

Eighth International Acid Sulfate Soils Conference at University of Maryland, July 17-23, 2016

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<http://www.midatlanticsoilscientists.org/acid-sulfate-soils-conference/>

www.enst.umd.edu

Call for Abstracts

Abstracts for oral and poster (1.2 m X 1.2 m) presentations:

Colleagues are invited to submit abstracts relevant to the topics of the Conference. Abstracts should not exceed 2 pages (8.5" x 11"; 21.6 cm x 27.9 cm), including a maximum of 1 figure, and references. Abstracts (with figures) will be published (in color) in an electronic conference volume and distributed as a (Black and White) paper copy at the conference. Abstracts should be submitted using the online form available at this link: <https://docs.google.com/forms/d/1HEXh9sxFZCxmy5ZedbtX5ZwAufXuzwDmfcyXvLFMKQk/viewform>

Major Conference Sessions

- Understanding Sulfidization - Environments for the formation of sulfide minerals and potential acid sulfate soils
- Understanding Sulfuricization - Natural and anthropogenic processes leading to acid sulfate soil problems
- Understanding issues and remediation strategies for inland acid sulfate soils and landscapes, AMD (acid mine drainage), ARD (acid rock drainage)
- Understanding issues and remediation strategies for coastal and agricultural acid sulfate soils and landscapes
- Policy, Regulation and Education - Best practices in avoidance and remediation
- Monitoring and mitigating impacts of acid sulfate soil and water during reclamation and development (assessment techniques, laboratory analysis and soil classification and mapping issues)

Keynote Speakers:

David Rickard, Cardiff Univ., UK
Darrell Kirk Nordstrom – US Geol. Survey, Boulder, Colorado, USA
Peter Österholm, Åbo Akademi University, Turku, Finland
Steve Appleyard, West. Australian Dept. of Environment Regulation, Perth, Australia
James Jacobs, Chief Hydrologist of Clear Water Group, Point Richmond, CA, USA
Markku Yli-Halla, Helsinki University, Finland

Conference Tours and Excursions

Pre-Conference Tour: This one day tour will be run on Sunday (July 17) and will examine Chesapeake Bay channel dredge material deposition areas (probably on Hart-Miller Island) and active AS soils and remediation processes. Tour will depart from, and return to, the College Park Marriott Hotel & Conference Center. Includes snacks and lunch. Estimated tour cost: \$90 (limited to 40 persons).

Mid-Conference Tour: This one day tour (July 20) will visit the Univ. of MD research facility in Upper Marlboro and also the Smithsonian Environmental Research Center (SERC) to view sulfide-forming processes in subaqueous soils and tidal marshes of Chesapeake Bay, and also Active and Post Active AS soil in Eocene/Paleocene and Cretaceous sediments before concluding the tour with a cookout at the scenic Sandy Point State Park (near Annapolis) overlooking Chesapeake Bay. This tour is included in the conference registration.

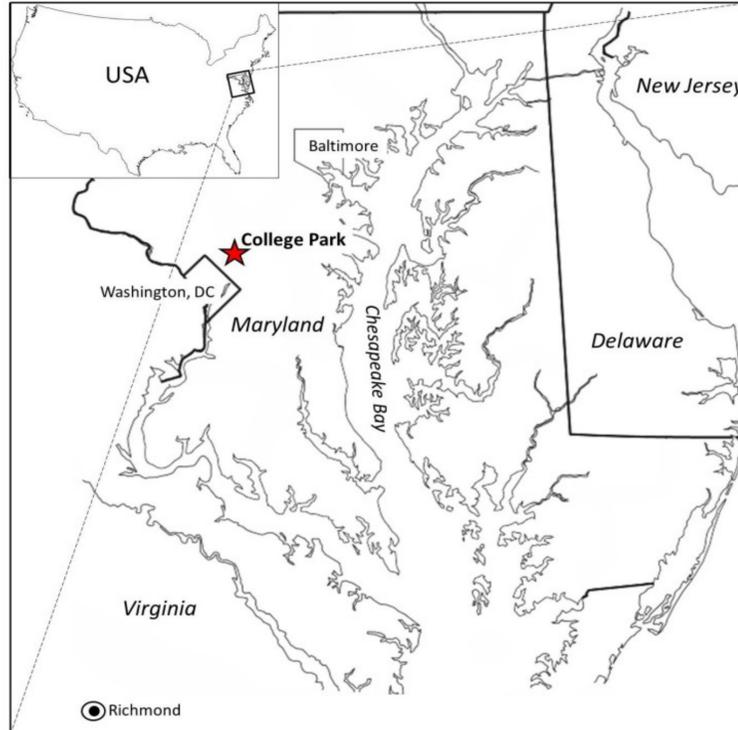
Post-Conference Tour: This two-day excursion (July 22-23) will permit participants to view sulfidic materials exposed in the Nanjemoy formation (Eocene) along the Potomac river and native American shell middens en route to the Richmond, VA area where AS soil problems associated with mining/dredging activities and highway construction will be seen. Friday night will be spent near Fredericksburg, VA which was the location of a number of important battles in the US civil war (Dec, 1862). On day two, additional active AS soil exposures associated with the Stafford regional airport and housing development construction will be examined before returning to College Park. Estimated tour cost: \$375 (including transportation, one night lodging on 7/22, lunches and snacks).

Important deadlines:

Abstract Submission Opens September 30, 2015
Conference Registration Opens Feb 1, 2016
Abstract Submission and Early Registration closes May 1, 2016
Acceptance of Presentations May 15, 2016
Online Pre-registration closes July 10, 2016

Organizing Committee

Martin Rabenhorst, UMD ENST, USA
Delvin Fanning, UMD ENST, USA
Brian Needelman, UMD ENST, USA
Maxine Levin, USDA-NRCS, USA
Thomas Reinsch, USDA-NRCS, USA
W. Lee Daniels, Virginia Tech, USA
Anton Boman, Finland
Rob Fitzpatrick, Australia
Chau Minh Khoi, Vietnam
Chuxia Lin, UK
Robert Quirk, Australia
Paul Shand, Australia
Leigh Sullivan, Australia
Markku Yli-Halla, Finland



Chesapeake Bay tidal marsh, where potential acid sulfate soils, e.g. Sulphuric acid soils, form by sulfidization.



An active acid sulfate soil on a scalped land surface at Stafford Co., VA regional airport. Yellow jarosite in *sulfidic horizon*. Vegetation possible because of application of lime-stabilized biosolids as reclamation strategy. Web soil survey at this and other disturbed land sites often needs updating as it commonly shows pre-disturbance soils, not existing active acid sulfate soils (see bottom panel below).

Conference Schedule

Sunday July 17 - Pre-Conference Excursion; Conference Registration, Welcome reception
Monday July 18 – Technical Sessions
Tuesday July 19– Technical Sessions
Wednesday July 20 Mid-conference excursion; Conference Cookout – Sandy Point State Park
Thursday July 21– Technical Sessions; Closing session and conference summary
Friday July 22 and Saturday July 23 Post-conference excursion

Conference Venue

The 8th IASSC will be held at the College Park Marriott Hotel & Conference Center, 3501 University Blvd E, Hyattsville, MD 20783 (301) 985-7300, which is immediately adjacent to the campus of the University of Maryland in College Park. College Park is a Maryland suburb of Washington, DC, located 8 miles from downtown Washington, DC. A special rate of \$159/night (either 1 king or 2 queen beds) has been negotiated with the Marriott for the conference. A link for reservations will be available when conference registration opens Feb. 1, 2016.

Registration:

Feb 1, 2016 - Conference Registration opens - Early registration Feb 1 to April 30, 2016, \$520 (\$260 for documented students)
May 1, 2016 to July 10, 2016 – Regular Registration Fee \$595 (\$295 for documented students)
On-site registration (after July 10, 2015) - Fee \$645
The fee covers admission to the sessions, the one-day mid-conference tour, conference material, breakfast, lunches and both morning and afternoon breaks/snacks during the conference, and the cookout at Sandy Point State Park.



Active acid sulfate soils in Great Oaks development, Fredericksburg, VA. Sidewalks turned red from oxidation and hydrolysis of iron in seepage waters released by oxidation of iron sulfides in soil exposed by excavation; waters were partially neutralized by concrete.



Profile of 4 year old active acid sulfate soil in Baltimore Harbor DM (dredged materials). Soil had a *sulfidic horizon* 30 cm thick over *sulfidic materials* with monosulfides. Currently, this area at Masonville in Baltimore near Ft. McHenry has been paved over.



Phragmites reeds begin to invade and colonize on active acid sulfate soils in DM at Hart-Miller Island. Phragmites are one of few kinds of plants that can grow on these soils while surficial horizons are undergoing sulfuricization and have *sulfidic horizons*.



On left, two photos from Google Earth with current SSURGO data for southeast end of Stafford Co. VA Regional Airport. Photos show before (top) in 1990's and after (currently, bottom) airport construction, which took place about turn of century. Note that the soil survey information has not been updated to show drastically changed slopes and landscapes that are now Active Acid Sulfate Soils. Interstate I-95 crosses the SE corner of the photo; it has in several places cuts and fills with Active Acid Sulfate Soils, also not recognized in the soil survey.

On right, cores of subaqueous soils from Indian River Bay in DE showing dark gray and black, chromas of 1 or less, *sulfidic materials* that occur in most Coastal subaqueous soils, many of which are *Sulfidic materials*, potential acid sulfate soils. When dredged and exposed to aerobic conditions in upland containment sites, these soil materials give rise to *sulfidic horizons* within a few weeks or months in Active Acid Sulfate Soils, typically *Sulfaquepts*.

