

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Application of Madison Fields)
Solar Project, LLC for a Certificate of Environmental)
Compatibility and Public Need to Construct a Solar-) Case No: 19-1881-EL-BGN
Powered Electric Generation Facility in Madison)
County, Ohio.)

DIRECT TESTIMONY OF

**Lauren Devine
Permitting & Environmental Senior Manager**

**on behalf of
Madison Fields Solar Project, LLC**

December 9, 2020

Christine M.T. Pirik (0029759)
(Counsel of Record)
William Vorys (0093479)
DICKINSON WRIGHT PLLC
150 East Gay Street, Suite 2400
Columbus, Ohio 43215
(614) 591-5461

1. Please state your name, current title, and business address.

My name is Lauren Devine. I am a Permitting and Environmental Senior Manager for Savion, LLC (“Savion”). My business address is 422 Admiral Boulevard, Kansas City, Missouri 64106.

2. Please summarize your educational and professional experience.

I received a Bachelor of Science from Villanova University with a major in Environmental Science and I have over 6 years of experience siting and permitting energy projects. In January 2020, I began working for Savion and permitting renewable energy projects. In my role at Savion, I manage permitting and environmental efforts for projects within Savion’s 10+ gigawatt-sized portfolio of utility scale solar and energy storage projects.

3. On whose behalf are you offering testimony?

I am testifying on behalf of the Applicant in the case, Madison Fields Solar Project, LLC (“Madison Fields” or “Applicant”). Madison Fields is a wholly owned subsidiary of Savion, LLC and Savion is owned by Macquarie’s Green Investment Group.

4. What is your role with respect to the Project?

In my position as Permitting and Environmental Senior Manager, I oversee and manage all facets of project planning and development for the Madison Fields Solar Project (“Project”). I oversee the permitting process and the production of the various studies required to complete the application before the Ohio Power Siting Board (“Board”) for the Project’s certification as a solar-powered electric generation facility (“Application”).

5. Please state the purpose of your testimony.

The purpose of my testimony is to provide a summary of the Madison Fields Project and a description of the process that led to the Joint Stipulation and Recommendation (“Stipulation”), which was filed in the docket on December 9, 2020, and is being offered in this proceeding as Joint Exhibit 1. I will sponsor the admission of the Stipulation into evidence in this case, along with the Applicant’s exhibits listed in the Stipulation, which include the Application and supplements, the Applicant’s responses to data requests from

1 the Board's Staff ("Staff"), certificates of service, and proofs of publication. I intend to
2 explain the background of the Stipulation and the reasons why I believe it should be
3 adopted by the Board. In addition, my testimony will confirm that the Stipulation complies
4 with the Board's three-part test for evaluating stipulations.

5
6 **6. Is the Application and all exhibits attached to the Application, as well as the**
7 **supplements and responses to data requests, true and accurate to the best of your**
8 **knowledge?**

9 Yes, they are.

10
11 **7. Did Madison Fields cause the Application and notices to be served on property**
12 **owners, tenants, adjacent property owners, various local government officials, and**
13 **libraries?**

14 Yes. The certificates of service were filed and have been marked as Applicant Exhibits 9,
15 11, 13, and 15-17.

16
17 **8. Did Madison Fields have notices of the public information meetings, the Application,**
18 **and the hearings published in a newspaper of general circulation in Madison County,**
19 **Ohio?**

20 Yes. Proofs of publication were filed and have been marked as Applicant Exhibits 10, 12,
21 14, and 16-17.

22
23 **9. Please provide a summary and overview of the proposed facility.**

24 Madison Fields proposes to construct the Project, a new solar-powered energy facility
25 located within approximately 1,932 acres of land secured by landowner agreements in Pike
26 Township, Madison County, Ohio. The Project will have a nameplate capacity of up to
27 180 megawatts ("MW") alternating current and will include photovoltaic solar panels
28 ("modules") mounted on a racking system to maximize solar energy capture and electric
29 generation of the array. Electricity generated by the modules is sent to inverters located
30 throughout the array. A series of underground and overhead electric collection lines will
31 collect and transfer the electricity from the inverters to the Project substations.

32

10. Please provide the background on the process leading up to the Stipulation and the evidentiary hearing.

The Staff issued a Staff Report of Investigation on November 18, 2020 (“Staff Report”). A virtual local public hearing was subsequently held on December 3, 2020. The Stipulation, which was signed by the Applicant, Staff, and the Ohio Farm Bureau Federation (“OFBF”), was filed on December 9, 2020. The virtual evidentiary hearing is scheduled to commence December 17, 2020.

The Applicant did not detect any major issues or hurdles during Staff’s investigation of the Application. Since the submission of the Application, we responded to questions from Staff and filed our responses in the docket. Those responses are marked as Applicant Exhibits 4-8. We do not have concerns with the Staff Report. Note that the OFBF is the only intervenor in this case and has been involved in the development of and discussions regarding the Stipulation.

11. Did you encounter any objections to the Madison Fields Project from the officials in the area?

No. The Applicant has been working in Madison County and meeting with landowners regarding the Madison Fields Project facility for two years. Throughout this time, we have formed strong relationships with local landowners, as well as county officials.

12. Did you attend the local public hearing held on December 3, 2020?

Yes.

13. What has the Applicant done to address and respond to the comments raised at the local public hearing?

Thirteen individuals offered sworn testimony during the local public hearing: ten testimonials were supportive of the Project; two were opposed; and one requested the consideration of specific management practices for stormwater runoff, native grasses, and invasive species at the Project.

1 The testimonials that were opposed to the Project at the local public hearing were provided
2 by Mr. Taylor and Ms. Young. Mr. Taylor's residence is approximately 2,230 feet (0.42
3 miles) from the proposed array and Ms. Young resides in an adjacent county,
4 approximately 9,250 feet (1.75 miles) from the proposed array. Both residences have
5 natural viewshed buffers which would result in an obstructed line-of-sight to the completed
6 Project. Once constructed, the Project would only be visible from vantage points away
7 from either residence or with the use of enhanced equipment from the residence. Mr. Taylor
8 and Ms. Young have both had the opportunity to engage with Project staff to ask questions,
9 express their concerns, and discuss potential solutions.

10
11 Mr. and Mrs. Taylor originally reached out to the Project team via the Project's microsite
12 on June 16, 2020. Their concern was regarding a pre-existing flooding issue with Barron
13 Creek when there are heavy rains. The Project team reached out to Mr. and Mrs. Taylor to
14 set up a call to discuss their concerns and the call took place on June 24, 2020. During the
15 discussion, Mr. and Mrs. Taylor explained their pre-existing flooding issue and expressed
16 their concern that the construction of the Project would worsen the conditions. The Project
17 team assured Mr. and Mrs. Taylor that measures would be taken to ensure that all new
18 facilities associated with the operation of the Project would not create any additional storm
19 water runoff than was generated during preconstruction conditions. The Project is required
20 to implement the Ohio Environmental Protection Agency's Guidance on Post-Construction
21 Storm Water Controls for Solar Panel Arrays to further ensure that storm water runoff is
22 minimized at the site. In addition, the transition in land cover from row crop to native
23 grasses that would result from the construction of the Project should ultimately enhance
24 natural drainage practices due to the increase in permeability. The Project team offered to
25 reach out to Pike Township and the Madison County Engineer on behalf of Mr. and Mrs.
26 Taylor, but the Taylors informed the Project that both entities were already aware of the
27 pre-existing flooding issue with Barron Creek. The Project team assured Mr. and Mrs.
28 Taylor that protections to ensure that adjacent landowners are not negatively impacted by
29 the construction and operation of the Project would be included in the Applicant's
30 commitments and the ultimate conditions associated with the Project. As mentioned
31 previously, in Section 4906-4-07(C)(2)(c) of the Application states "[f]urthermore,

1 measures will be taken to maintain the site with best management practices for post-
2 construction runoff control, as required, to ensure that all new facilities associated with the
3 operation of the Project do not create any additional storm water runoff than was generated
4 during preconstruction conditions.” In the Staff Report, the first General Condition states,
5 “[t]he Applicant shall install the facility, utilize equipment and construction practices, and
6 implement mitigation measures as described in the application and as modified and/or
7 clarified in supplemental filings, replies to data requests, and recommendations in this *Staff*
8 *Report of Investigation*.” This General Condition of the Staff Report was incorporated in
9 Stipulation Condition 1; therefore, the Project will be required to adhere to the commitment
10 of ensuring that there is no increase in post-construction storm water runoff that results
11 from the construction of the Project. While committing to repair a pre-existing condition
12 outside of the Project area is not feasible, the Project will be cognizant of the issue as
13 stormwater controls for the Project’s final design are developed. If necessary, during
14 construction and operation of the Project, the Taylors could utilize the Project’s Complaint
15 Resolution Plan to express specific concerns that may arise. A second solution was also
16 communicated to Mr. and Mrs. Taylor by proponent testimony during the local public
17 hearing, which was that the tax revenue generated by the Project could provide Pike
18 Township additional funding that may allow them to assist Mr. and Mrs. Taylor with the
19 Barron Creek’s pre-existing flooding issue, which is a Pike Township matter.

20
21 Ms. Young has expressed a variety of concerns regarding the Project through comments
22 on the Project’s Facebook Page and microsite, and submitting public comments to the
23 docket. The Project team has offered to meet with Ms. Young on multiple occasions to
24 discuss her various concerns; however, she has declined to engage in any further
25 conversation.

26
27 Mr. Sasson of the Darby Creek Association (“DCA”) provided testimony that included
28 recommendations from the DCA to protect the ecological integrity of the Big and Little
29 Darby Creeks and tributaries. Mr. Sasson reached out to the Project team via email on
30 November 13, 2020, and provided written comment. The Project team responded and
31 proposed a call to further discuss the DCA’s comments. The call was held on November

1 24, 2020. During the call, Mr. Sasson and other DCA members requested consideration of
2 specific management practices for stormwater runoff, native grasses, and invasive species
3 at the Project. All of the topics included in Mr. Sasson's testimony were also discussed
4 during the November 24, 2020 call. A majority of the DCA's concerns are items that would
5 be addressed as the Project's final design is developed. The Project team welcomes and is
6 looking forward to working with the DCA to achieve best practices for the Project site. The
7 Project team also plans to communicate these practices through the Madison County Soil
8 and Water District to share with other developers in the Big Darby Creek Watershed.

9
10 The Project would also like to address a comment posted to the docket on November 18,
11 2020, by Mr. Francis, Chairman of the Madison County Soil and Water Conservation
12 District. Mr. Francis's comments is attached to my testimony as Attachment LD-1. Mr.
13 Francis's comment supports the efforts to install native habitat to benefit wildlife species
14 and water quality. The Project began coordination with the Madison County Soil and Water
15 Conservation District at the public meeting held on November 6, 2019. The Project looks
16 forward to working with the Madison County Soil and Water Conservation District to
17 implement their recommendations into the Project's final design.

18
19 **14. Have you reviewed the Stipulation that was filed in this docket on December 9, 2020?**

20 Yes.

21
22 **15. Are you aware that the Board must make certain determinations under Ohio Revised**
23 **Code ("R.C.") 4906.10 before issuing a certificate for the construction, operation, and**
24 **maintenance of a major utility facility?**

25 Yes. My attorney has advised me that there are eight criteria considered by the Board in
26 making its determination for the issuance of a certificate.

27
28 **16. Does the first of these criteria under R.C. 4906.10(A)(1), which requires the Board to**
29 **determine the basis of need for the facility, apply to the Board's review of this**
30 **Application?**

1 No. My attorney has advised me that R.C. 4906.10(A)(1) only applies to an electric
2 transmission line or a gas pipeline, and is not applicable to this generating facility.

3
4 **17. Does the Application, as agreed to through the Stipulation, enable the Board to**
5 **determine the nature of the probable environmental impact of the facility?**

6 Yes. The Application addresses all of the subject matter areas necessary for the Board to
7 determine the nature of the probable environmental impact of the Project. The Application
8 includes detailed surveys, assessments, and reports related to probable socioeconomic
9 impacts, ecological impacts, and public services, facilities, and safety. The Application
10 narrative and exhibits, along with supplements and data request responses, provide the
11 information necessary to determine the probable impacts.

12
13 **18. Does the Application, as agreed to through the Stipulation, enable the Board to**
14 **determine that the facility represents the minimum adverse environmental impact,**
15 **considering the state of available technology and the nature and economics of the**
16 **various alternatives, and other pertinent considerations?**

17 Yes. The information included in the Application and the Stipulation enables the Board to
18 determine the probable adverse environmental impact, and shows that the Project has a
19 minimum adverse environmental impact.

20
21 **19. Does the Application, as agreed to through the Stipulation, enable the Board to**
22 **determine that the facility is consistent with regional plans for expansion of the**
23 **electric power grid, and of the electric systems serving this state and interconnected**
24 **utility systems, and that the facility will serve the interests of electric system economy**
25 **and reliability?**

26 Yes. The regional plans for expansion of the electric power grid and of the electric systems
27 serving the state are determined by PJM Interconnection, LLC ("PJM"). PJM performed
28 studies analyzing the proposed facility, its proposed interconnection point, and the related
29 impacts on the electric power grid. PJM concluded that no reliability violations would
30 occur.

1 **20. Does the Application, as agreed to through the Stipulation, enable the Board to**
2 **determine that the facility will comply with the requirements established by the State**
3 **of Ohio for air pollution control, solid and hazardous waste, water pollution control,**
4 **permitting for a major increase in withdrawal of waters, and aeronautical**
5 **requirements?**

6 Yes. The Application addresses air pollution topics, revealing that the proposed Project
7 would not produce air pollution through emissions. The Application addresses solid and
8 hazardous waste, revealing that the proposed Project would not produce solid or hazardous
9 waste.

10
11 **21. Does the Application, as agreed to through the Stipulation, enable the Board to**
12 **determine that the facility will serve the public interest, convenience, and necessity?**

13 Yes. The Application addresses the public interest, convenience, and necessity through
14 discussion and analysis of topics such as, but not limited to: the socioeconomic impacts of
15 the Project; the extensive public engagement efforts taken throughout the development of
16 the Project; the guarantee for liability insurance; the decommissioning plan; the complaint
17 resolution process; the discussion of health and safety; and the landscape plan. Discussion
18 of these topics, as well as others, as presented in the Application and Stipulation, enable
19 the Board to determine that the facility will serve the public interest, convenience, and
20 necessity.

21
22 **22. Does the Application, as agreed to through the Stipulation, enable the Board to**
23 **determine the facility's impact on the viability of agricultural land?**

24 Yes. The Application identifies the agricultural land within the Project Area (1,918 acres)
25 and the land use impact (1,000 acres) the Project will have on agricultural land. The
26 Application and subsequent responses to data requests also identify two Project parcels
27 totaling 154 acres that are enrolled in the Agricultural District program: 15-00195.000 and
28 15-00201.000. Once the Project is operational, these parcels will no longer be eligible for
29 inclusion in the program. However, once the Project is decommissioned, the parcels could
30 be re-enrolled in the program.

31

1 A review of Madison County records and the title work completed for the Project parcels,
2 indicates that there are no Ohio Department of Agriculture or other conservation easements
3 associated with the Project.
4

5 **23. Does the Application, as agreed to through the Stipulation, enable the Board to**
6 **determine that the facility incorporates maximum feasible water conservation**
7 **practices, considering available technology and the nature and economics of the**
8 **various alternatives?**

9 Yes. As a solar-powered electric generation facility, water is not utilized in the generation
10 process. The only water usage associated with the facility will be the potable water used
11 for operation and maintenance. As this represents similar water usage as a residence or
12 commercial building, the water usage does not warrant specific conservation practices.
13

14 **24. Are you aware that the Board utilizes a three-part test to evaluate stipulations?**

15 Yes.
16

17 **25. With regard to the first part of the Board's three-part test for stipulations, do you**
18 **believe that the settlement was the product of serious bargaining among capable,**
19 **knowledgeable parties?**

20 Yes. Counsel for all parties were invited to all settlement negotiations. Representatives of
21 the parties involved in the deliberations leading to the Stipulation were aware of and
22 knowledgeable about the issues addressed in the Stipulation.
23

24 **26. With regard to the second part of the Board's three-part test for stipulations, do you**
25 **believe the settlement, as a package, benefits the public interest?**

26 Yes. The Stipulation ensures that the Project will represent the minimum adverse
27 environmental impact for both construction and operation, considering the state of
28 available technology, and the nature and economics of the various alternatives, as well as
29 other pertinent considerations. The construction and operation of the facility then provides
30 benefits to the public interest.
31

1 The Project will help meet Ohio's demand for in-state carbon free energy resources. The
2 Project will generate electricity using virtually no fuels or water and with effectively zero
3 air emissions and waste generation. This Project is intended to fill the need for a more
4 diverse national energy portfolio that will include a higher percentage of energy generated
5 through use of renewable resources.

6
7 Public interest will also be met through the positive economic impact the Project will have
8 on the local economy through construction spending and jobs, and an annual service
9 payment in lieu of taxes ("PILOT"). It is estimated that the Project will create 596 jobs in
10 the state of Ohio, 453 jobs in Madison County during construction, and 3 to 4 jobs during
11 operations. The Applicant anticipates entering into a PILOT with Madison County that
12 will result in an annual payment of up to \$9,000 per MW or \$1.62 million that will benefit
13 local governments and school districts.

14
15 **27. With regard to the third part of the Board's three-part test, to your knowledge, does**
16 **the settlement package violate any important regulatory principle or practice?**

17 No.

18
19 **28. Do you have any other comments?**

20 Yes. The Applicant is appreciative of the efforts Staff has made in processing this
21 Application, culminating in the issuance of the Staff Report. In addition, the Applicant
22 would like to thank the OFBF for its participation in the case, as well as local community
23 leaders in Madison County, and the community itself for all of their participation in this
24 process.

25
26 **29. Does this conclude your testimony?**

27 Yes. However, I reserve the right to update this testimony to respond to any further
28 testimony, reports, and/or evidence submitted in this case.

CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 9th day of December, 2020.

/s/ Christine M.T. Pirik

Christine M.T. Pirik (0029759)

Counsel/Intervenors via email:

thomas.lindgren@ohioattorneygeneral.gov
robert.eubanks@ohioattorneygeneral.gov
cendsley@ofbf.org
lcurtis@ofbf.org
amilam@ofbf.org

Administrative Law Judges via email:

megan.addison@puco.ohio.gov
matthew.sandor@puco.ohio.gov

Attachment LD-1

November 14, 2019 Letter from Madison County
Soil and Water Conservation Department

November 14, 2019

Sarah Moser
Sr. Development Manager
Madison Fields Solar Project

Thank you for the opportunity to provide comment on the Madison County Solar Farm. We support efforts to install native habitat to benefit wildlife species and water quality. Other benefits include:

- Conformity with the community's values - A recent public opinion survey, "Defining our Vision for the Future," mailed randomly to 1000 residents in Madison County shows that residents see the value of native plants. According to the survey, 66% of the respondents agreed or strongly agreed with the statement, "Madison County should provide ordinances that prefer native plants, discourage non-native plants and prohibit invasive species from being planted in new developments." Only 11% disagreed or strongly disagreed with that statement while the remaining 23% were neutral.
- Improved public perception – Traditional solar farms have gravel or bare ground. Residents who think solar damages land can put pressure on local government to halt renewable energy development. Installing a pollinator friendly solar farm can change that perception.
- Supporting agricultural values - Agricultural productivity increases due to an increase in the number of pollinators, which are needed by agriculture.
- Less stormwater runoff – The root systems of native plants are deeper and may make managing stormwater less costly due to the increased infiltration and absorption.
- Reduced maintenance costs - There is less mowing, less pesticides and more resiliency to the changing climate.

The Ohio Habitat Pollinator Initiative developed the Solar Array Pollinator Job Sheet to provide specific recommendations on species and seeding rates (attached). The installer should reach for a score of 85 on the attached assessment form because Madison County is part of a national focus area to establish habitat in order to reverse the decline of the Monarch butterfly and Bobwhite Quail.

Please don't hesitate to contact Julia Cumming, Program Administrator, at 740-852-4003 or Julia.cumming@oh.nacdnet.net or for any questions or assistance. Thank you again for the opportunity to comment.

Yours truly,



Jonathan Francis
Chairman

Cc: Matt Butler, Public Utilities Commission (by email), Madison County Commissioners and Pike Township Trustees

Ohio Solar Site Pollinator Habitat Planning and Assessment Form

1. Percent of total site planted with native or beneficial introduced flowering plants.

- ☐ 25-50% 10 points
☐ 51-75% 20 points
☐ 76-100% 30 points

2. Flowering plant diversity in site perimeter & buffer area (species with more than 1% cover).

- ☐ 9-12 species 5 points
☐ 13-16 species 10 points
☐ 17-20 species 15 points
☐ 20+ species 20 points
☐ Site specific Milkweed included @2,000 pls/ac minimum 10 points

* If no boxes were selected in questions 1 or 2 then your site does not meet criteria to be considered as an OPHI Solar Pollinator Habitat. However, OPHI can work with you on ways to increase the pollinator score of your site.

3. Flowering plant seed mixes and plantings to be used.

Native species local to the site are preferred; otherwise species native to Ohio are encouraged.

- ☐ Includes only native plant species 15 points
☐ Includes native and beneficial introduced plant species 10 points
☐ Includes only beneficial introduced plant species 5 points

4. Flowering plant diversity in rows & under solar array.

- ☐ 4-6 5 points
☐ 7+ 10 points
☐ Site specific Milkweed included @2,000 pls/ac minimum 10 points

5. Seasons with at least 3 blooming species. Check all that apply.

- ☐ Spring (April – May) 5 points
☐ Summer (June – August) 5 points
☐ Fall (September – October) 5 points

6. Available habitat components within ¼ mile of site.

Check all that apply.

- ☐ Native grasses 2 points
☐ Trees and shrubs 2 points
☐ Forest edge habitat 2 points
☐ Cavity nesting sites 2 points
☐ Clean perennial water sources 2 points

7. Planned vegetative buffers adjacent to the solar site. Check all that apply.

- ☐ Site has planned buffer adjacent to solar site 5 points
☐ Buffer is at least 30 feet wide as measured from array fencing or edge of flower plantings 5 points
☐ Buffer is at least 50 feet wide as measured from array fencing or edge of flower plantings 10 points
☐ Buffer includes flowering Shrubs/trees and other shrubs/trees that provide food for wildlife 5 points

8. Habitat site preparation prior to implementation.

- ☐ Measures taken to control weeds and invasive species prior to seeding/planting. 10 points
☐ Appropriate soil preparation done to reduce erosion And enhance germination/growth 5 points
☐ None -10 points

9. Planned management practices for areas designated as part of the pollinator habitat site. Check all that apply.

- ☐ Detailed establishment and management plan developed for site 10 points
☐ Mowing Follows OPHI mowing schedule for monarchs each year 5 points
☐ Mowing is staggered over a 2 week period 5 points
☐ Signage indicating site is wildlife & pollinator-friendly 5 points
☐ Creation of habitat features (e.g. boxes, pass-through tunnels, bee hotels) 5 points
☐ Long-term monitoring plan developed that includes re-certification as Solar Site Pollinator Habitat 10 points

10. Insecticide risk. Check if applicable.

Communication with adjacent landowners about the project and possible impacts of their insecticide use is critical

- ☐ Site is adjacent to land (within 120 ft.) where insecticides are used -20 points
☐ Planned on-site insecticide use (including pre-treated seeds/plants) -40 points

Total Points: 0

Provides High Quality Pollinator Habitat > 85
 Meets OPHI Solar Pollinator Habitat Standards 70-84

Site Owner/Operator:

Project Location:

Project Size (acres):

Planned Source of Seeds:

Planned Seeding Date:

Habitat & Vegetation Consultant:

Refer to www.ophi.info for more information regarding solar pollinator habitat development.

Version 1 - March 2018

Developed by the OPHI Solar Pollinator Program Advisory Team





SOLAR ARRAY POLLINATOR HABITAT ESTABLISHMENT

Pollinator Job Sheet

October 2018

Description

The purpose of this practice is to enhance vegetative cover with habitat for pollinators. By establishing this cover, butterflies, bees, other insects and some birds which are important for the pollination of many plant species will have a variety of food and nectar sources.

The vegetation established will be a diverse mix of at least 9 pollinator-friendly shrubs (optional), legumes or wildflowers; it must provide at least three species in each of the bloom periods (early, middle, and late). Forbs and wildflowers shall be planted at the rate of 15-30 PLS per square foot.

Grasses may be used in mix at no more than 25% of mix based on PLS per square foot. Only Native Grasses may be used. Little Bluestem is highly recommended. Only "short" Native Grasses may be used. Tall grasses such as Indiangrass, Big Bluestem and are not permitted to be used.

Establishment Overview

Because some of the seeds are light, hairy or fluffy, the best results are obtained using a specialized drill. Broadcast seeding may also be an option for the small areas planted to the legumes or wildflowers found in the pollinator mix. The germination times may vary between the many species included in the mix.



Site Preparation and Planting

Apply soil amendments as needed and described on the specifications sheet. Soil amendments, if needed, shall be applied prior to seedbed preparation or before planting if a no-till drill is used. Normally, the application of lime and/or fertilizer is not needed when establishing native legumes and forbs on roadsides, infields, and facilities.

Because planting depth is critical for these plants, a firm, level seedbed is necessary. Also, because some species germinate later than most other plants typically found in fields, it is important to have a weed-free seedbed. In some cases, site preparation may be necessary the year before seeding. Seeds should be planted no deeper than ¼ inch. If planted properly, it is acceptable to see some seed on the surface after planting. If drilling, ensure that the drill is properly calibrated and set up.

Seed the species listed on the specifications sheet. Seed at rates and according to methods described on the specifications sheet.



No-till Planting The first step is to kill or suppress existing vegetation. If planting into an existing sod, treatment will need to begin the year before planting. Mow the existing sod and follow with a fall application of appropriate burndown herbicide to control grasses and broadleaved plants. New growth may occur in the spring prior to planting, so an additional burndown treatment may be necessary. If the previous crop was a row crop, use a nonselective burndown herbicide to control existing vegetation at the time of planting. Once competing vegetation is controlled, use a drill designed for no-till seeding these kinds of plants. Seed should be drilled uniformly at a depth no greater than $\frac{1}{4}$ inch.

Tilled Seedbed A firm seedbed is important when seeding native grasses. Initial tillage (plow, chisel, disc) should begin at least a month prior to seeding. About 2 weeks should be planned between initial tillage and final seedbed preparation to allow the weeds to germinate and be killed by the final seedbed preparation. A nonselective herbicide can be used prior to seeding to control weeds, especially the perennial weeds. The final seedbed should be cultipacked until firm enough to leave footprints only $\frac{1}{4}$ to $\frac{1}{2}$ inch deep. Once the seedbed is prepared, seed the area by:

- Drill Seeding – Uniformly drill the seed $\frac{1}{4}$ inch deep

OR

- Broadcast Seeding – Use an "air-flow" fertilizer applicator or broadcast seeder capable of handling these seeds to uniformly seed the area. A carrier may be needed if using a fertilizer spreader. Cultipack again after broadcast seeding to achieve seed coverage and seed-to-soil contact. Rolling or cultipacking before broadcasting seed will be required for all broadcast seedings that occur outside of the dormant seeding period. All slopes must be smooth and free of gullies and/or rills

Seeding Dates

The best time to seed the forbs and legumes is April 1 until May 30. Dormant seedings may be done from December 15 until March 1.



Maintenance during Establishment

Mow, clip or spray during the growing season to control weeds, insects or other undesirable species. Do not mow shorter than 10-12 inches. The goal the seeding year is to reduce the shade pressure that weeds can exert on the plant seedlings. The seeding should be mowed at least once before early August. There are herbicides labeled for some native forbs and legumes. These have proven to be very effective in helping the seeding get established. However, some caution must be used so that these materials do not harm desirable species included in the mix.

Areas that fail to become established should be re-seeded during the next seeding period.

Stand Evaluation

Native forbs and legumes often have slower germination than typical introduced cool-season grasses and legumes. It is appropriate to give the stand sufficient time to develop when evaluating stand success.

The Initial Evaluation should be made 6-8 weeks after planting. Check and record seedling density (plants per square foot) and distribution in several areas of the field. This is also a time to check weed pressures. If it appears that undesirable cool season grasses and legumes are overtaking the desired species, consider using an Imazapic or Clopyralid herbicide over the top to kill or suppress the cool season grasses.

The Second Evaluation should be made in late summer of the seeding year to evaluate stand adequacy based on density of established plants. An average of at least 2-4 strong seedlings per square foot should be the minimum acceptable stand.

The Final Evaluation should be made during the early summer of the second year. If an average of 2 healthy plants are found per square foot, a successful stand and cover should be accomplished.

Maintenance after Establishment

After the initial establishment is completed, maintain the planting according to your conservation plan. Maintenance activities should only be performed between July 16 and February 28 (outside the primary nesting and brood-rearing season)

Scout fields in May to early June to identify problems such as thistle, johnsongrass, other noxious weeds or trees. These may need treatment to control.



Spot treatment necessary to control noxious weeds or pests that will damage the cover may need to be treated. Try to avoid treating affected areas during the primary nesting season (March 1 to July 15): If treatment is necessary during the primary nesting season the method used should be the least damaging to nesting wildlife and habitat.

Mow no shorter than 10-12 inches. Do not mow after August 20 in order to allow regrowth for winter cover and nectar for pollinators. Mowing shorter than 10 inches will also damage or kill the desired species and promote cool season grasses.

Periodic mowing, mowing for cosmetic purposes and annual mowing for generic weed control are not recommended and can be detrimental to the stand.

If prescribed burning is to be used, it should be conducted in accordance with all applicable state or local regulations.



POLLINATOR HABITAT SPECIFICATIONS SHEET

For:	County:
Field(s):	District
Planned By:	Date:

3' SOLAR WILDFLOWER/LEGUME SEEDING

Acres to be seeded:

Recommended Species and Seeding Rates

Grasses			Wildflowers		
Species	Rate PLS lb./ac	Total PLS lb./ac	Species	Rate PLS lb./ac.	Total PLS lb./ac.
Little Bluestem	0.500	0.000	Alsike Clover	0.150	0.000
Prairie Junegrass	0.010	0.000	Aromatic Aster	0.015	0.000
Sideoats Grama	0.500	0.000	Blue Vervain	0.040	0.000
..			Butterfly Milkweed	0.060	0.000
..			Canada Milkvetch	0.150	0.000
..			Crimson Clover	0.750	0.000
..			Downy Wood Mint (Ohio Horse Mint)	0.007	0.000
..			Golden Alexander	0.030	0.000
..			Grass Leafed Goldenrod	0.010	0.000
..			Great Blue Lobelia	0.008	0.000
..			Hairy Beardtongue	0.020	0.000
..			Ladino or White Clover	0.100	0.000
..			Narrow Leaf Mountain Mint	0.006	0.000
..			Pale Spiked Lobelia	0.003	0.000
..			Partridgepea	0.500	0.000
..			Plains Coreopsis	0.030	0.000
..			Purple Prairieclover	0.100	0.000
..			Riddell Goldenrod	0.025	0.000
..			Seed Box	0.005	0.000
..			Sky Blue Aster	0.010	0.000
..			Smooth Violet Prairie Aster	0.025	0.000
..			Virginia Mountain Mint or Mountain Mint	0.006	0.000
..			Wild (Perennial) Lupine	1.000	0.000
..			Wild Petunia	0.050	0.000
..					
..					
..					
Total Grasses (lbs./acres)	1.010	0.000	Total Wildflowers (lbs./acre)	3.100	0.000

POLLINATOR HABITAT SPECIFICATIONS SHEET

GRASS/WILDFLOWER/LEGUME PERIMETER/BORDER SEEDING

Acres to be seeded:

Recommended Species and Seeding Rates

Grasses			Wildflowers		
Species	Rate PLS lb./ac	Total PLS lb./ac	Species	Rate PLS lb./ac.	Total PLS lb./ac.
Little Bluestem	0.250	0.000	Blackeyed Susan	0.105	0.000
Sideoats Grama	0.250	0.000	Brown-eyed Susan	0.070	0.000
Switchgrass (Blackwell)	0.100	0.000	Culvers Root	0.002	0.000
..			False or Oxeye	0.200	0.000
..			Grayhead Coneflower	0.060	0.000
..			Illinois Bundleflower	0.500	0.000
..			Lanceleaf Coreopsis	0.400	0.000
..			New England Aster	0.016	0.000
..			Partridgepea	0.500	0.000
..			Purple Coneflower	0.200	0.000
..			Stiff Goldenrod	0.030	0.000
..			Wild Bergamot	0.050	0.000
..			Butterfly Milkweed	0.030	0.000
..			Common Milkweed	0.030	0.000
..			Swamp or Rose Milkweed	0.030	0.000
..			Alsike Clover	0.050	0.000
..			Crimson Clover	0.400	0.000
..			Ladino or White Clover	0.050	0.000
..			..		
..			..		
..			..		
..			..		
..			..		
..			..		
..			..		
..			..		
..			..		
Total Grasses (lbs./acres)	0.600	0.000	Total Wildflowers (lbs./acre)	2.723	0.000

POLLINATOR HABITAT SPECIFICATIONS SHEET

ANNUAL WILDFLOWER SEEDING

Acres to be seeded: _____

Recommended Species and Seeding Rates	
---------------------------------------	--

[illegible]

SITE PREPARATION - BEFORE PLANTING IN YEAR:	
<input type="checkbox"/>	Mowing:
<input type="checkbox"/>	Herbicide:
<input type="checkbox"/>	Disturbance:
Special Notes:	

PLANTING YEAR:	
<input type="checkbox"/>	Planting Method NO-Till
Date:	
POST-PLANTING MAINTENANCE FOR PEST CONTROL DURING ESTABLISHMENT	
<input type="checkbox"/>	Herbicide: Per OSU Extension, professional consultant and/or label recommendations.
<input type="checkbox"/>	Mowing:
<input type="checkbox"/>	Prescribed burning – Burn according to approved burn plan
Notes:	

Special Recommendations



For more information about the Ohio Pollinator
Habitat Initiative Check out our website:
<http://www.ophi.info/>

Like us on facebook:
[www.facebook.com/Ohio-Pollinator-
Habitat-Initiative-102481783426075/](http://www.facebook.com/Ohio-Pollinator-Habitat-Initiative-102481783426075/)

Field Number	Planned Activity	Date Activity Will Take Place	Extent of Activity	Specifications
	Herbicide	October - November 2018		Herbicide tank mix application of Glyphosate and broadleaf herbicide at labeled rates for thistle to control annual weeds and prepare site for planting.
	Herbicide	May 2019		Herbicide application of Glyphosate at labeled rates for thistle to control annual weeds and prepare site for planting.
	Seeding Annuals	May 2019		Seeding of planned species according to recommended guidelines and listed on provided job sheet. Please be advised to follow seeding dates and site prep methods stated in job sheets.
	Mowing	June - July 2019		Mow at heights of 12"-18" to control noxious weeds and aid in the establishment of the planted species.
	Mowing	July - August 2019		Mow at heights of 12"-18" to control noxious weeds and aid in the establishment of the planted species.
	Herbicide	October - November 2019		Post emergent herbicide application of Imazapic at labeled rates by species planted to control noxious weeds and aid in the establishment of planted species.
	Seeding Perennials	December 2019 - March 2020		Seeding of planned species according to recommended guidelines and listed on provided job sheet. Please be advised to follow seeding dates and site prep methods stated in job sheets.
	Mowing	June - July 2020		Mow at heights of 12"-18" to control noxious weeds and aid in the establishment of the planted species.
	Mowing	July - August 2020		Mow at heights of 12"-18" to control noxious weeds and aid in the establishment of the planted species.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

11/18/2019 1:51:11 PM

in

Case No(s). 19-1881-EL-BGN

Summary: Public Comment of Jonathan Francis, Chairman, Madison Soil & Water Conservation District, via website electronically filed by Docketing Staff on behalf of Docketing

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/9/2020 1:50:17 PM

in

Case No(s). 19-1881-EL-BGN

Summary: Testimony of Lauren Devine electronically filed by Christine M.T. Pirik on behalf of Madison Fields Solar Project, LLC