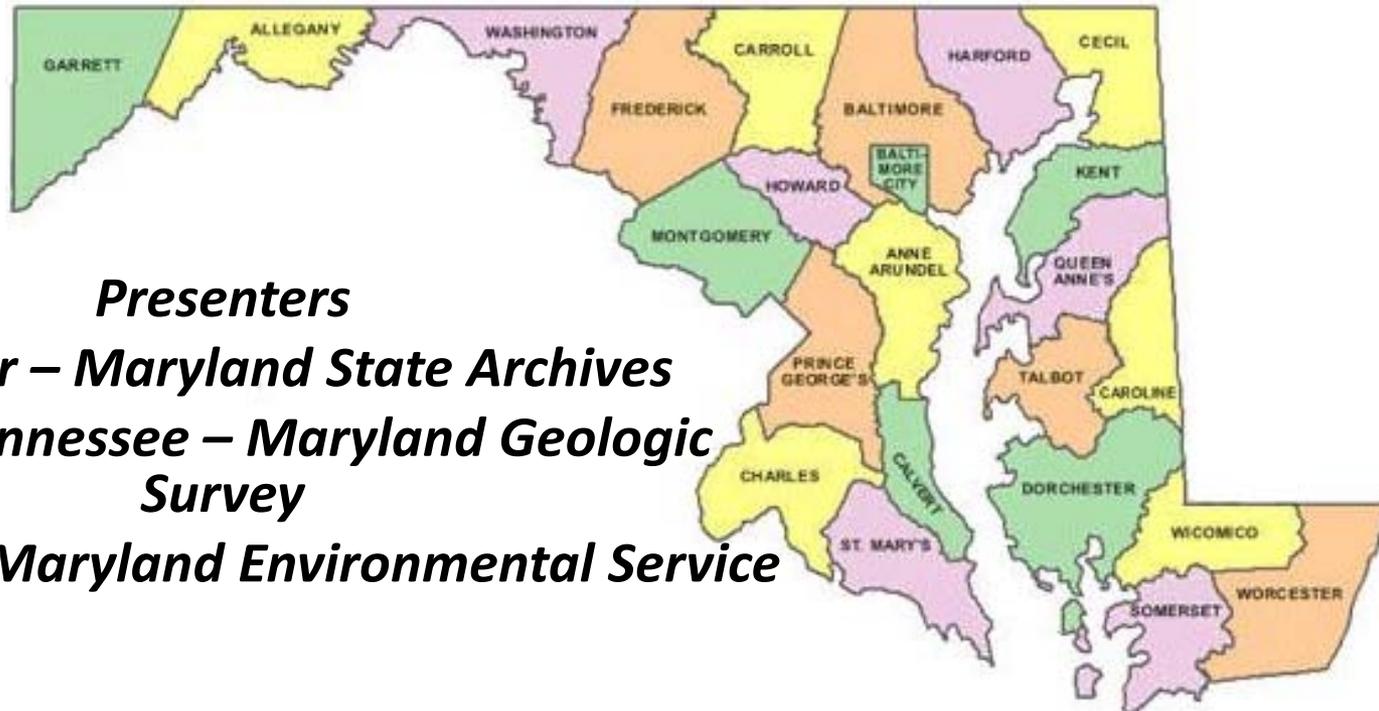# *Scanning and Preserving Maryland Historic Aerial Photos*

Presenters
Tim Baker – Maryland State Archives
Lamere Hennessee – Maryland Geologic Survey
Larry Swift – Maryland Environmental Service

Brief History of the
Historic Aerial Photos Committee

First Meeting of the Committee:
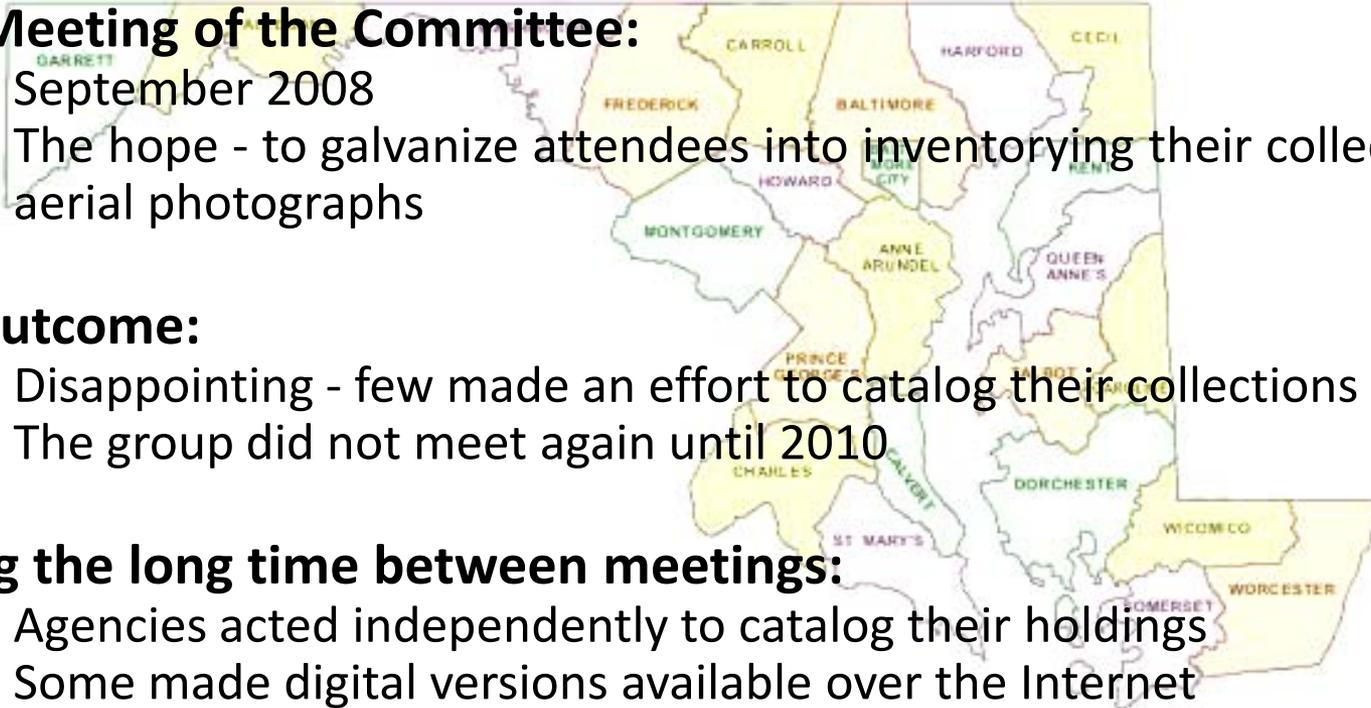- September 2008
- The hope - to galvanize attendees into inventorying their collections of aerial photographs

The Outcome:
- Disappointing - few made an effort to catalog their collections
- The group did not meet again until 2010

During the long time between meetings:
- Agencies acted independently to catalog their holdings
- Some made digital versions available over the Internet
- MES scanned and georeferenced 1980s aerial photos held by SHA

Brief History of the
Historic Aerial Photos Committee
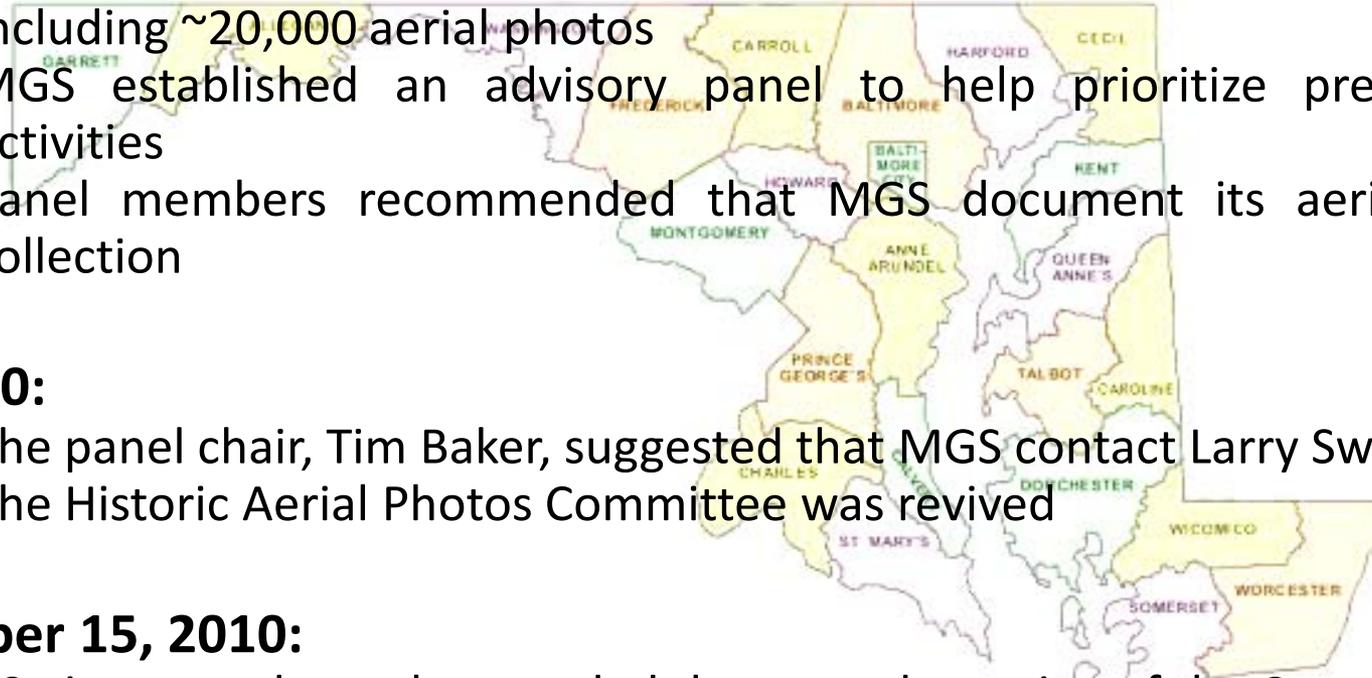
By Early Fall 2010:
- MGS awarded federal grants to preserve its geological collections, including ~20,000 aerial photos
- MGS established an advisory panel to help prioritize preservation activities
- Panel members recommended that MGS document its aerial photo collection

Fall 2010:
- The panel chair, Tim Baker, suggested that MGS contact Larry Swift
- The Historic Aerial Photos Committee was revived

December 15, 2010:
- 30+ interested people attended the second meeting of the Committee
- Expectations and interests were high

Expectations and Interests

Inventory:
- Inventory holdings of member agencies & others
- Capture more aerial imagery of Maryland state-owned properties

Access:
- Make images widely available to the public
- Overcome the difficulty of finding good quality historic aerial photos
- Replace photos battered by handling & use; improve their scanned images
- Create a one-stop shop, for example, at MSA, for statewide photos
- Expand GIS systems, like StateStat, to include historical information

Preservation:
- Recognize the value of aerial photos
- Preserve historic aerial photos of permanent value
- Improve the storage conditions of certain agency-held collections
- Provide guidance in scanning, archiving, & sharing
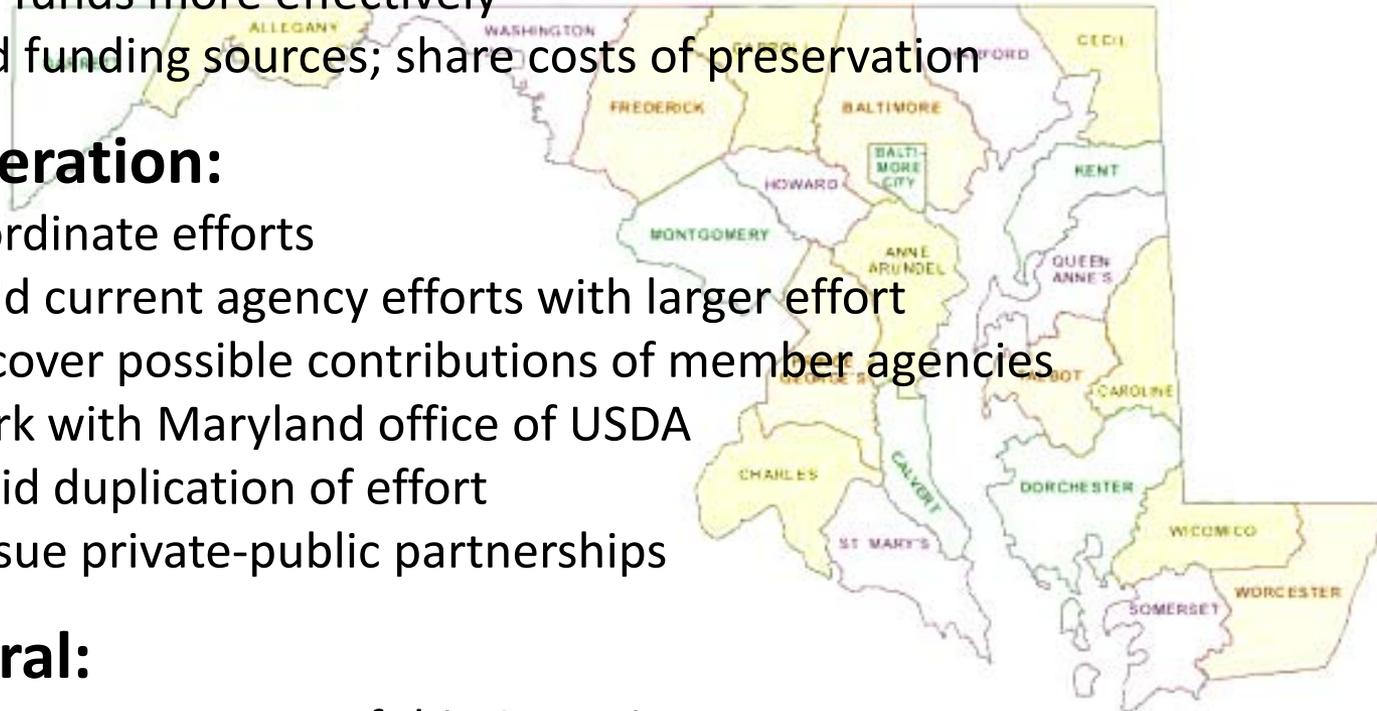
Expectations and Interests

Funding:
- Use funds more effectively
- Find funding sources; share costs of preservation

Cooperation:
- Coordinate efforts
- Meld current agency efforts with larger effort
- Discover possible contributions of member agencies
- Work with Maryland office of USDA
- Avoid duplication of effort
- Pursue private-public partnerships

General:
- Improve outcomes of this Committee
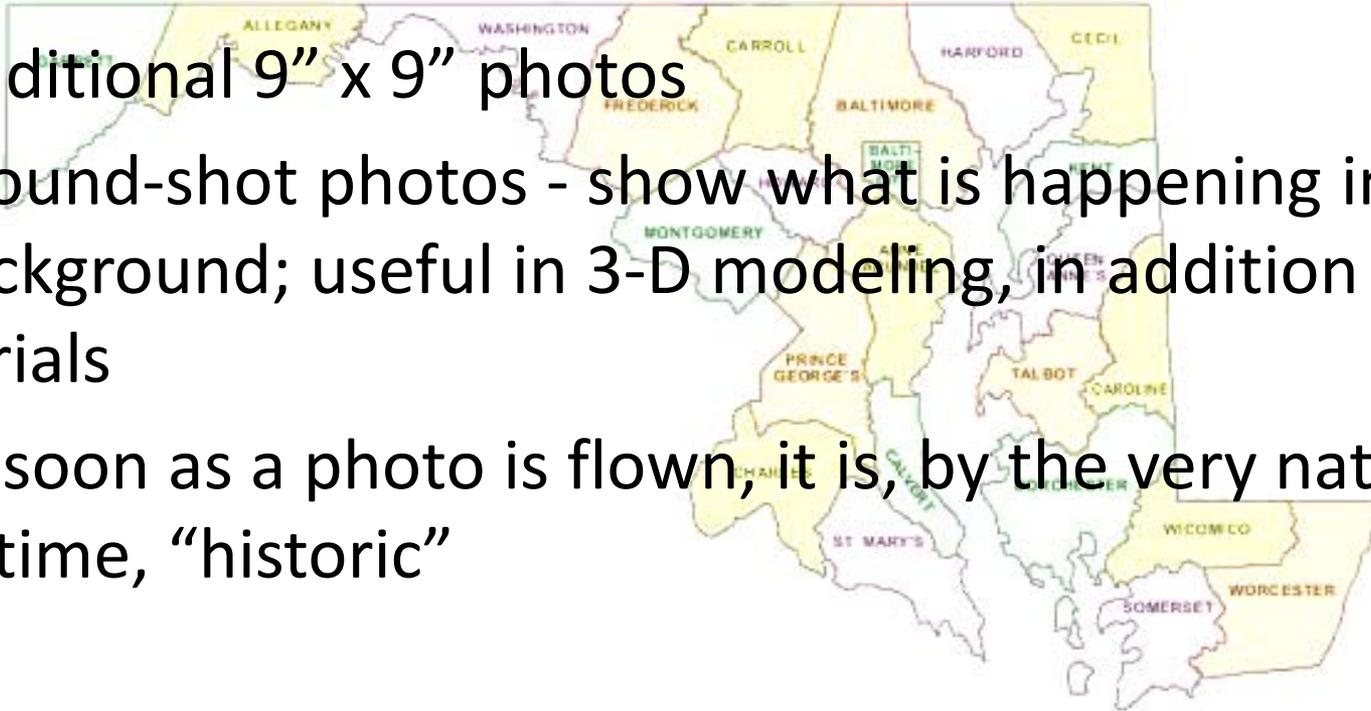- Develop strategies for handling aerial photos as go forward

Current Users & Uses for these Aerial Photos

- MSA – uses aerial photos in conjunction with historical title searches to understand the lay of the land from an aerial standpoint
- MDP – tracks historical change over time, statewide
- MHT - uses 1970s aerial photos to relocate former archeological sites
- MPA – forensic work
- County departments of planning
- Private land planning groups – use aerial photos for titles & land patents
- Used to understand land use & the built environment, particularly in the 1930s and 1950s
- Used in litigation (cases having to do with building sewers in Baltimore City)
- Used to extract features from historic photography for GIS input
- Used in land use/land cover mapping
- Used to document the history & possession of the land

What should be included as Historic Aerial Photos?

- Traditional 9" x 9" photos

- Ground-shot photos - show what is happening in the background; useful in 3-D modeling, in addition to aerials

- As soon as a photo is flown, it is, by the very nature of time, "historic"

Expertise of Committee Members

- Logistics

- Labor

- Familiarity with vendors

- Catalog management, including new ways of cataloging large collections

- Negotiating private-public partnerships

- Familiarity with Web technology
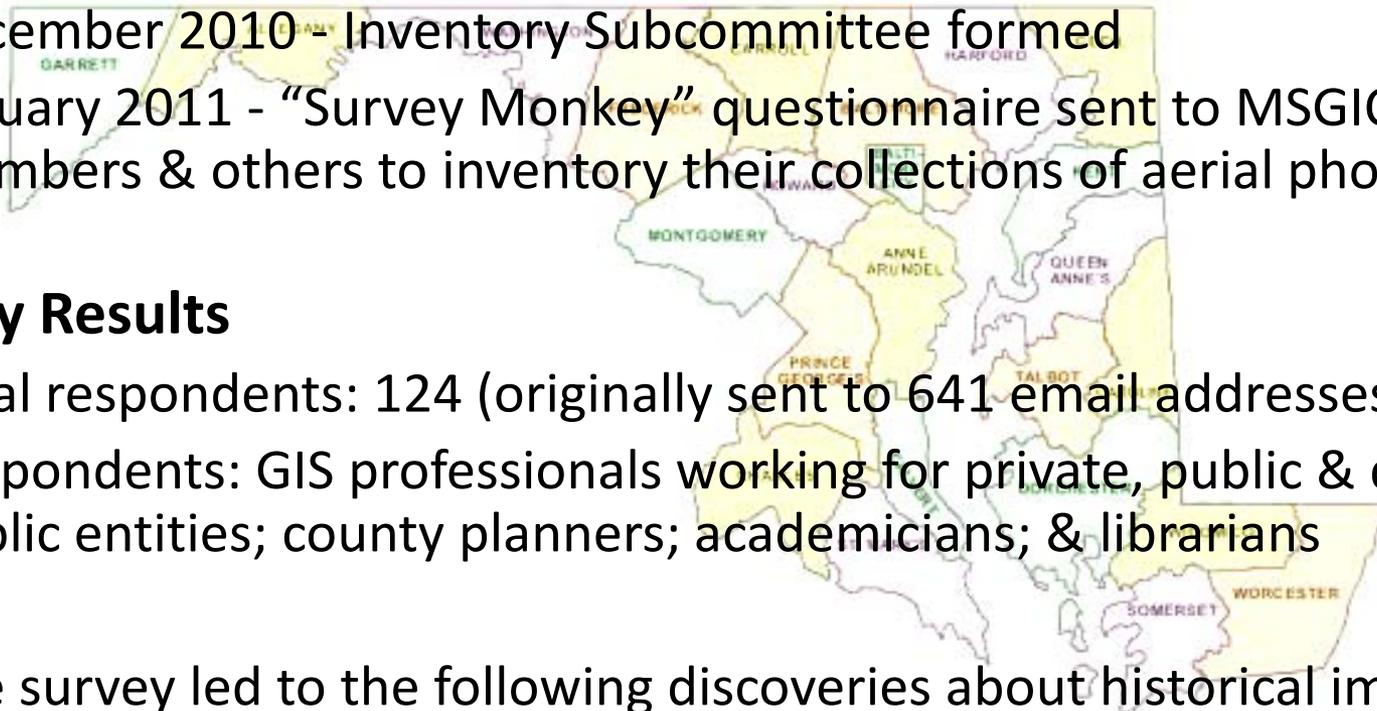
- Familiarity with archiving practices

MSGIC Questionnaire and Survey Results

Survey Timeline

- December 2010 - Inventory Subcommittee formed
- January 2011 - "Survey Monkey" questionnaire sent to MSGIC members & others to inventory their collections of aerial photos

Survey Results

- Total respondents: 124 (originally sent to 641 email addresses)
- Respondents: GIS professionals working for private, public & quasi-public entities; county planners; academicians; & librarians

- The survey led to the following discoveries about historical imagery, data , tools, and human resources in & around Maryland...

Survey Results

Satellite Imagery Discovered:

- Landsat scenes of various vintages, from the 1970s to the present
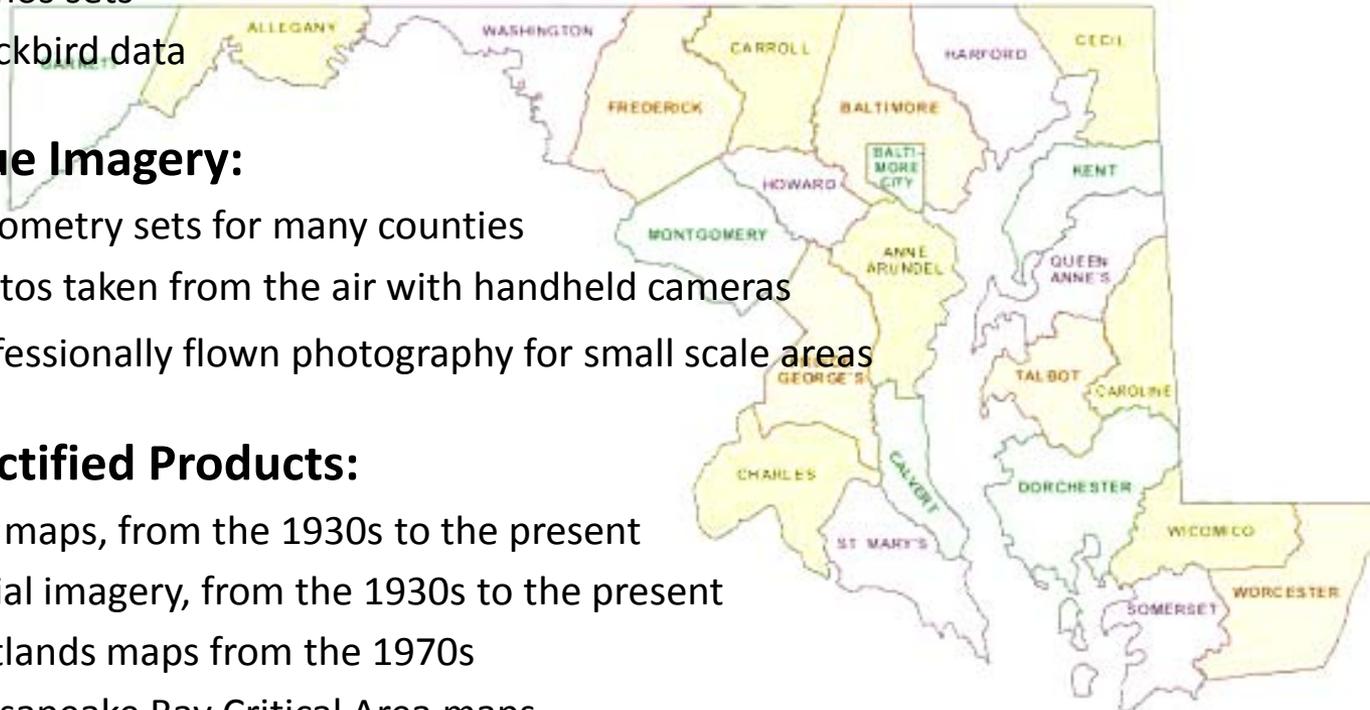- Ikonos sets
- Quickbird data

Oblique Imagery:

- Pictometry sets for many counties
- Photos taken from the air with handheld cameras
- Professionally flown photography for small scale areas

Georectified Products:

- Soil maps, from the 1930s to the present
- Aerial imagery, from the 1930s to the present
- Wetlands maps from the 1970s
- Chesapeake Bay Critical Area maps

Orthophotography:

- Color and black and white imagery, from the 1990s to the present

Survey Results

Other Types of Aerial Imagery:

- Color infrared imagery
- Lidar
- Sanborn maps from the 1880s

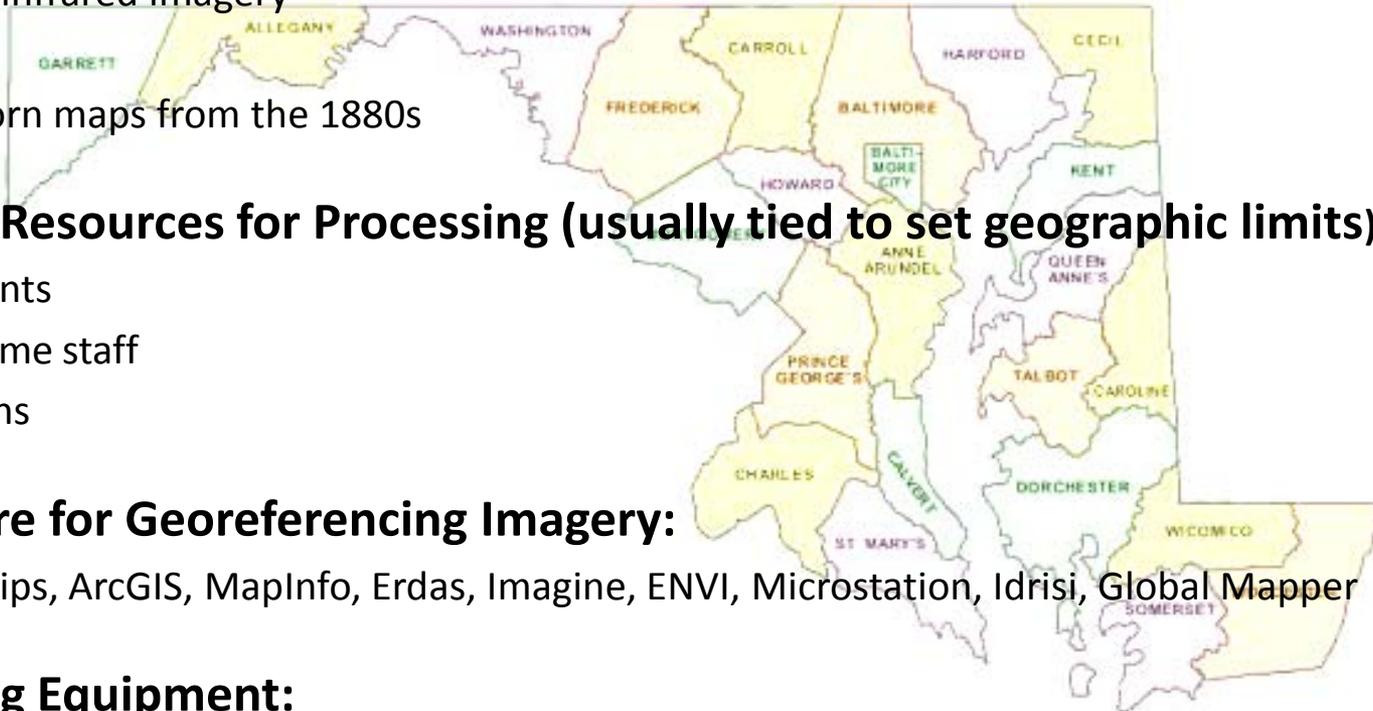**Human Resources for Processing (usually tied to set geographic limits):**

- Students
- Full-time staff
- Interns

Software for Georeferencing Imagery:

- TNTmips, ArcGIS, MapInfo, Erdas, Imagine, ENVI, Microstation, Idrisi, Global Mapper

Scanning Equipment:

- At least 4 large-format scanners

Are you interested in Joining the Committee?

Please send an e-mail to:
lswif@menv.com