

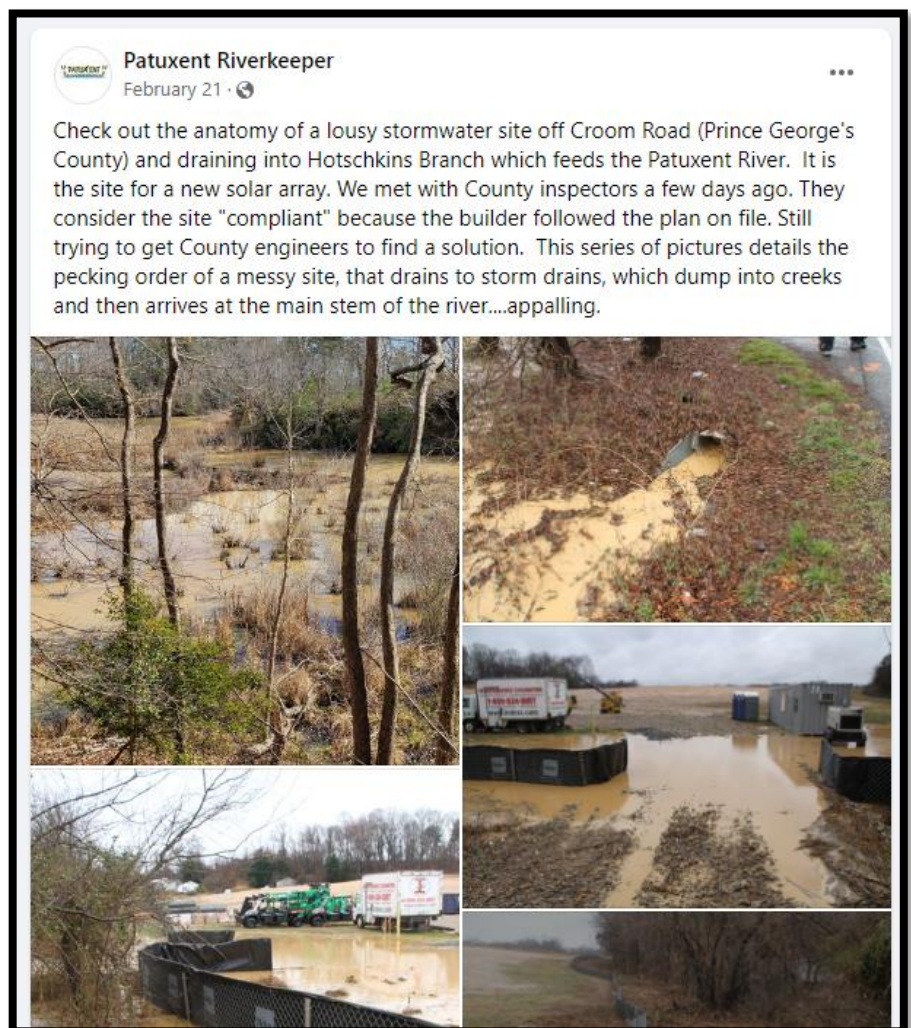
Testimony of the Advocates for Herring Bay  
Regarding Bill 53-23  
Concerning Zoning—Solar Energy Generating Facilities  
Submitted by Kathy Gramp  
July 3, 2023

The Advocates for Herring Bay strongly support expanding clean energy in an ecologically sound manner. Our view on Bill 53-23 is mixed. We support provisions that will expand opportunities for solar generation in the county but we are concerned about the lack of effective standards for managing water quality impacts. We urge the Council to pause action on this bill to allow time for amendments that will ensure that all future projects follow best environmental practices.

Our concern is shared by experts at the federal Chesapeake Bay Program and elsewhere, who have flagged the need for soil and water quality guidelines tailored to solar arrays. They note that conventional regulations do not address the special features of ground-mounted projects, which typically involve clearing dozens of acres and maintaining a vegetated ground cover under and around solar panels for more than 20 years.

The time to update the solar zoning code for best practices is now. Applications for new ground-mounted projects will be filed after this bill is enacted, and unless new guidance is in place beforehand, county staff will be managing those projects using rules for shopping centers and subdivisions. The status quo simply is not good enough, as evident in photos shared by the Patuxent Riverkeeper of a “lousy stormwater” solar site in Prince Georges County (see right).

Writing better guidelines for solar arrays is possible thanks to recent research by nationally recognized experts. A draft amendment incorporating that research is attached for your consideration (see reverse side).



## Bill 53-23: Soil and Water Quality Issues

**Issue:** Applications for solar projects received and approved after enactment of Bill 53-23 could adversely affect soils and water quality unless the bill is amended to add guidance on best practices for managing the impacts of multi-acre, ground-mounted solar arrays.

**Background:** The Chesapeake Bay program and others studying solar development have raised concerns about soil and water quality impacts that are not addressed by conventional regulations. The *Bay Journal's* 2022 article on *Protecting Water Quality While Harvesting the Sunshine*<sup>1</sup> discusses some of those solar-specific issues. A scientific advisory panel convened by the Chesapeake Bay Program in April 2023 included presentations on solar-related challenges in Virginia and other states.<sup>2</sup>

A three-year, federally funded study identified four aspects of development that are key to managing the water quality outcomes of ground-mounted solar projects. Those four elements—which are summarized in a 2023 presentation by the Great Plains Institute<sup>3</sup> and incorporated into a *PV-SMaRT* program—are:

- Soil compaction
- Soil depth
- Ground cover
- Distance between the arrays for infiltration, known as “disconnection.”

### Recommendation

Amend the conditions for Special Exceptions to add guidance that reflects the latest scientific findings on the best practices for managing soil and water quality impacts. The following proposal is based on the best practices listed in the 2023 presentation by the Great Plains Institute.

**New condition for Special Exceptions:** *Developers shall construct and manage solar facilities using low-impact development methods, which shall include measuring bulk soil density before and after construction; measuring soil depth before and after construction; minimizing the use of heavy equipment; minimizing top soil removal; maximizing preservation of pre-construction vegetation; using soil decompaction methods if bulk soil density is high; and establishing deep-rooted vegetative cover between and under the arrays that maximizes the infiltrative capacity of the soil and minimizes the need for vegetative maintenance over the life of the project.*

<sup>1</sup> This article may be found at this link: [https://www.bayjournal.com/news/climate\\_change/protecting-the-water-while-harvesting-sunshine/article\\_87076d22-1803-11ed-8a16-abd103989d23.html](https://www.bayjournal.com/news/climate_change/protecting-the-water-while-harvesting-sunshine/article_87076d22-1803-11ed-8a16-abd103989d23.html)

<sup>2</sup> All of the materials and videos from the Chesapeake Bay Program’s Scientific and Technical Advisory Committee’s April 2023 conference on best management practices for ground-mounted solar projects are at this link: <https://www.chesapeake.org/stac/events/best-management-practices-to-minimize-impacts-of-solar-farms-on-landscape-hydrology-and-water-quality/>. See presentations by Mike Rolband from the Virginia Department of Environmental Quality for a review of some of the environmental challenges experienced in that state.

<sup>3</sup> Here is a link to the Great Plains report: [www.chesapeake.org/stac/wp-content/uploads/2023/04/PV-SMaRT-Best-Practice.pdf](https://www.chesapeake.org/stac/wp-content/uploads/2023/04/PV-SMaRT-Best-Practice.pdf)