

Proposal #1 for Western Zoning

“Loudoun County has long recognized the value of retaining the Rural Policy Area as the location of a 240-year-old farming community. These farms and communities are important economic, scenic, and historic resources. ... Residents throughout the County are concerned about keeping rural Loudoun a vital, identifiable place. ... The Rural Policy Area land use pattern and design strategy is fundamentally committed to retaining the rural area as an essential asset of Loudoun County.” *Loudoun County Revised Comprehensive Plan*



Proposal #1 is structured so that the principal use of the land is Rural Economy while providing a reasonable amount of rural residential.

Public Input

The Board of Supervisors received comments on two Western zoning proposals from the general public during two public input sessions. It also received initial recommendations from the Rural Economic Development Council (REDC) and the Ad Hoc Zoning Ordinance Committee (ZORC). Finally, staff offered their own comments as well.

As a result of that input, the following modifications were made to Proposal #1:

- The original Proposal #1 never explicitly addressed the question of clustering. The modified proposal specifically states that “Cluster-Style Design is allowed within the Parent / Child and required by the Rezoning option.” An aim of Proposal #1 is to provide landowners with greater flexibility in their land use choices. This flexibility was never meant to eliminate the possibility of clustering.
- Applicants who choose the Rezoning option will rezone their land to a new zoning district. This district might be called AR-1Z or AR-2Z.
- A revised use list will apply to land rezoned to the new zoning district, incorporating the concerns expressed during the ZORC presentation.
- Location criteria would include matters such as:
 - Limited to the Rural Policy Area currently designated as either AR-1 or AR-2
 - Appropriate road access for the scale of the development
 - Compatibility with other properties in the vicinity, taking into consideration agricultural and forestall districts, open space easements, predominant parcel sizes, and adjacent uses; and
 - Ability to provide water and onsite sewage disposal systems
- Other regulations, such as setbacks, would draw on the County’s current cluster provisions, subject to recommendations by staff, ZORC, and REDC
- Trigger points for Maximum Rezoning to be 90 acres in AR-1 and 140 in AR-2
- The original Proposal #1 required a minimum lot size of 3 acres. Based upon comments made by the public, this minimum lot size will be decreased to 2 acres. However, the Board will encourage variable lot sizes.
- Families whose parcels fall between 15 and 20 acres may subdivide for a family subdivision without going through a rezoning process provided they forego resale for at least 5 years.
- Staff to make a recommendation as to how to implement an affordable housing policy in the rural area similar to Frederick County’s policy

Proposal #1

	Proposal #1	
	Previously Zoned AR-1	Previously Zoned AR-2
	AR-1	AR-2
Base Zoning		
Base Density	1 lot / 20 acres	1 lot / 40 acres
Maximum Build-Out	6,382 lots	
Parent / Child Option		
Trigger Point	20 acres	40 acres
Parent / Child Density	1 lot / 10 acres	1 lot / 20 acres
Maximum Build-Out	10,603 lots*	
Rezoning Option		
Trigger Point	15 acres	30 acres
Rezoning Density	1 lot / 7.5 acres	1 lot / 15 acres
Maximum Build-Out	13,936 lots	

*Calculated by J. Burton, not staff

- Cluster-Style Design is allowed within the Parent / Child and required by the Rezoning option.
- Child lots limited to the number allowed by the original base parcel acreage (see Waters' & Kurtz's proposals by-right descriptions)
- Child lots can be created **anytime**, until density count reached; parcels may be **any size 2 acres or more**, consistent with amended REDC recommendations (see following page)
- All lots to be self-sufficient for conventional well/septic as allowed by the Health Department
- Transportation proffers dedicated to major transportation arteries. No rezoning money will be designated for paving unpaved roads. Consideration during the rezoning process will also be given to incorporating the REDC recommended requests (see Waters' proposal)
- Suburban zoning categories (eg., PD-Hx) disallowed in the Rural Policy Area
- Current AR-1/AR-2 use list remains in effect
- Adopt REDC recommendation that residential lots screen and buffer themselves from the roads and from rural economy lots
- Sellers required to provide buyers with a "Welcome to Rural Loudoun" letter (see Waters' proposal for additional information)

REDC Size Proposals (amended by BOS on 1 June)

AR-1	AR-2
<ul style="list-style-type: none"> • 1:20 By-Right • 1:10 Rural Residential Development • 1:7-1/2 Residential Rezoning • 70% Open Space in Variable Lot Sizes • Open space requirements met by a combination of some percentage of open space on various lots, rather than by a single lot • Multiple Rural Economy Lots, 15-acre minimum • Rural Residential Lots 2 acre minimum • Each lot self-sufficient for conventional well/septic as allowed by the Health Department 	<ul style="list-style-type: none"> • 1:40 By-Right • 1:20 Rural Residential Development • 1:15 Residential Rezoning • 85% Open Space in Variable Lot Sizes • Open space requirements met by a combination of some percentage of open space on various lots, rather than by a single lot • Multiple Rural Economy Lots, 25-acre minimum • Rural Residential Lots 2 acre minimum • Each lot self-sufficient for conventional well/septic as allowed by the Health Department

Proposal # 1 – Definitions

<ul style="list-style-type: none"> • Base density: The minimum parcel size required to subdivide a property by-right • Trigger point: The minimum parcel size required for the parent/child and rezoning subdivision options • Parent lot: the original parcel from which subdivision occurs • Child lot: The lot created through a parent / child subdivision (also called a spin-off lot). Child lots can be created one-at-a-time or in groups • Parent/child density: the density allowed by a by-right sub-division • Rezoning option: the density allowed by a rezoning application. Parcels under 90 acres will file a minor ZMAP application, which waives certain checklist components; parcels 90 acres or more will file a standard ZMAP application. Both minor and standard applications will require Board approval • Rural Economy lot: A lot on which the primary use is agricultural rather than residential. Any subdivision (whether by-right or rezoning) of a parcel zoned AR is required to create at least one such lot • Residential lot: A lot on which the primary use is residential rather than agricultural • Open space requirement: Land placed in easement to ensure the conservation of open space and the accommodation of rural economy uses. Open space requirements will be met by drawing upon land in the parent and all child lots.

Proffer Policy

Current Proffer Policy

“Proffers are voluntary commitments that a developer makes to the County to offset the impacts of a proposed development and which assist, among other things, in improving the public infrastructure needed to serve new residents or users of his / her development. The proffer system is one of the tools used by the County to secure the public infrastructure needed to support new development.” *Loudoun County Revised Comprehensive Plan Chap. 3-B*

“Suburban Policy Area.....Such contributions will be evaluated in accordance with a specified base density of 1.0 dwelling unit per acre or a base density equivalent to the density requirements contained in the existing zoning district regulations applicable to the property and in effect at the time of application for a change in zoning, whichever represents the lower base density.” *Loudoun County Revised Comprehensive Plan Chap. 10-A*

“Joint Land Management Areas.....Such contributions will be evaluated in accordance with a specified base density of 1.0 dwelling unit per acre or a base density equivalent to the density requirements contained in the existing zoning district regulations applicable to the property and in effect at the time of application for a change in zoning, whichever represents the lower base density.” *Loudoun County Revised Comprehensive Plan Chap. 10-A*

Suggested Proffer Policy

- **Proffers will be calculated from the base density of 20 acres in AR-1 and 40 acres in AR-2**
- **In discussion with staff the only difference in the Capital Intensity Factor is Fire & Rescue, which is a higher cost because of geography**

Proposal Comparison: Build-Out and Tax Implications

	Proposal #1		Proposal #2	
	Previously Zoned AR-1	Previously Zoned AR-2	Previously Zoned AR-1	Previously Zoned AR-2
	AR-1	AR-2	AR-10	AR-20
Base Zoning				
Base Density	1 lot / 20 acres	1 lot / 40 acres	1 lot / 10 acres	1 lot / 20 acres
Maximum Build-Out	6,382		10,603*	
Cost to Taxpayer	\$240 million**		\$399 million**	
Cluster Option	Cluster-Style Designs are allowed within the Parent / Child option and required by the. Rezoning option.			
Trigger Point			15 acres	30 acres
Cluster Density			1 lot / 5 acres	1 lot / 10 acres
Maximum Build-Out			20,247	
Cost to Taxpayer			\$763 million**	
Parent / Child Option			n/a	
Trigger Point	20 acres	40 acres		
Parent / Child Density	1 lot / 10 acres	1 lot / 20 acres		
Maximum Build-Out	10,603 lots*			
Cost to Taxpayer	\$399 million**			
Rezoning Option			n/a	
Trigger Point	15 acres	30 acres		
Rezoning Density	1 lot / 7.5 acres+	1 lot / 15 acres+		
Maximum Build-Out	13,936 lots			
Cost to Taxpayer	\$240 million**			

*Calculated by J. Burton, not staff

**Based on Capital Intensity Factor of \$37,660

+Clustering required

<u>A-3 Zoning</u>		<u>2003 AR-1/AR-2 Zoning</u>	
Maximum Build-Out	45,876 lots	Maximum Build-Out	10,130 lots
Cost to Taxpayer	\$1,728 billion**	Cost to Taxpayer	\$ 382 million**

Proposal Comparison – Schools and School Children

	Proposal #1		Proposal #2	
	Previously Zoned AR-1	Previously Zoned AR-2	Previously Zoned AR-1	Previously Zoned AR-2
	AR-1	AR-2	AR-10	AR-20
Base Zoning				
Base Density	1 lot / 20 acres	1 lot / 40 acres	1 lot / 10 acres	1 lot / 20 acres
Maximum Build-Out	6,382		10,603*	
Student Population	5,105		8,482	
School Capital Costs	\$237 million		\$315 million	
Annual School Costs	\$68 million		\$90 million	
Cluster Option	Cluster-Style Designs are allowed within the Parent / Child option and required by the. Rezoning option.			
Trigger Point			15 acres	30 acres
Cluster Density			1 lot / 5 acres	1 lot / 10 acres
Maximum Build-Out			20,247	
Student Population			16,198	
School Capital Costs			\$602 million	
Annual School Costs			\$173 million	
Parent / Child Option			n/a	
Trigger Point	20 acres	40 acres		
Parent / Child Density	1 lot / 10 acres	1 lot / 20 acres		
Maximum Build-Out	10,603 lots*			
Student Population	8,482			
School Capital Costs	\$315 million			
Annual School Costs	\$90 million			
Rezoning Option			n/a	
Trigger Point	15 acres	30 acres		
Rezoning Density	1 lot / 7.5 acres	1 lot / 15 acres		
Maximum Build-Out	13,936 lots			
Student Population	11,149			
School Capital Costs	\$414 million			
Annual School Costs	\$119 million			

Source for Student Population and School Costs: Capital Intensity Factor Board Action Item , Adopted FY'06 Budget.

*Calculated by J. Burton, not staff

Concerns

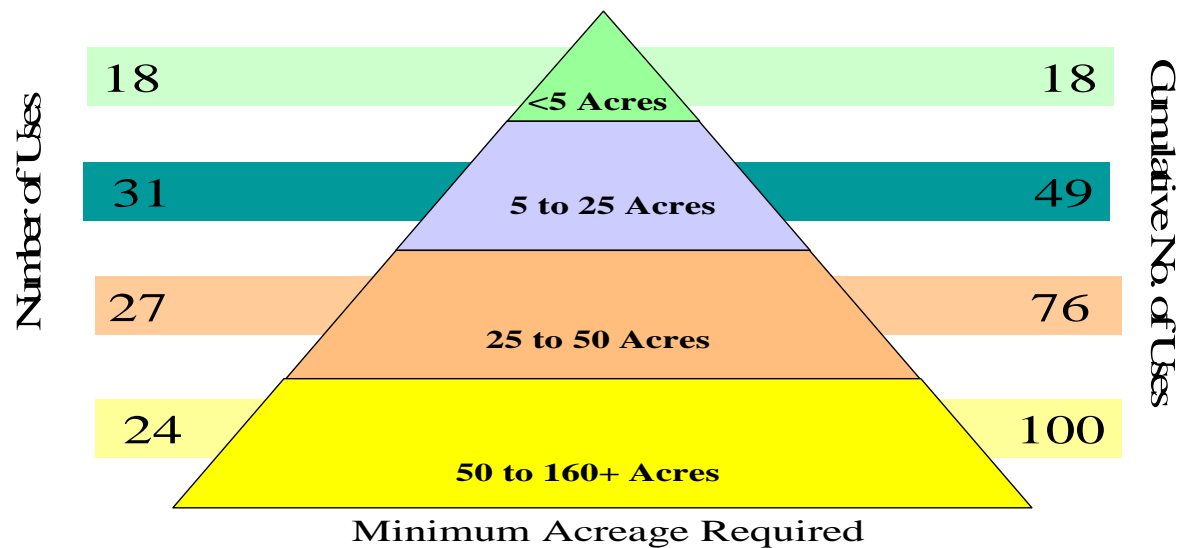
“Rural residential development has accelerated rapidly since the mid-1990’s ... This activity is destroying the rural landscape and negatively affecting natural resources, consuming rich agricultural soils, jeopardizing the rural economy, stressing rural road capacities and raising concerns about groundwater potability. It is also diverting limited public resources away from areas planned by the County for growth.” *Loudoun County Revised Comprehensive Plan*

- Rural Economy
- Rural Road Capacities
- Traffic
- Groundwater
- Sewer
- Fire & Rescue

The Rural Economy

“The County will support the rural economy by facilitating the development of rural businesses that are compatible in scale, use, and intensity with the rural environment and preserve large areas of land to be used for agriculture, forestry, and viticulture. The Zoning Ordinance will include innovative types of agricultural uses.” *Loudoun County Revised Comprehensive Plan*

By-Right Uses In AR1/AR2 Districts:



Both proposals retain the 2003 by-right uses.

By offering more uses on larger parcels, the proposal encourages the retention of large lots.

Rural Road Capacities

Approximately 330 miles of unpaved roads.*

Estimated per lane mile cost to pave to rural rustic road standards (based on Mt. Gilead Road):**	\$123,750
Total cost to pave roads to rural rustic road standards	\$40.8 million
Estimated per lane mile cost to pave to collector road standards (based on Sycolin Road): **	\$1,800,000
Total cost to pave roads to collector road standards	\$594 million

*KELLERCO Study (9/22/00)

** 5/12/05 Memo from Terrie Laycock to BOS

**The more homes on a road, the greater the usage to the detriment of a road's safety and driveability.
Rural rustic road standards may only be applied to roads experiencing fewer than 500 vehicle trips per day.**

Where will the money come to pay for road paving?

- **State or local tax increases?**
- **Special tax districts?**
- **Gas tax increase?**
- **Sales tax increase?**

Traffic

“The trip rates for residential activity are generally 6-10 vehicle trips per dwelling unit with potential modification for urban versus rural applications. Studies of residential trip generation in rural areas are very limited, but it is acknowledged that trip making is often consolidated in rural areas. A median of 7.5 trips per dwelling unit was used to reflect the character of the [rural] areas [studied] and the distance from commercial services that encourages trip consolidation.” *KELLERCO Study of Rural Roads, 22 September, 2000*

	Proposal #1		Proposal #2	
Base Zoning				
Base Density	1 lot / 20 acres	1 lot / 40 acres	1 lot / 10 acres	1 lot / 20 acres
Maximum Build-Out	6,382		10,603*	
Est. Vehicle Trips	47,865		79,522	
Cluster Option	Cluster-Style Designs are allowed within the Parent / Child option and required by the Rezoning option.			
Trigger Point			15 acres	30 acres
Cluster Density			1 lot / 5 acres	1 lot / 10 acres
Maximum Build-Out			20,247	
Est. Vehicle Trips			151,852	
Parent / Child Option			n/a	
Trigger Point	20 acres	40 acres		
Parent / Child Density	1 lot / 10 acres	1 lot / 20 acres		
Maximum Build-Out	10,603 lots*			
Est. Vehicle Trips	79,522			
Rezoning Option			n/a	
Trigger Point	15 acres	30 acres		
Rezoning Density	1 lot / 7.5 acres	1 lot / 15 acres		
Maximum Build-Out	13,936 lots			
Est. Vehicle Trips	104,520**			

*Calculated by J. Burton, not staff

**Able to negotiate road proffers to help pay for improvements on major transportation arteries

Where will most of that traffic head? **EAST**, further clogging already congested roads.

Flow-Through Traffic

Leesburg / Route 15 By-Pass	55,000 est. daily vehicular trips
Route 7 -Winchester	35,000 est. daily vehicular trips
Route 9 after Route 287 – West Virginia	15,000 est. daily vehicular trips
Route 287 – Maryland	18,000 est. daily vehicular trips
Route 15 – Maryland	20,000 est. daily vehicular trips
Route 50	25,000 est. daily vehicular trips passing through

Source: Loudoun County Office of Transportation

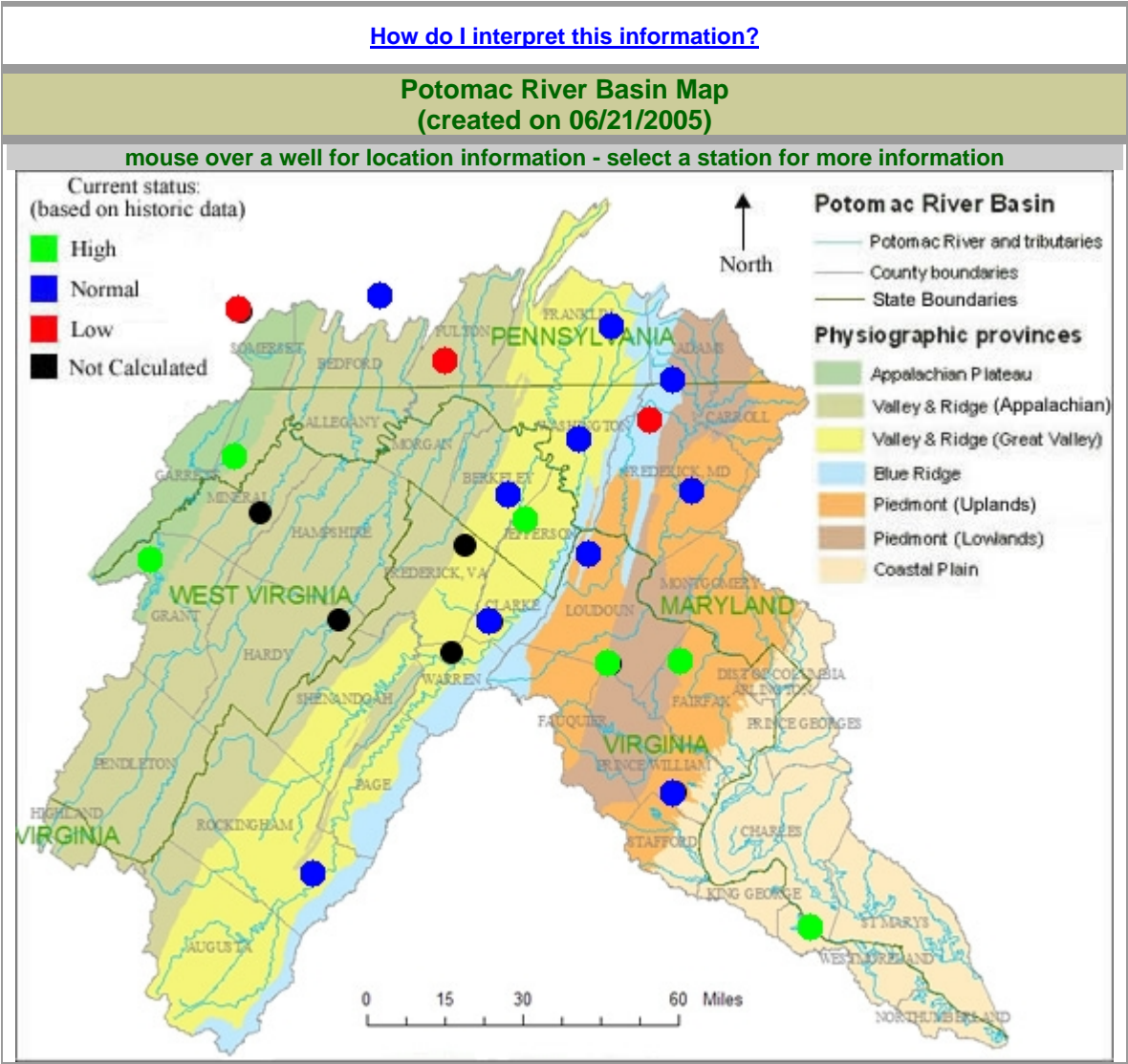
Loudoun County cannot control flow-through traffic from other jurisdiction – only the traffic it creates within its own boundaries.

The only control we have over those numbers is limits on residential density.

Ground-Water Conditions, Potomac River Basin

[Conditions Map](#)
[About](#)
[Links](#)
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Ground-water Conditions



U.S. Department of the Interior, U.S. Geological Survey

Groundwater

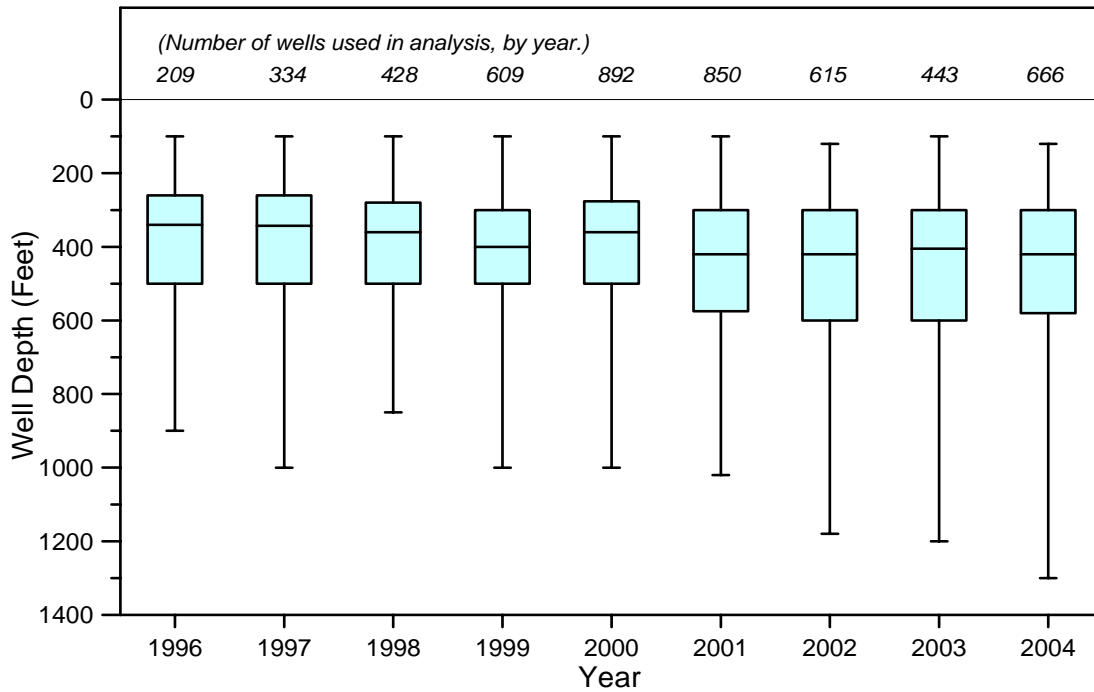
County (see map above)	Surface Datum (ft)	Well Depth (ft)	Casing Depth (ft)	Groundwater Levels Below Surface (3/11-6/05) (approx. ft)
Loudoun	1,120	516	45	54 - 61
Prince William	420	169	10	7 - 11
Fairfax	395	205	35	8 - 16
Clarke	600	80	24	25 - 45
Jefferson (WV)	480	155	37	17 - 24

- A 2000 study conducted by the Interstate Commission on the Potomac River Basin forecast that should DC Metro population increased by 19.4% between
- n 2000 and 2020 (as projected), by 2030 consumptive water use in two basin sub-watersheds, the Monocacy and the Middle Potomac Catoctin, could exceed available supply in the event of a recurrence of historical low-flow conditions

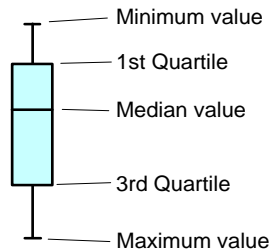
Groundwater

Depths of Water Wells Drilled in Loudoun County by Year from 1996 through 2004

(Information shown is preliminary)



EXPLANATION OF DATA PLOT SHOWN ABOVE



The data above are presented as a "Box-Whisker Plot". A box-whisker plot characterizes the distribution of values for separate but related sets of data. It shows the maximum and minimum values (the "whiskers") and the range of values comprising the middle 50% of the data set (the "box"). To make the plot, all of the well depth data are divided into columns by year and within each column the data are placed in order from the minimum value (shallowest) to the maximum value (deepest). The following points along the ordered sets of data are then used to make the box-whisker plots for each yearly set of data.

- Minimum = minimum data value (shallowest well).
- Maximum = maximum data value (deepest well).
- Median = data value (depth) located on the ordered set of data midway between the minimum and maximum.
- 1st Quartile = data value (depth) located on the ordered set of data midway between the median and minimum.
- 3rd Quartile = data value (depth) located on the ordered set of data midway between the median and maximum.

(Data from Loudoun County "wellpoll" database. Information presented by Department of Building & Development, June 2005.)

Groundwater

- Average well depth in Loudoun County is 451 feet (2004), 65 feet deeper than 1996
- However, range of well depths has dramatically increased
- While the water table in Western Loudoun does not appear to be dropping, the County has not witnessed a true drought since 1999

The more “straws” that are placed in the ground, the greater the uncertainty in finding adequate well water at a reasonable depth.

- Virginia water laws can be summarized as “First Come, First Served.” Water belongs to the person who turns on their faucet first. Established neighbors, no matter how long their wells have existed, do not retain superior rights to the water supply.
- Underground aquifers are uncertain and mobile...here today, and gone tomorrow.

The more “straws” that are placed in the ground, the greater the chance of wells running dry.

- There are many old farm dumps (some known and some yet to be discovered) that have been on rural properties for decades
- No one knows what materials were disposed in these locations, but one might assume them to contain fertilizer, pest control and farm vehicle petroleum products and containers

No one knows what effect, if any, such dumps have had or will have on the groundwater.

Sewer Issues

- Much of the remaining open land in Loudoun County cannot meet the standards to allow residential subdivisions on conventional septic field operations.
- Within the last few years the Commonwealth of Virginia Department of Health has begun permitting alternative sewer systems.
- These alternative systems have not been in operation long enough to establish a reliable track record for evaluating their success.
- The Loudoun County Health Department has experienced the failure of several alternative sewer systems

To minimize the occurrence of such failures in the future, Proposal 1 encourages the following actions:

- All lots to be self-sufficient for conventional well/septic as allowed by the Health Department
- Allow and encourage Cluster-Style Designs within the Rezoning or the Parent / Child option which can use package treatment plants. These plants should be serviced by LCSA or County-certified maintenance companies
- Recommend the annual testing or inspection of individual systems by County-certified inspection companies. As a part of the inspection process, these companies will populate a county-maintained database with their findings
- Development east of Route 15 should be encouraged to connect to LCSA or other existing systems to ensure that affluent is properly treated and discharged

Fire & Rescue Services

“The population of the County is one of three key drivers of the fire and rescue service. Demands on the fire and rescue system will continue to increase as the population continues to grow.... A direct link to the increase in population is the increase in the number of housing units in the County.” *Proposed Service Plan Loudoun County Fire and Rescue System* (20 June 2005)

“The volunteer component of the fire and rescue system is comprised of approximately 1337 volunteers (FY’04 aggregate), and has grown at an average annual rate of 3% since FY’91. Loudoun County’s estimated FY’04 population of 229,429 had an average annual increase of 255% for the same period.” *Proposed Service Plan Loudoun County Fire and Rescue System* (20 June 2005)

“The western end of the County also has been experiencing increased residential construction, which has generated higher call volumes and rural water supply issues.” *EMSSTAR Proposed Fire & Rescue Service Plan* (20 January 2003)

“Based on geography, rural areas cannot be accessed as quickly as suburban areas.” *EMSSTAR Proposed Fire & Rescue Service Plan* (20 January 2003)

- **Increasingly, the County must depend on tax-paid full-time F&R staff rather than volunteers. The greater the residential density, the more staff the County must hire.**
- **Fire suppression water depends on the same limited groundwater and surface water sources used by residents.**
- **Increased traffic on rural roads will further decrease accessibility, even as closer building proximity requires that equipment arrive ever earlier.**

Non- Conforming Lots

“Section 1-404 of the Zoning Ordinance addresses non-conforming lots and provides that such a lot may be used for any permitted (or special exception) use in the underlying zoning district even though the lot does not meet lot width, lot area, or access requirements. Such lot must meet all other zoning ordinance requirements to include minimum required yards (setbacks). Both the AR districts used the minimum required yards of the A-3 district to minimize the impact of the change in zoning district. **The only restriction on a non-conforming lot is that it cannot be further subdivided...There is no indication of financing difficulties with non-conforming lots.**”

6/1/05 Memo from Melinda Artman to BOS

Conclusion: Legally non-conforming lots is a non-issue.