



# Planning Commission Report to the Board of County Commissioners

## Fall 2010 Special Amendment: Hampstead Water Service Area

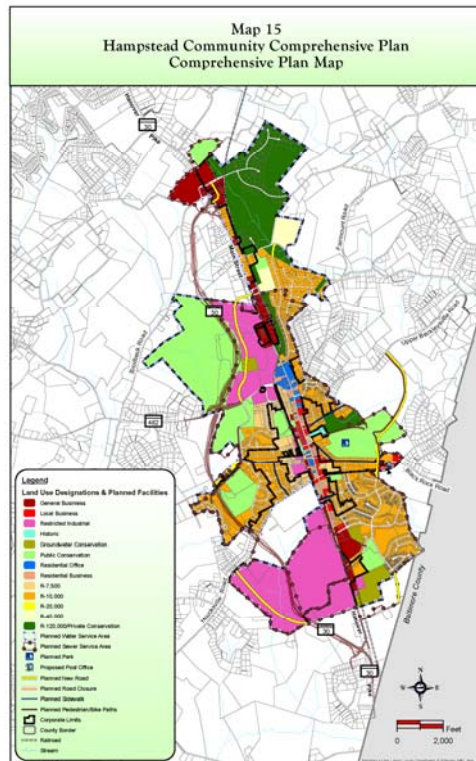
This request would amend the September 2007 *Carroll County Master Plan for Water and Sewerage* and any subsequent amendments prior to this request. The request detailed below pertains to changes to the Hampstead water service area and associated maps and tables.

### Request

Modify the Hampstead water service area map and Table 2 in the plan document to reflect recommended changes contained in the recently adopted *2010 Hampstead Community Comprehensive Plan*.

### Location

Various locations within the Hampstead designated growth area.



## **Background Information**

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The *2010 Hampstead Community Comprehensive Plan* was approved by the Hampstead Planning Commission on April 28, 2010 and adopted by the Mayor and Council on July 13, 2010. The plan contains recommended changes to the water service area that will implement the plan. These changes are detailed on Map 9-B and are discussed in Section D – Water and Sewerage Facilities – Water of the plan.

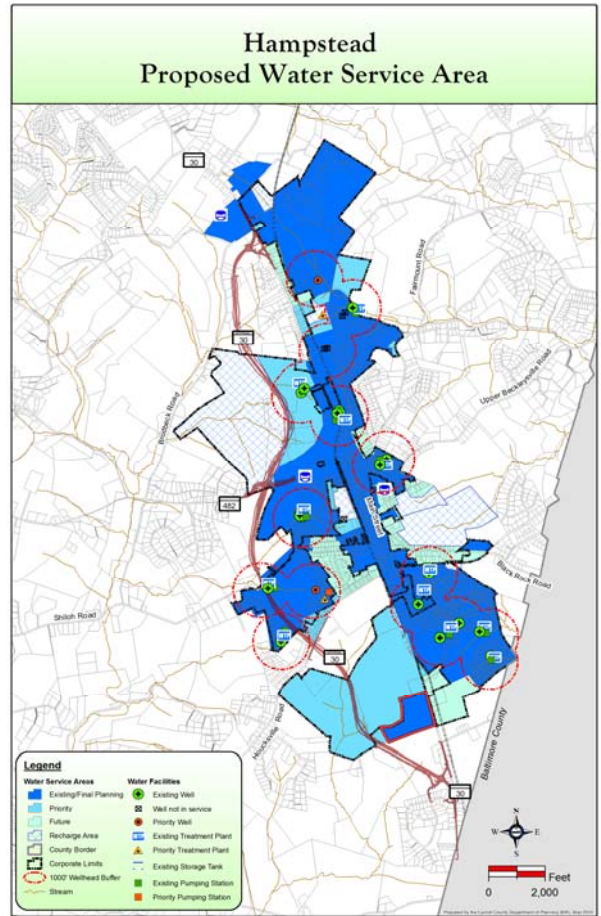
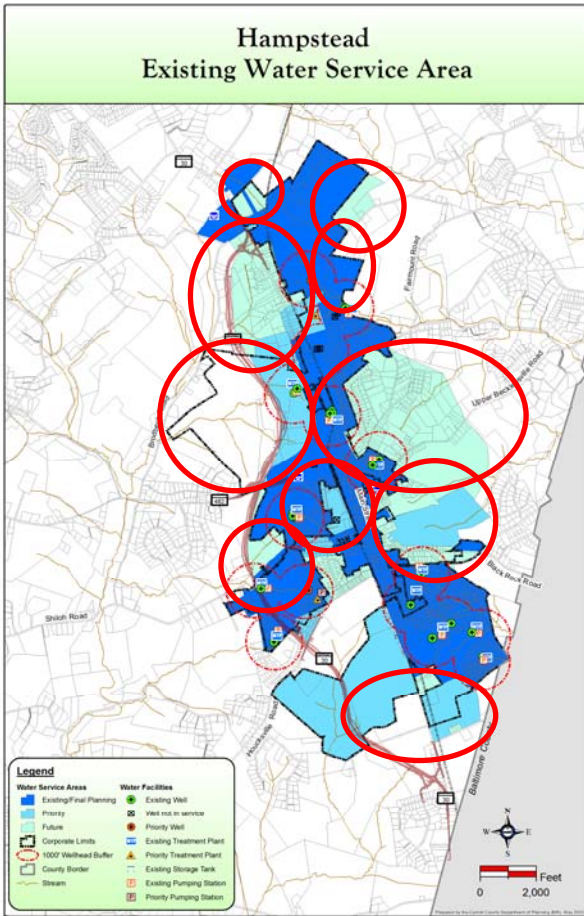
The recently adopted Water Resources Element (WRE) estimated that total demand for the 2003 Hampstead growth area (both planned service area and areas in the “no planned service” category) would have been 1.44 million gallons per day. Given the current permitted capacity of the water supply system (630,000 gallons per day), this would have meant that in order to meet the total projected demand of the growth area, significant additional water sources would have needed to be developed.

In response to the information from the WRE, the *2010 Hampstead Community Comprehensive Plan* recommends reducing the planned water service area to be more consistent with available water resources. As the text indicates, the plan reflects “an iterative approach to reduce the GAB to a point where there was a rough balance between future water demand and available groundwater recharge. The culmination of this work was a serious but careful reduction in the GAB to maximize available recharge and minimize potential demand.”

The existing water service area and proposed water service area are shown on the following page. Areas proposed to change are circled in red on the “Existing Water Service Areas” map. The proposed water service area mirrors that proposed in the *2010 Hampstead Community Comprehensive Plan*, with the exception of the Jos. A. Bank property (outlined in red on the “Proposed Water Service Areas” map). This property was recommended for the Priority (W-3) service area category in the plan, but is being proposed for the Existing/Final Planning (W-1) service area category with this amendment.

The Hampstead community water supply system has a permitted capacity of 630,000 gallons per day. Currently, the system has an average day demand of 459,667 gallons per day. The resulting excess capacity currently available to serve future demand is 170,333 gallons per day.

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Existing Service Area Category	Acres
Existing/Final Planning (W-1)	1,422
Priority (W-3)	708
Future (W-5)	812
<b>TOTAL</b>	<b>2,942</b>

Proposed Service Area Category	Acres
Existing/Final Planning (W-1)	1,426
Priority (W-3)	500
Future (W-5)	232
Recharge Area	416
<b>TOTAL</b>	<b>2,573</b>

## **Agency Comments**

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The Reservoir Technical Group suggested that clarifying language to be added to the Staff Analysis to indicate how the future water deficit will be addressed. [*Note: This language has been added to the text below.*]

No other comments were received from State or County agencies or adjoining jurisdictions.

## **Staff Analysis**

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The *2010 Hampstead Community Comprehensive Plan* contained a water demand analysis of the new growth area and water service area recommended in the plan. The analysis compared total demand (current and future) with the current permitted capacity of the water supply system (630,000 gallons per day).<sup>1</sup> The resulting calculations are shown in the table on the following page. The table reflects an adjustment to the projected demand for the Jos. A. Bank property that is based on actual flows extrapolated to account for a planned expansion, rather than an estimate based on 800 gallons per day applied to the gross property acreage.

The analysis indicates that there would be approximately 80,440 gallons per day of capacity after unserved infill demand within the W-1 category is accounted for. However, this would not be enough to serve all of the other W-3 and W-5 residential, commercial, or industrial properties in the planned service area. Estimated commercial and industrial flows alone account for 225,330 gallons per day of projected demand in the W-3 and W-5 categories. So even after changes to the service area proposed in the comprehensive plan are implemented, a long-range projected deficit for the entire planned water service area would remain. As RTG pointed out, this amendment does not specifically discuss how the deficit will be addressed. However, the Town will continue to explore the potential for additional water sources so that it can be prepared for future growth and needs.

The *Carroll County Master Plan* focuses growth into designated growth areas. The Hampstead community is a designated growth area. The Hampstead Water Supply System serves the designated growth area.

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<sup>1</sup> To calculate potential future demand created by infill development within the Existing/Final Planning (S-1) category, development potential was estimated using the existing County zoning outside of the Town and the zoning proposed in the plan for properties inside the Town. Potential future demand for properties located in the Priority (S-3) and Future (S-5) categories was calculated based on development potential associated with land use designations contained in the plan.

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<b>Capacity Currently Available for Existing Development and Future Growth</b>	
<b>Water Supply Capacity</b>	
<b>Planned Water Service Areas - Hampstead Public Water Supply System</b>	
<b>April 2010</b>	
	<b>Values (gpd)</b>
Total permitted Annual Average Daily Appropriations = 630,000 gpd	
<b>Average Daily Capacity</b>	
Average Day Capacity	630,000
Average Day Demand (2007)	- 459,667
Capacity available for unserved and future demand	= 170,333
<b>Unserved Infill Demand (W-1 Existing/Final Planning Service Area)</b>	
Estimated demand from existing unimproved residential lots and additional potential residential lots that could be created through subdivision in the W-1 service area (124 lots x 250 gpd)	+31,000
Estimated demand from additional commercial and/or industrial flows from improved and unimproved acreage ((16.7 ac. x 700 gpd)+(43.6 ac. x 800 gpd) + 10,000 gpd Jos. A. Bank property)	+ 56,570
Estimated demand from additional development flows from improved and unimproved groundwater conservation acreage (6.6 AC x 352 gpd)	+ 2,323
Total unserved infill demand (31,000 + 46,570 + 2,323)	= 89,893
<b>Future Demand (W-3 Priority and W-5 Future Planned Service Areas)</b>	
Estimated residential flows from existing improved residential lots in the W-3 and W-5 service areas (295 lots x 250 gpd)	+ 73,750
Estimated demand from existing unimproved residential lots and from additional potential residential lots created through subdivision (201 lots x 250 gpd)	+ 50,250
Estimated commercial and industrial flows ((9.1 ac. x 700 gpd) + (235.7 ac. x 800 gpd))*	+ 194,930
Estimated flows for the Hampstead Industrial Center	+ 15,000
Estimated groundwater conservation flows (35.5 ac. x 352 gpd)	+ 12,496
Total Future Demand	346,426
Total Demand (Unserved Infill and Future)	= 436,319
<b>Capacity available for future demand</b>	
Current capacity available for future demand	170,333
Potential Annual Average Daily Demand	- 436,319
<i>Net (Average Day) Capacity Available to Serve Estimated Future Demand within Planned Service Area</i>	<b>= (265,986)</b>
* Excludes acreage for the Hampstead Industrial Center (former Black & Decker property)	

## **Hampstead Planning Commission Certification**

At their August 25, 2010 meeting, the Hampstead Planning Commission certified that this amendment to the *Carroll County Master Plan for Water & Sewerage* is consistent with the *2010 Hampstead Community Comprehensive Plan*.

## **Carroll County Planning Commission Certification**

At its September 21, 2010 meeting, the Carroll County Planning & Zoning Commission approved the amendment and certified it as consistent with the Carroll County Master Plan.

**Table 2  
Projected Water Supply Demands and Planned Capacity\***

<i>Present Year</i>						
Service Area	Residential Population Served <sup>1</sup>	GPCD	Capacity in Million Gallons per Day (mgd)			
			Residential Demand	Other Demand	Total Demand	Existing Capacity
Mount Airy (Map W-1)	8,631	83	0.569	0.151	0.720	0.855
Sykesville-Freedom (Map W-2)	23,650	67	1.596	0.557	2.153	2.627
Manchester (Map W-3)	4,358	60	0.261	0.009	0.270	0.572
Hampstead (Map W-4)	6,400	55	0.350	0.110	0.460	0.630
Westminster (Map W-5)	26,861	69	1.842	1.059	2.901	3.841
Union Bridge (Map W-6)	1,049	86	0.090	0.024	0.114	0.166
New Windsor (Map W-7)	1,414	84	0.119	0.035	0.154	0.196
Taneytown (Map W-8)	6,200	62	0.383	0.096	0.479	0.563
<i>Priority Planning (0-6 Year)</i>						
Service Area	Residential Population Served <sup>1</sup>	GPCD	Capacity in Million Gallons per Day (mgd)			
			Residential Demand	Other Demand	Total Demand	Planned Capacity
Mount Airy (Map W-1)	12,183	84	0.866	0.352	1.218	1.400
Sykesville-Freedom (Map W-2)	35,654	76	2.514	1.497	4.011	4.427
Manchester (Map W-3)	6,367	65	0.416	0.093	0.509	0.622
Hampstead (Map W-4)	7,173	58	0.418	0.369	0.783	0.781
Westminster (Map W-5)	43,108	82	3.174	1.247	4.421	4.863
Union Bridge (Map W-6)	5,048	80	0.465	0.178	0.643	0.707
New Windsor (Map W-7)	2,229	80	0.185	0.156	0.341	0.375
Taneytown (Map W-8)	13,175	78	0.924	0.512	1.436	1.580
<i>Future Planning (7-10 Year)</i>						
Service Area	Residential Population Served <sup>1</sup>	GPCD	Capacity in Million Gallons per Day (mgd)			
			Residential Demand	Other Demand	Total Demand	Planned Capacity
Mount Airy (Map W-1)	16,615	74	1.195	0.430	1.625	1.788
Sykesville-Freedom (Map W-2)	35,654	76	2.514	1.497	4.011	4.895
Manchester (Map W-3)	6,458	66	0.423	0.093	0.516	0.622
Hampstead (Map W-4)	8,155	62	0.505	0.391	.896	1.055
Westminster (Map W-5)	47,201	82	3.509	1.426	4.935	5.429
Union Bridge (Map W-6)	5,256	81	0.481	0.414	0.895	0.985
New Windsor (Map W-7)	2,969	80	0.244	0.156	0.400	0.440
Taneytown (Map W-8)	14,225	78	1.006	0.566	1.572	1.729

<sup>1</sup> Present Year Population figures include only those people living in Existing/Final Planning Area  
<sup>2</sup> Priority Year Population figures assume total build out of Existing & Priority Service Areas  
<sup>3</sup> Future Year Population figures assume total build out of Existing, Priority, & Future Service Areas

GPCD – Gallons per Capita per Day

\*See Appendix 3 Method for Projecting Water Supply and Sewerage Demands and qualifiers for using the projections. Projected growth described in the Priority Planning and Future Planning sections of this Table may depend on the acquisition and development of new water sources, the availability of which is not guaranteed.

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