MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Mark J. Belton, Secretary
Mark L. Hoffman, Acting Deputy Secretary

MEMORANDUM

TO: Maryland Geologic Mapping Advisory Committee (attached)

FROM: Rebecca Kavage Adams, Geologist, Maryland Geological

DATE: Survey October 25, 2016

SUBJECT: Minutes from the 2016 Maryland Geologic Mapping Advisory Committee meeting held on October 25, 2016

The 2016 annual meeting of the Maryland Mapping Advisory Committee was held at Maryland Geological Survey on October 25, 2016. A quorum consisting of six of the eight voting members was present. The active Committee voting and non-voting member list is shown in Table 1. The attendees of the meeting are listed in Table 2.

1. Richard Ortt called the meeting to order at 10:00 am, welcoming guests and asking Committee members to introduce themselves.

2. A presentation was given outlining recent and current Maryland Geological Survey (MGS) mapping projects and products.

    a. Andrew Staley (proxy for David Bolton) described hydrogeologic mapping projects
        i. Isopotential maps of water levels in Maryland's Coastal Plain aquifers
            1. Aquia aquifer shows depression from 1982 to 2015 in Lexington Park area
        ii. Potential Land subsidence cause by groundwater extraction
            1. Anne Arundel County – elevation benchmarks existing
            2. Southern Maryland – elevation benchmarks installed
        iii. Coastal Plain aquifer maps – showing depth to top and confining units
            1. Calvert aquifer
            2. Aquia aquifer
        iv. Contaminant mapping
            1. High radium levels in some coastal plain aquifers
                a. Contour maps showed how deep to drill to radium-free water
                b. County specified minimum well depths
                c. Drastic reduction in number of wells exceeding radium standard
            2. Elevated arsenic concentrations in Aquia and Piney Point Aquifers
                a. MGS RI 78 published in interactive online map
        v. Well water quality in Garrett County
            1. Compilation of well water data from multiple sources
            2. Sources of arsenic and other constituents mapped based on geology

b. Steve VanRyswick described mapping projects along the Atlantic Coast, the Chesapeake Bay and the Piedmont regions.
    i. Patapsco River Dam Impoundment Sediment Studies
        1. Monitoring channel sediment and elevation changes prior to Bloede Dam removal
        2. Results from surveys show mainly coarse grained material behind dam
        3. MD DNR, American Rivers, and NOAA will use data to inform dam removal decisions
    ii. Shoreline Rates of Change mapping
        1. Chesapeake & Coastal Service (CCS): Shoreline Rates of Change mapping for Anne Arundel, Baltimore, Calvert, Prince George's, and Harford counties completed
        2. Proposed work: Caroline and Talbot Counties
    iii. Historical Aerial Photograph Preservation
        1. Inventory and metadata are complete for entire collection of historical aerial photographs of Maryland from 1930's-1990's
        2. Digitizing is 93% complete, projected finish September 2017
        3. Over 5,000 photographs transferred to Maryland State Archives
    iv. Offshore Sand Resources Delineation
        1. Atlantic Sand Assessment Project cores and seismic tracklines combined with previously collected data
        2. Estimate volumes and compile grain size of each mapped shoal sand feature
        3. Results available as GIS geodatabase and BOEM's MMPGIS data portal
    v. Baltimore Harbor Dredge Materials Study
        1. Compare metals concentrates from dredged sediment using 4 data types: Near-Total, Total, TCLP Leachate, and SPLP leachate
        2. Results will help determine
            a. potential use of dredged sediment such as road beds or landfill capping
            b. if existing datasets with total estimate leachable metals can be used to estimate concentrations in Baltimore Harbor sediments

c. David Brezinski presented details about the current Program 1 STATEMAP mapping project in Western Maryland
    i. Completion of McHenry and Sang Run Quadrangles (2015)
        1. Southeastern continuation of high angle reverse faults in Accident anticline onto McHenry Quadrangle
    ii. Current mapping of Bittinger and Friendsville Quadrangles (2016)
        1. High angle reverse faults also present on Bittinger Quadrangle, Deer Park anticline
        2. Drag folds in the Foreknobs Formation evidence for faulting
    iii. Proposed mapping of Deer Park and Oakland Quadrangles (2017)
        1. Continuation of mapping along Deer Park anticline

d. Rebecca Kavage Adams presented details about the current Program 2 STATEMAP mapping project in the Piedmont
    i. First year for Piedmont mapping Program 2 in Germantown Quadrangle (2016)
        1. Using lidar to map lithologies along geomorphic features
    ii. Proposed mapping of Gaithersburg, Damascus, and Libertytown Quadrangles (2017)
        1. Continue mapping in areas of rapid development along I-270 and I-70 corridors
        2. Continue mapping lithologies and faults along strike to the northeast

e. David Brezinski presented details about the new STATEMAP mapping project 3
    i. GIS assembly of Accident-McHenry quadrangles
        1. compilation of data into 3D GIS map including: soils, topography, surficial and bedrock geology, gas and water well data, and groundwater chemistry

f. Rebecca Kavage Adams presented examples of LiDAR use in mapping
    i. Landslides in Accident and Bittinger quads as well as Friendsville
        1. scarps, debris piles, and toes easily defined on hillshade or TPI image derived from LiDAR
    ii. Mine adits in Sang Run
        1. very small (3-5 meter) entrances to old mine shafts visible on LiDAR hilshade

3. A significant change to the intermediate-term strategy for geologic mapping in the State was introduced. For the recent years, MGS has only been proposing new mapping projects. This year, a third project area was added to produce a GIS map of previous mapping on the Accident and McHenry Quadrangles. The committee unanimously agreed to the creation of this third project area and its importance.

4. Dave Brezinski outlined the proposed quads for geologic mapping and GIS production in Maryland for the 2017 STATEMAP proposal. The committee discussed these quads and voted unanimously to support the effort.

5. David Brezinski presented details about the new Triassic Basin Carbon Sequestration Study.

6. The meeting adjourned at 12:00 noon.

Table 1: Maryland Geologic Mapping Advisory Committee, October 2016

Voting Members:	
Dr. David A. Vanko *(Chairperson GeoMAC Committee)* Dean of the Jess & Mildred Fisher College of Science and Mathematics Towson University Towson, MD 21252-0001 Phone 410-704-2121; Fax 410-704-2604 dvanko@towson.edu	***Ms. Janet DeTore*** Hillis-Carnes Engineering Associates, Inc. Corporate Headquarters 10975 Guilford Road, Suite A Annapolis Junction, Maryland 20701 Phone 410-880-4788, ext 124 jdetore@hcea.com
Mr. Eric Dougherty Chief, Engineering Geology Division Office of Materials Technology Maryland State Highway Administration 7450 Traffic Drive, Hanover, Maryland 21076 Office toll-free: 866-926-8501 Desk: 443-572-5171; Fax: 410-787-0483 Cell: 443-695-0939 EDoughtery@sha.state.md.us	***Mr. Phillip King*** State Soil Scientist, DE/MD/DC USDA/NRCS 1221 College Part Drive, Suite #100 Dover, DE 19904 Phone 302-678-4172 Phillip.King@de.usda.gov
C. Edmon (Ed) Larrimore Administrator, Mining Program Maryland Department of the Environment Montgomery Park Business Center, 1800 Washington Blvd., Baltimore, MD 21230 ed.larrimore@maryland.gov (410) 537-3557	***Mrs. Mary Kay Foley*** Director MD-DE-DC Water Science Center U.S. Geological Survey 5522 Research Park Drive Baltimore, MD 21228 Phone 443-498-5501; Cell 410-746-1897 mkfoley@usgs.gov
Dr*. James B. (Sam) Stribling* Director, Aquatic Ecology Tetra Tech, Inc. 10045 Red Run Blvd., Suite 110 Owings Mills, MD 21117 Phone 410-356-8993; Fax 410-356-9005 james.stribling@tetratech.com	***Ms. Marion Wiggins*** P.G. Senior Geologist Vulcan Materials Company 875 Oxford Avenue Hanover, PA 17331 Phone 717-637-7121 x498; Fax 717-637-1234 wigginsm@vmcmail.com
Non-Voting Members:	
Richard A. Ortt, Jr. Director and State Geologist Maryland Geological Survey 2300 St. Paul Street Baltimore, MD 21218 Phone 410-554-5503; Fax 410-554-5502 richard.ortt@maryland.gov	
Mr. David Bolton (ex officio; non-voting) Project Chief, Hydrogeology & Hydrology Maryland Geological Survey 2300 St. Paul Street Baltimore, MD 21218	Mr. Stephen VanRyswick (non-voting) Acting Project Chief, Coastal & Environmental Geology Maryland Geological Survey 2300 St. Paul Street Baltimore, MD 21218

Phone 410-554-5561; Fax 410-554-5502 david.bolton@maryland.gov	Phone 410-554-5544; Fax 410-554-5502 stephen.vanryswick@maryland.gov
Mr. Jeff Halka (ex officio, non-voting) Emeritus Director & State Geologist Maryland Geological Survey 2300 St. Paul Street Baltimore, MD 21218 Phone 410-554-5503 jeffrey.halka@maryland.gov	Dr. James Reger (ex officio; non-voting) Principal Geologist, Coastal and Environmental Geosciences (retired) Maryland Geological Survey 2300 St. Paul Street Baltimore MD 21218 regerj@comcast.net

Table 2. Attendees of the Annual Meeting on October 25, 2016

Name	Position
Dr. David Vanko	Chairman, Voting Member
Janet DeTore	Voting Member
C. Edmon Larrimore	Voting Member
Mary Kay Foley	Voting Member
Phillip King	Voting Member
Eric Dougherty	Voting Member
Ethan Weikel	Non-Voting Member
Andrew Staley	Non-Voting Member / Presenter
Stephen VanRyswick	Non-Voting Member / Presenter
Richard Ortt	Non-Voting Member / Presenter
Dr. David Brezinski	Presenter
Rebecca Kavage-Adams	Presenter