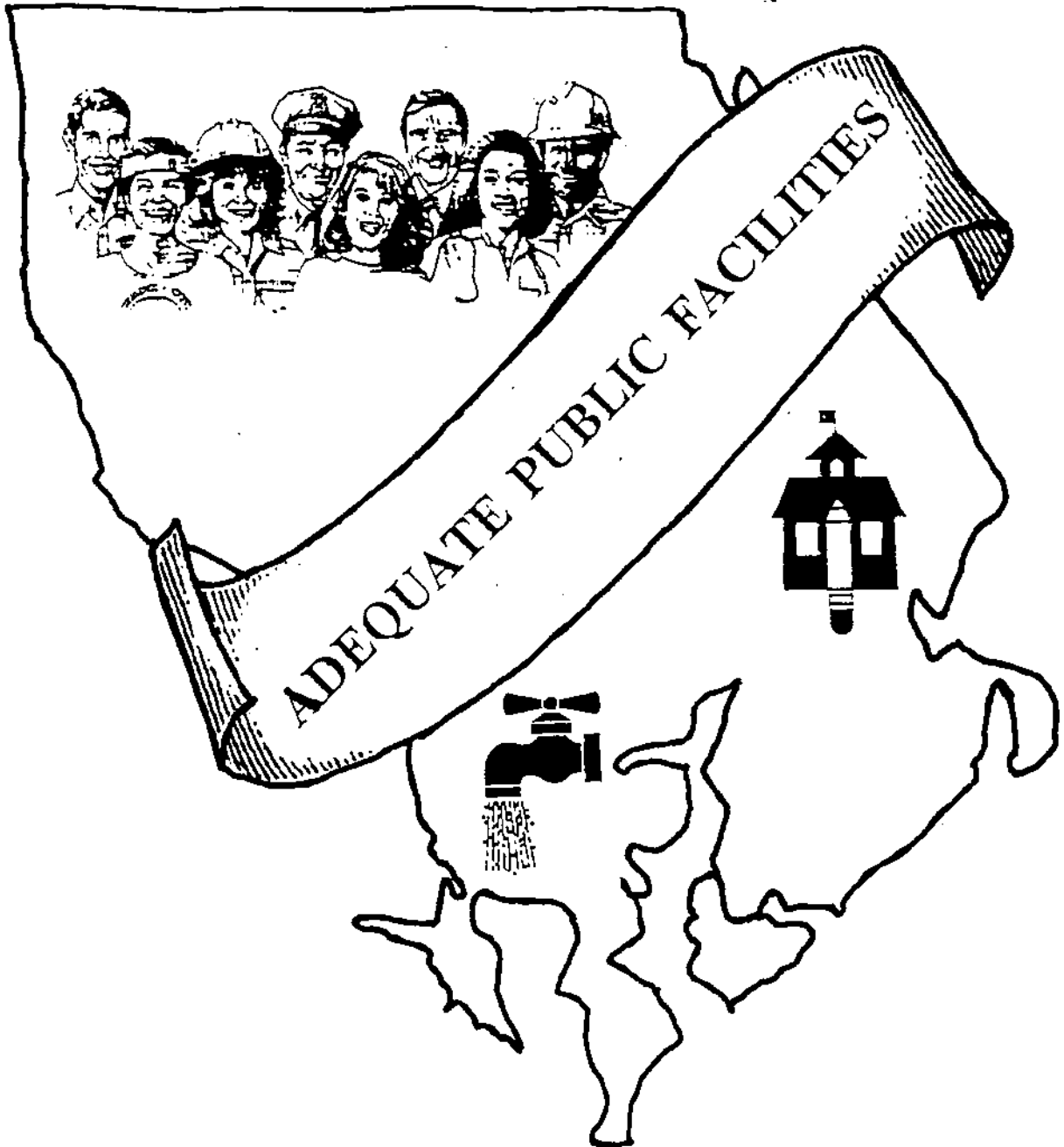


HARFORD COUNTY 1993 ANNUAL GROWTH REPORT



Prepared by the Department of Planning and Zoning
May 1994

THE 1993 ANNUAL REPORT
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EXECUTIVE SUMMARY

The Annual Growth Report is required to be updated and published once a year by the Adequate Public Facilities Law (Sec. 267-104) to determine which facilities have fallen below the adopted minimum standards. This year's Annual Growth Report will include the Public Schools and the Water and Sewerage System.

Harford County Public Schools:

The adequacy standards for the Public School system are:

Elementary Schools - 120 % of local rated capacity within 2 years.

Secondary Schools - 120 % of local rated capacity within 3 years.

Based on the aforementioned Adequate Public Facilities Ordinance level of service standards for public schools, preliminary plans for residential subdivisions will be denied approval in the Forest Hill Elementary School District. The projected enrollment for Forest Hill for the 1995/96 school year is 461 with a utilization rate of 123 percent (Table 9, p. 18). All preliminary plans located in this district will be processed and placed on a waiting list until capacity is available.

The following schools have approved construction funding and will open within the following time periods:

<u>School</u>	<u>Opening Date</u>	<u>Schools Affected</u>
Country Walk ES	Fall 1994	Homestead ES, Ring Factory ES, Youth's Benefit ES
Church Creek ES	Fall 1994	Bakersfield ES, W.M. Paca/OPR ES, Riverside ES, Hillsdale ES
Bel Air MS Addition	Fall 1994	None - Adds capacity to existing district

The Forest Lakes Elementary School has planning approval from the State Interagency Committee and has a tentative opening date in Fall of 1996.

Harford County Water and Sewerage System:

Harford County's Sewerage system's (Sod Run) average flow is 9.1 Million Gallons per Day (MGD) while the design capacity is 12.0 MGD -leaving an **total Average Reserve of 2.9 MGD** (As of December, 1993). The County Water system's current average daily usage is 7.4 MGD with a peak day consumption of 8.5 MGD. The Water Treatment Plant capacity is 9.6 MGD, leaving a **total reserve of 1.1 MGD** (As of December 1993). These figures refer only to a County-wide total capacity figure.

The determination of water or sewerage capacity in a specific area of the County can be found in the "Water and Sewer 1993 Adequate Public Facilities Report with appropriate guidance from the Department of Public Works."

Based on the Adequate Public Facilities Ordinance level of service standards for Water and Sewerage, preliminary plan approvals will be denied in the **Route 1/Benson Commercial Corridor** until adequate fire flow pressure is established. Existing parcels will be permitted to make water connections upon meeting fire safety design guidelines used by the Division of Water and Sewer.

INTRODUCTION

The Annual Report is a thorough and on-going analysis of growth trends, facility capacity and service performance. This report was prepared by the Department of Planning and Zoning with cooperation of the Department of Public Works - Water and Sewer Division and the Board of Education. It is the intention of this report to provide information on the present development activity as well as past trends and future projections for Harford County and the region.

The information in this report will be used by public officials, citizens and private developers for various purposes:

- to assess facility adequacy during the development review and approval process;
- to assess facility capacity in support of zoning reclassification decisions;
- to support the evaluation of priority projects in the annual Capital Budget review;
- to identify critical deficiencies which require prompt attention by the County.

Public Schools:

The data in this report relating to the public school system are aggregated by the elementary/middle/high school districts and includes development information such as building permits issued by dwelling type (Tables 1&2), population and households (Tables 3&4). In addition, school enrollments, County rated capacities for each school facility, utilization of each school facility, 3 year projected school enrollments (Tables 5 & 6), approved capital projects and pupil yield factors by dwelling unit type are included (Appendix).

The Forest Hill Elementary School utilization rate is projected to reach 123 percent for the 1995/96 School year (See Table 9 on p. 18). This projected overcrowding will be relieved by the planned Forest Lakes Elementary School. Currently Forest Lakes has planning approval from the State Interagency Committee, but does not have construction funding approval. The tentative opening date is in the Fall of 1996. Based on the level of service standards established by the Adequate Public Facilities law (Sec. 267-104), preliminary plans for residential subdivisions will be denied approval in Forest Hill Elementary School District. All preliminary plans located in this district will be processed and placed on a waiting list until capacity is available.

Water and Sewer:

The data included in this report for the water and sewer system are aggregated by the water & sewer service area, which is essentially the Development Envelope as defined in the 1988 Harford County Land Use Plan. Additional information is included in this report on water/sewerage usage by dwelling type and for nonresidential uses, an inventory of existing water consumption/sewerage flows, demand projections (including the basis for their computation), and a list of capital projects contained in the County's Capital Improvements Program for expanding facilities - including project status. This information is extracted from the "1993 Water and Sewer Adequate Public Facilities Report," and can be found in section VI (pages 20-25) of this report.

Based on the Adequate Public Facilities Law's level of service standards for water and sewerage, preliminary plan approvals will be denied in the Route 1/Benson Commercial Corridor until adequate fire flow pressure is established. Existing parcels will be permitted to make water connections upon meeting fire safety design guidelines used by the Division of Water and Sewer.

METHODOLOGY

Population Projections

The population and household information in this annual report is based on the 1990 Census data. Yearly estimates of population and households in Harford County are determined from the Census information and a number of variables including, building permits, average household size and household vacancy rates. The 5 and 10 year projections use the same information however; a growth factor is applied to determine how fast and how much the County will grow. This growth factor is based on the number of building permits that are expected to be issued each year. It is important to note that projections are made based on past trends and land use availability. The population projections for the five remaining jurisdictions in the Baltimore Region are based on an interpolation Baltimore Metropolitan Council's Round V population forecast.

The 1990 Census information at the census block level is utilized for specific analysis of each facility regarding area maps and demographic information. Building permits were distributed among facility areas by subdivision name and/or address of each building permit for each year. This provides the needed information on growth trends by facility service area.

School Enrollment Projections

The method for projecting students requires historical data for live births and the number of children enrolled in public schools. Using these data a series of ratios which reflect grade cohort survival are developed. These ratios automatically include consideration of a number of factors:

1. Births in a given year which affect subsequent kindergarten and first grade enrollments.
2. Net migration of school age children.
3. Net transfer of children between public and private schools.
4. Nonpromotion of children to the next grade level.

5. Dropouts in the later years of secondary school.
6. Shifts between regular grade and upgraded groups other than special education.

This technique of finding a ratio is used for each successive grade. For example, a ratio is developed between the number of children actually in the first grade in 1985 and the number in the second grade the following year. The ratio, therefore, represents the number of first graders who advance to the second grade. If significant variations, such as a housing boom exist then factors such as pupil yields for subdivision activity and development trends must be measured.

In order to ensure precise projections, development monitoring is a key task in performing accurate projections because housing expansion periods are one of the greatest impacts to school enrollments. Two of the primary means of calculating projected student enrollment due to a housing expansion period are by using pupil yield factors and build out schedules from developers.

Pupil yield factors are determined by researching the number of students from a particular community/subdivision that are actually attending their home school. By dividing the number of students accounted for by the number of dwelling units, a pupil generation factor is determined. It is important to note that different pupil yield factors are generated depending on housing type (single family, townhouse, apartment etc.) and school level (elementary, middle and high). Surveys of sample subdivisions to assess an accurate yield factor are completed on a regular basis.

Along with pupil yield factors, build out schedules help to determine impact to area schools on a yearly basis. A build out schedule will show the number and type of units to be constructed in year "x" and every successive year "x" until completion of the project. The Board of Education requests build-out schedules from developers for year one, year three, and year five. Yearly updates are also requested for the above scenarios in case there

are amendments made to the schedule.

Each school facility has been analyzed in terms of past growth trends, current conditions and future enrollment projections. The information has been aggregated by the current school districts. The information in this report is based on factual data. Based on the Adequate Public Facilities law the level of service standard for Public Schools are:

Elementary - 120% of local rated capacity within 2 years

Secondary - 120% of local rated capacity within 3 years

Water and Sewer Projections

Water:

The Harford County water service area is divided into four pressure zones because of varying topography within the Development Envelope. In order to provide an adequate supply of water the corresponding transmission lines, pumping and storage facilities for all zones must be sized for estimated future demands. For planning purposes, the 1990 population figure was allocated by local transportation zone (LTZ) and flows estimated as shown on table 4.2. In 1990, the average daily water demand by customers served by the County's central system was approximately 5.9 mgd, with a corresponding maximum day demand of approximately 7.6 mgd. In 1993, the County's average day and maximum day demands were 7.4 and 8.5 mgd respectively. In order to keep pace with the projected growth, staged construction programs are established that distribute required capital costs for improvements and/or additions to the County's system over the long term.

In addition, there are seventeen community water systems, which are not maintained and operated by Harford County. The following community water systems are privately maintained and monitored by the Maryland Department of the Environment (MDE):

- 1) City of Aberdeen
- 2) Maryland American Water Co.
- 3) Conowingo Power Co.
- 4) Campus Hills
- 5) Darlington
- 6) Greenridge Utilities Inc.
- 7) City of Havre de Grace
- 8) Lakeside Vista
- 9) Clear View Mobile Home Park
- 10) Williams Mobile Home Park
- 11) Fountain Green Mobile Park
- 12) Glen Echo Mobile Park
- 13) Atkins Retreat
- 14) Lou Mar Estates
- 15) Queens Castle Mobile Home Park
- 16) Darlington Mobile Home Park
- 17) Swan Harbor Dell

Campus Hills Water Works Inc. has experienced some problems supplying an adequate potable water to its customers. Several Consent Orders issued by the MDE must be complied with by October 31, 1994 in order to correct system deficiencies.

Sewerage:

The flows contributing to the existing Sod Run Wastewater Treatment Plant (WWTP) originate from a portion of an area that Harford County Division of Water and Sewer has designated as the "Development Envelope." Existing within the Development Envelope but not flowing to the Sod Run WWTP are the Cities of Aberdeen, Havre de Grace and the area served by their own local municipal sewerage facilities. A complete "Sewer System Capacity Analysis" is included on page 9 of the 1993 Water and Sewer Adequate Public Facilities Report. In addition, Aberdeen Proving Ground (the Aberdeen and Edgewood areas) maintains its own sewage collection system and six treatment plants.

The average daily influent flow to the Sod Run WWTP in 1993 was approximately 9.1 MGD, exclusive of recycle flows and septage. The determination of future wastewater flows to the Sod Run WWTP, are made by using population and household projections developed by Harford County Department of Planning and Zoning for the years 1995 through 2010 using the 1990 Census as a base. The projections were developed by local transportation zone (LTZ) and aggregated into sewerage service area. In order to keep pace with projected growth, staged construction of the Sod Run Wastewater Treatment Plant from 10 MGD to 12 MGD by 1994 and 20 MGD by 1995 will be necessary.

There are two private multi-use sewerage systems in the County. The Conowingo-Susquehanna Power Company provides sewerage service to the Conowingo Power Plant and some surrounding residences and the Swan Harbor Dell Mobile Home Park which serves about 160 units.

HARFORD COUNTY - BALTIMORE REGION
RESIDENTIAL PERMIT ACTIVITY - 1986 - 1993

TABLE 1

County	1986	1987	1988	1989	1990	1991	1992	1993	TOTAL 1986-1993
HARFORD	2,574	2,706	2,586	3,128	2,647	2,280	2,707	2,155	20,783
Anne Arundel	3,940	3,788	3,390	2,555	3,892	2,408	3,491	3,716	27,180
Baltimore City	158	306	668	672	240	530	78	315	2,967
Baltimore Co.	6,093	4,628	4,810	4,167	4,324	3,185	5,190	3,817	36,214
Carroll	1,608	1,786	1,458	1,335	958	751	1,046	1,389	10,331
Howard	4,011	4,161	4,101	5,348	1,303	1,772	2,603	1,869	25,168
REGION	18,384	17,375	17,013	17,205	13,364	10,926	15,115	13,261	122,643

% OF REGION'S PERMITS
1986 - 1993

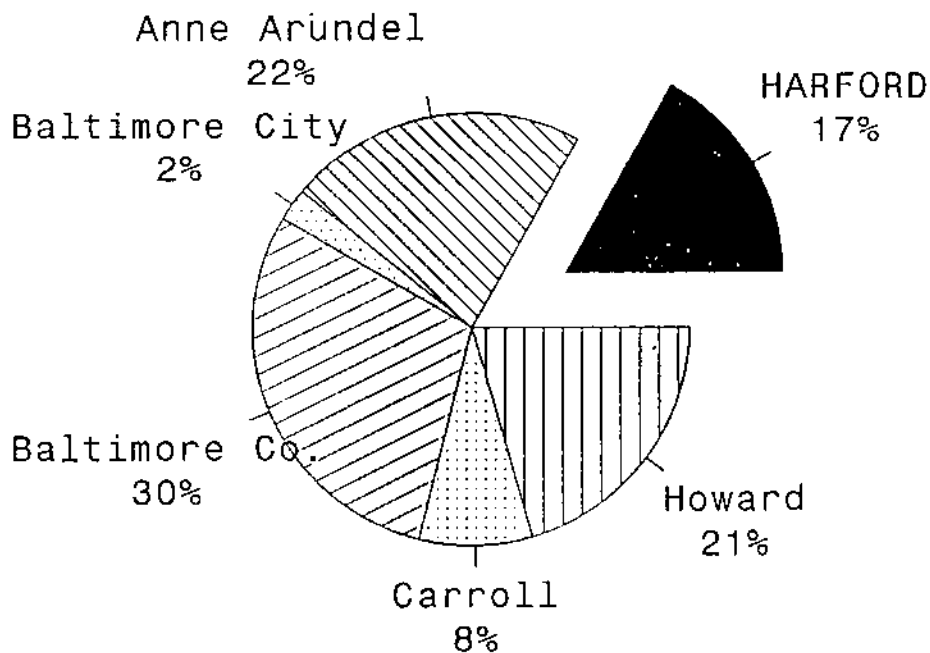


TABLE 2

HARFORD COUNTY POPULATION/EMPLOYMENT PROJECTIONS

**HARFORD COUNTY – BALTIMORE REGION
POPULATION / HOUSEHOLD PROJECTIONS – 1993 – 2003**

County	1993		1998		2003	
	POP	HH	POP	HH	POP	HH
HARFORD	196,775	70,445	219,500	78,500	234,400	85,400
Anne Arundel	443,200	157,200	466,200	170,200	483,500	181,500
Baltimore City	726,200	277,800	719,000	279,700	712,200	281,100
Baltimore Co.	698,500	276,000	709,000	288,400	721,300	300,400
Carroll	130,100	45,400	140,900	50,700	152,200	55,900
Howard	204,000	75,500	233,400	88,500	262,700	102,200

REGION	2,398,775	902,345	2,488,000	956,000	2,566,300	1,006,500
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**HARFORD COUNTY – BALTIMORE REGION
EMPLOYMENT PROJECTIONS – 1993 – 2003**

County	1993	1998	2003
	Total Employment	Total Employment	Total Employment
HARFORD	76,000	81,500	86,700
Anne Arundel	255,900	269,400	279,800
Baltimore City	462,200	464,600	466,600
Baltimore Co.	421,600	439,700	458,000
Carroll	49,800	53,100	56,700
Howard	111,900	124,800	139,500

REGION	1,377,400	1,433,100	1,487,300
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TABLE 3

HARFORD COUNTY - BALTIMORE REGION
NON-RESIDENTIAL PERMIT ACTIVITY - 1989 - 1993

NEW NON-RESIDENTIAL PERMITS (Valued \$50,000 & Over)

PERMIT TYPE	1989		1990		1991		1992		1993	
	# of Permits	Sq. Feet	# of Permits	Sq. Feet	# of Permits	Sq. Feet	# of Permits	Sq. Feet	# of Permits	Sq. Feet
Commercial	36	2,090,287	25	212,241	9	142,097	18	156,966	12	206,952
Industrial	13	1,337,604	7	1,525,463	8	793,851	5	51,488	8	77,523
Institutional	1	59,132	1	2,800	2	71,520	4	123,995	5	95,151
Utilities	2	19,051	0	0	4	11,434	1	NA	0	0
Other	1	NA	1	36,250	2	52,728	1	8,976	1	7,746
Total	53	3,506,074	34	1,776,754	25	1,071,630	29	341,425	26	387,372

ADDITIONS, ALTERATIONS & REPAIRS (Valued \$50,000 & Over)

PERMIT TYPE	1989		1990		1991		1992		1993	
	# of Permits	Sq. Feet	# of Permits	Sq. Feet	# of Permits	Sq. Feet	# of Permits	Sq. Feet	# of Permits	Sq. Feet
Commercial	10	NA	3	NA	7	NA	19	NA	30	NA
Industrial	7	NA	3	NA	6	NA	8	NA	13	NA
Institutional	0	NA	2	NA	4	NA	3	NA	2	NA
Utilities	0	NA	0	NA	1	NA	1	NA	1	NA
Total	17	0	8	0	18	0	31	0	46	0

NA: DATA NOT AVAILABLE

Source: Baltimore Metropolitan Council Of Governments, May, 1994.

HARFORD COUNTY BUILDING PERMIT ACTIVITY BY ELEMENTARY SCHOOL DISTRICT 1989 - 1993

SCHOOL	1989					1991					1992					1993									
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE									
	SF	TH	APT/	MH	TOTAL	SF	TH	APT/	MH	TOTAL	SF	TH	APT/	MH	TOTAL	SF	TH	APT/	MH	TOTAL	SF	TH	APT/	MH	TOTAL
CONDO					CONDO					CONDO					CONDO										
Abingdon	112	363	284	12	771	192	219	204	11	626	99	212	0	10	321	137	222	24	3	386	156	71	36	0	263
Bakerfield	58	0	0	4	62	14	0	0	2	16	11	0	0	4	15	50	0	0	2	52	50	0	0	0	50
Bel Air	54	37	0	0	91	40	0	0	0	40	51	0	0	0	51	10	0	223	0	233	49	0	224	0	273
Churchville	13	0	0	9	22	10	0	0	6	16	27	0	0	2	29	36	0	0	6	42	23	0	0	1	24
Church Creek	**	**	**	**	**	4	53	348	0	405	46	166	84	0	296	31	166	33	0	230	55	44	16	0	115
Darlington	6	0	0	16	22	1	0	0	11	12	5	0	0	8	13	4	0	0	12	16	5	0	0	2	7
Deerfield	25	0	0	2	27	61	0	0	1	62	23	0	0	4	27	22	0	0	1	23	20	0	0	0	20
Dublin	9	0	0	8	17	8	0	0	10	18	6	0	0	4	10	11	0	0	5	16	10	0	0	3	13
Edgewood	1	6	0	0	7	1	0	0	0	1	0	0	0	12	12	0	0	0	0	0	3	0	0	0	3
Emmorton	**	**	**	**	**	43	19	0	0	62	53	69	24	0	146	77	113	52	0	242	73	30	48	0	151
Forest Hill	100	6	96	1	203	62	8	36	7	113	77	8	102	2	189	101	0	36	1	138	77	12	12	0	101
Fountain Green	**	**	**	**	**	79	48	0	0	127	53	16	0	0	69	53	0	0	0	53	69	0	0	0	69
Hall's Cross Roads	0	0	0	0	0	30	0	0	0	30	15	0	0	0	15	5	0	0	0	5	0	0	0	0	0
Havre de Grace	4	0	19	0	23	5	0	8	0	13	0	10	6	0	16	2	0	1	0	3	1	0	1	0	2
Hickory	21	53	0	3	77	21	95	0	4	120	19	134	0	4	157	18	8	0	4	30	58	156	12	2	228
Hillsdale	22	0	0	59	81	20	0	0	41	61	8	0	0	19	27	15	0	0	30	45	7	0	0	0	7
Homestead/Wakefield	246	0	260	2	508	151	4	12	1	168	104	16	107	0	227	79	0	24	0	103	106	4	24	0	134
Jarrettsville	23	0	0	0	23	28	0	0	1	27	24	1	0	2	27	27	0	0	3	30	25	0	0	1	26
Joppatowine	4	0	0	2	6	3	0	0	2	5	4	0	0	6	10	1	0	0	7	8	4	0	0	1	5
Magnolia	3	0	0	7	10	18	1	0	7	26	20	0	0	7	27	12	0	0	5	17	4	0	0	0	4
Meadowvale	76	0	0	0	76	56	0	0	6	62	64	0	0	4	68	135	83	1	2	221	131	83	1	1	216
Norrisville	26	0	0	1	27	25	0	0	4	29	19	0	0	0	19	28	0	0	3	31	12	0	0	2	14
North Bend	38	0	0	7	45	40	0	0	10	50	17	0	0	6	23	30	0	0	12	42	33	0	0	3	36
North Harford	55	0	0	12	67	27	0	0	18	45	44	0	0	16	60	41	0	1	15	57	48	0	0	10	58
Prospect Mill	181	110	0	3	294	60	31	0	1	92	92	74	0	1	98	122	131	12	0	265	29	27	66	0	122
Ring Factory	83	193	24	1	301	82	76	36	0	194	76	2	0	0	78	101	39	0	0	140	73	7	0	0	80
Riverside	3	35	0	0	38	5	10	0	4	19	2	9	0	1	12	3	0	1	3	7	2	0	0	0	2
Roye-Williams	2	0	0	6	8	2	0	0	8	10	4	0	0	9	13	1	0	0	10	11	1	0	0	1	2
Wm. Paca/Old Post Rd	52	45	170	22	289	52	72	0	19	143	99	50	1	31	181	94	54	33	20	201	56	0	0	0	56
Wm. S. James	0	0	0	0	0	2	0	0	0	2	0	0	0	1	1	7	0	0	0	7	16	0	0	1	17
Youth's Benefit	32	0	0	1	33	49	0	0	4	53	43	0	0	0	43	52	0	0	1	53	54	0	2	1	57
TOTAL	1,249	848	853	178	3,128	1,189	1,636	644	178	2,647	1,105	1,767	336	141	2,280	1,305	1,816	441	145	2,707	1,250	1,434	442	29	2,155

Source: Harford County Department of Planning and Zoning, May 15, 1994.

** New school district

HARFORD COUNTY BUILDING PERMIT ACTIVITY BY SECONDARY SCHOOL DISTRICTS 1989 - 1993

MIDDLE SCHOOLS

SCHOOL	1989					1990					1991					1992					1993				
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE				
	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL
Aberdeen	99	45	0	94	238	75	53	348	56	532	102	172	84	55	413	118	166	66	60	410	118	44	15	0	177
Bel Air	199	193	200	3	595	175	99	36	1	311	159	102	47	1	309	246	165	277	0	688	212	41	309	1	563
Edgewood	182	383	440	17	1022	309	291	204	29	833	216	247	13	23	499	216	275	24	11	526	238	71	0	1	310
Fallston	234	6	180	1	421	194	8	48	4	254	172	8	176	0	356	198	0	60	1	259	168	12	38	1	219
Havre de Grace	86	0	19	16	121	62	0	8	17	87	69	0	16	12	97	142	83	2	13	240	137	83	2	3	225
Magnolia	10	35	0	9	54	26	11	0	13	50	26	9	0	14	49	16	0	1	15	32	11	0	0	1	12
North Harford	150	0	0	26	176	125	0	0	41	166	112	0	0	28	140	127	0	1	34	162	125	0	0	19	144
Southampton	288	200	0	13	501	221	174	0	19	414	196	213	0	8	417	230	139	12	9	390	241	183	78	3	505
TOTAL	1,248	1,862	839	179	3,128	1,187	636	644	180	2,647	1,052	751	336	141	2,280	1,293	1,828	443	143	2,707	1,250	434	442	29	2,155

SCHOOL	1989					1990					1991					1992					1993				
	BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE					BUILDING PERMITS ISSUED BY DWELLING TYPE				
	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL	SF	TH	APT/ CONDO	MH	TOTAL
Aberdeen	99	45	0	94	238	75	53	348	56	532	102	172	84	55	413	118	166	66	60	410	118	44	15	0	177
Bel Air	210	230	200	3	643	185	99	36	1	321	171	100	46	2	319	259	165	277	0	701	213	41	309	1	564
Edgewood	182	383	440	17	1022	309	291	204	29	833	216	247	13	23	499	216	275	24	11	526	238	71	0	1	310
Fallston	233	6	180	1	420	202	8	48	4	262	181	8	177	0	366	208	0	60	1	269	174	18	50	1	243
Havre de Grace	86	0	19	16	121	62	0	8	17	87	69	0	16	12	97	142	83	2	13	240	137	83	2	3	225
Joppatowne	10	35	0	9	54	26	11	0	13	50	26	9	0	14	49	16	0	1	15	32	11	0	0	1	12
North Harford	150	0	0	26	176	125	0	0	41	166	112	0	0	28	140	127	0	1	34	162	125	0	0	19	144
C. Milton Wright	278	163	0	13	454	205	174	0	17	396	175	215	0	7	397	207	139	12	9	367	234	177	66	3	480
TOTAL	1,248	1,862	839	179	3,128	1,189	636	644	178	2,647	1,052	751	336	141	2,280	1,293	1,828	443	143	2,707	1,250	434	442	29	2,155

Source: Harford County Department of Planning and Zoning, May 15, 1994.

HARFORD COUNTY POPULATION / HOUSEHOLDS 1989 - 1993
BY ELEMENTARY SCHOOL DISTRICT

TABLE 6

SCHOOL	1989 *		1990 * (April 1)		1991 *		1992 *		1993 *	
	Households	Population	Households	Population	Household	Population	Households	Population	Household	Population
Abingdon	2,815	8,024	3,410	8,076	4,005	11,333	4,310	12,110	4,676	13,062
Bakerfield	2,820	8,038	2,562	6,664	2,577	7,293	2,591	7,282	2,641	7,377
Bel Air	3,341	9,522	3,061	7,894	3,099	8,770	3,147	8,844	3,369	9,410
Churchville	1,859	5,298	1,874	5,460	1,889	5,346	1,917	5,386	1,957	5,466
Church Creek	**	**	1,875	4,965	2,260	6,395	2,541	7,140	2,759	7,708
Darlington	721	2,054	732	2,046	743	2,104	756	2,124	771	2,153
Deerfield	1,777	5,065	1,836	5,818	1,895	5,363	1,921	5,397	1,942	5,426
Dublin	1,249	3,559	1,266	3,504	1,283	3,631	1,293	3,632	1,308	3,653
Edgewood	1,595	4,546	1,596	5,306	1,597	4,519	1,608	4,519	1,608	4,493
Emmorton	**	**	1,111	3,285	1,170	3,311	1,309	3,677	1,539	4,297
Forest Hill	1,856	5,289	1,963	6,064	2,070	5,859	2,250	6,322	2,381	6,651
Fountain Green	**	**	1,918	4,926	2,039	5,769	2,104	5,913	2,155	6,018
Hall's Cross Roads	1,554	4,429	1,788	4,738	1,554	4,398	1,554	4,367	1,554	4,341
Havre de Grace	2,528	7,204	2,540	6,163	2,552	7,223	2,568	7,215	2,570	7,180
Hickory	1,991	5,674	1,816	5,737	1,930	5,462	2,079	5,842	2,108	5,887
Hillsdale	2,645	7,538	1,753	4,741	1,811	5,125	1,837	5,161	1,879	5,250
Homestead/Wakefield	4,762	13,571	4,205	11,556	4,365	12,353	4,580	12,871	4,678	13,067
Jarrettville	2,098	5,980	2,124	6,826	2,150	6,084	2,175	6,113	2,204	6,156
Joppatowne	2,882	8,214	2,887	7,851	2,892	8,184	2,901	8,153	2,909	8,125
Magnolia	1,342	3,826	1,367	4,329	1,392	3,939	1,417	3,983	1,434	4,004
Meadowvale	1,916	5,461	1,975	5,410	2,034	5,756	2,099	5,897	2,308	6,448
Norrisville	680	1,939	708	2,151	736	2,082	754	2,118	783	2,187
North Bend	1,750	4,986	1,797	5,655	1,845	5,220	1,866	5,244	1,906	5,325
North Harford	1,679	4,786	1,722	5,144	1,765	4,994	1,822	5,119	1,876	5,240
Prospect Mill	2,703	7,703	1,600	4,622	1,687	4,775	1,781	5,003	2,032	5,677
Ring Factory	2,163	6,164	1,484	4,105	1,668	4,721	1,742	4,896	1,875	5,239
Riverside	3,189	9,089	3,183	8,982	3,225	9,127	3,236	9,094	3,243	9,059
Roye-Williams	1,645	4,687	1,654	7,142	1,664	4,708	1,676	4,709	1,686	4,710
Wm. Paca/Old Post Rd	1,628	4,641	1,335	3,581	1,471	4,163	1,643	4,616	1,834	5,122
Wm. S. James	1,350	3,848	1,352	4,451	1,354	3,832	1,355	3,807	1,362	3,803
Youth's Benefit	4,140	11,799	4,699	14,940	4,749	13,440	4,790	13,460	4,841	13,521
TOTAL	60,678	172,933	63,193	182,132	65,708	185,953	67,874	190,725	70,445	196,775

Source: Harford County Department of Planning and Zoning, May 15, 1994.

* As of April 1

** New school district

HARFORD COUNTY POPULATION / HOUSEHOLDS 1989 – 1993
BY SECONDARY SCHOOL DISTRICT

TABLE 7

MIDDLE SCHOOLS

SCHOOL	1989 *		1990 * (April 1)		1991 *		1992 *		1993 *	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	9,719	27,698	10,224	29,927	10,729	30,364	11,122	31,252	11,511	32,154
Bel Air	7,381	21,035	7,678	22,030	7,975	22,570	8,269	23,236	8,923	24,923
Edgewood	7,545	21,502	8,336	23,208	9,127	25,830	9,601	26,979	10,101	28,214
Fallston	6,202	17,675	6,443	20,322	6,684	18,917	7,023	19,733	7,269	20,303
Havre de Grace	5,164	14,718	5,247	13,619	5,330	15,083	5,422	15,236	5,650	15,783
Magnolia	7,414	21,128	7,461	21,227	7,509	21,249	7,555	21,230	7,585	21,188
North Harford	7,068	20,145	7,226	22,231	7,384	20,895	7,517	21,122	7,671	21,426
Southampton	10,187	29,032	10,578	29,568	10,969	31,043	11,366	31,937	11,736	32,782
TOTAL	60,678	172,933	63,193	182,132	65,708	185,953	67,874	190,725	70,445	196,775

HIGH SCHOOLS

SCHOOL	1989 *		1990 (April 1)		1991 *		1992 *		1993 *	
	Households	Population	Households	Population	Households	Population	Households	Population	Households	Population
Aberdeen	9,719	27,698	10,224	29,927	10,729	30,364	11,122	31,252	11,511	32,154
Bel Air	9,866	28,118	10,171	28,182	10,401	29,435	10,705	30,081	11,371	31,762
C. Milton Wright	6,245	17,797	7,036	19,914	7,677	21,727	8,055	22,633	8,403	23,473
Edgewood	8,087	23,048	8,336	23,208	9,127	25,830	9,601	26,979	10,101	28,214
Fallston	7,409	21,117	7,492	23,824	7,550	21,368	7,898	22,193	8,153	22,774
Havre de Grace	5,200	14,819	5,247	13,619	5,330	15,083	5,422	15,236	5,650	15,783
Joppatowne	7,303	20,814	7,461	21,227	7,509	21,251	7,555	21,228	7,585	21,188
North Harford	6,850	19,522	7,226	22,231	7,384	20,895	7,517	21,123	7,671	21,426
TOTAL	60,678	172,933	63,193	182,132	65,708	185,953	67,874	190,725	70,445	196,775

Source: Harford County Department of Planning and Zoning, May 15, 1994.

* As of April 1

TABLE 8

**HARFORD COUNTY BUILDING PERMITS
DEVELOPMENT ENVELOPE VS. RURAL AREA
1991 - 1993**

	1991 - 1993	% OF TOTAL
DEVELOPMENT ENVELOPE	6,115	86%
REMAINDER OF COUNTY	1,028	14%
TOTAL	7,143	100%

**HARFORD COUNTY POPULATION PROJECTIONS
DEVELOPMENT ENVELOPE VS. RURAL AREA 1990 - 2010**

	1990	1995	2000	2005	2010
DEVELOPMENT ENVELOPE	123,837	147,056	161,470	172,499	178,385
REMAINDER OF COUNTY	58,295	62,072	65,090	67,082	68,180
TOTAL	182,132	209,128	226,560	239,581	246,565

Source: Harford County Department of Planning & Zoning, revised 3/16/94.

1993 HARFORD COUNTY SCHOOLS UTILIZATION CHART
 ELEMENTARY SCHOOLS

TABLE 9

ELEMENTARY SCHOOLS	CAPACITY	Actual			Projected					
		93-94		94-95		95-96		96-97		
		ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	
Abingdon	600	565	94%	628	105%	701	117%	754	126%	
Bakerfield	500	504	101%	427	85%	402	80%	395	79%	
Bel Air	525	565	108%	590	112%	625	119%	651	124%	
Church Creek	600	---	---	469	78%	522	87%	560	93%	
Churchville	385	368	96%	367	95%	387	101%	388	101%	
Darlington	175	139	79%	140	80%	153	87%	159	91%	
Deerfield	545	511	94%	502	92%	476	87%	467	86%	
Dublin	300	282	94%	282	94%	289	96%	296	99%	
Edgewood	520	400	77%	408	78%	420	81%	436	84%	
Emmorton	600	---	---	462	77%	469	78%	476	79%	
Forest Hill	375	393	105%	424	113%	461	123%	498	133%	
Fountain Green	600	533	89%	570	95%	598	100%	601	100%	
Hall's Cross Rds	650	483	74%	489	75%	511	79%	529	81%	
Havre de Grace	535	397	74%	393	73%	405	76%	429	80%	
Hickory	670	686	102%	683	102%	653	97%	649	97%	
Hillsdale	485	445	92%	397	82%	409	84%	415	86%	
Home/Wakefield	955	1190	125%	1080	113%	1083	113%	1118	117%	
Jarrettsville	550	514	93%	509	93%	492	89%	505	92%	
Joppatowne	515	500	97%	492	96%	478	93%	469	91%	
Magnolia	525	531	101%	522	99%	535	102%	554	106%	
Meadowvale	570	571	100%	603	106%	630	111%	662	116%	
Norrisville	200	203	102%	203	102%	201	101%	193	97%	
North Bend	565	526	93%	544	96%	576	102%	595	105%	
North Harford	525	431	82%	426	81%	434	83%	426	81%	
Prospect Mill	750	682	91%	729	97%	775	103%	820	109%	
Ring Factory	600	830	138%	482	80%	475	79%	483	81%	
Riverside	625	649	104%	578	92%	608	97%	619	99%	
Roye-Williams	750	697	93%	703	94%	723	96%	746	99%	
WP/OPR	1105	1089	99%	929	84%	949	86%	1001	91%	
Wm. S. James	575	563	98%	585	102%	597	104%	614	107%	
Youth's Benefit	920	958	104%	950	103%	960	104%	947	103%	
ELEMENTARY TOTAL	17,795	16,205		16,566		16,997		17,455		

Source: Harford County Public schools and Department of Planning and Zoning

1993 HARFORD COUNTY SCHOOLS UTILIZATION CHART TABLE 10
 SECONDARY SCHOOLS

MIDDLE SCHOOLS CAPACITY	Actual		Projected					
	93-94		94-95		95-96		96-97	
	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL
Aberdeen	1157	76%	1123	73%	1147	75%	1168	76%
Bel Air *	1074	82%	1152	88%	1264	96%	1306	100%
Edgewood	1015	73%	1062	76%	1065	77%	1105	79%
Fallston	875	97%	1030	114%	1023	114%	1010	112%
Havre de Grace	528	67%	545	69%	546	69%	536	68%
Magnolia	839	78%	903	84%	950	89%	947	88%
North Harford	968	78%	1006	81%	991	80%	980	79%
Southampton	1438	94%	1524	99%	1603	104%	1691	110%
MS SUBTOTAL	7,894		8,345		8,589		8,743	

HIGH SCHOOLS CAPACITY	Actual		Projected					
	93-94		94-95		95-96		96-97	
	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL	ENROLL	%UTIL
Aberdeen	1109	59%	1186	63%	1250	67%	1347	72%
Bel Air	1271	90%	1348	96%	1354	96%	1396	99%
C. Milton Wright	1296	108%	1289	108%	1336	112%	1416	118%
Edgewood	911	66%	893	65%	948	69%	984	71%
Fallston	1066	64%	1231	74%	1430	86%	1594	95%
Havre de Grace	541	60%	543	60%	567	63%	588	65%
Joppatowne	871	76%	937	82%	949	83%	1007	88%
North Harford	993	69%	1005	70%	1045	73%	1062	74%
HS SUBTOTAL	8,058		8,432		8,879		9,394	

SECONDARY TOTAL	15,952	16,777	17,468	18,137
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* Includes construction approval for 300 student addition will open Fall 1994

TABLE 11

JANUARY - DECEMBER 1993
 WATER USAGE & SEWER GENERATIONS

	1993
Total Number of Connections	26,507
WATER	
Water Average Consumption	7.4 MGD
Water Peak Day Consumption	8.5 MGD
Average Water Usage per Connection (gal/day)	279
Residential Unit Water Usage (gal/day)	178
Average Commercial/Industrial Water Usage (gal/day)	4,635
SEWER	
Sewer Average Flows	9.1 MGD
Sewer Peak Day Flows	25.0 MGD
Average Sewer per Connection (gal/day)	343
Residential Sewer Generation (gal/day)	178
Average Commercial/Industrial Sewer Generation (gal/day)	4,635

* MGD = Million Gallons per Day

TABLE 12

HARFORD COUNTY SYSTEM WATER DEMAND PROJECTIONS

	YEAR												
	1990	1993	1995	2000	2005	2010	2015	2020					
SYSTEMWIDE RESIDENTIAL/ COMMERCIAL INDUSTRIAL WATER DEMAND													
FIRST ZONE Avg. Day, mgd	3.4	3.9	4.6	5.6	6.6	7.6	9.0	10.4					
Max. Day, mgd	4.3	4.6	6.8	8.7	10.6	12.7	15.3	18.2					
Total of Second, Third and Fourth Zones and MAWC Requirements													
Avg. Day, mgd	2.5	3.5	4.5	5.8	7.3	9.1	10.0	10.9					
Max. Day, mgd	3.3	3.9	6.9	9.5	12.8	17.0	18.7	20.5					
Aberdeen													
Avg. Day, mgd	0.0	0.0	1.0	1.0	1.5	2.0	2.8	3.0					
Max. Day, mgd	0.0	0.0	1.0	1.0	1.5	2.0	2.8	3.0					
Total													
Avg. Day, mgd	5.9	7.4	10.1	12.4	15.4	18.7	21.8	24.3					
Max. Day, mgd	7.6	8.5	14.7	19.2	24.9	31.7	36.8	41.7					

Table 13

**Harford County Present and Projected Sewerage Demands and
Planned Capacities Million Gallons Per Day - MGD**

	SERVICE AREAS					
	PLANNING YEAR	HARFORD COUNTY	FALLSTON	JOPPATOWNE	SPRING MEADOWS	
PER CAPITA SEWAGE FLOW	1993 1995 2000	90 90 90	50 50 50	80 80 80	65 65 65	
RESIDENTIAL POPULATION SERVED	1993 1995 2000	70,732 85,187 104,979	0 0 0	7,000 7,000 9,500	153 153 153	
DOMESTIC FLOW (ADF)	1993 1995 2000	7.7 8.8 10.7	0 0 0	.59 .69 .76	.01 .01 .01	
INDUSTRIAL FLOW (ADF)	1993 1995 2000	.4 .9 1.1	.035 .035 .000	0.0 0.0 0.0	0 0 0	
INFILTRATION/INFLOW (ADF)	1993 1995 2000	1.0 1.6 2.1	0 0 0	.19 .19 .19	0 0 0	
TOTAL FLOW	1993 1995 2000	9.11 11.3 13.9	.035 .035 .000	.78 .88 .95	.01 .01 .01	
SYSTEM CAPACITY	1993 1995 2000	10.0 12.0 20.0	.035 .035 .000	.75 .88 .95	.01 .01 .01	

TABLE 14

1993 EXISTING WATER & SEWER CAPITAL PROJECTS

PROJECT NO.	PROJECT NAME	PROJECT STATUS
6387	Upper Bynum Run Parallel Interceptor	Awaiting permits
6410	Tank Site Selection & Acquisition	Negotiating site for future Forest Lake tank
6437-2	Winters Run S.P.S. II	Under construction
6438	Winters Run Parallel Interceptor	Awaiting permits
6439-1	Sod Run WWTP - Stage 1	Completed
6440	Infiltration/Inflow	Defining scope
6441	Fallston Sanitary Sewer Petition	Under design
6442	Swan Creek Commercial Sanitary Sewer	Under construction
6458	Lower Bynum Run Parallel Interceptor	Under design
6459	Bush Creek Sewage P.S. II	Under design
6474	Abingdon (Big Inch) WTP	Under construction
6483	Plumtree Sewage Pump Station	Completed
6486	Whiteford Area Sewer	Applied for Federal & State funding
6487	Perryman Well Expansion	Defining scope
6508	Bill Bass Sewage Pump Station Upgrade	Under construction
6509	Singer Road Water Extension	Under design
6510	Abingdon Rd. Water Trans Main I	Under design
6510	Abingdon Rd. Water Trans Main II	Installation complete

TABLE 14 (CONTINUED)

PROJECT NO.	PROJECT NAME	PROJECT STATUS
6510	Abingdon Rd. Water Trans Main IV	Award of design
6511	Woodsdale Booster Station	Installation complete
6512	Wakefield Water Transmission Main	Under design
6514	MacPhail Water Transmission Main	Awarding design
6518	Red Pump Road Transmission Line	Awarding design
6521	Boulton St. & Tollgate Rd. Trans Main	Awaiting Right-of-Ways
6524	Joppa-Trimble Sanitary Sewer	Under design
6526	Turner Lane Water Extension	Under design
6527	Northview Road Sewer Extension	Awaiting assessments
6530	Old Constant Friendship Sewer Petition	Applying for permits
6533	Joppa Storage Tank	Award of design
6534	HdG WTP - Finished Water Pump and Recycle	Completed
6535	HdG WTP - 4 to 6 mgd	Completed
6536	HdG WTP - Transmission Line Improvement	Under construction (75% complete)
6540	Country Walk Tank & Booster Station	Beginning design phase
7004	Joppatowne WWTP Short Term Improv.	Under construction
7013	Joppatowne WWTP Long Term Improv.	Under design

TABLE 14 (CONTINUED)

**PROPOSED WATER AND SEWER CAPITAL PROJECTS
FIVE YEAR PLAN**

WATER PROJECTS	FY95	FY96	FY97	FY98	FY99	FY00
Forest Lakes Tank/Feeder	\$ 150,000	\$1,930,000				
Laurel Bush II	\$ 131,000	\$ 422,000				
Country Walk Tank & Booster Station		\$2,630,000				
Fallston Fire Storage & Booster Station	\$ 1,200,000					
Red Pump Parallel		\$ 255,000				
Abingdon Road II				\$ 97,000	\$ 450,000	
Tollgate at Plumtree				\$ 120,600	\$ 400,000	

SEWER PROJECTS	FY95	FY96	FY97	FY98	FY99	FY00
Bush Creek P.S. Upgrade	\$ 3,300,000					
Bynum Run Parallel		\$2,100,000		\$3,100,000		\$3,100,000
Infil/Inflow		\$ 150,000		\$ 150,000		\$ 150,000
Sod Run Upgrade & Expansion	\$45,200,000					
Church Creek PS					\$ 100,000	\$ 650,000
Winters Run Parallel		\$4,750,000				

APPENDIX

PUPIL YIELD FACTORS

Nineteen subdivisions were selected from various geographic locations throughout Harford County, to include single family dwellings, townhouse units, apartments/condominium units, and mobile home units. The subdivisions selected represented newly constructed as well as established subdivisions ranging in size from 69 units to 1,025 units. Additionally, subdivisions were selected to provide a broad range of attendance areas across the County. A count was made of each student who resided in each of the nineteen subdivisions studied. The data were tabulated by unit type, and the specific pupil yields were calculated for each subdivision in the elementary, middle, and high schools.

UNIT TYPE	GRADES		
	K-5	6-8	9-12
Single Family	.43	.18	.17
Townhome	.23	.08	.11
Apartments (2 Bdrms)	.15	.03	.03
Condo (2+ Bdrms)	.15	.03	.03
Mobile Home	.07	.02	.02

Pennsylvania

York County

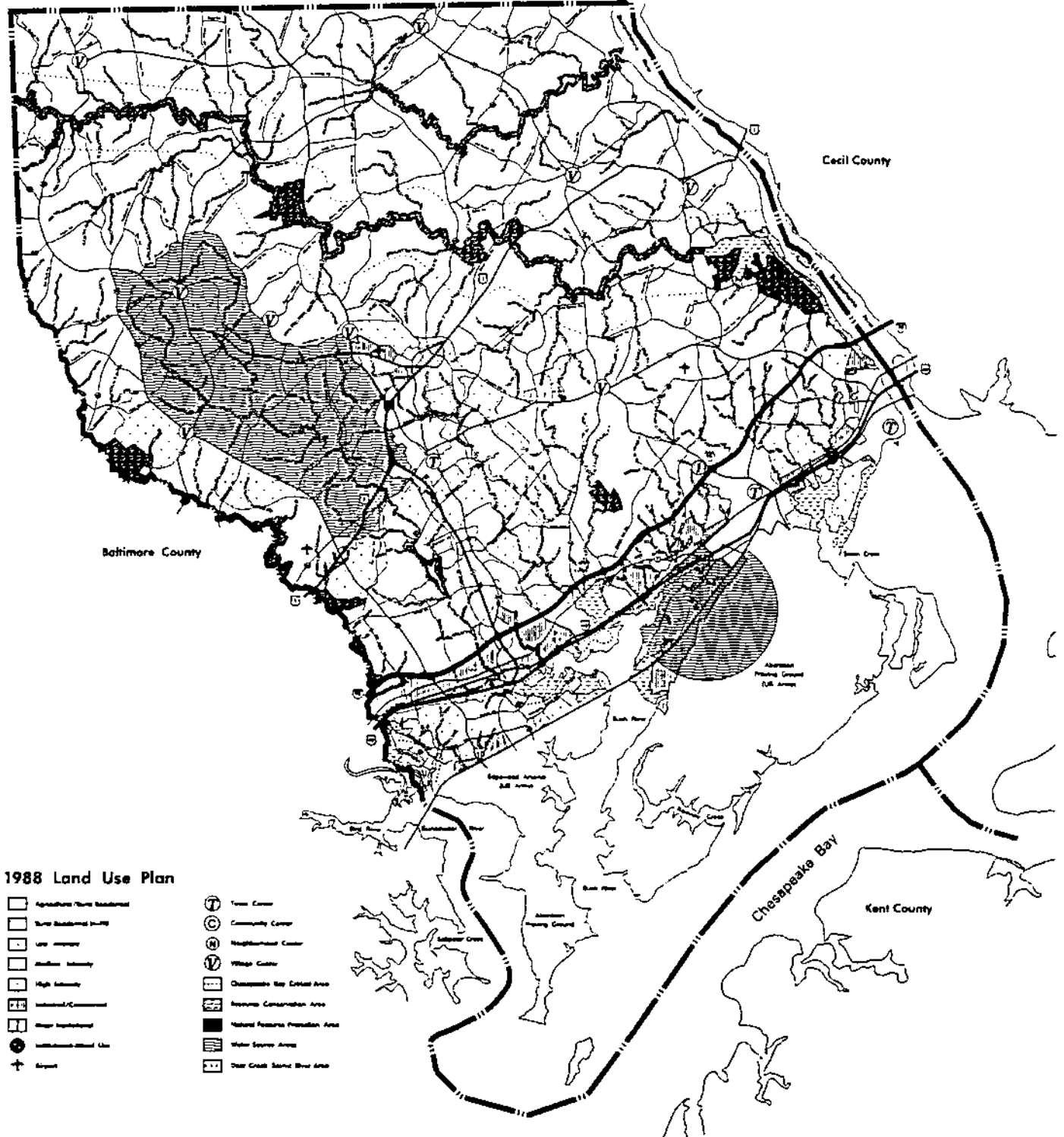
Lancaster County

Cecil County

Baltimore County

Kent County

Chesapeake Bay

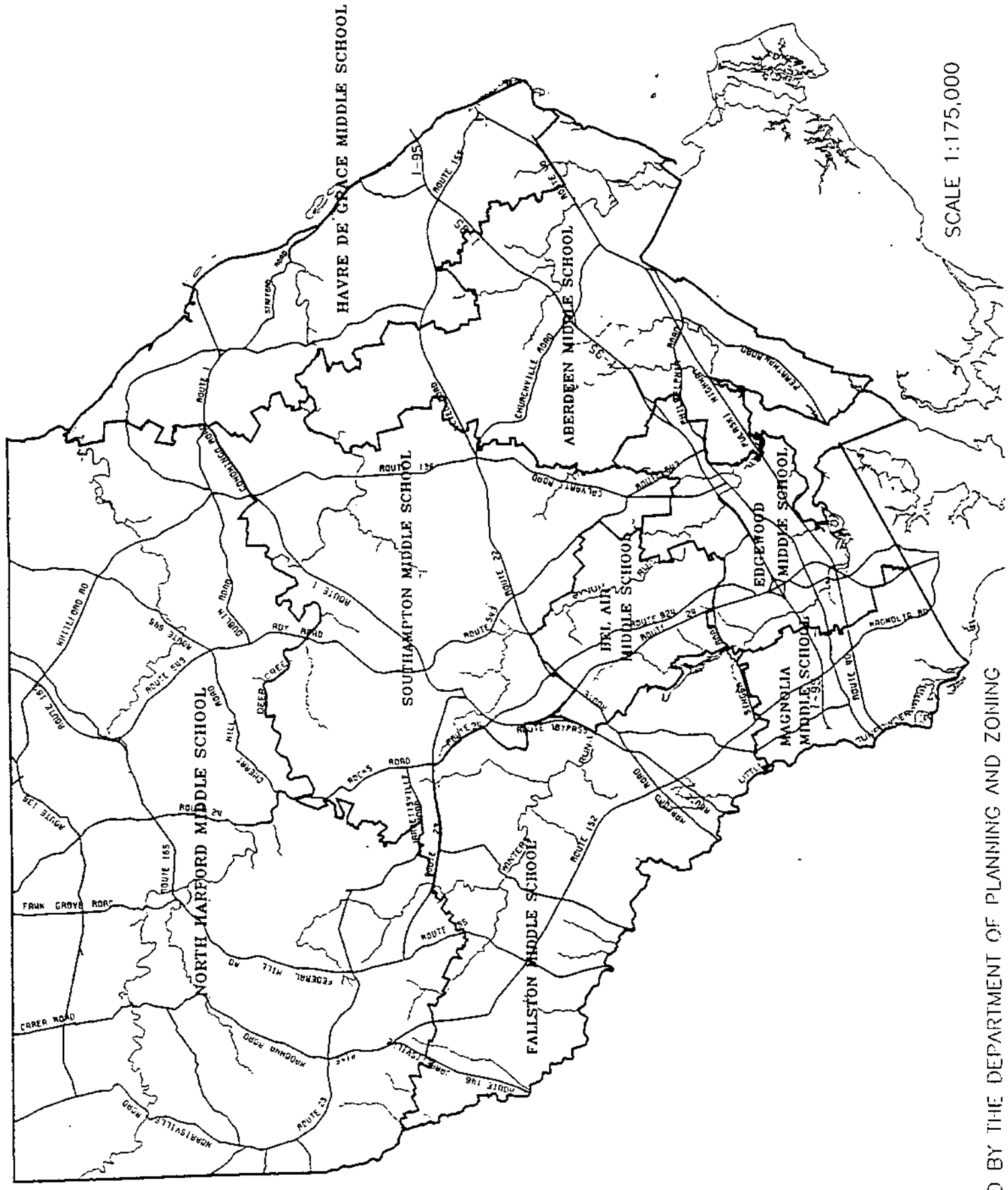


1988 Land Use Plan

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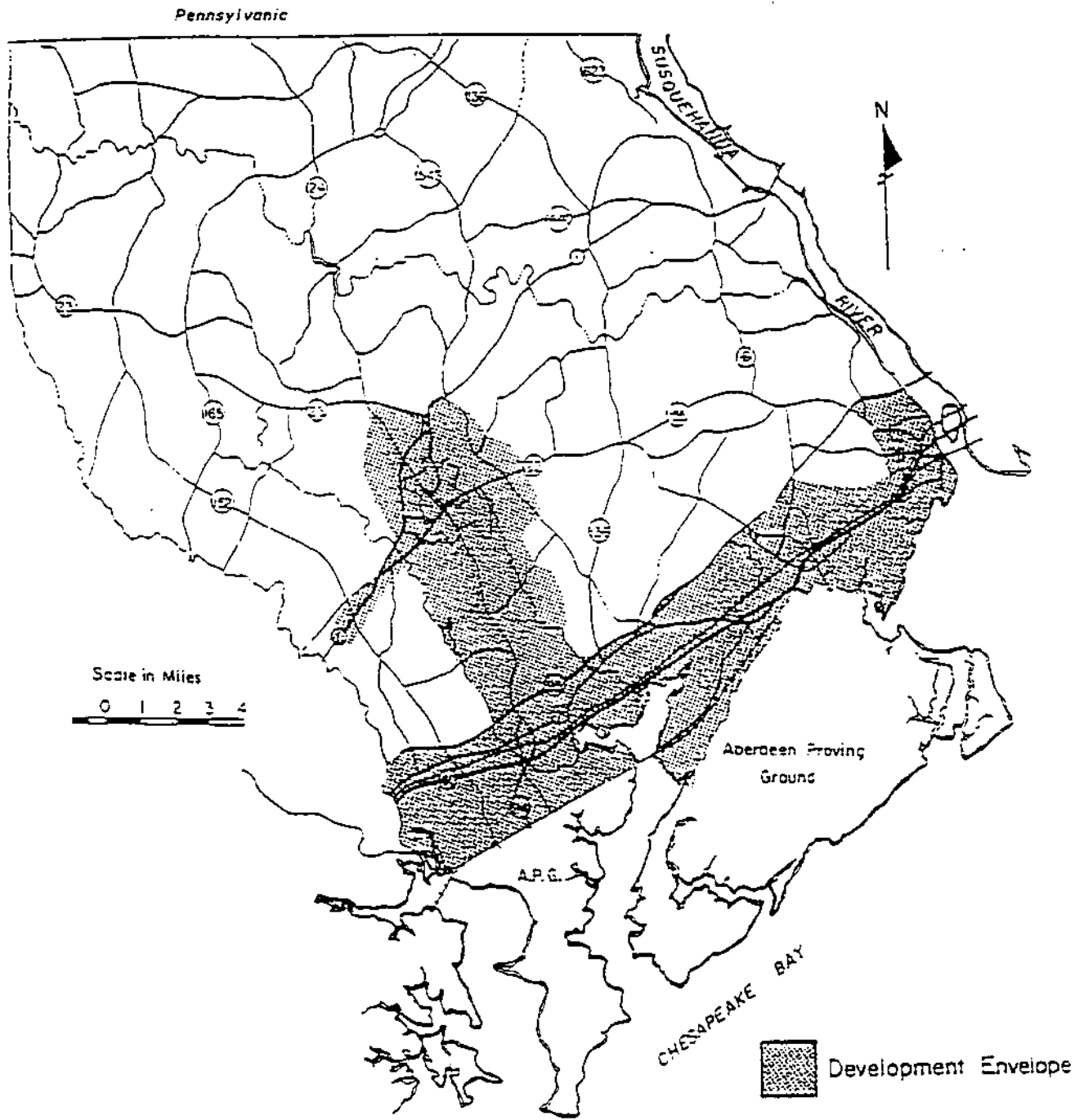


MIDDLE SCHOOL DISTRICTS HARFORD COUNTY, MD. 1994



SCALE 1:175,000

PREPARED BY THE DEPARTMENT OF PLANNING AND ZONING



Harford County
Development Envelope