



Department of the Environment

Water Allocation in Maryland

Issues and Strategies for the Piedmont Region



Piedmont Water Allocation

- Current allocation policies
- The perceived problem
- SB 674
- Proposed strategy

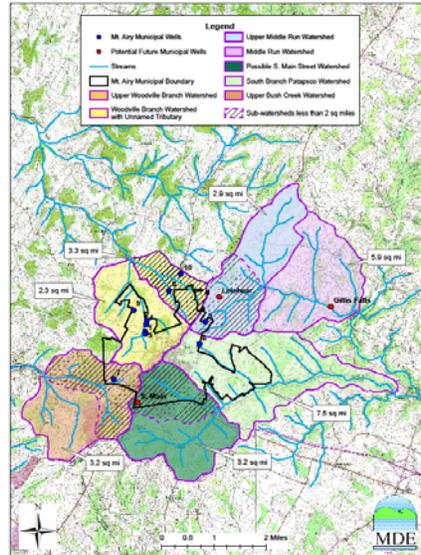




Water balance

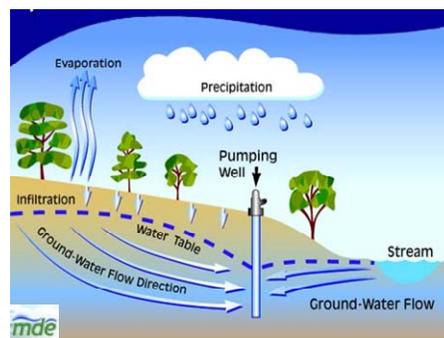
Available total adjusted effective drought-year recharge

- 1-in-10 yr drought precipitation rates
- Runoff /evapotranspiration
- Baseflow needs for streams
- Losses to impervious surface
- Land owned or controlled by the municipality



The problem: water balance and smart growth in the Piedmont

- Water balance generally allocates enough water for about 1 residential unit per acre
- Smart growth minimum 3.5 residential units per acre
- Municipalities can
 - acquire additional land
 - obtain water rights from landowners





SB 674



- Also known as “Brinkley Bill”
- Passed in 2008
- Codified in Laws of Maryland, Chapter 197
- Allows MDE to give “priority” to municipalities when allocating water in Carroll, Frederick, and Washington Counties



Proposed strategy development

- Workgroup meeting since 2009
- Workgroup representatives from counties, municipalities, agricultural community, developers, consultants, state agencies
- **Strategy still in development**





Goals of proposed strategy

- Allow MDE to allocate more water to municipalities in Carroll, Frederick, and Washington Counties than would be allocated under current policies
- Address water needs for priority funding areas
- Continue to preserve and protect the resource
- Preserve water rights of property owners



How it differs from current policies

- Assesses water availability on a Maryland 12-digit hydrologic unit
- Estimates potential impacts of other users based on consumptive use rather than permitted allocation
- Allocates water that is not directly recharged on land owned or controlled by the municipality





What the policy will NOT do

- Will not provide water for growth beyond the PFA established in 2000
- Will not supercede normal permitting requirements
- Will not overcome issues related to sustainable well yield

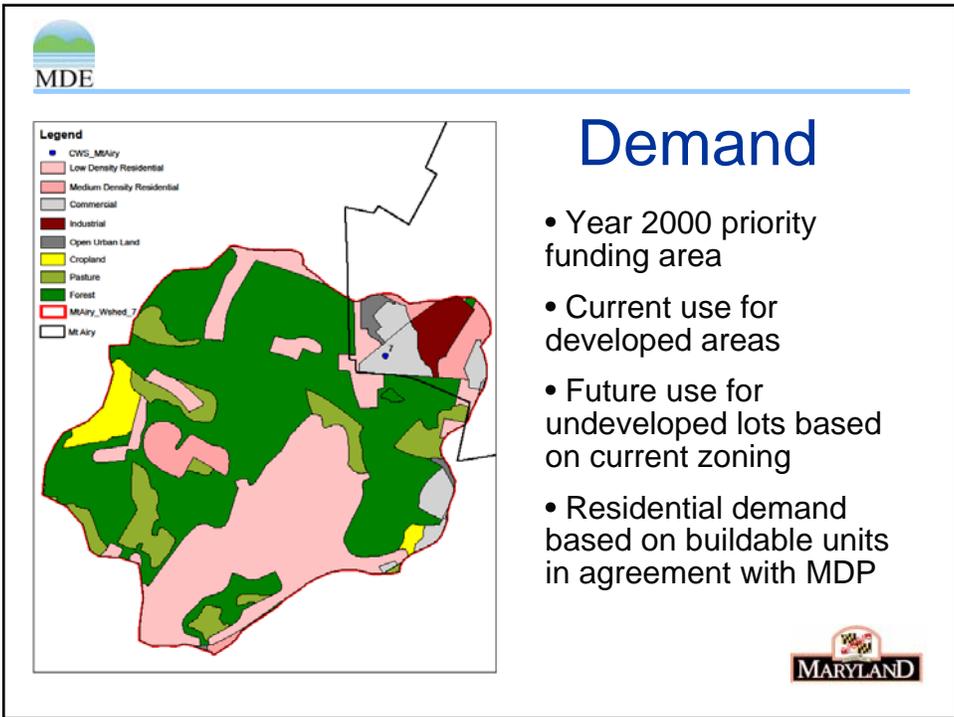
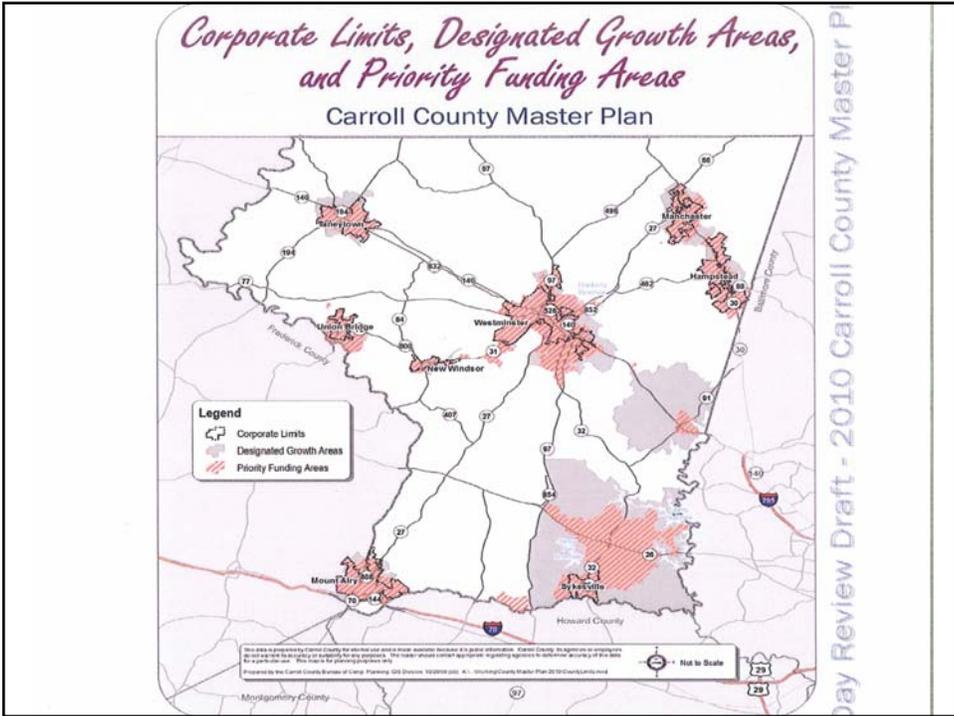


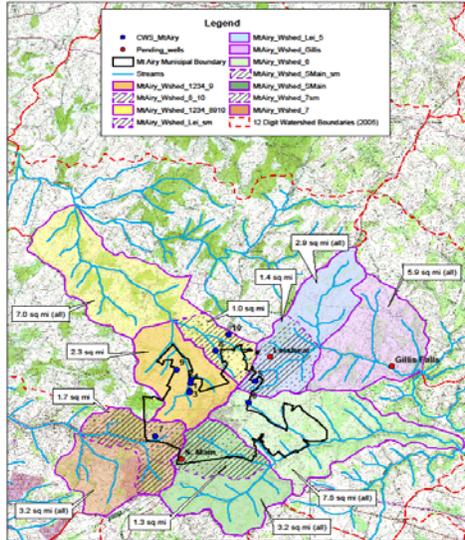
Proposed strategy:

Municipality to conduct analysis and submit with its application

- Existing allocations
- Existing demand
- Analysis of additional demand for priority funding areas (as of 2000)
- Analysis of potentially available water within watersheds







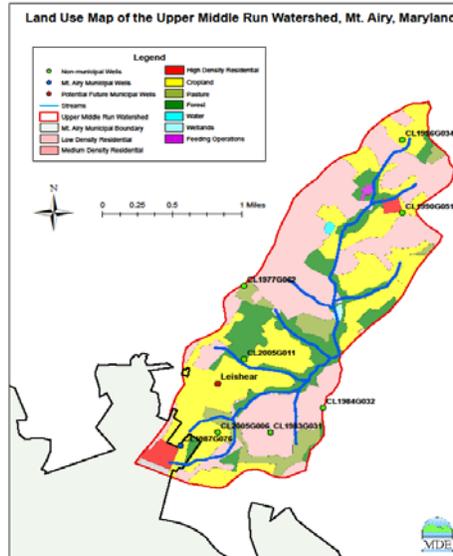
Available municipal groundwater

- Based on land owned or controlled by the municipality
- If available water is greater than projected future use within the PFA, no additional allocation will be considered



Potentially available water

- Evaluate FOR EACH WATERSHED
- Watershed groundwater
 - 50% of available total adjusted effective recharge
 - Adjust if watershed includes land owned or under an easement to DNR





Upper Potomac Run watershed

Account for existing permitted consumptive uses

Type of use	Permit allocation (Avg GPD)	% consumptive	Avg GPD consumptive
Restaurant	400	10	40
GW heat pump	5,000	0	0
GW heat pump	2,000	0	0
Golf course	60,000	100	60,000
Llama farm	400	100	400
Subdivision (on septic)	11,800	15	1,770
Subdivision (on septic)	11,600	15	1,740
Total consumptive use			63,950



Upper Middle Run watershed

Potential uses

Land Use	Acreage	Avg GPD consumptive
Low-density residential	762	1,425
Medium-density residential	0	0
High-density residential	9.03	7,900
Institutional	0	0
Cropland	624	20,800
Pasture	119	0
Deciduous forest	280	0
Water	3.49	0
Wetlands	4.45	0
Ag building, breeding, training facilities	4.3	8,000
Total	1,806	38,125

Total watershed = 1,872 acres

Municipally owned land = 65.5 acres





Upper Middle Run watershed

Total available recharge, gpd 670,896

50% of available recharge, gpd 335,448

Existing uses (gpd)

Municipal use	43,000
Other municipalities's use	0
Non-municipal permitted use	63,950
Residential (well & septic)	14,288
	121,238

50% of available recharge, gpd	335,448
Existing use, gpd	- 121,238
Potential uses, gpd	- 38,125
Available for additional allocation, gpd	176,085



Criteria for approval

- Must not result in unreasonable impacts to other users
- Subject to normal permitting requirements
- Must demonstrate that wells can sustainably produce the projected yield
- Must notify other municipalities within the watershed
- Capacity management plan, water conservation plan, adequate financial guarantees





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Water balance policy

