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PV-SMaRT Solar Farm Runoff Calculator Version 3.0

An innovative spreadsheet-based runoff calculator to estimate stormwater runoff from ground-mounted solar photovoltaic sites for pre-construction as well as post-construction site-specific conditions.

Technology No. 2023-053

This tool has been updated to Version 3.0!

IP Status: Copyrighted

Applications

- Estimation of stormwater runoff CN and runoff for the purposes of obtaining general construction or operating and management permits for solar PV development.

Technology Overview

A runoff curve number (CN) and runoff calculator has been developed to estimate stormwater CN and runoff at ground solar photovoltaic (PV) sites by accounting for: 1) Soil and topographic characteristics (soil texture, soil depth, soil bulk density, slope); 2) Surface cover (row crop, turf, pollinator habitat, etc); 3) Disconnected impervious surfaces associated with solar panel design (panel spacing and orientation); and 4) Climatic factors (precipitation).

Phase of Development

TRL: 8-9
Software has been developed and ready to be used.

Desired Partnerships

This technology is now available for:

- License

- Sponsored research
- Co-development

Please contact our office to share your business’ needs and learn more.

Researchers

- **David Mulla** Professor, Department of Soil, Water, and Climate

https://license.umn.edu/product/pv-smart-solar-runoff-calculator-version-30