Whether or not James City County extends water lines outside the PSA as part of this Comprehensive Plan update, it may want to consider developing a means of processing utility line extension requests outside the plan update process, particularly if the extension is needed to resolve a public health issue. Some communities use “out of turn plan” amendments and establish clear policies for considering them; others use the 15.2-2232 process to deem that utility extensions are consistent with the Comprehensive Plan. In either case, the extensions could be applied more consistently and fairly by the County over time by virtue of being tied to specific policy guidance and/or an identified public purpose.

List of Phone Interviews:

Albemarle – Bob Willingham - County Assessor
Augusta – Becky Earhart - Planning
Bedford – Mary Zirkle & Mark Jordan – Planning
Fauquier – Kristin Slaughter
Frederick – Candace Perkins, Planning
Hanover – Lee Garman, Planning
Pittsylvania – Greg Side, Planning
Rockingham – Willie Thompson, Planning
York – Earl Anderson, Planning
Loudoun - John Merrithew

