Overview

Concurrency Management tests for available capacity in the following public facilities and services:

- Fire and Emergency Medical Services
- Police
- Roads
- Schools
- Public Sewer
- Public Water

In accordance with Chapter 71 proposed developments that are subject to the concurrency ordinance are tested for adequacy at the following stages of the approval process: concept, preliminary, and final. Also in accordance with Chapter 71, the mechanism for the testing is the Adequate Threshold Capacity (ATC) certificate. When a test is required, the Concurrency Manager determines which public facilities would be affected by the proposed development and distributes ATC certificates for completion by the appropriate agencies.

Fire and Emergency Medical Services

THRESHOLD FOR FIRE AND EMS

adequate –

1. projected total of late and no responses < 15% of calls, measured quarterly; and total of no responses < 4% of calls, measured quarterly; and
2. response time is <= 8 minutes from time of dispatch to on-scene arrival with adequate apparatus and personnel, using a 24-month average; and
3. all bridges and roads for the most direct route or acceptable secondary route to the project site are adequate to support fire and emergency response apparatus

approaching inadequate –

1. either the projected total of late and no responses > 15% of calls, measured quarterly, or total number of no responses > 4% of calls, measured quarterly, but not both; or
2. response time is between 8 and 10 minutes from time of dispatch to on-scene arrival with adequate apparatus and personnel, using a 24-month average

inadequate –

1. projected total of late and no responses > 15% of calls, measured quarterly; and total of no responses > 4% of calls, measured quarterly; or
2. response time is > 10 minutes from time of dispatch to on-scene arrival with adequate apparatus and personnel, using a 24-month average; or
3. a bridge or road is inadequate to support fire and emergency response apparatus for the most direct route and a bridge or road is inadequate to support fire and emergency response apparatus for the acceptable secondary route to the project site

ADMINISTRATIVE PROCEDURES

The ATC certificates are completed and signed by the Office of Public Safety Support Services (OPSSS). When a proposed residential development is tested for adequacy, the first and second criteria under the threshold are tested by reviewing 911 dispatch data for the affected fire district. The third criteria, dealing with roads and bridges, is tested by identifying the preferred and secondary routes that the fire company would take from the firehouse to the proposed development in an emergency. Any bridges on the routes are listed and compared with the list of inadequate bridges. The worst rating of the three criteria trumps the others.

Criteria 1: Late / No Response

The first criteria is the percentage of calls that result in a late or no response. The data is collected by the Emergency Operations Center, which issues reports on a monthly, quarterly and annual basis. The threshold is based on the quarterly reports.

When the Emergency Operations Center receives a call for emergency assistance, the e-911 operator determines the type of response that is needed. Based on where the call originated and the availability of personnel and vehicles, the operator dispatches the call to a particular station. In most cases the call is dispatched to the station in whose district the call originated, but in a case where personnel and/or vehicles are already responding to another call, a neighboring station may be dispatched. Whichever district is dispatched first is counted as having received the first responder call. Types of calls are grouped as either fire calls or EMS calls. When the appropriate unit pulls out from the station, the radio operator notifies the Emergency Operations Center. If more than 4 minutes elapses between the dispatch and the unit leaving the station, the call is categorized as a late response. If more than 5 minutes elapses, the operator reassigns the dispatch to a different station and the first station is charged with a no response.

The late/no response statistic tracks all the first responder dispatches in a given fire district. If more than four percent of the dispatches result in a no response, and more than fifteen percent result in a late or no response, then the service is deemed inadequate. In cases where either the no responses exceed four percent or the late plus the no exceed fifteen percent, but not both, the service is deemed approaching inadequate. Otherwise, the service is deemed adequate.

Nearly all of the companies have performed at adequate levels by the late/no response measure. As indicated in Table 9, one company, Taneytown was approaching inadequate during one quarter of FY 08 for fire service. Table 10 indicates that one company, Lineboro, was approaching inadequate during one quarter of FY 08 for EMS. With regard to EMS calls, the percentage late or no has been particularly low. Countywide, fewer than one percent of the EMS calls have been categorized as no responses for eleven quarters running. Fewer than two percent of the EMS calls have been categorized as late or no response for eleven straight quarters as well.

Table 12
FIRST DUE LATE/NO RESPONSE BY STATION – FIRE

	First Quarter FY 08 July/Aug/Sept 2007		*Second Quarter FY 08 Oct/Nov/Dec 2007*		*Third Quarter FY 08 Jan/Feb/Mar 2008*		*Fourth Quarter FY 08 April/May/June 2008*	
Department	*% Late & No*	*% No*	*% Late & No*	*% No*	*% Late & No*	*% No*	*% Late & No*	*% No*
Mount Airy	6.06%	1.52%	1.69%	0.00%	4.23%	0.00%	1.85%	0.00%
Hampstead	3.85%	1.92%	2.00%	2.00%	7.14%	2.38%	6.90%	3.45%
Westminster	1.38%	0.00%	3.27%	2.34%	3.63%	0.00%	6.06%	2.02%
Manchester	8.89%	0.00%	9.76%	0.00%	4.65%	0.00%	6.25%	0.00%
Taneytown	8.11%	0.00%	6.52%	0.00%	3.23%	0.00%	10.00%	7.50%
Pleasant Valley	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Lineboro	0.00%	0.00%	7.14%	0.00%	0.00%	0.00%	12.50%	0.00%
Union Bridge	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Reese	10.71%	3.57%	6.00%	2.00%	0.00%	0.00%	6.38%	0.00%
New Windsor	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Harney	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sykesville	2.82%	0.00%	1.53%	0.00%	1.83%	0.00%	2.67%	0.67%
Gamber	2.86%	0.00%	0.00%	0.00%	2.86%	0.00%	3.77%	1.89%
Winfield	4.88%	0.00%	6.12%	2.04%	3.28%	0.00%	3.51%	0.00%
Countywide	**3.71%**	**0.51%**	**3.49%**	**1.07%**	**2.89%**	**0.14%**	**4.64%**	**1.42%**

PART III: AVAILABLE CAPACITY OF PUBLIC FACILITIES AND SERVICES

	First Quarter FY 08 July/Aug/Sept 2007		*Second Quarter FY 08 Oct/Nov/Dec 2007*		*Third Quarter FY 08 Jan/Feb/Mar 2008*		*Fourth Quarter FY 08 April/May/June 2008*	
Department	*% Late & No*	*% No*	*% Late & No*	*% No*	*% Late & No*	*% No*	*% Late & No*	*% No*
Mount Airy	3.51%	1.75%	3.93%	0.66%	1.17%	0.58%	1.62%	0.65%
Hampstead	0.45%	0.00%	0.00%	0.00%	0.47%	0.00%	0.00%	0.00%
Westminster	1.45%	0.87%	1.00%	0.30%	0.46%	0.00%	0.31%	0.20%
Manchester	1.16%	0.58%	1.65%	1.65%	1.53%	1.02%	1.44%	0.96%
Taneytown	4.87%	1.33%	3.14%	1.35%	2.01%	1.51%	2.74%	1.37%
Pleasant Valley	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.98%
Lineboro	3.85%	0.00%	0.00%	0.00%	0.00%	0.00%	8.11%	5.41%
Union Bridge	0.00%	0.00%	0.00%	0.00%	1.47%	0.00%	0.00%	0.00%
Reese	0.00%	0.00%	1.33%	0.00%	1.29%	0.65%	1.92%	1.28%
New Windsor	1.25%	0.00%	1.67%	0.00%	0.00%	0.00%	1.49%	0.00%
Harney	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sykesville	1.09%	0.87%	0.00%	0.00%	0.00%	0.00%	0.58%	0.39%
Gamber	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Winfield	0.00%	0.00%	0.51%	0.00%	0.00%	0.00%	0.00%	0.00%
Countywide	**1.47%**	**0.69%**	**1.14%**	**0.35%**	**0.60%**	**0.24%**	**0.87%**	**0.50%**

Table 13
FIRST DUE LATE/NO RESPONSE BY STATION – EMS

Criteria 2: Average Response Time

The second criterion is average response time. The data is also collected by Emergency Operations Center. Reports are issued monthly and annually. The threshold is based on the monthly reports.

Response time is measured from the moment the e-911 operator dispatches a call until the moment the appropriate unit arrives on the scene. Average response time is the average of all the response times in a given district over a 24-month period. It is a 24-month rolling average, updated monthly. In February 2008 the criteria was changed to a 24-month measurement from the previous 12-month average. The change to a 24-month average was intended to reduce the month-to-month fluctuations and provide more predictability and consistency. For EMS, all first responder calls in a district are used to calculate the average response time. For fire service, only calls with a certain level of urgency are counted. In fact 14 call types, including house fires, are counted. Less urgent call types, such as brush fires and downed power lines, are not counted towards average response time because they do not warrant high-speed driving.

During FY 08, ten of the fourteen districts maintained adequate average response times for both fire and EMS. Four of the districts, Taneytown, Pleasant Valley, Lineboro, and Harney posted average response times at approaching inadequate levels for fire service during parts of the year. Pleasant Valley and Lineboro were approaching inadequate for EMS as well.

The high average response times in the Pleasant Valley and Lineboro Fire Districts can be attributed to the characteristics of rural fire districts. The calls in rural districts are not concentrated in one geographic area like they are in districts with a city or town. Additionally, the road network tends to be less interconnected, i.e. the route from the station to the origin of the call is less likely to resemble a straight line.

PART III: AVAILABLE CAPACITY OF PUBLIC FACILITIES AND SERVICES

		8/1/06 - 7/31/07	9/1/06 - 8/31/07	10/1/06 - 9/30/07	11/1/06 - 10/31/07	12/1/06 - 11/30/07	1/1/07 - 12/31/07	2/1/07 - 1/31/08	3/1/06 - 2/29/08	4/1/06 - 3/31/08	5/1/06 - 4/30/08	6/1/06 - 5/31/08	7/1/06 - 6/30/08
1	**Mt. Airy**	5:15	5:25	5:46	5:45	5:47	6:07	6:11	6:02	6:05	6:04	6:02	5:56
2	**Hampstead**	6:59	7:08	6:50	6:50	6:45	6:55	6:39	7:01	6:56	7:01	7:06	7:07
3	**Westminster**	6:02	6:00	6:04	6:14	6:14	6:20	6:11	5:51	6:02	6:02	6:08	6:08
4	**Manchester**	6:14	6:24	6:24	7:04	7:01	6:32	6:46	6:52	6:56	6:53	6:57	7:01
5	**Taneytown**	7:55	7:47	7:47	7:39	7:30	7:34	7:07	7:35	8:02	8:05	8:03	8:04
6	**Pleasant Valley**	8:05	8:32	8:28	9:01	8:53	9:10	9:23	8:24	8:40	8:43	8:43	8:43
7	**Lineboro**	8:59	9:00	9:00	8:45	8:13	8:32	7:58	7:47	7:21	7:21	7:21	7:25
8	**Union Bridge**	7:31	7:37	7:50	7:53	7:52	7:43	7:57	6:59	6:46	6:39	6:16	6:33
9	**Reese**	7:15	7:23	7:35	7:27	7:30	7:36	7:33	7:22	7:15	7:09	7:17	7:15
10	**New Windsor**	7:01	7:27	7:20	6:52	6:59	6:43	5:40	7:04	7:15	7:34	7:02	7:02
11	**Harney**	9:50	9:50	9:50	9:50	9:50	9:50	9:50	8:11	8:11	8:11	7:44	8:20
12	**Sykesville**	6:23	6:23	6:17	6:22	6:21	6:36	6:28	6:19	6:26	6:20	6:19	6:24
13	**Gamber**	5:53	5:54	6:03	5:59	5:56	5:35	5:33	6:20	6:27	6:20	6:19	6:03
14	**Winfield**	6:54	6:46	6:51	7:04	6:57	7:11	7:14	7:04	7:11	7:08	7:18	7:23

Table 14
AVERAGE RESPONSE TIME BY STATION – FIRE

Beginning in February 2008 the average response time criteria changed from a 12-month rolling average to a 24-month rolling average

		8/1/06 - 7/31/07	9/1/06 - 8/31/07	10/1/06 - 9/30/07	11/1/06 - 10/31/07	12/1/06 - 11/30/07	1/1/07 - 12/31/07	2/1/07 - 1/31/08	3/1/06 - 2/29/08	4/1/06 - 3/31/08	5/1/06 - 4/30/08	6/1/06 - 5/31/08	7/1/06 - 6/30/08
1	**Mt. Airy**	6:39	6:38	6:40	6:41	6:43	6:45	6:44	6:42	6:40	6:37	6:39	6:39
2	**Hampstead**	6:03	6:04	6:00	5:59	5:55	5:52	5:54	5:51	5:48	5:46	5:55	5:55
3	**Westminster**	6:25	6:26	6:25	6:25	6:25	6:25	6:25	6:23	6:22	6:25	6:26	6:27
4	**Manchester**	6:20	6:16	6:16	6:24	6:19	6:17	6:20	6:16	6:18	6:20	6:15	6:13
5	**Taneytown**	6:35	6:36	6:39	6:36	6:39	6:40	6:33	6:33	6:34	6:32	6:34	6:36
6	**Pleasant Valley**	9:53	9:38	9:43	9:43	9:32	9:36	9:30	9:51	9:45	9:14	9:40	9:38
7	**Lineboro**	8:50	8:53	8:47	8:44	8:37	8:25	8:19	8:42	8:41	8:48	8:43	8:44
8	**Union Bridge**	6:16	6:16	6:20	6:23	6:25	6:25	6:23	6:23	6:16	6:20	6:15	6:11
9	**Reese**	7:43	7:42	7:35	7:33	7:31	7:29	7:25	7:37	7:30	7:23	7:32	7:29
10	**New Windsor**	7:11	7:16	6:55	6:52	6:43	6:43	6:44	6:57	6:50	6:50	6:48	6:47
11	**Harney**	6:49	6:41	6:51	6:58	7:04	6:50	6:49	6:51	6:43	6:57	6:45	6:40
12	**Sykesville**	6:34	6:35	6:37	6:38	6:38	6:39	6:37	6:31	6:28	6:15	6:31	6:33
13	**Gamber**	6:29	6:31	6:32	6:30	6:27	6:31	6:33	6:30	6:27	6:22	6:26	6:25
14	**Winfield**	7:35	7:39	7:41	7:39	7:43	7:52	7:51	7:44	7:38	7:28	7:34	7:37

Table 15
AVERAGE RESPONSE TIME BY STATION – EMS

Criteria 3: Bridges and Roads

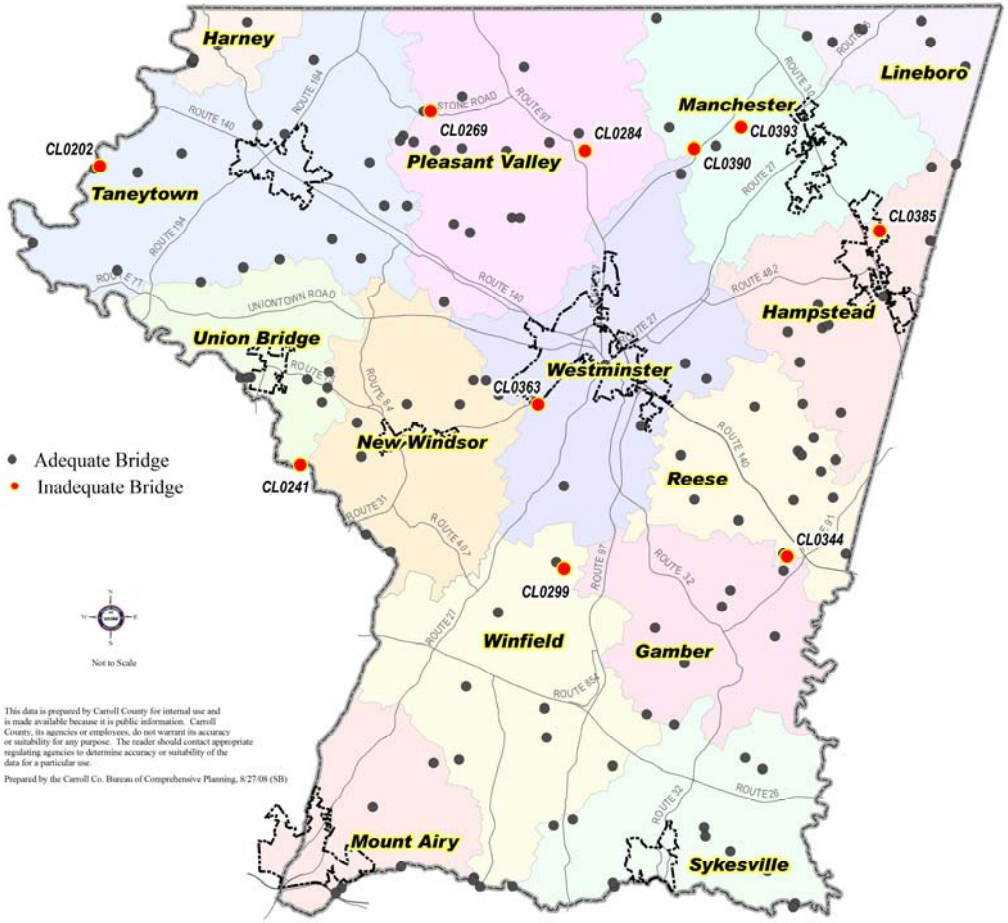
The third criterion is based on the capacity of any bridges along the route between the station and a proposed development. Data for the third criterion is provided by the OPSSS and the Department of Public Works (DPW). Available Threshold Capacity testing is completed by the OPSSS.

In spring of 2006 a consultant to the DPW completed an analysis of posted bridges in the county to determine their adequacy to carry fire equipment. In response to a request from the OPSSS, each of the 14 fire companies submitted detailed information on the weight and axle loading of their respective vehicles. The vehicle data, along with bridge ratings, bridge locations, and maps of fire districts were provided to the consultant. For the analysis a computer program was developed to model the structure type of each bridge and the axel loads and axel spacing of each fire vehicle. By using the program to model the pressures exerted as a vehicle passes over a bridge, the consultant was able to identify inadequate structures. The County also uses a consultant to perform biennial inspections of bridges on County roads.

Table 16
INADEQUATE BRIDGES AND STATUS OF PLANNED IMPROVEMENTS

Bridge No.	*Bridge Description*	*Fire District (Fire Dist. No.)*	*Restricted Fire Trucks*	*Status*
CL 385	Greenmount Church over Murphy Run	Hampstead (2)	Engine 23, Tanker 24, Truck 2	Funded in CIP. Engineering is substantially complete. Replacement slated for 2009.
CL 363	Stone Chapel over Little Pipe Creek	Westminster (3)	Tower 3	Funded in CIP. Major rehabilitation planned for 2014/2015.
CL 390	Bixlers Church over Big Pipe Creek	Westminster (3), Manchester (4)	Westm.: Engines 32 and 33, Tower 3. Manch.: Engine 44, Tanker 43, Squad 4	Request for funding in FY 10 CIP. Engineering/design in FY 11. Replacement in FY12.
CL 393	Hoover Mill over Big Pipe Creek	Manchester (4)	Tanker 43, Squad 4	No plans for improvement.
CL 202	Baumgardner over Piney Creek	Taneytown (5)	Engine 51, Tanker 54, Ladder 5	No plans for improvement. Located on a section of Baumgardner that is currently closed.
CL 269	Babylon over Silver Run	Taneytown (5)	Ladder 5	Funded in CIP. Engineering/design in FY 09. Replacement slated for 2010/2011.
CL 241	Pearre over Sams Creek	Union Bridge (8)	Engine 81, Tanker 82, Squad 8	No plans for improvement. Structure located on Frederick County border.
CL 344	Old Kays Mill over Beaver Run	Reese (9), Gamber (13)	Reese: Engine 91. Gamber: Engine 131.	No plans for improvement.
CL 299	Salem Bottom over Morgan Run	Winfield (14)	Tanker 14	No plans for improvement.
CL 284	Saw Mill over Bear Branch	Pleasant Valley (6)	Closed to all traffic.	Replacement structure is expected to be complete by January 2009.

PART III: AVAILABLE CAPACITY OF PUBLIC FACILITIES AND SERVICES



Map 3
BRIDGES INADEQUATE FOR CERTAIN EMERGENCY RESPONSE VEHICLES

Bridges on state highways, with few exceptions, are designed for all legal loads and therefore are assumed to be adequate. The three exceptions within Carroll County, two on MD 86 and one on MD 832, have posted weight limits.

When the analysis of County bridges was conducted in spring 2006, there were eleven inadequate structures in the county. Since that time two bridges have been removed from the list. Bridge CL 383 on Upper Beckleysville Road and bridge CL 305 on Twin Arch Road were removed from the list because rehabilitation projects have been completed. One bridge has been added to the table. Bridge CL 284 on Saw Mill Road was closed in July 2007 due to structural degradation found during routine biennial inspection. A replacement project is planned for completion in late 2008. As a result of the changes, Table 16 currently lists ten inadequate structures in the county. They are dispersed among nine of the fourteen fire districts. They are located on low-volume roadways that would not be part of the primary or secondary route between the local fire station and most residential developments in the fire district. In fact, one bridge (CL 241) is on the Frederick County border.

RELIEF FACILITIES IN THE CIP

EMS average response times in the Pleasant Valley and Lineboro Fire Districts remained at approaching inadequate levels throughout FY 08. There is no project in the current CIP that would provide relief. The Pleasant Valley Volunteer Fire Company increased the staffing hours of an EMS driver from 12 hours / 7 days per week to 24 hours / 7 days per week in January 2007. Following the staffing upgrade, average response times improved from inadequate levels to approaching inadequate levels.

There is no project in the current CIP that would provide direct relief to address approaching inadequate average response times for fire service in the four districts indicated in Table 14.

Several bridge repairs and replacements have been included in the County's adopted FY 09 capital budget to address inadequacies. As indicated in Table 16, replacement of bridge CL 284 on Saw Mill Road was underway in summer 2008 and slated for completion by the end of 2008. Bridge CL 385 on Greenmount Church Road is funded in the CIP for replacement in 2008. Funding is also in the CIP for replacement of bridge CL 269 on Babylon Road over Silver Run with engineering and design to begin in FY 09, and for major rehabilitation of bridge CL 363 on Stone Chapel Road over Little Pipe Creek with work to occur in FY 15.

Recommended capital improvements

As Table 16 indicates, there are four inadequate bridges for which replacement in underway or improvements are planned in the FY 09 CIP. That leaves six inadequate bridges without improvements planned in the current CIP. Excluding bridge CL 202 and bridge CL 241 for their respective locations, upgrades as necessary to make the remaining four structures adequate are recommended.

Recommended building permit caps

No caps are recommended. Due to the fluctuations inherent in the monthly data, some fire districts change between adequate and approaching inadequate or inadequate multiple times during the year. It is not practical for the County to issue a new resolution to amend the building permit caps on a month to month basis. Nor is it necessary; the Planning and Zoning Commission must review plans in accordance with Chapter 71 regardless of whether a building permit cap is in place.

Proposed changes to the boundaries of impact areas

No changes are recommended. The Concurrency Management program uses the fire district boundaries as established by the Carroll County Volunteer Emergency Services Association.

Proposed changes to threshold standards

No changes are recommended. An approaching inadequate criteria for late and no responses by fire and EMS was added as part of the code amendments adopted by the County Commissioners in February 2008.

Proposed changes in concurrency management methodology

The following change is recommended:

- Conduct a follow-up to the bridge analysis that assesses the capacity of bridges to bear the vehicles in the fleets of neighboring fire districts.

Police

THRESHOLD FOR POLICE

adequate –
projected ratio of sworn law enforcement officers to population is 1.3:1,000

approaching inadequate –
projected ratio of sworn law enforcement officers to population is between 1.2-1.3:1,000

inadequate –
projected ratio of sworn law enforcement officers to population < 1.2:1,000

ADMINISTRATIVE PROCEDURES

The data for the police threshold is compiled by the Concurrency Manager. The calculation requires a countywide population estimate and a count of sworn law enforcement officers. Population estimates are updated monthly by the Bureau of Comprehensive Planning. The population is estimated by multiplying the number of use and occupancy permits issued since the last census by the average household size in the County and adding the result to the population in the most recent census. Law enforcement officer counts are provided by the Carroll County Sheriff's Office and include sworn officers from the Sheriff's Office, Maryland State Police, and various municipal police departments. The staffing levels at the Sheriff's Office and municipal police departments are based on the number of funded positions in the annual budget of the appropriate jurisdiction. The staffing level at the Maryland State Police is subject in part to the number of officers from a statewide police force that are assigned to the Westminster Barrack at any given time. To minimize the affect of monthly fluctuations, the Concurrency Manager calculates a 12-month rolling average for the number of State Police officers serving in the county.

Future threshold capacity is projected using the following methods. Projected population from developments in the pipeline is added to the latest population estimate. Additional sheriff's deputy positions that are planned to be added each year in the current adopted Operating

Plan are added to the latest total of funded positions. The Operating Plan is a companion document to the CIP that is adopted annually by the Board of County Commissioners as part of the budgeting process.

RATIO OF SWORN LAW ENFORCEMENT OFFICERS PER 1,000 CITIZENS

The number of sworn law enforcement officers at the end of FY 08 was 229, based on staffing levels as of June 30, 2008. The County's Operating Plan (FY 09 – FY 14) indicates 3 new officer positions per year to be added.

The estimated population as of July 1, 2008 was 174,249. Including developments in the pipeline, the population is projected to be 178,783 by the end of FY 09.

The ratio of officers per 1,000 citizens at the end of FY 08 was estimated to be 1.32. The ratio at the end of FY 09 is projected to be 1.29. The ratio at the end of FY 10 is projected to be 1.28. Projecting the ratio using the development pipeline loses reliability quickly beyond a one to two year horizon. The development pipeline is made up of actual development plans that have been submitted for review. The time it takes to process a development plan from initial submittal to final approval typically ranges between six months and two years, depending on a number of factors including the type of plan. Therefore, many of the developments that will be constructed in three years do not yet appear in the pipeline.

Table 17 – NUMBER OF ACTUAL SWORN PERSONNEL IN CARROLL COUNTY

	As of July 1, 2007			*As of July 1, 2008*		
	Filled	*Currently Vacant*	*Total Available*	*Filled*	*Currently Vacant*	*Total Available*
Carroll County Sheriff's Office	64	7	71	71	0	71
Maryland State Police	81	N/A	81	80	N/A	80
Westminster Police Department	43	2	45	42	3	45
Hampstead Police	8	0	8	9	0	9
Manchester Police	5	0	5	5	0	5
Sykesville Police	7	0	7	6	1	7
Taneytown Police	11	0	11	12	0	12
TOTAL	*219*	*9*	*228*	*225*	*4*	*229*

Table 18 – PRESENT AND PROJECTED LEVEL OF SERVICE

	Population	*Total Filled Positions*	*Ratio of Officers to Population*	*Funded and Total Police Positions*	*Ratio of Officers to Population*
1-Jul-07	173,208	219	1.26	228	1.32
1-Jul-08	174,249	225	1.29	229	1.31
30-Jun-09	178,783	N/A		230	1.29

VACANCY RATE

It is important to monitor the vacancy rate among the police forces in the County. If the vacancy rate remains consistently high, then adequacy tests based on the number of funded positions might not accurately reflect the capacity of the police to serve additional population. Table 19 reports the number of funded positions that were vacant as of the first of each month from July 2007 through June 2008. The number of vacancies ranged from four to nine with an average vacancy rate of 4.17 percent.

Table 19 – VACANCY RATE AMONG POLICE FORCES IN CARROLL COUNTY

	2007						*2008*						
	JUL	*AUG*	*SEP*	*OCT*	*NOV*	*DEC*	*JAN*	*FEB*	*MAR*	*APR*	*MAY*	*JUN*	*AVERAGE*
Actual Sworn Personnel	136	137	137	139	138	138	138	137	138	138	138	138	138
In Training/Academy	3	3	4	4	4	4	5	7	4	3	2	7	4
Vacancies	8	6	7	5	6	6	5	4	6	8	9	4	6
Total Funded Positions	147	146	148	148	148	148	148	148	148	149	149	149	148
Vacancy Rate	5.44%	4.11%	4.73%	3.38%	4.05%	4.05%	3.38%	2.70%	4.05%	5.37%	6.04%	2.68%	4.17%

Table 19 does not include Maryland State Police where officers from a statewide police force are assigned to the Westminster Barracks on an as-needed basis and a vacancy rate is not applicable

RELIEF IN THE ADOPTED FY 09 OPERATING PLAN

The adopted FY 09 Operating Plan includes funding for three additional officers to be added each year. Using projected population with funded positions brings the projected ratio to 1.30 for July 1, 2009. This ratio meets the threshold for adequate level of service.

RECOMMENDATIONS

Evaluation of the feasibility of a plan for increasing the adequacy threshold to 1.5

Table 20 calculates the number of additional officers, which would be required for ratios of 1.3, 1.4 and 1.5 officers per 1,000 population, based on projected population figures. The column for number of police positions needed uses as its base the total number of current funded police positions (229).

Table 20 – POLICE OFFICERS NEEDED TO MAINTAIN SELECTED THRESHOLDS

End of Year	*Projected Population in Housing Units*	*1.3*	*Number of Police Needed to Maintain Min. Ratio*	*1.4*	*Number of Police Needed to Maintain Ratio*	*1.5*	*Number of Police Needed to Maintain Ratio*
FY 09	178,783	232	3	250	21	268	39
FY 10	181,667	236	7	254	25	273	44
FY 11	183,579	239	10	257	28	275	46
FY 12	185,141	241	12	259	30	278	49
FY 13	186,408	242	13	261	32	280	51
FY 14	187,266	243	14	262	33	281	52

The calculation in Table 20 details only the minimum number of police officers needed to maintain or achieve the selected threshold. To immediately achieve a ratio of 1.5 officers for 1,000 population would require the immediate funding of 39 additional positions.

Recommended building permit caps

No caps are recommended.

Proposed changes to the boundaries of impact areas

The impact area is the entire County, including incorporated and unincorporated areas. No changes are recommended.

Proposed changes to threshold standards

No changes are recommended at this time.

Proposed changes in concurrency management methodology

No changes are recommended at this time.

THRESHOLD FOR ROADS

adequate –
projected level of service for road segments and intersections within the traffic impact study area for the proposed project is rated Level of Service C or better

approaching inadequate –
projected level of service for road segments and intersections within the traffic impact study area for the proposed project is rated Level of Service D

inadequate –
projected level of service for road segments and intersections within the traffic impact study area for the proposed project is rated Level of Service E or F

ADMINISTRATIVE PROCEDURES

When a proposed development is tested for adequacy, the Carroll County Engineering Review Division determines which road or roads need to be evaluated. Depending on which agency owns/ maintains the affected road(s), the Available Threshold Capacity certificates are completed and signed either by the County's Engineering Review Division or by the Maryland State Highway Administration.

The threshold for roads is based on Level of Service (LOS). LOS assigns a grade of A through F to a road segment or intersection to describe and define the level of congestion. LOS A indicates few vehicles relative to the design capacity of the road or intersection. LOS F indicates a volume of traffic that chokes traffic flow. Carroll County does not perform a comprehensive LOS analysis of all roads and intersections. Neither does the County project future LOS. Instead, when a proposed development exceeds certain criteria, the County and/ or the Maryland State Highway Administration requires the developer to have a traffic impact study performed. The County and/or State meet with the developer to determine which road segments or intersections need to be evaluated. The traffic impact study determines the LOS that exists on any affected roads and the LOS that would result if the proposed development were built. The results of the traffic impact study are checked against the threshold for roads to determine adequacy.

The criteria used to determine whether a traffic impact study must be done include the projected number of vehicle trips the proposed development will generate and the traffic count on the affected road(s). The County's guidelines for traffic impact studies are listed in chapter 5 of the Design Manual Vol. 1 – Roads and Storm Drains. A traffic impact study is required for any proposed development that will generate 50 or more peak hour trips. A traffic impact study may be required for any proposed development that will generate 25 or more peak hour trips. In addition, a traffic impact study may be required for proposed developments in the vicinity of areas previously identified as having LOS E or F, hazardous locations, or other concerns.

If a traffic impact study is not required, the Department of Public Works determines adequacy using the following types of information:

functional classification – a designation assigned to a road that indicates the amount of traffic the road should be designed to carry. An inventory of functional classification designations for County roads was updated by the Department of Planning and the Department of Public Works in 2007.

traffic counts – a measurement of the number of vehicles passing a point on a road during certain times of day. The Department of Public Works updates the traffic counts on County roads every three years.

trip generation factors – an estimate of the amount of traffic generated by various types of development. Typically trip generation for residential development is estimated by multiplying the number of dwelling units (e.g. houses, apartments, etc.) in the proposed development by a predetermined factor.

By adding the trip generation factor to existing traffic count data, the Department of Public Works can estimate the traffic volume on a roadway if a proposed development were built. The projected traffic volume is then compared with standards for the volume of traffic that the various functional classifications of roadway are designed to carry. The result is a projected level of service that is checked against the threshold for roads to determine adequacy.

Recommended capital improvements

No capital improvements are recommended.

Recommended building permit caps

No caps are recommended.

Proposed changes to the boundaries of impact areas

Study areas are determined on a case by case basis when a proposed project is tested for adequacy.

Proposed changes to threshold standards

No changes are recommended at this time.

Proposed changes in concurrency management methodology

A comprehensive LOS analysis would enable the County to project inadequacies among roads.

Schools

THRESHOLD FOR SCHOOLS

adequate –	elementary or high school: projected enrollment equals or is less than 109% of State-rated capacity middle school: projected enrollment equals or is less than 109% of functional capacity
approaching inadequate –	elementary or high school: projected enrollment is 110% to 119% of State-rated capacity middle school: projected enrollment is 110% to 119% of the functional capacity
inadequate –	elementary or high school: projected enrollment exceeds 120% of State-rated capacity middle school: projected enrollment exceeds 120% of functional capacity

BACKGROUND

The threshold for schools compares a school's projected enrollment with its capacity. Carroll County measures the capacity in middle schools differently than it measures capacity in elementary or high schools. The threshold for middle schools is based on functional capacity instead of State-rated capacity.

Functional capacity: the measurement of capacity used by Carroll County for middle schools [# of teaching stations for core curriculum subjects (i.e. includes math, English, science and doesn't include music, media center, etc.) x 25 students per teaching station]

State-rated capacity: the measurement of capacity used by Carroll County for elementary and high schools

Elementary [# of classrooms x 23 students per classroom (grades 1-5), x 22 students per classroom (kindergarten), x 20 students per classroom (pre-k)]

High school [# of teaching stations (gym, media center, computer lab, classrooms) x .85 utilization factor x 25 students per station]

The key difference between functional capacity and State-rated capacity lies in whether all classrooms are counted or only core curriculum teaching stations are counted. A State-rated capacity figure is available for each middle school, but Carroll County uses functional capacity instead. Carroll County elects to use functional capacity as the measurement for middle school facilities because it takes into account the team approach that underpins the middle school philosophy. The team approach allows teachers of core curriculum subjects to be organized into blocks and, within each block, to share a joint planning period. The non-core curriculum teaching stations such as gyms and media centers do not count towards a measurement of functional capacity. Throughout a school day, as various blocks of students rotate through the non-core teaching stations, one block of core curriculum classrooms and its teachers is always free, i.e. the joint planning period. When functional capacity is used, a middle school has capacity for fewer students than it would under State-rated capacity.

The Carroll County Board of Education and Board of County Commissioners continue to build new schools to accommodate growing enrollments. The most recently completed new school, Ebb Valley Elementary, opened in August 2008. As of the drafting of this report, construction was underway at the site for Manchester Valley High and doors are expected to open in August 2009. The FY 09 – FY 14 CIP also includes plans for additional classrooms for full-day kindergarten at Winfield Elementary and William Winchester Elementary, construction of a new elementary school in southeastern Carroll County and construction of a new middle school in southern Carroll County.

The 2009-10 to 2018-19 Enrollment Projections include adjustments to the State-rated capacity for one elementary school. The State-rated capacity at Mt. Airy Elementary was adjusted downward as a result of an expansion of administrative facilities. Of the nine middle schools in the county, the capacity of seven schools was adjusted. The capacity of New Windsor, North Carroll, Sykesville, and Westminster East Middle schools were adjusted to correct inaccuracies in previous capacity ratings. The capacity of Special Education classrooms in Oklahoma Middle, Shiloh Middle, and Westminster West Middle was adjusted. The planned capacity of the new Manchester Valley High is included beginning in FY 10.

ANALYSIS

Annually, the Carroll County Board of Education provides enrollment projections for a ten-year period of which the first six years are included in the County's CIP. The projections are used to determine if building permit caps should be put in place. The projections are usually completed by the middle of November. Chapter 71 provides for building permit caps to be enacted during any portion of the year. The Board of County Commissioners, on February 7, 2007, adopted building permit caps in the Charles Carroll Elementary, Freedom Elementary, Piney Ridge Elementary, Mount Airy Middle, Sykesville Middle, and North Carroll High attendance areas. The Board of County Commissioners, on January 31, 2008, lifted building permit caps in the Charles Carroll Elementary, Freedom Elementary, Piney Ridge Elementary, and Sykesville Middle attendance areas. A building permit cap remains for the Mount Airy Middle, North Carroll High School attendance areas, as well as the Freedom Water service area.

The following tables list enrollments as a percentage of facility capacity so that adequacy can easily be assessed. The information in the tables is extracted from Carroll County Board of Education enrollment projections data which is prepared annually as part of the Facilities Master Plan. As for student population projections by the County, Carroll County Government currently uses Board of Education projections for its planning purposes. Therefore, the following tables serve as the basis for determining current and future inadequacies in the schools. Enrollment projections through September 2014, i.e. FY 15, are included in the tables. The currently adopted CIP covers the 6-year period (FY09 through FY 14). The final column in Tables 21-23 will not be applicable during the current CIP. It is included in this report to provide the enrollment projections that will be needed once the FY 10 CIP is adopted in spring 2009. To correspond with the adequacy threshold for middle schools, Table 22 lists functional capacity, rather than State-rated capacity, for each facility.

Table 21 shows projected enrollments as a percentage of State-rated capacities among elementary schools. Three elementary schools are projected to be approaching inadequate during the current CIP: Freedom, Piney Ridge and William Winchester. No elementary schools are projected to be inadequate.

PART III: AVAILABLE CAPACITY OF PUBLIC FACILITIES AND SERVICES

	State Rated Capacity			Actual	Projected[1]					
Elementary School	K thru 5	Pre K	Spec Ed	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15[2]
Carrolltowne	548	0	50	101.3%	105.2%	108.2%	107.9%	105.9%	107.4%	108.0%
Charles Carroll	320	0	0	97.2%	99.7%	103.8%	102.8%	99.4%	102.8%	102.8%
Cranberry Station	550	20	0	82.1%	86.3%	87.7%	89.3%	89.3%	90.9%	91.1%
Ebb Valley[1]	571	20	0	79.0%	80.2%	81.9%	81.4%	84.4%	84.9%	83.8%
Eldersburg	570	0	0	94.2%	93.7%	94.2%	96.0%	94.4%	94.9%	94.6%
Elmer Wolfe	548	0	0	75.4%	75.2%	76.3%	78.1%	77.2%	77.6%	77.9%
Freedom[1]	481	0	0	113.9%	**105.1%**	**109.3%**	**105.7%**	**108.4%**	**110.1%**	**110.9%**
Friendship Valley	527	0	0	87.1%	87.7%	88.4%	89.8%	92.4%	92.0%	88.8%
Hampstead	548	0	40	65.1%	66.0%	68.9%	68.5%	69.7%	70.2%	68.7%
Linton Springs	731	0	0	90.8%	92.2%	94.8%	96.6%	95.1%	93.4%	94.7%
Manchester	707	20	0	80.7%	80.2%	79.9%	80.3%	82.3%	80.7%	81.4%
Mechanicsville	616	0	0	94.0%	91.9%	91.4%	96.1%	97.1%	97.2%	95.1%
Mt. Airy	598	0	0	81.8%	81.4%	87.0%	83.4%	88.5%	88.1%	89.0%
Parr's Ridge	590	20	0	80.7%	85.6%	85.2%	86.1%	84.3%	83.0%	82.1%
Piney Ridge	571	0	0	105.6%	106.3%	107.9%	108.8%	108.6%	110.0%	110.2%
Robert Moton	504	0	40	82.5%	82.0%	82.7%	82.4%	82.5%	82.7%	83.1%
Runnymede	594	20	40	81.7%	78.7%	80.3%	81.2%	81.2%	77.4%	82.7%
Sandymount	527	0	0	83.7%	84.1%	85.2%	85.2%	84.4%	84.1%	85.6%
Spring Garden	593	0	0	92.7%	92.4%	93.4%	93.3%	95.4%	92.1%	93.1%
Taneytown	550	20	0	83.7%	80.4%	80.2%	81.2%	82.3%	80.2%	82.3%
Westminster	570	0	0	99.6%	100.4%	101.1%	101.4%	102.1%	104.7%	103.2%
Wm. Winchester	504	20	0	102.9%	108.8%	113.5%	116.0%	116.6%	116.8%	114.3%
Winfield	665	0	40	91.9%	94.8%	94.6%	96.7%	96.3%	96.5%	96.5%

Table 21 – Elementary Schools 2008-2014 Enrollments as a Percentage of State-Rated Capacity

Source: Carroll County Public Schools
Notes:

[1] Projected enrollment capacity percentages in **bold** type are based on the Board of Education's projections in that they account for construction projects that will expand State-rated capacity beginning in either FY 09 or FY 10. If the planned projects are not completed, the enrollment capacity percentages for the affected schools will need to be adjusted and some schools would change in status with regard to the adequacy threshold for schools.

[2] As stated above, enrollment projections for FY 15 will not be applicable until the FY 10 CIP is adopted in spring 2009.

Table 22 –
Middle Schools
2008-2014 Enrollments as a Percentage of Functional Capacity

	Functional Capacity		Actual	Projected					
Middle School	6 thru 8	Spec Ed	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15[1]
Mt. Airy	500	10	118.2%	116.5%	113.5%	121.0%	121.6%	128.2%	122.5%
New Windsor	500	10	82.9%	85.7%	82.0%	77.6%	77.6%	79.0%	81.8%
North Carroll	750	20	80.9%	79.2%	80.4%	78.6%	73.4%	74.4%	74.3%
Northwest	775	10	66.1%	66.2%	64.3%	66.8%	60.3%	63.4%	59.2%
Oklahoma Road	825	20	98.8%	93.1%	85.9%	91.2%	92.5%	94.9%	90.7%
Shiloh	825	20	86.7%	88.0%	78.3%	80.6%	76.6%	80.9%	79.2%
Sykesville	725	20	115.2%	113.8%	110.1%	105.4%	107.9%	109.7%	112.8%
Westminster East	750	40	92.9%	90.8%	92.5%	93.8%	101.3%	102.9%	106.1%
Westminster West	1025	20	96.4%	98.4%	97.3%	94.9%	88.9%	87.2%	93.6%

Source: Carroll County Public Schools

Notes:

[1] As stated above, enrollment projections for FY 15 will not be applicable until the FY 10 CIP is adopted in spring 2009.

Table 23 –
High Schools
2008-2014 Enrollments as a Percentage of State-Rated Capacity

	State-Rated Capacity		Actual	Projected					
High School	9 thru 12	Spec Ed	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15[2]
Century	1190	50	103.7%	102.4%	100.0%	97.7%	95.0%	92.4%	89.8%
Francis Scott Key	1254	50	90.8%	87.7%	82.7%	76.9%	79.0%	75.8%	72.6%
Liberty	1063	0	112.5%	113.0%	112.0%	108.1%	104.8%	98.1%	98.3%
Manchester Valley[1]	1254	40		**44.2%**	**55.4%**	**55.0%**	**54.7%**	**53.1%**	**54.0%**
North Carroll	1339	20	121.0%	74.5%	61.5%	57.4%	55.6%	53.6%	51.4%
South Carroll	1233	0	91.8%	88.6%	89.5%	88.9%	87.3%	86.9%	88.9%
Westminster	1849	30	95.5%	91.8%	91.4%	89.2%	87.3%	87.1%	84.1%
Winters Mill	1190	50	96.2%	95.9%	93.4%	94.0%	93.8%	93.3%	96.7%

Source: Carroll County Public Schools

Notes:

[1] Projected enrollment capacity percentages in **bold** type are based on the Board of Education's projections in that they account for the Manchester Valley High project that will provide relief capacity beginning in 2009. If the planned project is not completed, the enrollment capacity percentages for affected schools will need to be adjusted and some schools would change in status with regard to the adequacy threshold.

[2] Enrollment projections for FY 15 will not be applicable until the FY 10 CIP is adopted in spring 2009.

Among middle schools listed in Table 22, one school faces projected inadequacies during the current CIP. Mount Airy Middle School is approaching inadequate in FY 09, 10, and 11 and is projected to be inadequate in FY 12 through FY 14. Sykesville Middle School is currently approaching inadequate and is projected to remain approaching inadequate through FY 11.

Among high schools, as shown in Table 23, North Carroll High School is currently inadequate and is projected to remain inadequate until Manchester Valley High School opens its doors in August 2009 (FY 10). Additionally, Liberty High School is currently approaching inadequate and projected to remain so through FY 11.

Chapter 71 calls for an analysis of site limitations for adding portable classrooms. Individual site analyses are done on an as needed basis (the Board of Education has a budget to move four or five relocatables per year). The site analysis is more an evaluation of where best to locate the portables and not whether it can be done. Portables are for providing short-term relief for schools undergoing construction or facing a temporary capacity issue. No additional available capacity results from portables.

RELIEF FACILITIES IN THE CIP

Elementary Schools:

The enrollment projections for Freedom Elementary for FY 10 onwards are based on the planned added capacity that will result from the construction of kindergarten classroom additions. Looking farther ahead, the CIP plans for a new southeast area elementary school to relieve growing enrollments in a number of elementary schools. Funding of $31.1 million is planned in FY 12–14 for the construction of a new elementary school in the southeast region of the county to relieve crowding in Eldersburg, Carrolltowne, Piney Ridge, Linton Springs and Freedom Elementary Schools. This school is scheduled to open in FY 15.

Middle Schools:

Funding of $54.6 million is planned for a new middle school in FY 10–12 to relieve crowding in Oklahoma, Sykesville, and Mount Airy Middle Schools. This school is scheduled to open in FY 13.

High Schools:

The construction of Manchester Valley High School will relieve the inadequacy at North Carroll High School. The school is planned for completion in August 2009. The CIP provides an additional $11.0 million in funding in FY 09 for equipment and furnishings for the new 215,780 square foot school that is scheduled to open in FY 10.

RECOMMENDATIONS

Recommended capital improvements

No additional capital improvements are recommended at this time.

Recommended building permit caps

In southern Carroll County, one school faces inadequacies during the current six-year CIP: Mount Airy Middle. Although there is a relief facility planned, the timing of construction is uncertain due to the fact that a site has not yet been selected. Staff recommends a zero-permit cap be placed on the enrollment districts for Mount Airy Middle School through FY 14.

Proposed changes to the boundaries of impact areas

The Concurrency Management program uses the enrollment districts for each school as established by the Carroll County Board of Education. New attendance area boundaries will go into affect when Manchester Valley High School is completed.

Proposed changes to existing or adopted threshold standards

No changes are recommended with regard to the threshold standards for schools.

Proposed changes in concurrency analysis methodology

No changes are recommended at this time.

THRESHOLD FOR PUBLIC WATER

adequate –
projected maximum day demand < 85% of the total system production capacity
approaching inadequate –
projected maximum day demand 85 - 94.99% of the total system production capacity
inadequate –
projected maximum day demand >= 95% of the total system production capacity

THRESHOLD FOR PUBLIC SEWER

adequate –
projected average daily flow < 85% of the wastewater treatment facility permitted capacity
approaching inadequate –
projected average daily flow 85 - 94.99% of the wastewater treatment facility permitted capacity
inadequate –
projected average daily flow >= 95% of the wastewater treatment facility permitted capacity

ADMINISTRATIVE PROCEDURES

Carroll County operates three public utility facilities, including: Hampstead Sewerage System, Freedom District Sewer, and Freedom District Water. ATC certificates for water and/or sewer service in the Freedom area and sewer service in the Hampstead area are completed and signed by the Bureau of Utilities in the Department of Public Works. For projects in unincorporated areas of the County that are planned to connect to a municipally owned water or sewer system, the ATC certificates are completed and signed by the municipality.

The adequacy thresholds for water and sewer are both based on measurement of flows, but they are each handled differently. The adequacy threshold for water requires that the County compare the projected maximum day demand for water with the total production capacity of the system. The total system production capacity (TSPC) is the amount of water flow the system can provide. It is typically measured in million gallons per day (mgd). The maximum day demand is calculated by applying a factor of 1.75 to the projected annual average day demand which consists of three components:

- the existing demand for water of all users hooked up to the system;

- the total projected demand of any developments that have received preliminary or final approval from the Commission but have not yet hooked up to the system; and
- the projected demand for water that the proposed development currently undergoing testing for adequacy would generate.

For the projections, the County uses the Maryland Department of Environment (MDE) standard which is to multiply the number of proposed residential units by 250 gallons per day (gpd). The resulting number, expressed in gpd, represents the amount of water flow that the proposed development would draw from the system if it were connected, i.e. the projected demand of the development. As proposed developments go through the approval process, the Bureau of Utilities is responsible for monitoring the status of all projects that would connect to County water, including those not subject to Chapter 71, and the impact the projected demand would have on capacity in the water system.

The adequacy threshold for sewer requires that the County compare the projected annual average daily flow of wastewater with the wastewater treatment facility permitted capacity. The wastewater treatment facility is permitted and monitored by MDE and its capacity is expressed in mgd. For the purpose of testing the projected adequacy of sewer service capacity, the projected average daily flow consists of three components:

- the existing usage by all connections to the system;
- the total projected usage by any developments that have received preliminary or final approval from the Commission but have not yet hooked up to the system; and
- the projected usage by the proposed development currently undergoing testing for adequacy.

For the usage projections, the County uses the MDE standard which is to multiply the number of proposed residential units by 250 gpd. The resulting number, expressed in gpd, represents the amount of wastewater treatment capacity the proposed development would use if it were connected, i.e. the projected usage by the development. As with water service, the Bureau of Utilities monitors the status of all projects that would connect to a County sewer system, including those not subject to Chapter 71.

Freedom Water Supply

Freedom Water Plant	3.012 MGD
Fairhaven Well	0.340 MGD
Raincliffe Well	0.381 MGD
Total System Production Capacity (TSPC)	3.733 MGD

85% of TSPC 3.733 x .85 = 3.173 MGD

95% of TSPC 3.733 x .95 = 3.546 MGD

Chapter 71 states that maximum day demand is calculated by multiplying the annual average day demand for water by 1.75. For the purpose of determining the annual average day demand for water, the Bureau of Utilities reviews the annual average daily flows from the five preceding years and uses the five-year average or the preceding year, whichever is higher.

2007 Annual Average Day Demand	=	2.174 MGD
5-year Average Day Demand	=	2.158 MGD
Projected Annual Average Day Demand	=	2.174 MGD
Calculated Maximum Day Demand (1.75 x 2.174)	=	3.805 MGD
Calculated % of TSPC (3.805 ÷ 3.733)	=	102%

The Freedom Water System has reached capacity of the present system, and in accordance with Chapter 71, the facility is defined as inadequate. The Department of Public Works maintains a list of plans in the service area for Freedom Water. When a relief facility comes online, projects will be served on a first come first served basis.

Freedom Sewer

Design Capacity	3.500 MGD
Permitted Capacity	3.500 MGD

85% Permitted Flow (3.50 x .85) = 2.975 MGD

95% Permitted Flow (3.50 x .95) = 3.325 MGD

2005 Average Daily Flow	2.103 MGD
2006 Average Daily Flow	2.186 MGD
2007 Average Daily Flow	2.150 MGD
3-year Average	2.146 MGD
Projected Annual Average Daily Flow	2.150 MGD

The standard for sewer in Chapter 71 is based on the projected annual average daily flow. For the purpose of determining the projected annual average daily flow for sewer, the higher of the 3-year average or the preceding year is used. The County and State share the use of the waste-water treatment facility. Of the 3.5 MGD capacity, the County can allocate 2.6 MGD and the State can allocate 0.9 MGD.

The Freedom Sewer Plant is operating at less than 85% of permitted capacity and therefore meets the adequate threshold standard.

Hampstead Sewer

Design Capacity	0.900 MGD
Permitted Capacity	0.900 MGD
85% Permitted Flow (0.9 x .85) = .765 MGD	
95% Permitted Flow (0.9 x .95) = .855 MGD	
2005 Average Daily Flow	0.623 MGD
2006 Average Daily Flow	0.619 MGD
2007 Average Daily Flow	0.642 MGD
3-Year Average	0.628 MGD
Projected Annual Average Daily Flow	0.642 MGD

The Hampstead Sewer Plant is operating at less than 85% of permitted capacity and therefore meets the adequate threshold standard.

RELIEF FACILITIES IN THE CIP

A capacity expansion to the Freedom Water Supply System will add 4 MGD to the existing 3.7 MGD capacity. The added capacity is planned to be on-line in spring 2009 at a cost of $27 million. Eighty percent of the project cost is to be paid by new development.

RECOMMENDATIONS

Recommended capital improvements

No capital improvements are recommended at this time.

Recommended building permit caps

On January 31, 2008, the Board of County Commissioners adopted Resolution 717-08 which maintained a building permit cap of zero in the Freedom Water District through FY 2008. The cap ended on July 1, 2008. If a facility is inadequate but a relief facility is anticipated to be operational within six months, Chapter 71 allows for the recordation of subdivisions or final approval of site plans. In anticipation of the capacity expansion at the Freedom water treatment plant, no caps on building permits are recommended at this time.

Proposed changes to the boundaries of impact areas

Study areas are determined on a case by case basis when a proposed project is tested for adequacy.

Proposed changes to threshold standards

No changes are recommended at this time.

Proposed changes in concurrency management methodology

No changes are recommended at this time.