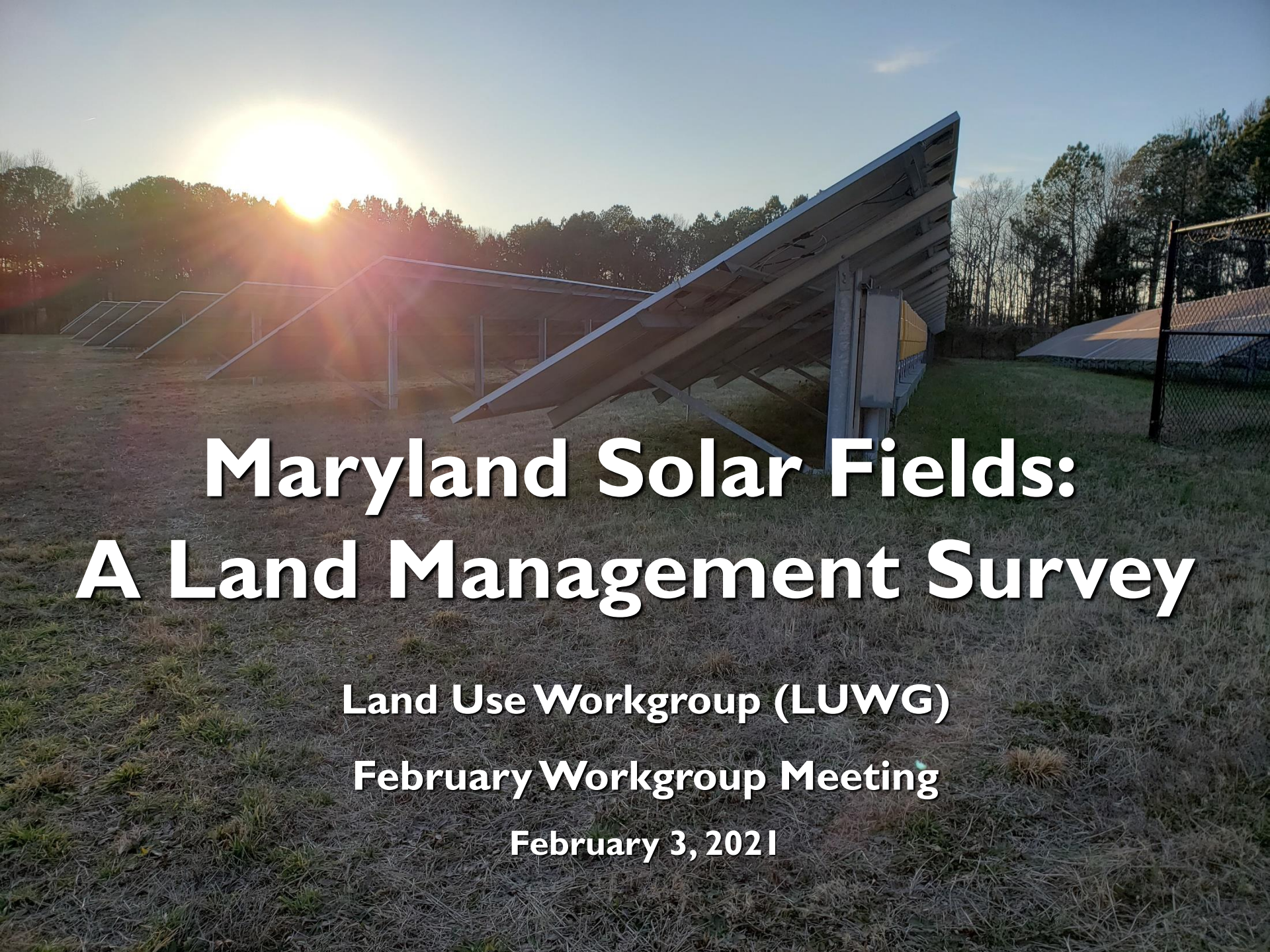
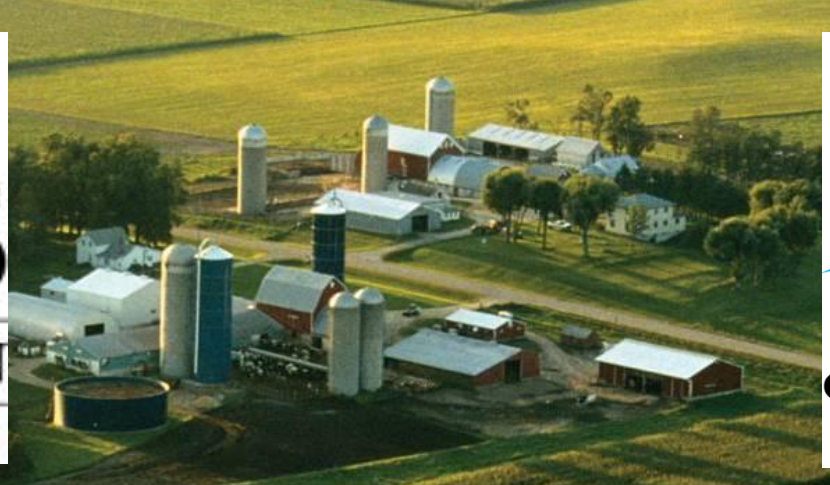


Maryland Solar Fields: A Land Management Survey

Land Use Workgroup (LUWG)

February Workgroup Meeting

February 3, 2021



UNIVERSITY OF MARYLAND EXTENSION

Solutions in your community

Chesapeake Bay Program

A Watershed Partnership

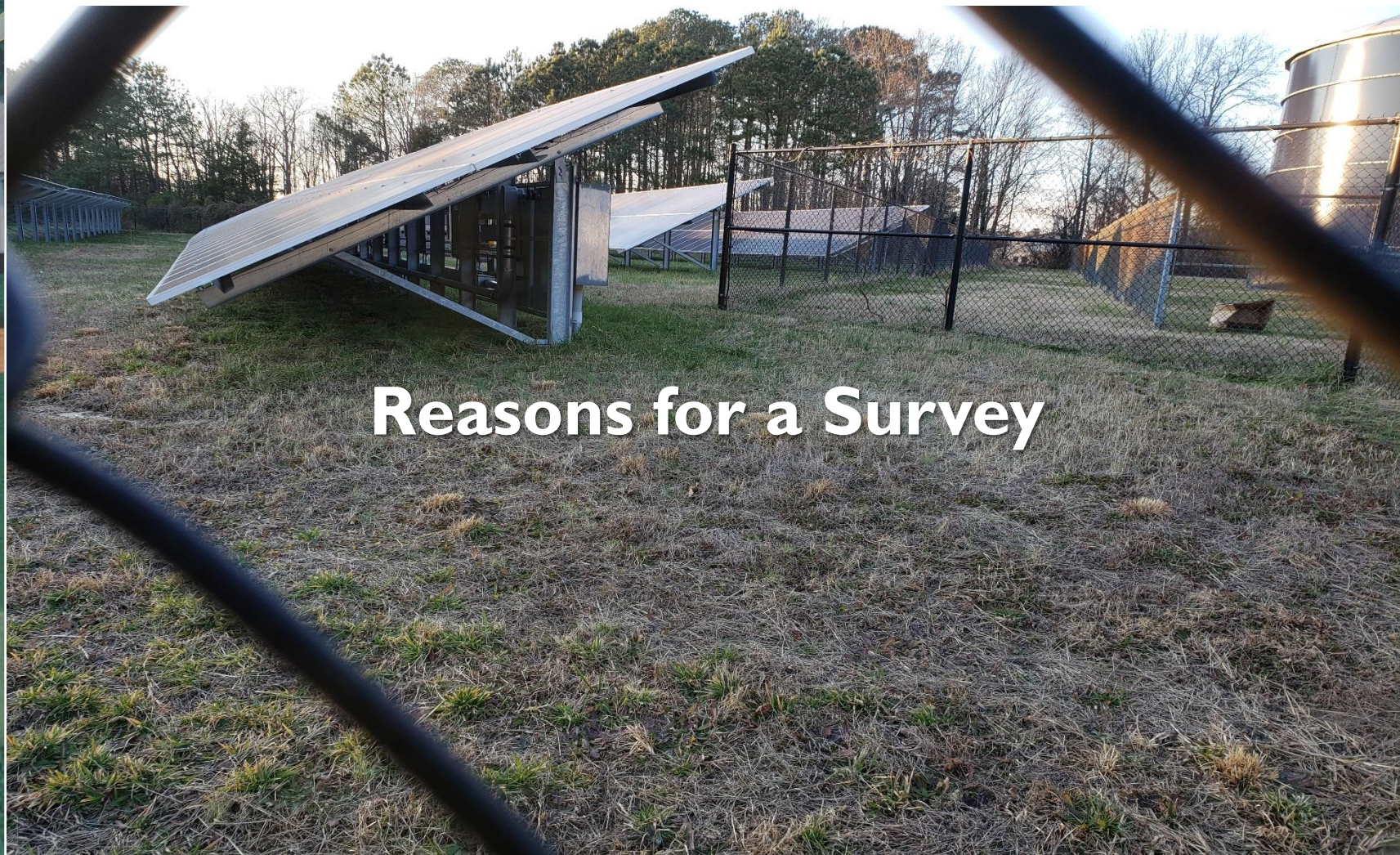
Mark Dubin
Senior Agricultural Advisor

University of Maryland Extension - College Park
College of Agriculture and Natural Resources

Department of Environmental Science & Technology
mdubin06@umd.edu

EPA Chesapeake Bay Program Office
mdubin@chesapeakebay.net

Maryland Solar Fields: A Land Management Survey



Reasons for a Survey

Maryland Solar Fields: A Land Management Survey

- Reasons for a Survey
  - Land Management:
    - What was the pre-facility land management?
    - How are solar fields typically managed post facility?
  - Facility Management:
    - Who owns the property the facility is located?
    - Who manages the facility?
  - Ground Truthing:
    - How accurate and complete are aerial observations?

Maryland Solar Fields: A Land Management Survey

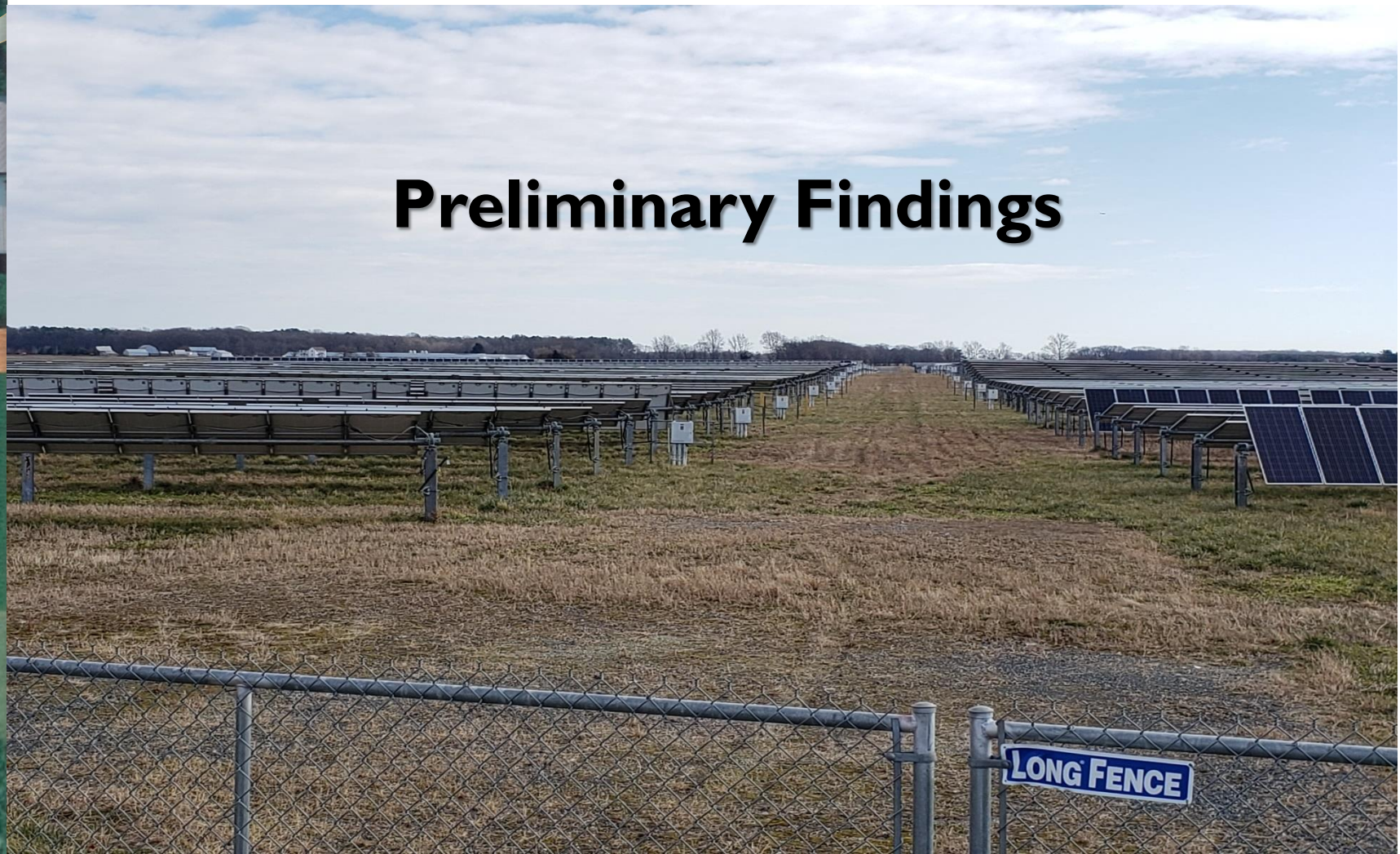
- Reasons for a Survey
  - State Records:
    - How accurate and complete are state records?
  - Multi-use Facilities:
    - Are facilities used for multiple purposes such as agricultural production?
  - Solar Panel Structure Types:
    - How do solar panel structures differ?
    - How do panel structures affect land management?

Maryland Solar Fields: A Land Management Survey

Maryland Solar Fields: A Land Management Survey

- Solar Field Database
  - USGS:
    - 141 Solar Fields Identified
    - 93 State of Maryland Database
    - 48 Chesapeake Conservancy
  - UME:
    - Additional solar fields are being identified as part of the survey

Maryland Solar Fields: A Land Management Survey



Preliminary Findings

Maryland Solar Fields: A Land Management Survey

- Preliminary Findings
  - Characteristics of the Data:
    - Eastern Shore Sites – 100% (Multiple Counties)
    - Sample Percentage – ~1% (140+ Sites Total?)
    - Primarily Undeveloped Counties (Agricultural/Urban)
  - Data Confidence:
    - Preliminary data results expected to change as:
      - Developed county sites are added to the data
      - Western county sites are added to the data
  - Unknowns:
    - How many currently unidentified solar fields exist.

Maryland Solar Fields: A Land Management Survey

- Preliminary Findings
  - Facility Types:
    - Municipal – 55% (State, County, Town, Schools)
    - Industrial – 27% (Power Generation)
    - Commercial – 18% (Agricultural)
  - Pre-Facility Land Management:
    - Agriculture – 63% (Row Crop)
    - Developed – 27% (Pervious)
  - Post Facility Land Management:
    - Developed – 100% (Pervious/Impervious)

Maryland Solar Fields: A Land Management Survey

- Preliminary Findings
  - Solar Panel Structure Type:
    - Short Post – 64% (Single Short Post)
    - Short Post – 9% (Multiple Short Posts)
    - Frame – 9% (Post and Frame)
    - Tilt Frame – 9% (Row)
    - Monolithic – 9% (Single Post Elevated)
  - Interior Land Management:
    - Turf Grass – 64% (Mowed Regularly)
    - Tall Grass – 27% (Mowed Infrequently)
    - Pervious/Impervious – 9% (Paved Parking)
  - Exterior Land Management:
    - Security Fencing – 90% (Chain Link)

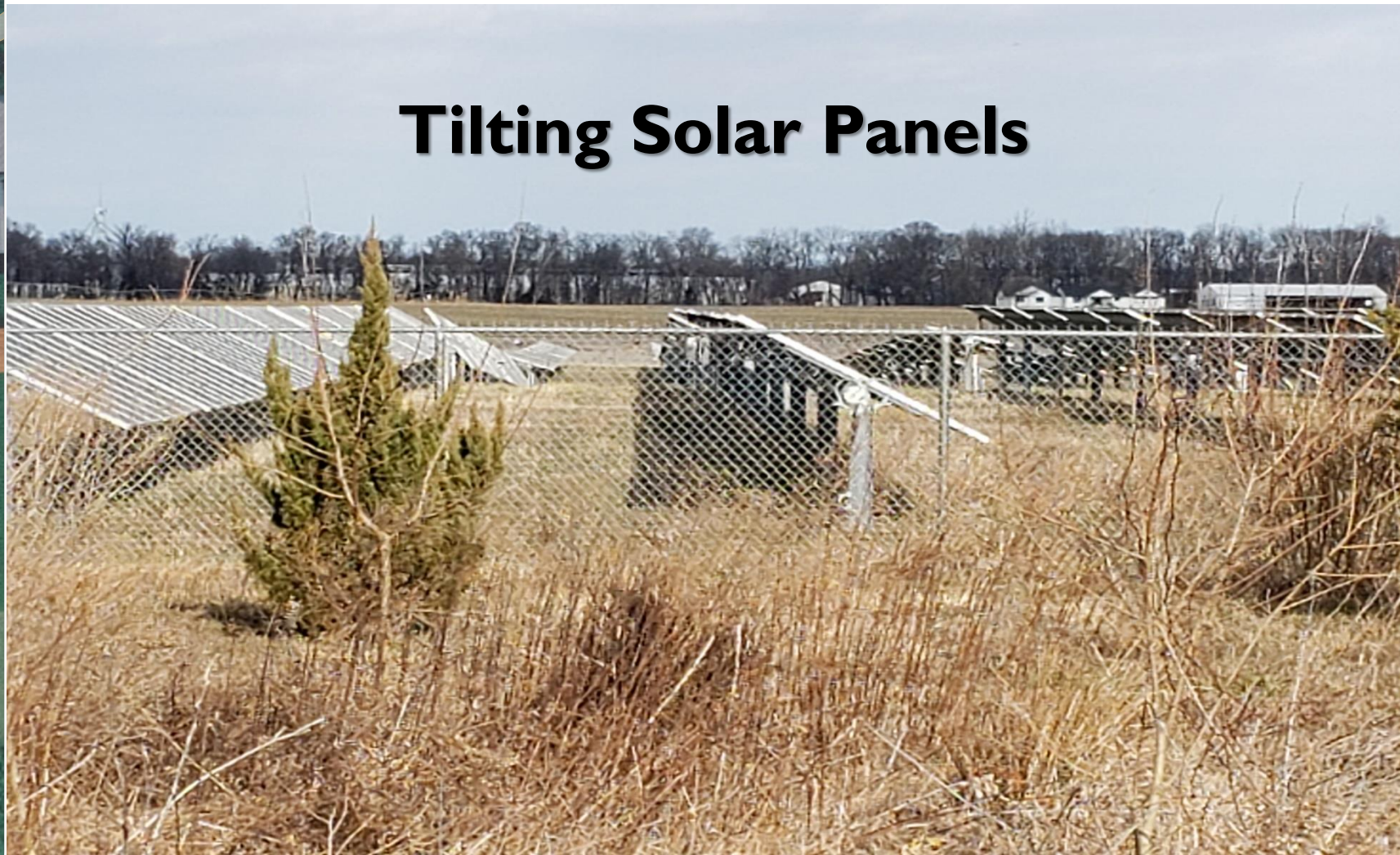
Maryland Solar Fields: A Land Management Survey

Short Post Solar Panels

Maryland Solar Fields: A Land Management Survey

Multiple Post Solar Panels

Maryland Solar Fields: A Land Management Survey



Maryland Solar Fields: A Land Management Survey

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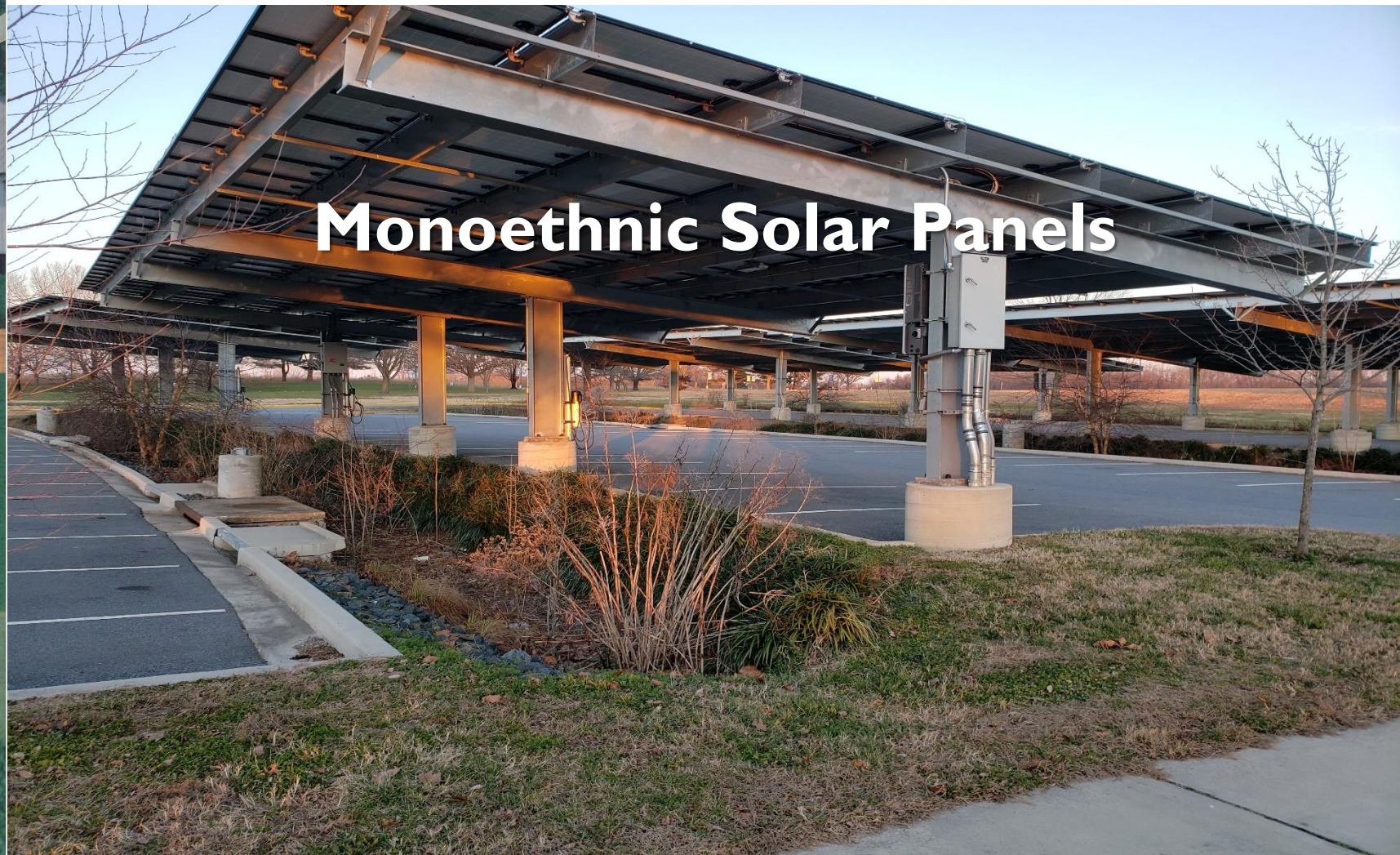

Questions & Comments