Pollinator Working Group Meeting Memorandum

Subject: Pollinator Working Group Meeting to discuss Senate Bill (SB) 1158

Date: 5 February 2018

Location: Maryland Department of Agriculture, 3:00-6:00 PM

Attendees: See attendance sheet Attachment 1

Presentation given by Bob Sadzinski, Power Plant Research Program (PPRP), Maryland Department of Natural Resources (DNR) followed by discussion with Working Group

Topics Discussed:

1. Solar Site Characteristics/Overview
    a. There are multiple solar facilities being constructed or proposed throughout the State, many of which are on agricultural land (e.g., Blue Star, Massy, Egypt Road).
    b. Solar facilities require setbacks from the property line and have vegetative screening/planting requirements that vary with location (county) and site characteristics (e.g., environmental constraints, adjacent properties, existing vegetation on site)
        i. Egypt Road Solar Project in Cambridge, Maryland is an example of a site requiring special consideration. The Project site drains into a DNR wetland restoration area on the opposite side of Egypt Road. The City of Cambridge has specific planting guidelines for screening, and PPRP has proposed a water quality monitoring project for the site.
    c. Vegetative buffers at existing solar facilities are lacking (e.g., 280-acre site in Queen Anne's County on Rt. 404, where buffer was encroached on by highway). PPRP discussed the need for buffer improvements with the owner.
    d. Adjacent property owners who don't want to see the solar panels- adequate vegetative screening is necessary
2. Review SB 1158 DNR's *Draft* Regulation
    a. Bill Requirements include:
        i. The Power Plant Research Program (PPRP) of the Department of Natural Resources (DNR) shall research the pollinator benefits that would occur under a pollinator-friendly vegetation management plan implemented on the land with a ground-mounted solar generation facility;

ii. The Department, in consultation with the Maryland Department of Agriculture (MDA), shall create pollinator-friendly designation program for solar generation facilities;
iii. The Department shall adopt regulations;
iv. The Department shall adopt a scorecard.

b. References on topic:
Current-
i. The Maryland Pollinator Protection Plan (MDA; JAN 2016)
ii. Native Herbaceous Plantings Establishment, Maintenance and Management for Wildlife Habitat and Pollinators (USDA; January 2017)
iii. Maryland Environmental Service Pollinator Habitat Plan (MES; June 2017)

PPRP Future Research-
i. Promoting Pollinators on Power Facility Properties in Maryland (DRAFT white paper)
ii. Proposed Egypt Road Solar Water Quality Monitoring Study

c. DNR's regulation to carry out the Pollinator program
i. Regulation takes time and effort to establish
ii. "Optional" given that it is a voluntary certification program
iii. Regulation motivated by projects claiming benefits (e.g., pollinator habitat) when they weren't providing these benefits
iv. Pollinator regulations proposed in bill require projects to go through the certification to claim or get credit for designated pollinator habitat

d. Designation of pollinator habitat - two-part process that includes an Application with Pollinator Habitat Plan and initial Score Card, and on-site inspection
i. Specifications from bill:
-Site must have ground mounted panels and be greater than or equal to 1 acre
-Site must exceed the minimum score on the scorecard (discussed further below)
-Site must be planted *and* managed- certification will not be based on pollinator habitat plan alone; planting seed isn't enough, requires active maintenance
ii. Application Forms will be web-based
http://dnr.maryland.gov/pprp/Pages/pollinator.aspx
iii. Next Step: Generate Pollinator Habitat Plan Guidelines

<u>Issues Discussed:</u>

1. When does certification occur?
Suggestion that certification occurs at least a year after planting. It takes 1-2 years of active management before there's a demonstrable pollinator habitat
2. What about continued management to maintain habitat?
3. Inspections are needed (see Certification Renewal Discussion)

4. Should there be regulations on the seed mix and plants used?
    a. Suggestion that there be flexibility in what seed mix is used, assessment of the site conditions to determine best mix for that site, instead of a prescriptive mix that may not work across the state
    b. Consider infrastructure (e.g., panels and fencing) when selecting plant heights and different mixes for inside and outside the perimeter fencing.
    c. Consider what is beneficial to pollinators (define benefits, seasonality, species of bees, etc.). It quickly gets complicated. See the research documents for additional information
    d. Need to consider seed and/or plant availability; certain seeds/plants aren't available in large quantities, and companies may need a year's notice to produce them. Unfortunately, many organizations have commitments to deliver and can't necessarily adjust schedules. This will be an ongoing challenge.

       -Bakers Point Solar mentioned as an example of a solar site planted with pollinator habitat. At the ribbon cutting in Frederick County, the seed companies were involved. Agreement that it's good to keep close partnerships with the seed providers

    e. The University of Maryland Bee Lab has funding to monitor different plantings /seed mixes and investigate management practices (e.g., mowing, weed control); products such as "wildflower turf" available in the UK-similar to roll out sod for wild flowers. Unfortunately, watering these sod farms wouldn't be cost effective on solar sites (Note: Follow up with UMD about a field trip to see experimental plantings.)

Consensus:

- **DNR should not provide prescriptive seed mix rules**
- **Conditions at the site should determine the best planting strategy**
- **Benefits to pollinators should be clearly defined**
- **Timing and availability of seeds/plants may be an issue; coordination with seed providers is important**

3. Pollinator Scorecard (see Attachment 2)
    a. Sent to PPRP/DNR for approval-Note: language in bill includes that UMD must recommend the scorecard (discussed below)
    b. Applicant works with a consultant to refine the pollinator plan, and submit final application and scorecard for review and approval.
    c. Modification to application? Submit new paperwork and review by MDA and DNR

d. Certification renewal-currently every 2 years – open for comments
   Issues Discussed:
   1. Is part of the package a maintenance plan for 2 years? To justify the 2-year revisit, have part of the application include plan for the 2-year period.
   2. To incentivize recertification, recommendation to push recertification period to 3 years. It might take that long for plants to establish. **Consensus on the 3-year recertification renewal timeline.**
   3. Clarify process for submitting a certification renewal. Currently, onus is on the applicant to manage and maintain their certification.
   4. Should the Applicant be notified that their renewal is pending? Certification is voluntary. **Consensus – PPRP/DNR will send a friendly reminder to the applicant X months in advance of the certification expiring.**

4. Other Issues/ Action Items
   a. Conveyance of certification? Currently, certification isn't transferable. Advantage of it being non-transferrable is that it forces the new owner to fully understand the verification and apply for it themselves and manage it. Disadvantage is that solar facilities are often constructed and then sold within a short period of time. **Is certification of the facility going to be transferable or not?** Left unresolved.
   b. Site inspections-
      i. Inspections are needed to verify the "planted and managed" portion of the bill.
      ii. The State doesn't have the manpower to do these inspections.
      iii. The applicant needs to find someone to perform inspections and submit to DNR- i.e., self-certified by the Applicant.
         1. Can inspection be as simple as a drive by video?
         2. Isn't there an inherent problem with letting the Applicant certify themselves?
         3. Who will provide a list of consultants that can perform the inspections?
         4. Will sites be inspected seasonally to determine floral index and biodiversity?
         5. Should these metrics be collected as part of management? If so, who will do it?
            Suggestions:
            a) Reach out to Master Gardeners, and various volunteer forestry groups.
            b) Have the company that develops the plan do the inspections to provide continuity.
            c) Have volunteers perform interim inspections (and report back if problems are found), but use the planner to perform official inspections.

d) Larger companies are going to need licenses from their subcontractors (professional liability insurance reasons), which makes it difficult to use volunteers in any official capacity.

6. Can the state pre-certify firms that are qualified to do the inspections?
7. Is there a consistent protocol it might be easier to "train the trainers?"
8. Comment that industry should work together with the Wildlife Habitat Council (WHC) - the WHC is already considering some of these questions.

iv. Note that there is no funding in the bill to do research.

<u>Questions from the Group:</u>

1) Who can submit an application? Does the bill certify the facility, or the Applicant? Interpretation is that it's the facility that is certified (Note: see discussion on transference of certification).
2) What are the benefits to this certification and how to get companies on board?
    a. Public opinion boost, good PR, looks good from the road as opposed to turf grass.
    b. What is the value after the developer has obtained permits and moved on? If developer has an approved plan that helps them through the Public Service Commission (PSC) permitting process, is the value still high after they're operating?
    c. Co-benefit with stormwater management and erosion and sediment control (ESC) for the site?
    d. Possible spin – pollinators help neighboring food farmers.
    e. What about costs of continued vegetation management? Developers are already required to plant buffers, and turf for erosion, which can be done without planting pollinator habitat. Outside the perimeter fence can be used as pollinator habitat in the buffer or setback, but inside the fence, it's an added upfront cost to the developer. Unfortunately, mowing costs don't offset the changed planting plan.
    f. Likely to have far more "outside the fence" area getting pollinator habitat that the area between and under the panels. Bill explicitly says you can't get credit for adjacent parcels, but the project area outside the fence counts. Existing trees and plants in the project area can be included in the score card.
    g. Is there a tax credit to incentivize plantings?
    h. There are already dozens of proposed solar facilities coming through PPRP for review. How many of them will be interested in this certification?
    i. How did the UMD approval language (i.e., UM must recommend the score card) get into bill? The UMD wants to help answer questions as they arrive as

certification process is implemented. But, who is the arbiter of that decision? Who at UMD will sign off on the score card adopted by the Department?

Action item: UMD will follow up on how this will be done.

3) Pesticide/Herbicide Use on Sites-
    a. Comments from the Central Maryland Beekeepers Association (CMBA):
        i. With current score card, a solar facility could qualify as having "pollinator friendly habitat" or even as "providing exceptional habitat" and use pesticides that are harmful to bees. Recommended solution: Guidelines for habitat on solar farms should align with what is required on state land regarding the use of pesticides.
        ii. CMBA suggests that two beekeepers be added to the pollinator workgroup. Recommendations: Steve McDaniel, a Master beekeeper (past president of Maryland State Beekeepers, Central Maryland Beekeepers and board member of Carroll Co. Beekeepers) and Luke Goembel, PhD (chemist and beekeeper)
    b. Concern that pollinators could be devastated by pesticides - codify avoidance of certain pesticides.
    c. Let's clarify pesticide vs. herbicide vs. insecticide.
    d. Avoid using neonicotinoids, but there are legitimate situations where there may be a need to control noxious species

       Suggestion: Go through one more submission before using certain chemicals; prioritize certain pesticides, blacklist the ones that harm bees unless an extra submission is filed.
    e. Use of insecticides routinely (like for Japanese beetles) is overkill, so they should be prohibited. No need to use long lasting deadly chemicals.
    f. Part of the site assessment form should acknowledge if the use toxic chemicals is needed. If there is an existing monoculture of invasive thistle, it probably won't be feasible for pollinator habitat.
    g. State listed noxious weeds must be controlled. The noxious weed law is going to override everything else. However, these sites are in general historically farmed lands and vegetation is already managed. Counterpoint is that as soon as the use of Roundup and crop rotation stops, there is potential for invasive noxious plants to establish.

4) Seed Bed Preparation Is the Make or Break for Every Project-
    a. Chemically burn existing vegetation, or alternate method if working on an organic site, followed by deep tillage (Soil Conservation District (SCD) and DNR)
    b. Get best practices on bed preparation-some sites were pasture, some crops, some just vegetated buffers
    c. Preparation takes time and depends on the site conditions

5) How applicable are certifications for existing solar sites?

    a. Exiting solar sites can get certified but it may be harder. It's not all or nothing, planting a percentage of the site can still get a good score.

6) Question about having two applications for inside/outside fence for large facilities like the 1000-acre site coming through (Cherrywood Solar)? This way they can get an excellent rating for their "outside the fence work" since it will increase the percentages planted.
7) Possible points on scorecard for raising the panels? Issues raised regarding sightline and glare issues. Higher panels do help vegetation and mowing, but buffering from the road and glare gets difficult. Mention of growing vines on fencing.
8) Question about whether large scale facilities add benefits for other wildlife – if additional wildlife habitat is created, how will other wildlife benefit or be affected (forage for deer, habitat for quail, etc.)?

Workgroup members – please share your materials!

-Maryland Environmental Service (MES) has a site-by-site pollinator program - the MES building on Benfield has nice panels and land

-Follow up on existing sites, potential site visits

Attachment 1. Attendance Sheet

MEETING SIGN-IN SHEET

Project: Pollinator Workgroup Meeting	**Meeting Date:** 5 Feb 2018
Facilitator: Matt Teffeau & Bob Sadzinski	**Place/Room:** MDA Room 114

Name	Company	Phone	E-Mail
Bob Sadzinski	DNR	410-260-8668	bob.sadzinski@maryland.gov
David Tancabel	DNR	410-260-8691	david.tancabel@maryland.gov
Matt Teffeau	~~DNR~~ MDA	410	matthew.teffeau@maryland.gov
Glenn Carowan	MDNR	410-271-4528	glenn.carowan@maryland.gov
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Sam Droege	USGS	301 497 5840	sdroege@USGS.GOV
Lindsay Barrance	UMD	410-570-1132	lbarrance@umd.edu ~~lbarrance@comcast.net~~
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JONATHAN MCKNIGHT	DNR WILDLIFE	410 260 8539	jonathan.mcknight@maryland.gov

Attachment 1 (continued)

MEETING SIGN-IN SHEET	
Project:	**Meeting Date:**
Facilitator:	**Place/Room:**

Name	Company	Phone	E-Mail
DAVE BAUER	H&B Solutions	410-512-9109	dbauer@hollandbauer.com
On Conference Line:			
Rebecca Rush			
Dennis VanEngelsdorp			
Ruth Berlin			
Bonnie Raindrop			
Steve McDaniel			
Luke Goembel			

Attachment 2. Pollinator Score Card

DRAFT

Solar Site Pollinator Habitat Planning and Assessment Form

To be used in the process of site and seed mix planning/designing or site evaluation.

1a. Percent of site with flowering plant species (select one)
- ☐ 1-15 percent — 5 points
- ☐ 16-30 percent — 10 points
- ☐ 31-45 percent — 15 points
- ☐ 46-60 percent — 20 points
- ☐ 61+ percent — 25 points

1b. Flowering plant seed mix to be used (Points only for seed mix planning; add all that apply)
- ☐ Includes five or more plant species appropriate for the region or local habitat identified by USDA as beneficial to pollinators — 5 points
- ☐ Amount of seed to be planted (lbs/acre) is determined according to seed provider's recommended application rate and/or planting density for planted species in the target area — 5 points

2. Percent of site to be planted with native plant species (select one)
- ☐ 26-50 percent — 5 points
- ☐ 51-75 percent — 10 points
- ☐ 76-100 percent — 15 points

3. Planned cover diversity within the ground cover area (# of flowering plant species that will constitute >2 percent cover each; select one)
- ☐ 1-9 species — 5 points
- ☐ 10-19 species — 10 points
- ☐ 20 or more species — 15 points

4. Seasons that will have at least 3 blooming species with >2 percent cover each (add all that apply)
- ☐ Spring — 10 points
- ☐ Early summer — 5 points
- ☐ Late summer — 5 points
- ☐ Fall — 5 points

Total: ☐

5. Observed nesting habitat within 0.25 miles (add all that apply)
- ☐ Bare ground with undisturbed, and/or well-drained soil — 5 points
- ☐ Forest edge habitat — 2 points
- ☐ Cavity nesting sites (e.g., dead trees, snags, fallen logs, shrubs) — 2 points

Total: ☐

6. Planned/existing management practices (add all that apply)
- ☐ Mowing occurs no more than once per year — 5 points
- ☐ Detailed establishment plan — 10 points
- ☐ Detailed monitoring plan — 10 points
- ☐ Creation of nesting habitat features (e.g. boxes, tunnels) — 0.2 points per

Total: ☐

7. Vegetation "screen" adjacent to the solar site (add all that apply)
- ☐ At least 50% of screen area planted with flowering plant species — 5 points
- ☐ At least 50% of screen area planted with native plant species — 5 points

Total: ☐

8. Signage/Education (add all that apply)
- ☐ Three or more signs legible at 40 feet stating pollinator habitat — 10 points
- ☐ Bench and educational display suitable to outdoor conditions regarding the pollinator habitat — 5 points

Total: ☐

9. Pesticide risk
- ☐ Planned on-site insecticide use — -40 points

Grand Total ☐

Meets Standard 70-84
Provides Exceptional Habitat >85

Developer: _____

Project Location: _____

Project Size: _____

Target Seeding Date: _____

Send completed forms to: MD Dept. of Agriculture, MD Dept. of Natural Resources PPRP

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