Holding Capacity Analysis

In Anne Arundel County

Holding Capacity Analysis

A process of

- Finding all vacant and under-developed lands in the County

- Finding and eliminating of all lands that can not be developed because of:
  - Naturals features and conditions
  - State and county policies
  - Ownership and use of the land

- Calculating possible buildable number of units in all developable lots in the county based on land use codes and actual practice

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The process includes the following steps:

- Selecting two sets of data for all parcels, tax accounts including all other relevant information with improvement values
  - Less than $10,000 (potentially vacant lot)
    and
  - More than $10,000 but less than the base land value (making it a candidate for redevelopment)
- Understanding how the developability of the above lots are affected by their locations in regards to natural constraints, zoning and government policies, availability of infrastructures etc.

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- For natural and other constraints that would restrict development, we considered:
  - Steep slopes (>25%)
  - Stream buffer (100 ft)
  - Wetlands & BOG areas
  - Schools, Parks, cemeteries, Home owners association
  - SWM areas
  - BGE Utility corridors,
  - Open spaces, Protected land, Open water and Marshes
  - Etc.

Data (GIS layers) with above information were combined together to create a master layer depicting areas where nothing could be built.

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  - Schools, Parks, cemeteries, Home owners association
  - SWM areas
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  - Open spaces, Protected land, Open water and Marshes
  - Etc.

Data (GIS layers) with above information were combined together to create a master layer depicting areas where nothing could be built.

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GIS Models were used to generate two GIS layers – one for vacant parcels (<$10k improvement value) and another for re-developable (>$10k improvement value) parcels indicating:

- Zoning info
- Whether they have sewer/water infrastructure,
- Areas that are affected by constraints,
- If they fall in critical areas and
- Their original areas

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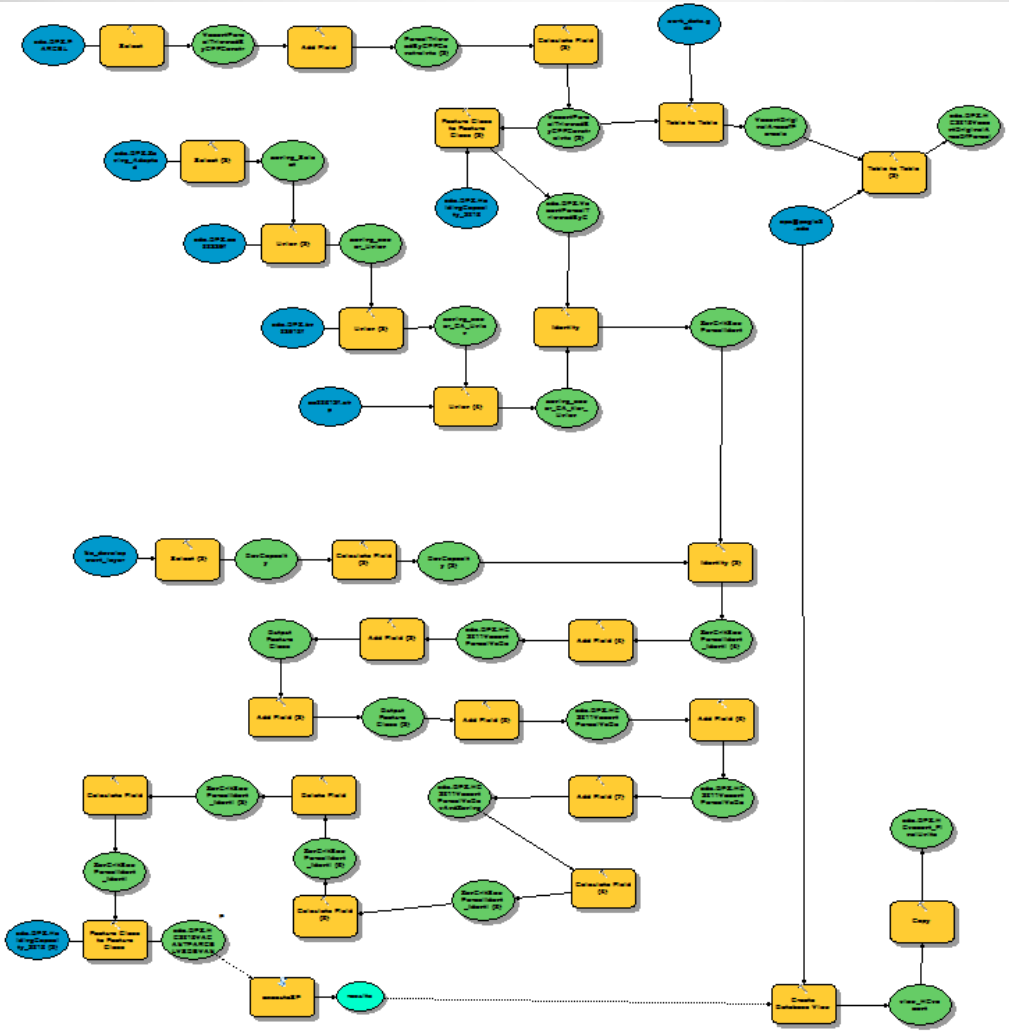

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Finally:

- Units are calculated based on zoning, allowable density and yield factors.

Note: yield factors are a percentage determined by historical data of what number of units were actually built per acre as oppose to what could be built as per the codes.

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Yield factor chart:

Zone	Min. Lot Size by Code	Sewer	Critical Area	Yield by Code	Actual Yield (Units/Per Acre) for Min. Acreage for Yield Factor	Min Net. Acreage for Yield Factor	Gross Lot Size for one house (sq ft)	Net Lot Size for two houses (sq ft)	Minimum Net Lot size for redev.	Redevelopment Yield Factor (remember to minus exist. Lot)
R1	40,000 sq.ft.	yes	N/A	1/40,000 sq.ft.	0.7	4 (174,240 sq.ft.)	4000 ≤ > 80,000	80,000 ≤ > 174,240	2.67 (116,160 sf)	0.75
R1	40,000 sq.ft.	yes	RCA	1/ 20 acres	0.05	40	8,000≤ > 40ac (1,742,400)	N/A		
R10		no	IDA		9.1					
R10		no	LDA		9.1					
R10	N/A	yes	IDA	10/acre	9.1	0.23 (10,130sq.ft.)	4,000≤ >10,131	N/A	40,000 sf	9.1
R10	N/A	yes	LDA	4/acre	2.2	.91 (39,600 sq.ft.)	4000≤ > 39,600	N/A	40,000 sf	2.2
R10	N/A	yes	N/A	10/acre	9.1	0.23 (10,130sq.ft.)	4,000≤ >10,131	N/A	40,000 sf	9.1
R10	N/A	yes	RCA	1/ 20 acres	0.05	40	8,000≤ > 40ac (1,742,400)	N/A	40,000 sf	0.05
R15	N/A	no	N/A	4/acre	2.2	.91 (39,600 sq.ft.)	8000≤ > 39,600	N/A	40,000 sf	2.2
R15	N/A	yes	IDA	15/acre	12.2	0.18 (7,576sq.ft.)	4000≤ > 7,576	N/A	40,000 sf	12.2
R15	N/A	yes	LDA	4/acre	2.2	.91 (39,600 sq.ft.)	4000≤ > 39,600	N/A	40,000 sf	2.2
R15	N/A	yes	N/A	15/acre	12.2	0.18 (7,576sq.ft.)	4000≤ > 7,576	N/A	40,000 sf	12.2
R15	N/A	yes	RCA	1/ 20 acres	0.05	40	8,000≤ > 40ac (1,742,400)	N/A	40,000 sf	0.05
R2	20,000 sq.ft.	no	IDA	1/20,000 sq.ft.	0.6	2.5 (108,900 sf)	4,000≤ > 40,000	40,000 ≤ > 108,900	1.67 (72,600 sf)	1.2
R2	20,000 sq.ft.	no	LDA	1/20,000 sq.ft.	0.7	2.5 (108,900 sf)	4,000≤ > 40,000	40,000 ≤ > 108,900	1.67 (72,600 sf)	1.2
R2	20,000 sq.ft.	no	N/A	1/20,000 sq.ft.	0.6	2.5 (108,900 sf)	4,000≤ > 40,000	40,000 ≤ > 108,900	1.67 (72,600 sf)	1.2
R2	20,000 sq.ft.	no	RCA	1/ 20 acres	0.05	40	8,000≤ > 40ac (1,742,400)	N/A		
R2	15,000 sq.ft.	yes	IDA	2.5/acre (17,424 sf)	2	1.67 (72,600 sq.ft.)	4,000≤ >30,000	30,000 ≤ > 72,600	1.12 (48,400 sf)	1.8
R2	15,000 sq.ft.	yes	LDA	2.5/acre (17,424 sf)	1.7	1.67 (72,600 sq.ft.)	4,000≤ >30,000	30,000 ≤ > 72,600	1.12 (48,400 sf)	1.8
R2	15,000 sq.ft.	yes	N/A	2.5/acre (17,424 sf)	2	1.67 (72,600 sq.ft.)	4,000≤ >30,000	30,000 ≤ > 72,600	1.12 (48,400 sf)	1.8
R2	20,000 sq.ft.	yes	RCA	1/ 20 acres	0.05	40	4,000≤ > 40ac (1,742,400)	N/A		
R22	N/A	yes	N/A	22/acre	20.9	0.125 (5,445sq.ft.)	4000≤ >5,445	N/A	40,000 sf	20.9
R22	N/A	yes	RCA	22/acre	0.05	40	8,000≤ > 40ac (1,742,400)	N/A	40,000 sf	0.05
R22	N/A	no	N/A	22/acre	20.9	0.125 (5,445sq.ft.)	4000≤ >5,445	N/A	40,000 sf	20.9
R5	7,000 sq.ft.	no	IDA	5/acre (174,240 sf)	4.1	1.2 (52,272 sf)	8,000≤ >17,424	17,424≤ > 52,272	.8 (34,848 sf)	2.5
R5	7,000 sq.ft.	no	LDA	4/acre (174,240 sf)	1.9	1.36 (59,400sq.ft.)	8000≤ > 21,780	21,780≤ > 59,400	.90 (39,560 sf)	2.2
R5	N/A	no	N/A	5/acre (174,240 sf)	3	1.2 (52,272 sf)	8,000≤ >17,424	17,424≤ > 52,272	.8 (34,848 sf)	2.5
R5	7,000 sq.ft.	no	RCA	1/ 20 acres	0.05	40	4,000≤ > 40ac (1,742,400)	N/A		
R5	7,000 sq.ft.	yes	IDA	5/acre (217,800 sf)	4.1	.8 (34,848 sf)	4000≤ > 23,232	23,232 ≤ > 34,848	.53 (23,232 sf)	3.75
R5	7,000 sq.ft.	yes	LDA	4/acre (174,240 sf)	1.9	1.36 (59,241sq.ft.)	8000≤ > 21,780	21,780≤ > 59,400	.90 (39,560 sf)	2.2

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Final Result:

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Residential

2008		
Vacant		
Zoned	**Acreage**	**Units**
R1	2908.70723	1864
R10	139.8256662	938
R15	113.7929316	1158
R2	1443.229161	2299
R5	1050.42075	3140
RA	11807.22613	1482
RLD	2273.068642	441
	19736.27051	**11322**
Redev		
Zoned	**Acreage**	**Units**
R1	4562.022562	2242
R2	2920.202914	2826
R5	2630.763131	6279
RA	13681.42412	395
RLD	1463.059583	163
	25257.47231	**11905**

2010		
Zoning actually from May 2011		
Zoned	**Acreage**	**Units**
R1	2347.681	1998
R10	408.3699	3268
R15	60.84216	696
R2	1860.359	4319
R22	16.44441	337
R5	946.4385	3170
RA	9335.722	1699
RLD	1939.163	765
	16915.02	**16252**
Zoned	**Acreage**	**Units**
R1	3167.36	1640
R10	61.69224	473
R15	220.3281	2530
R2	2903.792	3605
R22	56.98632	1176
R5	1997.373	4936
RA	7087.385	221
RLD	1028.999	128
	16523.92	**14709**

2012		
Zoned	**Acreage**	**Units**
R1	2167.03	1884
R10	426.0911	3433
R15	69.65653	796
R2	1795.572	4338
R22	14.03669	289
R5	981.6764	3282
RA	9634.016	1697
RLD	1947.385	762
	17035.46	**16481**
Zoned	**Acreage**	**Units**
R1	2973.711	1515
R10	87.15006	698
R15	228.3004	2624
R2	2829.271	3492
R22	96.44822	2001
R5	2012.057	5021
RA	7149.089	230
RLD	1127.463	150
	16503.49	**15731**

2015		
Zoned	**Acreage**	**Units**
R1	2197.75	2234
R10	357.82	2520
R15	79.07	788
R2	1865.79	4703
R22	9.22	199
R5	953.88	3709
RA	8821.90	1621
RLD	1735.88	775
	16021.32	**16549**
Zoned	**Acreage**	**Units**
R1	2859.91	1363
R10		
R15		
R2	2391.13	2581
R22		
R5	1965.26	4634
RA	6106.28	173
RLD	1098.00	141
	14420.58	**8892**

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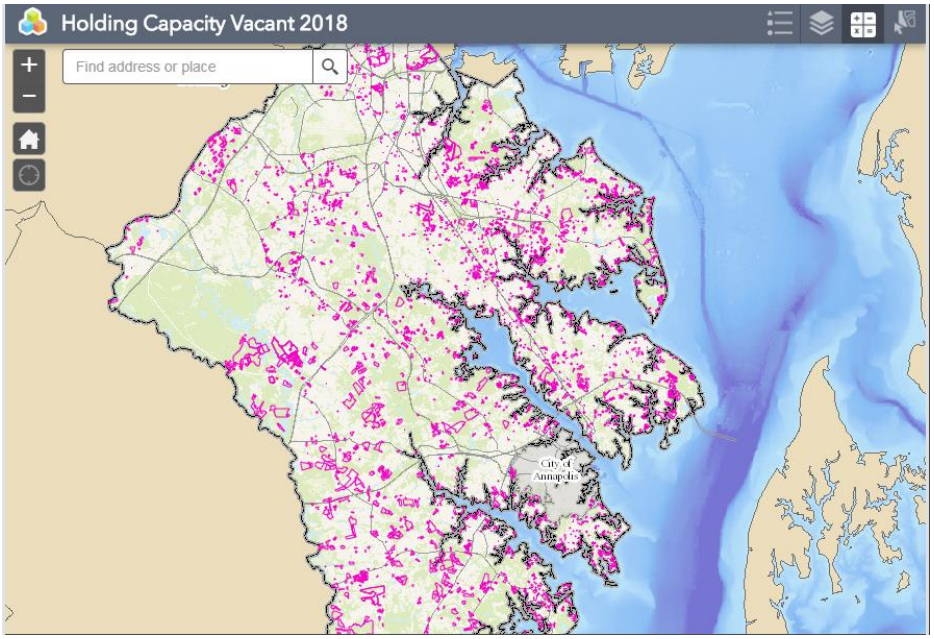
Quick App:



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Thank you!!!!