

**APG MARYLAND AT THE READY**

**6 JULY 2005**

**BRAC COMMISSION STAFF**

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**COMMUNITY READINESS FOR  
BRAC RECOMMENDATIONS AT  
ABERDEEN PROVING GROUND**

**APG COMMUNITY  
READINESS OVERVIEW**

**1**

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**COMMUNITY SUPPORT  
FOR PROPOSED  
BRAC CHANGES**

**2**

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**INSTALLATION  
COMPARISONS**

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**WORKFORCE ANALYSIS**

**4**

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**HIGHER EDUCATION  
INSTITUTIONS**

**5**

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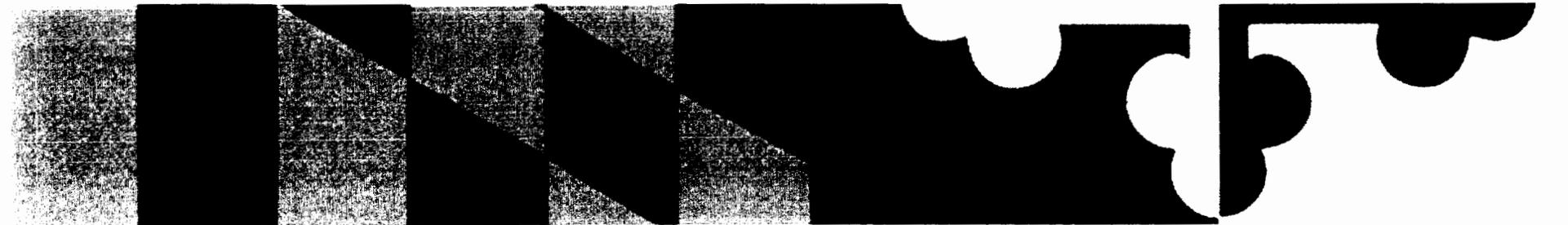


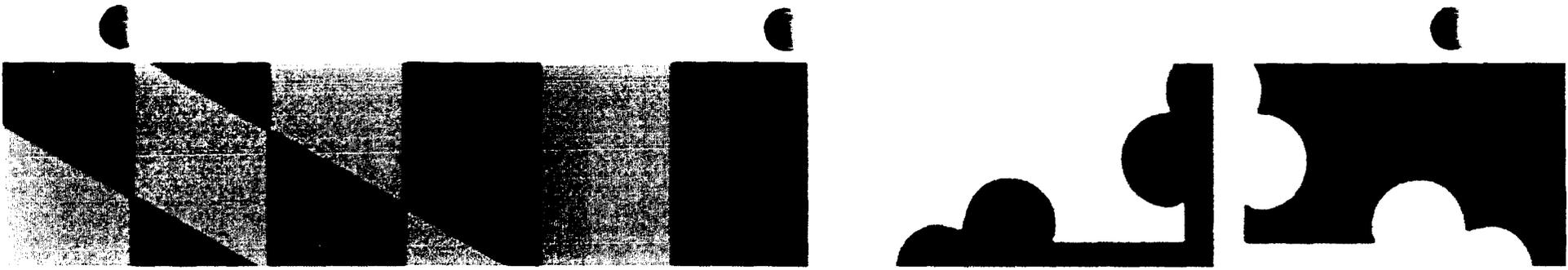
**APG MARYLAND AT THE READY**

**6 JULY 2005**

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**COMMUNITY READINESS**





# **APG MARYLAND AT THE READY**

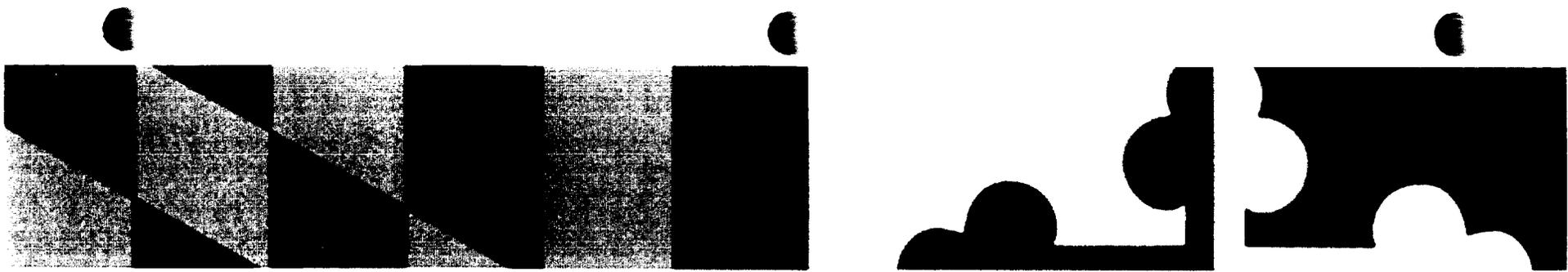
## **Proposed BRAC Changes at APG**

### **Losses**

- **The Ordnance School to Fort Lee, VA**
- **The Army Environmental Center, to Fort Sam Houston, TX**

### **Gains**

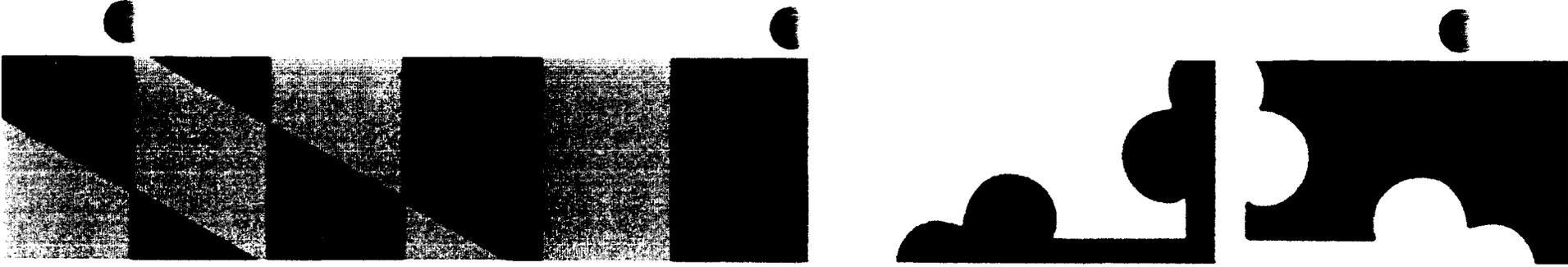
- **A new communications-electronics life cycle management command**
- **Chemical and biological defense organizations relocate to APG from seven sites**
- **Army Test & Evaluation Command HQ relocates to APG**
- **The Civilian personnel management center at APG becomes larger**
- **Two Army Research Laboratory directorates move to APG**



# **APG MARYLAND AT THE READY**

## **APG Personnel Distribution**

<b>Harford County</b>	<b>65.50%</b>
<b>Cecil County</b>	<b>12.90%</b>
<b>Baltimore</b>	<b>8.60%</b>
<b>Pennsylvania</b>	<b>4.70%</b>
<b>Other Maryland</b>	<b>2.90%</b>
<b>Virginia</b>	<b>2.10%</b>
<b>Delaware</b>	<b>1.90%</b>
<b>Other States inc D.C</b>	<b>1.30%</b>
<b>New Jersey</b>	<b>0.10%</b>



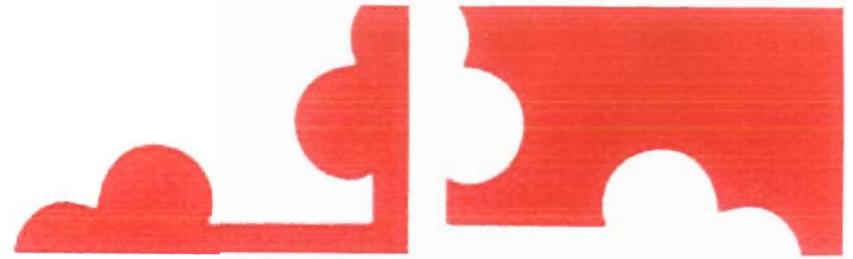
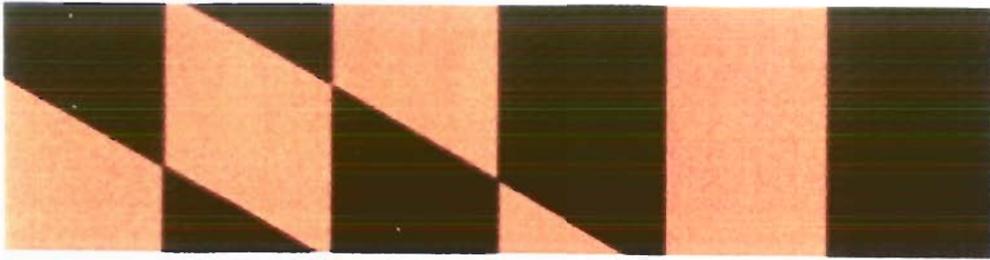
# APG MARYLAND AT THE READY

## Workforce

### Maryland workers achieve top ranks

- First in percentage of professional, technical workers
  - First in PhDs in Math & Health Science
  - Second for Biological Science
  - Third in Physical Science
  - Fifth in Computer and Information Sciences
- 
- Maryland is **FIRST** in % population over 25 with bachelors or higher degree
  - Maryland is **SECOND** in number of people with advanced degrees

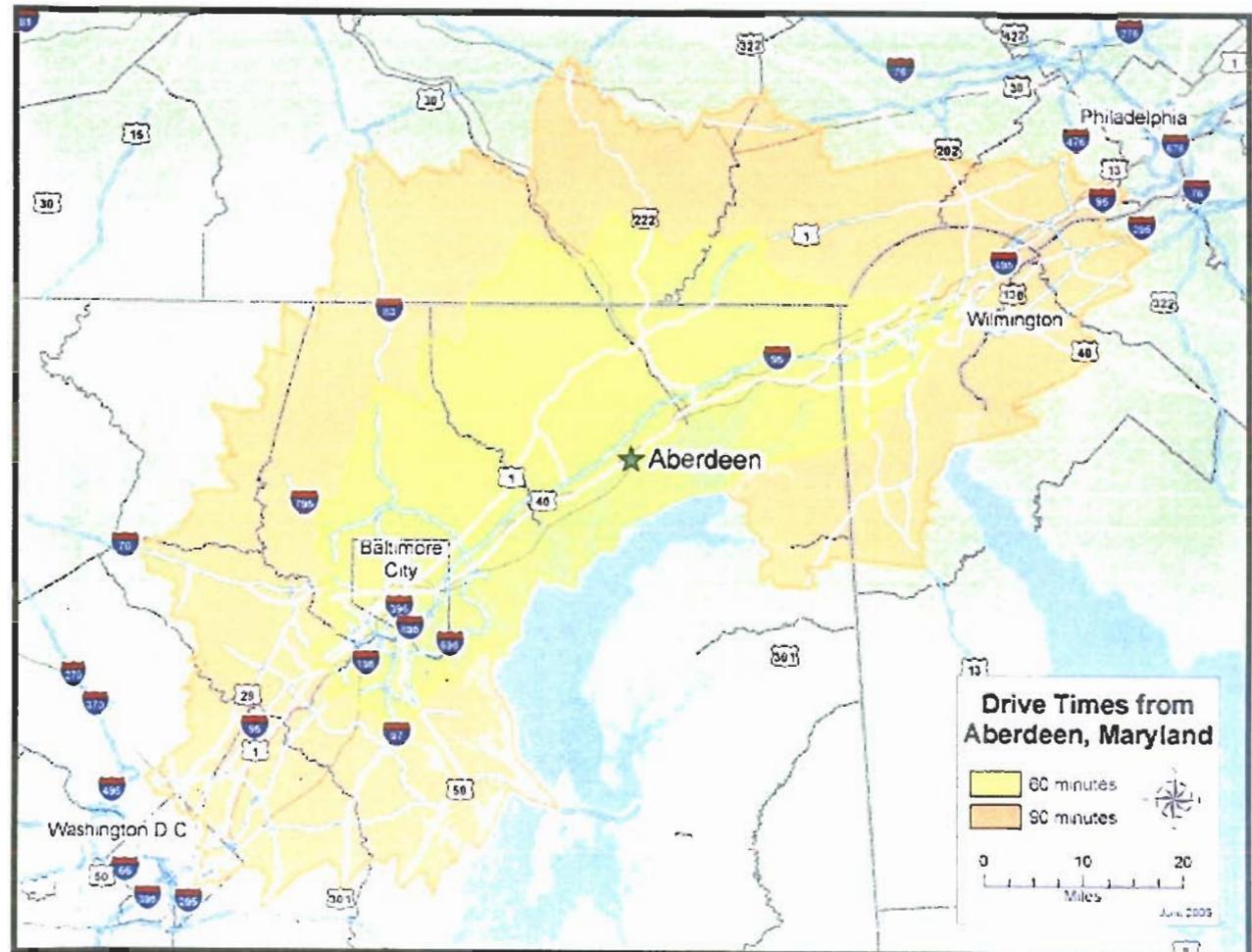


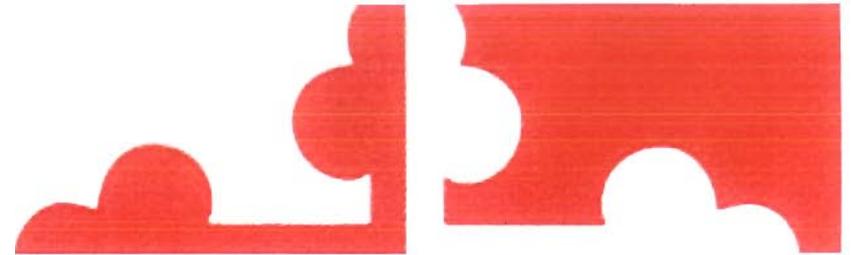
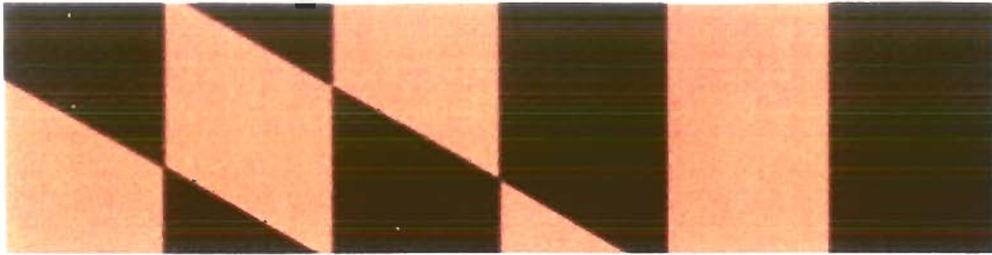


# APG MARYLAND AT THE READY

## Available Workforce

- 200,000+ professionals within 60 mile radius
- 500,000+ professionals within 90 mile radius

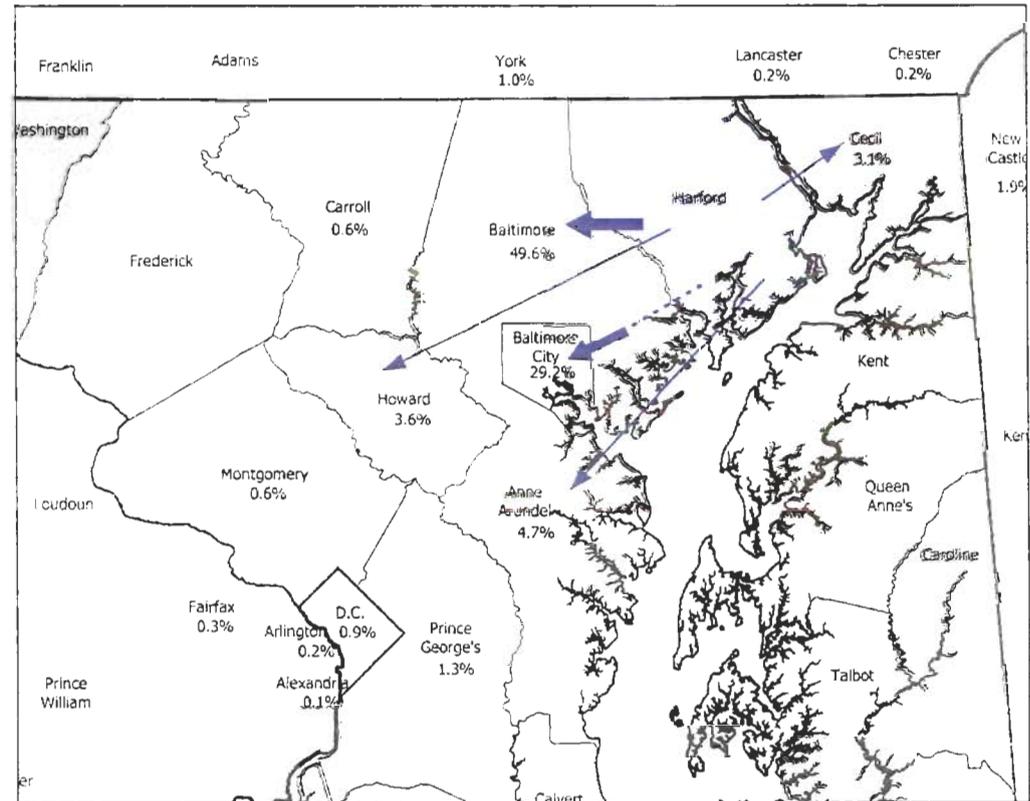


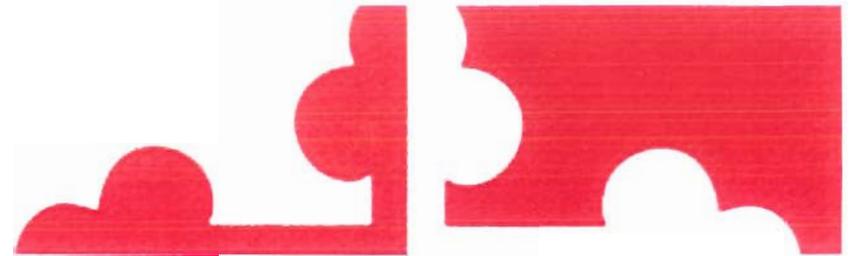
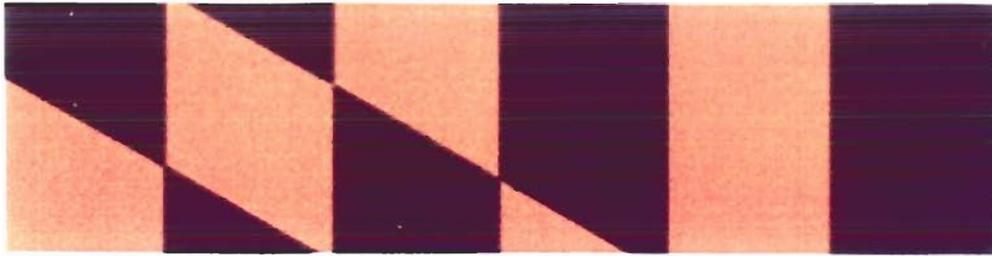


# APG MARYLAND AT THE READY

## Local Workforce

- Harford County fastest growing labor market (6.5%) from 2003 in 2004 with 4,700+ net new jobs. 16,000 jobs since 1999 (34%)
- Harford & Cecil County employment grew by more than 7,300 jobs from 2001 to 2004 (7.6%)
- Currently 48% of employed residents commute out of Harford County to work.

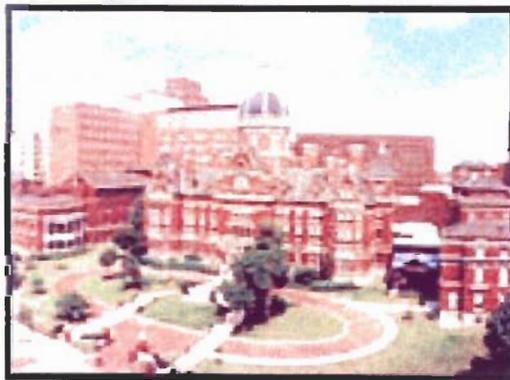
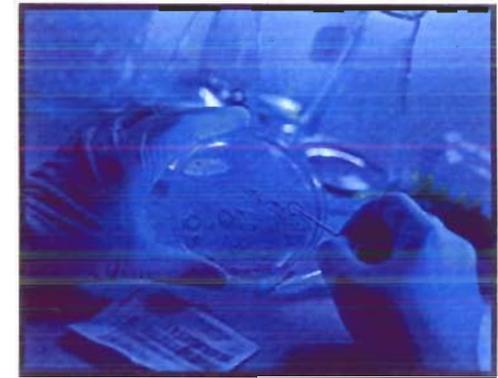




# APG MARYLAND AT THE READY

## Federal Research Centers (88)

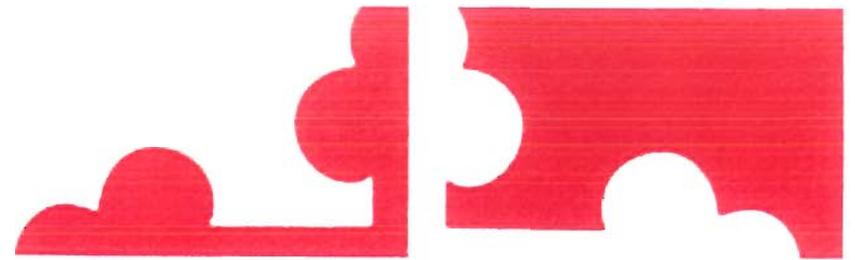
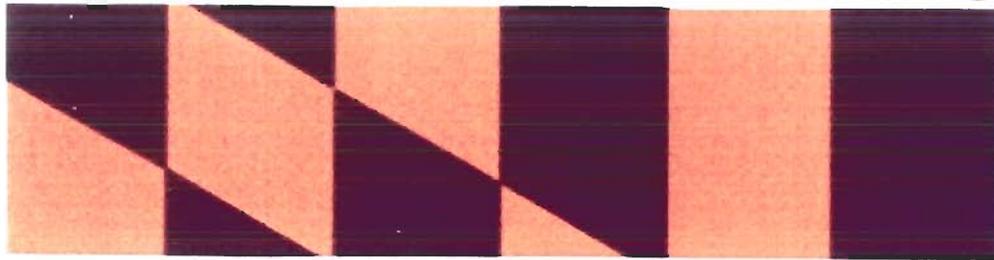
Bioscience Area  
Computer Sciences  
Physical Sciences



## Higher Education Federal R&D

Johns Hopkins - #1 (\$796M)  
UM College Park - #47 (\$121M)  
UM Baltimore - #55 (\$93M)

Maryland Federally Funded Research (FY00) - \$9 Billion



# APG MARYLAND AT THE READY



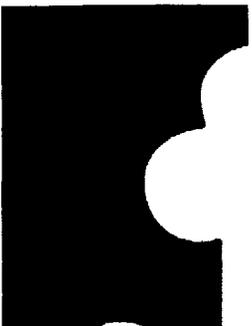
**C. Warren Mullins**  
Vice President for  
Strategic Planning and Business Development  
Battelle Eastern Technology Center

*“Even though our growth has exceeded expectations, we have not experienced difficulty in obtaining employees with the required skills. Battelle plans include continued growth in Harford County oriented around support of the Proving Ground, other federal laboratories and the commercial market sector located in the mid-Atlantic area.”*

*“SAIC has grown steadily over the last 15 years but recently has made a special effort to grow and establish a very permanent base of operation in this area. Because of the area’s attractiveness and talent pool, we have been able to very effectively fuel our growth with high quality technical and administrative staff. In fact, in the last 12 months we have added 190 employees to our local Operation. Many of these positions are highly specialized and the talent pool in this area is outstanding.”*



**Gary Boyd**  
Senior Vice President  
SAIC Corporation



# APG MARYLAND AT THE READY

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## Education

Maryland has 58 Accredited Institutions

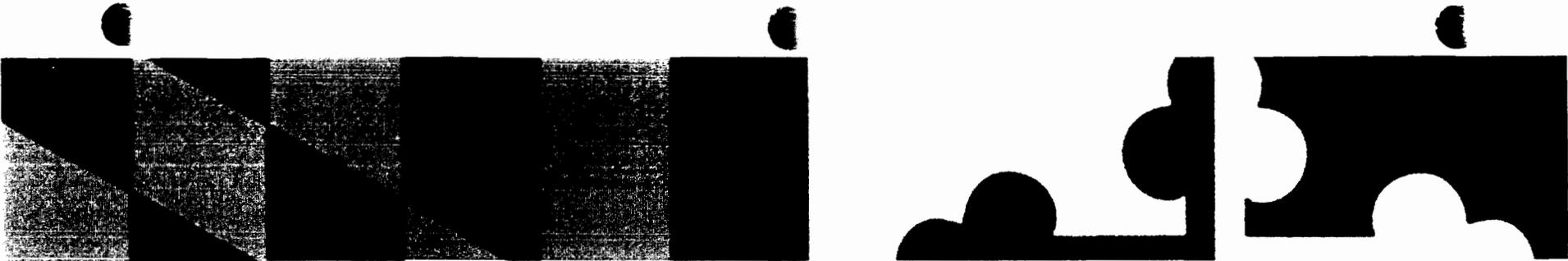
### Regional

*15 colleges/universities within 30 mile radius, including:*

- Johns Hopkins University
- UMBC
- Towson University
- Villa Julie College
- Loyola College
- College of Notre Dame
- Goucher College

### Colleges and Universities at APG

- Harford Community College
- University of Maryland University College
- Florida Institute of Technology
- Central Michigan University
- HEAT Center



# APG MARYLAND AT THE READY

## Higher Education and Applied Technology Center (HEAT)

Serving Northeastern Maryland with advanced degrees in: *Biotechnology, IT, MBA, Nursing, Applied Science, Education, and engineering degrees in Chemical, Electrical, and Environmental.*

### HEAT partners offering advanced degrees:

- Johns Hopkins University
- Towson University
- University of Maryland at College Park
- College of Notre Dame
- University of Phoenix





# **APG MARYLAND** AT THE **READY**

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## **Innovative Secondary Education**

**Creative educational approaches:**

- **Aberdeen Science & Math Academy, magnet program**
- **Homeland Security Studies, magnet program in development**
- **Harford Glen Outdoor Education Program**

**High School Attainment: 86.7%**

**Average combined SAT scores: 1021**

**\$60 million Patterson Mill Complex, \$50 million North Harford Expansion**  
(under construction)

**10 new schools constructed in past 15 years**

**40 private secondary and trade schools**



# APG MARYLAND AT THE READY

## Transportation

### Train

Aberdeen and Edgewood stations,  
adjacent to Post  
Amtrak  
MARC Commuter Rail

### Air

BWI Airport

- 53 minutes from Aberdeen
- 46 minutes from Edgewood

Philadelphia International, Dulles,  
Reagan National

### Bus

Local transit service, State  
Commuter Service  
Planned routes to/from APG

### Roads

APG is less than 2 miles from I-95

***Harford County is expected to spend \$56+ million on road network infrastructure improvements over next three years. State of Maryland is expected to spend \$115+ million over the next five years.***



# **APG MARYLAND AT THE READY**

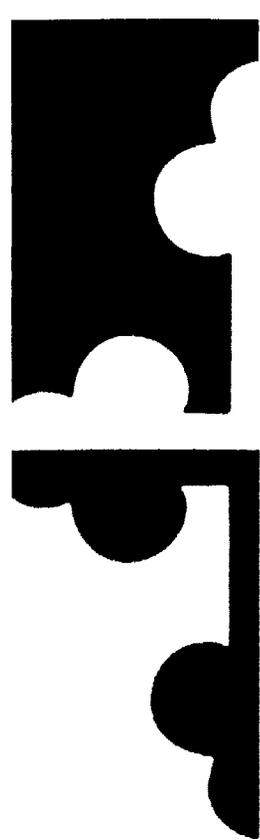
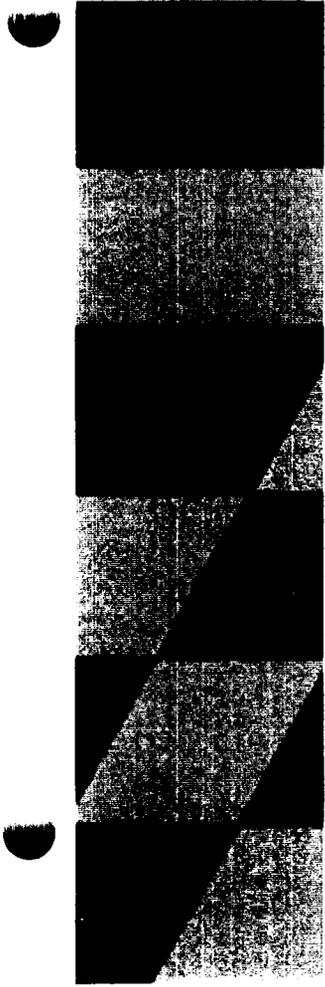
## **Healthcare**

- Johns Hopkins Hospital
- University of Maryland Medical Center
- Greater Baltimore Medical Center
- Upper Chesapeake Healthcare
- St. Joseph Hospital

Ratio of physician to  
population 1:273  
30% better than national average

## **Childcare**

- 58 YMCA Sites
- 17 Head Start Centers
- 515 Family Child Care providers
- 38 licensed full day care centers



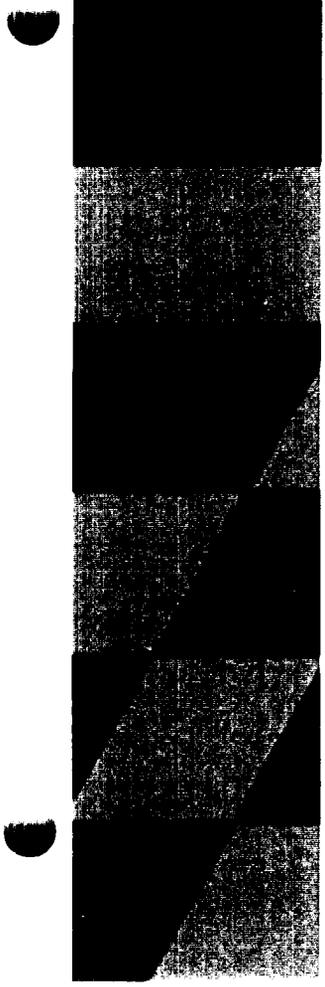
# **APG MARYLAND AT THE READY**

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## **Spousal Employment**

Susquehanna Workforce Network administers workforce development in the Northeastern Maryland region, and offers:

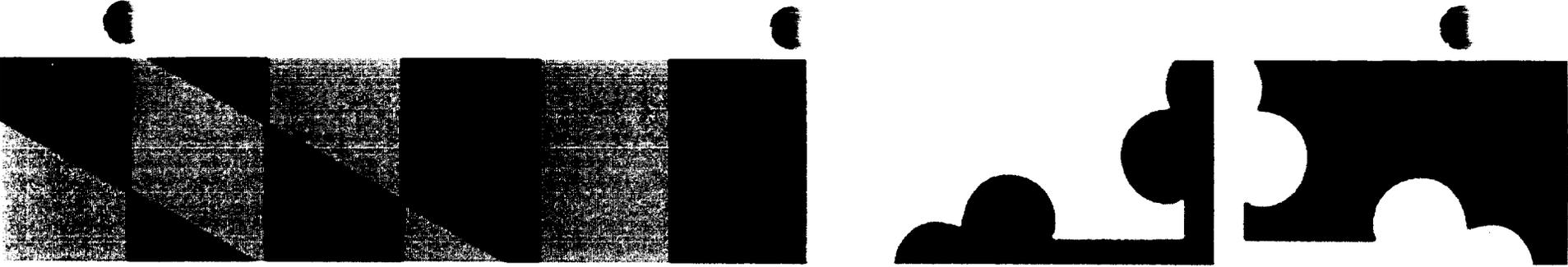
- \$1.2 million Department of Labor grant
- Comprehensive spousal employment service
- Career services: educational sessions, research, interviewing
- Specialized services: open houses, orientations, job fairs
- Community services: housing, educational, clubs, networking
- Collaboration with partner organizations: Maryland Job Services, Economic Development, colleges, public schools, businesses



# **APG MARYLAND** AT THE **READY**

## **Cost of Living**

<b>State Sales Tax</b>	<b>5.00%</b>
<b>Income Tax Rate</b>	<b>4.75%</b>
<b>CPI (national average 100)</b>	
Harford County	97.7
Cecil County	99.1
Baltimore	122.7



# **APG MARYLAND AT THE READY**

## **Housing**

### **Median Sale Price**

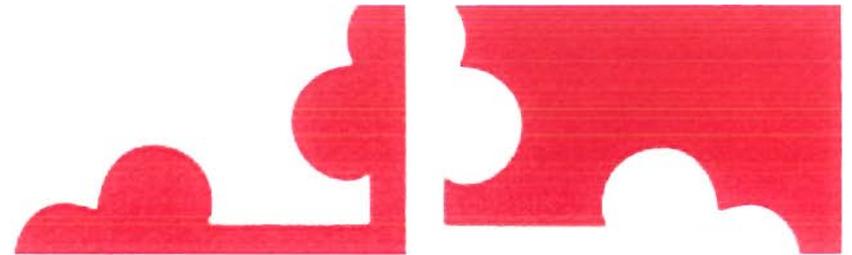
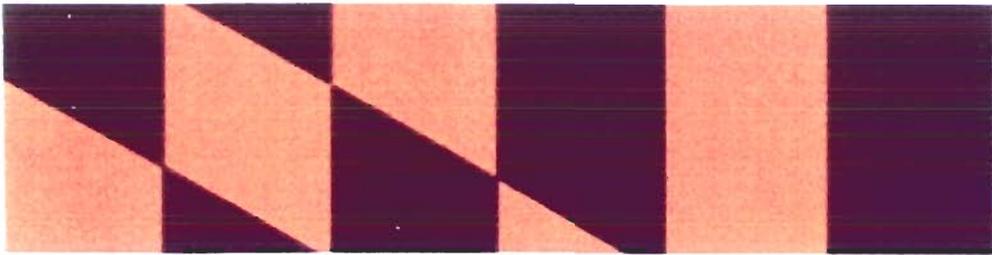
<b>Harford County</b>	<b>\$220,000</b>
<b>Cecil County</b>	<b>\$207,673</b>
<b>National</b>	<b>\$236,600</b>

### **Land Inventory (available units)**

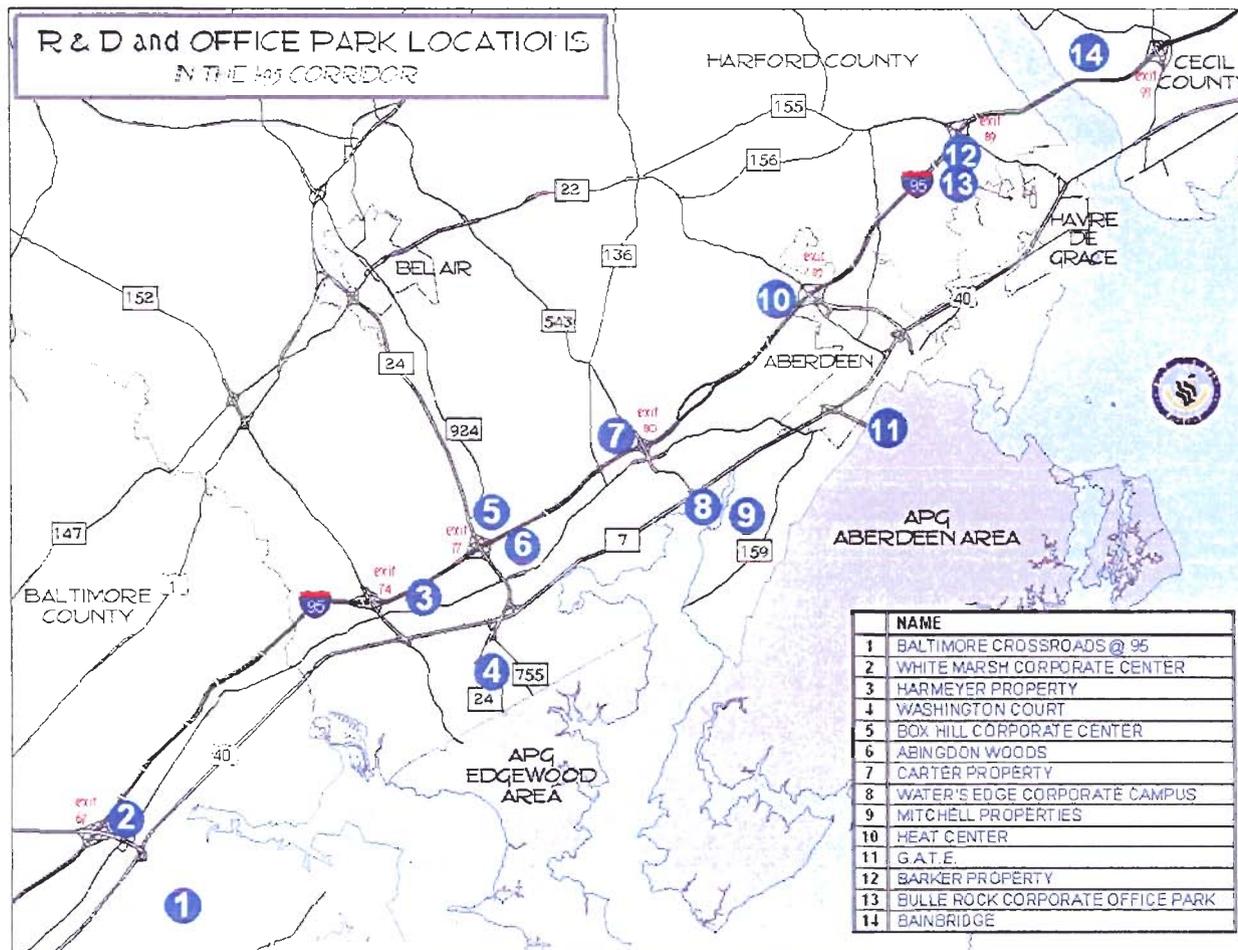
<b>Harford County</b>	<b>32,000</b>
<b>Cecil County</b>	<b>18,000</b>
<b>Baltimore County</b>	<b><u>49,900</u></b>
	<b>99,900 units</b>

**Average Housing Starts/Year** **5,645**

**Net Planned units Harford County  
(including municipalities)** **37,181**



# APG MARYLAND AT THE READY



# APG MARYLAND AT THE READY

## Best Metros for Quality of Life

Rank	Metro Area	Military Installation(s)	Military Population	Rank Among 354 Metros
1	Baltimore, Md.	Fort Meade, Aberdeen Proving Ground, U.S. Naval Academy	31,102	8
2	Fort Walton Beach, Fla.	Eglin AFB, Hurlburt Field	38,300	21
3	Washington, D.C.-Md.-Va.-W.Va.	Various Installations	100,000+	38
4	San Antonio, Texas	Fort Sam Houston, Lackland AFB, Randolph AFB, Brooks AFB, Kelly AFB	76,061	66
5	Pensacola, Fla.	Various Installations	28,374	71
6	Manhattan, Kan. (Riley County)	Fort Riley	24,413	78
7	Jacksonville, Fla.	Jacksonville Naval Air Station, Mayport Naval Station	26,089	80
8	Norfolk-Virginia Beach-Newport News, Va.-N.C.	Various Installations	138,868	102
9	Louisville, Ky.-Ind.	Fort Knox	22,980	136
10	Honolulu, Hawaii	Various Installations	89,284	141
11	San Diego, Calif.	San Diego (11), Oceanside (1)	154,731	150
12	Watertown, N.Y. (Jefferson County)	Fort Drum	26,025	178
13	Waynesville, Mo. (Pulaski County)	Fort Leonard Wood	22,182	181
14	Anchorage, Alaska	Elmendorf AFB, Fort Richardson	23,266	185
15	Charleston-North Charleston, S.C.	Charleston AFB, NWS Charleston, Charleston NAVSTA, Naval Hosp Charleston	20,108	189

SOURCE: "Military Communities of Excellence Study," September 2004, Expansion Management magazine.



# **APG MARYLAND AT THE READY**

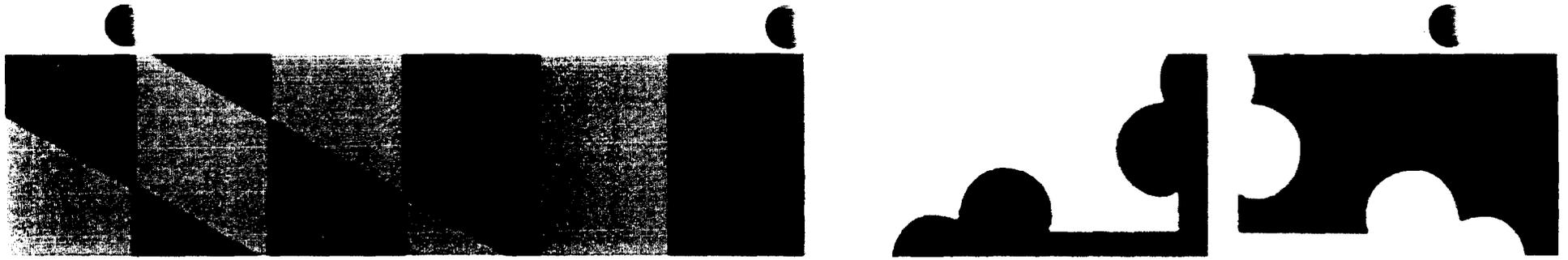
## **Quality of Life**

**Havre de Grace: "Harbor of Grace" Jewel of the Chesapeake**

**Chesapeake Bay (350 miles of shoreline, Susquehanna & Bush Rivers**

**Waterfront recreation center planned at APG**

**Close proximity to major waterway destinations: Baltimore Inner Harbor, Ocean City, Atlantic City, Cape May, Annapolis, St Michaels, Deep Creek**

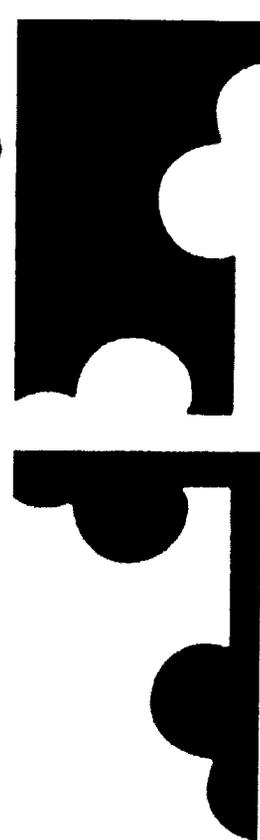
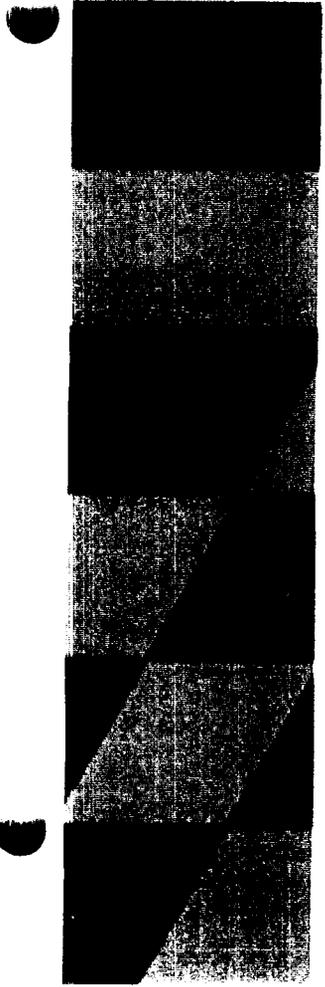


# **APG MARYLAND AT THE READY**

## **Quality of Life**

**Baltimore ♦ Washington, D.C ♦ Annapolis ♦ Philadelphia**

- Baltimore Symphony Orchestra
- Center Stage
- Baltimore Opera Company
- Joseph Meyerhoff Symphony Hall
- Lyric Opera House
- Morris A. Mechanic Theater
- Peabody Conservatory of Music
- Pier Six Concert Pavilion
- Merriweather Post Pavilion
- Smithsonian Institute
- Kennedy Center
- National Zoo and Aquarium



# APG MARYLAND AT THE READY

## Quality of Life

- Harford County Home to Ripken Stadium
- LPGA McDonald's Championship
- 3 of Top Golf Courses in Maryland



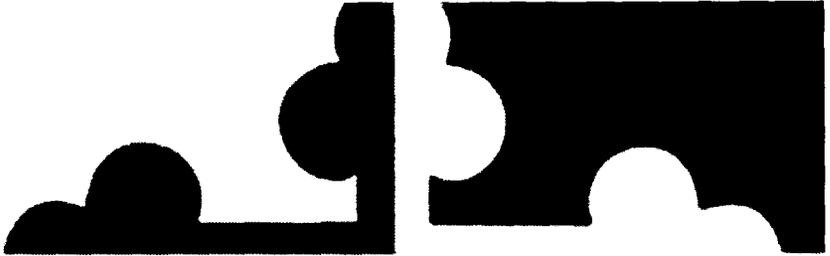
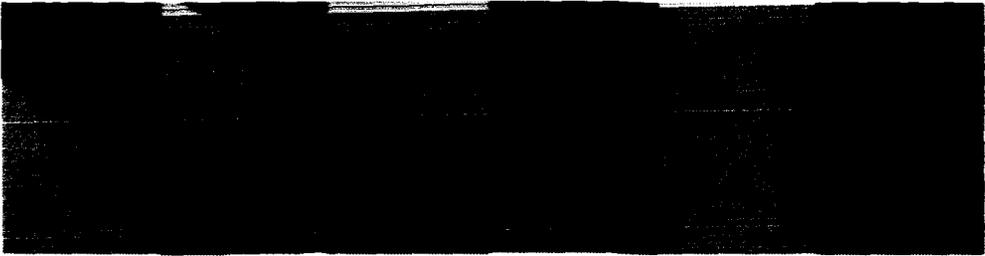


# **APG MARYLAND** AT THE **READY**



**Northeastern Maryland is poised to  
implement the  
BRAC recommendations.**

**Visit our website:  
[www.marylandready.com](http://www.marylandready.com)**

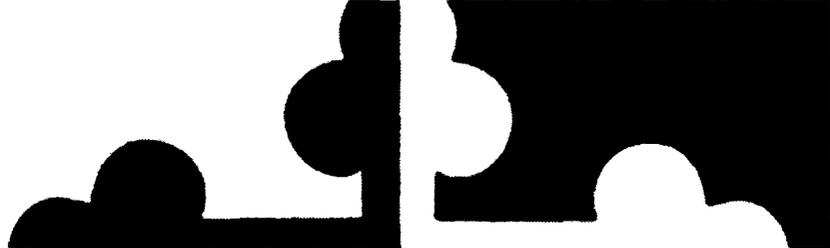


**APG MARYLAND AT THE READY**

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**Aberdeen Proving Ground**

**Bill Richardson  
Harford County  
Executive Military Liaison**



# **APG MARYLAND AT THE READY**

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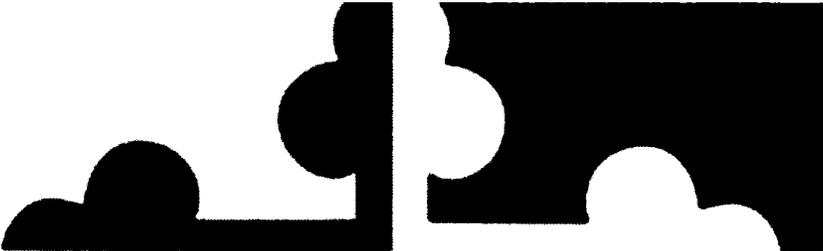
## **DOD RECOMMENDATIONS ACTIONS AT ABERDEEN PROVING GROUND**

### **MAJOR LOSSES –**

- The Army Environmental Center**
- The Ordnance Center and School**

### **MAJOR GAINS –**

- Creation of a new C4ISR life cycle management command**
- Co-location of chem- bio defense elements**
- Relocation of ATEC HQ from leased space**
- Relocation of two army research lab directorates**



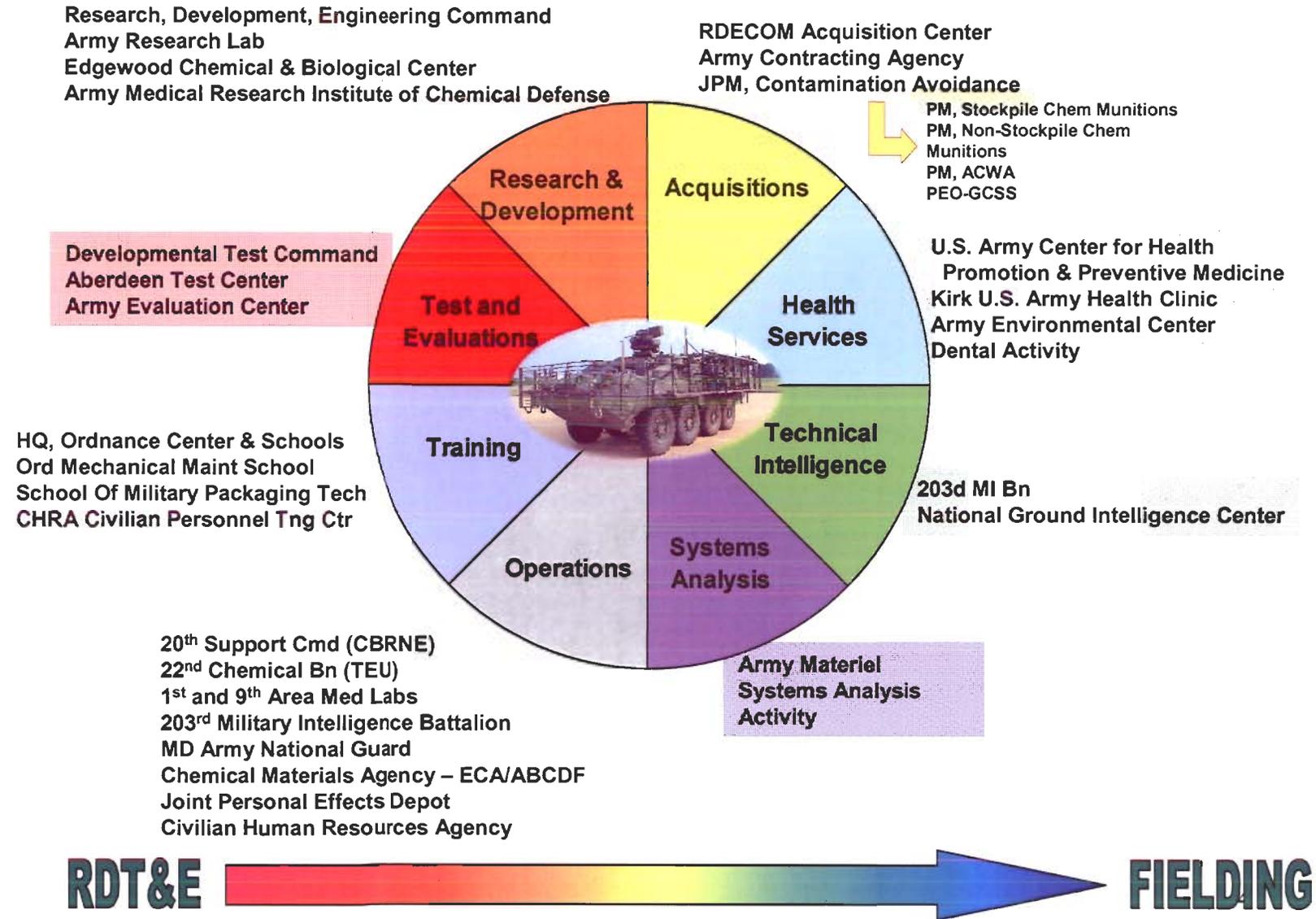
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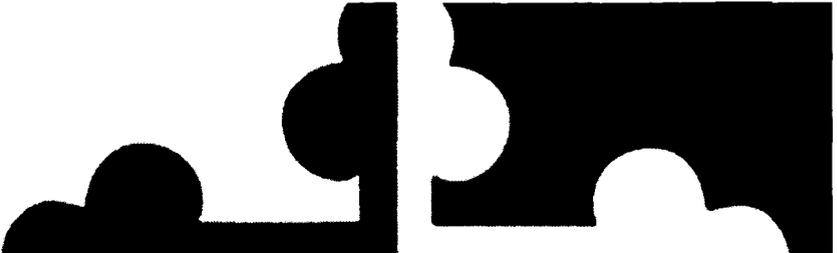
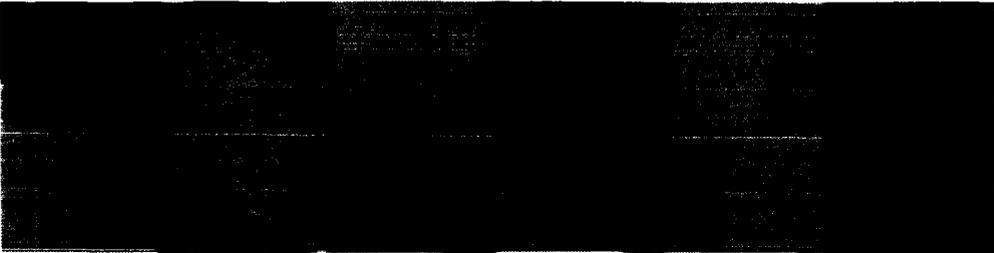
## **APG: CAPABLE, DIVERSE, PREPARED**

- **35,495 acres: space for maneuver and test**
- **One of the world's largest supercomputers**
- **Primary mission is RDT&E – like most of the incoming organizations**
- **Experienced at receiving units – tenants have grown from 50 to 66 in recent years.**
- **Joint service activities in all phases of RDT&E**
- **DOD's technology center for automotive T&E and for defense against weapons of mass destruction**
- **Major national role in homeland security**

**ABERDEEN PROVING GROUND IS THE SECOND MOST COST EFFICIENT INSTALLATION IN THE ARMY**

# INSTALLATION PROFILE - Synergy



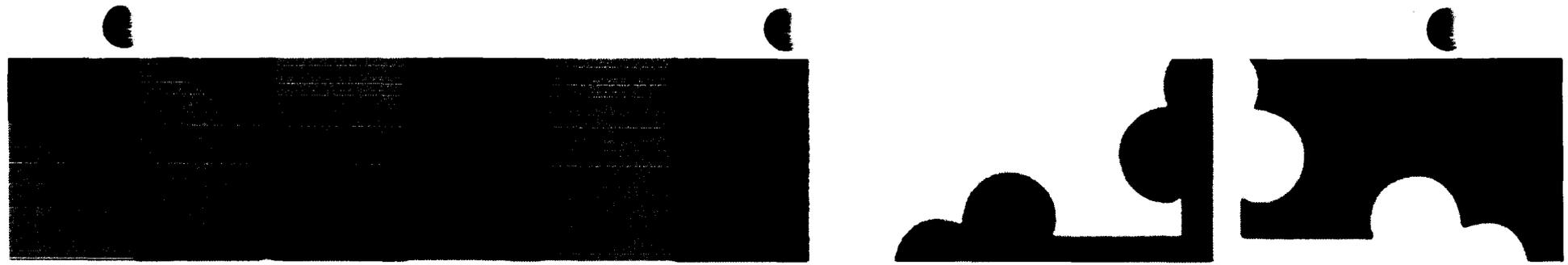


# **APG MARYLAND AT THE READY**

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## **BENEFITS ACTUALLY EXCEED THOSE LISTED BY DOD –**

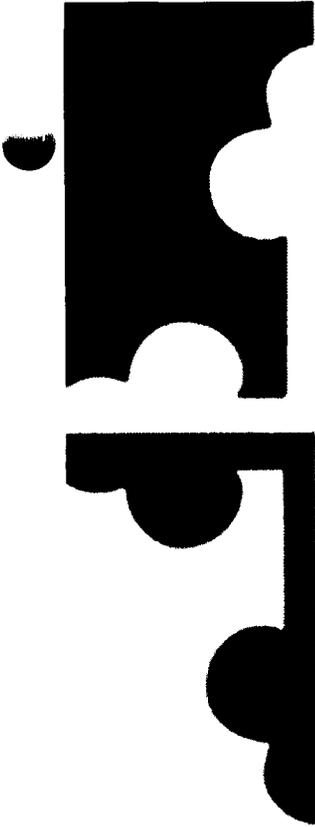
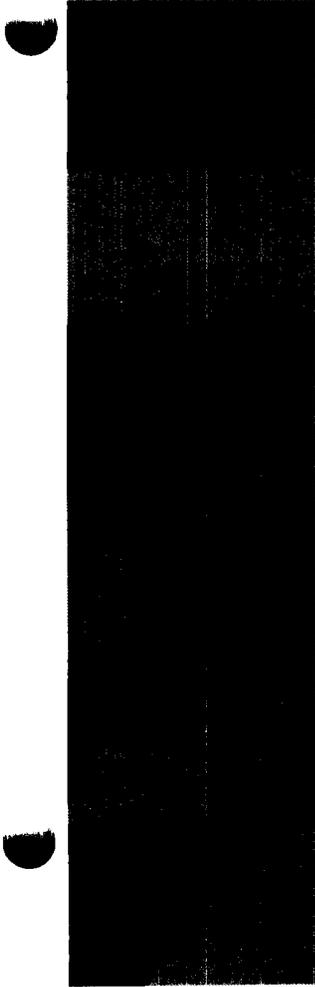
- The combined actions of C4ISR formation and CB defense co-location puts DOD radiation detector development and management at a single site.**
- All ground reconnaissance systems - the “R” in C4ISR - are evaluated at APG, facilitating evaluation of C-E components**
- C4ISR can benefit from the \$20 million network centric node at the proving ground to test, prove, and develop the FCS family of systems**
- Synergies with the diverse research, development and testing organizations already in place**



# **APG MARYLAND AT THE READY**

## **Driving Costs Lower**

- **Aberdeen Area enhanced Use Leasing project underway**
- **Announcement expected soon for Edgewood Area project**
- **Provides alternative to MILCOM and rehab at reduced immediate cost**



# **APG MARYLAND** AT THE **READY**

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## **THE APG-COMMUNITY PARTNERSHIP**

Some examples --

- Participation in county development advisory board
- County membership on the APG Science & Technology Board
- Joint participation in the NE Maryland Technology Council
- Joint design and steering of the Science & Math Academy
- Daily liaison through county military liaison officer, office of economic development, and APG business development office
- Quarterly meetings of county and installation leaders





# APG MARYLAND AT THE READY

5-Jul-05

## Community Support for BRAC Changes at Aberdeen Proving Ground

Northeastern Maryland is well prepared to accept and support the organizations the DOD has recommended for relocation to the Aberdeen Proving Ground. Relocating families will enjoy a great standard of living at a significantly reduced cost, while any immediate and future employment needs can be met with our large, highly skilled regional labor pool that ranks number one in the United States in the percentage of professional and technical workers. The following points illustrate our readiness to support the Army's effort to successfully establish and sustain a technical center of excellence in the command, control, communication, information systems area. Northeastern Maryland and APG -- we stand at the ready.

### Ability to Provide a Technical Workforce

- Maryland ranks first among U.S. states in the percentage of professional and technical workers in the labor pool (24%), and is in a statistical tie for first place in the percentage of the population with a bachelor's degree or higher.
- Maryland ranks first among the states for PhDs employed in mathematical and health sciences, second in biological sciences, third in physical sciences, and fifth in computer and information sciences.
- Maryland is in a statistical tie with Massachusetts as the top state in the nation for educational attainment.
- Maryland ranks second among the states in the percentage of graduate and professional degree holders.
- Maryland ranks second among the states in the concentration of doctoral scientists and engineers as a percentage of the population.
- Maryland ranks fifth nationwide by employment in computer systems design, fifth in measuring and control instruments manufacturing, and eighth in engineering services.
- Maryland ranks first among the states in federal and academic R&D, particularly in engineering, life science, and biomedical fields. (March, 2004 Milken State Technology and Science Index)

- Maryland is second among the states in its number of people holding advanced degrees, and first in the percent of the population age 25 and over holding a bachelor's or higher degree. (March, 2004 Milken State Technology and Science Index)

- Statistics for the Greater Baltimore Area illustrate the technical workforce base –

Total labor force (May 2004):	1,368,620
Computer and mathematical jobs :	34,280
Electrical and electronic engineers:	2,840
Mechanical engineers:	2,240
Engineering managers:	2,110
Science occupations:	11,140

- Maryland has a young and active population – particularly in the areas near APG. The state median age is 36.9. For the counties nearest APG, it is 36.2 (Harford County) and 35.5 (Cecil County).

- Major, international defense firms who support Army communications and electronics activities also have roots in Maryland where they provide support to APG. Some of these firms include, ITT Industries, Lockheed Martin, Logicon, SAIC, Northrop Grumman and TRW. These and many other firms can provide the necessary contractor support for the incoming operations.

### Education

The technical talent of the Baltimore regional area stems from the region's 25 colleges and universities, including Johns Hopkins University, University of Maryland Baltimore County, and Towson University.

- Maryland has 58 accredited institutions of higher learning, including 11 campuses of the University System of Maryland and the world-renowned Johns Hopkins University.

- The Higher Education and Applied Technology (HEAT) Center is a unique educational and economic development partnership among local government, regional academic institutions and industry. It provides a means for universities to offer undergraduate and graduate college courses and specialized training in close proximity to APG.

- Harford Community College and Cecil County Community College provide a variety of courses tailored to the educational needs of APG personnel.

- The local school system employs creative educational approaches: the Aberdeen Science & Math Academy is a magnet program developed by joint effort of APG, the County, the State, and federal government. Both teachers and students are competitively selected, and military families coming to APG can apply from overseas. Another prototype high school program is being developed to offer instruction in homeland security studies, and three other magnet programs are being explored.

- The school system has built 10 new schools in the past 15 years, and all high schools are in a modernization/replacement program. The new \$60 million Patterson Middle/High School now under construction will provide capacity for 1,600 additional students in grades 6 -12, opening in Fall, 2007. The \$50 million expansion of North Harford High School is also underway.
- Harford County has 40 private secondary and trade schools.

### Transportation

Transportation assets for APG are actually somewhat better than surmised in BRAC deliberations –

- **Highway:** APG is within 2 miles of Interstate 95.
- **Train:** Rail transportation (Amtrak and MARC commuter train) is adjacent to the installation at both Aberdeen and Edgewood locations and provides access to many destinations including: Baltimore (Penn and Camden Stations), BWI Airport, University of Maryland, Annapolis, Washington, D.C, Wilmington, Philadelphia, and New York.
- **Air:** Baltimore Washington International Airport (BWI) is 51 minutes and 43 miles from the Aberdeen Area of the Proving Ground, and 42 minutes and 33 miles from the Edgewood Area.
- **Bus:** Harford Transit is the leading local transit system in the state, recognized by Community Transportation Association of America for quality of personnel and services. Harford Transit coordinates with Job Access Reverse Commute to connect the region's workforce in Baltimore City, Baltimore County and the Route 40 corridor of Harford County, with dedicated lines to employment districts, medical facilities, train stations, shopping, and tourism.
- **Enhancements underway:** Preparations have been underway to expand transportation services to accommodate growth anticipated with APG's enhanced use leasing (EUL) initiatives. Those same preparations apply to the APG growth expected with BRAC actions –
  - RAIL: Harford County and the State of Maryland have allocated \$800,000 in current-year budgets for upgrades to the Edgewood train station, and an additional \$400,000 in federal FY06 funds has been requested.
  - BUS: Ours will be the first transit system in the state to have a dispatching software system with GIS capabilities, and it will improve ridership and service. As EUL and BRAC-induced traffic increases, schedules will expand and new routes on- and off-post to coordinate with commuter trains and provide enhanced on-post service.
  - ROADS: Recent completion of the upgrade to I-95 and MD Route 22 interchange, and pending improvement of the I-95 and MD Route 24 interchange will provide sufficient capacity to handle existing and projected growth in the area. These improvements reflect an investment of well over \$120 million.

– Additional access roads for the Perryman peninsula and upgrades to existing APG access roadways are funded for construction under the County’s five year plan. Initiated to accommodate the coming growth of APG’s enhanced use leasing initiatives, these enhancements will also accommodate APG growth due to BRAC actions.

**Cost of Living**

A key part of a quality lifestyle is affordability – and it’s better here. Some indicators of affordability are –

- Median sale price of a home (2004)	Harford County	\$220,000
	Cecil County	\$207,673
	National	\$236,600
- State sales tax rate:	5%	
- State individual income tax top rate:	4.75%	
- Consumer price index		
	Harford County CPI (2000)	97.7
	Cecil County CPI	99.1
	National average	100

- Maryland has the second highest median household income in the nation, at \$57,218 for 2003, 31 percent above the national median.
- Maryland had a 2004 per capita personal income of \$39,247, ranking fourth among the 50 states and topping the national average by 19 percent.
- Sixty-five percent of APG employees live in Harford County; about 13% are Cecil County residents, and 12% of APG employees reside in several other Maryland counties. Ten percent commute from nearby communities in Delaware, Pennsylvania, Virginia and Washington, D.C.
- The most recent census shows that 48% of Harford County employees commute to work outside the county; 51% of Cecil County residents commute to other areas for employment. Given the opportunity many of these residents would opt to work closer to home, providing another source of highly skilled labor.
- According to *Governing* magazine, Maryland ranks among the best-managed state governments in the country and earned the country's top grade in management of capital projects.

**Quality of Life: A Military Community of Excellence**

The DOD website on BRAC Information for Families refers them to Expansion Management Magazine’s “Military Communities of Excellence Study.” That September, 2004 study ranks Baltimore first among all metropolitan areas for family quality of life. The study considered public schools, housing affordability, standard of living, recreation & leisure, health care, safety, continuing education, affordable child care, traffic & commuting, and other factors.

Northeastern Maryland offers visitors a wealth of opportunities and amenities for exploration and entertainment, including more than 350-miles of shoreline on the Chesapeake Bay. Scenic parks, world-class golf courses, state-of-the-art sports complexes, unique shopping, and dining options provide a superior quality of life for residents and tourists. The Susquehanna River converges with the Chesapeake Bay at Havre de Grace, MD. Marinas, boating, and fishing are available at numerous locations throughout the area.

- APG fronts the Chesapeake Bay and the Susquehanna and Bush Rivers. Through an innovative industry partnership APG will soon be getting an elaborate new waterfront recreation area, with boating access, a competition-sized pool, and other amenities.
- For many, a low population density is one measure of quality of life. At less than 542 people per square mile it's good in Maryland – and for the area immediately around APG, even better (Harford County 496, Cecil County 247).
- Harford County is home to 10 challenging golf courses, and Cecil County has five more. The Bulle Rock Golf Course in Havre de Grace is ranked third nationally by a 2003 Zagat survey and is the host of the LPGA Championship, a weeklong nationally-televised event and one of only four “major” events on the LPGA Tour .
- Ripken Baseball and the Aberdeen Ironbirds are in their fourth consecutive sold-out season. This \$30 million state-of-the-art-complex, which opened in 2002, entertains over 300,000 visitors annually during its 76 game minor league baseball season, the Ripken Youth Baseball Academy, and the Ripken World Series.
- Harford County offers 6,850 acres of protected open space and 6,226 acres of State parkland; Cecil County has 2,200 acres of waterfront state park and 5,600 acres of natural resource area.
- Farmers markets (Harford County has five of them), riding stables, and extensive boating opportunities provide traditional Maryland recreation.
- The APG area offers easy access to a big city without being in one: Baltimore is about 30 minutes away, with its Inner Harbor, the Joseph Meyerhoff Symphony Hall, the Lyric Opera House, the National Aquarium, the Baltimore Zoo, M&T Stadium, home to the 2001 Super Bowl Champions, the Baltimore Ravens, Camden Yards, home to the Baltimore Orioles, and much more.
- Within about an hour's drive are Washington DC attractions such as the Kennedy Center and the Smithsonian.

## **Health Care**

- Aberdeen Proving Ground, Harford County and the surrounding region have exceptional health care facilities and capabilities, including access to premier world class hospitals such as the Johns Hopkins Hospital and The Johns Hopkins University School of Medicine and the University of Maryland Medical System.
- Equally important to quality of medical care is accessibility. In the APG area the ratio of physicians to the overall population is 1:273 – 30 percent better than the national average.
- The Upper Chesapeake Health System in Harford County provides advanced inpatient and outpatient services, with over 2,500 physicians and healthcare professionals who are delivering care in settings from offices, outpatient centers, hospitals, shopping centers, businesses, and homes. Over \$50 million in upgrades are currently underway to the hospitals in Bel Air and Havre de Grace.

## **Spousal Employment Opportunities**

Northeastern Maryland is one of the fastest growing regions in the State. Harford County's private sector employment has increased 34% since 1999 (16,000 net new jobs). Harford County led the State in total employment growth last year with an increase of 6.5% in just twelve-months.

- The non-profit Susquehanna Workforce Network and Maryland Job Service Career Center organizations provide free specialized services to assist spouses and dependents of persons relocating to APG. Their regional workforce centers provide job search, assistance, resume preparation, educational seminars, research on local businesses, and access to employment specialists.
- The U.S. Department recently awarded a grant of \$1.2 million to the Maryland Job Service to assist with BRAC-related employment assistance.
- Regional job fairs are held annually in each county, with about 60 employers supporting each event, and mini-fairs are held quarterly at the workforce centers.

## **Child Care**

- The Child Care Resource Center provides counseling and referrals to parents seeking quality child care by providing information on the availability of licensed child care providers.
- The YMCA has 58 area Child Care Sites and 17 Head Start Centers throughout the Central Maryland Region. The Y provides superior child care services to preschools at Harford Community College and school-age child care programs are also available.
- There are 515 registered family child care providers and 38 licensed full-day child care centers in Harford County.

## Aberdeen Proving Ground

Maryland understands and appreciates the military. The Proving Ground can best be described by its own leaders, but the community is proud of it, and proud of the close partnership relationship between the community and the installation. APG ranks high in military value for good reason: it is a vital, vibrant, growing activity with the flexibility to meet future national needs.

- Aberdeen Proving Ground employees hold over 350 doctorates, nearly 1,000 masters' degrees and over 3,000 bachelors' degrees
- APG is home to the \$1.4 billion Major Shared Resource Center for High Performance Computing (one of four across the country) and one of the world's largest (11<sup>th</sup>) supercomputers.
- APG is the Army's technology center for test and evaluation and for defense against weapons of mass destruction (for which DOD recently directed a 27% increase in funding for the next five years), and it plays a significant role in national homeland security.
- APG has a land area of 35,495 acres: it has the space needed for maneuver and test ranges.
- APG already does R&D, test, evaluation, and acquisition – the functions of the most of the proposed new organizations.
- APG knows how to receive incoming organizations: installation tenants have grown from 50 to 66 in recent years.
- APG is one of the most cost efficient installations in the Army.
- APG benefits from a strongly supportive community that is proud of its partnership relationship with the Army. That relationship is illustrated by such things as –
  - senior APG leaders' participation in the County Economic Development Advisory Board
  - County representation on the APG Science & Technology Board
  - joint participation in the Northeastern Maryland Technology Council
  - joint participation in Army Alliance activities
  - memberships on Science & Math Academy steering committee
  - participation in Science & Math Academy Educational Specifications Committee
  - joint participation in professional associations (NDIA, ITEA, etc.)
  - daily liaison through County Military Liaison Officer, Office of Economic Development, APG Business Development Office, and other means
  - quarterly meetings of the County Executive and Installation Commander





# APG MARYLAND AT THE READY

## Comparisons

### Maryland and New Jersey Monmouth County and Counties near APG

#### Workforce

- Professional and technical workers make up 24.0% of the workforce in Maryland; in New Jersey they are 21.4%.
- Maryland has 939 doctoral scientists and engineers per 100,000 workers; New Jersey has 537.
- Educational achievement of the state population in Maryland is better than New Jersey at all levels:

	<u>MD</u>	<u>NJ</u>
High School graduate	87.6%	86.2%
BS degree	37.2%	33.4%
Graduate degree	13.4%	11.0%

- In the 2004 Milken overall index of technology & science, Maryland ranks 4<sup>th</sup> among the states with a score of 78.19; New Jersey ranks 7<sup>th</sup>, with a score of 69.03. (March, 2004 Milken State Technology and Science Index)
- Of the approximately 4,800 jobs that would be relocated from Fort Monmouth, the DOD estimates that only 2,569 are skilled employee positions. That further eases the task of replacing such positions and the administrative positions that support them.
- Several major companies who support Fort Monmouth operations also have ongoing support to APG, facilitating contractor support for the incoming operations. These include ITT Industries, Lockheed Martin, Logicon, SAIC, and TRW.
- The state median age for Maryland is 36.9; for New Jersey it is 37.5.

## Education

- Maryland has 41 four-year colleges and universities; New Jersey has 34.
- Average Scholastic Aptitude Test (SAT) scores are essentially the same for the areas near the two installations:

County	Harford	Cecil	Monmouth
Average SAT score	1021	1024	1023

## Quality of life

- The population density for Maryland (541.8) is far less than for New Jersey (1,134.2). For the counties near APG and Fort Monmouth the difference is even greater:

	<u>Harford</u>	<u>Cecil</u>	<u>Monmouth</u>
Density (people/square mile)	496	247	1,256

- At APG access to rail transportation is essentially adjacent to the installation; at Fort Monmouth the nearest rail station is 23.5 miles away.
- In the APG area the ratio of physicians to overall population is 1:273; for the Fort Monmouth area it is 1: 4,163.

## Cost of living

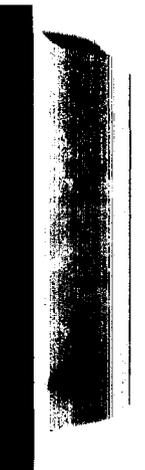
- Median Sale Price of a Home (2004): Harford County, \$220,000; Cecil County, \$207,673; Baltimore County 179,900 Monmouth/Ocean, N.J.: \$338,400.
- The Monmouth/Ocean area is the 15<sup>th</sup> most expensive for housing among US metro areas; the national median existing single-family home price was \$188,800 – NAR, 2004 data.
- State Sales Tax Rate: MD 5% NJ 6%
- State Individual Income Tax Top Rate: MD 4.75% NJ 8.97%
- NJ ranked as worst state in the union for property tax rates, \$1871/per capita, (Money Magazine, 2002 data), and its property tax rate is reported to be 50% greater than the national average (WSJ, 2 Jun 05).

- Consumer price index (Mar 05)
 

Washington-Baltimore	122.7
New York-New Jersey-LI	212.4
National average	100
Harford County CPI (2000)	97.7
Cecil County CPI	99.1

**APG and Industry**

- A large part of Fort Monmouth activity is contracted – to companies that are already here or that are headquartered in DC – making it easier to relocate those activities. Companies that support activities at both places include ITT Industries, Northrop Grumman Corporation, Lockheed Martin, Logicon, SAIC, and TRW.
- The size of APG is about 32 times that of Fort Monmouth (35,495 acres of land vs. 1,126 acres).





## **WORKFORCE ANALYSIS**

This document was written by Maryland's Department of Business and Economic Development (DBED) to provide the BRAC Commission and staff with workforce analysis regarding the labor pool supporting the Aberdeen Proving Ground.

July 8, 2005



## I. Workforce Availability

The Aberdeen Proving Ground [APG] draws on a plentiful pool of sophisticated talent to support current capabilities, and has worked with county and state officials, as well as the leaders of Maryland’s academic institutions, to provide a future pipeline of talent. Maryland provides the Aberdeen Proving ground with a highly skilled workforce. According to the Department of Labor, Maryland ranks first among the states with the highest percentage (24%) of professional and technical workers in the state’s labor pool. In addition, in 2003 the US Department of Commerce found that Maryland is statistically tied with Massachusetts as the top state in the nation for educational attainment. Nearly 38% of Maryland’s population 25 years of age and above have earned a bachelor’s degree or higher.

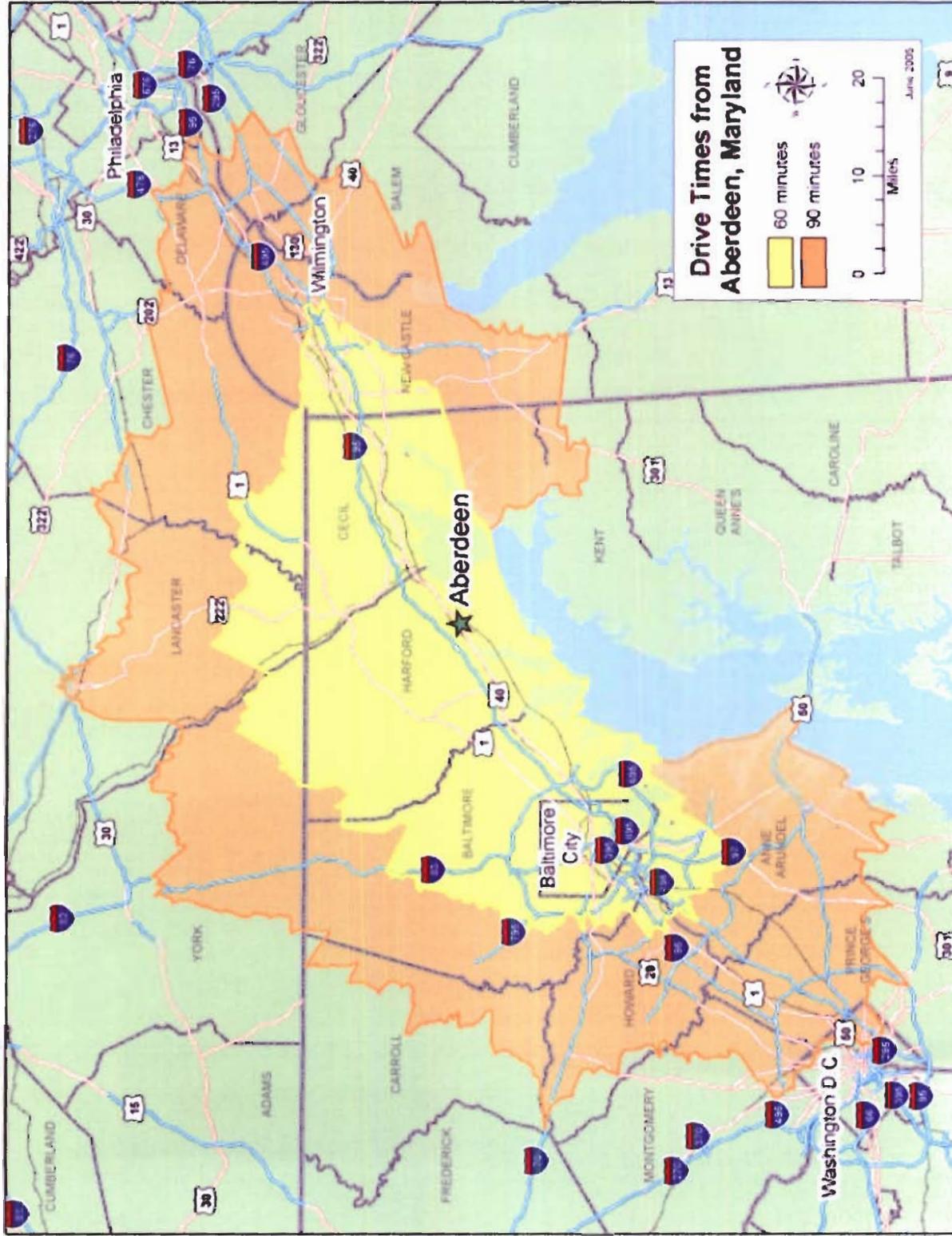
There is a nationally recognized science and technology workforce concentrated in and around Harford County, host to the APG. Nearly half a million professionals working in the management, business, computer and mathematics, science and engineering sectors live within a 90 minute drive of APG. Although a little more than 200,000 professionals work within a 60 minute drive of APG, it is neither uncommon nor unreasonable to drive an additional thirty minutes for work in this region. For example, professionals living in Annapolis, MD regularly drive more than an hour to Washington, DC every day for work. Please see the chart and illustrative map on the following two pages for more details.

**Employed Persons by Selected Occupational Group - 2004 (estimate)  
Residence within a 60 or 90 minute drive of Aberdeen Proving Ground**

Occupational Group	Number of Persons	
	60-minute drive	90-minute drive
Management	93,304	254,389
Business / Financial	52,793	140,051
Computer and Mathematical	28,920	92,261
Architecture / Engineering	23,164	58,538
Life Science / Physical Science / Social Science	15,342	41,269
<b>Totals</b>	<b>213,523</b>	<b>586,508</b>

Source: ESRI ArcGIS Business Analyst

Note: Drive-time estimated by ESRI ArcGIS Business Analyst



Employers in Baltimore City and Anne Arundel, Baltimore, Cecil, Carroll, Howard and Harford Counties hire a wide variety of high-tech talent today. According to the Department of Labor 2002 estimates, Baltimore city and the counties listed above employ nearly 153,000 professionals, including 40,359 in computer science and mathematics and nearly 24,000 engineers and architects. Furthermore, in 2012, it is projected that more than 185,000 professionals will be employed in the Baltimore metro area.

In 2004, more than 2,000 engineers earned associate, undergraduate, masters, and doctorate degrees from Maryland universities. The National Science Foundation (NSF) recognized Maryland in 2001 as the state with the second highest concentration of doctoral scientists and engineering in the nation. The NSF also noted Maryland ranks second in the nation for employed PhD scientists and engineers per 100,000 employed workers. It is not surprising, therefore, that in 2004 the US Technology Administration named Maryland among the top ten states with an intense technology business base. The ranking is a reflection of, among others, the number of high-tech industries located in Maryland and the large percentage of entrepreneurial high-tech start-ups in the state.

**Occupational Employment Estimates, by place of employment**  
**Baltimore metropolitan area**  
**2002 estimates & 2012 projections**

<b>Occupational Category</b>	<b>2002</b>	<b>2012</b>
Management (11-3000)	23,644	28,427
Business and Financial Operations (13-1000, 13-2000)	57,687	67,540
Computer and Mathematical Science (15-1000, 15-2000)	40,359	55,396
Architecture and Engineering (17-1000, 17-2000, 17-3000)	23,824	25,702
Life and Physical Science (19-1000, 19-2000, 19-4000)	7,483	8,407
<b>Totals</b>	<b>152,997</b>	<b>185,472</b>

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES), and Maryland Department of Labor, Licensing & Regulation.

Note: Baltimore, Maryland area includes Baltimore City, Anne Arundel, Baltimore, Carroll, Cecil, Harford and Howard Counties.

Every two years, the Milken Institute, an independent economic think tank located in Santa Monica, CA, publishes the "State Technology and Science Index." The report ranks the states according to their technology and science workforce. The report uses a variety of economic, academic and political measures to rank the states, including whether there is sufficient depth of high-end technical talent, technology concentration and outcomes, as well as a policy decisions that support technology-based economic development. Maryland maintained its 2002 ranking as 4<sup>th</sup> in the nation for the concentration of technology and science among the workforce. The Milken report describes Maryland's "most poignant strengths" in the life sciences and communications technology, "two sectors with extremely bright long-term prospects, and where it has some of the best and deepest talent in the nation." In addition, Maryland policymakers' are committed to fostering a high-tech economy. The report notes that the Ehrlich Administration recently released a roadmap to foster development of advanced technology business in the state.

In addition to the professionals in Maryland willing to commute to APG for work, more than 25,000 Delaware residents are employed within 90 miles of APG and represent a viable labor pool for the military installation. In fact, 333 New Castle, DE residents commute to Harford County for work every day. Also, more than a quarter of a million skilled workers live in Pennsylvania counties that are located within a 90 minute drive of APG. The counties are listed below.

**Occupational Employment Estimates, by place of employment  
New Castle County, Delaware - 2003**

<b>Occupational Category</b>	<b>Employment</b>
Management (11-3000)	4,650
Business and Financial Operations (13-1000, 13-2000)	15,230
Computer and Mathematical Science (15-1000, 15-2000)	9,300
Architecture and Engineering (17-1000, 17-2000, 17-3000)	4,070
Life and Physical Science (19-1000, 19-2000, 19-4000)	5,080
<b>Totals</b>	<b>38,330</b>

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES); Delaware Department of Labor. Estimates for November, 2003.

**Occupational Employment Estimates, by place of employment  
Southeastern Pennsylvania - York, Lancaster, and Philadelphia metropolitan areas  
May 2004 estimates**

<b>Occupational Category</b>	<b>York MSA</b>	<b>Lancaster MSA</b>	<b>Philadelphia MSA</b>
Management (11-3000)	1,880	2,900	36,710
Business and Financial Operations (13-1000, 13-2000)	4,650	6,020	109,020
Computer and Mathematical Science (15-1000, 15-2000)	1,550	2,100	64,340
Architecture and Engineering (17-1000, 17-2000, 17-3000)	3,080	3,180	39,790
Life and Physical Science (19-1000, 19-2000, 19-4000)	420	1,040	18,210
<b>Totals</b>	<b>11,580</b>	<b>15,240</b>	<b>268,070</b>

Note: York Metropolitan Statistical Area (MSA) includes only York County; Lancaster MSA includes only Lancaster County; Philadelphia MSA includes five counties in Pennsylvania (Bucks, Chester, Delaware, Montgomery, Philadelphia) plus four counties in New Jersey (Burlington, Camden, Gloucester, Salem).

## II. Workforce Sustainability

In addition to the existing workforce in Maryland, the Aberdeen Proving Ground is surrounded by two and four-year academic institutions that can replenish the workforce. These universities provide a continual pipeline of new, fresh talent. As the Milken report notes, the number of bachelor's degrees awarded within a state is an indication of "both the level of educational attainment and the type of skills that are demanded by the state's firms." In 2004, more than 8,000 Bachelor's degrees were awarded to graduates in high-tech, business, engineering and science programs in Maryland's four-year universities. In Delaware, a state that currently provides and will continue to provide APG with professionals, more than 1,800 graduates earned Bachelor's degrees. As the chart below illustrates, more than 7,000 Master's degrees and 563 Doctorate degrees were awarded in science, engineering, technology and business to graduates from Maryland and Delaware universities in 2004. In Washington, D.C., which neighbors Maryland, more than 7,000 students graduated in 2004 with associate, undergraduate, graduate and PhD degrees in a variety of disciplines, including science, business, engineering and technology.

**Degrees Awarded by Maryland and Delaware Colleges and Universities in 2004**  
Selected Programs

Program	Degree				Total
	Associate	Bachelors	Masters	Doctorate	
<i>All institutions</i>					
Biological Science	269	1,461	354	167	2,251
Business and Management	1,794	5,062	4,384	16	11,256
Computer Science	1,292	2,350	1,284	32	4,958
Engineering and Technology	881	1,219	884	205	3,189
Mathematics	1	259	86	27	373
Physical Science	0	285	175	116	576
<b>Total</b>	<b>4,237</b>	<b>10,636</b>	<b>7,167</b>	<b>563</b>	<b>22,603</b>

Note: Associate includes Associate Degrees, Lower and Upper Division Certificates; Bachelors includes Bachelors Degrees; Masters includes Masters Degrees and Post Baccalaureate Certificates; Doctorate includes Doctoral Degrees.

Sources: Maryland Higher Education Commission; Delaware Higher Education Commission / IPEDS Completions Survey.

**Degrees Awarded by Washington, D.C. Colleges and Universities in 2002  
Selected Programs**

Program	Degree				Total
	Associate	Bachelors	Masters	Doctorate	
<b>All institutions</b>					
Biological Science	0	304	186	43	533
Business and Management	190	1,961	1,850	20	4,021
Computer Science	179	1,233	589	7	2,008
Engineering and Technology	11	124	359	39	533
Mathematics	0	32	20	6	58
Physical Science	0	93	101	27	221
<b>Total</b>	380	3,747	3,105	142	7,374

Note: Associate includes Associate Degrees, Lower and Upper Division Certificates; Bachelors includes Bachelors Degrees; Masters includes Masters Degrees and Post Baccalaureate Certificates; Doctorate includes Doctoral Degrees.

Source: National Center for Education Statistics - IPEDS Completions Survey.

Nearly 300,000 students currently attend 58 accredited two- and four-year colleges and universities in Maryland. These educational resources include the eleven campuses of the University System of Maryland as well as Johns Hopkins University. The University System of Maryland alone offers over 600 degree programs delivered in classrooms, laboratories, education centers, and online. The four-year colleges, such as Villa Julie, provide intense, hands-on training for future careers in the sciences. Maryland's sixteen community colleges operate a network of 23 campuses and numerous learning centers throughout the state.

The Milken report notes “the total number and percentage of the population with advanced degrees or higher are important to a state because large concentrations of people with advanced degrees are a good indicator of a state labor pool’s sophistication and level of skill development.” Employers recognize the importance of locating their companies in states with strong academic institutions. They are also a reflection of a “solid advanced education system.”

**Degrees Awarded by Maryland Colleges and Universities in 2004  
Selected Programs**

Program	Degree				Total
	Associate	Bachelors	Masters	Doctorate	
<b><i>Four-year Institutions</i></b>					
Biological & Natural Sciences	269	1,301	344	163	2,077
Business and Management	1,458	3,797	3,848	16	9,119
Computer Science	1,213	2,224	1,226	27	4,690
Engineering & Technology	710	1,027	809	158	2,704
Mathematics	0	247	76	22	345
Physical Science	0	238	161	89	488
<b>Total</b>	<b>3,650</b>	<b>8,834</b>	<b>6,464</b>	<b>475</b>	<b>19,423</b>

Note: Associate includes Associate Degrees, Lower and Upper Division Certificates; Bachelors includes Bachelors Degrees; Masters includes Masters Degrees and Post Baccalaureate Certificates; Doctorate includes Doctoral Degrees.

Source: Maryland Higher Education Commission.

In addition to Maryland's outstanding academic institutions listed above, the Harford County government joined with the state, academia and local businesses to create a facility called the "Higher Education and Applied Technology (HEAT) Center." The HEAT Center is a 152-acre campus located in Harford County that supports the mission of APG, helps support regional technology transfer initiatives and provides business incubator space. The HEAT Center also plays a significant role in workforce training by offering associate degrees, certificates, continuing education from the following academic institutions:

- College of Notre Dame of Maryland
- Johns Hopkins University
- Towson University
- University of Maryland at College Park
- University of Phoenix

- Villa Julie College
- Harford Community College
- Cecil Community College

The HEAT Center is located less than ten minutes from the base and is utilized by neighboring defense contractors, academia and government officials. Harford County plans to develop the entire HEAT Center campus with academic institutions and major private sector entities that support the mission of APG. Pursuant to this, in 2001 the Battelle Memorial Institute, one of the world's largest private research and development organizations, purchased 89-acres at HEAT for the development of its new Battelle Eastern Science and Technology (BEST) Center. The first phase of construction was completed in 2002 with the opening of a new \$20 million, 80,000 square foot facility complete with office space, a conference center and 16 biology and chemistry labs.

In 2005, the Harford County Council approved a revised Master Land Use plan for Harford County which provides an additional 100+-acres to the HEAT Center campus in order to sustain the growth of industry activity and educational programming.



# Higher Education - 60 Mile Radius of APG

LABEL	SCHOOL	FACILITY
1	Allegany College of Maryland	
2	Anne Arundel Community College	
3	Baltimore City Community College	
4	Bowie State University	
5	Capitol College	
6	Capitol College	Southern Maryland Higher Education Center
7	Carroll Community College	
8	Catholic University	Southern Maryland Higher Education Center
9	Catholic University	
10	Cecil Community College	
11	Chesapeake College	
12	College of Notre Dame of Maryland	
13	College of Notre Dame of MD	HEAT Center
14	College of Notre Dame of MD	Southern Maryland Higher Education Center
15	College of Southern Maryland - La Plata	
16	College of Southern Maryland - Leonardtown	
17	College of Southern Maryland - Prince Frederick	
18	Community College of Baltimore County - Catonsville	
19	Community College of Baltimore County - Dundalk	
20	Community College of Baltimore County - Essex	
21	Coppin State University	
22	Delaware State University	
23	Dickinson College	
24	Embry Riddle Aeronautical University	PAX River
25	Florida Institute of Technology	PAX River
26	Frederick Community College	
27	Frostburg State University	
28	Garrett Community College	
29	George Mason University	Southern Maryland Higher Education Center
30	George Mason University	
31	George Washington University	Southern Maryland Higher Education Center
32	George Washington University	
33	Gettysburg College	
34	Goucher College	
35	Gratz College	Southern Maryland Higher Education Center
36	Hagerstown Business College	
37	Hagerstown Community College	
38	Hagerstown Higher Education Center	
39	Harford Community College	
40	Harrisburg Area Community College - Gettysburg	
41	Higher Education and Applied Technology Center	
42	Hood College	
43	Howard Community College	
44	Johns Hopkins University	HEAT Center
45	Johns Hopkins University	Southern Maryland Higher Education Center
46	Loyola College in Maryland	
47	Maryland College of Art and Design	
48	Maryland Institute, College of Art	
49	McDaniel College (formerly Western MD College)	
50	Montgomery College - Germantown	
51	Montgomery College - Rockville	
52	Montgomery College - Takoma Park	
53	Morgan State University	
54	Mount Saint Mary's University & Seminary	
55	Old Dominion	Southern Maryland Higher Education Center
56	Peabody Institute of the JHU	
57	Penn State University at Mont Alto	
58	Prince George's Community College	
59	Rowan University	
60	Salisbury University	
61	Shippensburg University	
62	Sojourner-Douglass College	
63	Southern Maryland Higher Education Center	
64	St. John's College	
65	St. Mary's College of Maryland	
66	Tesst College of Technology - Baltimore	
67	Tesst College of Technology - Beltsville	
68	Tesst College of Technology - Towson	
69	The Johns Hopkins University	
70	Towson University	
71	Towson University	HEAT Center
72	United States Naval Academy	
73	University of Baltimore	
74	University of Delaware	
75	University of Maryland Baltimore County	
76	University of Maryland College Park	HEAT Center
77	University of Maryland College Park	Southern Maryland Higher Education Center
78	University of Maryland Eastern Shore	
79	University of Maryland University College	
80	University of Maryland University College	Southern Maryland Higher Education Center
81	University of Maryland, Baltimore	
82	University of Maryland, College Park	
83	University of Pennsylvania	
84	University of Phoenix	HEAT Center
85	University of Tennessee Space Institute	PAX River
86	Ursinus College	
87	USM Shady Grove Center	
88	Villa Julie College	
89	Villanova University	
90	Waldorf Center for Higher Education	
91	Washington College	
92	West Chester University of Pennsylvania	
93	Widener College	
94	Wilson College	
95	Wor-Wic Community College	
96	York College of Pennsylvania	

