

What's Wrong with the 1980 Master Plan Forecast of Build Out?

1. What does the 1980 Master Plan say?

From the 1980 Olney Master Plan, Residential Land Use Section, p. 34:

“The maximum theoretical capacity of land in Olney, based on recommended densities, is about 10,800 units. This estimate is based on potential development yields on all vacant land and the number of subdivision plans already on file.

It is unlikely the maximum development capacity of Olney based on Plan densities will be reached. Growth forecasts for Olney project that only about 9,690 units are likely to be in Olney by 1995 ...”

2. What actually happened?

The second part, about 9,690 units by 1995, was pretty close. There were 9,700 units in 1994.

But the first part, about 10,800 units as a maximum theoretical capacity was very wrong! Current estimates¹ of maximum theoretical capacity, with the zoning in place from the 1980 plan, are:

Existing Units	12,662
Pipeline (approved plans)	532
Remaining Capacity	900
Total	14,094 housing units

How did the “maximum theoretical capacity” increase by 31%?

3. Where did the 10,800 number come from?

By reviewing the testimony before the County Council for the 1980 Master Plan, the Olney Coalition has found a rather convoluted trail to the 10,800 number.

The zoning proposed in the 1979 Planning Board Draft², without the implementation of the TDR Program, and without considering the application of MPDUs, would have yielded capacity as follows:

Existing Units	5,400
Pipeline (approved plans)	2,360
Remaining Capacity	4,794
Town Center	1,335
Greater Olney	680
Rural Open Space	380
TDR Sending Areas	1,460
TDR Receiving Areas	939
Total	12,554 housing units

¹ From Khalid Afzal in Planning Board Work Session 6, 3/18/04.

² precursor to the 1980 Approved and Adopted Master Plan, as understood from the Council Resolution and notes in the testimony microfilm.

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The 1,460 units in the TDR Sending Areas is based on estimated yield factors, i.e., what the land would actually permit to be developed given perc test results and the like. The 939 units in the TDR Receiving Areas is the base density before TDRs are applied.

If the TDR Program were implemented, the TDR Sending Areas would have sending rights based on acreage, not potential yields. So while only 1,460 units would likely ever have been built in the sending areas, 1,881 sending rights were assigned.

Four sections of Olney were designated as receiving areas. **The permitted densities on those 1,220 acres were raised by factors between 2 and 8.³**

In all, 2,137 receiving rights were assigned. The new estimate of capacity was:

Existing Units	5,400	
Pipeline (approved plans)	2,360	
Remaining Capacity	5,471	
Town Center	1,335	
Greater Olney	680	
Rural Open Space	380	
TDR Sending Areas	0	
TDR Receiving Areas Base	939	
TDR Receiving Areas Add'l	2,137	
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Total	13,231	housing units

Since the TDR Program was envisioned at that point to apply only to the Olney Planning Area, it was impossible for all 2,137 receiving rights to be used, since only 1,881 were available, and it was highly unlikely they would all be used. Page 66 of the plan implies that if only 50% - 75% of the rights were used, that would be considered a success. These forecasts of capacity (12,554 without TDR program, 13,231 with TDR program) were in the Planning Board draft, but were changed in the Council resolution.

Now things begin to get messy.

At the County Council hearing on the Planning Board Draft, GOCA strenuously objected to the population forecast of 32,000 at build out.⁴ How could an increase of housing from 5,400 units to 13,231 units (nearly 150%) result in a population growth of only 50% (20,600 to 32,000)? The Planning Board's answer: household size would decrease from 3.7 in 1977 to 2.5 (the county average), due to such things as women joining the workforce and choosing not to have children, and the rise of the divorce rate causing what used to be one household now occupying two homes.

Many arguments were given by both GOCA and the Planning Board. A memo from the Planning Board to the Council, dated 5/22/1980, says the Planning Board met with GOCA and, among other things, they agreed on the maximum development potential of Olney being 10,800. The logic was that only 80% of build out was likely to occur.

³ Properties in the receiving areas were zoned 1 unit/acre and 1 unit/2 acres. New zoning was 2 units/acre and 4 units/acre.

⁴ Testimony before the council related the story that the planners began the Master Plan process by asking Olney what size town it wanted to be: 32,000 population, 50,000 population, or 100,000 population. Olney chose 32,000.

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Rounded Max Theoretical Capacity	13,500
	<u>x 80%</u>
New "Maximum Theoretical Capacity" ⁵	10,800

And that's the number used in the final version of the 1980 Master Plan. And a new household size forecast was given as 3.0, which conveniently yields a population of 32,400.

4. But wait a minute, that doesn't make any sense!

Absolutely! Even if you had a good reason to say "maximum theoretical capacity" equals 80% of "maximum theoretical capacity," how could you possibly apply that factor to the entire 13,500? At most, it should only be applied to the remaining capacity, not to existing and pipeline housing units! If that had been done, it would have been:

Existing Units	5,400	5,400	
Pipeline (approved plans)	2,360	2,360	
<u>Remaining Capacity</u>	<u>5,471 x 80% =</u>	<u>4,377</u>	
Total	13,231	12,137	housing units

But no, the "maximum theoretical capacity" was set at 10,800. So if you subtract out what was on the ground and in the pipeline, the remaining capacity was now:

"Maximum Theoretical Capacity"	10,800	
less Existing Units	-5,400	
<u>less Pipeline (approved plans)</u>	<u>-2,360</u>	
"Remaining Capacity"	3,040	housing units

This new number is only 56% of the original computation of remaining capacity.

5. So how good was the original Maximum Theoretical Capacity?

As far as it went, it was pretty good. Two major things happened to throw it off.

First, it failed to account for MPDU bonuses.⁶ If all of the properties in the TDR receiving areas built out at maximum bonus densities, that would provide approximately 675 additional units. If the Greater Olney Area and the Town Center areas also built at bonus densities, and assuming half of those parcels would qualify for the MPDU program, that would add 222 additional units.

Original Maximum Theoretical Capacity	13,231	
MPDU Bonuses	897	
from TDR areas	675	
from Greater Olney	75	
<u>from Town Center</u>	<u>147</u>	
Adjusted Max Theoretical Capacity	14,128	housing units

⁵ "Maximum Theoretical Capacity" is now 80% of previous "Maximum Theoretical Capacity." Go figure....

⁶ See footnote on page 64 of the 1980 Olney Master Plan.

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The Adjusted Maximum Theoretical Capacity is actually pretty close to the current estimate of capacity, which is 14,094. The actual number of MPDUs built between 1976 and 2002 is 776.⁷

The other complicating factor was the TDR Program. It was thought the 13,231 units was an unattainable number because only 1,881 sending rights were available to the 2,137 receiving areas. So at least 256 of those units could not be built because TDRs would not be available. Page 66 of the 1980 Olney Master Plan implies that only 50% to 75% of the TDRs were expected to be used for the plan to be considered a success. That would mean 900 to 1400 TDRs being used in the Olney Planning Area.

Shortly after the 1980 Olney Master Plan was approved, the TDR Program was opened up county wide. Now, instead of a supply of 900 to 1400 TDRs, there were thousands and thousands of sending rights available. In addition, other master plans were resisting the designation of receiving areas within their planning areas. As a result, Olney received far more TDRs than expected. As of 1999, Olney had received 1,800 TDRs.⁸

6. What does it all mean?

Lessons learned from this analysis:

1. It is important to know how numbers are derived. Just because they are labeled as something, that doesn't mean that's what they are. (example: "maximum theoretical capacity")
2. It is important to understand other factors not mentioned or accounted for in the master plan. (example: the effect of MPDU bonus densities, the change in the TDR program to be county-wide).
3. It is important to understand what "build out" means. The 1980 plan forecast proved to be reasonably accurate through 1995. But the 1980 plan did not adequately address how the zoning being established could affect Olney in later years.
4. We need to be aware of what could happen to Olney after a 15-20 year planning horizon. (example: Olney has grown by nearly 3,000 units since 1995.)
5. County initiatives and programs can alter build out results in unexpected ways. The TDR and MPDU programs added dwelling units and population to Olney without adding sufficient infrastructure improvements to support the increased demand for public services. (example: Olney has been under a building moratorium since 1998)

⁷ Source: "Strengthening the MPDU Program: A 30 Year Review," February 2004, page 3-3.

⁸ Source: "An Analysis of the Transfer of Development Rights Program in Montgomery County Maryland," University of Maryland Spring 2001 Community Planning Studio, page 68.