



Chesapeake Bay Program's (CBP)
Scientific and Technical Advisory Committee (STAC)
Workshop

**Best Management Practices to Minimize Impacts of Solar Farms
on Landscape Hydrology and Water Quality**

April 6-7th, 2023

George Mason University, Manassas VA

Beacon Hall 1017A

[Workshop webpage](#)

****Exact Times Are Subject to Change****

This meeting will be recorded to assure the accuracy of meeting notes.

Day 1, Thursday, April 6th

9:00 am Coffee & Light Breakfast (Provided)

Session 1: Setting the Stage

- 9:30 am** **Workshop Overview & Objectives** – *Rachel Tardiff (Rachel Tardiff LLC), Meg Cole (CRC)*
Discuss the goals of the workshop and the expertise in the room. Workshop objectives that will be addressed over the 2-day workshop are the following:
- What is the state of science on how solar farms impact hydrology and water quality under a range of site and management conditions and project scales?
 - What are current best management practices and policies, and where in our region are there opportunities for improving recommendations and/or policies?
 - What are the key gaps with respect to research needs to better answer questions 1 and 2?
- 9:40 am** **Setting the Stage: A brief review of published research and existing stormwater guidance**
– *Lauren McPhillips (Penn State)*
- 9:50 am** **Scale of Development and Transition**
Discussion of the existing and potential extent of planned solar fields in the Bay watershed based on the states' plans for renewable energy production.
- **Footprint and Land Use of Existing Solar Farms in the Chesapeake Region** – *Michael Evans (Chesapeake Conservancy)*
 - **Potential Extent of Future Solar Farm Implementation** – *David Murray (American Clean Power)*
- 10:50 am** **10-minute break**

Session 2: State of the Science

- 11:00 am** **Insights from the [PV-SMaRT project](#)** – *David Mulla (University of Minnesota)*
- 11:45 am** **Soils and Hydrology of Solar Farms in Midwestern US** – *Sujith Ravi (Temple University)*
- 12:05 pm** **Hydrology of Solar Farms in Central PA** – *Lauren McPhillips (PSU)*
- 12:25 pm** **Group Discussion** – *led by Steering committee member(s)*
- 1:00 pm** **Lunch (provided)**

Session 3: Insights from Regulatory and Industry Sectors

2:00 pm

Regulatory/Permitting Panel – moderated by *Tony Buda (USDA)*

Invited Bay state representatives will speak on a panel regarding current and considered regulatory and permitting processes and perceived challenges regarding solar farms. Panelists listed below:

- **Mike Rolband**, Director, Virginia Dept of Environmental Quality
- **Andrew Foley/Domenic Rocco**, Regional Permit Coordination Office, PA Department of Environmental Protection
- **Stewart Comstock**, Chief, Permit Review Division, Stormwater, Dam Safety, and Flood Management Program, Maryland Dept of Environment

Panel questions:

- What are some of the key solar-specific management considerations in your state?
- What have been some of the challenges in developing current guidance for solar farms?
- What can be learned from other states in the region? Are there opportunities to coordinate?
- Are current management practices for solar farms adequate, or are they too restrictive?
- How can we promote solar projects on marginal sites like those with steep slopes, poorly drained soils, floodplains, etc.? Can we do this while still minimizing impacts on runoff?

3:00 pm

Industry Panel – moderated by *John Ignosh (VT), Siobhan Fathel (PSU)*

Panel discussion with invited speakers from Lightsource BP, Dominion Energy, and Geosyntec. Questions considered will include site selection and management of solar projects. Panelists listed below:

- **Virginia Brown**, Director of Ecosystem Services, Lightsource BP
- **Sterling Turner**, Environmental Compliance Consultant, Dominion Energy
- **Tim Seldon**, Senior Engineer, Geosyntec Consultants
- **Jordan Brooks**, Solar Project Manager/Engineer, Kimley-Horn

Panel questions:

- Based on your project experiences, what are some of your preferred practices and design approaches for erosion and sediment control and stormwater management for utility-scale solar sites in the Chesapeake Bay watershed? How do project economics and regulations inform these? Have these preferences and approaches evolved over time? If so, how so?
- Based on your project experiences, what are some of your biggest challenges or concerns regarding erosion and sediment control or stormwater management for utility-scale solar sites in the Chesapeake Bay watershed? Have these challenges or concerns evolved over time? If so, how so?
- Based on your project experiences, what (if any) research-based information do you believe is still lacking but needed to help better design utility-scale solar sites in the Chesapeake Bay watershed?
- Are potential opportunities for co-benefits (e.g., carbon sequestration, pollinator habitat, agrivoltaics (solar grazing, etc.)) with utility-scale solar considered in your project design work? If so, how and what type(s) of co-benefits? Have considerations for co-benefits evolved over time? If so, how so?

4:00 pm

Group Discussion – led by workshop facilitator, *Rachel Tardiff (Rachel Tardiff LLC)*

4:45 pm

Overview of Day 1 and Expectations for Day 2 – *Siobhan Fathel (PSU), David Sample (VT)*

5:00 pm

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Day 2, Friday, April 7th

- 8:00 am** **Breakfast (Provided)**
- 8:30 am** **Introduction to Dominion Energy: Solar Projects – Sterling Turner (Dominion Energy)**
Sterling Turner (Dominion Energy) will provide an overview of Dominion Energy in advance of the workshop fieldtrip. This presentation will include details on the range of Dominion solar projects and context on how the Remington solar site fits into the broader Dominion Energy portfolio.
- 9:00 am** **Field trip to Local Solar Operation:**
An optional fieldtrip is offered to interest participants to the [Dominion Energy](#) Remington Solar Power Facility. Those attending should be dressed appropriately and are required to wear closed toe footwear appropriate for walking around uneven terrain. Transportation to the site will be provided. The chartered bus will leave GMU at 9am.
- 12:00 pm** **Lunch (provided)**
- 12:40 pm** **Report-out on Morning Fieldtrip to Dominion Energy, Remington Solar Site**
- 12:50 pm** **Review of Day 1; Objectives for Day 2 – Rachel Tardiff (Rachel Tardiff LLC), Meg Cole (CRC)**
- 1:00 pm** **Breakout Discussions: Identifying key gaps, needs, and points of coordination**
Questions considered during the breakout session are the following:
 1. What are key gaps in the current science that is informing best practices?
 2. What are key gaps in the current regulatory/development process or guidance?
 3. Where are there opportunities for better sharing knowledge/insights/approaches to achieve the best outcome for all?
- 2:00 pm** **15-minute break**
Participants will take a 15-minute break during the breakout session.
- 2:45 pm** **Breakout Group Report-out**
- 3:25 pm** **15-minute break**
- 3:40 pm** **Group Discussion: Report recommendations**
Participants will draft and prioritize report recommendations resulting from Day 1 and Day 2.
- 4:30 pm** **Workshop Wrap-up and Next Steps – Steering committee member**
The workshop steering committee will synthesize workshop findings and recommendations provided by participants.
- 4:45 pm** **Workshop Adjourns**