ESA Intervention Memo - Calvert Cliffs Solar Project

Date: August 11, 2025

Location: Calvert Cliffs, Maryland (ZIP: ~20685)

Species: Cicindela puritana (Puritan tiger beetle)

Law Triggered: Federal ESA 7 + 9 + MD Natural Resources 10-2A

SCENARIO:

A utility-scale solar developer proposes a 75-acre site 2.1 miles inland from the Chesapeake Bay shoreline near Calvert Cliffs. Project includes: ground-mount solar panels, minimal grading, battery storage building, and an access road with minor wetland crossing.

STEP 1: Scroll-Based Species Impact Check

Distance from shoreline: 2.1 miles inland Borderline impact zone within beetles known dispersal range.

Soil type: Sandy substrate + historic erosion pattern High relevance beetle habitat depends on erosion-exposed cliff zones.

Construction phase grading: Partial mechanical disturbance Possible sedimentation risk downstream habitat degradation.

Stormwater flow direction: Toward cliff corridor May transport silt or chemicals into protected habitat unless mitigated.

Conclusion: Scroll logic predicts habitat degradation under ESA 9 even without direct contact.

STEP 2: Scroll-Fused Intervention Plan

1. Shift solar layout 150m upslope from watershed 7 consultation avoidance 'no effect' buffer.

2. Install sediment curtains + 3-tier biofiltration berm Avoids habitat siltation (ESA + Clean Water Act overlay).

3. Consult with MD DNR early request species occurrence data layer Required under MD 10-2A-05.

4. Apply for scroll-based 'Low Impact Certification' Voluntary, but scroll-aligned with public trust obligations.

5. Use native coastal seed mix post-construction Ensures no invasive vegetation alters insect microhabitat.

BRIEF SNAPSHOT FOR LEGAL DEFENSE:

Due to the known erosion-based shoreline ecology of Cicindela puritana, and the proximity of the proposed solar footprint to a sloped watershed leading to Calvert Cliffs, the project constitutes a foreseeable degradation of critical habitat under 9 of the ESA. This triggers either formal consultation (7) or an immediate redesign to demonstrate no effect.

Prepared under AGDI deterministic legal framework.

Scrollline logic: Prevent sediment prevent habitat degradation avoid ESA violation.

Scroll Seal Applied - Vault-Grade Output