Study Advisory Committee Meeting No. 2

Regional Helicopter System Plan

Metropolitan Washington Council of Governments (COG)

Maryland Aviation Administration (MAA)

Edwards and Kelcey, Inc.

March 5, 2003

Agenda

1. Introductions
2. Review First SAC Meeting Minutes
3. Review Report No. One - System Inventory & Forecasts of Demand
4. General Discussion of System Requirements
5. SAC Breakout Sessions
6. Recap of Breakout Session Findings and Recommendations
7. Upcoming Tasks
8. Next SAC meeting

Study Format

Phase I

Status as of March 5, 2003

- System Inventory
- Forecast of Rotorcraft Demand

Draft Report Submitted

- System Requirements

In Progress

- Definition of System Goals and Objectives

SAC Input

- Phase II Scope Revisions and Finalization

Study Format

Phase II

- Recommended System
- Environmental Issues
- Economic Impacts of the Recommended System
- Policies and Plans for System Development
- Implementation Program
- Security and Disaster Airlift Plan

Maryland Aviation Administration (MAA) Issues

1. Can a system of strategically located privately-owned/limited-use helipads throughout Maryland adequately serve helicopter operator demand without the need for large public-use downtown or key suburban heliports?

2. How can the needs of the various helicopter users be balanced with public concerns about noise and safety?

Maryland Aviation Administration (MAA) Issues

3. How will airspace, air traffic control services, GPS instrument approaches for heliports, etc. impact plans and policies for heliport development within the State?

4. Will the purchase, ownership, operating, and maintenance costs of helicopters increase to the point where they will constrain demand?

Metropolitan Washington Council of Governments (COG) Issues:

1. Analyze how existing and future helicopter operations in the region impact residents, employees, and visitors.

2. Residents in a number of locations in the region have expressed concern about helicopter noise, and many of those areas of concern are located under designated helicopter routes, and the intersections of those routes.

Metropolitan Washington Council of Governments (COG) Issues:

3. What is the relationship between helicopter activity and economic development, as well as the importance of helicopter activity to the overall transportation needs of the Metropolitan Washington region.

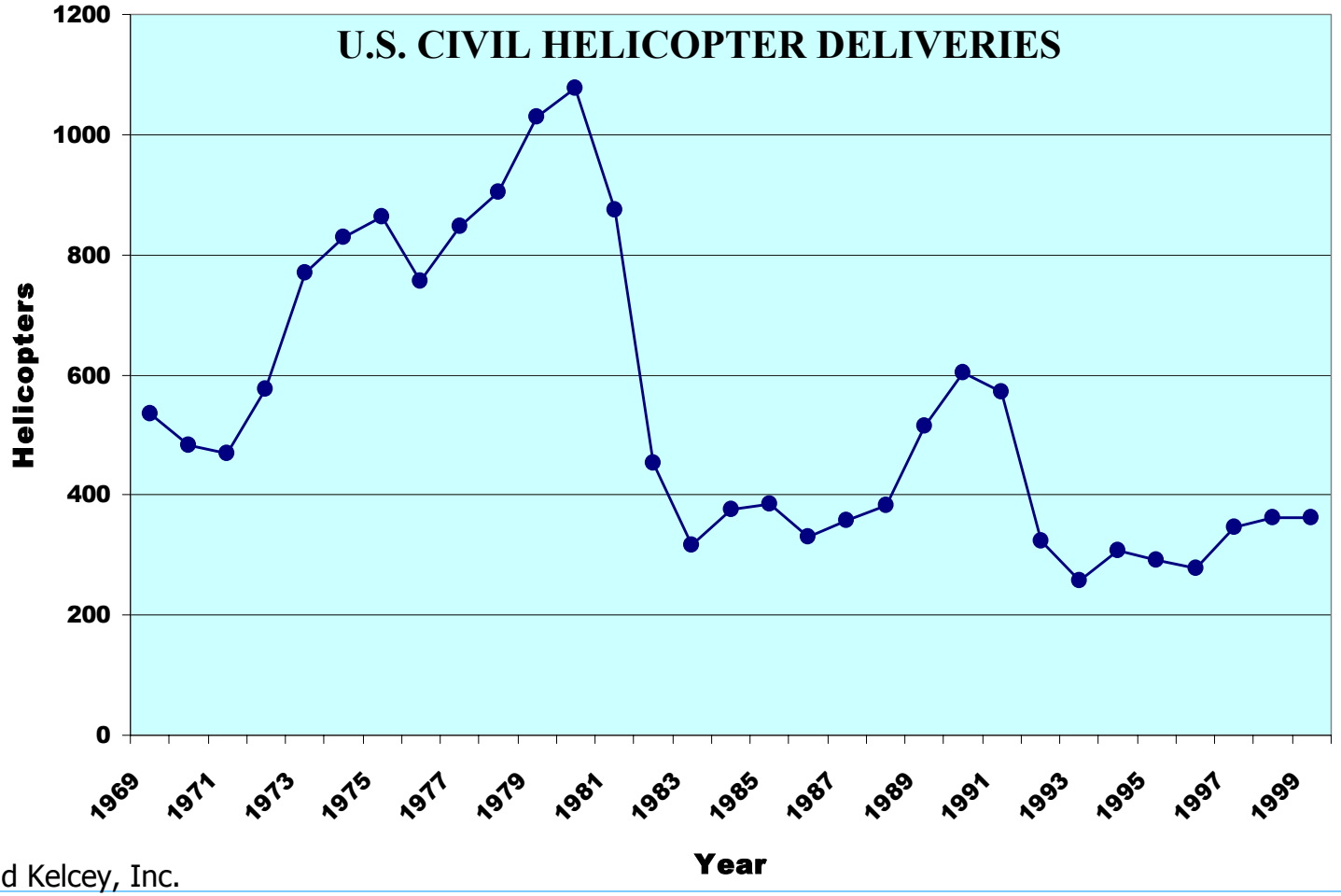
Long History of Helicopters in the Study Area

Emile and Henry Berliner Helicopter 1924 - College Park Airpark

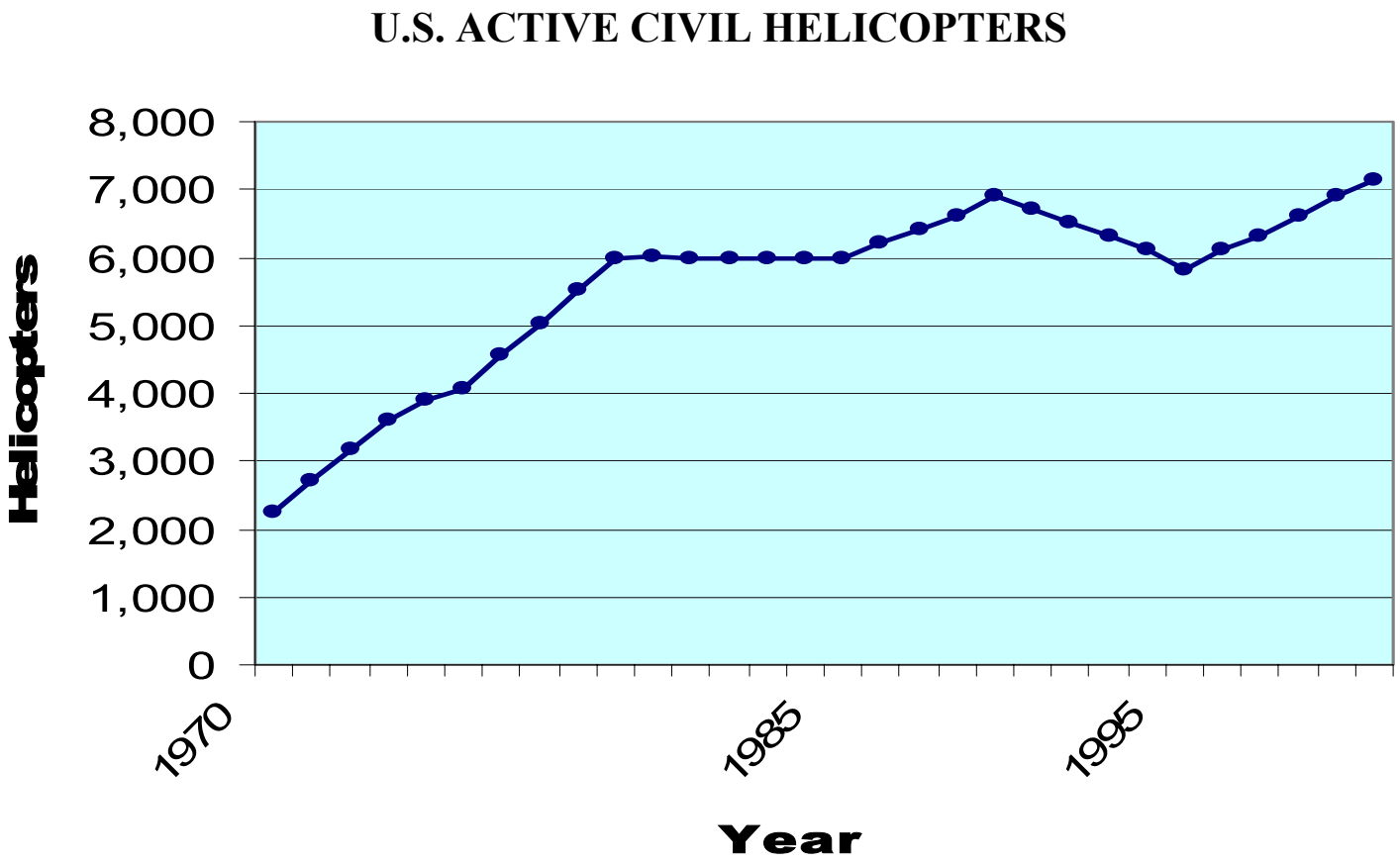
Patuxent River NAS - 1943

First Helicopter One - 1957

Helicopter Deliveries



Active Civil Helicopters



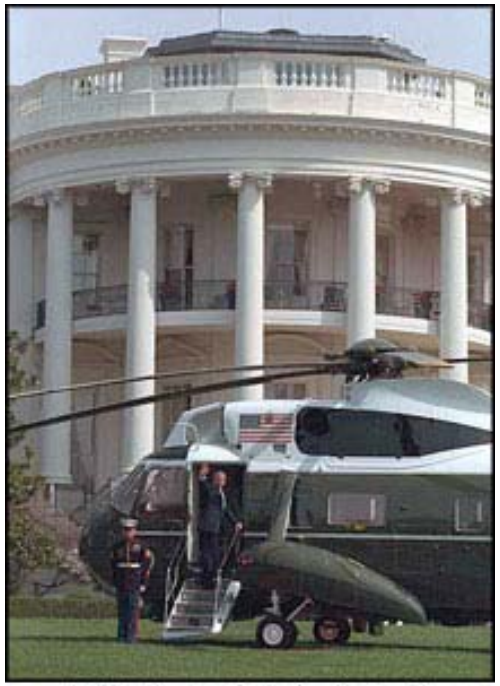
Historical Activity in COG Region

ITEM	1992 (Actual)	2000 (Forecast)	2002 (Actual)
Based Helicopters	140	--	41
Helicopter Operators	35	--	15
Helicopter Operations	180,000	200,000	108,870
Heliports	51	--	48

Sources: 1992 & 2000 data: MWCOG, Helicopter System Inventory and Vertiport Feasibility Study for Metropolitan Washington, July, 1992. 2002 data: Edwards & Kelcey survey.

U.S. Air Force 89th Airlift Wing

U.S. Air Force Helicopters over D.C



White House photo by Susan Sterner

Landing Facilities in COG Region

Facility	Private/Corp	Govt.	Military	Medical	Public Use	Total
Heliport	12	10	3	22	1	48
Airport	0	0	2	0	14	16
Total	12	10	5	22	15	64

Helicopter Operators in COG Region

Operator	Base	Helicopter (Number)
Anne Arundel County Police Dept.	Tipton Airport	Bell OH-58 (2)
AOL/Time Warner	Dulles Int'l Airport	SK-76, Bell 430, Bell 407 (3)
Bechtel Nevada	Andrews AFB	Bell 412 (1)
Capital Helicopter	Fairfax Heliport	Bell 407 (2)
CVC Helicopter Inc.	Darlington, MD	Schweizer 300C (1)
Fairfax County Police Dept.	Fairfax, VA	Bell 407 (1)
HeloAir	Sandston VA	Bell 206, Bell 407, Schweizer 300C (5)
Inova Hosptial	Fairfax County Hospital	Bell 407 (1)
Metropolitan Police Dept.	South Capitol Street	American Eurocopter AS 350 B3 (1)
Prince George's Co. Police Dept.	Washington Exec. Airport	MD 520N (2)
US Air Force - 89th Airlift Wing	Andrews AFB	UH-1N (20)
U.S. Park Police	District of Columbia	Bell 412 (2) Bell 206L (1)

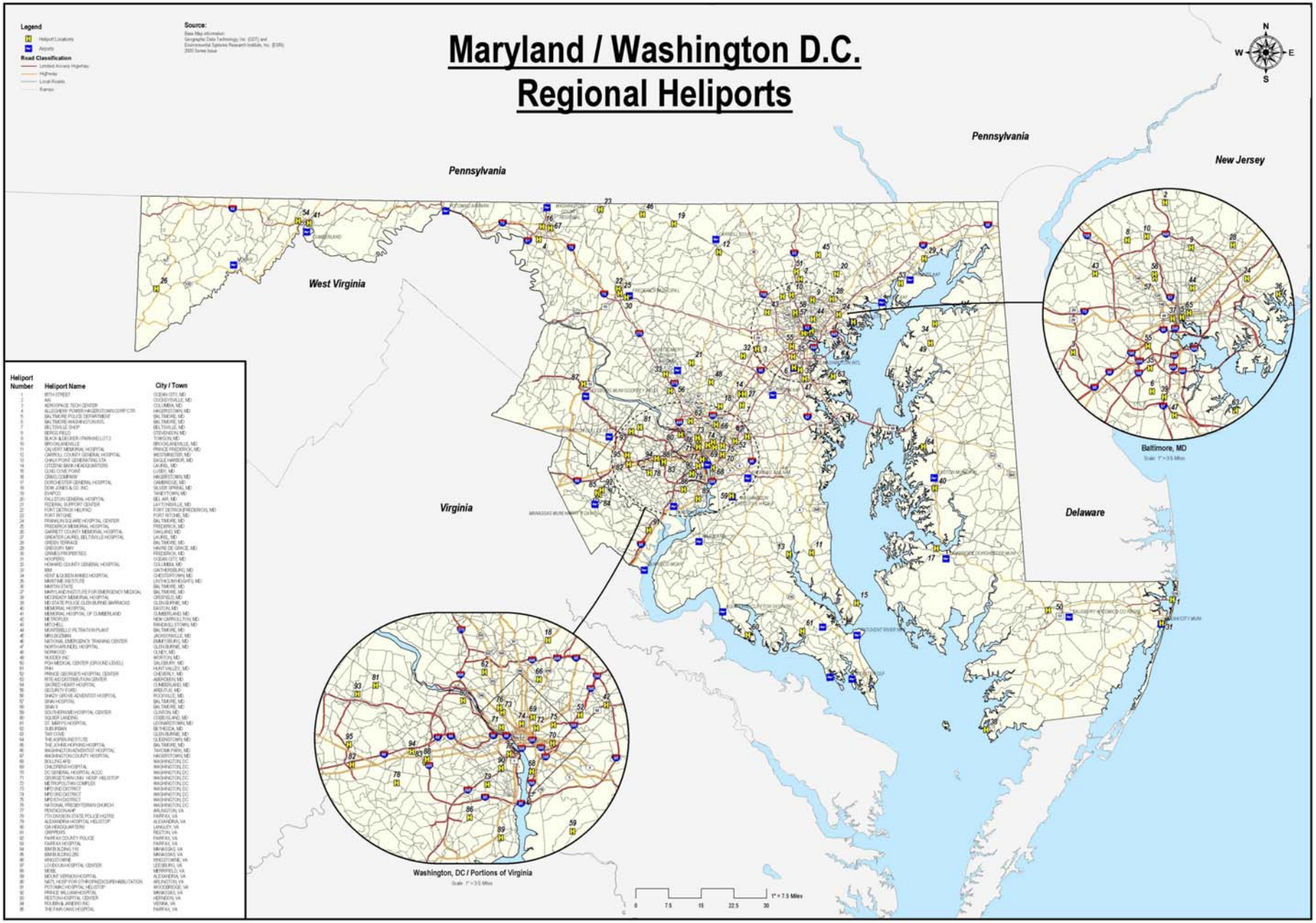
Helicopter Based in COG Region (2002)

Type of Helicopter	Number	Percent
Total	41	100%
Civilian	21	51%
Military *	20	49%
Piston	2	5%
Single Turbine	16	36%
Twin Turbine	23	59%
Total	41	100%

Landing Facilities in Maryland

Facility	Private/Corp	Govt.	Military	Medical	Public Use	Total
Heliport	15	5	3	27	0	50
Airport	0	0	1	0	32	33
Total	15	5	4	27	32	83

Study Advisory Committee Meeting No. 2

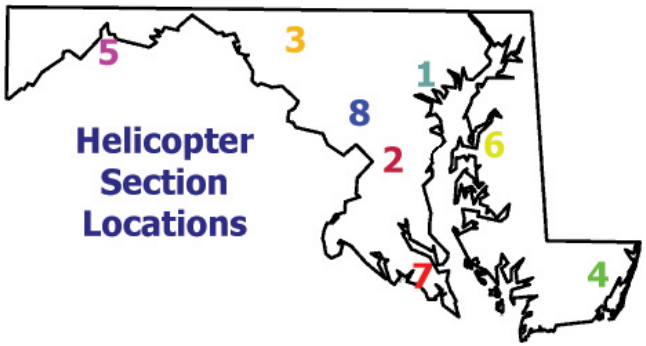


Helicopter Operators in Maryland

Operator	Base	Helicopter (Number)
Advanced Helicopters	Frederick Airport	R-22 (6), Bell Jet Ranger (1)
Anne Arundel County Police	Tipton Airport	Bell OH-58 (2)
Baltimore City Police	Martin State Airport	EC-120 (1)
Baltimore County Police Aviation	Martin State Airport	Bell 206 (3)
America Rising/Glenwood Aviation	Tipton Airport	A-109, B-206 (5)
CVC Helicopters Inc.	Darlington	Schweizer 300C (1)
Helicopter High Inc.	Martin State Airport	R-22, R-44, B-206 (5)
Maryland ANG, 29th Aviation Brigade	Edgewood	UH-1H, UH-60A, OH-58 (26)
Maryland State Police (MSP)	Martin State Airport	EC AS-365N II (12)
Prince George's Co. Police Dept.	Washington Executive Airport	MD 520N (2)
Stat Medevac	Martin State Airport	BK-117 (1)
Whirlwind Aviation Inc.	Frederick Airport	AS-365 (2), S-76 (1)
U.S. Navy Test Center	Patuxent River NAS	SH-60
U.S. Air Force, 89th Airlift Wing	Andrews AFB	UH-1N (20)

Maryland State Police AS-365N II

Stat Medevac at Johns Hopkins Hospital Heliport



America Rising – Charter/Air Taxi

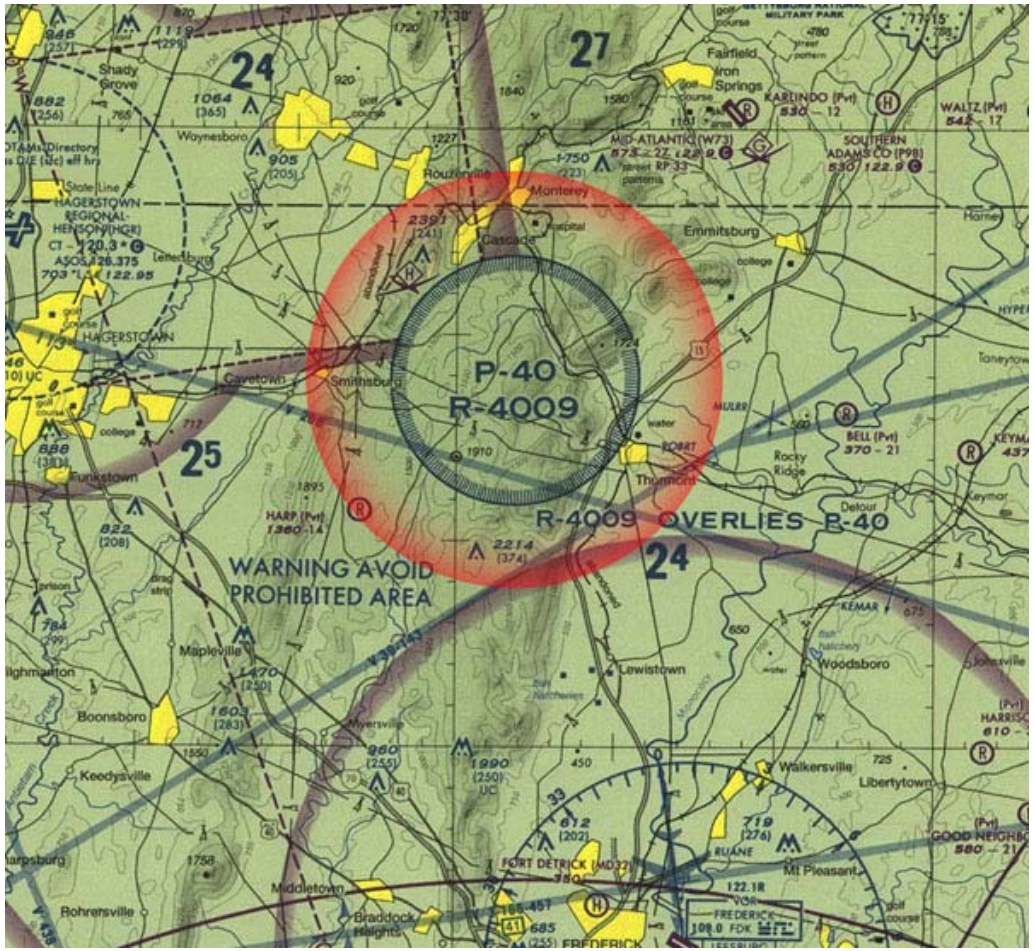
Helicopter Based in Maryland (2002)

Type of Helicopter	Number	Percent
Total	68	100.0%
Civilian	42	61.8%
Military	26	31.2%
Piston	9	13.3%
Single Turbine	29	42.6%
Twin Turbine	30	44.1%
Total	68	100.0%

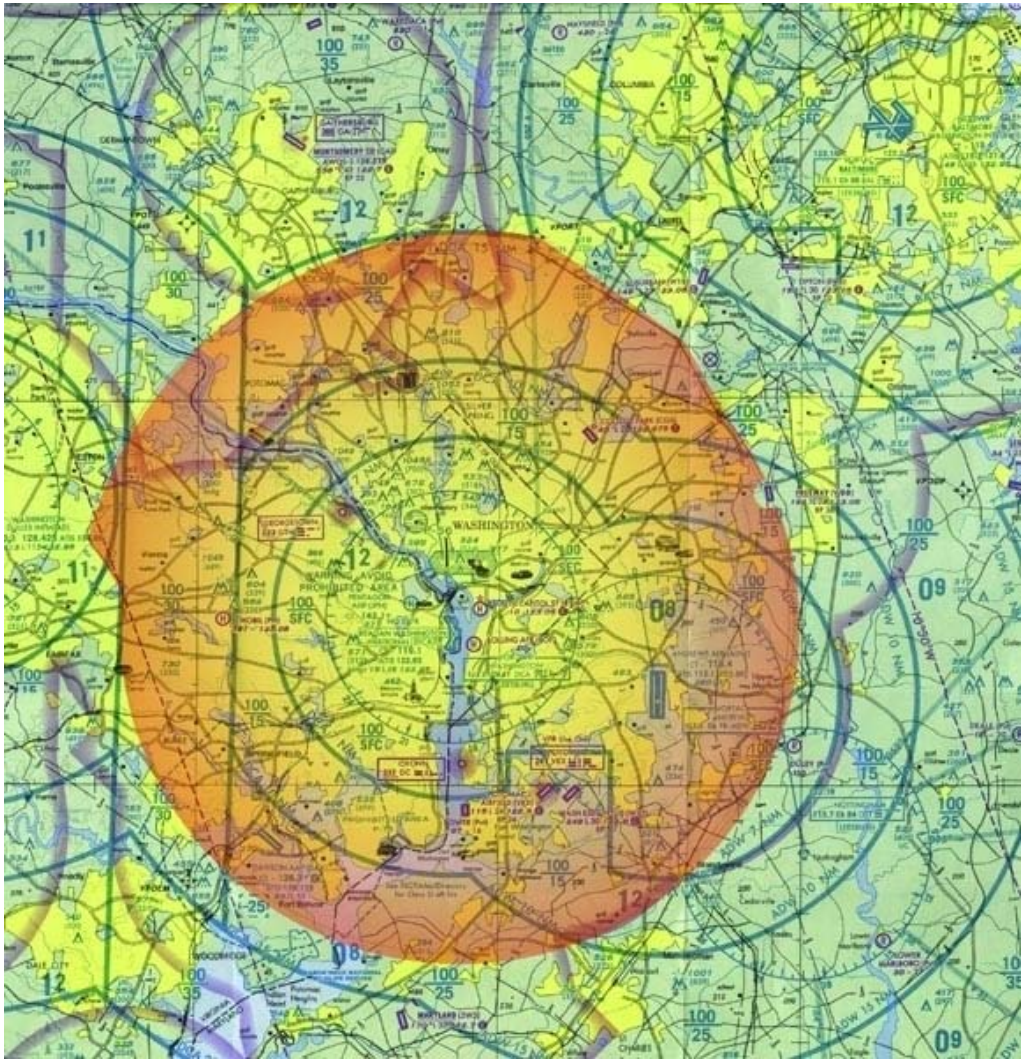
Helicopter Missions in Maryland

Mission	% of Operations
Emergency Medical Services (EMS)	32.3%
Military/defense	16.2%
Aerial patrol/survey	10.3%
Flight Training	9.6%
Law Enforcement	8.6%
Other	5.2%
Corporate/business	4.6%
Electronic news gathering (ENG)	4.2%
Agriculture/spraying	3.3%
Filming/aerial photography	3.1%
Personal	1.3%
Wildlife management	1.0%
Utility	0.3%
Total	**100%**

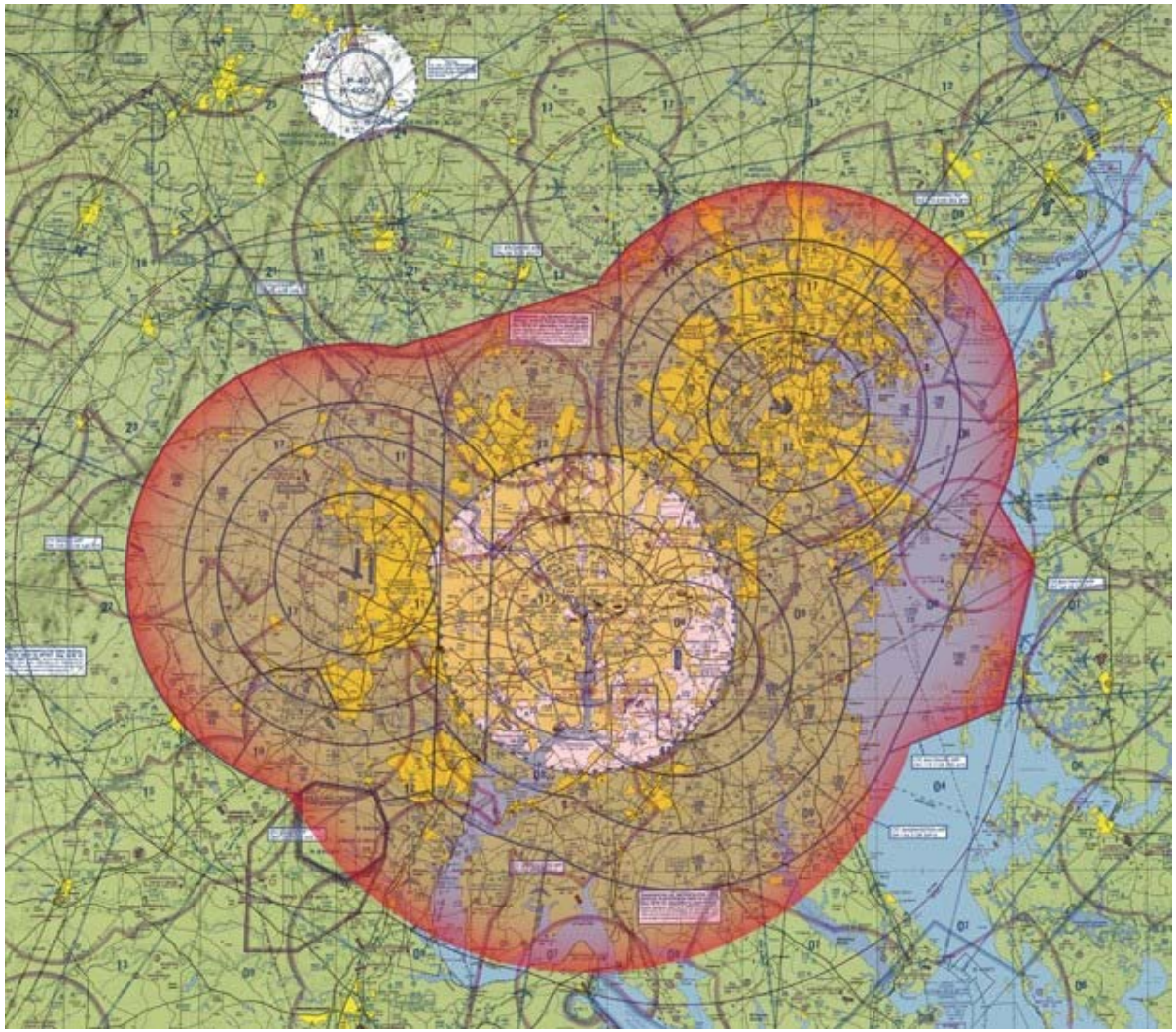
Prohibited Area (P-40)
Camp David, MD



Temporary Flight Restrictions Washington DC

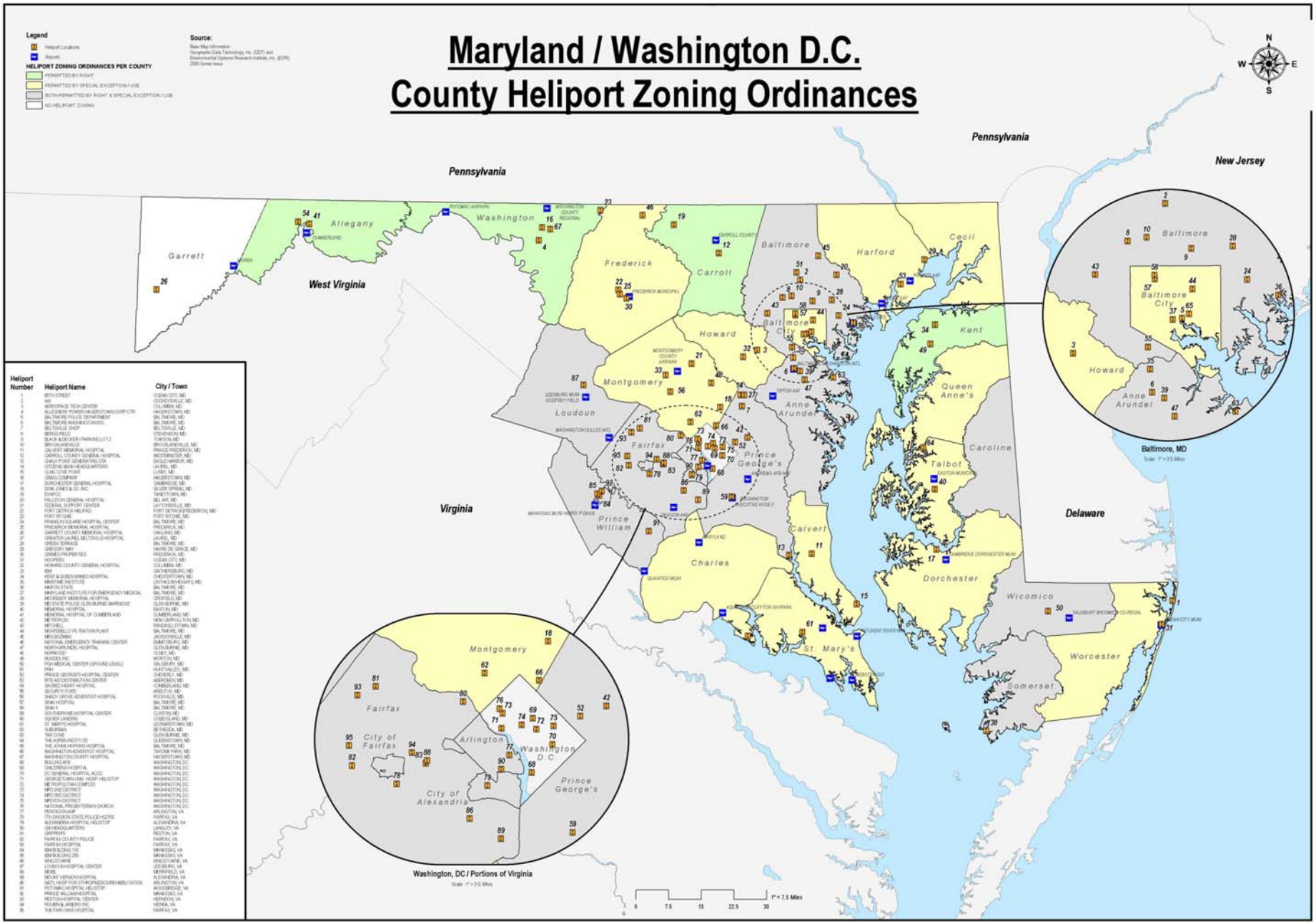


Air Defense Identification Zone (ADIZ)



Zoning and Land Use

- The regulation of heliports does not seem to be a concern for most jurisdictions.
- Less than half of the jurisdictions in the state of Maryland have regulations that address aircraft landing facilities of any kind, including airports.
- Of those jurisdictions with regulations, the larger, more densely developed jurisdictions tend to have regulations whereas the smaller, less densely developed areas do not.
- The Metropolitan Washington COG member jurisdictions, all but two have some form of regulations related to helicopter landing facilities.


Maryland / Washington D.C.
County Heliport Zoning Ordinances
Legend
Heliport Locations
Airports
HELIPORT ZONING ORDINANCES PER COUNTY
PERMITTED BY RIGHT
PERMITTED BY SPECIAL EXCEPTION / USE
BOTH PERMITTED BY RIGHT & SPECIAL EXCEPTION / USE
NO HELIPORT ZONING
Source:
Pennsylvania
West Virginia
Virginia
Delaware
New Jersey
Garrett
Allegany
Washington
Frederick
Carroll
Baltimore
Harford
Cecil
Howard
Montgomery
Loudoun
Fairfax
Prince William
Anne Arundel
Baltimore City
Kent
Queen Anne's
Caroline
Talbot
Prince George's
Calvert
Charles
Dorchester
Wicomico
Somerset
St. Mary's
Worcester
Baltimore, MD
Washington, DC / Portions of Virginia
City of Fairfax
Arlington
Washington D.C.
City of Alexandria
Heliport Number
Heliport Name
City / Town

Zoning and Land Use (cont.)

In jurisdictions without any applicable regulations (i.e. the use is not mentioned in the ordinance):

- In some jurisdictions the ordinance language clearly states that if a use is not expressly permitted, then it is prohibited.
- Others are less specific and are handled on a case by case basis.
- In some instances, permitting a new use could require an amendment to the zoning ordinance or municipal code.

Zoning and Land Use (cont.)

Those jurisdictions that have applicable regulations and allow helicopter-landing facilities:

- Most are permitted as a Special Exception (SE) or Special Use Permit (SUP) use, most commonly in industrial and rural residential/agricultural zones.
- The requirements for obtaining a SE or SUP typically involves a formal application and review by the Planning Commission or Board of Zoning Appeals.
- In jurisdictions that specifically regulate heliports, helistops and helipads, many identified conditions of use or performance standards that would have to be met in order to grant a SE or SUP. These dealt with a range of issues including noise, setback requirements, hours of operation, number of aircraft on site, frequency of use, public vs. private use, maintenance facilities, lighting, screening, etc.

Zoning and Land Use (cont.)

Those jurisdictions that have applicable regulations and allow helicopter-landing facilities:

- Many also identify that the design of such facilities must comply with applicable FAA regulations.
- A small amount of jurisdictions (14 in the State of Maryland) do allow heliports By Right or as a Principal Permitted Use in limited zones.
- The majority of those allowed By Right are permitted in industrial zones.

Forecasts of Demand

FAA National Forecast of Helicopter Activity (2002-2013)

Active Helicopters			Hours Flown		
Piston	Turbine	Total	Piston	Turbine	Total
8.9%	2.7%	5.0%	11%	7.8%	8.5%

GA Active Fleet: Assumptions and Forecasts

- F/W piston
  - Single-engine: contraction in fleet through 2003; no change in 2004; and resumption of growth in 2005
- F/W Turbine
  - Turboprop: slight decline through 2003; modest growth through 2013
  - Turbofan/jet: modest to strong growth throughout the entire forecast period
- Rotorcraft
  - Decline through 2003; modest growth, led by piston through 2013

George Stamas, FAA General Aviation Forecast Conference 2002-2013

Aircraft Utilization: Assumptions and Forecasts

- **Piston**
  - *"Aging" of piston fleet and decline in number of student pilots leads to lower piston utilization at end of forecast period*
- **Turbine**
  - *Increase in turbine utilization is largely due to increase in number of these aircraft in fractional ownership programs*
- **Rotorcraft**
  - *Utilization decreases slightly due to change in fleet mix and changing use patterns*
- **Net Effect**
  - *Overall 2.6% increase in utilization over forecast period*

George Stamas, FAA General Aviation Forecast Conference 2002-2013

George Stamas, FAA General Aviation Forecast Conference 2002-2013

Local Factors Affecting Future Helicopter Activity

- Regional highway congestion and delays
- Availability of public-use heliports
- Availability of off-airport landing sites
- Continued airspace and airport access restrictions
- Lack of access to Reagan National Airport
- Availability and cost of aviation insurance (both liability and hull)

Two Forecast Scenarios

- Status Quo
- High Growth

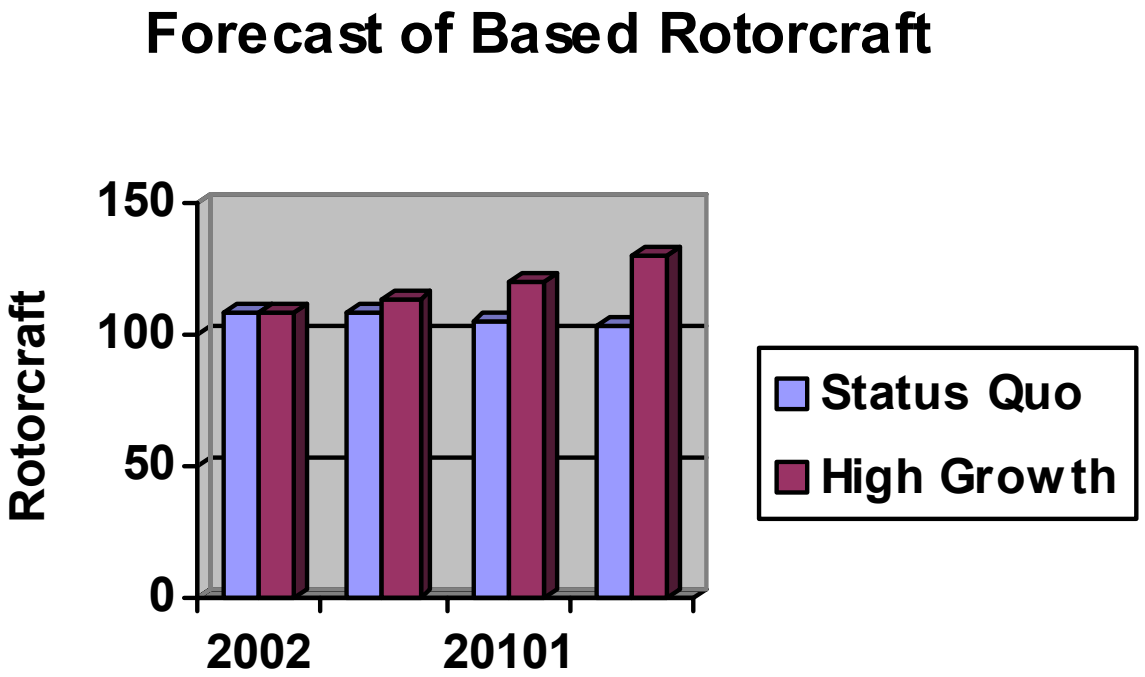
Status Quo Forecast Scenario

- Airspace restrictions remain in place
- Access to GA airports within 15 mile radius restricted
- No new public use heliports in either DC or Baltimore
- Insurance rates continue to increase & availability decreases
- Security procedures extended to GA aircraft & airports
- Cost of helicopter ownership & operation rises faster than CPI

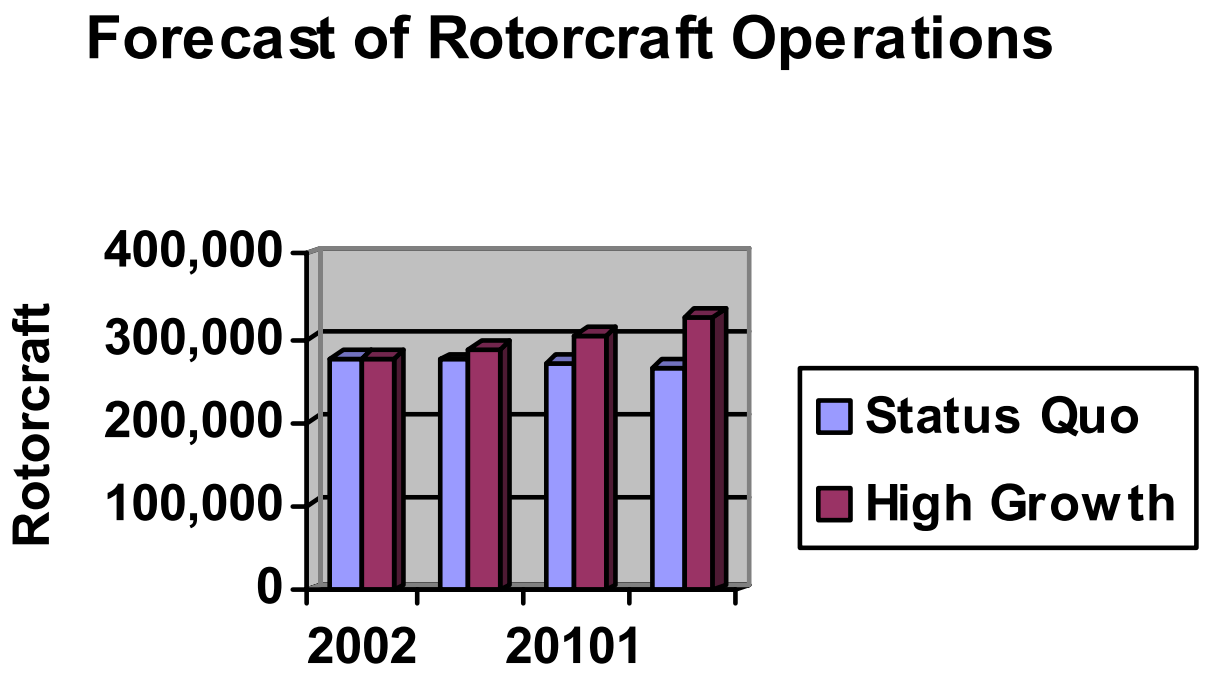
Status Quo Forecast Scenario

- Based helicopters and operations experience a decline by 2020
- Military helicopter activity will remain steady or increase
- Police and EMS helicopter activity will increase slightly
- Corporate, air taxi, flight training, utility, & personal activity will decline

Forecasts of Demand



Forecasts of Demand



High Growth Forecast Scenario

- Airspace and airport access restrictions are lifted
- Regional highway congestion continues to increase
- Public use heliports are opened in both DC and Baltimore
- Insurance rates stabilize over a long period
- Cost of helicopter ownership & operation stabilizes

High Growth Forecast Scenario

- Based helicopters and operations will increase by 21% by 2020
- Military helicopter activity will remain level
- All segments of civil helicopter market will increase

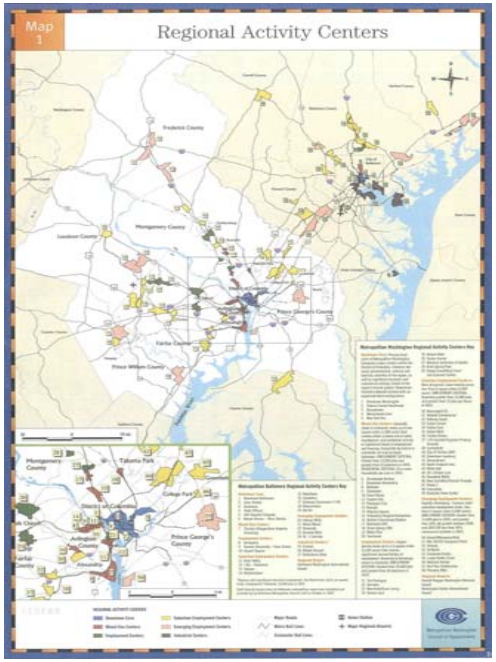
Existing System Characteristics

- Helipads are predominantly privately-owned private use
- Minimal facilities
- No instrument approaches to heliports
- Airports serve as bases, provide facilities & services
- Unprepared sites serve as landing areas

Existing System Characteristics

- Most public agency operators expressed little need for additional facilities
- Corporate/air taxi operators need additional facilities, including public use heliports in DC and Baltimore
- Lack of access to Reagan National Airport impacting corporate activity
- Helipads at highway rest areas/park-n-ride lots could serve EMS & police missions
- Standardize local local helipad permitting process

Regional Activity Centers



Breakout Sessions

- Facility Needs and System Requirements
- Airspace/ATC/Operating Restrictions
- Land Use/Zoning/Noise

Breakout Sessions Objectives

- Define system goals
- Provide more detail on key issues

Recap of Breakout Session Findings and Recommendations

- Facility Needs and System Requirements
- Airspace/ATC/Operating Restrictions
- Land Use/Zoning/Noise

Upcoming Tasks

- Economic Impacts (near completion)
- Noise Impacts (public input)
- System Requirements (near completion)
- Definition of System Goals and Objectives (SAC Input)
- Phase II Scope Revisions and Finalization (SAC Input)

Next SAC Meeting

- June Timeframe
- Focus on Defining System Goals and Objectives
- Finalize Phase 2 Scope of Work