

Fauquier County

Business Development Strategies

Preliminary Findings & Recommendations

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**Business Development Strategies
Preliminary Findings & Recommendations**

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Comprehensive Plan

Background Information. Chapter 6 – Service Districts outlines the goals, principles and land use blueprints for the nine Service Districts in Fauquier County. It needs to be highlighted that a long standing Board of Supervisors planning goal stated within the adopted Comprehensive Plan is to concentrate and guide growth in and around these districts. They are designated growth areas planned for the “most intense development in terms of use and density.” In order to support and promote the envisioned growth, adequate public facilities and infrastructure, including public water and sewer have been planned for the Service Districts.

The financing, construction, expansion and availability of public utilities, primarily public sewer and water, have become critical elements to development within the Service Districts in Fauquier County. Although such utilities are only one of a number of possible limitations to supporting higher residential densities and business development, they are proving to be the essential incentives for encouraging more balanced and concentrated development in these locations.

In 1997, the Fauquier County Water and Sanitation Authority (FCWSA) completed through its consultant, Camp Dresser & McKee, the Water and Wastewater Master Plan. This technical document provided the project descriptions, maps, recommended water and wastewater treatment facilities, collection, storage and conveyance facilities for the nine Service Districts over a planning period of 1996-2015.

That document was adopted and incorporated into the Fauquier County Comprehensive Plan by reference, with some descriptive text in Chapter Nine Public Facilities & Utilities.

The existing and future sewer and water capacities for the Service Districts are highlighted in Tables 1.1 and 1.2 (Sources: FCWSA and the Town of Warrenton).

Table 1.1
Wastewater Treatment Plants

WWTP Location	Existing Treatment Capacity	Planned Treatment Capacity ¹
Marshall	0.64 mgd	0.64 mgd
Remington ²	1.40 mgd	2.50 mgd
Vint Hill ³	0.60 mgd	0.95 mgd
Warrenton ⁴	2.50 mgd	2.50 mgd

The Village Service Districts of Calverton, Catlett and Midland do not have public sewer services available, with the exception of the Warrenton – Fauquier Airport in Midland. The airport has a small package treatment plant (capacity: 4,400 gpd), which serves the airport and several adjacent industrial properties.

¹ Virginia Department of Environmental Quality (DEQ) has limited sewer plant capacities statewide (point source discharges); for details refer to Wastewater Treatment on page 5 and to Appendix C. The “Planned Capacities” represent that total capacity allocated through DEQ and must be certified operational by 2010.

² Serves the Bealeton, Opal & Remington Service Districts.

³ Serves: New Baltimore

⁴ This facility is owned and operated by the Town of Warrenton and primarily serves its incorporated limits and specified areas within the County and located within the Warrenton Service District.

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The Town of Warrenton relies primarily on surface water for its drinking water through a reservoir in Airlie; it has two groundwater production wells. The Town water plant has a 2.0 mgd capacity. The FCWSA provides public water supplies to seven Service District via groundwater supplies. Only Calverton and Midland have no service, with property owners and businesses relying on private wells within those Village Service Districts.

the EGGI hydrogeologic study and production well development to serve both growing and projected resident populations and business development for the designated Service Districts.

Regional Population Growth: Fauquier County is a member of the Rappahannock-Rapidan Regional Commission (RRRC), which also includes the Counties of Culpeper, Madison, Orange and Rappahannock. The region is certainly experiencing the growth impact and pressures of Northern Virginia whether it is through residential development or growing regional traffic growth.

Table 1.2: Public Water Facilities (FCWSA)

Service District	Existing Capacity (mgd)	Planned Capacity (mgd)
Bealeton	0.564	1.000
Calverton ⁵	0.000	0.000
Catlett ⁶	0.062	0.062
Marshall ⁷	0.100	0.175
Midland	0.000	0.000
New Baltimore ⁸	0.632	1.000
Opal ⁹	0.128	0.250
Remington ¹⁰	0.047	0.250
Totals	1.533	2.737
Town of Warrenton	2.000	2.000

The following table presents some stark residential growth contrasts in the region. Some of our Northern Virginia neighbors added more residents over the past five years than the total resident populations in all of the RRRC counties. In fact, the Counties of Loudoun and Prince William averaged 1,380 and 1,240 new residents respectively each

It needs to be noted that Fauquier County, through Emory & Garrett Groundwater Inc. (EGGI), is developing a Water Management Plan for Board of Supervisors consideration in 2007. In addition, the FCWSA and Board of Supervisors continue to proactively fund

Table 1.3: Population Growth of Selected Virginia Counties¹¹

County	2005 Population	Residents Added (2000-05)
Clarke	13,900	1,553
Culpeper	41,200	6,938
Fauquier	62,900	7,761
Madison	13,500	980
Orange	29,300	3,419
Rappahannock	7,000	17
Warren	34,300	2,716
Fairfax	1,022,100	52,351
Loudoun	252,300	82,701
Prince William	355,300	74,487
Stafford	117,300	24,854

⁵ No FCWSA service planned at this time.

⁶ No FCWSA service expansion planned at this time.

⁷ FCWSA ownership of the Marshall Waterworks became effective 12-29-06.

⁸ Totals here include FCWSA service to its franchise portion of the Warrenton Service District.

⁹ FCWSA is initiating preliminary engineering study for phasing, expansion elements, cost identification and overall system expansion.

¹⁰ FCWSA service for the Remington Service District; Town provides its own public water.

¹¹ 2004 Final & 2005 Provisional Population Estimates, Virginia Cities & Counties; Demographics & Workforce Section, Weldon Cooper Center for Public Service, University of Virginia.

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month between 2000 and 2005, while Fauquier and Culpeper Counties added 130 and 115 new residents each month over the same time period.

Over the past 5-years, Fauquier County's growth rate was 12.3% or 2.5% annually. Sustained growth at these rates introduces significant demands on all schools, public sewer and water facilities, roads, as well as all other public facilities and services.

The Comprehensive Plan recognizes both the external and internal ramifications of this population and business development and future growth. As a result, it presents a blueprint for growth management and implementation strategies within its Service District Plans, along with the requisite elements focused on transportation and Public Facilities & Utilities. For specific detail, please refer to the Comprehensive Plan.

In 2002, the Utility Task Force of the Fauquier County Economic Development Advisory Council (EDAC) reviewed sewer and water availability and service within designated areas and provided a recommended strategy to achieve acceptable service. Refer to Appendix A for the details. The report basically focused its review on:

- Facilitating the retention and expansion of commercial and industrial business opportunities; and
- Being aware of the County's funding limitations for the provision of increased public services.

The report identified four areas of promise: the Service Districts of

Marshall, New Baltimore and Opal, and the Warrenton/Fauquier Airport.

Based on the demonstrated need for expanded or enhanced utility service in the latter referenced areas, the EDAC Committee recommended the employment of the same "funding model used in the New Baltimore Sewer Project for the development of water and sewer in the service districts." The Committee felt this model would not place the financial burden entirely on the County or the FCWSA, but would require participation of the private sector in funding the project. The New Baltimore model, however, has experienced revenue issues resulting from slower pre-purchased tap activity and land use development than anticipated (due to market conditions) and construction timing problems for the sewer trunk lines and pump stations.

Some progress has been made regarding other recommended actions in the EDAC Committee report. Examples are: (a) the NBSD sewer line extension to U.S. 15/29 and the Mill Run Business Park, targeted for completion in 2002, will now be completed in 2007; (b) the ownership and operation of the Marshall Water Works was officially transferred to the FCWSA on December 29, 2006; and (c) the Marshall Wastewater Treatment Plant capacity has been expanded to 0.64 mgd.

The need for utility and public infrastructure identified in the EDAC Report and the Comprehensive Plan have become more critical with the development experienced over the past four years. With costs escalating and state actions effecting wastewater treatment expansion, Fauquier County is

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now cornered and facing significant expenditure decisions and actions over the next 12 to 24-months. Consequently, development of an effective business development strategy has become more complicated. Some significant short-term costs and construction action timelines are highlighted in this preliminary report.

Bealeton, Opal & Remington Service Districts

Planning Character: Local and regional traffic using the major primary roads of Route 28, Route 17 and U.S.15/29 greatly affect all three communities. These corridors have significant traffic volumes (automobile and truck) that are growing 3-4% annually and also link Bealeton, Opal and Remington to the I-95, I-81 and I-66 corridors and other Northern Virginia destinations. In 2005, Route 17 in Bealeton carried 25,000 vehicles per day, while U.S. 15/29 in Opal had over 45,000 vehicles per day.

With the availability of FCWSA sewer and water and the favorable road linkages, Bealeton, Opal and Remington continue to experience significant residential growth, with over 200 dwellings units being annually constructed. Meanwhile, business development has been modest. The combined projected population for these three communities is over 17,000 residents.

Bealeton is planned to be a traditional town in design. The town center is intended to have shopping, recreation, schools, offices, library, post office and a VRE station, with other locations for commercial, office and institutional uses. Residential development will range from

apartments over commercial buildings, townhouses, and single family detached housing. Residential neighborhood densities become lower at the outer perimeter of the Service District. The buildout population is projected to be approximately 9,000 residents, with potential for over 2 million square feet of business development (e.g., retail, office, and industrial).

The incorporated Town of Remington is and will continue to be the institutional and commercial hub for the Remington Service District. Significant residential development is also expected, with a projected population of up to 5,100 residents. The potential for 1.2 million square feet of commercial and industrial development is available.

Due to its location at the intersection of two major highways (U.S. 15/29 and Rt. 17), the Opal Service District is envisioned primarily for business development to serve regional traffic, including commercial offices, fueling, motel and/or hotels, restaurants, retail and flex-industrial uses.

Public Sewer & Water Services

Existing Zoning & Future Land Use Impacts: The Land Use Plans in Appendix B for Bealeton, Opal and Remington illustrate the vision for the three communities. The existing zoning for the parcels within each Service district are provided after each land use plan map.

The critical exercise here is to review the impact of full development on the Remington Wastewater Treatment Plant within the boundaries of each Service District for either existing zoning or the

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land use plan. Those detailed demand estimates are provided in tabular form in the report appendices for both sewer and water (refer to Appendix B).

Wastewater Treatment: The reason the report places special focus on sewer plants results from a variety of state regulations and Virginia Department of Environmental Quality (DEQ) actions associated with the Chesapeake Bay and state efforts to reduce nutrients (e.g., nitrogen). To limit point source water quality impacts, DEQ has been in the process of setting capacity allocations for all existing public wastewater treatment facilities statewide.

If a public sewer facility is not expanded and operational to its DEQ allocated capacity by 2010, it cannot be expanded, unless phosphorous and nitrogen impacts are extinguished within that facility's watershed under exceptionally strict and expensive provisions. This statewide limitation is summarized in Appendix C.

Public Water Supplies: The FCWSA provides public water service in Bealeton, Opal and Remington through a limited series of wells; the Town of Remington is also public water service in a limited area. The WSA public water systems are currently not interconnected among these communities.

Tables 1.2 and 1.4 demonstrate how planned sewer and water capacity diverge significantly. This capacity difference reflects the need for priority attention in the development of the County's public water supply to meet planned growth and development within the Service Districts. Current expansion practice is that new development is expected to pay for the requisite line

extensions and, where appropriate, dedicate developed production wells for WSA ownership, maintenance and operation.

The FCWSA has EGGI groundwater studies for these Service District areas identifying potential areas for high yield well sites. However, funding is a constraint, and many of these areas have not had test wells installed, tested nor developed.

The FCWSA and EGGI completed a Groundwater Resource Study in March of 2000 for the Opal Service District. With limited development at that location, the WSA has not invested in system expansion, including the design or extension of water distribution lines or construction of water storage for the undeveloped properties of this Service District. There are limited areas within existing business and residential neighborhoods currently served.

Since this area is planned for significant business development, the Board of Supervisors has requested a prepared plan for the phased extension of public water as an incentive to such development, and to also provide adequate fire protection capabilities. The FCWSA has completed a conceptual plan and rough cost estimates for such a program.

The FCWSA estimates that just Phase IA for the public water service (well development and storage tank) will cost in excess of \$3 million, while the total project cost could be in the \$9 million range. As a result, the FCWSA and County will need to complete a preliminary engineering study in 2007 to establish a more technically based

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phasing plan, the required facilities and estimated program costs.

Table 1.4
Wastewater Treatment Constraints in the
Bealeton, Opal and Remington Service
Districts

Service District	Zoning Buildout (mgd)	Land Use Plan Buildout (mgd)	Plant Capacity (mgd) ¹²
Bealeton	0.830	1.250	
Opal	0.130	0.256	
Remington	0.627	0.770	
Totals	1.587	2.276	
Remington WWTP			1.40 mgd
1. Existing Capacity			1.40 mgd
2. DEQ Allocation			2.50 mgd

Recommendations:

If business development remains a top County priority, then the Board of Supervisors needs to:

Sewer:

1. Identify the updated design, project management, and construction costs, through the FCWSA, to bring the Remington Wastewater Treatment plant to its full operational capacity of 2.5 mgd by the 2010 deadline. Therefore, time is of the essence for completion of this phase due to its ability to support build-out demand for Bealeton, Opal and Remington, and to offer business development and other opportunities as outlined in 3.a and 3.b herein. This upgrade and expansion cost has been estimated at \$12,960,000 and will meet the enhanced nutrient removal needed to

comply with new nutrient regulations for Chesapeake Bay protection.¹³ If this expansion is not completed and DEQ certified for operation by 2010, then the plant capacity remains at 1.40 mgd.

2. Develop effective and scheduled fiscal steps to achieve practical financing methods to fund the Remington plant improvements. These could include Taxing District, public-private sector partnership investment, bonding, frontage fees and other investment options;
3. Determine the feasibility and cost of using expanded Remington WWTP capacity to:
 - a. Serve the Warrenton – Fauquier Airport expansion as envisioned within its Master Plan, as well as the surrounding I-1 and I-2 industrial zoned areas within the Midland Village Service District. This facility is well located to state primary roads, as well as the Norfolk Southern Railroad. Sewer demand for this portion of the Midland Village Service District has a sewer demand estimate of 0.097 to 0.137 mgd, including the airport facility (refer to pp. 16 and 17 for further details); and
 - b. Solve the long standing drainfield problems for existing residential homes, fire and rescue, schools and businesses in the Calverton and Catlett Village

¹² This DEQ allocation needs to be constructed and operational by 2010, or the County is restricted to the 1.4 mgd of existing capacity.

¹³ Remington Wastewater Treatment Plant Enhanced Nutrient Removal Preliminary Engineering Report (Hazen & Sawyer, P.C.; February 2007).

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Service Districts. These two communities have been subjected to multiple engineering studies to solve this public health problem and its impacts on surrounding surface waters that are also designated as impaired streams by the DEQ.

At present, the designed 0.35 mgd package treatment plant, collection system, and discharge construction cost exceed 13 million dollars. The Marine Corps at Quantico had originally been interested to share in added capacity and costs, but that interest has been withdrawn.

4. Recommend that the FCWSA develop a scheduled and funded I/I program for the Bealeton, Opal and Remington area. Such a program could result in added capacity for future redevelopment in these service districts, with VRE service expected in the long-term.

Public Water Supply:

1. At the conclusion of the Preliminary Engineering Study for the Public Water Supply in the Opal Service District, develop a phasing and funding plan for extending public water service throughout the district. Priority attention needs to be focused on areas with existing businesses, as well as properties with existing commercial and industrial zoning. The financial planning may require consideration of public-private partnerships, establishment of a taxing district, lot frontage assessments or other similar options needing both FCWSA and Board of

Supervisors consideration. The first phase (e.g., well development and storage tanks) as represented in this report could cost an estimated \$3 million.

2. As in Opal, a similar program of groundwater study, exploration and well development needs to be completed for Bealeton and Remington to supplement the FCWSA service in the remaining areas planned for development.
3. In conjunction with the FCWSA, the County needs to implement and continue an annual commitment to fund a development program of designated EGGI sites for test wells, the requisite pump testing, production well development and the monitoring throughout the three Service Districts.

Transportation System:

Transportation Plan: Through the traffic impact analyses and public hearings, the Bealeton, Opal and Remington Service Districts present a balanced transportation system network predicated on road improvements and VRE service. Refer to Appendix D for this area's overall transportation plan (Map 10.e: Southern Fauquier Transportation Plan Stage 4). Included is a network that is coordinated with the development plans for the Warrenton-Fauquier Airport.

The Transportation Plan reflects the system that needs to be in place to support the growth reflected in these Service Districts, and to effectively move the ever expanding regional traffic through this area. It also shows the

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location of planned interchanges, including the pending flyover in Opal.

VDOT originally planned to place a major grade separated interchange at the intersection of Routes 17/28. The proposed interchange impact on the combined Liberty High School and Grace Miller Elementary School campus and the adjacent/existing business development was significant.

The Transportation Plan proposed what has become known as the “Bealeton Connector” to replace the Route 17/28 interchange. This proposed and limited access facility, starting south of Bealeton, would connect Route 17 with U.S. 15/29 just north of Remington. Its primary purpose is to redirect the regional traffic needing to travel the Route 17 and U.S. 15/29 corridors to reach other destinations (e.g., I-95, I-66 and I-81). With such a roadway, the interchange at Routes 17/28 is not needed.

As a result, the Department of Community Development and MCV Associates (transportation consultant) have been developing proposed alignment options for the Bealeton Connector, with VDOT coordination included. Preliminary conceptual alignments and costs should be completed in the February or March 2007 timeframe. The next steps would be: (1) presentation to the Board of Supervisors; (2) public meetings for public information and comment; (3) preliminary environmental and historical assessments; and (4) inclusion on the Board of Supervisors 6-Year Transportation Improvement Program list of priorities.

In its development of the Transportation Chapter 10, the County reviewed the transportation impacts of buildout in the Opal Service District. Even with the flyover, the intersection of U.S. 15/29 with Route 17 has levels-of-service (LOS) designated F. This location cannot handle the combination of regional and local traffic.

The draft Chapter 10 proposed a future Opal by-pass alignment with linkage to the flyover and the planned interchange at Route 28 and U.S. 15/29. The primary objectives of such a proposal are to: (1) separate regional traffic from the existing and congested facility; (2) preserve the option for the Rural Freeway (limited access); while (3) retain a Business Rt. 15/29 for local traffic. The alignment would have linkage to the planned flyover and eventually connect to the existing U.S. 15/29 in the general vicinity of Covington’s Corner (Route 663), refer to Appendix E. With the growing and more problematic convergence of automobile and truck traffic at this location, more phased and long-term solutions and alignments need to be considered.

Transportation Impact Fees: §15.2-2317 of the Code of Virginia was amended in 2006 to empower Fauquier, Frederick and Spotsylvania Counties to implement transportation impact fees. Due to previous legislation, Stafford County has already implemented its program in specific areas of its jurisdiction. The impact fees apply to all commercial, industrial and residential development, including by-right subdivision of land.

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For rezoning applications and the pending impact fee legislation, the Department of Community Development already initiated work on two test projects: one for Bealeton, Opal & Remington, while the other is the Marshall Service District. The Department has completed the: (1) transportation modeling for the Bealeton, Opal and Remington Service Districts' proposed road network; the new road cost estimates (for buildout only) and draft impact fees. However, the 10-year transportation improvements and costs need to be developed. This effort is being completed in conjunction with Joe Mehra (MCV), the County's transportation consultant, and VDOT. Preliminary impact fee results are listed in the following table, and still need additional adjustments and added details.

Table 1.5
Draft Impact Fees
Bealeton, Opal & Remington Service Districts
(Preliminary Only)

Land Use	Developer Cost (100%)	Developer Cost (50%)
Dwelling Unit ¹⁴	\$8,000	\$4,000
Retail ¹⁵	\$20,000	\$10,000
Non-Retail ¹⁶	\$12,000	\$6,000

Recommendations:

¹⁴ Represents the per dwelling unit cost, regardless of whether the unit is single-family detached or attached and multiple-family.
¹⁵ Fee is calculated per 1,000 square feet of gross floor area.
¹⁶ Fee is calculated per 1,000 square feet of gross floor area.

1. Support the needed technical work required, pursuant to state code, for the Bealeton, Opal and Remington traffic impact fee project; including the establishment of a Impact Fee Advisory Committee, public hearings and other tasks before the Board of Supervisors can consider adopting such a fee. With declining VDOT funds for new secondary roads and statewide competition, alternative funding sources are important to meet local growth requirements experienced within our Service Districts and to provide an effective transportation system.
2. Determine the financial feasibility of becoming a member of the PRTC, introducing bus transit to selected regional destinations, and phasing the location of a VRE station and service within the Bealeton, Opal and Remington area.

Membership in the PRTC also allows access to gas tax revenues. This revenue may be used for rail facility development, bus transit, planned local road improvements, and other associated projects. The County needs to develop a more comprehensive tool box of financial options for key road improvements. Total reliance on only VDOT revenue sources may become problematic in the future if present conditions and direction persist. The General Assembly is considering legislation and other actions in a variety of forms that may delegate the maintenance and costs of the secondary road system to the local governments statewide.

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3. In conjunction with VDOT, initiate the technical review of whether a future Opal by-pass alignment has merit to better manage local and regional traffic growth.

Marshall Service District

The Service District Plan has policies and guidelines envisioning community neighborhoods with a street grid design linked to schools, parks and the local businesses. The community wants new development to be focused in and around the village core, along Main Street, with all new development reinforcing the vitality of Main Street rather than competing with it.

Utilities: The FCWSA is now the sole franchise provider for both public sewer and water in the community. Ownership and operation of the Marshall Water Works was effectively deeded to the FCWSA on December 29, 2006. As in several other Service Districts, development is restricted significantly due to water and sewer service. Demand is projected to exceed actual service capacities, as illustrated in Table 1.6.

Table 1.6: Build-Out Sewer & Water Demand in the Marshall Service District

Land Use	Sewer Demand (mgd)	Water Demand (mgd)	Sewer Plant Capacity (mgd)	Water Plant Capacity (mgd)
Residential	0.772	0.670		
Commercial	0.060	0.060		
Industrial	0.027	0.027		
Totals	0.859	0.757	0.640	0.175

Based on either existing zoning or the Marshall Land Use Plan at buildout within the existing Service District boundaries, the total residential and business development demand for sewer

is projected to be 0.859 mgd, with water demand estimated to be 0.757 mgd. The sewer totals include infiltration and inflow problems, characteristic for the older sewer lines that need maintenance. These calculations do not include the sewer demand requirements for the Town of The Plains which is also served through this facility.

The wastewater treatment plant already has been expanded to its DEQ allocated 2010 capacity of 0.64 mgd, but needs install the \$4,031,000 of enhanced nutrient removal improvements to meet state requirements. The planned potable water service capacity for the former Marshall Water Works (0.175 mgd) falls well below the projected demand of 0.757 mgd for Marshall. With FCWSA ownership of the water system, the needed distribution system upgrades to meet existing and projected supply requirements, well and storage development requirements and programmatic phasing must be subjected to the requisite resource and financial analyses.

Recommendations:

1. Provide the annual funding needed for the FCWSA and EGGI program which results in the: (a) completion of the Groundwater Resource Study identifying source locations for well development; and (2) development of production wells to meet the long-term needs of both Marshall and The Plains.
2. Implement the phasing plan for the upgrade of the Marshall public water distribution system in phases as mutually approved through the Board of Supervisors and FCWSA

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with priority attention to existing neighborhoods and businesses. Effectively phase and coordinate the planned line upgrades with VDOT improvements to Main Street and the sidewalk system. Refer to Appendix F for the preliminary phasing plan, which has an estimated construction cost of approximately 6 million dollars.

3. Request the FCWSA to investigate available methods for expanding the Marshall Wastewater Treatment Facility capacity of 0.64 mgd through spray irrigation and other land application alternatives that are not subject to the DEQ 2010 capacity allocation. Consideration of The Plains requirements also need to be included.

New Baltimore Service District

The updated Plan for this community is expected to be adopted in the February or March 2007 timeframe. The overall population potential is estimated to be 15,000 residents, along with the planned commercial, industrial and employment uses essential for a community of this scale. Refer to New Baltimore Service District Plan for overall details and recommendations.

The three primary issues affecting business development within this community are the availability of sewer and water and transportation access.

Utilities:

Vint Hill Wastewater Treatment Plant: The first module of the Vint Hill plant (600,000 gpd) is targeted to be DEQ certified operational in the spring of

2007. Over 545,700 gpd of that capacity has already been committed through pre-sold taps or land development application approvals (refer to Appendix G for details). The following Table and text summarizes the commitment:

**Table 1.7
Vint Hill Wastewater Treatment Facility**

Sewered Area	1 st WWTP Module	
	Dwelling Unit Equivalents	Sewer Demand (gpd)
1. Vint Hill - AB.1		250,000
2. Business & Residential - AB.2 and AB.3	1,346	350,000
Sewer Allocation Totals:		600,000

- *Vint Hill EDA: 250,000 gpd.* This capacity increment is reserved exclusively for the Vint Hill Economic Development Authority (EDA);
- *Business Community Line Extension Project: ± 50,000 gpd.* This FCWSA project is nearing completion and was funded in part through pre-sold taps and the expectation of other sewer connections. The primary objective for the sewer line project was to serve businesses and residential uses generally north of Route 600 and east of Route 676 extended in the vicinity of U.S. 15/29, as well as Mill Run Business Park.
- *Brookside Community.* The approved rezoning and preliminary plat for this Planned Residential Project (PRD) south of Vint Hill will result in 945 lot connections (sewer demand: 245,700 gpd), plus business and community uses. The developer through pre-purchased taps basically

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funded much of the plant design and construction costs.

- *Bishops Run*. This approved rezoning will result in 99 dwelling units (sewer demand: 25,740 gpd; excludes the adjoining commercial property, with planned apartments above retail buildings and the New Baltimore Fire & Rescue facility).

Vint Hill, plus the pre-sold sewer taps and the approved rezoning applications leave only an estimated 28,560 gpd of uncommitted capacity. In sum, the Vint Hill facility's first phase only can add the residential equivalent of 110 dwelling units or 19 acres of commercial development.

Sewer Recommendations:

1. 2nd Module Expansion: To avoid a capacity problem and meet the DEQ 2010 deadline limitations, the Board of Supervisors and FCWSA need to aggressively implement the \$5,113,000 million second phase (350,000 gpd) of this facility.¹⁷ If this module is not added and certified for operation prior by December 2010, the Vint Hill plant will be restricted to 600,000 gpd. Such a result would be devastating to the redevelopment of Vint Hill and other community aspirations.

The construction phase for the project first module commenced with site plan approval on February 4, 2004 leading to a target certification for operation 600,000 gpd module in

April/May 2007. The point here is it takes time to establish adequate funding, then design, bid and construct the project.

2. AB.3 Sewered Area: The Board of Supervisors and FCWSA need to immediately develop an agreement that pre-purchased sewer taps in this designated sewer location will be based on a current subdivision potential determination certified by the Department of Community Development. All properties within this area are zoned Rural Agriculture (RA) and subject to sliding scale density and associated provisions. Concern here is that a developer or property owner will propose to acquire taps beyond their zoning limitations.

3. Business Development Priorities: Within the established legal parameters of the Code of Virginia, the Board of Supervisors and FCWSA need to mutually develop policies, priorities and practices that insure adequate sewer service from the 950,000 gpd facility is planned and made available for areas zoned and/or designated for commercial and industrial uses in the New Baltimore Service District Plan and located within AB.1 and AB.2 (Sewered & Water Service Area).

Clear priorities and expectations need to be established to insure adequate service is available for areas zoned for business growth (e.g., C-1, C-2, I-1, I-2), Vint Hill development, approved rezoning applications and R-1 zoned land in the primary areas designated AB.1 and AB.2 within the NBSD Plan.

¹⁷ Vint Hill Wastewater Treatment Plan Enhanced Nutrient Removal Preliminary Engineering Report (Hazen & Sawyer, P.C.; Date: February 2007).

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Public Water Supply: The FCWSA is the franchise provider of public water service for the NBSD. The source is groundwater through a growing network of interconnected production wells and water tanks that serve both New Baltimore and portions of the Warrenton Service District not served through the Town. Table 1.2 summarizes the existing (0.632 mgd) and planned (1.0 mgd) capacity of this potable water supply.

EGGI has completed a Groundwater Resource Study for this overall service area, including designated locations where production wells should be aggressively tested and developed (refer to the NBSD Plan (Figure 6-UT-3: New Baltimore Wellhead Protection Zones).

Such a well development program is critical for effectively meeting both New Baltimore and Warrenton Service District potable water requirements. A major and growing problem is the need to curtail residential irrigation demand in new subdivisions with FCWSA service. During the spring and summer months, residential irrigation demand in NBSD neighborhoods has doubled potable supplies usage. The FCWSA has developed a fee schedule to discourage such non-potable usage; the effect of this fee will be monitored to determine whether other options need to be developed. Refer to the NBSD Plan educational programs that also need to be pursued to reduce such demand.

Recommendations:

1. Test Well and Development Program. In conjunction with the WSA, the Board of Supervisors

needs to implement a funded program which completes the associated geophysical surveys and exploratory test well drilling and production well development in the remaining zones that have yet to be investigated. The County needs to insure that adequate potable supplies are available to serve FCWSA franchise areas within New Baltimore and Warrenton.

2. Monitoring:

- a. The adjoining residential wells need to be monitored during the pump tests. This action assists in establishing a clear baseline for water levels in private wells that could be affected during draw down testing;
- b. The WSA establish a systematic and periodic monitoring program that includes any WSA monitoring well(s) and the residential wells in the original testing regimen where the property owner has volunteered to recurring monitoring of their wells; and
- c. Pre-existing wells taken into the WSA New Baltimore and Warrenton Service District public water supply system be tested to establish their recommended and long term operational pumping rates.

3. Wellhead Protection: Direct staff to develop a wellhead protection ordinance for areas with established FCWSA well systems. Include the basis principles established within the NBSD Plan.

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Transportation:

Transportation Plan: The New Baltimore Service District's Transportation Plan identifies the key secondary and primary road priorities in the 5-Year Action Plans. Those need to be reviewed; most are not included within this assessment due to its narrow focus. The following identifies key elements needing special focus for business development.

Recommendations:

1. Broad Run Church Road (Route 600): Place secondary road improvement priority on Route 600 improvements.

Due to anticipated business and residential development, the NBSD Plan priority attention on the replacement of existing power poles and cable underground, along with design and construction of conventional travel lanes, curb and gutter, sidewalks, and a traffic calming roundabout at the intersection with Route 676.

VDOT has already accepted a County request to complete a transportation study on the feasibility of the proposed roundabout. Such a facility would assist in slowing down and distributing traffic from either Route 600 directions or Riley Road without signalization. This specific intersection is the next project considered for the VDOT Revenue Sharing Program if it's available in 2008. The Brookside Communities have also requested priority attention be provided this intersection.

Broad Run Church Road also serves commercially zoned properties fronting U.S. 15/29. Access to this primary road will be limited by VDOT and the Comprehensive Plan; Route 600 provides alternate entry options for the NBSD neighborhoods to access these business locations without having to enter U.S. 15/29.

2. Brookside Parkway Connection to Route 215: Proactively work with the Vint Hill EDA and the Brookside Communities to insure the timely connection of this parkway extension to Vint Hill. The EDA needs to initiate its rezoning amendment and make the final connection to Route 215. This corridor from Rt. 215 to Rt. 605 will also provide better resident access to the planned employment, commercial, and other business services planned in Vint Hill.
3. Route 215: The success of Vint Hill redevelopment as a business center will rely on access to U.S. 15/29, Route 28, Route 602 and Route 605. Therefore, the County needs to aggressively work with VDOT in any realignment of this primary road and its eventual interchange location on U.S. 15/29. The Prince William County Comprehensive Plan shows Route 215 as a 4-lane divided road from its border with Fauquier County to Route 28.
4. Buckland Bypass Study: Participate in any future public input meetings and request additional scrutiny of Route 15 as a 4-lane divided (controlled access) facility with an interchange at U.S. 29 as depicted on

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the Prince William Comprehensive Plan.

A far more balanced transportation approach at the borders of Prince William County also needs to be pursued. For example, Fauquier County needs to focus on public bus transit service to local and regional destinations, support Prince William County in its efforts to bring VRE service to Gainesville via I-66, and review the viability of VRE service to the Bealeton area in the long-term.

5. VDOT and University of Virginia Transportation Corridor Study: Participate in this study which will develop a methodology on how to protect this corridor for future development as a Rural Freeway. Fauquier County, along with the Counties of New Kent, Orange and Stafford, has been selected as a candidate locality. The Department of Community Development is already a member of the designated Steering Committee, which also includes: VDOT, Rappahannock-Rapidan Regional Commission, Virginia Economic Development Partnership and other agencies.

Warrenton Service District Plan

The Town of Warrenton serves as the County seat and major center for commercial activities. The Warrenton Service District encompasses the perimeter of the Town with limited areas north on U.S. 15/29 zoned and planned for commercial highway uses, or industrial (the Meetze Road area near the planned Central Sports Complex).

The Town/County Master Sewer and Water Agreement identified the limited areas where Warrenton has agreed to provide those utility services. The FCWSA has no plans to offer sewer service, but does provide and has areas for planned extension public water service. The one-time only exceptions to FCWSA sewer service may be two previously approved package treatment facilities that will be developer funded, designed, constructed and dedicated to the FCWSA for ownership and operation to exclusively serve two discrete subdivisions.

The main business development issue the County faces at this point is improving site access in the vicinity of Outback Steakhouse, Starbucks, 5-Guy Burgers, IHOP, and the automobile dealerships of Jacoby Chrysler & Jeep, and Miller Toyota. Better internal access and a service road consistent with the Comprehensive Plan need to be designed and implemented, due to the growing traffic volume on U.S. 15/29 and the merging of traffic from Business Route 29. However, this effort will take technical study, time, effort, as well as a public-private partnership to fund.

Town development and the ever growing regional through traffic traveling to and from Route 211 requires both communities and VDOT to work together and develop transportation options that assist in more effectively distributing traffic from the Rt. 211 corridor to Route 17 and U.S. 15/29.

Village Service Districts: Calverton, Catlett and Midland

Introduction: Calverton, Catlett and Midland were designated as Village

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Service Districts due to cost limitations primarily in delivering both sewer and water services. The available options are different for the three communities.

Calverton & Catlett:

Failing Drainfields: Calverton and Catlett have had multiple studies through the years grappling with how to solve the 102 failing drainfields, identified through the Health Department, with a collection and treatment system that is both affordable and meets state permitting requirements. Further complicating the situation is the location of both villages within the Occoquan Watershed, which is subject to the Occoquan Policy (VR680-11-05). This policy severely limits the options to solve the drainfield issue with the construction of any new community based, direct discharge wastewater treatment facility.

The County conducted preliminary engineering studies on a variety of options to solve the problem. The latest versions ranged from a 350,000 gpd recirculating filter, non-discharge treatment system to a more conventional package treatment facility with discharge into state waters. DEQ has allowed consideration of the discharge option, due to the remediation and small scale nature of the project. The FCWSA even had cost sharing interest from the Marine Corps Base at Quantico for limited service, but that federal interest has been removed.

The historic lack of funding support for resolving this established problem through the years only results in the escalation of construction costs for any treatment option. The discharge option

that has been FCWSA engineered for the 350,000 gpd facility and collection system now would cost in excess of \$13 million to construct. For the limited number of existing residential units and businesses served and capacity constraints for added development, fiscal questions still remain on the viability of this investment at the Board of Supervisors level for a free standing plant serving the two communities.

Recommendations:

1. Final check to determine whether there is a cost sharing option still available with the U.S. Marine Corps at Quantico; and
2. Request a FCWSA preliminary engineering report which identifies the cost of extending a sewer line, construction of pump stations and the collection system, required easements and other associated costs with the replacement of the existing septic systems. The prevailing questions will still remain regarding how this option will be funded, along with how to account for those residents not able to afford connection and the monthly fees.

Midland:

Airport & Environs:

The Midland Service District organized itself into two discrete areas. North of Route 28 was primarily low density residential, park and school sites, while south of this primary road found planned business development, associated with the Warrenton-Fauquier County Airport.

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The adopted plan also identified a Sewer Service Priority Area (refer to Appendix H). This locale encompasses the area south of Route 28, and includes properties that are zoned R-1, C-1, I-1 and I-2. Table 1.8 summarizes sewer demand projections based on existing zoning or the Village Service District Land Use Plan. With the Warrenton-Fauquier County Airport and the significant industrial land zoned in this location, bringing public sewer to this location was a plan priority due to its ramifications on future business development and employment opportunities.

**Table 1-8
Midland Sewer Service Demand Projections**

Category	Zoning Buildout (gpd)	Land Use Plan Buildout (gpd)
Route 28-South		
1. Residential	31,000	10,000
2. Commercial	3,000	9,000
3. Industrial	95,000	70,000
4. Airport	7,500	7,500
Totals	136,500	96,500

With constraining soil conditions that restrict development within Midland, the adopted Village Service District Plan recommends that the preferred sewer system is one that connects to the Remington Wastewater Treatment Plant.

Since the adoption of the plan, the Board of Supervisors has approved the installation of a package treatment facility serving the airport (1st Phase: 4,400 gpd), with a potential capacity of 8,800 gpd. Some limited connections to adjoining industrial properties have been authorized.

530± acres of I-1 and I-2 zoned land surrounding the airport represents a significant long term business

development opportunity for the County which should not be missed. The commercial and industrial properties are in close proximity to a primary road (Rt. 28) and the Norfolk & Southern railroad, with the potential for VRE.

Recommendations:

1. Request the FCWSA identify the cost of connecting the Midland Sewer Service Priority Area to the Remington Sewer Plant. This task request would require a preliminary engineering study identifying the cost of extending the trunk sewer line, collection system, pump station(s), as well as a phasing plan. It should also include feasibility of expanding the wastewater treatment capabilities on the airport site for sewer taps to industrial properties within the Sewer Service Priority Area;
2. The Board of Supervisors needs to determine whether it is interested or not in reserving Remington Wastewater Treatment Plant capacity for FCWSA service to all or a designated portion of the Midland Sewer Service Priority Area;
3. Request County and FCWSA staff, in coordination with the Airport Committee, to analyze, identify preliminary cost estimates and provide recommendations on the viability of a public water supply for the Midland Sewer Service Area and whether it should be added as a companion project with any expansion of sewer service (e.g. due to fire protection needs); and

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4. Upon completion of the FCWSA study, direct County staff to identify the feasibility of the creation of a Taxing District or other options for funding such a project, as well as the procedures which need to be followed to implement each.