



**LMI COMMUNITY SOLAR
APPLICATION**
Program Year 1, Application Period 1

Project # 1
LOVE LANE SOLAR 2 LLC
78 LOVE LANE, BRIDGETON NEW JERSEY 08302
BLOCK 1301, LOT 1.10 - (CSF-1, ARRAY #2)
UPPER DEERFIELD TOWNSHIP, CUMBERLAND COUNTY
NEW JERSEY

Site Situated In:

ELECTRIC DISTRIBUTION COMPANY

ATLANTIC CITY ELECTRIC

SEPTEMBER 9, 2019

Submitted To:


**New Jersey Board of Public Utilities
44 South Clinton Avenue, 7th Floor
Post Office Box 350
Trenton, New Jersey 08625-0350
Attn: Office of Clean Energy
Community Solar Energy Pilot Program Application Package**

Additional Electronic Versions Emailed to:

**communitysolar@njcleanenergy.com (receipt requested)
board.secretary@bpu.nj.gov (receipt requested)
kblechman@crenergygroup.com**

Submitted by Applicant:

**Victor Naar, President
Love Lane Solar 2 LLC
333 Westchester Ave West Building Suite W2100
White Plains, NY 10604
Tel: (914) 403-2003
Email: vnaar@crenergygroup.com**



John Renz, Authorized Member

Table of Contents

Executive Summary	1
1. The Project	3
A. LOVE LANE SOLAR 2 LLC.....	3
B. MUNICIPAL APPROVAL	3
C. CO-LOCATION OF PROJECTS AND NET-METER PROJECT	5
D. KEY MAP SHOWING LOCATION OF PROJECT.....	7
2. The Team	8
A. LOVE LANE MANAGEMENT TEAM:	8
B. PROFESSIONAL TEAM:	8
3. Community Solar Program Application:	11
4. Community Solar Program Application: (*Supplemental Responses).....	12
A. SECTION VII. COMMUNITY SITING QUESTION 6.; FARMLAND ASSESSMENT:.....	12
B. SECTION VII. COMMUNITY SITING QUESTION 8.; BROWNFIELDS:.....	12
C. SECTION VII. COMMUNITY SITING QUESTION 21.; POLLINATOR PLAN:	13
D. SECTION VIII. PERMITS QUESTION 3.; PERMITS RECEIVED:	13
E. SECTION VIII. PERMITS QUESTION 4.; CAPACITY HOSTING MAP:.....	13
F. SECTION X. COMMUNITY ENGAGEMENT QUESTION 1.; COLLABORATION:	13
G. SECTION XII. OTHER BENEFITS QUESTION 2.; GRID BENEFITS:.....	14
H. SECTION XII. OTHER BENEFITS QUESTION 5.; LOCAL SOLAR TRAINEES:	14
5. Copies of Permits Received (attachment Section B. VIII. Permits) (See Section 12, Attachment J. for copies of Permits).....	15
A. NJDEP PERMIT COORDINATION AND ENVIRONMENTAL REVIEW (PCER)	15
B. NJDEP LOI ABSENCE DETERMINATION	15
C. NJDEP NATURAL HERITAGE PROGRAM REVIEW LETTER.....	15
D. USFWS T&E REVIEW LETTER.....	15
E. NJDEP HPO CLEARANCE LETTER	15
F. UPPER DEERFIELD JLUB RESOLUTION OF APPROVAL 8-2019	15
G. UPPER DEERFIELD JLUB RESOLUTION OF APPROVAL 23-2011	15
6. LSRP Report	15
7. LMI Project Approach	15
8. Solar Subscriber Organization Collaboration	15
9. Co-Location Considerations	16
10. Interconnection Strategy	16
11. Appendix B - Required Attachments	17
ATTACHMENT 1 DELINEATED MAP - SITE PLAN ARRAY #2.....	18
ATTACHMENT 2 ELECTRONIC SUBMISSION – COPY OF DELINEATED MAP WITH PDF AND DWG FILES.....	17
ATTACHMENT 3 PROOF OF SITE CONTROL	20
ATTACHMENT 4 PERMIT READINESS CHECKLIST	21
ATTACHMENT 5 PROOF OF MEETING WITH NJDEP, PCER.....	22

ATTACHMENT 6	SCREENSHOT OF CAPACITY HOSTING MAP SHOWING AVAILABLE CAPACITY	23
ATTACHMENT 7	SUBSTANTIATING EVIDENCE OF PROJECT COST	24

12. Additional Attachments..... 25

A.	SITE PHOTOGRAPHS REPORT.....	25
B.	LSRP REPORT (MARATHON AUGUST 29, 2019)	25
C.	POLLINATOR PLAN	25
D.	COMMUNITY ENGAGEMENT LETTERS.....	25
E.	PUBLIC NOTICE OF JLUB MEETING	30
F.	PUBLIC NOTICE PROPERTY OWNERS 200' LIST	31
G.	JOB, APPRENTICESHIP, EDUCATION.....	32
H.	DEVELOPMENT PLANS	33
	1. USE VARIANCE, SUBDIVISION AND SITE PLANS	
	2. DELINEATION MAP	
	3. REMEDIATION PLAN	
I.	CD OF APPLICATION PACKAGE, ALL FILES ELECTRONIC COPIES.....	34
J.	COPIES OF PERMITS RECEIVED:.....	35
	A. NJDEP PERMIT COORDINATION AND ENVIRONMENTAL REVIEW (PCER)	36
	B. NJDEP LOI ABSENCE DETERMINATION	37
	C. NJDEP NATURAL HERITAGE PROGRAM REVIEW LETTER	38
	D. USFWS T&E REVIEW LETTER	39
	E. NJDEP HPO CLEARANCE LETTER	40
	F. UPPER DEERFIELD JLUB RESOLUTION OF APPROVAL 8-2019	41
	G. UPPER DEERFIELD JLUB RESOLUTION OF APPROVAL 23-2011	42

Executive Summary

Love Lane Partners believes that a business can act in manner which is responsible to the environment, responsible to the community in which it operates and still be profitable. We are fully committed to the concepts of environmental justice.

To that end, we have actively engaged with the Township of Upper Deerfield, the Cumberland County Regional High School District, local Public Housing Authorities, Private Housing Owners, religious and civic organizations, and the local farming community.

We have spent countless hours not only understanding how these groups might use the power that Love Lane Partners will generate, but also the needs of those community groups.

It's not enough to just offer a discount on power, it's about how we can positively impact the quality of life in those communities. We are determined to have a substantial impact on the communities in which we do business!

Therefore, we believe that the following points offer a compelling reason to support our initiative.

- The Project is an LMI Project and the Project Developer will dedicate at least 55% for LMI subscribers. Love Lane Partners will offer a floating **TWENTY PERCENT** discount off LMI electric bills. Furthermore, we have taken the time to understand how additional revenues may financially impact the operators and residents (due to federal and state regulations governing those entities) and shaped our product offerings so that we can positively impact the quality of life of the residents of those communities.
- Love Lane Partners will offer a floating **FIFTEEN PERCENT** discount off Non-LMI household electric bills.
- Love Lane Partners has worked with the Cumberland County Regional High School and the Town of Upper Deerfield to remediate the contaminated farmland located next to the School and Church that is currently a major health and environmental issue in the community. We have also engaged with the NJ Department of Environmental Protection along with Love Lane Partners LSRP to discuss best ways to remediate the site which is heavily contaminate with Arsenic, DDT, and Lead due to historic use as the Del-Bay Orchards.

- Love Lane Partners has engaged with the Cumberland Regional High School to promote renewable energy goals and increase the environmental awareness to our young people. We are working with the school to develop curriculum, videos, and dash-board monitors to educate the students about the renewable energy generation facility the students will see from the school windows.
- Love Lane Partners has demonstrated a great degree of Community Engagement, and their residents and the larger community have given their full support of the project.
- Love Lane Partners has developed and will implement a Pollinator Plan for the benefit of the community and the environment.
- Love Lane Partners' projects will generate significant tax revenues for the Town of Upper Deerfield, which will benefit this mostly rural community significantly.
- Love Lane Partners has pledged to make the power we generate accessible to the community and will continue to have an outreach and subscriber recruitment program to make the local residents, business and industries aware of their eligibility to subscribe to the project.
- Love Lane Partners has partnered with the local farming community, and will continue to reach out to local farmers, to enroll farmers as subscribers and receive the Non-LMI discount.
- Love Lane Partners has partnered with Miller Brothers Electric to build the projects. Miller Bros. Electric is a union contractor and we want to ensure that union labor is used to build the project. Love Lane Partners will support the union's apprenticeship programs in place to train workers from the local community.
- Love Lane Partners has taken many steps to gain the support of the community and to actively develop the site. We have entered into a purchase and sale agreement to acquire the property, received Use Variance, Preliminary Site Plan and Subdivision Approvals from the Township's Board, received NJDEP Wetlands LOI Absence determination, and we have done the research regarding NJDEP Historic Preservation, NJDEP Natural Heritage Program and USFWS reviews and the site is suitable based upon those determinations.

1. The Project

A. Love Lane Solar 2 LLC

Love Lane Solar LLC (LLS) is a New Jersey based Solar Developer engaged in the acquisition, development and ownership of Community Solar and Net-Meter projects throughout New Jersey. Our primary emphasis is on providing clean, renewable solar power to Low and Moderate-Income (LMI) subscribers in the Cumberland County and the surrounding Counties in the Atlantic City Electric territory.

Our core belief is that it is possible to develop products and services that will benefit our communities, specifically the LMI community, and business operations. The company has had communication with potential communities that are a mix of LMI housing agencies, private LMI providers, religious institutions, and municipalities.

Additionally, LLS has selected the location of Project to stabilize an environmental threat to Upper Deerfield and Cumberland Regional High School. The site is located directly across the lane from Cumberland Regional High School and has historic arsenic and lead contamination caused by and attributable to the former Del-Bay Orchards. A review of the Title Commitment furnished by Title America Agency Inc. indicates the Del-Bay Orchard was in existence prior to 1928 and neighbors have indicated the orchard or remnants thereof existed until the early 1970s. The extent of the contamination is of record at the New Jersey Department of Environmental Protection. Please see **LRSP Report Section 12, Attachment B** for further information of the history of the contamination.

Love Lane Solar, with support of Upper Deerfield Township and Cumberland County Regional High School, plans to develop the Solar Projects and as a result would remediate the site. In effect, the Solar Projects by being built would eliminate the student body's (sensitive receptors) exposure to contaminated dust associated with farming.

B. Municipal Approval

A previous developer Millennium Land Development LLC made application for a Use Variance to permit the development of a 20-Megawatt Solar Facility on the Block 1301, Lot (slightly smaller development area) to the Upper Deerfield Joint Land Use Board ("JLUB") in 2011. Public Meetings were held on this application on; June 13, 2011, July 11, 2011, September 12, 2011 and November 14, 2011. The previous developer was granted a Use Variance by the JLUB on November 14, 2011 to develop the 20-Megawatt Solar Project. A copy of the Use Variance Resolution of Approval 23-2011 is attached to this application, please see **Attachment J in Section 12**.

The Project proposed by Millennium was not developed and was later shelved by the developer before the project was offered to Love Lane Partners.

Love Lane Partners LLC, decided to pursue the Project and is now the Contract Purchaser of a 126.35-acre portion of Block 1301, Lot 1, Upper Deerfield Township, Cumberland County, New Jersey, which is a 219.3-acre parcel of land owned by Westrum Upper Deerfield LLC (Westrum) and is currently zoned residential.

Currently, Westrum is designing a residential subdivision to be built on the southern portion of the retained portion of Block 1301, Lot 1 that was approved for housing and is zoned accordingly.

Love Lane Partner LLC (Love Lane Solar 2 LLC parent company) designed and submitted a complete Use Variance, Preliminary Site Plan and Subdivision Application to the Upper Deerfield Joint Land Use Board ("JLUB") for review.

Subsequent to the submission a Workshop Meeting was held on March 26, 2019. At the Workshop Meeting the Mayor, Township Administrator, Council Members, JLUB Members, Emergency Management Personnel and Professional Staff; JLUB Attorney, Engineer and Planner and the Township Engineer representing the Township and five Members of Love Lane Partners; Howard Blechman, Victor Naar, Kenneth Blechman, Bradd Forstein and John Renz were in attendance. The purpose of the Workshop was to discuss with the Township any concerns as well as many of the design aspects of the Projects and any community impacts.

At the meeting, the topic of the Historic Arsenic and Lead Contamination caused by the former Del-Bay Orchard was discussed. Love Lane Partners' under advice of the Project's LRSP is to remediate the areas where public access is currently at issue. Love Lane Partners indicated the plan is to perform Site Remediation, by first doing additional confirmatory soil sampling and then preparing a Remedial Action Work Plan ("RAWP") to obtain the Remedial Action Outcome ("RAO"). As part of the plan, Love Lane Partners will be removing contaminated soils from the Township's Right of Ways along Love Lane and contaminated soils in the County's Right of Ways along Old Deerfield Pike. Ultimately the Project will be fenced along the perimeter and there will be a permanent maintained ground covers which are pollinator friendly to prevent the soil from becoming a dust hazard.

The Workshop was also an opportunity for Love Lane Solar to discuss the Community Solar Program's positive impacts and the ability for the Upper Deerfield and surrounding community's residents, farmers, businesses and industries to become subscribers. Love Lane also discussed its commitment to be a Low and Moderate Income (LMI) Project and what that means as far as potential subscribers.

Love Lane Partners made revisions based upon the discussions and recommendations received at the Workshop Meeting and submitted revised plans to the Land Use Board Secretary. Love Lane Partners engaged with the community and met personally with several of the neighboring property owners to discuss the Project and discuss the Remediation of the contaminated soils.

The Board Secretary Informed Love Lane Partners that our Board application was complete and that a public meeting would be held on April 15, 2019. Love Lane Partners placed a Notice of the hearing in the Daily Journal on April 4, 2019, please see **Section 12, Attachment F**. In

addition, Notice of the Meeting was mailed directly to all of the property owners within 200' and in this case the 200' list included all property owners within 200' of the larger 219.3-acre unsubdivided tract, please see **Section 12, Attachment F**.

On April 15, 2019, a Public Hearing was conducted by the JLUB to review the applications presented by Love Lane Partners. In attendance were several members of the public who spoke in support of the Project and several neighbors voiced their questions and concerns. At the hearing, JLUB'S Professionals and Board Members, representing the community asked numerous questions regarding the Historic Arsenic and Lead Contamination and agreed with Love Lane Partners assessment that the Property should be remediated. The Upper Deerfield JLUB approved Love Lane Partners application for Use Variance, Preliminary Subdivision and Site Plan Approvals. A copy of the Use Variance, Preliminary Subdivision and Site Plans Resolution of Approval 8-2019 is attached to this application, please see **Section 12, Attachment J - F**.

On May 20, 2019, Upper Deerfield Township JLUB adopted a Resolution of Approval, Resolution of Approval 8-2019 memorializing the Board's approval of the Use Variance, Preliminary Subdivision and Site Plan Approvals.

On May 24, 2019, the Notice of Decision was published in the Daily Journal, Upper Deerfield Township paper of record.

On July 9, 2019 as is the case of this date, the Township nor Love Lane Partners has received any kind of notice of the filing of any appeal at the Court, thus, the appeal period has expired and the Approvals received by Love Lane Partners are un-appealable.

A copy of the Use Variance, Preliminary Subdivision and Site Plans Resolution of Approval 8-2019, with aforementioned notices, are attached to this application, please see **Attachment J - F in Section 12**.

C. Co-Location of Projects and Net-Meter Project

Love Lane Partners is planning on developing several projects on the approximate 126.35 acre parcel it currently controls. Per the recent approvals from Upper Deerfield Township, this will consist of 1 net metered project and up to 4 community solar projects.

Through and RFP process, Love Lane Partners was awarded a PPA contract with the Upper Deerfield High School District for an approximate 2.2 MW DC system that will offset nearly 100% of the school's current usage as well as save them in excess of \$100,000 per year for the next 15 years.

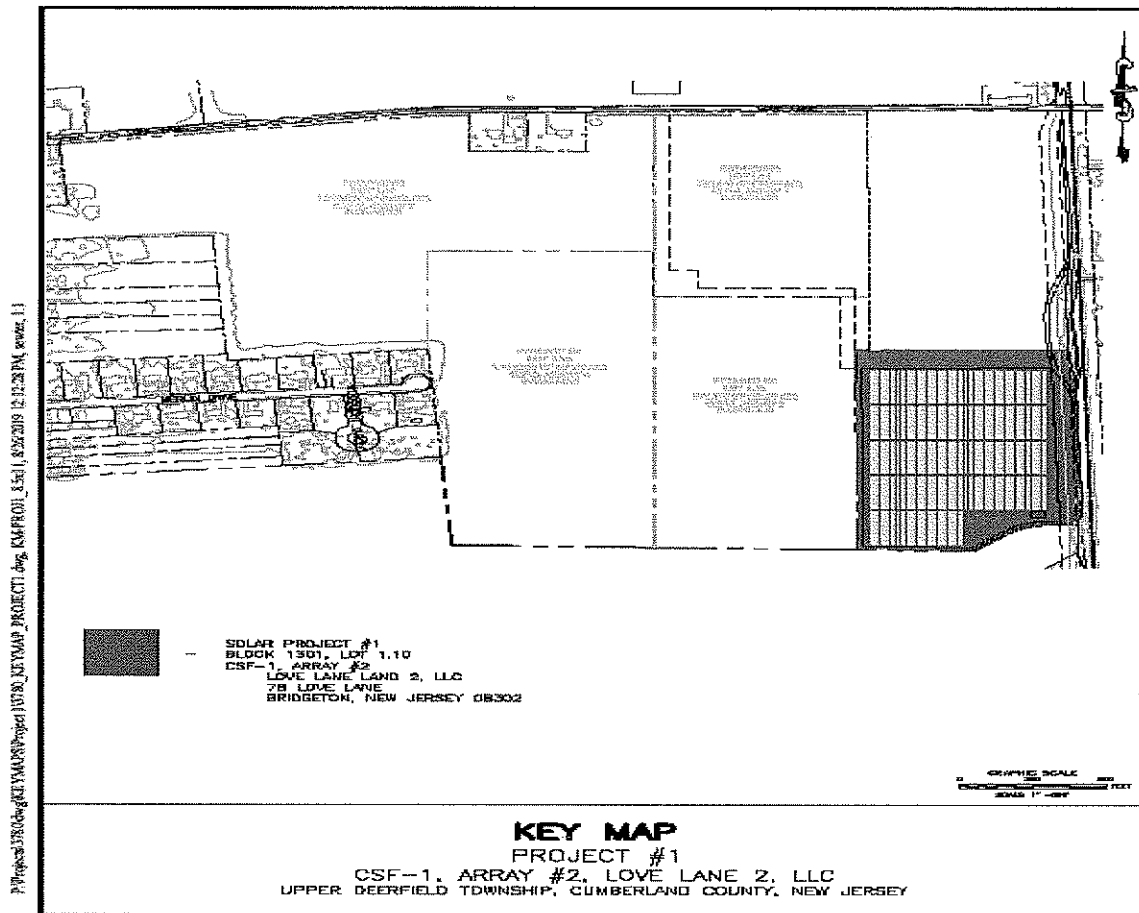
The balance of the property has been thoughtfully subdivided into 4 separate parcels, each of which will contain its own community solar project. For the purposes of this application, we are planning a 3.5 MW DC project on the southeastern portion of the property.

The remaining 3 parcels are planned to be 5 MW DC each and comply with N.J.A.C. 14:8-9.2.

Describe five Projects, one net and four community as follows:

- **Project 1 (CSF-1, ARRAY #2) is a 3.5 MW DC/ 2.5 MW AC Community Solar Co-Location Facility situated on Block 1301, Lot 1.10 and is the subject of this application;**
- Project 2 (CSF-2, ARRAY #3) is a 5 MW DC / 3.57 MW AC Community Solar Co-Location Facility situated on Block 1301, Lot 1.12.
(SUBJECT OF A SEPARATE APPLICATION – PROGRAM YEAR 1, APPLICATION PERIOD 1)
- Project 3 (CSF-3, ARRAY #4) is a 5 MW DC / 3.57 MW AC Community Solar Co-Location Facility situated on Block 1301, Lot 1.13.
(SUBJECT OF A FUTURE APPLICATION)
- Project 4 (CSF-4, ARRAY #5) is a 5 MW DC / 3.57 MW AC Community Solar Co-Location Facility situated on Block 1301, Lot 1.14.
(SUBJECT OF A FUTURE APPLICATION)
- Net-Meter Project (SPF-1, ARRAY #1) is a 2.2 MW DC / 1.57 MW AC net-meter project to serve Cumberland Regional High School. The Project is situated on Block 1301, Lot 1.11. Love Lane Solar 1 LLC was awarded a PPA contract with the Cumberland Regional High School District and submitted an interconnection application on 8/23/2019. This project is adjacent to the community solar projects but is completely separate.
(NOT PART OF THIS APPLICATION)

D. Key Map showing location of Project



KEY MAP
NOT TO SCALE

Property highlighted in Southeast corner is the system associated with this application.

2. The Team

Love Lane Solar 2 LLC management team is comprised of experienced professionals, each with over 30 years of experience in Solar Development, Solar Financing, Project Financing, Construction, Engineering, and Real Estate Development professions. The management team's varied experience includes the development and construction of Solar Facilities, high-rise buildings, telecommunications facilities, municipal infrastructure, mixed-use commercial projects, medical office parks, and residential communities in multiple states.

Love Lane Solar 2's team has spent over a year since its founding to identify the Upper Deerfield property, negotiate an agreement of sale, review conceptual designs, assess the environmental issues including significant soil contamination of the former Del-Bay Orchard and address the remediation, site planning and making application to the Township Joint Land Use Board and receiving a Use Variance, Preliminary Subdivision and Preliminary Site Plan approvals.

A. Love Lane Management Team:

Victor Naar, Managing Member
Kenneth Blechman, Member
Howard Blechman, Member
Jason Epstein, Member
Bradd Forstein, Member
John J. Renz, Member

B. Professional Team:

➤ *General Counsel – Albert K. Marmero, Esq. Grace, Marmero, & Associates:*

Albert Marmero is well known and is highly regarded in the legal community as an accomplished land use, governmental and corporate attorney. Albert's areas of expertise include zoning and planning, negotiation, municipal, housing authority, school board and local government law.

➤ *Financial Advisors - Triad Associates, Inc.:*

Triad is a multi-disciplined firm that develops and implements strategies to secure governmental grants, loans and loan guarantees from multiple sources including federal, state and regional sources. This resourceful team of community and economic development specialists is dedicated to securing governmental funding for our projects.

➤ *EPC – Miller Brothers Electric:*

Miller Bros. is experienced in all aspects of the construction industry including engineering, design and construction of large-scale utility, transit, heavy and highway, renewable energy, commercial and industrial projects, as well as a full line of preventative maintenance services. Our commitment to excellence and focusses on safety are the foundations that our company is built upon. With a family history and depth of experience in the utility construction and maintenance business, Miller Bros. has created long-lasting customer relationships based on high quality, safe and productive services exceeding the customer's expectations.

➤ *Electrical Engineering Consultant:*

Mr. Williams has over 30 years' experience in the power industry including various executive positions with PJM, Exelon Corporation and Air Liquide Americas in system planning and operations, business and project development, commodity trading and risk management, rates/pricing and product management. More recently Mr. Williams has focused on project development, energy management and operations and commodity risk management for large energy intensive industrial operations like ArcelorMittal USA and Lehigh Hanson, Inc. Mr. Williams is experienced in transmission system operations, generation interconnection issues, power and renewable energy marketing and alternative fuel analysis.

Mr. Williams has been involved in the development and operation of more than 2,000 MW of fossil fueled and renewable power generation projects in the U.S., including over 300 MW of renewable generation all for steel mills, chemical companies and gasification projects. He previously helped develop energy trading and energy efficiency contracting businesses for Exelon and managed energy procurement, risk management and efficiency for some of the world's most energy intensive companies. Mr. Williams began his career at PECO Energy where he progressed through positions in engineering and construction, system planning and operations and Rates. He holds a BS in Electrical Engineering and MS degrees in both Electrical Engineering and Engineering Management (Economic Operation of Bulk Power Systems) all from Drexel University.

➤ *Civil Design, Landscape Architecture and Surveying Services - Consulting Engineer Services:*

Consulting Engineer Services (CES) is a full-service surveying, planning, civil engineering, and construction management/inspection firm with expertise in projects including site planning, subdivisions, roadway reconstruction and resurfacing, intersection improvements, streetscaping, traffic signals, site development/redevelopment, bridges, culverts, recreational facilities, landscaping and lighting, storm drainage, and utilities, feasibility studies, and permitting. We have provided these services to public and private clients throughout New Jersey, southeastern Pennsylvania, and Delaware for more than 50 years. We have maintained a solid

reputation in the field among clients and professional peers for providing accurate, timely, and cost efficient services.

CES has extensive experience completing surveying, permitting, reports, design plans, and specifications for over 5,000 successful projects, with the majority of them in southern New Jersey. Our project portfolio includes residential, commercial, industrial, healthcare, and educational facilities on tracts of land ranging from less than one (1) acre to over 1,000 acres. We have also completed roadway and utility infrastructure improvement projects for municipal, county, and state agencies ranging from a few hundred feet to several miles long.

CES has built a reputation in the industry by concentrating on providing high-quality products and designs in a timely manner. Our survey personnel include licensed surveyors in the states of New Jersey and Pennsylvania, and we have a professional staff that can respond to individual project needs with little notice. CES' success is reflected in its commitment to invest heavily in technology and innovation by upgrading our field equipment, hardware, and software to remain on the cutting edge of the latest developments.

➤ *Environmental Consultants – Marathon Engineering and Environmental Services Inc.:*

Marathon is assisting with environmental consulting services, including Licensed Site Remediation Professional (LSRP) services; coordination with the NJDEP, Office of Permit Coordination and Environmental Review; search of threatened and endangered species databases; freshwater wetlands investigation and delineation; preparation of application to the NJDEP for Freshwater Wetlands Letter of Interpretation; preparation of applications to the NJDEP for Freshwater Wetlands and Flood Hazard Area permits; and preparation of an Environmental Impact Statement.

3. Community Solar Program Application:

See attached Community Solar Application



Community Solar Energy Pilot Program Application Form

Section A: Application Form Requirements, Instructions, Terms and Conditions

The following Application Form is intended only for entities submitting a community solar project for consideration by the New Jersey Board of Public Utilities ("Board" or "BPU"). Projects selected by the Board will be approved for participation in the Community Solar Energy Pilot Program, pursuant to the rules at N.J.A.C. 14:8-9.

This Application Form is valid only for the following Program Year and Application Period:

Program Year 1, Application Period 1

Application Period Opens: April 9, 2019 at 9:00 A.M.

Application Period Closes: September 9, 2019 at 5:00 P.M.

I. Minimum Qualification Requirements

The Community Solar Energy Pilot Program is open to projects that meet the following minimum requirements, and the full requirements defined in N.J.A.C. 14:8-9 (available for reference at the following link: [http://njcleanenergy.com/files/file/R_2019%20d_021%20\(51%20N_J_R_%20232\(a\)\).pdf](http://njcleanenergy.com/files/file/R_2019%20d_021%20(51%20N_J_R_%20232(a)).pdf)).

1. The proposed community solar project must be located in the electric service territory of an Electric Distribution Company ("EDC") in the State of New Jersey.
2. Existing solar projects may not apply to requalify as a community solar project. An existing solar project, as defined in N.J.A.C. 14:8-9.2, means a solar project having begun operation and/or been approved by the Board for connection to the distribution system prior to February 19, 2019. Projects having received a subsection (t) conditional certification from the Board prior to February 19, 2019 should refer to section B. XIII. Special Authorizations and Exemptions for additional information.
3. The Board will not consider Applications for EDCs to develop, own, or operate community solar project(s).
4. The Board will not consider Applications for projects sited on preserved farmland, as defined in N.J.A.C. 14:8-9.2.
5. The Board will not consider Applications for projects exceeding the capacity limit for individual community solar projects, set at 5 MW as defined in N.J.A.C. 14:8-9.4(g).

II. Instructions for Completing the Community Solar Energy Pilot Program Application Form

1. Each solar project applying to participate in the Community Solar Energy Pilot Program requires the submission of an individual Application Form. Do not apply for more than one (1) project per Application Form. There is no limit to the number of Application Forms that can be submitted by any one Applicant (see the definition of an "Applicant" in section A. III. Terms and Conditions).



2. Complete sections B and C, and Appendix A in full. All questions are required to be answered, unless explicitly marked as optional. All attachments are required, unless explicitly marked as optional. All attachments must be attached to the end of the Application Form, therefore forming a complete application package. Note that attachments marked as optional will be considered if included, but their absence will not penalize an Application.
3. Original signatures on all forms and certifications of this Application Form are required. The certifications contained in section C must be notarized.
4. Specific exemptions are identified throughout the Application Form which apply only if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals ("RFP"), Request for Quotations ("RFQ"), or other bidding process. If this is the case, the Applicant must include a letter describing the proposed bidding process, and the Applicant should complete all sections of the Application Form based on the project as it will be designed in the bidding process. The Applicant must further commit to issuing said RFP, RFQ, or other bidding process within 90 days of the proposed project being approved by the Board for participation in the Community Solar Energy Pilot Program (see section B. XIII. Special Authorizations and Exemptions).

III. Terms and Conditions

General Terms and Conditions

1. The "Applicant" is defined as the entity that submits the Community Solar Energy Pilot Program Application Form (for example, an Applicant may be a project developer, project owner, project operator, property owner, contractor, installer, or agent thereof).
2. Prior to completing the Application Form, the Applicant must carefully review the rules at N.J.A.C. 14:8-9, and any other rules, regulations, and codes applicable to the design, construction, and operation of a community solar project in New Jersey. All Applications must be in compliance with all local, state and federal rules, regulations and laws. Furthermore, submission of an Application Form does not obviate the need for compliance with all applicable local, state, and federal laws and regulations at any time during the design, construction, operation, and decommissioning of a community solar project including, but not limited to, regulations by commissions such as the New Jersey Highlands Council and the New Jersey Pinelands Commission.
3. By submitting an Application, the Applicant acknowledges notice on behalf of all project participants that the information included in the Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47:1A-1 et seq. Aggregated information may be used by the Board and/or other state, federal, county, regional or local agencies in reports and evaluations, and the geographic location may be used to update Geographic Information System ("GIS") mapping. Applicants may identify sensitive and trade secret information that they wish to keep confidential by submitting them in accordance with the confidentiality procedures set forth in

N.J.A.C. 14:1-12.3. Furthermore, the Applicant understands that the list of approved community solar projects will be published on the Board of Public Utilities website.

4. Amendments or supplements to the Community Solar Energy Pilot Program Application Form will be made available via the New Jersey Clean Energy Program ("NJCEP") website at www.njcleanenergy.com. This Application Form may be modified for future Application Periods at any time without prior notification.

Evaluation of Applications and Approval of Projects

5. Only Applications that are administratively complete by the close of the Application Period will be considered for participation in the Community Solar Energy Pilot Program during that Program Year. An application will be deemed administratively complete if: 1) All questions are completed, except those explicitly marked as optional, 2) All required attachments are included (see Appendix B for a checklist of required attachments), and 3) All required signatures are included. Applicants will be notified if an Application is deemed administratively incomplete. An incomplete Application may be amended and resubmitted during the following Application Period without advantage or disadvantage.
6. The Applicant may be required to supplement the information provided in the Application Form upon request from the Board or Board Staff.
7. Following the close of the Application Period, each Application will be reviewed and evaluated by a dedicated Evaluation Committee.
8. In reviewing each application, Board Staff may consult with the New Jersey Department of Environmental Protection ("NJDEP"), the New Jersey Department of Agriculture, or other state agencies and consultants as are relevant to the Application. Any information marked and submitted as confidential will be treated as such by the receiving agency, and used for the sole purpose of evaluation.
9. The criteria for evaluation of Applications are presented in Appendix C (Evaluation Criteria). Projects must score a minimum 30 points total in order to be considered for participation in the Community Solar Energy Pilot Program. Projects that score above 30 points will be presented to the Board for approval for participation in the Community Solar Energy Pilot Program in order, starting with the highest-scoring project and proceeding to the lowest-scoring project, and until the allocated program capacity for that Program Year is filled.
The allocated program capacity for Program Year 1 is 75 MW. At least 40% of program capacity (i.e. at least 30 MW) will be allocated to LMI projects.
10. Board Staff may reject Applications that are incomplete at the close of the Application Period, that are not in compliance with the rules and regulations established in N.J.A.C. 14:8-9, or that do not meet a minimum standard for selection, as set forth in this Application Form.



Milestones and Follow-Up for Approved Projects

11. Should the proposed community solar project be approved by the Board for participation in the Community Solar Energy Pilot Program, such approval will be contingent on the project being constructed and operated as was proposed in its Application.

Furthermore, pursuant to the rules at N.J.A.C. 14:8-9.3(c), approved projects are expected to begin construction within 6 months of their approval by the Board, and are expected to become fully operational within 12 months of their approval by the Board. Extensions may be granted by Board Staff at its discretion, based on its assessment of the specific circumstances of each project approved.

In order to monitor compliance, approved projects will be required to submit updates to the Board:

- a. Prior to the beginning of construction, the Applicant must provide evidence that commitments in the following categories have been met: project location, community and environmental justice engagement, other benefits.
- b. Prior to applying for permission to operate ("PTO"), the Applicant must provide evidence that commitments in the following categories have been met: siting (other than location), all permits received.
- c. Prior to applying to the EDC for allocation of bill credits, the Applicant must provide evidence that commitments in the following categories have been met: product offering, subscriber type, geographic limit within EDC service territory.

If the approved project fails to be completed as proposed in the Application, and the Applicant fails to remediate the failure or provide an equivalent modification within a reasonable timeframe, the project may be penalized up to and including a withdrawal of the permission to operate in the Community Solar Energy Pilot Program.

Special Considerations for Project Siting

12. Unless the proposed community solar facility is located on a rooftop, parking lot, or parking structure, the Applicant must meet with the NJDEP's Office of Permit Coordination and Environmental Review ("PCER") to determine what permits may be required and to identify other potential issues. More information is available at: <http://www.nj.gov/dep/pcer>. The Applicant must have completed the NJDEP Permit Readiness Checklist and submitted said Checklist to NJDEP PCER prior to submitting the Application to the Board (see section B. VIII. Permits). The Permit Readiness Checklist is available at the following link: <https://www.nj.gov/dep/pcer/introchecklist.htm>.
13. Special attention should be paid when siting a project on a landfill, a brownfield, or an area of historic fill. For reference, NJDEP's *Guidance for Installation of Solar Renewable Energy Systems on Landfills in New Jersey* can be found at the following link: <https://www.nj.gov/dep/dshw/swp/solarguidance.pdf>.
14. The Applicant should review the environmental compliance history at the proposed site and the various operations that were conducted there. Satisfaction of all outstanding NJDEP regulatory



compliance obligations, if applicable, will be required prior to applying for permission to operate. The Applicant should identify any outstanding compliance and enforcement issues associated with the property on which the proposed project is to be sited and resolve them accordingly before submitting the Post Construction NJDEP Compliance Form, if applicable.

15. If the proposed project is sited on Green Acres preserved open space, as defined in N.J.A.C. 14:8-9.2, or on land owned by NJDEP, the Applicant must receive special approval for the project from NJDEP prior to submitting the Application to the Board, and attach proof of approval to their application package (see section B. VII. Community Solar Facility Siting).

Submitting an Application

Applications must adhere to all of the following instructions for submission. Applications must be received no later than 5:00 P.M. on the date of the close of the Application Period in order to be considered.

Mail or hand-deliver the original complete Application package plus three copies of the complete Application package to:

New Jersey Board of Public Utilities
44 South Clinton Avenue, 7th Floor
Post Office Box 350
Trenton, New Jersey 08625-0350
Attn: Office of Clean Energy
Community Solar Energy Pilot Program Application Package

In addition, submit an electronic version of the complete Application package to both of the following email addresses: communitysolar@njcleanenergy.com and board.secretary@bpu.nj.gov.

Questions and Further Information

Please address all questions pertaining to the Application Form to communitysolar@njcleanenergy.com.

Additional guidance and Frequently Asked Questions will be available on the NJCEP website at: <http://njcleanenergy.com/renewable-energy/programs/community-solar>.



Section B: Community Solar Energy Project Description

Instructions: Section B must be completed in its entirety. Any attachments should be placed at the end of the Application package.

I. Applicant Contact Information

Applicant Company/Entity Name: Love Lane Solar 2 LLC

First Name: Victor Last Name: Naar

Daytime Phone: 914-403-2003 Email: vnaar@crenergygroup.com

Applicant Mailing Address: 333 Westchester Ave, West Building, Suite W2100, White Plains, NY

Municipality: White Plains County: Westchester Zip Code: 10604

Applicant is: ☒ Community Solar Project Owner ☒ Community Solar Developer/Facility Installer
☒ Property/Site Owner ☐ Subscriber Organization
☐ Agent (if agent, what role is represented) _____

II. Community Solar Project Owner

Project Owner Company/Entity Name (complete if known): Love Lane 2 LLC

First Name: Victor Last Name: Naar

Daytime Phone: 914-403-2003 Email: vnaar@crenergygroup.com

Mailing Address: 333 Westchester Ave, West Building, Suite W2100, White Plains, NY

Municipality: White Plains County: Westchester Zip Code: 10604

III. Community Solar Developer

This section, "Community Solar Developer," is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. In all other cases, this section is required.

Developer Company Name (optional, complete if applicable): Love Lane 2 LLC

First Name: Victor Last Name: Naar

Daytime Phone: 914-403-2003 Email: vnaar@crenergygroup.com

Mailing Address: 333 Winchester Ave, West Building, Suite W2100

Municipality: White Plains County: Westchester Zip Code: 10604

The proposed community solar project will be primarily built by:

☐ the Developer ☒ a contracted engineering, procurement and construction ("EPC") company



If the proposed community solar project will be primarily built by a contracted EPC company, complete the following (optional, complete if known):

If the EPC company information is left blank and the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program, the Applicant must inform the Board of the information below once the EPC company becomes known.

EPC Company Name (optional, complete if applicable): Miller Brothers
First Name: Joseph Last Name: Marrone
Daytime Phone: 610-506-6111(m) Email: joe@millerbros.us
Mailing Address: 301 Alan Wood Road
Municipality: Conshohocken County: Montgomery Zip Code: 19428

IV. Property/Site Owner Information

Property Owner Company/Entity Name: Westrum Upper Deerfield LLC
First Name: John Last Name: Mershon
Daytime Phone: 215-283-2190 Email: jmershon@westrum.com
Applicant Mailing Address: 1300 Virginia Drive, Suite 215, Fort Washington, PA
Municipality: _____ County: Montgomery Zip Code: 19034

V. Community Solar Subscriber Organization (optional, complete if known)

If this section, "Community Solar Subscriber Organization," is left blank and the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program, the Applicant must inform the Board of the information below once the Subscriber Organization becomes known.

Subscriber Organization Company/Entity Name (optional, complete if applicable): Arcadia Power
First Name: MJ Last Name: Shiao
Daytime Phone: 330.573.4670 Email: mj.shiao@arcadiapower.com
Mailing Address: 555 11th Street NW Forth Floor
Municipality: Washington DC County: District of Columbia Zip Code: 20004

VI. Proposed Community Solar Facility Characteristics

Community Solar Facility Size (as denominated on the PV panels):

2.5 MW AC

3.5 MW DC

Community Solar Facility Location (Address): Love Lane
Municipality: Upper Deerfield County: Cumberland Zip Code: 08302
Name of Property (optional, complete if applicable): Former Del-Bay Orchard
Property Block and Lot Number(s): Block 1301, Lot 1.10



Community Solar Site Coordinates: 75.218579 Longitude 39.467110 Latitude

Total Acreage of Property Block and Lots: 18.15 acres

Total Acreage of Community Solar Facility: 18.15 acres

Attach a delineated map of the portion of the property on which the community solar facility will be located. In the electronic submission, two copies of the delineated map should be provided: 1) as a PDF document, and 2) as a design plan in drawing file format (.dwg) or as a shapefile (.shp), in order to facilitate integration with Geographic Information System (GIS) software.

EDC electric service territory in which the proposed community solar facility is located: *(select one)*

☒ Atlantic City Electric

☐ Jersey Central Power & Light

☐ Public Service Electric & Gas

☐ Rockland Electric Co.

Estimated date of project completion* *(The Applicant should provide a good faith estimate of the date of project completion; however, this data is being collected for informational purposes only.)*: August (month) 2020 (year)

Project completion is defined pursuant to the definition at N.J.A.C. 14:8-9.3 as being fully operational, up to and including having subscribers receive bill credits for their subscription to the project.

The proposed community solar facility is an existing project* ☐ Yes ☒ No

If "Yes," the Application will not be considered by the Board. See section B. XIII. for special provisions for projects having received a subsection (t) conditional certification from the Board prior to February 19, 2019.

*Existing project is defined in N.J.A.C. 14:8-9.2 as a solar project having begun operation and/or been approved by the Board for connection to the distribution system prior to February 19, 2019.

VII. Community Solar Facility Siting

1. The proposed community solar project has site control* ☒ Yes ☐ No

If "Yes," attach proof of site control. **(See attached Proof of Site Control)**

If "No," the Application will be deemed incomplete.

*Site control is defined as property ownership or option to purchase, signed lease or option to lease, or signed contract for use as a community solar site or option to contract for use as a community solar site.

2. The proposed community solar facility is located, in part or in whole, on preserved farmland* ☐ Yes ☒ No

If "Yes," the Application will not be considered by the Board.

CERTIFICATION OF SITE CONTROL

We/I do hereby certify to the New Jersey Board of Public Utilities, Office of Clean Energy, and any other interested party, that Westrum Upper Deerfield, LLC, a Pennsylvania Limited Liability Company with offices at 1300 Virginia Drive, Suite 215, Fort Washington, Pennsylvania 19034 the Property Owner of Block 1301, Lot 1 has a valid Contract of Sale, in full force and effect, with Love Lane Partners, LLC, a New Jersey limited liability company located at 5 Woodcrest Lane, Old Tappan, New Jersey 07675 and its affiliates as listed below and its successors and assigns for the Properties and Projects listed below:

Solar Project: Love Lane 2 LLC

Community Solar Project #1

Land Purchaser: Love Lane Land 2 LLC

78 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.10 - Project 1 (CSF-1, ARRAY #2) Community Solar Facility.

Solar Project: Love Lane 3 LLC

Community Solar Project #2

Land Purchaser: Love Lane Land 3 LLC

82 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.12 - Project 2 (CSF-2, ARRAY #3) Community Solar Facility.

Solar Project: Love Lane 4 LLC

Community Solar Project #3

Land Purchaser: Love Lane Land 4 LLC

86 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.13 - Project 3 (CSF-3, ARRAY #4) Community Solar Facility.

Solar Project: Love Lane 5 LLC

Community Solar Project #4

Land Purchaser: Love Lane Land 5 LLC

90 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.14 - Project 4 (CSF-4, ARRAY #5) Community Solar Facility.

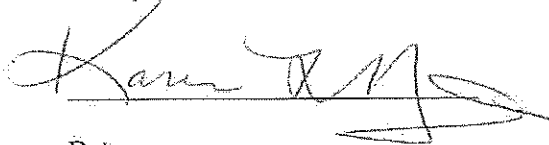
Furthermore, We/I do hereby consent to Love Lane Partners LLC and its affiliates, successors and assigns and hereby grant our approval to Love Lane Partners LLC and its affiliates, successors and assigns to submit Community Solar Pilot Program applications and certifications for consideration and acceptance by the New Jersey Board of Public Utilities, Office of Clean Energy for the Community Solar Pilot Program.

If the New Jersey Board of Public Utilities, Office of Clean Energy requires further assurances of the facts certified herein, We/I do hereby agree that Love Lane Partners LLC may furnish a redacted copy (financial terms) of the execute Contract of Sale to the New Jersey Board of Public Utilities, Office of Clean Energy for the purposes stated herein.


WESTRUM UPPER DEERFIELD LLC

BY: John Mershon, CFO
Address: 1300 Virginia Drive, Ft Washington PA 19034
Phone: 215-283-2190
Email: jmershon@westrum.com

Notary Public



Date:

Commonwealth of Pennsylvania - Notary Seal
KAREN L. FOLLIS MRAZ, Notary Public
Bucks County
My Commission Expires May 3, 2023
Commission Number 1231714

Sworn and Subscribed to before me this
3 day of Sept, 2019 (Year).



*Preserved farmland is defined in N.J.A.C. 14:8-9.2 as land from which a permanent development easement was conveyed and a deed of easement was recorded with the county clerk's office pursuant to N.J.S.A. 4:1C-11 et seq.; land subject to a farmland preservation program agreement recorded with the county clerk's office pursuant to N.J.S.A. 4:1C-24; land from which development potential has been transferred pursuant to N.J.S.A. 40:55D-113 et seq. or N.J.S.A. 40:55D-137 et seq.; or land conveyed or dedicated by agricultural restriction pursuant to N.J.S.A. 40:55D-39.1.

3. The proposed community solar facility is located, in part or in whole, on Green Acres preserved open space* or on land owned by the New Jersey Department of Environmental Protection (NJDEP) ☐ Yes ☒ No

If "Yes," the Applicant must attach special authorization from NJDEP for the site to host a community solar facility. The Board will not consider Applications for projects located, in part or in whole, on Green Acres preserved open space or on land owned by NJDEP, unless the Applicant has received special authorization from NJDEP and includes proof of such special authorization in the Application package.

*Green Acres preserved open space is defined in N.J.A.C. 14:8-9.2 as land classified as either "funded parkland" or "unfunded parkland" under N.J.A.C. 7:36, or land purchased by the State with "Green Acres funding" (as defined at N.J.A.C. 7:36).

4. The proposed community solar facility is located, in part or in whole, on land located in the New Jersey Highlands Planning Area or Preservation Area ☐ Yes ☒ No

5. The proposed community solar facility is located, in part or in whole, on land located in the New Jersey Pinelands ☐ Yes ☒ No

6. The proposed community solar facility is located, in part or in whole, on land that has been actively devoted to agricultural or horticultural use and that is/has been valued, assessed, and taxed pursuant to the "Farmland Assessment Act of 1964," P.L. 1964, c.48 (C. 54:4-23.1 et seq.) at any time within the ten year period prior to the date of submission of the Application (See Section 12, Attachment B - LSRP Report) ☒ Yes ☐ No

7. The proposed community solar facility is located, in part or in whole, on a landfill ☐ Yes ☒ No

If "Yes," provide the name of the landfill, as identified in NJDEP's database of New Jersey landfills, available at www.nj.gov/dep/dshw/lrm/landfill.htm: _____

8. The proposed community solar facility is located, in part or in whole, on a brownfield * See Section 12, Attachment B - LSRP Report ☒ Yes ☐ No

If "Yes," has a final remediation document been issued for the property? ☐ Yes ☒ No

* RAO to be issued upon completion of project.



If "Yes," attach a copy of the Response Action Outcome ("RAO") issued by the LSRP or the No Further Action ("NFA") letter issued by NJDEP.

9. The proposed community solar facility is located, in part or in whole, on an area of historic fill ☐ Yes ☒ No

If "Yes," have the remedial investigation requirements pursuant to the Technical Requirements for Site Remediation, N.J.A.C. 7:26E-4.7 been implemented? ☐ Yes ☐ No

Has the remediation of the historic fill been completed pursuant to the Technical Requirements for Site Remediation, N.J.A.C. 7:26E-5.4? ☐ Yes ☐ No

If the remediation of the historic fill has been completed, attach a copy of the Response Action Outcome ("RAO") issued by a Licensed Site Remediation Professional ("LSRP") or the No Further Action ("NFA") letter issued by NJDEP.

10. The proposed community solar facility is located on a parking lot ☐ Yes ☒ No

11. The proposed community solar facility is located on a parking deck ☐ Yes ☒ No

12. The proposed community solar facility is located on a rooftop ☐ Yes ☒ No

13. The proposed community solar facility is located on a canopy over an impervious surface (e.g. walkway) ☐ Yes ☒ No

14. The proposed community solar facility is located on the property of an affordable housing building or complex ☐ Yes ☒ No

15. The proposed community solar facility is located on a water reservoir or other water body ("floating solar") ☐ Yes ☒ No

16. The proposed community solar facility is located on an area designated in need of redevelopment ☐ Yes ☒ No

If "Yes," attach proof of the designation of the area as being in need of redevelopment from a municipal, county, or state entity.

17. The proposed community solar facility is located on land or a building that is preserved by a municipal, county, state, or federal entity ☐ Yes ☒ No

If "Yes," attach proof of the designation of the area as "preserved" from a municipal, county, or state entity.

18. The proposed community solar facility is located, in part or in whole, on forested lands ☐ Yes ☒ No



Construction of the proposed community solar facility will require cutting down one or more trees ☐ Yes ☒ No

If "Yes," estimated number of trees required to be cut for construction: _____

19. The proposed community solar facility is located on land or a building owned or controlled by a government entity, including, but not limited to, a municipal, county, state, or federal entity ☐ Yes ☒ No

20. Are there any use restrictions at the site? ☐ Yes ☒ No
If "Yes," explain the use restriction below and provide documentation that the proposed community solar project is not prohibited.

Will the use restriction be required to be modified? ☐ Yes ☒ No
If "Yes," explain the modification below.

21. The proposed community solar facility has been specifically designed or planned to preserve or enhance the site (e.g. landscaping, land enhancements, pollination support, stormwater management, soil conservation, etc.) ☒ Yes ☐ No
If "Yes," explain below, and provide any additional documentation in an attachment.

The proposed community solar facility has been specifically designed and planned to preserve and enhance the site by using native and commercial landscape plantings, land enhancements, pollination supporting ground covers, trees and shrubs, stormwater management features and soil conservation measures to create the desired affects. For a more detailed information please see the Use Variance, Site Plan and Subdivision Plans, see Section 12, Attachment J and see the Pollinator Plan Section 12, Attachment C.

VIII. Permits

1. The Applicant has completed NJDEP Permit Readiness Checklist, and submitted it to NJDEP's PCER ☒ Yes ☐ No
If "Yes," attach a copy of the completed Permit Readiness Checklist as it was submitted to NJDEP PCER.

See Attachment 4 - Permit Readiness Checklist



If "No," the Application will be deemed incomplete. Exception: Applications for community solar projects located on a rooftop, parking lot, or parking structure are exempt from this requirement.

2. The Applicant has met with NJDEP's PCER ☒ Yes ☐ No
If "Yes," attach proof of a meeting with NJDEP PCER. (See Appendix B, Attachment 5 - Proof of Meeting with NJDEP PCER)

If "No," the Application will be deemed incomplete. Exception: Applications for community solar projects located on a rooftop, parking lot, or parking structure are exempt from this requirement.

3. Please list all permits, approvals, or other authorizations that will be needed for the construction and operation of the proposed community solar facility pursuant to local, state and federal laws and regulations. Include permits that have already been received, have been applied for, and that will need to be applied for. The Applicant may extend this table by attaching additional pages if necessary. These include:
- Permits, approvals, or other authorizations from NJDEP (i.e. Land Use, Air Quality, New Jersey Pollutant Discharge Elimination System "NJPDES", etc.) for the property.
 - Permits, approvals, or other authorizations from NJDEP (i.e. Land Use, Air Quality, NJPDES, etc.) directly related to the installation and operation of a solar facility on this property.
 - Permits, approvals, or other authorizations other than those from NJDEP for the development, construction, or operation of the community solar facility (including local zoning and other local and state permits)

An Application that does not list all permits, approvals, or other authorizations that will be needed for the construction and operation of the proposed community solar facility will be deemed incomplete.

If a permit has been received, attach a copy of the permit.

Permit Name & Description	Permitting Agency/Entity	Date Permit Applied for (if applicable) / Date Permit Received (if applicable)
SEE SECTION 12, ATTACHMENT J, A through G.		



4. The Applicant has consulted the hosting capacity map of the relevant EDC and determined that, based on the capacity hosting map as published at the date of submission of the Application, there is sufficient capacity available at the proposed location to build the proposed community solar facility ☒ Yes ☐ No
If "Yes," include a screenshot of the capacity hosting map at the proposed location, showing the available capacity. **See Appendix B, Attachment 6**
If "No," the Application will be deemed incomplete.

IX. Community Solar Subscriptions and Subscribers

1. Estimated or Anticipated Number of Subscribers (*please provide a good faith estimate or range*):
560
2. Estimated or Anticipated Breakdown of Subscribers (*please provide a good faith estimate or range of the kWh of project allocated to each category*):
Residential: 70% Commercial: 15%
Industrial: _____ Other: 15% (define "other": Farmers)
3. The proposed community solar project is an LMI project* ☒ Yes ☐ No
*An LMI project is defined pursuant to N.J.A.C. 14:8-9 as a community solar project in which a minimum 51 percent of project capacity is subscribed by LMI subscribers.
4. The proposed community solar project will allocate at least 51% of project capacity to residential customers ☒ Yes ☐ No
5. The proposed community solar project is being developed in partnership with an affordable housing provider: ☐ Yes ☒ No
If "Yes," attach a letter of support from the affordable housing provider.
* (See LMI Approach)
6. An affordable housing provider is seeking to qualify as an LMI subscriber for the purposes of the community solar project ☐ Yes ☒ No
If "Yes," estimated or anticipated percentage of the project capacity for the affordable housing provider's subscription (*provide an estimate or range*): _____
* (See LMI Approach)
If "Yes," what specific, substantial, identifiable, and quantifiable long-term benefits from the community solar subscription are being passed through to their residents/tenants?



Additionally, the affordable housing provider must attach a signed affidavit that the specific, substantial, identifiable, and quantifiable long-term benefits from the community solar subscription will be passed through to their residents/tenants.

* (See LMI Approach)

7. This project uses an anchor subscriber (optional) ☐ Yes ☒ No
If "Yes," name of the anchor subscriber (optional): _____
Estimated or anticipated percentage or range of the project capacity for the anchor subscriber's subscription: _____
* (See LMI Approach)

8. Is there any expectation that the account holder of a master meter will subscribe to the community solar project on behalf of its tenants? ☒ Yes ☐ No
If "Yes," what specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription are being passed through to the tenants?

* (See LMI Approach)

Additionally, the account holder of the master meter must attach a signed affidavit that the specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription will be passed through to the tenants.

If "No," please be aware that, if, at any time during the operating life of the community solar project the account holder of a master meter wishes to subscribe to the community solar project on behalf of its tenants, it must submit to the Board a signed affidavit that the specific, identifiable, sufficient, and quantifiable benefits from the community solar subscription will be passed through to its tenants.

9. The geographic restriction for distance between project site and subscribers is: (select one)
☐ No geographic restriction: whole EDC service territory
☒ Same county OR same county and adjacent counties
☐ Same municipality OR same municipality and adjacent municipalities

Note: The geographic restriction selected here will apply for the lifetime of the project, barring special dispensation from the Board, pursuant to N.J.A.C. 14:8-9.5(a).



10. Product Offering: *(The Applicant must also complete and attach one or more product offering form(s) found in Appendix A. See Appendix A for exemptions.)*

The subscription proposed offers guaranteed or fixed savings to subscribers ☒ Yes ☐ No

If "Yes," the guaranteed or fixed savings are offered as:

- ☒ A percentage saving on the customer's annual electric utility bill
- ☐ A percentage saving on the customer's community solar bill credit
- ☐ Other: _____

If "Yes," the proposed savings represent:

- ☐ 0% - 5% of the customer's annual electric utility bill or bill credit
- ☐ 5% - 10% of the customer's annual electric utility bill or bill credit
- ☒ 10% - 20% of the customer's annual electric utility bill or bill credit
- ☐ over 20% of the customer's annual electric utility bill or bill credit

15% Non-LMI
20% LMI

The subscription proposed offers subscribers ownership or a pathway to ownership of a share of the community solar facility ☐ Yes ☒ No

If "Yes," include proof of a pathway to ownership of a share of the community solar facility offered to the subscribers in Appendix A.

11. The list of approved community solar projects will be published on the Board's website. Additionally, subscriber organizations have the option of indicating, on this list, that the project is currently seeking subscribers.

If this project is approved, the Board should indicate on its website that the project is currently seeking subscribers ☒ Yes ☐ No

If "Yes," the contact information indicated on the Board's website should read:

Company/Entity Name: Love Lane Solar 2 LLC Contact Name: Victor Naar
Daytime Phone: 914-403-2003 Email: vnaar@crenergygroup.com

Note: it is the responsibility of the project's subscriber organization to notify the Board if/when the project is no longer seeking subscribers, and request that the Board remove the above information on its website.

X. Community Engagement

1. The proposed community solar project is being developed by or in collaboration* with the municipality in which the project is located ☒ Yes ☐ No

If "Yes," explain how and attach a letter of support from the municipality in which the project is located.

*Collaboration with the municipality should include, at minimum, one or more meetings with relevant municipal authorities and clear evidence of municipal involvement and approval of the design, development, or operation of the proposed community solar project.

(See Section 12, Attachment D - Community Engagement Letters)

2. The proposed community solar project is being developed in collaboration* with one or more local community organization(s) ☒ Yes ☐ No

If "Yes," explain how and attach a letter of support from the local community organization(s).

*Collaboration with a local community organization should include, at minimum, one or more meetings with the relevant local community organization(s) and clear evidence of the local community organization's involvement and approval of the design, development, or operation of the proposed community solar project.

(See Community Engagement)

3. The proposed community solar project was developed, at least in part, through a community consultative process* ☒ Yes ☐ No

If "Yes," please describe the consultative process.

*A community consultative process should include, at minimum, one or more opportunities for public intervention and outreach to the municipality and/or local community organizations.

(See Community Engagement)

XI. Project Cost

1. Provide the following cost estimates and attach substantiating evidence in the form of charts and/or spreadsheet models:

Applicants are expected to provide a good faith estimate of costs associated with the proposed community solar project, as they are known at the time the Application is filed with the Board. This information will not be used in the evaluation of the proposed community solar project.

Net Installed Cost (in \$)	\$9,300,000
Net Installed Cost (in \$/Watt)	\$1.86/Watt DC (includes interconnection and finance)
Initial Customer Acquisition Cost (in \$/Watt)	\$.08 - \$.13 / Watt DC (depends on type)
Annual Customer Churn Rate (in %)	3-5% predicted



Annual Operating Expenses (in c/kWh)	approximately \$.01/kWh
LCOE (in c/kWh)	*14.5 (per NREL calculator)

*Does not include Interconnection cost.

2. Pursuant to N.J.A.C. 14:8-9.7(q), "community solar projects shall be eligible to apply, via a one-time election prior to the delivery of any energy from the facility, for SRECs or Class I RECs, as applicable, or to any subsequent compensations as determined by the Board pursuant to the Clean Energy Act."

For indicative purposes only, please indicate all local, state and federal tax incentives which will be applied to if the proposed community solar project is approved for participation in the Community Solar Energy Pilot Program:

Federal: Investment Tax Credit of 26% assuming 2020 start of construction

State: no tax incentives

Local: no tax incentives

XII. Other Benefits

1. The proposed community solar facility is paired with another distributed energy resource:
 - a. Micro-grid project ☐ Yes ☒ No
 - b. Storage ☐ Yes ☒ No
 - c. Other (identify): See Section 4G ☒ Yes ☐ No
2. The proposed community solar facility provides grid benefits (e.g. congestion reduction) ☒ Yes ☐ No
If "Yes" to any, please explain how and provide supporting documents.

See Section 4G (Supplemental Responses). Section XII. Other Benefits Question 2: Grid Benefits

4. The proposed community solar project will create temporary or permanent jobs in New Jersey ☒ Yes ☐ No
If "Yes," estimated number of temporary jobs created in New Jersey: _____
If "Yes," estimated number of permanent jobs created in New Jersey: _____
5. The proposed community solar project will provide job training opportunities for local solar trainees ☒ Yes ☐ No
If "Yes," will the job training be provided through a registered apprenticeship? ☒ Yes ☐ No



If "Yes," identify the entity or entities through which job training is or will be organized (e.g. New Jersey GAINS program, partnership with local school):

XIII. Special Authorizations and Exemptions

1. Is the proposed community solar project co-located with another community solar facility (as defined at N.J.A.C. 14:8-9.2)? ☒ Yes ☐ No
If "Yes," please explain why the co-location can be approved by the Board, consistent with the provisions at N.J.A.C. 14:8-9.

See Section 9 - Co-Location Considerations

2. Does this project seek an exemption from the 10-subscriber minimum? ☐ Yes ☒ No
If "Yes," please demonstrate below (and attach supporting documents as relevant):
 - a. That the project is sited on the property of a multi-family building.
 - b. That the project will provide specific, identifiable, and quantifiable benefits to the households residing in said multi-family building.
3. Specific sections throughout the Application Form are identified as optional only if: 1) the Applicant is a government entity (municipal, county, or state), and 2) the community solar developer will be selected by the Applicant via a RFP, RFQ, or other bidding process. Has the Applicant left those specific sections blank? ☐ Yes ☒ No
If "Yes," attach a letter describing the proposed bidding process. The Applicant must further commit to issuing said RFP, RFQ, or other bidding process within 90 days of the proposed project being approved by the Board for participation in the Community Solar Energy Pilot Program. The Applicant will be required to provide the information contained in those optional sections to the Board once it becomes known.
4. Has the proposed community solar project received, in part or in whole, a subsection (t) conditional certification from the Board prior to February 19, 2019? ☐ Yes ☒ No
If "Yes," the project may apply to participate in the Community Solar Energy Pilot Program if it commits to withdrawing the applicable subsection (t) conditional certification immediately if it is approved by the Board for participation in the Community Solar Energy Pilot Program. Attach a signed affidavit that the Applicant will immediately withdraw the applicable subsection (t)



conditional certification if the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program.





Section C: Certifications

Instructions: Original signatures on all certifications are required. All certifications in this section must be notarized.

Applicant Certification

The undersigned warrants, certifies, and represents that:

- 1) I, John Renz (name) am the Authorized Member (title) of the Applicant Love Lane Solar 2 LLC (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the SREC Registration Program or subsequent revision to the SREC Registration Program, if applicable; and
- 5) My organization understands that certain information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that sensitive and trade secret information that they wish to keep confidential should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3.; and
- 6) My organization acknowledges that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, they are subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: _____

Date: 9/9/19

Print Name: John Renz

Title: Authorized Member

Company: Love Lane Solar 2 LLC

Signed and sworn to before me on this 9 day of September, 2019

Signature _____

Name Donna L. Hann
NOTARY PUBLIC
State of New Jersey
My Commission Expires 9/26/2023



Project Developer Certification

This Certification "Project Developer / Installer" is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process. In all other cases, this Certification is required.

The undersigned warrants, certifies, and represents that:

- 1) I, John Renz (name) am the Authorized Member (title) of the Project Developer Love Lane 2 LLC (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the SREC Registration Program or subsequent revision to the SREC Registration Program, if applicable; and
- 5) My organization understands that certain information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that sensitive and trade secret information that they wish to keep confidential should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3.; and
- 6) My organization acknowledges that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, they are subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: _____

Date: 9/9/19

Print Name: John Renz

Title: Authorized Member

Company: Love Lane 2 LLC

Signed and sworn to before me on this 9 day of September, 2019

Signature _____

Name _____


Donna L. Hann
NOTARY PUBLIC
State of New Jersey
My Commission Expires 9/26/2023



Project Owner Certification

The undersigned warrants, certifies, and represents that:

- 1) I, John Renz (name) am the Authorized Member (title) of the Project Owner Love Lane 2 LLC (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) The system proposed in the Application will be constructed, installed, and operated in accordance with all Board policies and procedures for the SREC Registration Program or subsequent revision to the SREC Registration Program, if applicable; and
- 5) My organization understands that certain information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that sensitive and trade secret information that they wish to keep confidential should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3.; and
- 6) My organization acknowledges that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, they are subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: 

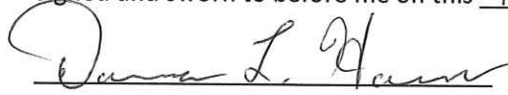
Date: 9/9/19

Print Name: John Renz

Title: Authorized Member

Company: Love Lane 2 LLC

Signed and sworn to before me on this 9 day of September, 2019


Signature

Name


Donna L. Hann
NOTARY PUBLIC
State of New Jersey
My Commission Expires 9/26/2023



Property Owner Certification

The undersigned warrants, certifies, and represents that:

- 1) I, John Renz (name) am the Authorized Member (title) of the Property Love Lane 2 LLC (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package pertaining to siting and location of the proposed community solar project has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) My organization or I understand that certain information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that sensitive and trade secret information that they wish to keep confidential should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3.; and
- 4) My organization acknowledges that **submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, they are subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.**

Signature: 

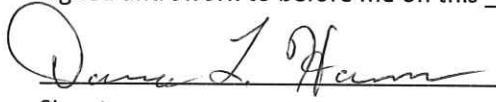
Date: 9/9/19

Print Name: John Renz

Title: Authorized Member

Company: Love Lane 2 LLC

Signed and sworn to before me on this 9 day of September, 2019


Signature

Name Donna L. Hann
NOTARY PUBLIC
State of New Jersey
My Commission Expires 9/26/2023



Subscriber Organization Certification (optional, complete if known)

The undersigned warrants, certifies, and represents that:

- 1) I, _____ (name) am the _____ (title) of the Subscriber Organization _____ (name) and have been authorized to file this Applicant Certification on behalf of my organization; and
- 2) The information provided in this Application package has been personally examined, is true, accurate, complete, and correct to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
- 3) The community solar facility proposed in the Application will be constructed, installed, and operated as described in the Application and in accordance with all Board rules and applicable laws; and
- 4) My organization understands that certain information in this Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47-1A-1 et seq., and that sensitive and trade secret information that they wish to keep confidential should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3.; and
- 5) My organization acknowledges that submission of false information may be grounds for denial of this Application, and if any of the foregoing statements are willfully false, they are subject to punishment to the full extent of the law, including the possibility of fine and imprisonment.

Signature: _____ Date: _____

Print Name: _____

Title: _____ Company: _____

Signed and sworn to before me on this _____ day of _____, 20__

Signature

Name



Section D: Appendix

Appendix A: Product Offering Questionnaire

Complete the following Product Offering Questionnaire. If there are multiple different product offerings for the proposed community solar project, please complete and attach one Product Offering Questionnaire per product offering.

Applicants are expected to provide a good faith description of the product offerings developed for the proposed community solar project, as they are known at the time the Application is filed with the Board. If the proposed project is approved by the Board, the Applicant must notify the Board and receive approval from the Board for any modification or addition to a Product Offering Questionnaire.

Exception: This "Product Offering Questionnaire" is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process.

This Questionnaire is Product Offering number 1 of 2 (total number of product offerings).

1. Community Solar Subscription Type (examples: kilowatt hours per year, kilowatt size, percentage of community solar facility's nameplate capacity, percentage of subscriber's historical usage, percentage of subscriber's actual usage):

KW per year based on historical actual usage

2. Community Solar Subscription Price: (check all that apply)

☐ Fixed price per month

☒ Variable price per month, variation based on: 20% discount off of bill credit amount

☐ The subscription price has an escalator of _____ % every _____ (interval)

3. Contract term (length): _____ months, or 20 years OR ☐ month-to-month

4. Fees

☐ Sign-up fee: _____

☐ Early Termination or Cancellation fees: TBD

☐ Other fee(s) and frequency: _____

5. Does the subscription guarantee or offer fixed savings or specific, quantifiable economic benefits to the subscriber? ☒ Yes ☐ No

If "Yes," the savings are guaranteed or fixed:

the savings are guaranteed because they are a discount to actual usage



- ☐ As a percentage of monthly utility bill
- ☐ As a fixed guaranteed savings compared to average historic bill
- ☒ As a fixed percentage of bill credits
- ☐ Other: _____

6. Special conditions or considerations:



Section D: Appendix

Appendix A: Product Offering Questionnaire

Complete the following Product Offering Questionnaire. If there are multiple different product offerings for the proposed community solar project, please complete and attach one Product Offering Questionnaire per product offering.

Applicants are expected to provide a good faith description of the product offerings developed for the proposed community solar project, as they are known at the time the Application is filed with the Board. If the proposed project is approved by the Board, the Applicant must notify the Board and receive approval from the Board for any modification or addition to a Product Offering Questionnaire.

Exception: This "Product Offering Questionnaire" is optional if: 1) the Applicant is a government entity (municipal, county, or state), AND 2) the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process.

This Questionnaire is Product Offering number 2 of 2 (total number of product offerings).

1. Community Solar Subscription Type (examples: kilowatt hours per year, kilowatt size, percentage of community solar facility's nameplate capacity, percentage of subscriber's historical usage, percentage of subscriber's actual usage):

2. Community Solar Subscription Price: (check all that apply)

- ☐ Fixed price per month
- ☒ Variable price per month, variation based on: 15% discount to bill credit amount
- ☐ The subscription price has an escalator of _____ % every _____ (interval)

3. Contract term (length): _____ months, or 20 years OR ☐ month-to-month

4. Fees

- ☐ Sign-up fee: _____
- ☒ Early Termination or Cancellation fees: TBD
- ☐ Other fee(s) and frequency: _____

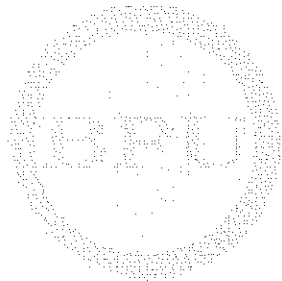
5. Does the subscription guarantee or offer fixed savings or specific, quantifiable economic benefits to the subscriber? ☒ Yes ☐ No

If "Yes," the savings are guaranteed or fixed:



- ☐ As a percentage of monthly utility bill
- ☐ As a fixed guaranteed savings compared to average historic bill
- ☒ As a fixed percentage of bill credits
- ☐ Other: _____

6. Special conditions or considerations:





Appendix B: Required Attachments Checklist

Note that this list is for indicative purposes only. Additional attachments may be required, and are identified throughout this Application Form.

Required Attachments for all Applications	Page	Attached?
Delineated map of the portion of the property on which the community solar facility will be located.	p.7	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
For electronic submission only: copy of the delineated map of the portion of the property on which the community solar facility will be located as a PDF and in drawing file format (.dwg) or as a shapefile (.shp).	p.7	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Proof of site control.	p.8	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Copy of the completed Permit Readiness Checklist as it was submitted to NJDEP PCER, if applicable.	p.11	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Proof of a meeting with NJDEP PCER, if applicable.	p.12	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
A screenshot of the capacity hosting map at the proposed location, showing the available capacity.	p.12	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Substantiating evidence of project cost in the form of charts and/or spreadsheet models.	p.16	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Certifications in Section C.	p.19-23	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Product Offering Questionnaire(s).	p.24	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Required Attachments for Exemptions	Page	Attached?
The Applicant is a government entity (municipal, county, or state), and the community solar developer will be selected by the Applicant via a Request for Proposals (RFP), Request for Quotations (RFQ), or other bidding process: ⇒ Attach a letter from the Applicant describing the bidding process	p.6, p.19	<input type="checkbox"/> Yes <input type="checkbox"/> No
The proposed community solar project is located, in part or in whole, on Green Acres preserved open space or on land owned by NJDEP. ⇒ Attach special authorization from NJDEP for the site to host a community solar facility.	p.8	<input type="checkbox"/> Yes <input type="checkbox"/> No
The proposed community solar project has received, in part or in whole, a subsection (t) conditional certification from the Board prior to February 19, 2019. ⇒ Attach a signed affidavit that the Applicant will immediately withdraw the applicable subsection (t) conditional certification if the proposed project is approved by the Board for participation in the Community Solar Energy Pilot Program.	p. 19	<input type="checkbox"/> Yes <input type="checkbox"/> No



Appendix C: Evaluation Criteria

The Evaluation Criteria chart below lists the various categories that the Board will consider in evaluating project Applications. Projects must score a minimum 30 points total in order to be considered for participation in the Community Solar Energy Pilot Program. Projects that score above 30 points will be awarded program capacity in order, starting with the highest-scoring project and proceeding to the lowest-scoring project.

Evaluation Criteria	Max. Points
Low- and Moderate-Income and Environmental Justice Inclusion Higher preference: LMI project	30
Siting Higher preference: landfills, brownfields, areas of historic fill, rooftops, parking lots, parking decks *Property subject to NJDEP site remediation program, RAO required. Medium preference: canopies over impervious surfaces (e.g. walkway), areas designated in need of redevelopment No Points: preserved lands, wetlands, forested areas, farmland Bonus points for: landscaping, land enhancement, pollination support, stormwater management, soil conservation	20 Max. possible bonus points: 5
Product Offering Higher preference: guaranteed savings >10%, flexible terms* Medium preference: guaranteed savings >5% No Points: no guaranteed savings, no flexible terms* *Flexible terms may include: no cancellation fee, short-term contract	15
Community and Environmental Justice Engagement Higher preference: partnership with municipality, partnership with local community organization(s), partnership with affordable housing provider Medium preference: letter of support from municipality, project owner is a government and/or public and/or quasi-public entity, project owner is an affordable housing developer	10
Subscribers Higher preference: more than 51% project capacity is allocated to residential subscribers	10
Other Benefits Higher preference: Provides local jobs/job training, demonstrates co-benefits (e.g. paired with storage, micro-grid project, energy audit, EE measures)	10
Geographic Limit within EDC service territory Higher preference: municipality/adjacent municipality Medium preference: county/adjacent county No Points: any geographic location within the EDC service territory.	5
TOTAL	105 POINTS

4. Community Solar Program Application: (*Supplemental Responses)

A. Section VII. Community Siting Question 6.; Farmland Assessment:

The majority of the 219.3-acre un-subdivided Property known as Block 1301; Lot 1 is currently not actively dedicated to agriculture. Historically, the Property was home to the Del-Bay Orchard since before 1928 (title report) up until the early 1970s (as reported by neighbor). After the 1970s portions of the Property were leased to Nurserymen to grow trees and shrubbery and remnant trees and shrubs remain on the Property (Please see ARCGIS).

Westrum Upper Deerfield LLC purchased the Property in 2006 for the purposes of developing the Property into a large-scale 174-unit housing development consistent with the Townships Master Plan and later abandoned that plan as a result of a delay in the project due to township water supply issues and then the economic recession making the development economically infeasible. Since purchasing the Property, Westrum Upper Deerfield LLC has been allowing a portion of the Property to be farmed by a local tenant farmer seasonally and the tenant farmer has been planting soybean crops. The Farmer is farming pursuant to a verbal agreement to allow such activities until Westrum Upper Deerfield, LLC requests him to discontinue farming activities.

Westrum Upper Deerfield has been informed by the Upper Deerfield Township Tax Assessor that they are no longer seeking farmland assessment and that the Property does not meet the minimum standard of land actually being farmed to obtain farmland assessment. Westrum Upper Deerfield LLC has not applied for Farmland Assessment for calendar year 2020 due to the fact that the Property does not meet the farmland requirement to obtain "Q" farm or qualified farmland status. Since the removal of the Del-Bay Orchard back in the 1970s and Westrum Upper Deerfield acquisition of the property in 2006, only small portions of the overall un-subdivided property has been farmed and none of the property has been used for nurse stock.

B. Section VII. Community Siting Question 8.; Brownfields:

The Property has an inactive NJDEP Site Remediation Program file with known contamination levels that exceed the residential direct soil contact standards. One of the many goals of the Project is to remediate the contamination through the development of the net-metered and community solar projects. Please see the attached **LSRP Report Section 12, Attachment B**.

C. Section VII. Community Siting Question 21.; Pollinator Plan:

The proposed community solar facility has been specifically designed and planned to preserve and enhance the site by using native and commercial landscape plantings, land enhancements, pollination supporting ground covers, trees and shrubs, stormwater management features and soil conservation measures to create the desired affects.

For a more detailed information please see the Use Variance, Site Plan and Subdivision Plans, please see **Section 12 Attachment I** and Please see the **Pollinator Plan Section 12, Attachment C.**

D. Section VIII. Permits Question 3.; Permits Received:

Please see **SECTION 12, ATTACHMENT J, A through G.**

E. Section VIII. Permits Question 4.; Capacity Hosting Map:

The system is going to be located between Love Lane and Cornwell Dr. In discussion with Atlantic City Electric and Upper Deerfield Township, we intend to interconnect into the distribution system on the south side of Cornwell Drive. We are fortunate that the Township has an easement that runs North/South from our site to the interconnection point and we will be able to use that easement to access the proposed interconnection location. Please see **Capacity Hosting Map Appendix B, Attachment 6.**

F. Section X. Community Engagement Question 1.; Collaboration:

Love Lane Partners has done extensive outreach to the local and county governments, private LMI providers and housing authorities in Cumberland County and Surrounding Counties to make them aware of the unique opportunities the Community Solar Pilot Program will have for Love Lane and the community at large to work together. All of our community partners are excited.

There has been an ongoing dialogue with many of the organizations concerning economic development opportunities, an important goal in this rural area of the state, to help retain businesses and attract new business. In addition, Love Lane's goal is to have as many local farmers become subscribers to help the farm community in this critic area of the state for agriculture. Besides, the numerous meeting and telephone conversations, Love Lane Partners reached out in writing and demonstrated our pledge to be a local project serving the local community, please see **Community Engagement Letters, Section 12, Attachment D.**

1. Bridgeton Area Chamber of Commerce
2. Cumberland Development Corporation
3. Cumberland County Improvement Authority

4. South Jersey Economic Development District
5. Cumberland County Agricultural Board
6. Upper Deerfield Township
7. Cumberland Regional High School

G. Section XII. Other Benefits Question 2.; Grid Benefits:

Before embarking on this development, Love Lane Partners spent a significant amount of time researching the area and getting an understanding of the distribution circuits surrounding this location. In discussions with Atlantic City Electric, we had proposed the potential installation of express feeders that would connect our arrays directly to the substation at the transformer level. In addition, we are aware that some of those transformers may need to be upgraded and we have estimated that cost and built that into our financial models for the projects.

The combination of the net-metered school project and the community solar project(s) will help to reduce congestion on the local circuits when the express feeders are installed. The benefits to the High School will be substantial as the quality and consistency of their electricity will substantially improve.

There is substantial congestion on the grid in this region and if these projects are approved, that congestion will be reduced by several MW, the transformers and associated equipment and systems will be upgraded and the overall quality and delivery of electricity in the area will be improved.

H. Section XII. Other Benefits Question 5.; Local Solar Trainees:

The proposed community solar project will provide job training opportunities for local solar trainees by partnering with local labor unions and apprentice programs, and the local high school. See attached letters from (see **Section 12, Attachment G**):

1. Cumberland Regional High School Letter
2. Miller Bros. Letter

5. Copies of Permits Received (attachment Section B. VIII. Permits) (See Section 12, Attachment J. for copies of Permits)

- A. NJDEP Permit Coordination and Environmental Review (PCER)
- B. NJDEP LOI Absence Determination
- C. NJDEP Natural Heritage Program Review Letter
- D. USFWS T&E Review Letter
- E. NJDEP HPO Clearance Letter
- F. Upper Deerfield JLUB Resolution of Approval 8-2019
- G. Upper Deerfield JLUB Resolution of Approval 23-2011

6. LSRP Report

Please see the attached **LSRP Report – Section 12, Attachment B.**

7. LMI Project Approach

Love Lane Partners believes we can align our belief social responsibility alongside our business goals. To that end our goal is that the at least 55% (if not greater) of the power generated by our photovoltaic systems will support the LMI community.

We have spent significant time ensuring that we can provide quality of life and financial benefits to the LMI community within the constraints of the federal and state regulations governing the operations of those communities, which might inhibit the ability of these communities to take advantage of the savings.

Our goal is to provide discounts of twenty percent (which will float as the price of power changes) to the LMI community. These savings should have a tangible impact in the quality of life for this community.

8. Solar Subscriber Organization Collaboration

Love Lane Partners will partner with a solar subscriber organization such as Arcadia Power to support community outreach, education, consumer protection and consistency in our communication and marketing approach, and to ensure that our subscribers receive a single bill for the power they purchase, which clearly explains the both the details of the power which the subscriber consumes and the community solar discount in a understandable manner. (See attached Arcadia Power information)



Arcadia Power Platform and Community Solar Overview

Meet Arcadia Power



Access clean energy and savings. For free.



Automatically save

Enjoy automatic savings on your monthly energy bill when you enroll in community solar, home efficiency, and price alerts.



Use renewable energy

Support clean renewable energy projects at no extra cost, reducing your impact on the environment every month.



Sign up online for free

Connect your utility account in two minutes. There are no obligations, you may start or stop your membership anytime.



Arcadia
Power

Arcadia Power delivers clean energy and savings to customers in all 50 states

We've built new consumer energy choices on top of existing utility infrastructure.



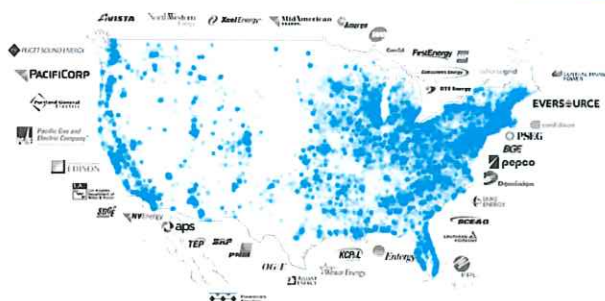
Suite of products and services to help customers save money and go green

- Integrated with existing utility billing and payment
- 50% clean energy through wind RECs for free
- Purchase up to 100% clean energy through wind RECs
- On-bill finance of energy efficiency devices such as thermostats and LEDs
- Retail electricity brokerage through customer aggregation
- Community solar subscriptions
- ... and more coming soon

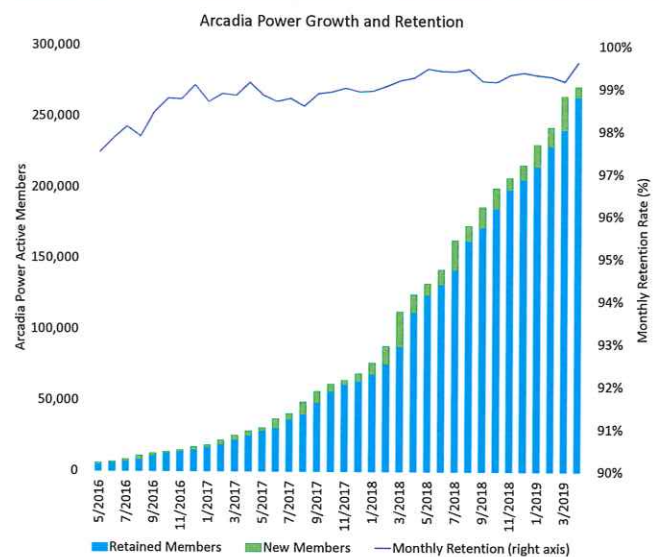


Delighting residential customers at scale

Arcadia Power delivers energy services to over 300,000 members across all 50 states



- **300,000+** members across all 50 states with **>99% monthly retention**
- Operating in nearly every major U.S. utility
- Over **\$200 million** in payments processed
- In-house customer experience team capable of fielding thousands of inquiries-per-month with a 90%+ customer satisfaction score.



41% of Arcadia Power members reside in community solar states

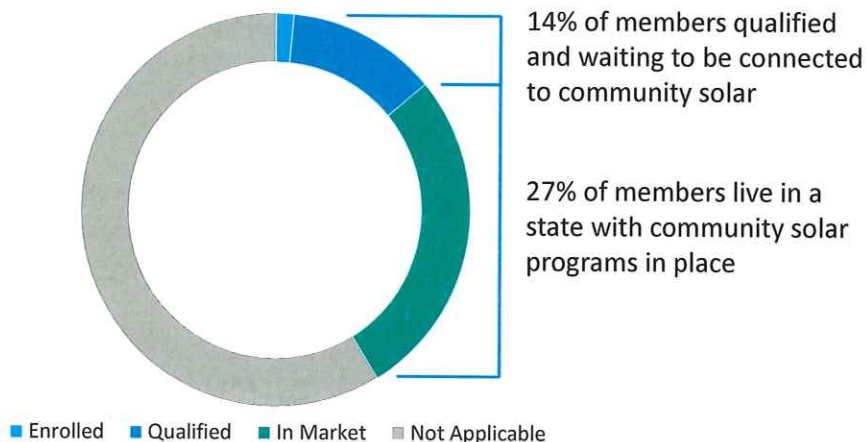
Arcadia Power already operates in all community solar markets and can draw from existing base

Over **30,000 Arcadia Power members** could be signed onto community solar without any additional steps

An additional **70,000 Arcadia Power members** require some additional marketing and information collection (e.g., payment information on file)

Proven ability to **add hundreds of community solar customers per month in a targeted geography** with commitments in place

Arcadia Power Members in Community Solar States



Our Unique One-Bill Solution for Community Solar

Arcadia Power members **see one bill** that includes:

- Community solar subscription
- Net utility bill
- Other Arcadia Power services

100% of subscribers are on autopay with ACH or credit card with no convenience fees

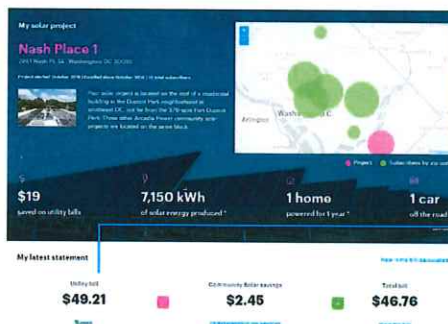
Customers make one payment. Payments are automatically split to respective parties at the point of transaction by payment vendor



Daily solar production automatically pulled from monitoring system



Average and cumulative savings from subscription



Details on connected community solar project

Utility and solar subscription charge

Transparent savings and single net bill



Residential Aggregation and Subscription

Arcadia Power establishes an ongoing billing relationship and customer support ahead of connection

- Arcadia Power enables automated community solar enrollment for Arcadia Members
- Arcadia Power utilizes its platform to:
 - Acquire subscribers through broad consumer marketing
 - Establishes billing relationship well before COD
 - Minimizes customer fall out before COD through an automated subscription process
 - Actively manages customer subscription levels based on ongoing energy usage levels
 - Provides free clean energy before and during subscription

In-house subscriber acquisition through new and existing – primarily digital – marketing channels



New members create Arcadia accounts and establish billing relationship by paying electricity bills through Arcadia

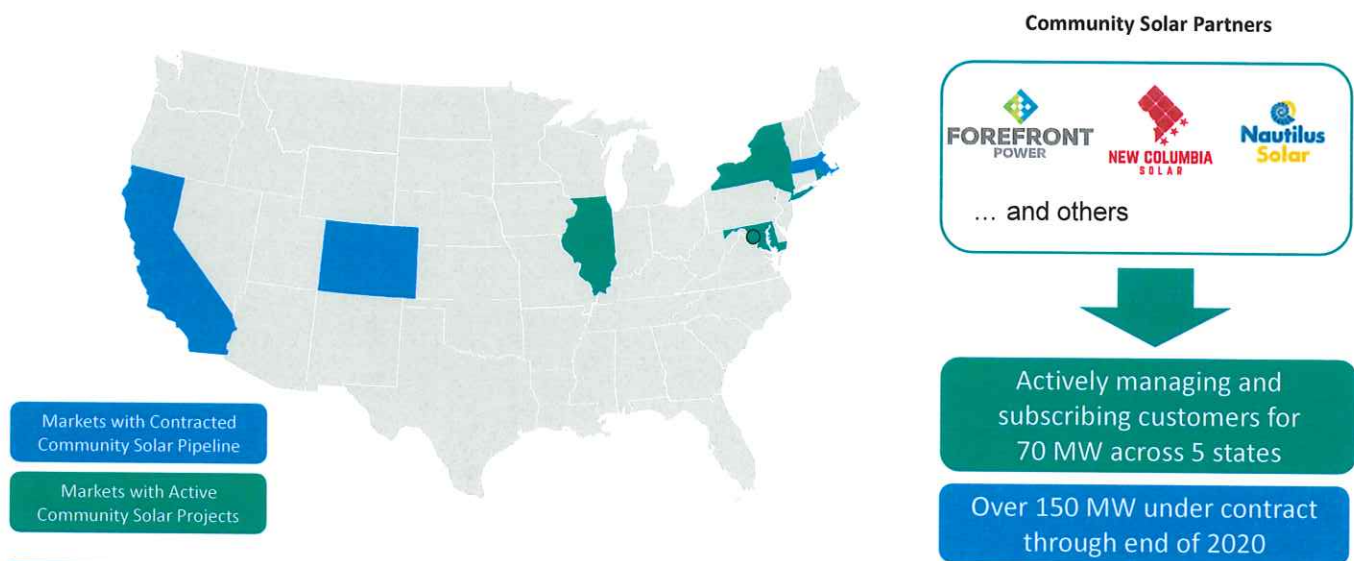


Existing and new Arcadia members pooled and subscribed to community solar via automated process



Our Community Solar Track Record

Over 10,000 residential customers enrolled onto community solar projects



How We Work with Community Solar Partners

Arcadia Power Provides Turnkey Residential Subscriber Acquisition and Management Solutions



Residential Subscriber Acquisition

- In-house team that provides turnkey acquisition services
- Primarily digital marketing channels to existing and new Arcadia Power members
- 100% of subscribers on credit card or ACH autopay with no service fees
- Billing history established before project interconnection
- Customers subscribed through opt-out



Billing and Management

- One-bill solution for all subscribers
- In-house customer service team handling nearly 8,000 customer inquiries per month with >90% customer satisfaction
- Utility allocation management and subscriber reporting
- Monthly and annual reporting on subscription levels, payments, churn, etc.



Subscriber Replacement

- Pool of existing Arcadia members with active billing relationship serve as a wait list for churn replacement
- Wait list customers receive access to community solar-compatible Arcadia products and services
- Fee structures align incentives to keep subscription levels high and customer churn low



Thank you!

Contact:

MJ Shiao 

Director of Community Solar

mj.shiao@arcadiapower.com

Cell: 330-573-4670

9. Co-Location Considerations

Love Lane Partners has plans to develop this property into five separate solar projects. There are four that are slated to be community solar and one that is net-metered. Given the congestion in the area on the ACE distribution system and the number of MW's we plan to install, it was a logical decision to look at installing express feeders to ensure we would be able to achieve a successful interconnection for our systems.

Given the expense associated with this proposed solution, we would need to have multiple systems share that cost. The number of MW's proposed and the plan we have created would allow for our team to install potentially two express feeders directly to a substation located about two miles south of the property. We are fortunate that the township has an easement along the railroad tracks (immediately adjacent on the east side of our site) that runs directly to the substation and they have agreed to allow us to use that easement to run the feeders.

Co-location of multiple facilities on this property is essential for us to justify the cost of these electrical upgrades. These upgrades would provide substantial improvements to the distribution system for the area.

In addition, given the contamination of the soil on this property, we have been advised that the best possible use would be for something like solar arrays as it will stabilize the soil and minimize any toxins being released into the air that may be caused by farming operations. This combined with our containment and pollinator friendly plantings will provide for a tremendously beneficial use for the township and the community.

10. Interconnection Strategy

As stated in section G of this proposal, Love Lane Partners has spent a substantial amount of time with ACE discussion interconnection and the various paths and possibilities.

Once the NJBPU and the EDC's have decided on an interconnection application process, Love Lane Partners is prepared to resubmit our interconnection applications for study and approval. We did submit an application already but it was returned to us given there is no current process for them to receive a community solar interconnection application.

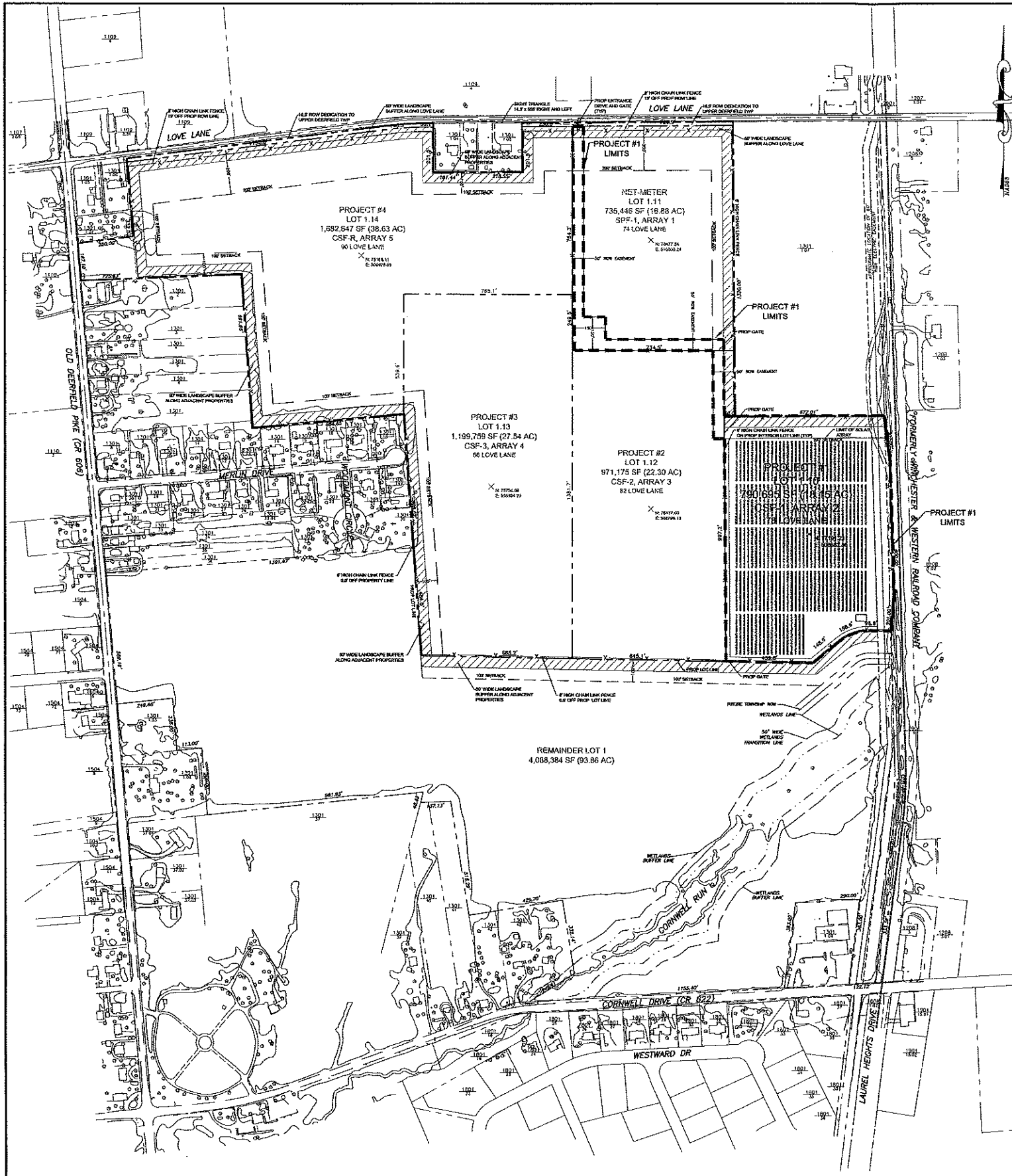
We have discussed with ACE the need to study the area and are prepared to do that with the intention on installing one or two express feeders that will run from our site south to the Laurel St. substation where there appears to be substantial enough capacity to receive the energy. In addition, we may need to upgrade the transformers at the substation but have included that cost estimate in our proformas.

ACE is in agreement with our approach and as the process becomes more defined, we will be ready with our submission.

11. Appendix B - Required Attachments

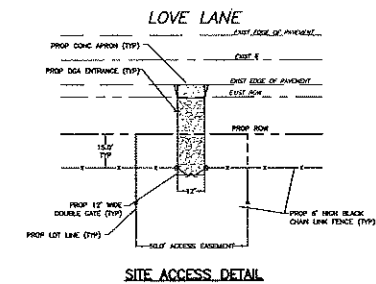
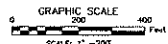
Attachment 1	Delineated Map - Site Plan Array #2
Attachment 2	Electronic Submission – Copy of Delineated Map with PDF and DWG files
Attachment 3	Proof of Site Control
Attachment 4	Permit Readiness Checklist
Attachment 5	Proof of Meeting with NJDEP, PCER
Attachment 6	Screenshot of Capacity Hosting Map Showing Available Capacity
Attachment 7	Substantiating Evidence of Project Cost

Attachment 1
Delineated Map - Site Plan Array #2



NOTES:

- OUTBOUND AND EXISTING FEATURES ARE BASED UPON PLAN ENTITLED "PLAN OF SURVEY FOR DAMIANO LONG, LLC" PREPARED BY PENNELL LAND SURVEYING, INC. DATED 06/10/04.
- THIS PLAN SHALL NOT BE USED TO FILE THE PROPOSED SUBDIVISION. A PLAN IN ACCORDANCE WITH THE NJ MAP FILING LAW SHALL BE PREPARED FOR REVIEW, APPROVAL, AND FILING.
- THE PROJECT AREA WILL BE PLANTED WITH NATIVE GRASS SPECIES FAVORABLE TO POLLINATORS, AND THE LANDSCAPE BUFFERS WILL LIKEWISE BE PLANTED WITH NATIVE TREES AND SHRUBS FAVORABLE TO POLLINATOR SPECIES.



CONCRETE DRIVEWAY APRON DETAIL

NOTES: CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. CURB SHALL BE 4" HIGH.

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

12' WIDE DOUBLE GATE

6' HIGH CHAIN-LINK FENCE

DRAINAGE CALCULATIONS

IN ACCORDANCE WITH NJPDES STORMWATER MANAGEMENT RULES (NJDMS 7.9), A PROJECT IS CONSIDERED A MAJOR DEVELOPMENT IF IT CONTAINS 1.0 ACRE OF DISTURBANCE OR 0.25 ACRE OF NEW IMPERVIOUS COVER. NEW JERSEY LAW 8-211 STATES THAT SOLAR PANELS SHALL NOT BE CONSIDERED IMPERVIOUS, HOWEVER BASES AND FOUNDATIONS FOR THE EQUIPMENT ARE CONSIDERED IMPERVIOUS.

FOR THE SUBJECT SITE, NEW IMPERVIOUS COVER WILL BE LIMITED TO THE NECESSARY FOUNDATIONS FOR THE SOLAR ARRAYS AND ASSOCIATED EQUIPMENT. THE APPLICANT IS NOT PROPOSING ANY ACCESS ROADS OR DRIVEWAYS THROUGHOUT THE SITE. IN ADDITION, THE SITE WILL ONLY BE DISTURBED TO THE EXTENT NECESSARY TO CONSTRUCT AND PROVIDE FOUNDATIONS FOR THE SOLAR ARRAYS AND ASSOCIATED EQUIPMENT AND TO ESTABLISH THE REQUIRED PERMANENT VEGETATION COVER.

THE FOLLOWING CALCULATIONS ARE PROVIDED TO COMPARE PRE-DEVELOPED AND POST-DEVELOPED DRAINAGE CONDITIONS FOR THE PROPOSED AREA OF DISTURBANCE. THE (C) OF THE EXISTING CALCULATIONS FOR THE NORTH SIDE WERE DETERMINED TO BE 197.3 MM AND 160.7 MM FOR THE SOUTH SIDE. THE (C) OF THE PROPOSED CALCULATIONS FOR THE NORTH SIDE WERE DETERMINED TO BE 173.5 MM AND 155.8 MM FOR THE SOUTH SIDE.

DESCRIPTION OF PRE-DEVELOPED CONDITIONS

THE SUBJECT AREA CONSISTS OF 125.8 ACRES, AND THE APPLICANT HAS INDICATED THAT IT HAS BEEN USED FOR AGRICULTURAL PURPOSES FOR MANY YEARS. IT WAS PREVIOUSLY AN ORCHARD, AND THEN IT WAS UTILIZED AS A BURNED. IN RECENT YEARS, PORTIONS OF THE SITE HAVE BEEN FARMED WITH ROW CROPS, AND THE REMAINING PORTIONS HAVE BEEN LEFT FALLOW AND HAVE NOT BEEN FARMED OR MOVED. FOR A CONSERVATIVE ANALYSIS, WE HAVE ASSIGNED A RUNOFF CURVE NUMBER FOR FALLOW, CROP RESIDUE, FOR THE ENTIRE AREA. BASED ON THE EXISTING TOPOGRAPHY, RUNOFF FROM THE AREA FLOWS IN A NORTHEAST DIRECTION TOWARDS LOVE LANE AND IN A SOUTHERLY DIRECTION TOWARDS CORNWELL DRIVE. THE EXISTING DRAINAGE AREAS MAY BE DESCRIBED AS FOLLOWS:

LOCATION	AREA (AC)	CN	DESCRIPTION
NORTH SIDE	46.77	83	FALLOW, CROP RESIDUE, GOOD, HSG B
SOUTH SIDE	78.57	83	FALLOW, CROP RESIDUE, GOOD, HSG B

PEAK RATES OF RUNOFF WERE DETERMINED FOR THE 2-YEAR, 10-YEAR, AND 100-YEAR STORM EVENTS. A SUMMARY OF THE EXISTING DRAINAGE CONDITIONS OF THE SITE IS TABULATED BELOW.

LOCATION	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₁₀₀ (cfs)
NORTH SIDE	11.21	22.18	46.07
SOUTH SIDE	16.18	31.94	66.64

DESCRIPTION OF POST-DEVELOPED CONDITIONS

SINCE NO SIGNIFICANT GRADING IS PROPOSED, WATERSHED AREAS AND DIRECTIONS OF RUNOFF UNDER THE POST-DEVELOPED CONDITION WILL BE EQUIVALENT TO THE PRE-DEVELOPED CONDITION. THE APPLICANT HAS INDICATED THAT THIS SITE IS PROPOSED TO BE VEGETATED WITH TURF GRASS. BASED ON THE CHANGE IN TYPE OF COVER, THE PROPOSED DRAINAGE AREAS MAY BE DESCRIBED AS FOLLOWS:

LOCATION	AREA (AC)	CN	DESCRIPTION
NORTH SIDE	46.77	81	> 75% GRASS COVER, GOOD, HSG B
SOUTH SIDE	78.57	81	> 75% GRASS COVER, GOOD, HSG B

A SUMMARY OF THE DEVELOPED DRAINAGE CONDITIONS OF THE SITE IS TABULATED BELOW:

LOCATION	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₁₀₀ (cfs)
NORTH SIDE	2.37	8.02	25.00
SOUTH SIDE	3.71	12.35	38.48

A SUMMARY OF THE NET DECREASE IN RUNOFF IS SUMMARIZED BELOW:

LOCATION	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₁₀₀ (cfs)
NORTH SIDE	8.84	14.16	21.07
SOUTH SIDE	12.47	19.59	28.16

AS SHOWN ABOVE, A NET DECREASE IS REALIZED FOR EACH STORM EVENT. THEREFORE, THE SITE MEETS OR EXCEEDS ALL APPLICABLE DRAINAGE STANDARDS.

NEW JERSEY
CONSULTING ENGINEER SERVICES
PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS
645 BERLIN-CROSS KEYS ROAD, SUITE 11, SICKLEVILLE, NEW JERSEY 08081
PHONE (609) 881-1111 FAX (609) 881-1112
WWW.MICHAELR.BROWN.COM
NJ REGISTRATION NO. 240278770



DELETED MAP
PROJECT 1 (CSF-1, ARRAY #2)
LOVE LANE 2, LLC
LOT 1.10
UPPER DEERFIELD TOWNSHIP, CUMBERLAND COUNTY, NEW JERSEY

DATE: 10/1/2024
DRAWN BY: JLB
CHECKED BY: MCB
DATE: 10/1/2024

MICHAEL R. BROWN
PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. 240278770

Attachment 2

**Electronic Submission – Copy of Delineated Map with PDF
AND DWG Files**

Attachment 3
Proof of Site Control

CERTIFICATION OF SITE CONTROL

We/I do hereby certify to the New Jersey Board of Public Utilities, Office of Clean Energy, and any other interested party, that Westrum Upper Deerfield, LLC, a Pennsylvania Limited Liability Company with offices at 1300 Virginia Drive, Suite 215, Fort Washington, Pennsylvania 19034 the Property Owner of Block 1301, Lot 1 has a valid Contract of Sale, in full force and effect, with Love Lane Partners, LLC, a New Jersey limited liability company located at 5 Woodcrest Lane, Old Tappan, New Jersey 07675 and its affiliates as listed below and its successors and assigns for the Properties and Projects listed below:

Solar Project: Love Lane 2 LLC

Community Solar Project #1

Land Purchaser: Love Lane Land 2 LLC

78 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.10 - Project 1 (CSF-1, ARRAY #2) Community Solar Facility.

Solar Project: Love Lane 3 LLC

Community Solar Project #2

Land Purchaser: Love Lane Land 3 LLC

82 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.12 - Project 2 (CSF-2, ARRAY #3) Community Solar Facility.

Solar Project: Love Lane 4 LLC

Community Solar Project #3

Land Purchaser: Love Lane Land 4 LLC

86 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.13 - Project 3 (CSF-3, ARRAY #4) Community Solar Facility.

Solar Project: Love Lane 5 LLC

Community Solar Project #4

Land Purchaser: Love Lane Land 5 LLC

90 Love Lane, Bridgeton New Jersey 08302

Block 1301, Lot 1.14 - Project 4 (CSF-4, ARRAY #5) Community Solar Facility.

Furthermore, We/I do hereby consent to Love Lane Partners LLC and its affiliates, successors and assigns and hereby grant our approval to Love Lane Partners LLC and its affiliates, successors and assigns to submit Community Solar Pilot Program applications and certifications for consideration and acceptance by the New Jersey Board of Public Utilities, Office of Clean Energy for the Community Solar Pilot Program.

If the New Jersey Board of Public Utilities, Office of Clean Energy requires further assurances of the facts certified herein, We/I do hereby agree that Love Lane Partners LLC may furnish a redacted copy (financial terms) of the execute Contract of Sale to the New Jersey Board of Public Utilities, Office of Clean Energy for the purposes stated herein.

WESTRUM UPPER DEERFIELD LLC

BY: John Mershon, CFO
Address: 1300 Virginia Drive, Ft Washington PA 19034
Phone: 215-283-2190
Email: jmershon@westrum.com

Notary Public



Commonwealth of Pennsylvania - Notary Seal
KAREN L. FOLLIS MRAZ, Notary Public
Bucks County
My Commission Expires May 3, 2023
Commission Number 1231714

Date:

Sworn and Subscribed to before me this
3 day of Sept, 2019 (Year).

Attachment 4
Permit Readiness Checklist

Don Brickner

From: Brunatti, Megan <Megan.Brunatti@dep.nj.gov>
Sent: Tuesday, July 2, 2019 6:37 PM
To: Don Brickner
Cc: John Renz; Ken Blechman; Foster, Ruth; Corleto, Joseph; West-Rosenthal, Jesse; Resnick, Matthew; Hill, Erin
Subject: RE: Request for Pre-Application Review, Love Lane Solar, Upper Deerfield, NJ

Dear Don,

The Office of Permit Coordination and Environmental Review distributed project information to various programs within the Department for the proposed Love Lane Solar project located in Upper Deerfield, Cumberland County. Below are preliminary comments of possible permits and action items this project may require (but not limited to) based on the information that was submitted on June 4, 2019: *** this is neither a comprehensive nor a technical summary ***

Division of Land Use Regulation – Matt Resnick: Matthew.Resnick@dep.nj.gov (609) 984-6216

The applicant is showing a wetland line on the subject property, with proposed construction north of and outside the regulated area. A Letter of Interpretation: Verification has previously been issued for this property and has subsequently expired. A presence/absence LOI is currently under review. Any impacts to wetlands and/or transition areas will require approvals from the Division of Land use Regulation under the Freshwater Wetlands Protection Act.

Division of Fish and Wildlife– Joseph Corleto: Joseph.Corleto@dep.nj.gov or (609)984-3859

Based on the potential of ground nesting birds and habitats in the immediate vicinity of this project, the NJDFW would recommend any ground clearing or site preparation be done outside the nesting season (4/1 to 8/31) to avoid impact to ground nesting birds. Additionally, the Division recommends avoiding trimming or removal of trees from (4/1 – 8/31) to protect nesting birds covered under the NJ Endangered & Non-game Species Conservation Act.

To avoid possible impacts to Little Brown and Tricolored Bats the NJDFW would recommend removal of highly suitable roost trees including snags (dead trees), shagbark hickories (*Carya ovata*), other trees with shaggy or exfoliating bark, and trees of any species over 5 inches DBH, be avoided between (4/1 to and 9/30).

Additionally, the contractor should instruct all employees and sub contractors to avoid any animals and, if possible, move any turtles to the closest suitable habitat outside the work zone and **release unharmed**.

County Soil Conservation District BMP's for prevention of sediment movement towards the Cornwell Run should be used at all times and maintained for function.

Bureau of Energy & Sustainability– Erin Hill: Erin.Hill@dep.nj.gov or (609) 633-1120

- The Community Solar Energy Pilot Program Application window opened April 9, 2019 and closes September 9, 2019 <https://www.bpu.state.nj.us/bpu/pdf/boardorders/2019/20190329/8E%20-%20Community%20Solar%20Energy%20Pilot%20Program%20Application%20Form.pdf>

- The proposed array is located on Forested & Agriculture Lands which are identified as “not preferred” per the Solar Siting Analysis.
- In the Community Solar Application and Evaluation Criteria, projects on Ag lands will receive zero points under the siting category. [Application](#), page 28.
- Visit the BES solar siting webpage & NJ Community Solar Siting Tool <https://www.state.nj.us/dep/aqes/solar-siting.html>

State Historic Preservation Office- Jesse West-Rosenthal: Jesse.West-Rosenthal@dep.nj.gov or (609) 984-6019

Based upon the documentation submitted, there are no buildings, structures, sites, objects, or historic districts on or adjacent to the project location that are listed on, or that have been identified as eligible for listing on the New Jersey or National Registers of Historic Places. Although the project setting is sensitive for archaeological sites, based upon information on file at the HPO, the project only has a low potential for archaeological remains. Consequently, the HPO does not recommend further consideration prior to permit issuance.

Stormwater: Eleanor Krukowski (Eleanor.Krukowski@dep.nj.gov)

- Construction projects that disturb 1 acre or more of land, or less than 1 acre but are part of a larger common plan of development that is greater than 1 acre, are required to obtain coverage under the Stormwater construction general permit (5G3). Applicants must first obtain certification of their soil erosion and sediment control plan (251 plan) from their local soil conservation district office. Upon certification, the district office will provide the applicant with two codes process (SCD certification code and 251 identification code) for use in the DEPonline portal system application. Applicants must then become a registered user for the DEPonline system and complete the application for the Stormwater Construction General Authorization. Upon completion of the application the applicant will receive a temporary authorization which can be used to start construction immediately, if necessary. Within 3-5 business days the permittee contact identified in the application will receive an email including the application summary and final authorization.

Should circumstances or conditions become different than what was set forth in the information that was provided to the NJDEP, the comments and regulatory requirements provided above are subject to change and may no longer apply to this project. Statements made within this email do not represent a decision by the DEP on whether the proposed project will be permitted.

If upon review of the comments provided, you would like to contact the programs directly, we ask that you keep Permit Coordination copied on any correspondence so we may update our records. This email shall serve to satisfy the Community Solar Pilot Program application requirement that the Applicant shall meet with PCER.

Best Regards,
Megan

From: Don Brickner <Don.Brickner@marathonconsultants.com>
Sent: Tuesday, June 4, 2019 12:18 PM
To: Brunatti, Megan <Megan.Brunatti@dep.nj.gov>
Cc: John Renz <jjrenz@crenergygroup.com>; Ken Blechman <kblechman@crenergygroup.com>
Subject: [EXTERNAL] Request for Pre-Application Review, Love Lane Solar, Upper Deerfield, NJ

Hi Megan,

Please see the attached documents in support of a request for review by the Office of Permit Coordination & Environmental Review. You will also receive a paper copy of this package via USPS.

We look forward to your response.

Regards,
Don

Donald W. Brickner
Marathon Engineering & Environmental Services, Inc.
553 Beckett Road, Suite 608
Swedesboro, New Jersey 08085

www.marathonconsultants.com

Phone: 856-241-9705

Fax: 856-241-9709

CONFIDENTIALITY NOTICE: This e-mail and any accompanying documents contains information belonging to the sender that is confidential and privileged. The information is intended only for the use of the individual(s) or entity(ies) named above. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or the taking of any action in reliance on the contents of this information is strictly prohibited. If you have received this e-mail in error, please reply as such and delete the e-mail.

Attachment 5
Proof of Meeting with NJDEP, PCER

Don Brickner

From: Brunatti, Megan <Megan.Brunatti@dep.nj.gov>
Sent: Tuesday, July 2, 2019 6:37 PM
To: Don Brickner
Cc: John Renz; Ken Blechman; Foster, Ruth; Corleto, Joseph; West-Rosenthal, Jesse; Resnick, Matthew; Hill, Erin
Subject: RE: Request for Pre-Application Review, Love Lane Solar, Upper Deerfield, NJ

Dear Don,

The Office of Permit Coordination and Environmental Review distributed project information to various programs within the Department for the proposed Love Lane Solar project located in Upper Deerfield, Cumberland County. Below are preliminary comments of possible permits and action items this project may require (but not limited to) based on the information that was submitted on June 4, 2019: *** this is neither a comprehensive nor a technical summary ***

Division of Land Use Regulation – Matt Resnick: Matthew.Resnick@dep.nj.gov (609) 984-6216

The applicant is showing a wetland line on the subject property, with proposed construction north of and outside the regulated area. A Letter of Interpretation: Verification has previously been issued for this property and has subsequently expired. A presence/absence LOI is currently under review. Any impacts to wetlands and/or transition areas will require approvals from the Division of Land use Regulation under the Freshwater Wetlands Protection Act.

Division of Fish and Wildlife- Joseph Corleto: Joseph.Corleto@dep.nj.gov or (609)984-3859

Based on the potential of ground nesting birds and habitats in the immediate vicinity of this project, the NJDFW would recommend any ground clearing or site preparation be done outside the nesting season (4/1 to 8/31) to avoid impact to ground nesting birds. Additionally, the Division recommends avoiding trimming or removal of trees from (4/1 – 8/31) to protect nesting birds covered under the NJ Endangered & Non-game Species Conservation Act.

To avoid possible impacts to Little Brown and Tricolored Bats the NJDFW would recommend removal of highly suitable roost trees including snags (dead trees), shagbark hickories (*Carya ovata*), other trees with shaggy or exfoliating bark, and trees of any species over 5 inches DBH, be avoided between (4/1 to and 9/30).

Additionally, the contractor should instruct all employees and sub contractors to avoid any animals and, if possible, move any turtles to the closest suitable habitat outside the work zone and **release unharmed**.

County Soil Conservation District BMP's for prevention of sediment movement towards the Cornwell Run should be used at all times and maintained for function.

Bureau of Energy & Sustainability- Erin Hill: Erin.Hill@dep.nj.gov or (609) 633-1120

- The Community Solar Energy Pilot Program Application window opened April 9, 2019 and closes September 9, 2019 <https://www.bpu.state.nj.us/bpu/pdf/boardorders/2019/20190329/8E%20-%20Community%20Solar%20Energy%20Pilot%20Program%20Application%20Form.pdf>

- The proposed array is located on Forested & Agriculture Lands which are identified as “not preferred” per the Solar Siting Analysis.
- In the Community Solar Application and Evaluation Criteria, projects on Ag lands will receive zero points under the siting category. [Application](#), page 28.
- Visit the BES solar siting webpage & NJ Community Solar Siting Tool <https://www.state.nj.us/dep/ages/solar-siting.html>

State Historic Preservation Office- Jesse West-Rosenthal: Jesse.West-Rosenthal@dep.nj.gov or (609) 984-6019

Based upon the documentation submitted, there are no buildings, structures, sites, objects, or historic districts on or adjacent to the project location that are listed on, or that have been identified as eligible for listing on the New Jersey or National Registers of Historic Places. Although the project setting is sensitive for archaeological sites, based upon information on file at the HPO, the project only has a low potential for archaeological remains. Consequently, the HPO does not recommend further consideration prior to permit issuance.

Stormwater: Eleanor Krukowski (Eleanor.Krukowski@dep.nj.gov)

- Construction projects that disturb 1 acre or more of land, or less than 1 acre but are part of a larger common plan of development that is greater than 1 acre, are required to obtain coverage under the Stormwater construction general permit (5G3). Applicants must first obtain certification of their soil erosion and sediment control plan (251 plan) from their local soil conservation district office. Upon certification, the district office will provide the applicant with two codes process (SCD certification code and 251 identification code) for use in the DEPonline portal system application. Applicants must then become a registered user for the DEPonline system and complete the application for the Stormwater Construction General Authorization. Upon completion of the application the applicant will receive a temporary authorization which can be used to start construction immediately, if necessary. Within 3-5 business days the permittee contact identified in the application will receive an email including the application summary and final authorization.

Should circumstances or conditions become different than what was set forth in the information that was provided to the NJDEP, the comments and regulatory requirements provided above are subject to change and may no longer apply to this project. Statements made within this email do not represent a decision by the DEP on whether the proposed project will be permitted.

If upon review of the comments provided, you would like to contact the programs directly, we ask that you keep Permit Coordination copied on any correspondence so we may update our records. This email shall serve to satisfy the Community Solar Pilot Program application requirement that the Applicant shall meet with PCER.

Best Regards,
Megan

From: Don Brickner <Don.Brickner@marathonconsultants.com>
Sent: Tuesday, June 4, 2019 12:18 PM
To: Brunatti, Megan <Megan.Brunatti@dep.nj.gov>
Cc: John Renz <jrenz@crenergygroup.com>; Ken Blechman <kblechman@crenergygroup.com>
Subject: [EXTERNAL] Request for Pre-Application Review, Love Lane Solar, Upper Deerfield, NJ

Hi Megan,

Please see the attached documents in support of a request for review by the Office of Permit Coordination & Environmental Review. You will also receive a paper copy of this package via USPS.

We look forward to your response.

Regards,
Don

Donald W. Brickner
Marathon Engineering & Environmental Services, Inc.
553 Beckett Road, Suite 608
Swedesboro, New Jersey 08085

www.marathonconsultants.com

Phone: 856-241-9705

Fax: 856-241-9709

CONFIDENTIALITY NOTICE: This e-mail and any accompanying documents contains information belonging to the sender that is confidential and privileged. The information is intended only for the use of the individual(s) or entity(ies) named above. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or the taking of any action in reliance on the contents of this information is strictly prohibited. If you have received this e-mail in error, please reply as such and delete the e-mail.

Attachment 6

**Screenshot of Capacity Hosting Map Showing Available
Capacity**



In extensive discussions with Atlantic City Electric, they have determined that we are able to interconnect this project (location – red star) just south of the proposed array location (location – black star). This will be subject to an interconnection application which cannot be accepted at this time and is waiting on new regulations being developed by the EDC's and NJBPU

Attachment 7
Substantiating Evidence of Project Cost

MILLER BROS.

September 1, 2019

Bradd Forstein

SVP of Sales & Customer Development
CastleRock Energy Group
333 Westchester Ave West Building Suite W2100
White Plains, NY 10604
Phone: 215-370-0041
www.CRenergygroup.com

RE: Array 2 – 3,201 MWdc

Miller Bros. Electrical Contractors, a Division of Wampole-Miller, Inc. is pleased to present our indicative proposal to provide the necessary materials, labor, equipment, and supervision required to complete the installation for the above referenced project.

Engineering

- Coordinate with CEG
- Coordinate with Utility
- Perform completion of civil engineering
- Perform structural engineering
- Perform completion of electrical engineering
- Provide submittals
- Provide one (1) Owner/ Township/ First Responders training
- Utilize the current and usable benchmark to perform layout (LOD, fence, posts, skids, trench, etc.)

Procurement

- Civil BOS materials
- Modules
- Racking
- Inverters
- CBs
- Switchgear
- Electrical BOS materials

General Conditions

- Mobilization/demobilization
- Dumpsters
- Restroom facilities
- Office trailer
- Material storage trailers
- Daily housekeeping
- Project schedule and 4WLA schedules
- Lead project meetings and record meeting minutes

MILLER BROS.

- QA/QC / punchlist
- DCA Permitting

Civil Construction

- Furnish and install silt sock
- Furnish and install site entrance tracking pad
- Perform site preparation
- Receiving and staging of civil materials
- Continual maintenance of site
- Furnish and install 6' tall galvanized fencing (no barbed wire)
- Perform excavation, backfill, compaction and restoration as required
- Form, tie, pour, finish and strip pads for switchgear
- Perform site restoration
- Perform final seeding

Mechanical Construction

- Furnish and install racking structure and modules
- Furnish and install posts 13.5' or less in length
- Furnish and install CB posts
- Furnish and install racking structure
- Furnish and install modules

Electrical Construction

- Furnish and install string cabling
- Furnish and install MC4 (module compatible) connectors
- Furnish and install wire management
- Furnish and install grounding as per NEC requirement
- Furnish and install CBs
- Furnish and install DC raceways
- Furnish and install aluminum DC feeder cabling
- Furnish and install AC raceways
- Furnish and install aluminum AC cabling
- Furnish and install comm raceways
- Furnish and install comm cabling
- Perform terminations
- Furnish and install switchgear
- Furnish and install JCP&L utility pole cluster and equipment local to site
- Furnish and install DAS system
- Perform testing and commissioning

MILLER BROS.

IC Extension Scope

- Furnish and install aluminum aerial cabling
- Furnish and install switching/ cutouts
- Perform excavation, backfill, compaction and restoration
- Furnish and install PVC raceway
- Furnish and install aluminum U/G cabling
- Perform splicing and terminations
- Perform grounding
- Perform testing and commissioning

Schedule

- Construction: 2020
- PTO: February, 2020
- Final Completion: December 2020

EXCLUSIONS:

- Bond/escrow/ decommissioning
- O&M
- Fencing along IC route
- Lighting
- Land surveying
- Stone, asphalt, concrete accessways
- Utility fees
- Rock excavation
- Sink hole filling
- Post refusal
- Uncharted utilities
- Dewatering
- Import of topsoil
- Removal of spoils
- Any and all permitting or process, including closeout, except trade permits
- Revision/ submission of SWPPP
- Vegetation maintenance after mechanical completion
- FD plan approval
- PJM/ JCP&L approvals
- Compression, OT, DT and shift work
- Railroad MPT fees
- Utility fees

MILLER BROS.

Pricing

Our total price including all applicable taxes and fees is:

\$1.48/Wdc

If you have any questions or comments regarding this indicative proposal, or if we can be of further service, please feel free to contact this office.

Sincerely,

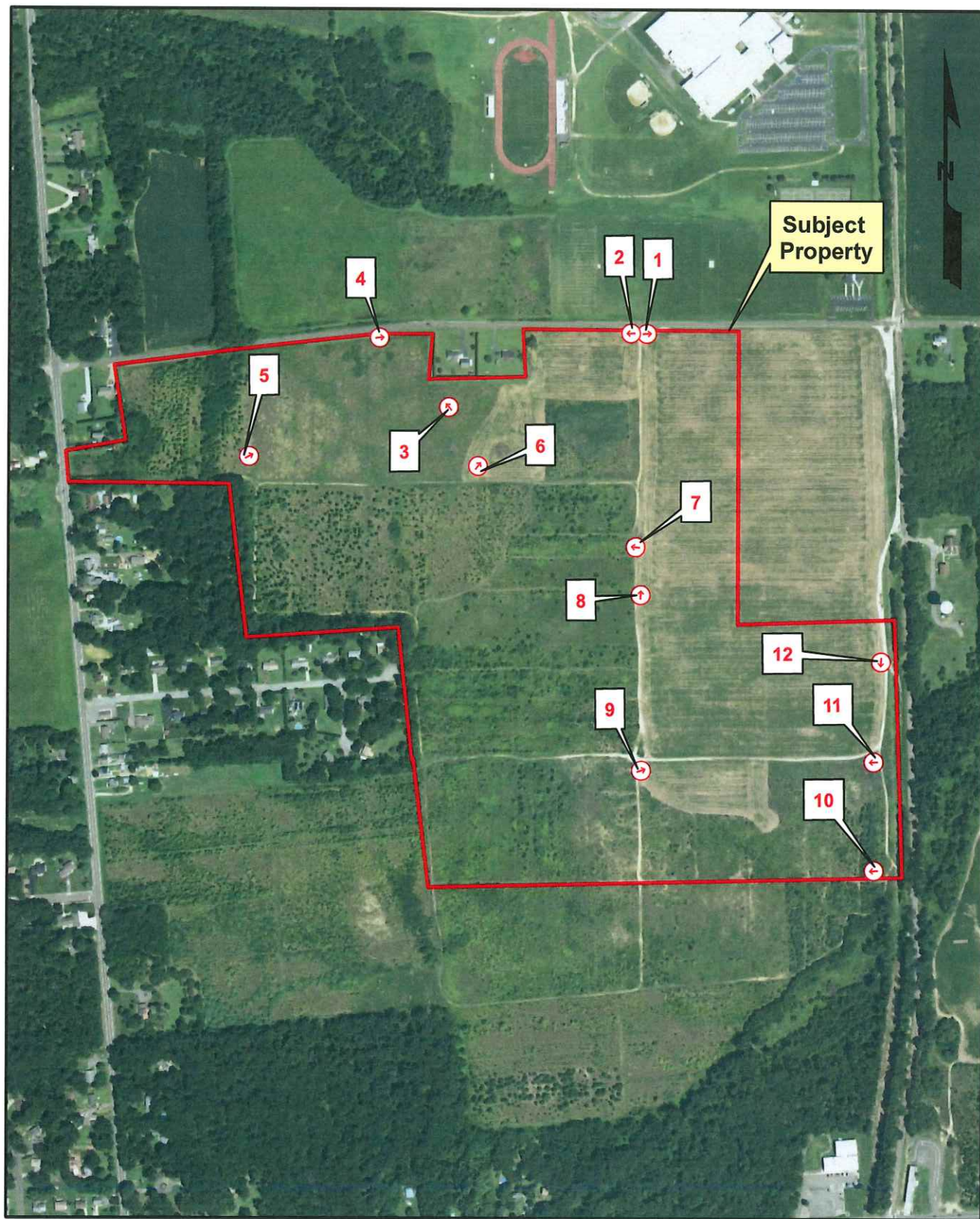
A handwritten signature in black ink, appearing to read 'Joe Marrone', with a stylized flourish at the end.

Joe Marrone
Miller Bros.

12. Additional Attachments

- A. Site Photographs Report**
- B. LSRP Report (Marathon August 29, 2019)**
- C. Pollinator Plan**
- D. Community Engagement Letters**
- E. Public Notice of JLUB Meeting**
- F. Public Notice Property Owners 200' List**
- G. Jobs, Apprenticeship, Education**
- H. Development Plans**
 - 1. Use Variance, Subdivision and Site Plans**
 - 2. Delineation Map**
 - 3. Remediation Plan**
- I. CD of Application Package, All Files Electronic Copies**
- J. Copies of Permits Received:**
 - A. NJDEP Permit Coordination and Environmental Review (PCER)**
 - B. NJDEP LOI Absence Determination**
 - C. NJDEP Natural Heritage Program Review Letter**
 - D. USFWS T&E Review Letter**
 - E. NJDEP HPO Clearance Letter**
 - F. Upper Deerfield JLUB Resolution of Approval 8-2019**
 - G. Upper Deerfield JLUB Resolution of Approval 23-2011**

A. Site Photographs Report



**MARATHON ENGINEERING &
ENVIRONMENTAL SERVICES, INC.**
553 BECKETT ROAD,
SUITE 608
SWEDESBORO, NJ 08085

**Love Lane Solar
Block 1301, Lot 1 (part of)
Upper Deerfield Township
Cumberland County, New Jersey**

Photo Location Map

Source: 2017 Orthophotography,
NJ Geographic Info. Network

Scale: 1:7,200

LLP 001.01



PHOTO 1: Facing east, view along Love Lane in the northeastern portion of the Subject Property.



PHOTO 2: Facing west, view along Love Lane in the northeastern portion of the Subject Property.



PHOTO 3: Facing northwest, view of existing conditions in the northern portion of the Subject Property.



PHOTO 4: Facing east, view along Love Lane in the northern portion of the Subject Property.



PHOTO 5: Facing northeast, view of existing conditions in the northwestern portion of the Subject Property.



PHOTO 6: Facing northeast, view of existing conditions in the northern portion of the Subject Property.



PHOTO 7: Facing west, typical view of scrub-shrub upland in the central portion of the Subject Property.



PHOTO 8: Facing north, view along a farm road in the central portion of the Subject Property.



PHOTO 9: Facing east, view of existing conditions in the southern portion of the Subject Property.



PHOTO 10: Facing west, view along a farm road in the southeastern portion of the Subject Property.



PHOTO 11: Facing west, typical view in the eastern portion of the Subject Property.



PHOTO 12: Facing south, view along an existing driveway in the eastern portion of the Subject Property.

B. LSRP Report



August 29, 2019

LLP 001.02

Kenneth Blechman, Managing Member
Love Lane Partners LLC
5 Woodcrest Lane
Old Tappan, New Jersey 07675

RE: Summary of Environmental Condition
Love Lane Solar – Community Solar Applications
Block 1301, Lots 1.10, 1.12, 1.13 & 1.14
Upper Deerfield Township, Cumberland County, New Jersey

Dear Mr. Blechman:

Marathon Engineering & Environmental Services, Inc. ("Marathon") has prepared this letter to summarize the environmental condition of the above referenced property, hereafter referenced as the Subject Property.

The applicant, Love Lane Partners LLC, is proposing one net-metered solar project to service the Cumberland Regional High School and four Community Solar Projects with the majority of the energy slated for low and moderate income New Jersey residents. Marathon has been retained to provide environmental consulting services and Licensed Site Remediation Professional Services for the remediation of the Subject Property.

Background

The Subject Property encompasses 126.35 acres of undeveloped land that was historically used as an orchard dating back to at least 1928 when the property was farmed as Del-Bay Orchards. The use of an orchard continued through the 1970s followed by intermittent agricultural use including row crops and landscape nursery stock. In 2006, Westrum Development Company (Westrum) purchased the Subject Property with plans to develop the Subject Property with single-family residential dwellings. Towards that goal, Westrum retained Damiano and Long (D&L) to complete a Phase I Environmental Site Assessment, dated April 2004 (Phase I) and Remedial Investigation and Remedial Action Workplan, dated June 3, 2005. Westrum retained ABR Consultants (ABR) to prepare a supplemental Remedial Action Workplan, dated June 3, 2005. Westrum

553 BECKETT ROAD ▲ SUITE 608 ▲ SWEDESBORO ▲ NEW JERSEY 08085

TEL. (856) 241-9705 ▲ FAX (856) 241-9709

abandoned their plans to develop with residential dwelling due to market conditions in 2008.

Phase I/Phase II Investigation

The Phase I identified the former use of the Subject Property as an apple orchard dating back to at least 1940. D&L did not identify any other areas of concern on the Subject Property except for the historically applied pesticides. In accordance with the Findings and Conclusions of the Historic Pesticide Contamination Task Force Report, dated March 1999 (Pesticide Task Force Report), D&L conducted a Phase II that consisted of the collection of twenty-one samples from the former orchard area of the Subject Property. Soil samples were submitted to a New Jersey Department of Environmental Protection (NJDEP) certified laboratory for analysis of arsenic and lead by United States Environmental Protection Agency (EPA) Method 6010 and pesticides by EPA Method 8082. Sampling methods, sample preservation requirements and decontamination procedures were implemented in accordance with the NJDEP's Field Sampling Procedures Manual, dated 1992. Copies of the FRB and D&L reports are provided in Attachment A and B respectively.

The analytical results from D&L's Phase II confirmed the presence of arsenic and lead in the surface soils at concentrations above the NJDEP's Residential Direct Contact Soil Remediation Standards and/or Default Impact to Groundwater Soil Screening Level (IGWSSL). D&L completed an additional 89 samples to delineate the extents of arsenic and lead impacts on the Subject Property. Soil samples were submitted to a NJDEP certified laboratory for analysis of arsenic and lead by United States Environmental Protection Agency (EPA) Method 6010. Samples were collected from discrete six inch intervals with a properly decontaminated auger. Sampling methods, sample preservation requirements and decontamination procedures were implemented in accordance with the NJDEP's Field Sampling Procedures Manual, dated 1992.

Remedial Investigation

To further refine the delineation, ABR collected a total of 370 soil samples from 74 locations. Five samples were taken at each location at six inch intervals to a depth of 30 inches below ground surface. ABR conducted the sampling event in accordance with the NJDEP's Field Sampling Procedures Manual, dated 1992. Soil samples were submitted to a NJDEP certified laboratory for analysis of arsenic and lead by EPA Method 6010. The analytical results indicate that arsenic is present in the surface soils at concentrations ranging from 20 to 130 milligrams per kilogram (mg/kg), which exceeds the NJDEP's RDCSRS and IGWSSL of 19 mg/kg. Lead concentrations range from 5.7 mg/kg to 470 mg/kg with some exceedances of the NJDEP's RDCSRS and IGWSSL.

Remedial Action Workplan

The RI/RAW documents impacts to surface soils on the Subject Property as a result of lead arsenate pesticide applications. Specifically, the RIRAW documents that arsenic and lead concentrations are present in the surface soils at concentrations above the NJDEP RDCSRS and IGWSSL. ABR performed a baseline ecological evaluation to determine whether arsenic and lead impacted soil had resulted in any impacts to sensitive

environmental receptors. ABR concluded that no further ecological evaluation was warranted.

Based upon the analytical results and a proposed residential use of the Subject Property, Westrum proposed soil blending to reduce arsenic and lead concentrations to below the NJDEP's RDCSRS and IGWSSL. ABR prepared a remedial action workplan that proposed soil blending across the Subject Property to depths ranging from 24 inches to 48 inches in order to homogenize the impacted surface soils with clean or unimpacted underlying soils. ABR proposed to conduct the soil blending using CBA's patented MITU-LVR technology. The goal of the remedial action workplan is to dilute arsenic concentrations to concentrations below the NJDEP's RDCSRS of 20 mg/kg, which has since been revised to 19 mg/kg.

The NJDEP approved the RI/RAW in a letter dated April 28, 2008; however, the plan was never implemented because of the great recession. Westrum has since abandoned their plans to develop the Subject Property. To maintain compliance with the NJDEP regulations, Westrum filed a Historically Applied Pesticides (HAP) Deferral Notice on the Property.

Proposed Remedial Action Workplan

Since Love Lane Partners LLC is proposing a net-metered and community solar projects and not a residential development, Marathon evaluated and modified the proposed remedial action workplan with the goal of being protective of human health and the environment. Marathon determined that a two-pronged approach to the remediation consisting of remedial action of arsenic impacted soils along the project's frontage of public right of ways using excavation and relocation to the central portion of the Subject Property where direct contact to the arsenic impacted soil will be eliminated through the use of fencing as an engineering control. By doing so, Love Lane Partners will eliminate the potential impacts to the general public. An onsite safety program will be developed to safeguard worker potential risks whom are expected to have limited exposure to the contaminated soils due to the planting of permanent maintained vegetative covers (grasses and pollinator plants). Deed notices will be filed and associated remedial action permits will subsequently be obtained to serve as institutional controls that will outline future obligations for the inspection, monitoring and maintenance of the engineering controls.

Marathon determined that this change in remedial strategy was preferable to soil blending because soil blending, if successful, would destroy the natural resource of top soil by mixing it with inorganic soil. The resultant blended soil would no longer contain enough organic matter to support use as a top soil and would contain too much organic material that would preclude the ability to use the material as a structural fill material that could support development of homes, roads and parking areas. Since members of the public will not be permitted entrance into the solar field and worker access will be limited to repairs on an as-needed basis and routine lawn care, the use of fencing and signage as engineering controls are protective of human health and the environment. Further, the proposed engineering control represents a significant improvement over existing conditions that results in a potential exposure to sensitive receptors including Cumberland Regional High School and associated athletic fields, the residential population and church

as a result of farming practices that cause airborne dust migration of arsenic impacted soil. Love Lane Partners' proposed remediation of the contamination eliminates potential exposure to the sensitive receptors and should be a high priority of the community. The proposed Remediation Plan prepared by CES, dated June 3, 2019 is provided in Attachment C.

Technical Consultation

On July 25, 2019, Love Lane Partners, LLC and Marathon attended a technical consultation with the NJDEP where we presented our proposed remedial action plan. During the technical consultation, the NJDEP provided guidance on how to navigate the project through the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) (NJAC 7:26C et seq) with respect to the following:

1. NJDEP provided the framework to lift the Historically Applied Pesticides (HAP) Deferral Notice from the Subject Property and open the re-open the case in the NJDEP's database tracking system to allow for the LSRP to file notice of retention and start the annual remediation fee billing required by ARRCS.
2. NJDEP provided the timeframe with respect to the subdivision occurring prior to filing of deed notices and soil remedial action permits to ensure the post-development certain lots could be transferred without triggering the need to modify permits for other project/lots.
3. NJDEP provided technical advice that since the analytical data from D&L and ABR's investigations was more than 10 years old, a new investigation of surface soils may warrant more favorable analytical results. This advice was based upon NJDEP's technical experience. Marathon intends to re-sample certain locations to provide a statistical basis to determine whether the D&L and ABR datasets reflect current site conditions.
4. NJDEP reserved comment on the remedial action workplan except to note that they would rely upon the LSRP to document why the proposed remediation was protective of human health and the environment. As noted above, it is the LSRP's opinion that the proposed two pronged approach of excavation and relocation followed by the use of fencing and signage as the engineering control in conjunction with a deed notice and soil remedial action permit is protective of human health and the environment for the proposed solar project.

Marathon looks forward to working to complete the remediation of this contaminated property and redeveloping it with the proposed net-metered solar project. If you have any questions, please do not hesitate to contact us.

Sincerely,

Marathon Engineering & Environmental Services, Inc.

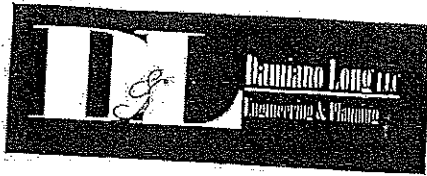
A handwritten signature in black ink, appearing to read "Robert L. Carter Jr.", with a long horizontal line extending to the right.

Robert L. Carter Jr.,
Principal Environmental Scientist

Enclosure

P:\LLP00102\correspondence\LLP00102 summary of environmental 08-27-2019.docx

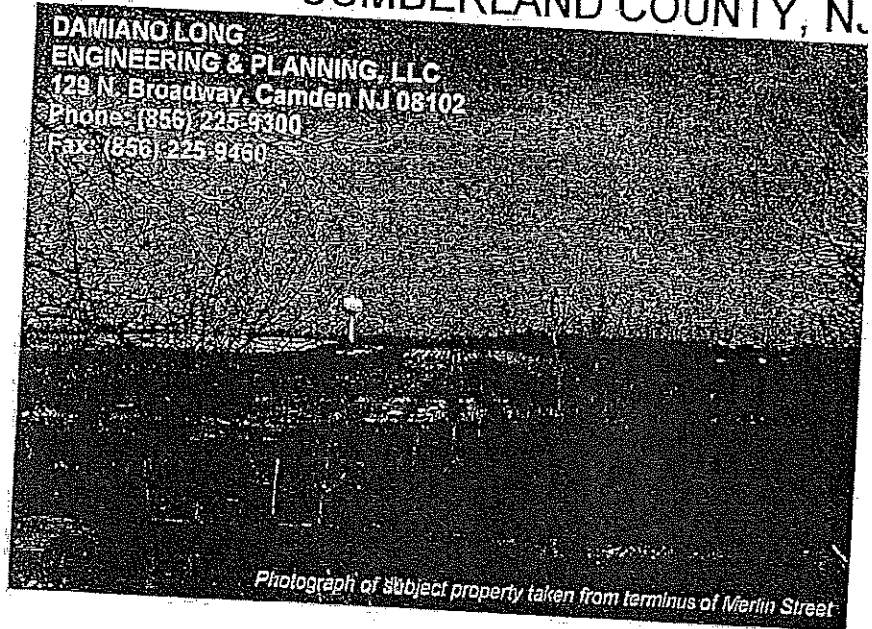
ATTACHMENT A



PRELIMINARY REMEDIAL INVESTIGATION
REMEDIAL ACTION WORKPLAN


THE SANCTUARY
LOVE LANE AND OLD DEERFIELD PIKE
BLOCK 1301, LOT
UPPER DEERFIELD TOWNSHIP
CUMBERLAND COUNTY, N.J.

DAMIANO LONG
ENGINEERING & PLANNING, LLC
129 N. Broadway, Camden NJ 08102
Phone: (856) 225-9300
Fax: (856) 225-9460



Submitted To:

Lawrence McNight
Westrum Land Development, LLC
370 Commerce Drive, Suite 100
Ft. Washington, PA 19034


Anthony J. Velazquez
Project Manager/ Environmental Services

June 3, 2005

THE SANCTUARY
LOVE LANE & OLD DEERFIELD PIKE
BLOCK 1301, LOT 1,
UPPER DEERFIELD TOWNSHIP, CUMBERLAND COUNTY
PRELIMINARY REMEDIAL INVESTIGATION/
REMEDIAL ACTION WORKPLAN

Table of Contents

	<u>Page</u>
I. Introduction	1
II. Background	1
III. Project Data	4
IV. Physical Setting	5
V. Technical Overview	9
VI. Synopsis of Sampling Activities	10
VII. Site Investigation Conclusions	21
VIII. Additional Data Acquisition	21
IX. Identification of Human Receptors	21
X. Baseline Ecological Evaluation	21
XI. Proposed Remedial Action	25
XII. Schedule of Activities	28
XIII. Cost Estimate for Remedial Activities	28
XIV. Required Permits	28
XV. Site Specific Health & Safety Plan	28
XVI. Certifications	28
Figures:	
1. Site Location Map	2
2. 1940 Aerial Photograph	3
3. Soils Map	6
4. Geologic Map	8
5. Human & Ecological Receptors Map	22

Tables:

1.	Phase II/Site Investigation Samples	11
2.	Site Investigation, Vertical Delineation and "Hotspot" Sample Data	18
	(Arsenic and Lead Results within former Orchard Area)	
3.	Horizontal Delineation (Perimeter Sample Data)	20
4.	Blending Area Data	27

Appendices:

- A. Phase II Sample Location Plan
- B. Preliminary Remedial Investigation Plan
- C. Chain of Custody Documentation
- D. Analytical Results
- E. Threatened and Endangered Species Correspondences
- F. Site Specific Health and Safety Plan

I. INTRODUCTION

Damiano Long Engineering and Planning LLC (Damiano Long) was contracted by Westrum Development Company, LLC to perform a Preliminary Remedial Investigation/Remedial Action Workplan on a portion of Block 1301, Lot 1 in the Township of Upper Deerfield, Cumberland County. The site is located near the intersection of Love Lane and Old Deerfield Pike. The study area was formerly utilized as an apple orchard and encompasses approximately 96.43 acres on the northern portion of the 222.35 acre property (*Figure 1*).

The Preliminary Remedial Investigation presents the methods and results of investigations performed by Damiano Long during the period of March 29, 2004 to March 22, 2005. The objectives of these investigations were to determine whether or not the former orchard activities resulted in historical pesticide contamination on the property, and to preliminarily delineate the vertical and horizontal extent of contamination. Efforts were also made to delineate "hot spots"; areas where arsenic concentrations would require soil excavation and disposal as a remedial method. The delineation presented herein is preliminary in nature and is being presented to the New Jersey Department of Environmental Protection (NJDEP) for consultation so that the Remedial Investigation can be finalized.

The Remedial Action Workplan sets forth the proposed remedial action and may be refined upon completion of the Remedial Investigation.

II. BACKGROUND

Phase I Environmental Site Assessment

Damiano Long completed a Phase I Environmental Site Assessment for the subject property for US Estates, Inc. in April of 2004. The Phase I identified that the northern portion of the property was formerly utilized as an orchard. The former orchard use was identified through the interpretation of aerial photography dating back to 1940 (*Figure 2*). The balance of the site appears to have been cultivated with row crops, with some portions remaining forested until sometime after 2002. An interview with a long time area resident and employee of the Cumberland County Planning Office confirmed that the northern portion of the property was utilized as an apple orchard. No other potentially contaminated areas of concern were identified on the property during the Phase I.

Phase II Environmental Site Assessment/Site Investigation

A Phase II Environmental Site Assessment was conducted to determine if historic pesticide contamination was present on the property at levels exceeding the NJDEP soil cleanup criteria. In accordance with the *Findings and Recommendations for the Remediation of Historic Pesticide Contamination Task Force, Final Report* (March 1999), 49 soil samples were collected from 0-6 inches below the ground surface (bgs). Twenty-one (21) of the 49 samples collected indicated concentrations of arsenic and/or lead above the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC). These 21 samples were located within the former orchard area at the northern portion of

damiano long engineering and planning, llc, camden nj 856-225-9300

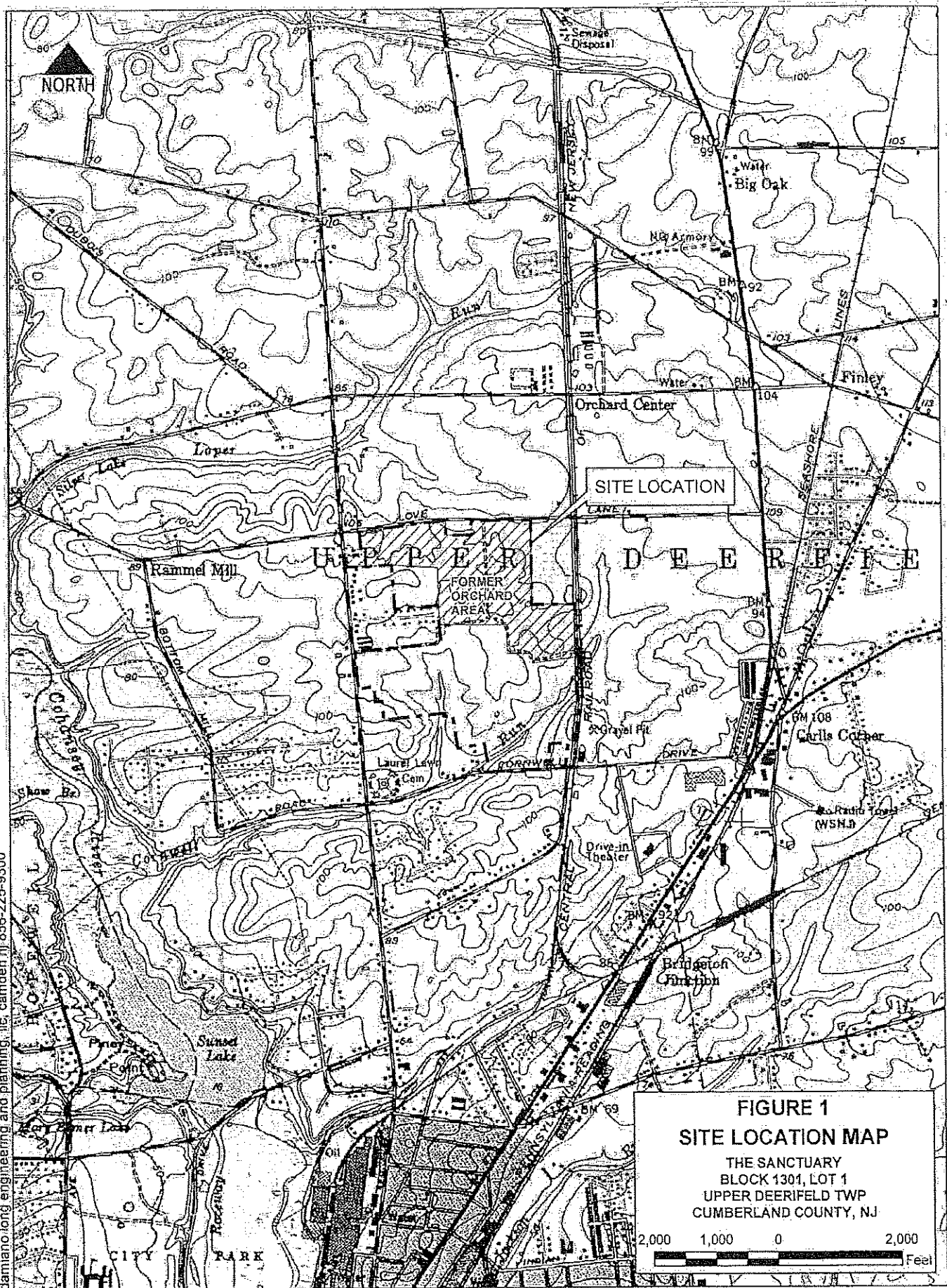
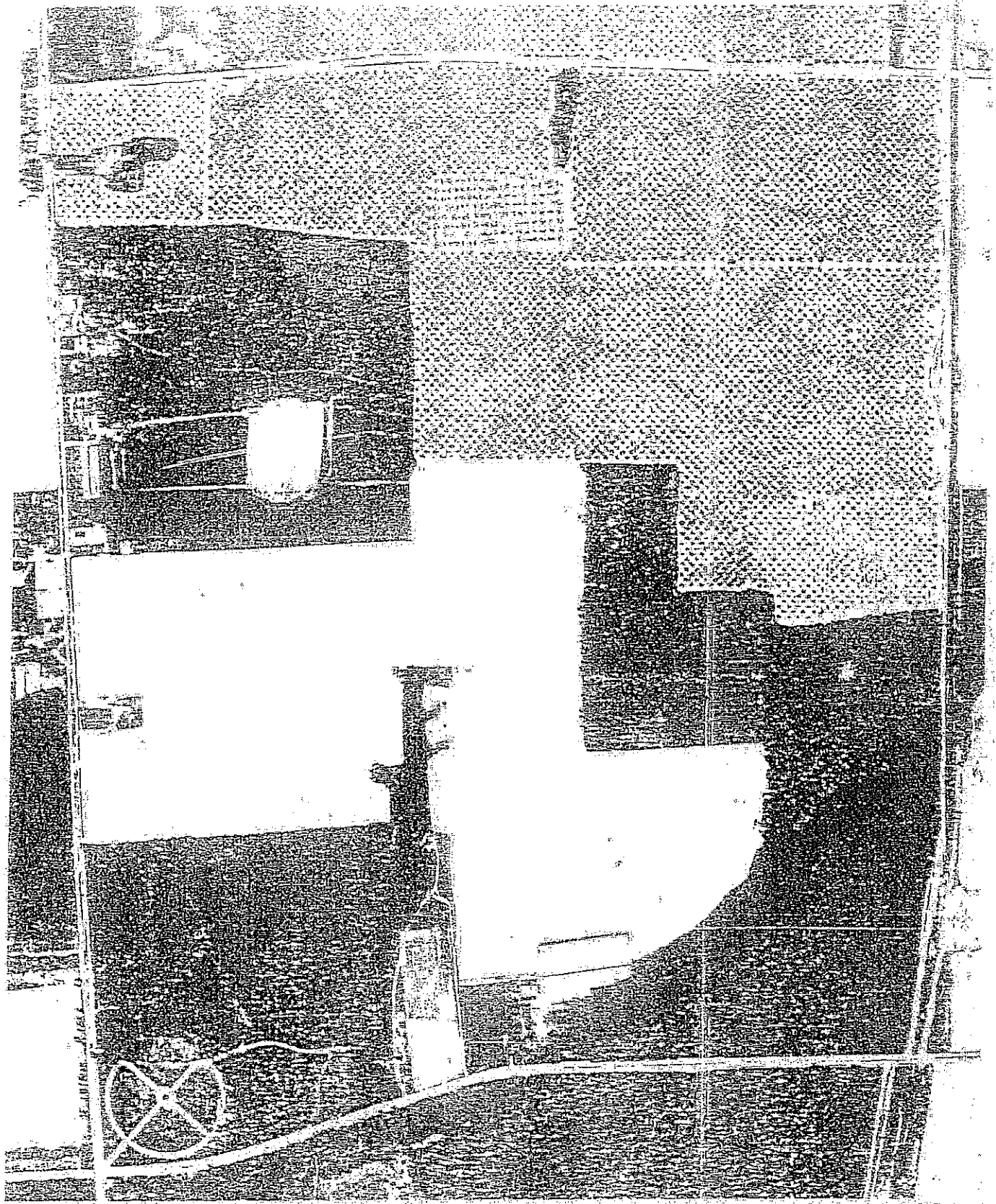


FIGURE 1
SITE LOCATION MAP

THE SANCTUARY
BLOCK 1301, LOT 1
UPPER DEERFIELD TWP
CUMBERLAND COUNTY, NJ

2,000 1,000 0 2,000
Feet

U.S.G.S. BRIDGETON 7.5' QUADRANGLE



Damiano Long

Engineering & Planning, LLC
129 N. Broadway
Camden, NJ 08012
Office: (856) 225-8300
Fax: (856) 225-8400

THE SANCTUARY
BLOCK 1301, LOT 1
UPPER DEERFIELD TWP
CUMBERLAND COUNTY, NJ

FIGURE 2
1940 AERIAL PHOTOGRAPH

SOURCE: Cumberland County
Planning Office

SCALE: N.T.S.



the site. None of the soil samples on the balance of the site contained lead or arsenic above the RDCSCC. The pesticide scan did not indicate concentrations above the RDCSCC for any of the 49 samples. A copy of the Phase II Sample Location Plan has been included in Appendix A.

III. PROJECT DATA

A. FACILITY NAME & LOCATION

The Sanctuary
Love Lane & Old Deerfield Pike
Block 1301, Lot 1
Upper Deerfield Township, Cumberland County, New Jersey

B. AREA OF CONCERN ON PROPERTY

Historic pesticide contamination due to previous orchard operations.

C. REFERENCED REGULATIONS & GUIDANCE DOCUMENTS

- Findings and Recommendations for the Remediation of Historic Pesticide Contamination, Historic Pesticide Contamination Task Force, Final Report-March 1999
- New Jersey Department of Environmental Protection Technical Requirements for Site Remediation (N.J.A.C. 7:26E)
- New Jersey Department of Environmental Protection Cleanup Standards for Contaminated Sites (N.J.A.C. 7:26D, revised 5/12/99)
- New Jersey Department of Environmental Protection and Energy Field Sampling Procedures Manual, May 1992

D. STUDIES CONDUCTED ON THE SITE

Phase II/Site Investigation: 49 discrete soil samples collected throughout the property at a depth of 0-6 inches below the ground surface (bgs). Results of which have been incorporated in this report.

Preliminary Remedial Investigation: Additional 89 samples collected to preliminarily delineate the vertical and horizontal extent of arsenic & lead contamination on the site.

E. ANALYTICAL PARAMETERS & METHODS

Lead: USEPA Method 6010
Arsenic: USEPA Method 6010
Pesticides: USEPA Method 8082

Lead, arsenic and pesticide analysis conducted for Phase II/Site Investigation samples.
Arsenic and lead analysis conducted for Remedial Investigation Samples

F. ANALYTICAL LABORATORIES

Hampton-Clarke, Inc./Veritech Laboratories - (973) 244-9770
175 Route 46 West Fairfield, NJ 07004
New Jersey Laboratory Certification #: 14622

EMSL Analytical, Inc. - (856) 858-4800
3 Cooper Street Westmont, NJ 08108
New Jersey Laboratory Certification #: 04653

IV. PHYSICAL SETTING

Physiographic Province

The property is located in New Jersey's Coastal Plain physiographic province. The Coastal Plain is the largest of the 4 physiographic provinces, encompassing approximately three-fifths of the state. The coastal plain is characterized by unconsolidated sediments that dip gently to the southeast. The streams that flow northwest to the Delaware River are confined within steep narrow valleys, while the south and southeast flowing streams generally contain wider floodplains.

Watershed/Water Resources

The site is located within the Cohansey River drainage, which flows into the Delaware Bay. Cornwell Run, a small tributary to the Cohansey flows southwesterly through the southern portion of the property. Groundwater in the Area of Concern varies, but is anticipated to occur at depths greater than 10 feet.

Soils

According to the Soil Survey of Cumberland County the soils on the site mainly consist of Sassafras and Downer series soils (*Figure 3*). Small areas of Aura and Muck soils also occur on the property. The soils encountered in the borings were consistent with the soil survey descriptions and can generally be characterized as brown, fine to coarse sand, some gravel. Soil series descriptions are provided below.

Sassafras Series: The Sassafras series consists of nearly level to sloping, well-drained soils. These soils formed under a hardwood forest in marine and fluvial deposits. They are in high areas and on side slopes. In a representative profile, in a cultivated area, the plow layer is dark yellowish-brown sandy loam about 10 inches thick. The upper part of the subsoil is yellowish-brown sandy loam to a depth of 14 inches. The middle part is yellowish-brown sandy clay loam to a depth of 30 inches. The lower part is yellowish-brown sandy loam to a depth of 40 inches. The substratum is brownish-yellow loamy sand to a depth of 60 inches.

Sassafras soils are medium in natural fertility and moderate in organic-matter content. Permeability is moderate, and the available water capacity is moderate.

Downer Series: The Downer series consists of nearly level to sloping, well-drained soils. These soils formed mainly under a hardwood forest in marine or fluvial deposits. They are in high areas. In a representative profile, in a cultivated area, the plow layer is dark grayish-brown loamy sand about 10 inches thick. The subsurface layer is yellowish-brown loamy sand 6 inches thick. The subsoil is yellowish-brown sandy loam 12 inches thick. The substratum is yellowish-brown loamy sand to a depth of 60 inches.

Downer soils are medium in fertility and low to moderate in organic-matter content. Permeability is moderately rapid, and the available water capacity is moderate. The soils warm early. Extensive cultivated areas of the loamy sand soils are subject to soil blowing if left bare in winter.

damiano long engineering and planning, llc camden nj 856-225-9300



Aura Series: The Aura series consists of nearly level or gently sloping, well-drained soils. These soils formed under a hardwood forest on divides and knolls. In a representative profile, in a cultivated area, the plow layer is dark grayish-brown sandy loam about 8 inches thick. The subsurface layer is brown sandy loam 4 inches thick. The upper 12 inches of the subsoil is yellowish-brown sandy clay loam, and the lower 36 inches is firm and very firm, yellowish-red gravelly sandy clay loam.

Aura soils are medium in natural fertility and moderate or low in organic-matter content. Permeability is moderate or moderately slow in the lower part of the subsoil. Without proper management, intense cultivation causes compaction and results in a plowpan moderately slow in permeability; roots penetrate only cracks and fractures in the dense lower part of the subsoil.

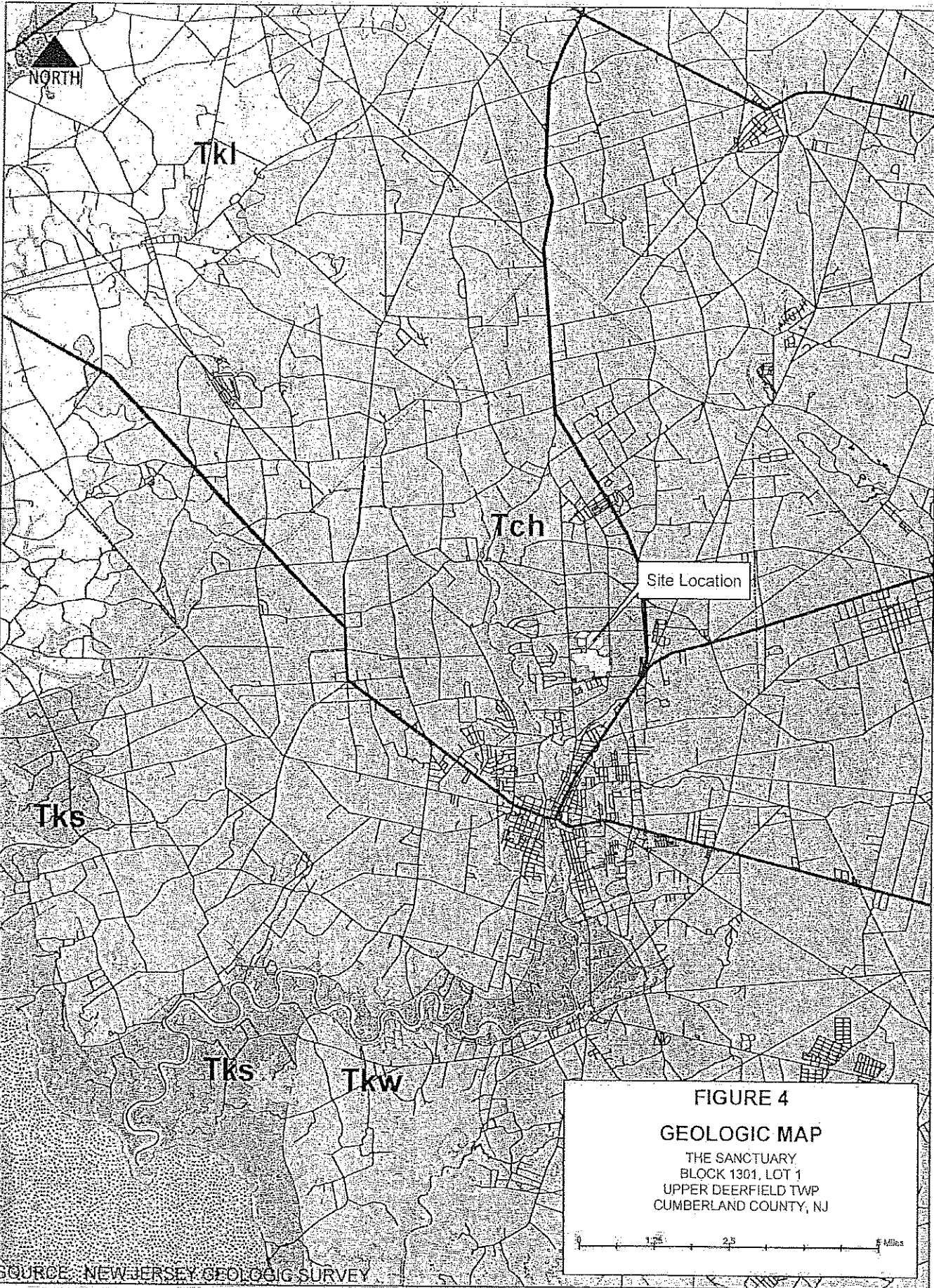
Muck: Muck is nearly level and consists of black, finely decomposed, saturated soil material. At most times, the saturated soil material is essentially liquid and has little bearing capacity. Muck ranges from 16 inches to 10 feet or more in thickness, but it generally is 3 feet or more thick.

Muck is in low areas that are stream courses or are transitional from Tidal Marsh to mineral soils of the uplands. It is subject to frequent, short-duration flooding. The water table is at the surface throughout the year except during extreme droughts. Included in mapping are some mineral soils near streamheads. Natural fertility is medium. If drained, these soils have high available water capacity. Permeability is rapid.

Geology

According to the Bedrock Geologic Map of New Jersey, the site is located in an area underlain by the Cohansey Formation (Geologic Symbol Tch) (*Figure 4*). This formation consists of fine to coarse-grained sand, which is locally gravelly. The formation is massive to crossbedded, and is gray-brown or dark-gray in color, and weathers yellow to white. Typically, the weathered sand is nearly all quartz or rock fragments of orthoquartzite. Where less weathered, small amounts (5-10 percent) of potassium feldspar are present. The Cohansey is interbedded with discrete beds of clay or silty clay. Dark-gray beds commonly contain carbonized wood fragments, some of which are log size. The thicker clay beds occur in lenses that commonly have small to very large pieces of lignitized wood. Locally, the formation consists of several thin- to thick-bedded, upward-coarsening sections (clay to sand). The sand is locally coarsely stratified (typically small-amplitude crossbeds) and locally highly bioturbated. The clay is extensively bioturbated. These beds represent the deepest marine beds found in the Cohansey in the New Jersey Coastal Plain.

The basal contact with underlying units has considerable relief. The contact is sharp and commonly consists of a thin bed of fine gravelly sand. The original thickness of the Cohansey is difficult to ascertain because of extensive erosion. The formation lies in a broad channel and is thickest near Atlantic City where it is nearly 350 feet thick.



V. TECHNICAL OVERVIEW

Phase II/Site Investigation:

The Phase II/Site Investigation was performed in accordance with the recommendations for Site Investigation made by the Historic Pesticide Contamination Task Force. These recommendations include sampling of former agricultural areas prior to site development. Addendum 5 of the *Findings and Recommendations for the Remediation of Historic Pesticide Contamination* (Final Report, March 1999) sets forth the Site Investigation Sampling Methods, which were developed by the NJDEP. Specifically, the Site Investigation Sampling Methods includes the following:

Sample Location and Depth:

Discrete samples should be taken at a depth of 0-6" within farm fields. If extent of former fields cannot be determined, the entire property should be sampled.

Sample Frequency:

Sampling frequency is dependent on the size of the site:

Sites < 1-10 acres, 1 sample for every 2 acres with a minimum of 2 samples; then sites > 10 acres add 1 sample for every 5 acres.

Analytical Parameters:

All samples should be analyzed for arsenic, lead and a pesticide scan (SW 846-8081A). The pesticide scan includes a total of 20 compounds including DDT, DDD, DDE, dieldrin and chlordane.

The property comprises approximately 219 acres; therefore 49 samples were collected to comply with the above-referenced guidelines. The samples were collected at a depth of 0-6 inches bgs throughout the property. The parameter groups selected for laboratory analysis for the Site Investigation phase included:

- Lead, USEPA Test Method 6010
- Arsenic, USEPA Test Method 6010
- Pesticides, USEPA Test Method 8082

Preliminary Remedial Investigation:

The Remedial Investigation activities were performed in accordance with the applicable sections of the Technical Requirements for Site Remediation (N.J.A.C. 7:26E). No pesticides were detected above the RDCSCC in the Site Investigation phase, therefore the parameter groups selected for laboratory analysis for the Preliminary Remedial Investigation phase included:

- Lead, USEPA Test Method 6010
- Arsenic, USEPA Test Method 6010

Samples were collected in discrete six inch (6") intervals with a properly decontaminated bucket auger. Sampling methods, sample preservation requirements, sample handling times, and decontamination procedure for field equipment conformed to industry

methods such as those specified in the NJDEP "Field Sampling Procedures Manual" made effective by the NJDEP in May 1992.

Samples for all phases of the study remained in the custody of Damiano Long until their release to the laboratory under appropriate Chain of Custody. Chain of Custody Documentation has been included in *Appendix C*.

Quality assurance procedures as outlined in N.J.A.C. 7:26E - 2.1 were utilized throughout all phases of the project to insure reliable data. The laboratories performing the analyses have applicable New Jersey certifications pursuant to N.J.A.C. 7:18. Analytical methods used have been published and approved by organizations with expertise in the development of standardized analytical methods. Quality assurance and quality control procedures specified in the analytical methods were also followed.

VI. SYNOPSIS OF SAMPLING ACTIVITIES

Following identification of arsenic and lead contamination, 89 additional samples were collected to delineate the horizontal and vertical extent of the impacted soils, as well as to define the extent of excavation and disposal that would be required for remediation. This section presents a summary of all sampling activities performed on the site to date. Three (3) analytical summary tables are included in this section. Table 1 summarizes the initial Phase II/Site Investigation samples. Table 2 summarizes the additional Remedial Investigation samples, and provides the arsenic and lead results documented in the former orchard area during the initial Phase II/Site Investigation. Table 3 summarizes the horizontal delineation samples collected at the perimeter of the former orchard area. The sample locations are shown on the Preliminary Remedial Investigation Plan in *Appendix B*. Analytical results are included in *Appendix D*.

Phase II/Site Investigation Samples:

The Phase II Environmental Site Assessment identified arsenic and lead contamination on the property due to historical applications of lead arsenical pesticides. Forty-nine (49) samples (US-1 through US-49) were collected at 0-6 inches bgs. Of the 49 samples collected during the Phase II study, 21 indicated concentrations of arsenic and/or lead above the RDCSCC (US-1 through US-8, US-10 through US-19 and US-24 through US-26). These 21 samples were located within the former orchard area at the northern portion of the site. None of the soil samples on the balance of the site (US-9, US-20 through US-23, and US-27 through US-49) contained lead or arsenic above the RDCSCC. The pesticide scan did not indicate concentrations above the RDCSCC for any of the 49 samples. A copy of the Phase II Sample Location Plan has been included in *Appendix A*. *Table 1* presents a summary of the analytical results for the Phase II/Site Investigation.

Table 1
Phase II/Site Investigation Samples

Sample ID	Depth	Date	Analytical Parameters	Constituents Detected	Results (Mg/Kg)	NJDEP Soil Cleanup Criteria (Mg/Kg)
US-1	0 - 6"	3/29/04	Lead	Lead	100	400
			Arsenic	Arsenic	37	20
			Pesticides	P, P'-DDD	0.0083	3
				P, P'-DDE	0.059	2
				P, P'-DDT	0.017	2
US-2	0 - 6"	3/29/04	Lead	Lead	140	400
			Arsenic	Arsenic	33	20
			Pesticides	P, P'-DDE	0.032	2
				P, P'-DDT	0.020	2
US-3	0 - 6"	3/29/04	Lead	Lead	570	400
			Arsenic	Arsenic	110	20
			Pesticides	P, P'-DDE	0.24	2
				P, P'-DDT	0.17	2
US-4	0 - 6"	3/29/04	Lead	Lead	290	400
			Arsenic	Arsenic	86	20
			Pesticides	P, P'-DDD	0.010	3
				P, P'-DDE	0.13	2
				P, P'-DDT	0.081	2
US-5	0 - 6"	3/29/04	Lead	Lead	87	400
			Arsenic	Arsenic	22	20
			Pesticides	P, P'-DDE	0.041	2
				P, P'-DDT	0.023	2
US-6	0 - 6"	3/29/04	Lead	Lead	400	400
			Arsenic	Arsenic	99	20
			Pesticides	P, P'-DDE	0.46	2
				P, P'-DDT	0.73	2
US-7	0 - 6"	3/29/04	Lead	Lead	220	400
			Arsenic	Arsenic	59	20
			Pesticides	P, P'-DDD	0.0092	3
				P, P'-DDE	0.13	2
				P, P'-DDT	0.077	2
US-8	0 - 6"	3/29/04	Lead	Lead	320	400
			Arsenic	Arsenic	68	20
			Pesticides	P, P'-DDD	0.011	3
				P, P'-DDE	0.14	2
				P, P'-DDT	0.080	2
US-9	0 - 6"	3/29/04	Lead	Lead	17	400
			Arsenic	Arsenic	2.4	20
			Pesticides	none	ND	-
US-10	0 - 6"	3/29/04	Lead	Lead	360	400
			Arsenic	Arsenic	100	20
			Pesticides	P, P'-DDD	0.0078	3
				P, P'-DDE	0.13	2
				P, P'-DDT	0.065	2

Table 1 continued on next page

Table 1 continued from previous page

Sample ID	Depth	Date	Analytical Parameters	Constituents Detected	Results (Parts Per Million)	NJDEP Soil Cleanup Criteria (Parts Per Million)
US-11	0 - 6"	3/29/04	Lead	Lead	280	400
			Arsenic	Arsenic	82	20
			Pesticides	P, P'-DDD	0.020	3
				P, P'-DDE	0.21	2
				P, P'-DDT	0.18	2
US-12	0 - 6"	3/29/04	Lead	Lead	470	400
			Arsenic	Arsenic	130	20
			Pesticides	P, P'-DDE	0.61	2
				P, P'-DDT	1.1	2
US-13	0 - 6"	3/29/04	Lead	Lead	250	400
			Arsenic	Arsenic	85	20
			Pesticides	P, P'-DDE	0.073	2
				P, P'-DDT	0.037	2
US-14	0 - 6"	3/29/04	Lead	Lead	200	400
			Arsenic	Arsenic	55	20
			Pesticides	P, P'-DDE	0.063	2
				P, P'-DDT	0.033	2
US-15	0 - 6"	3/29/04	Lead	Lead	130	400
			Arsenic	Arsenic	41	20
			Pesticides	P, P'-DDE	0.17	2
				P, P'-DDT	0.29	2
US-16	0 - 6"	3/29/04	Lead	Lead	220	400
			Arsenic	Arsenic	52	20
			Pesticides	P, P'-DDE	0.29	2
				P, P'-DDT	0.45	2
US-17	0 - 6"	3/29/04	Lead	Lead	350	400
			Arsenic	Arsenic	45	20
			Pesticides	P, P'-DDE	0.25	2
				P, P'-DDT	0.54	2
US-18	0 - 6"	3/29/04	Lead	Lead	130	400
			Arsenic	Arsenic	31	20
			Pesticides	P, P'-DDE	0.14	2
				P, P'-DDT	0.17	2
US-19	0 - 6"	3/29/04	Lead	Lead	360	400
			Arsenic	Arsenic	89	20
			Pesticides	P, P'-DDE	0.30	2
				P, P'-DDT	0.21	2
US-20	0 - 6"	3/29/04	Lead	Lead	5.7	400
			Arsenic	Arsenic	20	20
			Pesticides	P, P'-DDE	0.055	2
				P, P'-DDT	0.040	2
US-21	0 - 6"	3/29/04	Lead	Lead	21	400
			Arsenic	Arsenic	4.9	20
			Pesticides	P, P'-DDE	0.025	2
				P, P'-DDT	0.018	2

Table 1 continued on next page

Table 1 continued from previous page

Sample ID	Depth	Date	Analytical Parameters	Constituents Detected	Results (Parts Per Million)	NJDEP Soil Cleanup Criteria (Parts Per Million)
US-22	0 - 6"	3/29/04	Lead	Lead	12	400
			Arsenic	Arsenic	3.3	20
			Pesticides	P, P'-DDE	0.0067	2
				P, P'-DDT	0.0079	2
US-23	0 - 6"	3/29/04	Lead	Lead	68	400
			Arsenic	Arsenic	20	20
			Pesticides	P, P'-DDE	0.13	2
				P, P'-DDT	0.14	2
US-24	0 - 6"	3/29/04	Lead	Lead	350	400
			Arsenic	Arsenic	73	20
			Pesticides	P, P'-DDE	0.25	2
				P, P'-DDT	0.55	2
US-25	0 - 6"	3/29/04	Lead	Lead	230	400
			Arsenic	Arsenic	59	20
			Pesticides	P, P'-DDE	0.48	2
				P, P'-DDT	0.97	2
US-26	0 - 6"	3/29/04	Lead	Lead	34	400
			Arsenic	Arsenic	11	20
			Pesticides	P, P'-DDE	0.17	2
				P, P'-DDT	0.17	2
US-27	0 - 6"	3/29/04	Lead	Lead	14	400
			Arsenic	Arsenic	3.0	20
			Pesticides	P, P'-DDE	0.013	2
				P, P'-DDT	0.021	2
US-28	0 - 6"	3/29/04	Lead	Lead	17	400
			Arsenic	Arsenic	5.5	20
			Pesticides	P, P'-DDE	0.040	2
				P, P'-DDT	0.054	2
US-29	0 - 6"	3/29/04	Lead	Lead	64	400
			Arsenic	Arsenic	16	20
			Pesticides	P, P'-DDE	0.092	2
				P, P'-DDT	0.077	2
US-30	0 - 6"	3/29/04	Lead	Lead	10	400
			Arsenic	Arsenic	2.4	20
			Pesticides	P, P'-DDE	0.0074	2
				P, P'-DDT	0.0092	2
US-31	0 - 6"	3/29/04	Lead	Lead	22	400
			Arsenic	Arsenic	4.0	20
			Pesticides	P, P'-DDE	0.030	2
				P, P'-DDT	0.027	2
US-32	0 - 6"	3/29/04	Lead	Lead	30	400
			Arsenic	Arsenic	8.2	20
			Pesticides	P, P'-DDE	0.016	2
				P, P'-DDT	0.020	2

Table 1 continued on next page

Table 1 continued from previous page.

Sample ID	Depth	Date	Analytical Parameters	Constituents Detected	Results (Parts Per Million)	NJDEP Soil Cleanup Criteria (Parts Per Million)
US-33	0 - 6"	3/29/04	Lead	none	ND	400
			Arsenic	none	ND	20
US-34	0 - 6"	3/29/04	Lead	Lead	12	400
			Arsenic	Arsenic	4.4	20
			Pesticides	P, P'-DDE	0.013	2
				P, P'-DDT	0.018	2
US-35	0 - 6"	3/29/04	Lead	Lead	11	400
			Arsenic	Arsenic	3.7	20
			Pesticides	P, P'-DDE	0.011	2
				P, P'-DDT	0.013	2
US-36	0 - 6"	3/29/04	Lead	Lead	11	400
			Arsenic	none	ND	20
			Pesticides	none	ND	-
US-37	0 - 6"	3/29/04	Lead	Lead	7.3	400
			Arsenic	none	ND	20
			Pesticides	P, P'-DDE	0.011	2
				P, P'-DDT	0.015	2
US-38	0 - 6"	3/29/04	Lead	Lead	8.6	400
			Arsenic	none	ND	20
			Pesticides	P, P'-DDE	0.017	2
				P, P'-DDT	0.016	2
US-39	0 - 6"	3/29/04	Lead	Lead	7.8	400
			Arsenic	Arsenic	2.9	20
			Pesticides	P, P'-DDE	0.015	2
				P, P'-DDT	0.015	2
US-40	0 - 6"	3/29/04	Lead	Lead	15	400
			Arsenic	Arsenic	3.5	20
			Pesticides	P, P'-DDE	0.0076	2
				P, P'-DDT	0.0088	2
US-41	0 - 6"	3/29/04	Lead	Lead	20	400
			Arsenic	Arsenic	4.1	20
			Pesticides	P, P'-DDE	0.056	2
				P, P'-DDT	0.084	2
US-42	0 - 6"	3/29/04	Lead	Lead	8.9	400
			Arsenic	none	ND	20
			Pesticides	P, P'-DDE	0.028	2
				P, P'-DDT	0.025	2
US-43	0 - 6"	3/29/04	Lead	Lead	9.1	400
			Arsenic	Arsenic	3.5	20
			Pesticides	P, P'-DDE	0.0074	2
				P, P'-DDT	0.0095	2
US-44	0 - 6"	3/29/04	Lead	Lead	8.3	400
			Arsenic	none	ND	20
			Pesticides	P, P'-DDE	0.0076	2
				P, P'-DDT	0.0068	2

Table 1 continued on next page

Table 1 continued from previous page

Sample ID	Depth	Date	Analytical Parameters	Constituents Detected	Results (Parts Per Million)	NJDEP Soil Cleanup Criteria (Parts Per Million)
US-45	0 - 6"	3/29/04	Lead	Lead	9.9	400
			Arsenic	none	ND	20
			Pesticides	P, P'-DDE	0.0086	2
				P, P'-DDT	0.011	2
US-46	0 - 6"	3/29/04	Lead	Lead	7.5	400
			Arsenic	none	ND	20
			Pesticides	P, P'-DDE	0.0061	2
				P, P'-DDT	0.0047	2
US-47	0 - 6"	3/29/04	Lead	Lead	22	400
			Arsenic	Arsenic	6.9	20
			Pesticides	P, P'-DDE	0.059	2
				P, P'-DDT	0.068	2
US-48	0 - 6"	3/29/04	Lead	Lead	15	400
			Arsenic	none	ND	20
			Pesticides	none	ND	-
US-49	0 - 6"	3/29/04	Lead	Lead	25	400
			Arsenic	none	ND	20
			Pesticides	P, P'-DDE	0.0096	2
				P, P'-DDT	0.012	2

*Results in **Bold** indicate exceedances of the NJDEP Residential Direct Contact Cleanup Criteria.

Additional Site Investigation Samples:

Four (4) additional Site Investigation samples were collected (US50, US 51, US 52 and US 53) for supplementary data at the 0-6 inch increment. All of these samples indicated contaminants above the RDCSCC, however no significantly elevated levels were detected. *Table 2* presents a summary of the analytical results for the additional site investigation samples.

Vertical Delineation Samples:

Vertical delineation was generally conducted at sample locations indicating the highest contaminant concentrations. The locations selected for vertical delineation included depth increments collected in discrete six inch intervals below samples US-3, US-4, US-6, US-10, US-11, US-12, US-13, US-19, US-24, and US50. Samples at the 6-12 inch interval were initially analyzed, with successive depth intervals being activated for analysis until results below the RDCSCC were achieved. The vertical delineation samples included the following. The notation in parentheses indicates the depth at which the sample was collected.

- | | |
|-----------------|-----------------|
| ▪ US3(6-12) | ▪ US12(6-12) |
| ▪ US3(12-18) | ▪ US 13 (6-12) |
| ▪ US3(18-24) | ▪ US 13 (12-18) |
| ▪ US 3 (24-30) | ▪ US19(6-12) |
| ▪ US 4 (6-12) | ▪ US19(12-18) |
| ▪ US6(6-12) | ▪ US19(18-24) |
| ▪ US6(12-18) | ▪ US 24 (6-12) |
| ▪ US6(18-24) | ▪ US 24 (12-18) |
| ▪ US10(6-12) | ▪ US 24 (18-24) |
| ▪ US 11 (6-12) | ▪ US50(6-12) |
| ▪ US 11 (12-18) | ▪ US50(12-18) |
| ▪ US12(12-18) | |

Table 2 presents a summary of the analytical results for the vertical delineation samples.

"Hotspot" Delineation Samples:

The Site Investigation samples indicated 5 sample locations (US-3, US-6, US-10, US-12 and US-19), where arsenic levels approached or exceeded 90 parts per million (ppm). This threshold indicates areas where; according to sources at NJDEP, blending would not be effective to render samples below the RDCSCC. An attempt was made to delineate the horizontal and vertical extent of these "hotspots" in order to define the amount of excavation and disposal that would be required to remediate these areas.

Samples were collected 10 feet to the north, south, east and west of locations US-3, US-6, US-10, US-12 and US-19. These delineation samples were generally collected at the 0-6 inch increment, as well as at the "clean" depth established by the vertical delineation. At the time the "hotspot" delineation samples were collected, the vertical delineation for sample US-3 was not established. Based on the arsenic levels recorded for sample

US3(18-24), the vertical delineation was estimated, and samples to the north, south, east and west were collected at 30-36 inches. Upon confirmation that the RDCSCC was achieved at 30 inches, the samples at 30-36 inches were not analyzed. The following samples were analyzed as part of the "hotspot" delineation.

- | | |
|-------------------|--------------------|
| ▪ US 3-1N (0-6) | ▪ US 10-1W (0-6) |
| ▪ US 3-1S (0-6) | ▪ US 10-1W (6-12) |
| ▪ US 3-1E (0-6) | ▪ US 12-1N (0-6) |
| ▪ US 3-1W (0-6) | ▪ US 12-1N (12-18) |
| ▪ US 6-1N (0-6) | ▪ US 12-1S (0-6) |
| ▪ US 6-1N (18-24) | ▪ US 12-1S (12-18) |
| ▪ US 6-1S (0-6) | ▪ US 12-1E (0-6) |
| ▪ US 6-1S (18-24) | ▪ US 12-1E (12-18) |
| ▪ US 6-1E (0-6) | ▪ US 12-1W (0-6) |
| ▪ US 6-1E (18-24) | ▪ US 12-1W (12-18) |
| ▪ US 6-1W (0-6) | ▪ US 19-1N (0-6) |
| ▪ US 6-1W (18-24) | ▪ US 19-1N (18-24) |
| ▪ US 10-1N (0-6) | ▪ US 19-1S (0-6) |
| ▪ US 10-1N (6-12) | ▪ US 19-1S (18-24) |
| ▪ US 10-1S (0-6) | ▪ US 19-1E (0-6) |
| ▪ US 10-1S (6-12) | ▪ US 19-1E (18-24) |
| ▪ US 10-1E (0-6) | ▪ US 19-1W (0-6) |
| ▪ US 10-1E (6-12) | ▪ US 19-1W (18-24) |

Table 2 presents a summary of the analytical results for the "hotspot" delineation samples.

Horizontal ("Perimeter") Delineation:

Twenty-six (26) perimeter samples (P1 through P22, P 5A, P 12A, P 13A, and P 19A) were collected along the boundary of the former orchard area to establish horizontal delineation of the contaminated area. The perimeter samples were generally collected every 200 feet at a depth of 0-6 inches bgs. These samples, along with the existing property boundaries, define the approximate area to be remediated on the site. The perimeter samples P1 through P22 were collected on February 15, 2005. Follow-up samples P 5A, P 12A, P 13A and P 19A were collected on March 22, 2005 to refine the delineation. The area south of sample P 13A requires additional sampling to confirm and complete the horizontal delineation. *Table 3* presents a summary of the analytical results for the "perimeter" delineation samples.

Table 2
Site Investigation, Vertical Delineation and "Hotspot" Sample Data
(Arsenic and Lead Results within Former Orchard Area)

Sample ID	Depth (inches)	Date	Arsenic (ppm)	Lead (ppm)
US-1	0-6	3/29/04	37	100
US-2	0-6	3/29/04	33	140
US-3	0-6	3/29/04	110	570
US3(6-12)	6-12	2/15/05	91.58	393.1
US3(12-18)	12-18	2/15/05	77.19	307.2
US3(18-24)	18-24	2/15/05	99.45	346.4
US 3 (24-30)	24-30	3/22/05	11.1	20.24
US 3-1N (0-6)	0-6	3/22/05	111.9	487.3
US 3-1S (0-6)	0-6	3/22/05	71.79	343.3
US 3-1E (0-6)	0-6	3/22/05	95.61	438.3
US 3-1W (0-6)	0-6	3/22/05	99	417.2
US-4	0-6	3/29/04	86	290
US 4 (6-12)	6-12	3/22/05	13.9	29.67
US-5	0-6	3/29/04	22	87
US-6	0-6	3/29/04	99	400
US6(6-12)	6-12	2/15/05	86.38	298.1
US6(12-18)	12-18	2/15/05	29.45	6.821
US6(18-24)	18-24	2/15/05	8.077	9.243
US 6-1N (0-6)	0-6	3/22/05	96.37	340.8
US 6-1N (18-24)	2	3/22/05	6.859	4.457
US 6-1S (0-6)	0-6	3/22/05	84.93	284.7
US 6-1S (18-24)	2	3/22/05	9.279	12.81
US 6-1E (0-6)	0-6	3/22/05	83.28	302.4
US 6-1E (18-24)	2	3/22/05	7.223	7.01
US 6-1W (0-6)	0-6	3/22/05	101.2	378.6
US 6-1W (18-24)	2	3/22/05	5.334	6.347
US-7	0-6	3/29/04	59	220
US-8	0-6	3/29/04	68	320
US-10	0-6	3/29/04	100	360
US10(6-12)	6-12	2/15/05	11.37	16.28
US 10-1N (0-6)	0-6	3/22/05	166.3	343.2
US 10-1N (6-12)	6-12	3/22/05	80.78	279.7
US 10-1S (0-6)	0-6	3/22/05	103.9	361
US 10-1S (6-12)	6-12	3/22/05	64.01	47.11
US 10-1E (0-6)	0-6	3/22/05	84.29	267.1
US 10-1E (6-12)	6-12	3/22/05	13.24	14.6
US 10-1W (0-6)	0-6	3/22/05	123.9	149.5
US 10-1W (6-12)	6-12	3/22/05	27.94	15.4
US-11	0-6	3/29/04	82	280
US 11 (6-12)	6-12	3/22/05	44.53	125.8
US 11 (12-18)	12-18	3/22/05	7.7	17
US-12	0-6	3/29/04	130	470
US12(6-12)	6-12	2/15/05	50.55	170.3
US12(12-18)	12-18	2/15/05	15.3	9.448

Table 2 continued on next page

Table 2 continued from previous page

Sample ID	Depth (inches)	Date	Arsenic (ppm)	Lead (ppm)
US 12-1N (0-6)	0-6	3/22/05	83.7	238.9
US 12-1N (12-18)	12-18	3/22/05	31.22	26.01
US 12-1S (0-6)	0-6	3/22/05	97.91	339.8
US 12-1S (12-18)	12-18	3/22/05	44.49	51.25
US 12-1E (0-6)	0-6	3/22/05	95.51	335.6
US 12-1E (12-18)	12-18	3/22/05	6.67	7.062
US 12-1W (0-6)	0-6	3/22/05	108.1	366.9
US 12-1W (12-18)	12-18	3/22/05	37.96	23.17
US-13	0-6	3/29/04	85	250
US 13 (6-12)	6-12	3/22/05	63.29	48.95
US 13 (12-18)	12-18	3/22/05	14	14
US-14	0-6	3/29/04	55	200
US-15	0-6	3/29/04	41	130
US-16	0-6	3/29/04	52	220
US-17	0-6	3/29/04	45	350
US-18	0-6	3/29/04	31	130
US-19	0-6	3/29/04	89	360
US19(6-12)	6-12	2/15/05	73.46	237.1
US19(12-18)	12-18	2/15/05	28.39	36.1
US19(18-24)	18-24	2/15/05	11.5	11.53
US 19-1N (0-6)	0-6	3/22/05	58.44	257.2
US 19-1N (18-24)	2	3/22/05	3.995	6.682
US 19-1S (0-6)	0-6	3/22/05	76.16	310.8
US 19-1S (18-24)	2	3/22/05	8.657	11.23
US 19-1E (0-6)	0-6	3/22/05	65.44	293.4
US 19-1E (18-24)	2	3/22/05	4.362	7.979
US 19-1W (0-6)	0-6	3/22/05	58.22	251.2
US 19-1W (18-24)	2	3/22/05	4.638	6.882
US-20	0-6	3/29/04	20	5.7
US-21	0-6	3/29/04	4.9	21
US-22	0-6	3/29/04	3.3	12
US-23	0-6	3/29/04	20	68
US-24	0-6	3/29/04	73	350
US 24 (6-12)	6-12	3/22/05	121.1	386.5
US 24 (12-18)	12-18	3/22/05	28	27
US 24 (18-24)	18-24	3/22/05	9.2	13
US-25	0-6	3/29/04	59	230
US-26	0-6	3/29/04	11	34
US50	0-6	2/15/05	34.74	94.16
US50(6-12)	6-12	2/15/05	37.8	113.6
US50(12-18)	12-18	2/15/05	7.242	4.864
US 51	0-6	3/22/05	42.66	186.7
US 52	0-6	3/22/05	49.34	149.6
US 53	0-6	3/22/05	41.85	173.7

The NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) for Arsenic is 20 parts per million (ppm):

The RDCSCC for Lead is 400 ppm

Results in Bold indicate exceedances of the RDCSCC

Table 3
Horizontal Delineation
(Perimeter Sample Data)

Sample ID	Depth (inches)	Date	Arsenic (ppm)	Lead (ppm)
P1	0-6	2/15/05	12.38	38.26
P2	0-6	2/15/05	3.945	6.365
P3	0-6	2/15/05	12.78	25.43
P4	0-6	2/15/05	1.293	5.871
P5	0-6	2/15/05	40.45	110.6
P 5A	0-6	3/22/05	3.811	10.84
P6	0-6	2/15/05	1.959	6.146
P7	0-6	2/15/05	2.283	6.863
P8	0-6	2/15/05	2.66	6.17
P9	0-6	2/15/05	3.207	5.496
P10	0-6	2/15/05	2.706	4.134
P11	0-6	2/15/05	8.317	23.16
P12	0-6	2/15/05	24.12	66.26
P 12A	0-6	3/22/05	14.82	55.63
P13	0-6	2/15/05	43.23	147
P 13A	0-6	3/22/05	33.07	138
P14	0-6	2/15/05	17.47	62.7
P15	0-6	2/15/05	46.42	159.8
P16	0-6	2/15/05	11.12	30.93
P17	0-6	2/15/05	3.959	8.681
P18	0-6	2/15/05	19.6	48.43
P19	0-6	2/15/05	34.04	69.9
P 19A	0-6	3/22/05	6.943	18.13
P20	0-6	2/15/05	7.783	18.59
P21	0-6	2/15/05	6.868	29.11
P22	0-6	2/15/05	3.33	9.893

The NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) for Arsenic is 20 parts per million (ppm).

The RDCSCC for Lead is 400 ppm

Results in **Bold** indicate exceedances of the RDCSCC

VII. SITE INVESTIGATION CONCLUSIONS

The investigative activities conducted on the site consisted of the collection and analysis of 138 soil samples. The 49 samples collected during the Phase II/Site Investigation indicated that historical lead arsenate applications from a previous apple orchard resulted in arsenic and lead contamination of the shallow soil column within the former orchard area. Based on interpretation of the 1940 aerial photograph, it is estimated that the former orchard use encompasses 91 of the approximate 219 acres of the present day lot. Horizontal (perimeter) delineation samples estimate the remediation area at 96 acres.

The primary contaminant at the site is arsenic. Pesticides were not detected above the RDCSCC in any of the initial Phase II/Site Investigation samples. Within the former orchard area, lead was detected above the RDCSCC in only 5 of the 110 samples collected. Lead arsenate was typically applied to individual trees with handgun sprayers, thus resulting in significant variability in soil concentrations and distribution (*Historical use of lead arsenate insecticides; resulting soil contamination and implications for soil remediation*, Peryea 2004). The remediation of this contamination is expected to be achieved through a combination of "hotspot" excavations and soil blending as discussed in Section XI of this report.

VIII. ADDITIONAL DATA ACQUISITION

At this time additional sampling points are proposed to the south of sample P13A to complete the horizontal delineation. To verify the blending depth, additional data will be collected in the blending area in conjunction with NJDEP recommendations. Additional data will also be collected to complete the delineation of the "hotspots".

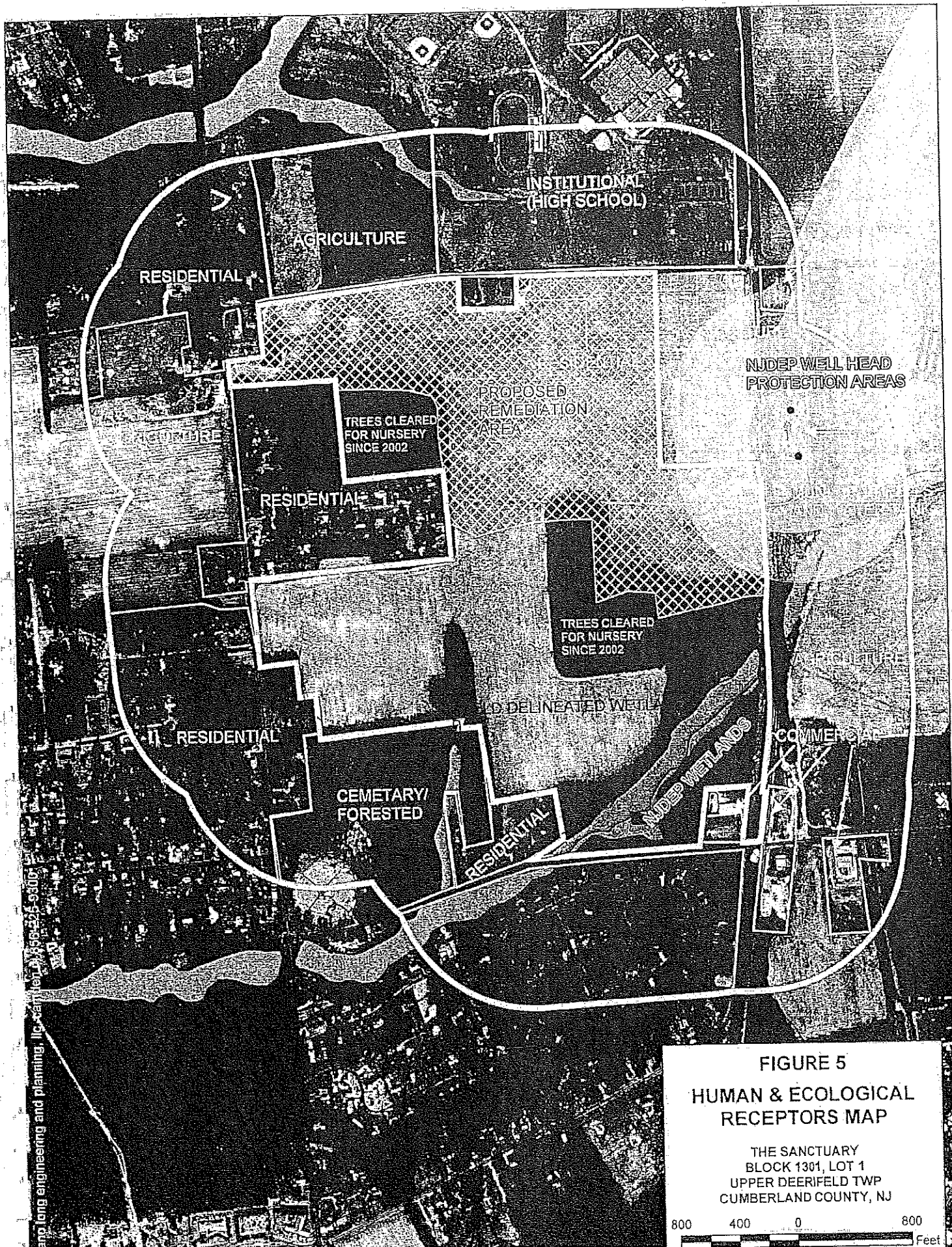
IX. IDENTIFICATION OF HUMAN RECEPTORS

Human receptors within 1,000 feet of the site were identified on 2002 aerial photography (*Figure 5*). This evaluation was conducted through analysis of NJDEP 1995/97 Land Use/Land Cover GIS data, aerial photography interpretation and field studies.

Numerous residential dwellings exist within 1,000 feet of the site. Approximately 7 residential properties abut the remediation area to the north along Love Lane, and to the west along Merlin Street and Old Deerfield Pike. Cumberland Regional High School exists across Love Lane to the north of the remediation area. Recreational fields associated with the school are located within approximately 50 feet of the remediation area. The school building lies approximately 920 feet from the remediation area. No other sensitive human receptors were identified within 1,000 feet of the site.

X. BASELINE ECOLOGICAL EVALUATION

This baseline ecological evaluation was prepared in accordance with N.J.A.C. 7:26E-3.11 for the purpose of identifying the co-occurrence of contaminants of ecological concern on the site; environmentally sensitive natural resources on or in the immediate vicinity of the site; and potential contaminant migration pathways to an environmentally sensitive resource, or physically observed impacts to environmentally sensitive resources.



Contaminants of Ecological Concern

Arsenic and Lead are considered contaminants of ecological concern. According to *Contaminant Hazard Reviews* (Eisler, 1988), lead arsenate pesticides present a risk to aquatic communities. The New Jersey Surface Water Quality Standards for arsenic and lead in Cornwell Run, an FW2 watercourse, are presented below.

Arsenic:	0.017 ppb (carcinogenic effect-based human health criteria)
Lead:	38 ppb (acute aquatic life protection criteria)
	5.4 ppb (chronic aquatic life protection criteria)
	5 ppb (non- carcinogenic effect-based human health criteria)

Arsenic and lead are also water supply contaminants which are regulated by federal and state drinking water standards. Currently, the federal drinking water Maximum Contaminant Level (MCL) for arsenic is 50 parts per billion (ppb). Beginning in January 2006, the federal MCL for arsenic will be 10 ppb. New Jersey has enacted a new standard for arsenic concentrations in drinking water which is more protective than the federal standard. This new standard of 5 ppb in drinking water will become effective on January 23, 2006. The action level for lead in drinking water is 15 ppb.

Environmentally Sensitive Areas

Review of the NJDEP's Environmentally Sensitive Areas Guidance Document, NJDEP Geographic Information Systems (GIS), field surveys, and information provided by the Natural Heritage Program and US Fish and Wildlife Service indicated the following environmentally sensitive areas on or within proximity to the site.

- Freshwater Wetlands and Wetland Transition Areas
- Public Community Supply Wells and Well Head Protection Areas

Freshwater wetlands and wetland transition areas exist on the southern portion of the site. These wetlands were identified and delineated through field surveys and are generally associated with Cornwell Run, which bisects the southeastern portion of the site. A small wetland area also occurs at the southwestern portion of the site. The wetlands associated with Cornwell Run are located between 325 feet and 680 feet from the proposed remediation area. The small wetland area at the southwestern portion of the site is located approximately 1,240 feet from the proposed remediation area.

Public Community Supply wells were identified through GIS mapping as well as field surveys. Two wells identified as Upper Deerfield Township Water Department wells #3 and #4 exist approximately 290 feet and 430 feet from the area of concern. Well Head Protection Areas associated with these wells coincides with approximately 7.5 acres on the eastern side of the proposed remediation area.

Several sources were consulted in determining whether the site contained rare, threatened, or endangered (RTE) species. These sources included the New Jersey Landscape Project, the New Jersey Department of Environmental Protection's (NJDEP) Natural Heritage Program (NHP) Database, the NHP Priority Sites GIS Data, and consultation with the U.S. Fish and Wildlife Service (USFWS).

The NJDEP-NHP provided information on rare plants, animals and/or natural communities in the project study area in a letter, with attachments, dated April 21, 2004. This response indicated that the NJDEP-NHP has records for barred owl (*Strix varia*), bald eagle nest buffer (*Haliaeetus leucocephalus*) and the Cooper's hawk (*Accipiter cooperii*) on the site. The preferred habitat for barred owl (*Strix varia*) and cooper's hawk (*Accipiter cooperii*) is wooded wetland areas. The nearest wooded wetland area is located approximately 680 feet from the remediation area. The remediation area and immediate surrounding vicinity would not be considered preferred habitat for either of these species.

A letter received from USFWS dated June 24, 2004 indicates a known nest site for the federally listed (threatened) bald eagle (*Haliaeetus leucocephalus*) within five miles of the project area. Consultation with USFWS was conducted and it was determined that the forested areas of concern on the site have been cleared since 2002 in conjunction with the sites use as a nursery. The USFWS determined that construction of the proposed housing development would have no adverse effect on the bald eagle (*Haliaeetus leucocephalus*). The location of the nest buffer is not available to the general public; therefore the proximity of the nest buffer in relation to the remediation area cannot be determined.

The USFWS also indicated that the federally listed plant species swamp pink (*Helonias bullata*) has the potential to be affected by the proposed project. A survey was requested to determine the species presence or absence. The survey was conducted on August 3 and 4, 2004 within the wetlands on the southeastern portion of the property and extending 500 feet into any adjacent wetlands and/or waterways. This survey revealed no swamp pink within the wetland areas of the site. The USFWS reviewed the survey report and concurred with the findings that the construction of the proposed housing development will have no adverse effect on swamp pink (*Helonias bullata*).

As part of the Letter of Interpretation (LOI) process for verifying the jurisdictional wetland boundary and wetland resource value classification, the NJDEP reviews Threatened and Endangered Species habitat data. The wetlands on the site have been classified as Intermediate Resource Value, which implies that these wetlands do not provide habitat for Threatened or Endangered species. Based on field studies, consultation with the appropriate regulatory agencies, and review of the wetland resource value classification by NJDEP, it does not appear that the site provides suitable habitat for Threatened or Endangered Species.

No other environmentally sensitive areas were identified in conducting this evaluation. Copies of correspondences relating to the identification of Threatened or Endangered species have been included in Appendix E.

Potential Migration Pathways

Field studies indicated no evidence of stressed or dead vegetation, absence of biota in any specific areas, or seeps/discharges. According to the GIS data, screened pumping intervals for wells #3 and #4 are greater than 100 feet deep. The surficial soil contamination is not expected to result in any negative effects to groundwater quality, the public water supply wells, or the Well Head Protection Areas.

Two erosional ditches drain a portion of the remediation area and eventually lead to Cornwell Run. The presence of these ditches may present a potential migration pathway to Cornwell Run and associated wetlands and wetland transition areas. To affect the wetland areas, contaminated sediments would have to travel a minimum of 500 feet to the wetland areas. Soil sampling will be conducted along these erosional ditches to rule out these areas as migration pathways.

Baseline Ecological Evaluation Conclusions

The co-occurrence of contaminants of ecological concern; environmentally sensitive natural resources; and contaminant migration pathways was not identified in performing this evaluation. Other than limited soil sampling to rule out the presence of erosional ditches as migration pathways, no further ecological evaluation is warranted, nor is any proposed.

XI. PROPOSED REMEDIAL ACTION

The remedial action will involve a combination of "hotspot" excavations and capping (under institutional and engineering controls) and soil blending.

"Hotspot" Excavations and Capping

The current data suggests that 6 areas require excavation and disposal to effectively remediate soils with elevated arsenic levels. The anticipated excavation areas include soils from the vicinity of samples US-3, US-6, US-10, US-12, US-19 and US-24. Of these 6 areas, successful vertical and horizontal delineation was achieved for the US-19 location. The area of US-19 would require a 20 foot by 20 foot by 2 foot deep excavation, totaling approximately 30 cubic yards. The extent of excavation required in the other 5 areas will be determined through additional delineation sampling. Following complete delineation of all "hotspot" areas, excavation would ensue and contaminated soils would be consolidated under cover in one of the open space areas of the development. Prior to blending, the excavations will be backfilled with soils removed from the consolidation area.

The cover for the consolidation area is proposed to consist of a geotextile fabric and three to five feet of uncontaminated compacted soils from areas outside the AOC. At this time suitable areas for on-site consolidation are being investigated, however the areas are

anticipated to consist of grass areas without landscape plantings. Upon confirmation of the volume of soil to be capped, suitable areas will be determined and a draft deed notice document will be submitted for NJDEP review and approval. The restrictions, maintenance and biennial certification for this area would be the responsibility of the homeowner's association.

Soil Blending

Soil tilling equipment will be utilized within the AOC to blend surficial soils with uncontaminated soils from the 1.5 to 3.5 foot interval. The area proposed for blending encompasses approximately 96 acres as defined by the "perimeter" soil samples P1 through P22, P 5A, P 12A, P 13A and P 19A. For the purposes of determining the feasibility and depth of blending, remediation calculations were derived by considering a portion of the "hotspot" and "perimeter" data along with the blending area data, as presented in *Table 4*. This data set represents all samples collected in the area to be blended, with the exception of "hotspot" samples above 90 ppm, which will be excavated. "Hotspot" delineation samples below 90 ppm have been considered because it is anticipated that these levels would remain on the site following the excavations. "Perimeter" samples where the RDCSCC was achieved were also excluded as these were not considered representative of the 96 acre blending area.

As indicated in the blending area data summary (Table 4), aside from the "hotspots" that will be excavated, the greatest depth of contamination to be blended is 18 inches (1.5 feet). With an approximate 96 acre blending area, the estimated volume of contaminated soil to be blended is 233,859 cubic yards. The average arsenic concentration in the blending area is 42.09 ppm; therefore a simplifying assumption is that a slightly larger volume of clean subsoil will be required to render the contamination below the RDCSCC. Given the available data, the estimated blending depth is 3.5 feet bgs, with soils from the depth of 1.5 feet to 3.5 feet being incorporated in the blending process.

Site Preparation/Soil Erosion and Sediment Control

The removal of the existing landscaping stock will be conducted by the owner of the nursery. A nominal amount of tree removal and grubbing would be required on the western portion of the AOC to ensure that the entire remediation area is accessible to the blending equipment.

Prior to any remediation activities, soil erosion and sediment controls would be installed on the site per the County Soil Conservation District Approval. This approval will be obtained for the grading and infrastructure improvements associated with construction of the proposed residential subdivision. The controls would generally consist of silt fencing, hay bales, stormwater inlet protection and a stabilized construction entrance. Additional silt fencing, beyond the County approved plan would be placed along the southern boundary of the AOC to contain the contaminated media within the remediation area. Additional hay bales would also be installed outside of the silt fence in low areas and in erosional drainageways, to prevent the transport of contaminated sediments outside the remediation area.

Table 4
Blending Area Data

Sample ID	Depth	Arsenic
US-1	0-6"	37
US-2	0-6"	33
US 3-1S (0-6)	0-6"	71.79
US-4	0-6"	86
US 4 (6-12)	6" 12"	13.9
US-5	0-6"	22
US 6-1S (0-6)	0-6"	84.93
US 6-1S (18-24)	18" 24"	9.279
US 6-1E (0-6)	0-6"	83.28
US 6-1E (18-24)	18" 24"	7.223
US-7	0-6"	59
US-8	0-6"	68
US 10-1E (0-6)	0-6"	84.29
US 10-1E (6-12)	6" 12"	13.24
US-11	0-6"	82
US 11 (6-12)	6" 12"	44.53
US 11 (12-18)	12" 18"	7.7
US 12-1N (0-6)	0-6"	83.7
US 12-1N (12-18)	12" 18"	31.22
US-13	0-6"	85
US 13 (6-12)	6" 12"	63.29
US 13 (12-18)	12" 18"	14
US-14	0-6"	55
US-15	0-6"	41
US-16	0-6"	52
US-17	0-6"	45
US-18	0-6"	31
US 19-1N (0-6)	0-6"	58.44
US 19-1N (18-24)	18" 24"	3.995
US 19-1S (0-6)	0-6"	76.16
US 19-1S (18-24)	18" 24"	8.657
US 19-1E (0-6)	0-6"	65.44
US 19-1E (18-24)	18" 24"	4.362
US 19-1W (0-6)	0.5	58.22
US 19-1W (18-24)	2	4.638
US-25	0-6"	59
US-26	0-6"	11
P5	0-6"	40.45
P12	0-6"	24.12
P13	0-6"	43.23
P 13A	0-6"	33.07
P15	0-6"	46.42
P16	0-6"	11.12
P19	0-6"	34.04
US50	0-6"	34.74
US50(6-12)	6" 12"	37.8
US50(12-18)	12" 18"	7.242
US 51	0-6"	42.66
US 52	0-6"	49.34
US 53	0-6"	41.85

SUMMARY OF BLENDING AREA DATA:

Size of Area: +/- 96 acres
Number of Data Points: 50 Samples
Lowest Arsenic Concentration: 3.995 ppm
Highest Arsenic Concentration: 86 ppm
Average Arsenic Concentration: 42.09 ppm

0-6" Summary:

Number of Data Points: 35 Samples
Lowest Arsenic Concentration: 11 ppm
Highest Arsenic Concentration: 86 ppm
Average Arsenic Concentration: 52.38 ppm

6" - 12" Summary:

Number of Data Points: 5 Samples
Lowest Arsenic Concentration: 13.24 ppm
Highest Arsenic Concentration: 63.29 ppm
Average Arsenic Concentration: 34.55 ppm

12" - 18" Summary:

Number of Data Points: 4 Samples
Lowest Arsenic Concentration: 7.242 ppm
Highest Arsenic Concentration: 31.22 ppm
Average Arsenic Concentration: 15.04 ppm

18" - 24" Summary:

Number of Data Points: 6 Samples
Lowest Arsenic Concentration: 3.995 ppm
Highest Arsenic Concentration: 9.279 ppm
Average Arsenic Concentration: 6.359 ppm

**Greatest Depth of Contamination
to be Blended:**

18 Inches

Size of Area:

+/- 96 Acres

**Cubic yards of Contaminated
Soil to be Blended:**

+/- 233,589 CY

Average Arsenic Concentration:

42.09 ppm

**Estimated Blending Depth Required
to Render Contamination Below 20ppm: 3.5 Feet**

**Cubic yards of Soil to be Blended
Including Contaminated Soil and
Clean Subsoil Beneath Contamination: +/- 544,504 CY**

Post Remediation Sampling and Site Restoration

Attainment of the RDCSCC of 20 ppm for arsenic and 400 ppm for lead within the AOC is the goal of the proposed remedial action. To demonstrate attainment of this goal, post blending soil sampling will consist of the collection of 4 samples per acre at the 0-6 inch increment. In addition, 1 location every 4 acres will be sampled at each 6-inch increment throughout the blending zone. Following receipt of the analytical data demonstrating that the RDCSCC is met, the area will be compacted with a roller for stabilization.

XII. SCHEDULE OF ACTIVITIES

Because the site is located in close proximity to the Cumberland Regional High School, Soil blending activities will not be conducted when school is in session. The proposed schedule of activities is presented below.

Action	Anticipated Start Date	Anticipated Completion Date
Approval of Remedial Investigation and Remedial Action Workplan	June, 2005	
Implement Remedial Action	June, 2006	August, 2006
Post Excavation Sampling	August, 2006	August, 2006
Submittal of Remedial Action Report	October, 2006	November, 2006

In accordance with N.J.A.C. 7:26E-1.4, notification to the Township Clerk will be made 45 days prior to the implementation of remedial actions.

XIII. COST ESTIMATE FOR REMEDIAL ACTIVITIES

Preliminary estimates indicate that the remedial activities, including excavation, blending, analytical costs and environmental consulting will cost \$277,000.00.

XIV. REQUIRED PERMITS

The remediation activities will require a Soil Erosion and Sediment Control Permit from the Cumberland County Soil Conservation District. This permit will be procured as part of the residential subdivision construction.

XV. SITE SPECIFIC HEALTH AND SAFETY PLAN

A Site Specific Health and Safety Plan pursuant to N.J.A.C. 7:26E-1.9 has been included in Appendix F.

XVI. CERTIFICATIONS

A signed and notarized technical submittal certifications page pursuant to N.J.A.C 7:26E has been included on the subsequent page.

CERTIFICATIONS
N.J.A.C. 7:26-1.2 et. seq.

Any person making a submission to the Department required by this chapter and pursuant to N.J.A.C. 7:26E, shall include the following signature and notarized certification, for each technical submittal. Additionally, the certification shall indicate the case name and address, case number, type of documents submitted, e.g. Remedial Action Report, for each technical submittal.

TYPE OF DOCUMENT Remedial Investigation / Rem Action Workplan
CASE NAME The Sauehany
CASE ADDRESS Love Lane & Old Deerfield Pike
CASE NUMBER _____

The following certification shall be signed by:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner of the proprietor, respectively, or;
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.
4. For persons other than 1 through 3 above, by the person with legal responsibility for the site.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement that I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

PRINTED NAME LAWRENCE MCKNIGHT TITLE LAND DEV. MGR.

SIGNATURE [Signature] DATE 6/10/05

NOTARY SIGNATURE [Signature] DATE 6/10/05

Notarial Seal
Karen Traves Hoff, Notary Public

ATTACHMENT B



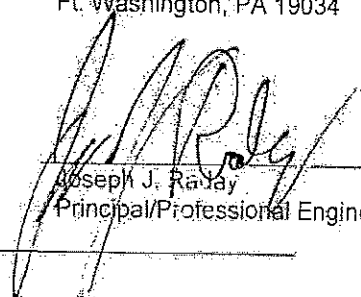
SUPPLEMENTAL REMEDIAL ACTION **WORKPLAN**

**THE SANCTUARY
LOVE LANE AND OLD DEERFIELD PIKE
BLOCK 1301, LOT 1
UPPER DEERFIELD TOWNSHIP,
CUMBERLAND COUNTY, NJ**



Submitted To:

Lawrence McNight
Westrum Land Development, LLC
370 Commerce Drive, Suite 100
Ft. Washington, PA 19034


Joseph J. R. Jay
Principal/Professional Engineer

June 3, 2005

THE SANCTUARY
LOVE LANE & OLD DEERFIELD PIKE
BLOCK 1301, LOT 1,
UPPER DEERFIELD TOWNSHIP, CUMBERLAND COUNTY
PRELIMINARY REMEDIAL INVESTIGATION/
REMEDIAL ACTION WORKPLAN

Table of Contents

	Page
I. Introduction	1
II. Background	1
III. Project Data	2
IV. Physical Setting	4
V. Site Investigation Conclusions	6
VI. Proposed Remedial Action	7
VII. Schedule of Activities	8
VIII. Cost Estimate for Remedial Activities	8
IX. Required Permits	8
X. Site Specific Health and Safety Plan	8
Appendices:	
A. Phase III Sample Location Plan	
B. Chain of Custody Documentation	
C. Analytical Results	
D. Soil Blending Area Map	
E. Soil Blending Area Data	
F. Site Specific Health and Safety Plan	

I. INTRODUCTION

ABR Consultants, LLC (ABR) was contracted by Westrum Development Company, LLC to perform a Preliminary Remedial Investigation/Remedial Action Workplan on a portion of Block 1301, Lot 1 in the Township of Upper Deerfield, Cumberland County. The site is located near the intersection of Love Lane and Old Deerfield Pike. The study area was formerly utilized as an apple orchard and encompasses approximately 96.43 acres on the northern portion of the 222.35 acre property.

II. BACKGROUND

Phase II/Site Investigation:

The Phase II/Site Investigation was performed in accordance with the recommendations for Site Investigation made by the Historic Pesticide Contamination Task Force. These recommendations include sampling of former agricultural areas prior to site development. Addendum 5 of the *Findings and Recommendations for the Remediation of Historic Pesticide Contamination* (Final Report, March 1999) sets forth the Site Investigation DDD, DDE, dieldrin and chlordane.

The property comprises approximately 219 acres; therefore 49 samples were collected to comply with the above-referenced guidelines. The samples were collected at a depth of 0-6 inches throughout the property. The parameter groups selected for laboratory analysis for the Site Investigation phase included:

- Lead, USEPA Test Method 6010
- Arsenic, USEPA Test Method 6010
- Pesticides, USEPA Test Method 8082

Preliminary Remedial Investigation:

The Remedial Investigation activities were performed in accordance with the applicable sections of the Technical Requirements for Site Remediation (N.J.A.C. 7:26E). No pesticides were detected above the RDCSCC in the Site Investigation phase, therefore the parameter groups selected for laboratory analysis for the Preliminary Remedial Investigation phase included:

- Lead, USEPA Test Method 6010
- Arsenic, USEPA Test Method 6010

Samples were collected in discrete 6 inch intervals within a properly decontaminated bucket auger. Sampling methods, sample preservation requirements, sample handling times, and decontamination procedure for field equipment conformed to industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" made effective by the NJDEP in May 1992.

Samples for all phases of the study remained in the custody of ABR until their release to the laboratory under appropriate Chain of Custody. Chain of Custody Documentation has been included in *Appendix C*.

Quality assurance procedures as outlined in N.J.A.C. 7:26E - 2.1 were utilized throughout all phases of the project to insure reliable data. The laboratories performing the analyses have applicable New Jersey certifications pursuant to N.J.A.C. 7:18. Analytical methods used have been published and approved by organizations with expertise in the development of standardized analytical methods. Quality assurance and quality control procedures specified in the analytical methods were also followed.

Phase III/Horizontal and Vertical Delineation Sampling

ABR conducted sampling between August, 2006 and March, 2007. In order to delineate the contaminated area of the project site, 370 samples were taken from 74 locations. A Sample Location Plan is included in *Appendix A*. 5 samples were taken at each location at 6 inch intervals to a depth of 30 inches. Samples collected at the 0-6, 6-12, and 12-18 inch intervals were analyzed for Lead and Arsenic. Samples collected at the 18-24 and 24-30 inch intervals were retained by ABR to be analyzed if contamination levels in the 12-18 inch samples showed elevated levels of Lead and Arsenic. Analytical results are included in *Appendix C*. Chain of Custody documentation included in *Appendix B*.

III. PROJECT DATA

A. FACILITY NAME & LOCATION

The Sanctuary
Love Lane & Old Deerfield Pike
Block 1301, Lot 1
Upper Deerfield Township, Cumberland County, New Jersey

B. AREA OF CONCERN ON PROPERTY

Historic pesticide contamination due to previous orchard operations.

C. REFERENCED REGULATIONS & GUIDANCE DOCUMENTS

- Findings and Recommendations for the Remediation of Historic Pesticide Contamination, Historic Pesticide Contamination Task Force, Final Report-March 1999
- New Jersey Department of Environmental Protection Technical Requirements for Site Remediation (N.J.A.C. 7:26E)
- New Jersey Department of Environmental Protection Cleanup Standards for Contaminated Sites (N.J.A.C. 7:26D, revised 5/12/99)
- New Jersey Department of Environmental Protection and Energy Field Sampling Procedures Manual, May 1992

D. STUDIES CONDUCTED ON THE SITE

Phase II/Site Investigation: 49 discrete soil samples collected throughout the property at a depth of 0-6 inches below the ground surface (bgs). Results of which have been incorporated in this report.

Preliminary Remedial Investigation: Additional 89 samples collected to preliminarily delineate the vertical and horizontal extent of arsenic & lead contamination on the site.

Horizontal and Vertical Delineation Sampling: 370 additional samples were collected throughout the contaminated area of the project site. 222 samples were sent to EMSL Laboratories for analysis. The remaining samples will be retained in case further analysis is required.

E. ANALYTICAL PARAMETERS & METHODS

Lead: USEPA Method 6010
Arsenic: USEPA Method 6010
Pesticides: USEPA Method 8082

Lead, arsenic and pesticide analysis conducted for Phase II/Site Investigation samples.
Arsenic and lead analysis conducted for Remedial Investigation Samples.

F. ANALYTICAL LABORATORIES

EMSL Analytical, Inc. - (856) 858-4800
3 Cooper Street Westmont, NJ 08108
New Jersey Laboratory Certification #: 04653

IV. PHYSICAL SETTING

Physiographic Province

The property is located in New Jersey's Coastal Plain physiographic province. The Coastal Plain is the largest of the 4 physiographic provinces, encompassing approximately three-fifths of the state. The coastal plain is characterized by unconsolidated sediments that dip gently to the southeast. The streams that flow northwest to the Delaware River are confined within steep narrow valleys, while the south and southeast flowing streams generally contain wider floodplains.

Watershed/Water Resources

The site is located within the Cohansey River drainage, which flows into the Delaware Bay. Cornwell Run, a small tributary to the Cohansey flows southwesterly through the southern portion of the property. Groundwater in the Area of Concern varies, but is anticipated to occur at depths greater than 10 feet.

Soils

According to the Soil Survey of Cumberland County the soils on the site mainly consist of Sassafras and Downer series soils (*Figure 3*). Small areas of Aura and Muck soils also occur on the property. The soils encountered in the borings were consistent with the soil survey descriptions and can generally be characterized as brown, fine to coarse sand, some gravel. Soil series descriptions are provided below.

Sassafras Series: The Sassafras series consists of nearly level to sloping, well-drained soils. These soils formed under a hardwood forest in marine and fluvial deposits. They are in high areas and on side slopes. In a representative profile, in a cultivated area, the plow layer is dark yellowish-brown sandy loam about 10 inches thick. The upper part of the subsoil is yellowish-brown sandy loam to a depth of 14 inches. The middle part is yellowish-brown sandy clay loam to a depth of 30 inches. The lower part is yellowish-brown sandy loam to a depth of 40 inches. The substratum is brownish-yellow loamy sand to a depth of 60 inches.

Sassafras soils are medium in natural fertility and moderate in organic-matter content. Permeability is moderate, and the available water capacity is moderate.

Downer Series: The Downer series consists of nearly level to sloping, well-drained soils. These soils formed mainly under a hardwood forest in marine or fluvial deposits. They are in high areas. In a representative profile, in a cultivated area, the plow layer is dark grayish-brown loamy sand about 10 inches thick. The subsurface layer is yellowish-brown loamy sand 6 inches thick. The subsoil is yellowish-brown sandy loam 12 inches thick. The substratum is yellowish-brown loamy sand to a depth of 60 inches.

Downer soils are medium in fertility and low to moderate in organic-matter content. Permeability is moderately rapid; and the available water capacity is moderate. The soils warm early. Extensive cultivated areas of the loamy sand soils are subject to soil blowing if left bare in winter.

Aura Series: The Aura series consists of nearly level or gently sloping, well-drained soils. These soils formed under a hardwood forest on divides and knolls. In a representative profile, in a cultivated area, the plow layer is dark grayish-brown sandy loam about 8 inches thick. The subsurface layer is brown sandy loam 4 inches thick. The upper 12 inches of the subsoil is yellowish-brown sandy clay loam, and the lower 36 inches is firm and very firm, yellowish-red gravelly sandy clay loam.

Aura soils are medium in natural fertility and moderate or low in organic-matter content. Permeability is moderate or moderately slow in the lower part of the subsoil. Without proper management, intense cultivation causes compaction and results in a plow pan moderately slow in permeability; roots penetrate only cracks and fractures in the dense lower part of the subsoil.

Muck: Muck is nearly level and consists of black, finely decomposed, saturated soil material. At most times, the saturated soil material is essentially liquid and has little bearing capacity. Muck ranges from 16 inches to 10 feet or more in thickness, but it generally is 3 feet or more thick.

Muck is in low areas that are stream courses or are transitional from Tidal Marsh to mineral soils of the uplands. It is subject to frequent, short-duration flooding. The water table is at the surface throughout the year except during extreme droughts. Included in mapping are some mineral soils near stream heads. Natural fertility is medium. If drained, these soils have high available water capacity. Permeability is rapid.

V. SITE INVESTIGATION CONCLUSIONS

The investigative activities conducted on the site consisted of the collection and analysis of 370 soil samples. The samples collected during the Phase III/Site Investigation indicated that historical lead arsenate applications from a previous apple orchard resulted in arsenic and lead contamination of the shallow soil column within the former orchard area. Based on interpretation of the 1940 aerial photograph, it is estimated that the former orchard use encompasses 91 of the approximate 219 acres of the present day lot. Horizontal (perimeter) delineation samples estimate the remediation area at 96 acres.

The primary contaminant at the site is arsenic. Pesticides were not detected above the RDCSCC in any of the initial Phase II/Site Investigation samples. Within the former orchard area, lead was detected above the RDCSCC in 99 of the 370 samples collected. Lead arsenate was typically applied to individual trees with handgun sprayers, thus resulting in significant variability in soil concentrations and distribution (*Historical use of lead arsenate insecticides, resulting soil contamination and implications for soil remediation*, Peryea 2004). The remediation of this contamination is expected to be achieved through a combination of "hotspot" excavations and soil blending as discussed in Section VI of this report.

Contaminants of Ecological Concern

Arsenic and Lead are considered contaminants of ecological concern. According to *Contaminant Hazard Reviews* (Eisler, 1988), lead arsenate pesticides present a risk to aquatic communities. The New Jersey Surface Water Quality Standards for arsenic and lead in Cornwell Run, an FW2 watercourse, are presented below.

Arsenic:	0.017 ppb (carcinogenic effect-based human health criteria)
Lead:	38 ppb (acute aquatic life protection criteria)
	5.4 ppb (chronic aquatic life protection criteria)
	5 ppb (non- carcinogenic effect-based human health criteria)

Arsenic and lead are also water supply contaminants that are regulated by federal and state drinking water standards. Currently, the federal drinking water Maximum Contaminant Level (MCL) for arsenic is 50 parts per billion (ppb). Beginning in January 2006, the federal MCL for arsenic will be 10 ppb. New Jersey has enacted a new standard for arsenic concentrations in drinking water which is more protective than the federal standard. This new standard of 5 ppb in drinking water will become effective on January 23, 2006. The action level for lead in drinking water is 15 ppb.

Baseline Ecological Evaluation Conclusions

The co-occurrence of contaminants of ecological concern; environmentally sensitive natural resources; and contaminant migration pathways was not identified in performing this evaluation. Other than limited soil sampling to rule out the presence of erosional ditches as migration pathways, no further ecological evaluation is warranted, nor is any proposed.

VI. PROPOSED REMEDIAL ACTION

Soil Blending

In-Situ shallow soil blending through mechanical methods is being proposed as the remedial technology for this site. Soil blending will be accomplished across the site at depths ranging from 24-inches to 48-inches in order to homogenize the impacted surface soils with the clean or un-impacted underlying soils. Soil blending will dilute the arsenic concentrations through the blending soil column to below the RDCSCC of 20 ppm. Soil blending is recognized as an acceptable remedial option according to the Historic Pesticide Document. Soil blending has been used successfully on several sites in New Jersey containing similar characteristics and contaminant concentrations.

The blending equipment proposed for this site is CBA's patented MITU-LVR technology. The MITU-LVR is superior to conventional and agriculturally based soil mixing equipment in that it ensures thorough blending of soils throughout the depth of mixing. CBA will provide the MITU-LVR with a mixing head attachment capable of blending to a depth of 4.5 feet and a width of 11 feet.

Areas of Planned Soil Remediation

The site will be developed and remediated as one contiguous tract of land; however, remedial activities will be focused in 12 separate Soil Blending Areas (SBA). The Soil Blending Areas are separated based upon depth of blending and their physical location on the site, as the boundary of each SBA is determined by lot boundaries and property lines. A description of each SBA, the lots included in each and the proposed remedial approach is provided in the following tables and figures. A map detailing the location of each blending area is included in *Appendix D*. The areas of planned soil remediation and associated blending depths are provided in *Appendix E*.

The Soil Blending Area Worksheets also provide information on remediation to be conducted within the roadways on the site. The blending process is typically conducted to greater depths than most roadway cuts; therefore, constructing the roadways on top of blended soils would require significantly more material handling and compaction. In light of this, the areas of the roadways that have cuts deeper than the proposed blending in that area will be blended in-place. The areas of the roadways that either have fills or cuts that are not as deep as the blending in that area will be scraped to the depth of contamination and placed in a designated area (SBA-12) to be spread out and blended with the underlying soils.

VII. SCHEDULE OF ACTIVITIES

Because the site is located in close proximity to the Cumberland Regional High School, Soil blending activities will not be conducted when school is in session. The proposed schedule of activities is presented below.

Action	Anticipated Start Date	Anticipated Completion Date
Approval of Remedial Investigation and Remedial Action Workplan	July, 2007	
Implement Remedial Action	August, 2007	September, 2006
Post Excavation Sampling	September, 2006	September, 2006
Submittal of Remedial Action Report	October, 2007	November, 2007

In accordance with N.J.A.C. 7:26E-1.4, notification to the Township Clerk will be made 45 days prior to the implementation of remedial actions.

VIII. COST ESTIMATE FOR REMEDIAL ACTIVITIES

Preliminary estimates indicate that the remedial activities, including blending, analytical costs and environmental consulting will cost \$277,000.00.

IX. REQUIRED PERMITS

The remediation activities will require a Soil Erosion and Sediment Control Permit from the Cumberland County Soil Conservation District. This permit will be procured as part of the residential subdivision construction.

X. SITE SPECIFIC HEALTH AND SAFETY PLAN

A Site Specific Health and Safety Plan pursuant to N.J.A.C. 7:26E-1.9 has been included in Appendix F.

Appendix E
Soil Blending Area Data

SOIL BLENDING AREA -1

BLENDING AREA LOTS

Lot #	Block #	Acres
17	1301.02	0.75
18	1301.02	0.75
19	1301.02	0.75
21	1301.02	0.887
22	1301.02	0.757
23	1301.02	0.757
Total Acres		4.651

Total Lots 6

ATTAINMENT SAMPLING

Discrete Samples 20

Profile Locations 2

Samples/Profile 7

Total Samples 34

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	42" Blend Weighted Avg.
WD-1	28	44	53	42	21
WD-2	18	15	6.4	13	8
WD-11	7.9	6.6	6.1	7	6
WD-12	47	49	14	37	19
WD-21	59	41	8.1	36	18

REMEDIAL APPROACH

Regrade soils from high point in location of sample WD-1 towards sample location WD-2. Blend the entire area to a depth of 3.5 feet

ROADWAYS

Farmers Lane:

Remove 6" from STA 19+00 - 24+00

Remove 6" from Cul De Sac Area

SOIL BLENDING AREA -2

BLENDING AREA LOTS

Lot #	Block #	Acres
15	1301.02	0.75
16	1301.02	0.75
24	1301.02	2.554

Total Acres 4.054

Total Lots 3

ATTAINMENT SAMPLING

Discrete Samples 20

Profile Locations 1

Samples/Profile 7

Total Samples 27

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	42" Blend Weighted Avg.
WD-3	59	61	65	65	13
WD-4	34	48	12	30	12
WD-13	45	50	53	52	18
Depth of soil removed, not included in average					

REMEDIAL APPROACH

Remove 6" to 12" of soil from this area and place it on designated area SBA-11. After removing soil, blend entire area to a depth of 3.5 feet.

ROADWAYS

Farmers Lane:

Remove 6" from STA 16+50 - 19+00

SOIL BLENDING AREA -3

BLENDING AREA LOTS

Lot #	Block #	Acres
12	1301.02	0.787
13	1301.02	0.755
14	1301.02	0.750
25	1301.02	0.787

Total Acres 3.079

Total Lots 4

ATTAINMENT SAMPLING

Discrete Samples 12

Profile Locations 1

Samples/Profile 6

Total Samples 18

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	36" Blend Weighted Avg.
WD-5	35	14	6.30	18	12
WD-14	33	5.4	6.7	15	10
WD-15	71	16	17	35	20

REMEDIAL APPROACH

Perform soil blending to a depth of 3 feet throughout entire blending area.

ROADWAYS

Farmers Lane:

Remove 6" from STA 12+50 - 16+50

SOIL BLENDING AREA - 4

BLENDING AREA LOTS

Lot #	Block #	Acres
1	1301.02	0.750
2	1301.02	0.751
27	1301.02	0.750
28	1301.02	1.118
29	1301.02	0.055
8	1301.02	0.843
9	1301.02	0.843
10	1301.02	0.843
11	1301.02	0.881
26	1301.02	0.856
1	1301.01	0.751
2	1301.01	0.750
9	1301.03	0.750
10	1301.03	0.750
11	1301.03	0.750
Short Road	0+00 - 3+50	0.402
Total Acres		11.843

Total Lots

15

ATTAINMENT SAMPLING

Discrete Samples 48

Profile Locations 3

Samples/Profile 8

Total Samples

72

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	48" Blend Weighted Avg.
WD-6	44	37	70	50	17
WD-7	17	14	8.5	13	8
WD-8	45	46	53	48	21
WD-9	67	12	4.1	28	14
WD-10	83	9.4	4.5	32	15
WD-16	81	69	11	54	14
WD-17	44	26	6.8	26	13
WD-26	54	64	32	50	16
Depth of soil removed, not included in average					

REMEDIAL APPROACH

Collect additional samples to determine the depth of contamination and verify concentrations. Remove 6" of soil from approximately 3.33 acres (2700CY). Place soil in 6" layer in designated location in SBA-8. Blend entire area to a depth of 4 feet. The average arsenic concentration in removed soils is estimated to be approximately 60 ppm.

ROADWAYS

Farmers Lane:

Remove 12" from STA 7+00 - 12+50

Short Road:

Remove 6" from STA 3+50 - 5+00

Blend to 4' STA 0+00 - 3+50

SOIL BLENDING AREA -5

BLENDING AREA LOTS

Lot #	Block #	Acres
12	1301.03	0.75
13	1301.03	0.75
1	1301.06	1.085

Total Acres 2.585

Total Lots 3

ATTAINMENT SAMPLING

Discrete Samples 10

Profile Locations 1

Samples/Profile 4

Total Samples 14

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	24" Blend Weighted Avg.
WD-22	27	16	4.5	16	13
WD-23	12	4.3	5.3	7	7
WD-24	28	3.9	3.2	12	10
WD-25	17	51	11	26	21

REMEDIATION APPROACH

Blend the entire area to a depth of 2 feet.

ROADWAYS

NONE

SOIL BLENDING AREA - 6

BLENDING AREA LOTS

Lot #	Block #	Acres
3	1301.01	0.750
4	1301.01	0.750
3	1301.02	0.751
4	1301.02	0.750
5	1301.02	0.752
6	1301.02	0.752
7	1301.02	0.775
3	1301.03	0.750
4	1301.03	0.750
5	1301.03	0.750
6	1301.03	0.750
7	1301.03	0.750
8	1301.03	0.750
Farmers Lane 0+00 - 2+50		0.287

Total Acres 10.067

Total Lots 13

ATTAINMENT SAMPLING

Discrete Samples 40

Profile Locations 3

Samples/Profile 4

Total Samples 52

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	24" Blend Weighted Avg.
WD-18	22	3.7	8	11	10
WD-19	60	5.4	8.5	25	20
WD-20	44	4.2	2.6	17	14
WD-27	32	11	8.1	17	14
WD-28	40	8.8	8.2	19	16
WD-29	48	5.8	4.6	19	16
WD-30	12	13	9.6	12	10

REMEDIAL APPROACH

Blend Entire area to a depth of 2 feet

ROADWAYS

Farmers Lane:

Remove 6" from STA 2+50 - 7+00

Blend to 2' STA 0+00 - 2+50

SOIL BLENDING AREA - 6

BLENDING AREA LOTS

Lot #	Block #	Acres
3	1301.01	0.750
4	1301.01	0.750
3	1301.02	0.751
4	1301.02	0.750
5	1301.02	0.752
6	1301.02	0.752
7	1301.02	0.775
3	1301.03	0.750
4	1301.03	0.750
5	1301.03	0.750
6	1301.03	0.750
7	1301.03	0.750
8	1301.03	0.750
Farmers Lane	0+00 - 2+50	0.287
Total Acres		10.067

Total Lots

13

ATTAINMENT SAMPLING

Discrete Samples 40

Profile Locations 3

Samples/Profile 4

Total Samples 52

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	24" Blend Weighted Avg.
WD-18	22	3.7	8	11	10
WD-19	60	5.4	8.5	25	20
WD-20	44	4.2	2.6	17	14
WD-27	32	11	8.1	17	14
WD-28	40	8.8	8.2	19	16
WD-29	48	5.8	4.6	19	16
WD-30	12	13	9.6	12	10

REMEDIAL APPROACH

Blend Entire area to a depth of 2 feet

ROADWAYS

Farmers Lane:

Remove 6" from STA 2+50 - 7+00

Blend to 2' STA 0+00 - 2+50

SOIL BLENDING AREA - 7

BLENDING AREA LOTS

Lot #	Block #	Acres
5	1301.01	0.750
6	1301.01	0.750
7	1301.01	0.750
8	1301.01	0.750
9	1301.01	0.750
10	1301.01	0.750
11	1301.01	0.750
12	1301.01	0.750
13	1301.01	0.750
14	1301.01	0.789
15	1301.01	0.792
16	1301.01	1.101
17	1301.01	0.905
18	1301.01	0.750
27	1301.01	0.750
28	1301.01	0.904
1	1301.03	0.751
2	1301.03	0.751
17	1301.03	0.880
18	1301.03	0.750
19	1301.03	0.750
20	1301.03	0.750
21	1301.03	0.750
22	1301.03	0.750
23	1301.03	0.750
24	1301.03	0.755
25	1301.03	0.751
1	1301.04	0.750
2	1301.04	0.750
24	1301.05	0.750
25	1301.05	0.750
26	1301.05	0.750
37	1301.01	0.976
Sanctuary Drive		0.459
Lafayette Drive		0.459
Total Acres		30.304

Total Lots

32

ATTAINMENT SAMPLING

Discrete Samples	120
Profile Locations	8
Samples/Profile	5
Total Samples	160

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	36" Blend Weighted Avg.
WD-31	14	8.7	35	26	16
WD-32	87	4.2	25	15	15
US-10	70	15	6.1	33	19
WD-33	57	9.2	16	27	16
WD-34	60	5.1	4.1	38	22
WD-35	79	8.6	3.5	30	18
WD-36	78	8.6	3.5	30	18
WD-37	60	5.8	6	27	16
WD-39	38	38	3.7	26	15
WD-42	55	30	16	36	20
WD-43	53	4.7	2.8	20	13
WD-45	53	23	4	27	16
WD-49	47	16	3.7	22	14
WD-50	38	23	8	23	14
WD-51	42	4	4.9	29	17
WD-58	57	23	1.9	27	16
WD-63	31	8.7	5	15	10
WD-67	46	2	2.7	3	4
WD-52	50	26	11	29	17
WD-59	570	78	42	63	34
WD-64	33	42	8.2	26	16

REMEDIAL APPROACH

Remove 6" of soil around sample point WD-59 and Place on SBA-12. Blend entire area to a depth of 3 feet.

ROADWAYS

Sanctuary Drive:
Remove 6" from STA 0+00 - 5+00
Remove 6" from STA 9+00 - 10+50
Remove 6" from STA 13+00 - 14+00
Blend to 3' STA 5+00 - 9+00
Blend to 3' STA 10+50 - 13+00
Blend to 3' STA 14+00 - 16+00
Lafayette Drive:
Remove 6" from STA 2+50 - 7+00
Blend to 3' STA 0+00 - 2+50
Blend to 3' STA 7+00 - 8+50

SOIL BLENDING AREA - 8

BLENDING AREA LOTS

Lot #	Block #	Acres
3	1301.04	0.750
4	1301.04	0.750
23	1301.04	0.750
24	1301.04	0.750
25	1301.04	0.750
26	1301.04	0.750
1	1301.05	0.750
2	1301.05	0.750
3	1301.05	0.750
4	1301.05	0.750
23	1301.05	0.750
6	1301.06	0.752
7	1301.06	0.750
8	1301.06	0.944
9	1301.06	0.900
Hopewell Drive		0.402
Sanctuary Drive		0.344
Total Acres		12.342

Total Lots

15

ATTAINMENT SAMPLING

Discrete Samples

48

Profile Locations

3

Samples/Profile

4

Total Samples

60

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	24" Blend Weighted Avg.
WD-38	42	5.7	6.5	18	15
WD-40	38	6	2.2	15	13
WD-41	32	5.1	3.7	14	11
WD-44	48	8	5.3	20	17
WD-46	24	16	4.5	15	12
WD-47	36	10	4.2	17	14
WD-48	51	3.6	2.9	19	16
WD-54	25	8.2	6	13	11
WD-55	18	6	4.4	9	8

REMEDIAL APPROACH

Blend entire area to a depth of 2 feet.

ROADWAYS

Hopewell Drive:

Remove 6" from STA 0+00 - 2+50

Blend to 2' STA 2+50 - 6+00

Sanctuary Drive:

Remove 12" from STA 57+00 - 61+00

Blend to 2' STA 54+00 - 57+00

SOIL BLENDING AREA - 9

BLENDING AREA LOTS

Lot #	Block #	Acres
19	1301.01	0.858
20	1301.01	0.833
21	1301.01	0.870
22	1301.01	0.868
23	1301.01	0.868
24	1301.01	0.870
25	1301.01	0.833
26	1301.01	0.858
Kelly Court		0.287

Total Acres 7.145

Total Lots 8

ATTAINMENT SAMPLING

Discrete Samples 28

Profile Locations 2

Samples/Profile 6

Total Samples 40

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	36" Blend Weighted Avg.
WD-56	41	68	54	54	13
WD-57	40	26	2.3	23	14
WD-61	120	130	21	90	8
WD-62	31	10	5.1	15	10
WD-66	26	54	81	54	18
Depth of soil removed, not included in average					

REMEDIAL APPROACH:

Remove 12" from approximately 4.3 acres, remove 6" from approximately 2.6 acres. Remove highly impacted soil (>120 ppm) for off-site disposal. Blend the entire area to a depth of 3 feet after

ROADWAYS

Sanctuary Drive:

Remove 12" from STA 16+00 - 22+00

Kelly Court:

Remove 12" from STA 0+00 - 7+50

Remove 12" from STA 10+00 - 14+00

Blend to 3' STA 7+50 - 10+00

SOIL BLENDING AREA - 10

BLENDING AREA LOTS

Lot #	Block #	Acres
29	1301.01	1.034
30	1301.01	0.750
31	1301.01	0.750
32	1301.01	0.750
33	1301.01	0.754
34	1301.01	0.750
35	1301.01	0.750
36	1301.01	0.750
37	1301.01	4.000
38	1301.01	1.000

Total Acres 11.288

Total Lots 10

ATTAINMENT SAMPLING

Discrete Samples 44

Profile Locations 3

Samples/Profile 6

Total Samples 62

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	36" Blend Weighted Avg.
IA	73	5	5	28	16
IA = Imported Soil Average Ar Concentration					

REMEDIAL APPROACH:

Spread soil removed from blending area SBA-9 to a maximum depth of 6 inches and compact. Blend entire area to a depth of 3 feet.

SOIL BLENDING AREA - 11

BLENDING AREA LOTS

Lot #	Block #	Acres
14	1301.03	0.927
15	1301.03	0.893
16	1301.03	0.889
2	1301.06	1.249
3	1301.06	0.752
4	1301.06	0.759
5	1301.06	0.750

Total Acres 6.219

Total Lots 7

ATTAINMENT SAMPLING

Discrete Samples 25

Profile Locations 2

Samples/Profile 6

Total Samples 37

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg.	36" Blend Weighted Avg.
IA	55	5	5	22	13
IA = Imported Soil Average Ar Concentration					

REMEDIAL APPROACH:

Spread soil removed from blending area SBA-2 to a maximum depth of 6 inches and compact. Blend entire area to a depth of 3 feet.

SOIL BLENDING AREA - 12

BLENDING AREA LOTS

Lot #	Block #	Acres
5	1301.04	0.750
6	1301.04	0.750
7	1301.04	0.750
8	1301.04	0.750
9	1301.04	0.750
10	1301.04	0.750
11	1301.04	0.750
12	1301.04	0.750
13	1301.04	0.750
14	1301.04	0.797
15	1301.04	0.750
16	1301.04	0.750
17	1301.04	0.750
18	1301.04	0.751
22	1301.04	0.750

Total Acres 11.298

Total Lots 15

ATTAINMENT SAMPLING

Discrete Samples	44
Profile Locations	3
Samples/Profile	6

Total Samples 62

SOIL SAMPLE RESULTS

Sample	A 6"	B 12"	C 18"	Avg. Weighted Avg.	36" Blend
IA	55	5	5	22	13
IA = Imported Soil Average Ar Concentration					

REMEDIAL APPROACH:

Spread soil removed from Roadways (approx. 7500 CY) to a maximum depth of 6 inches and compact. Blend entire area to a depth of 3 feet.

ATTACHMENT C

This is a detailed plat map of a large land tract, likely a railroad right-of-way. The map shows a complex arrangement of lots, easements, and surrounding infrastructure. Key features include:

- Top Labels:** "FORMERLY WINCHESTER & WESTERN RAILROAD COMPANY" and "SANDY CREEK TRAIL".
- Left Side:** "LOVE LANE" and "WOODMONT CIRCLE".
- Bottom Labels:** "OLD DEERFIELD PIKE (CA. 1800)" and "SANDY CREEK TRAIL".
- Map Details:** The map is divided into numerous small lots, many of which are labeled with numbers (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). There are also various easements and rights-of-way indicated by dashed lines and labels.
- Scale and Orientation:** A scale bar is located at the top left, and a north arrow is at the top right.

C. Pollinator Plan

A GUIDE TO POLLINATOR SOLAR FIELDS AND NATIVE BUFFERS

FOR

COMMUNITY SOLAR FACILITIES & SOLAR PHOTOVOLTAIC FACILITY
LOVE LANE, LLC
PLATE 13, BLOCK 1301, LOTS 1.10, 1.11, 1.12, 1.13 & 1.14

UPPER DEERFIELD TOWNSHIP, CUMBERLAND COUNTY, NEW JERSEY

CES # – 3780

AUGUST 2019

Prepared for:

Love Lane Partners, LLC
5 Woodcrest Lane
Old Tappan, NJ 07675

Prepared by:



CONSULTING ENGINEER SERVICES

Professional Engineers, Planners, and Land Surveyors

645 Berlin-Cross Keys Road, Suite 1 Sicklerville, NJ 08081

(856) 228-2200

Fax (856) 232-2346



Table of Contents

Introduction	1
Benefits of Pollinator Plantings.....	1
Implementation Methodology	2
<i>Seed Choice and Establishment</i>	<i>2</i>
<i>Site Preparation</i>	<i>2</i>
<i>Planting and Maintenance</i>	<i>3</i>
<i>Land Management</i>	<i>3</i>
Surrounding Buffers	4
Lawn Access Tracks.....	4
Conclusion.....	5

Appendices

Appendix A: Seed Mix Varieties

Zone A: Native Landscape Buffer with High Pollinator Seed Mix

Zone B: Lawn Access Tracks & Right-of-Way

Zone C: Low Pollinator Seed Mix Under Solar Panels

Appendix B: Upland & Meadow Sites Planting Guide

Appendix C: Tools & Seeding Methods Planting Guide

Appendix D: Landscaping Zone Key Map



Introduction

This guide is for the assistance in successfully establishing and managing a pollinator-friendly, native planting solar field and solar photovoltaic facility in Upper Deerfield Township, Cumberland County, New Jersey (known as the “Site”). The following is provided to assist in the support of introducing pollinator-friendly and native plants, in order to provide the benefits, establishment, and maintenance needed for introducing a successful landscape to the Site.

Projects such as solar fields, span over acres of land allowing the opportunity to utilize pollinator-friendly landscapes. Establishing these sites properly, help to attract pollinators and provide benefits to the surrounding wildlife. By utilizing proper plant varieties and native species, these sites can also help reduce management costs over time.

Benefits of Pollinator Plantings

Pollinators can be defined as a diverse group of animals that feed on the pollen and nectar produced by flowers or collect the plants’ oils and resin. During this process, the pollinator distributes the plants’ pollen from one plant to another, helping in the assistance of the plant’s reproduction. This process helps contribute to supporting the productivity of both natural and agricultural landscapes. Not only do pollinators help support a healthy ecosystem, but they also can help air quality, stabilizing soils and the support of other local wildlife.

Many pollinator populations and species are in decline. The Monarch Butterfly has seen close to 90% of its population diminished. The honeybee is another example of an important pollinator species declining. Without protecting proper feeding and nesting habitats, pollinators are unable to properly function and support a healthy ecosystem. The decline of these, along with other pollinators, is a serious problem that requires assistance.

Integrating pollinator friendly sites to solar field design is one strategy being utilized successfully. As an occupier of large tracts of land, solar farms can protect these pollinators by creating large pollinator friendly fields. By creating a pollinator-friendly landscape, these sites can not only create a beautiful landscape, but also provide excellent wildlife food and habitat by:

- Providing food and habitat to important birds, butterflies, bees and insects that pollinate flowers, plants and agricultural crops.
- Providing food, cover, shelter and nesting for some species of amphibians, birds, insets, mammals and reptiles.
- Significantly reducing wind and/or water erosion.
- Reducing the application/use of pesticides, which can also contribute to improving water quality.
- Increasing organic matter and water holding capacity of soils.
- Helping to improve the aesthetic look of a solar facility field.



Implementation Methodology

Solar facilities often manage their site in a variety of ways to prevent shading to their solar panels. The following section helps to outline steps to a pollinator habitat and execution for a successful design. Selecting the correct native plant selection and choosing the correct geographical location will help a successful landscape take root. Helping to create an ideal habitat for pollinators is essential for the success of this type of landscape.

Seed Choice and Establishment

A functional pollinator landscape provides native seed mixes to support the pollinator habitats that are appropriate and adapted to our region and site. Vegetation height should be limited to under 3 feet so that it does not cover or shade the solar panels, thus allowing the solar facility to function at its highest efficiency. A variety of flowering species, that produce resources throughout multiple seasons, should be considered to help provide a variety of pollinators with different nectar and pollen. There are numerous seed companies that provide suggested seed mixes that utilize these resources throughout most months of the year, some of which can be tailored and/or are specifically for solar farm facilities with emphasis on pollinator attraction. One such company is Ernst Seeds out of Meadville, Pennsylvania which has a “VA Solar Pollinator 2’ Mix”.

VA Solar Pollinator 2’ Mix:

○ 81.0%	‘Bad River’ Blue Grama	<i>Bouteloua gracilis</i> , ‘Bad River’
○ 10.0%	Round Seed Panicgrass	<i>Panicum sphaerocarpon</i>
○ 4.0%	Butterfly Milkweed	<i>Asclepias tuberosa</i>
○ 2.0%	Patridge Pea (PA Ecotype)	<i>Chamaecrista fasciculata</i>
○ 2.0%	Sensitive Pea (NC Ecotype)	<i>Chamaecrista nictitans</i>
○ 0.5%	Sundrops	<i>Oenothera fruticosa</i> var. <i>fruticosa</i>
○ 0.5%	Hairy Beardtongue	<i>Penstemon hirsutus</i>

The “VA Solar Pollinator 2’ Mix” is one of many options that could be suited for establishment of a pollinator habitat on the Site. This mix could also be tailored to include more or less of a certain species or even omit anything *too tall* for proper solar facility management. Additional examples of seed mixes by Ernst Seeds are included in Appendix A of the report. The actual seed mixture and/or custom blend is expected to be approved by the Engineer.

Site Preparation

The preparation of the Site is critical in helping to establish a functional pollinator-friendly site. The Site should be cleared of any vegetation that may hinder the growth of the selected pollinator seed mix. The ideal time to prepare the Site for sowing wildflower seeds would be immediately after construction of the solar array is completed. Typically, during solar facility construction, the surrounding land is graded, and the majority of the vegetation is removed. During construction time, the soil around the Site can become compacted, which can hinder the establishment of seeds, as their roots have difficulty penetrating the hard, compacted soil. In order to reverse soil compaction, one option to consider is tilling the soil to a depth of 6-8”, to help loosen the soil and allow for proper root establishment. After tilling



the soil, minor grading may need to be done to ensure proper drainage. Ernst Seeds recommendations for Site Preparation are included in Appendix B of the report.

Planting and Maintenance

It is recommended that seeds be planted in the early spring or based upon the advice of the seed provider. Seed should be applied by using a mechanical spreader and pressed into soil by using a seed roller. Spreading straw after seeding is recommended to help stabilize the soil while helping to keep the seeds moist for germination. Applying straw after seeding can also help to prevent wildlife from foraging on the seeds. Ernst Seeds recommendations for Tools and Seeding Methods are included in Appendix C of the report.

Pollinator-friendly sites are typically considered low-maintenance, which means some maintenance is needed beyond the first year of planting. It is recommended to reseed any areas that have poor plant establishment following the first growing season after initial planting. This task of spreading seed can be done by hand. Mowing is also recommended to take place once or twice each fall, after the flowers have bloomed and dropped their seed, to an approximate height of 4-6 inches, to help prime the site for the next growing season.

The first 2-4 years of maintenance are crucial for establishing a successful pollinator-friendly site. Mowing is typically the most efficient strategy used during the first and second growing seasons. By the 3rd full growing season, after the plants have successfully established themselves, maintenance can become more target controlled. Integrated Pest Management (IPM) can be one technique applied during this time and continually used on an “as-needed-basis” after the 3rd growing season. IPM consists of spotted treatments of certain herbicides, controlled by an expert, applied at targeted areas of concern. By the 5th and 6th growing season, the site should be able to naturally maintain itself and only require as needed mowing.

Land Management

Management of the Site can be classified by three categories: actions that will restore, maintain or enhance the pollinator habitat. The manager of the Site should understand the role that both large and small actions play in creating benefits to local and regional areas. *Restoring* natural vegetation to the Site is the simplest, and one of the most important actions to apply. Any area of the site that is not being directly developed with solar infrastructure should be restored to a natural habitat by using native species of trees, shrubs, and flowering plants. *Maintaining* these areas using methods that minimize the disturbance and harm to the pollinators should be of utmost priority. This, again, is easily accomplished by only planting native plants and excluding anything invasive, mowing/pruning the landscape at appropriate times of the season, and eliminating using harmful pesticide applications. These practices help to ensure a safe and successful landscape for pollinators and pollinator-friendly plants. The last category is to *enhance* the habitat using methods that attracts pollinators and provide diversity, by establishing a variety of flowering plants and shrubs that support pollination.



Surrounding Buffers

It is important to note, that the entire solar facility will not be planted with a singular pollinator-friendly seed mix. The landscape buffer boundary of the Site will be planted with a different seed mix that is larger in height and offers more variety of plant selections. Samples from Ernst Seeding are provided in Appendix A of the report. By incorporating different species, with different heights, not only will it help with expanding the diversity of plant pollination and variety of nectar and pollen, but also the additional height of plants will help aid local birds and insects find shelter from predators and nesting during the winter season. The surrounding buffers shall be planted with native trees and shrubs to provide adequate screening from neighboring sites.

Native Plantings for Buffer Areas:

- Deciduous Trees
 - Red Maple *Acer rubrum*
 - American Hornbeam *Carpinus caroliniana*
 - Green Ash *Fraxinus pennsylvanica*
 - American Sweetgum *Liquidambar styraciflua*
 - American Linden *Tilia americana*
- Evergreen Trees
 - American Holly *Ilex opaca*
 - Colorado Blue Spruce *Picea pungens 'Glauca'*
 - Eastern White Pine *Pinus strobus*
 - Canadian Hemlock *Tsuga canadensis*
- Ornamental Trees
 - Serviceberry *Amelanchier canadensis*
 - Eastern Redbud *Cercis canadensis*
 - Pagoda Dogwood *Cornus alternifolia*
 - Sweetbay Magnolia *Magnolia virginiana*
- Shrubs
 - American Witch-hazel *Hamamelis virginiana*
 - Spicebush *Lindera benzoin*
 - American Elderberry *Sambucus canadensis*
 - Blackhaw Viburnum *Viburnum prunifolium*
 - American Cranberrybush *Viburnum trilobum*

Lawn Access Tracks & Right-of-Way

Along with the Native Planting Buffer Areas around the perimeter of the Site and the pollinator-friendly fields, there will also be access lawn tracks that allow vehicular traffic to get to the solar fields and any mechanical equipment areas. A 20' Easement has been created for each Project to allow for authorized vehicles to enter the premises. These access tracks will be planted with a mix of hardy grasses that allow for vehicles to access and service the Site on a daily basis without the need to construct more standard roadways throughout the site. Examples of seed mixtures recommended by Ernst Seeds are included in Appendix A of the report. This mix will also be planted along the Right-of-Way along Love Lane and the Site. These areas will be maintained by “as-needed” mowing throughout the growing seasons.



Typical lawn maintenance may be needed to avoid unwanted weeds and other vegetation taking over the site and competing with the pollinator vegetation. A natural blend of the lawn areas and the pollinator-friendly fields will likely occur, but any mowing should be strictly confined within the track areas until final mowing of the pollinator-friendly fields during the fall season.

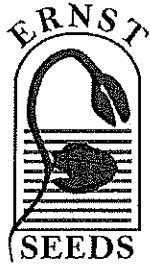
Conclusion

A successful pollinator habitat project on the solar facility tract has an opportunity to create a successful habitat that promotes healthy pollination and assists in a healthier ecosystem. There have been numerous projects throughout the world that have successfully created a solar facility field while also creating a pollinator-friendly landscape. These such projects offer a chance to help restore the rural landscape that surrounds the site. The outline above will help to ensure the success of the project for years to come.

APPENDIX A
SEED MIX VARIETIES

ZONE A

*NATIVE LANDSCAPE BUFFER WITH
HIGH POLLINATOR SEED MIX*



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 19, 2019

Eastern Native Habitat & CREP Mix - ERNMX-173

	Botanical Name	Common Name	Price/lb
40.00 %	<i>Andropogon gerardii</i> , 'Niagara'	Big Bluestem, 'Niagara'	10.90
25.00 %	<i>Elymus virginicus</i> , PA Ecotype	Virginia Wildrye, PA Ecotype	5.63
15.00 %	<i>Panicum virgatum</i> , 'Shelter'	Switchgrass, 'Shelter'	4.38
8.00 %	<i>Chamaecrista fasciculata</i> , PA Ecotype	Partridge Pea, PA Ecotype	7.00
5.00 %	<i>Sorghastrum nutans</i> , NY4 Ecotype	Indiangrass, NY4 Ecotype	10.87
3.90 %	<i>Echinacea purpurea</i>	Purple Coneflower	36.00
3.00 %	<i>Rudbeckia hirta</i> , Coastal Plain NC Ecotype	Blackeyed Susan, Coastal Plain NC Ecotype	20.00
0.10 %	<i>Monarda fistulosa</i> , Fort Indiantown Gap-PA Ecotype	Wild Bergamot, Fort Indiantown Gap-PA Ecotype	120.00

100.00 %

Mix Price/lb Bulk: \$9.65

Seeding Rate: 11 lb per acre

Uplands & Meadows

The eastern warm and cool season grasses and hardy forbs make an economical cover for large areas. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 18, 2019

Low-Growing Wildflower & Grass Mix - ERNMX-156

Botanical Name	Common Name	Price/lb
73.20 % <i>Festuca ovina</i> , Variety Not Stated	Sheep Fescue, Variety Not Stated	3.40
17.00 % <i>Lolium multiflorum</i>	Annual Ryegrass	0.90
3.00 % <i>Chrysanthemum maximum</i>	Shasta Daisy	32.00
2.30 % <i>Rudbeckia hirta</i> , PA Ecotype	Blackeyed Susan, PA Ecotype	20.00
2.00 % <i>Coreopsis lanceolata</i>	Lanceleaf Coreopsis	24.00
0.80 % <i>Achillea millefolium</i>	Common Yarrow	32.00
0.40 % <i>Tradescantia virginiana</i> , Southeastern PA/Northern VA	Virginia Spiderwort, Southeastern PA/Northern VA blend	400.00
0.30 % <i>Chamaecrista fasciculata</i> , PA Ecotype	Partridge Pea, PA Ecotype	7.00
0.30 % <i>Penstemon hirsutus</i>	Hairy Beardtongue	400.00
0.20 % <i>Baptisia tinctoria</i> , PA Ecotype	Yellow False Indigo, PA Ecotype	600.00
0.20 % <i>Pycnanthemum tenuifolium</i>	Narrowleaf Mountainmint	140.00
0.10 % <i>Aster divaricatus</i>	White Wood Aster	360.00
0.10 % <i>Aster oblongifolius</i> , PA Ecotype	Aromatic Aster, PA Ecotype	360.00
0.10 % <i>Aster prenanthoides</i> , PA Ecotype	Zigzag Aster, PA Ecotype	360.00

100.00 %

Mix Price/lb Bulk: **\$10.18**

Seeding Rate: 20-40 lb per acre

Uplands & Meadows

Specifically designed to provide erosion and sediment control and color on low-fertility sites. May be mowed occasionally. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.

All prices are FOB Meadville, PA.

Please check our web site at www.ernstseed.com
for current pricing when placing orders.



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 18, 2019

Mesic to Dry Native Pollinator Mix - ERNMX-105

Botanical Name	Common Name	Price/lb
27.00 % <i>Schizachyrium scoparium</i> , Fort Indiantown Gap-PA Ecotype	Little Bluestem, Fort Indiantown Gap-PA Ecotype	13.76
20.00 % <i>Elymus virginicus</i> , PA Ecotype	Virginia Wildrye, PA Ecotype	5.63
15.00 % <i>Sorghastrum nutans</i> , 'Tomahawk'	Indiangrass, 'Tomahawk'	10.00
5.00 % <i>Panicum clandestinum</i> , 'Tioga'	Deertongue, 'Tioga'	17.09
5.00 % <i>Tridens flavus</i>	Purpletop	18.86
4.00 % <i>Chamaecrista fasciculata</i> , PA Ecotype	Partridge Pea, PA Ecotype	7.00
3.00 % <i>Coreopsis lanceolata</i>	Lanceleaf Coreopsis	24.00
3.00 % <i>Echinacea purpurea</i>	Purple Coneflower	36.00
3.00 % <i>Rudbeckia hirta</i> , Coastal Plain NC Ecotype	Blackeyed Susan, Coastal Plain NC Ecotype	20.00
3.00 % <i>Verbena hastata</i> , PA Ecotype	Blue Vervain, PA Ecotype	32.00
2.00 % <i>Heliopsis helianthoides</i> , PA Ecotype	Oxeye Sunflower, PA Ecotype	36.00
2.00 % <i>Penstemon digitalis</i> , PA Ecotype	Tall White Beardtongue, PA Ecotype	160.00
1.00 % <i>Asclepias incarnata</i> , PA Ecotype	Swamp Milkweed, PA Ecotype	160.00
1.00 % <i>Liatris spicata</i> , PA Ecotype	Marsh Blazing Star, PA Ecotype	210.00
0.90 % <i>Aster novae-angliae</i> , PA Ecotype	New England Aster, PA Ecotype	360.00
0.70 % <i>Aster laevis</i> , NY Ecotype	Smooth Blue Aster, NY Ecotype	360.00
0.50 % <i>Geum canadense</i> , PA Ecotype	White Avens, PA Ecotype	160.00
0.50 % <i>Senna hebecarpa</i> , VA & WV Ecotype	Wild Senna, VA & WV Ecotype	24.00
0.50 % <i>Zizia aurea</i> , PA Ecotype	Golden Alexanders, PA Ecotype	240.00
0.40 % <i>Baptisia australis</i> , Southern WV Ecotype	Blue False Indigo, Southern WV Ecotype	80.00
0.40 % <i>Monarda fistulosa</i> , Fort Indiantown Gap-PA Ecotype	Wild Bergamot, Fort Indiantown Gap-PA Ecotype	120.00
0.30 % <i>Asclepias syriaca</i>	Common Milkweed	196.00
0.30 % <i>Eupatorium perfoliatum</i> , PA Ecotype	Boneset, PA Ecotype	300.00
0.30 % <i>Lespedeza capitata</i> , RI Ecotype	Roundhead Lespedeza, RI Ecotype	108.00
0.30 % <i>Pycnanthemum tenuifolium</i>	Narrowleaf Mountainmint	140.00
0.30 % <i>Tradescantia ohiensis</i> , PA Ecotype	Ohio Spiderwort, PA Ecotype	210.00
0.20 % <i>Solidago juncea</i> , PA Ecotype	Early Goldenrod, PA Ecotype	280.00
0.10 % <i>Eupatorium fistulosum</i> , PA Ecotype	Joe Pye Weed, PA Ecotype	228.00
0.10 % <i>Eupatorium rugosum</i> , PA Ecotype	White Snakeroot, PA Ecotype	240.00
0.10 % <i>Solidago nemoralis</i> , PA Ecotype	Gray Goldenrod, PA Ecotype	360.00
0.10 % <i>Solidago rugosa</i> , PA Ecotype	Wrinkleleaf Goldenrod, PA Ecotype	420.00
100.00 %	Mix Price/lb Bulk:	\$32.75

Seeding Rate: Expect to apply about 20 lb per acre.

Pollinator Favorites; Uplands & Meadows

The native wildflowers and grasses in this mix provide an attractive display of color from spring to fall. Designed for mesic to upland sites and full sun to lightly shaded areas. This mix will attract a variety of pollinators and songbirds. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.

All prices are FOB Meadville, PA.

Please check our web site at www.ernstseed.com
for current pricing when placing orders.



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 18, 2019

Showy Northeast Native Wildflower & Grass Mix - ERNMX-153

Botanical Name	Common Name	Price/lb
35.00 % <i>Schizachyrium scoparium</i> , 'Camper'	Little Bluestem, 'Camper'	12.82
26.50 % <i>Bouteloua curtipendula</i> , 'Butte'	Sideoats Grama, 'Butte'	7.68
14.00 % <i>Elymus virginicus</i> , PA Ecotype	Virginia Wildrye, PA Ecotype	5.63
3.50 % <i>Echinacea purpurea</i>	Purple Coneflower	36.00
3.00 % <i>Chamaecrista fasciculata</i> , PA Ecotype	Partridge Pea, PA Ecotype	7.00
3.00 % <i>Coreopsis lanceolata</i>	Lanceleaf Coreopsis	24.00
3.00 % <i>Rudbeckia hirta</i> , Coastal Plain NC Ecotype	Blackeyed Susan, Coastal Plain NC Ecotype	20.00
2.00 % <i>Heliopsis helianthoides</i> , PA Ecotype	Oxeye Sunflower, PA Ecotype	36.00
2.00 % <i>Penstemon digitalis</i>	Tall White Beardtongue	160.00
1.50 % <i>Liatris spicata</i> , PA Ecotype	Marsh Blazing Star, PA Ecotype	210.00
1.00 % <i>Aster laevis</i> , NY Ecotype	Smooth Blue Aster, NY Ecotype	360.00
1.00 % <i>Baptisia australis</i> , Southern WV Ecotype	Blue False Indigo, Southern WV Ecotype	80.00
1.00 % <i>Tradescantia ohimensis</i> , PA Ecotype	Ohio Spiderwort, PA Ecotype	210.00
1.00 % <i>Zizia aurea</i> , PA Ecotype	Golden Alexanders, PA Ecotype	240.00
0.60 % <i>Aster novae-angliae</i> , PA Ecotype	New England Aster, PA Ecotype	360.00
0.40 % <i>Monarda fistulosa</i> , Fort Indiantown Gap-PA Ecotype	Wild Bergamot, Fort Indiantown Gap-PA Ecotype	120.00
0.40 % <i>Senna hebecarpa</i> , VA & WV Ecotype	Wild Senna, VA & WV Ecotype	24.00
0.30 % <i>Pycnanthemum tenuifolium</i>	Narrowleaf Mountainmint	140.00
0.10 % <i>Aster oblongifolius</i> , PA Ecotype	Aromatic Aster, PA Ecotype	360.00
0.10 % <i>Aster prenanthoides</i> , PA Ecotype	Zigzag Aster, PA Ecotype	360.00
0.10 % <i>Baptisia tinctoria</i> , PA Ecotype	Yellow False Indigo, PA Ecotype	600.00
0.10 % <i>Penstemon hirsutus</i>	Hairy Beardtongue	400.00
0.10 % <i>Rudbeckia fulgida</i> var. <i>fulgida</i> , Northern VA Ecotype	Orange Coneflower, Northern VA Ecotype	300.00
0.10 % <i>Senna marilandica</i>	Maryland Senna	24.00
0.10 % <i>Solidago juncea</i> , PA Ecotype	Early Goldenrod, PA Ecotype	280.00
0.10 % <i>Solidago nemoralis</i> , PA Ecotype	Gray Goldenrod, PA Ecotype	360.00

100.00 %

Mix Price/lb Bulk: **\$31.91**

Seeding Rate: 20 lb per acre, or 1/2 lb per 1,000 sq ft

Pollinator Favorites; Uplands & Meadows

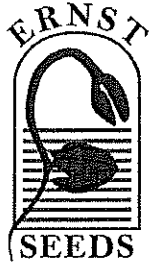
The native wildflowers and some grasses provide a gorgeous display of color from spring to fall. Designed for upland sites with well-drained soils and full sun to semi-shaded areas; ideal for attracting butterflies and hummingbirds. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.

All prices are FOB Meadville, PA.

Please check our web site at www.ernstseed.com
for current pricing when placing orders.

ZONE B:
LAWN ACCESS TRACKS
& RIGHT-OF-WAY



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 19, 2019

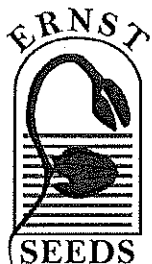
Cover Crop Mix - ERNMX-135

	Botanical Name	Common Name	Price/lb
75.00 %	<i>Secale cereale</i> , Variety Not Stated	Rye, Variety Not Stated	0.30
12.50 %	<i>Trifolium incarnatum</i> , Variety Not Stated	Crimson Clover, Variety Not Stated	2.00
7.50 %	<i>Trifolium michelianum</i> , 'Fixation'	Balansa Clover, 'Fixation'	2.75
5.00 %	<i>Raphanus sativus</i> , 'GroundHog'	Radish, 'GroundHog'	2.00
100.00 %		Mix Price/lb Bulk:	\$0.78

Seeding Rate: Expect to apply about 40 lbs per acre.

Annual cover crop mix.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 19, 2019

Spring Greens Mix - ERNMX-185

	Botanical Name	Common Name	Price/lb
25.00 %	<i>Trifolium repens, Ladino</i>	White Clover, Ladino	3.30
20.00 %	<i>Trifolium incarnatum, Variety Not Stated</i>	Crimson Clover, Variety Not Stated	2.00
20.00 %	<i>Trifolium pratense, Medium, Variety Not Stated</i>	Red Clover, Medium, Variety Not Stated	2.50
15.00 %	<i>Trifolium repens, Dutch</i>	White Clover, Dutch	3.30
10.00 %	<i>Cichorium spp.</i>	Chicory, 'Six Point'	10.00
5.00 %	<i>Trifolium alexandrinum, 'Frosty'</i>	Berseem Clover, 'Frosty'	2.75
5.00 %	<i>Trifolium michelianum, 'Fixation'</i>	Balansa Clover, 'Fixation'	2.75

100.00 %

Mix Price/lb Bulk: \$3.50

Seeding Rate: 12 lb per acre

Wildlife Habitat & Food Plots

The legumes and forbs attract deer and turkey in the early spring and provide necessary protein for antler development. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.

All prices are FOB Meadville, PA.

Please check our web site at www.ernstseed.com
for current pricing when placing orders.



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 19, 2019

PA Central Lowland Province UPL Grass Mix - ERNMX-200

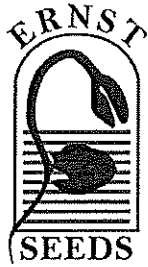
	Botanical Name	Common Name	Price/lb
37.00 %	<i>Schizachyrium scoparium</i> , Fort Indiantown Gap-PA Ecotype	Little Bluestem, Fort Indiantown Gap-PA Ecotype	13.76
37.00 %	<i>Sorghastrum nutans</i> , PA Ecotype	Indiangrass, PA Ecotype	10.32
20.00 %	<i>Elymus virginicus</i> , PA Ecotype	Virginia Wildrye, PA Ecotype	5.63
5.00 %	<i>Panicum virgatum</i> , 'Shelter'	Switchgrass, 'Shelter'	4.38
1.00 %	<i>Panicum clandestinum</i> , 'Tioga'	Deertongue, 'Tioga'	17.09
100.00 %		Mix Price/lb Bulk:	\$10.43

Seeding Rate: 15 lb per acre

Uplands & Meadows

Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 19, 2019

Right-of-Way Pasture Mix - ERNMX-134

	Botanical Name	Common Name	Price/lb
25.00 %	<i>Phleum pratense</i> , 'Climax'	Timothy, 'Climax'	1.20
15.00 %	<i>Festuca arundinacea</i> , 'Bronson'	Tall Fescue, 'Bronson' (pasture type)	2.00
15.00 %	<i>Trifolium hybridum</i>	Alsike Clover	3.25
13.00 %	<i>Agrostis alba</i>	Redtop	8.00
12.00 %	<i>Lolium multiflorum</i>	Annual Ryegrass	0.90
10.00 %	<i>Festuca elatior</i> x <i>Lolium perenne</i> , 'Duo'	Festulolium, 'Duo'	1.70
5.00 %	<i>Trifolium repens</i> , Dutch	White Clover, Dutch	3.30
5.00 %	<i>Trifolium repens</i> , Ladino	White Clover, Ladino	3.30

100.00 %

Mix Price/lb Bulk: \$2.74

Seeding Rate: 30 lb per acre

Forage & Pasture Sites

An ideal, long-lasting pasture mix for most livestock breeds. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.

ZONE C:
LOW POLLINATOR SEED MIX UNDER
SOLAR PANELS



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 18, 2019

VA Solar Pollinator 2' Mix - ERNMX-623

Botanical Name	Common Name	Price/lb
81.00 % <i>Bouteloua gracilis</i> , 'Bad River'	Blue Grama, 'Bad River'	8.19
10.00 % <i>Panicum sphaerocarpon</i>	Roundseed Panicgrass	28.84
4.00 % <i>Asclepias tuberosa</i>	Butterfly Milkweed	280.00
2.00 % <i>Chamaecrista fasciculata</i> , PA Ecotype	Partridge Pea, PA Ecotype	7.00
2.00 % <i>Chamaecrista nictitans</i> , NC Ecotype	Sensitive Pea, NC Ecotype	60.00
0.50 % <i>Oenothera fruticosa</i> var. <i>fruticosa</i>	Sundrops	300.00
0.50 % <i>Penstemon hirsutus</i>	Hairy Beardtongue	400.00
100.00 %	Mix Price/lb Bulk:	\$25.56

Seeding Rate: Seed with 30 lbs/acre of a cover crop. For a cover crop use either grain oats (1 Jan to 31 Jul), brown top millet (10 lbs/acre; 1 May to 31 Aug) or grain rye (1 Aug to 31 Dec).

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.



Ernst Conservation Seeds

8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: August 19, 2019

Ernst Native/Naturalized Solar Farm Seed Mix - ERNMX-186-1

	Botanical Name	Common Name	Price/lb
34.00 %	<i>Festuca rubra</i>	Creeping Red Fescue	2.05
33.00 %	<i>Festuca ovina</i> , Variety Not Stated	Sheep Fescue, Variety Not Stated	3.40
10.00 %	<i>Festuca brevipila</i> , 'Beacon'	Hard Fescue, 'Beacon'	3.20
5.00 %	<i>Festuca ovina</i> var. <i>duriuscula</i> , 'Gladiator'	Hard Fescue, 'Gladiator'	3.20
5.00 %	<i>Festuca ovina</i> var. <i>glauca</i> , 'Azure'	Blue Fescue, 'Azure'	3.75
5.00 %	<i>Poa pratensis</i> , 'Kelly'	Kentucky Bluegrass, 'Kelly'	3.10
5.00 %	<i>Poa pratensis</i> , 'Shamrock'	Kentucky Bluegrass, 'Shamrock'	3.10
3.00 %	<i>Agrostis perennans</i> , Albany Pine Bush-NY Ecotype	Autumn Bentgrass, Albany Pine Bush-NY Ecotype	14.00

100.00 %

Mix Price/lb Bulk:

\$3.22

Seeding Rate: 6 lb per 1,000 sq ft

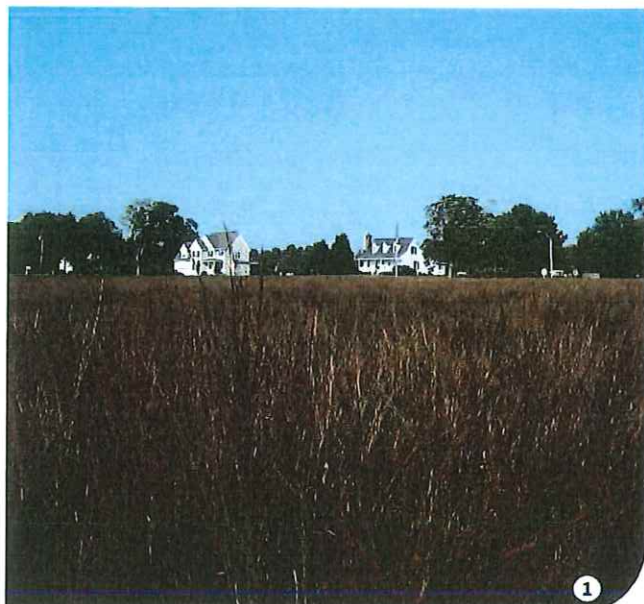
Lawn & Turfgrass Sites

Provide a 2' clearance between the ground and the solar panels. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.

APPENDIX B
UPLAND & MEADOW SITES
PLANTING GUIDE

UPLAND & MEADOW SITES



Upland sites are characterized as being dry most of the year. Soils at these sites are well drained and may consist of sandy clay, sandy loam, loam or shale. The topsoil layer may be thin and subject to drought. If yours is a sandy site, refer to the Southeastern U.S. Sites Establishment Guide, p. 38.

Upland examples: Naturally rocky soil that has been subject to erosion or steep road cuts.

Meadow examples: Abandoned farm fields, previous lawns, vacant land or roadsides.

SITE PREPARATION

If your site was previously a lawn or crop field to which herbicides were applied, it is important that you allow the appropriate interval for the residues of those herbicides to break down prior to planting your meadow. Some herbicide residues can prevent seedling germination.

Competition from invasive or undesirable vegetation is the most limiting factor in upland meadow preparation. Prior to planting, all such vegetation must be fully controlled. Typical control strategies include repeated tilling, smothering with black plastic or herbicides.

When using the tillage strategy, a site is disc harrowed every two to four weeks for a one to two-month period. The underlying premise of this process is that the root system of perennial species will be worn out to the point of killing the species. In addition, tillage will stimulate germination of dormant weed seed which will be killed by subsequent tillage. Planting should not occur until perennial species are completely killed.

Black plastic may also be used to kill weeds. It may be laid across tilled or untilled soil and anchored down by burying the edges in soil or laying boards or bricks across the surface. This protocol should be utilized during a growing season where the intent is to fall plant in the same year or spring plant the following year.

The application of an approved herbicide, such as glyphosate (Roundup® or Rodeo®), is the most common and least time-intensive protocol for controlling existing vegetation. Herbicides are most effective on actively growing plant tissues; therefore, they are very effective on new growth in the

CAPTIONS

1: A little bluestem meadow in North Carolina

2: A well-established meadow in northern Virginia



spring. Spraying should begin when growth is approximately 6" high. One to two weeks later, a follow-up application of spray may be made to address skips or persistent species. If substantial plant tissues remain on the surface following a full kill by herbicides, a close mowing, tillage or burning may be necessary to achieve good seed-to-soil contact.

HABITAT: Typically in full sun for at least half the day with good air circulation; generally occupied with UPL, FACU and FAC species.

FERTILITY: Natural fertility is usually adequate; fertilizer and lime are not needed (fertilizer often helps weeds and invasives). Check your soil pH and select species adapted to that pH.

SEEDING METHOD: Hand seed, broadcast seed, hydroseed or drill seed.

MAINTENANCE

For seedings of annual wildflower mixes or annual & perennial wildflower mixes, problem weeds should be hand pulled.

For all other mixes:

FIRST GROWING SEASON MAINTENANCE

Whenever canopy (overall vegetation) reaches a height of 18"-24", use a brush hog mower or string trimmer to trim the meadow to a height of 8" (Note: A lawn mower is not recommended as the mower height will be too low and native seedlings will be killed). This will reduce competition by fast-growing weeds for sunlight, water and nutrients needed by slow-growing perennial natives. Mowing should cease by mid-September.

Problem weeds should be hand pulled or spot sprayed with approved herbicides (such as Roundup® or Rodeo®).

CAPTIONS

3: Native meadow in northern Virginia

4: Color, texture and diversity evident in a native meadow

5: A native meadow in northern Virginia

SECOND & SUBSEQUENT GROWING SEASON MAINTENANCE

Prior to new spring growth reaching a height of 2" (e.g., shortly after forsythia or redbud blooms), trim any material standing from the previous year close to the ground (approximately 2"). This will allow the soil to warm more quickly, which will stimulate the emergence and growth of native seedlings and reduce the likelihood of the meadow being invaded by shrubs.

Problem weeds should be hand pulled or spot sprayed with an approved herbicide.

SPECIAL CIRCUMSTANCES - SECOND GROWING SEASON

If you notice a heavy infestation of ragweed or foxtail in the second growing season, trim the meadow to a height of 8". Trimming should cease by mid-September.

The following mixes are used in full sun with well-drained soils and provide food and/or cover for wildlife. Meadow and wildflower mixes provide food for insects, including native pollinators:

- ERNMX-102-1 - Pipeline Mix with Switchgrass
- ERNMX-105 - Northeastern U.S. Roadside Native Mix
- ERNMX-110 - Ernst Native Biomass Mix for Strip Mines & Natural Gas Production Sites
- ERNMX-111 - Ernst Native Habitat for Strip Mines Mix
- ERNMX-115 - Biodiverse Polyculture Mix for Biomass Production & Wildlife Habitat
- ERNMX-117 - Warm Season Grass Mix
- ERNMX-117 PLS - Warm Season Grass Mix
- ERNMX-123 - Native Upland Wildlife Forage & Cover Meadow Mix
- ERNMX-125 - Northeastern U.S. Roadside Native Mix without Grasses
- ERNMX-153 - Showy Northeast Native Wildflower & Grass Mix
- ERNMX-153-1 - Showy Northeast Native Wildflower Mix
- ERNMX-155 - Deer-Resistant Meadow Mix
- ERNMX-156 - Low-Growing Wildflower & Grass Mix
- ERNMX-166 - Plateau-Tolerant Wildflower & Grass Mix
- ERNMX-166-1 - Plateau-Tolerant Wildflower Mix
- ERNMX-167 - Annual Wildflower Mix
- ERNMX-168 - Northeast Annual & Perennial Wildflower Mix
- ERNMX-169 - Southeast Annual & Perennial Wildflower Mix
- ERNMX-170 - Annual & Perennial Wildlife Food Plot Mix
- ERNMX-171 - Multi-Purpose/Multi-Year Wildlife Food & Shelter Mix
- ERNMX-172 - Maryland Upland Mix
- ERNMX-173 - Eastern Native Habitat & CREP Mix
- ERNMX-174 - Virginia Gentleman's Mix
- ERNMX-177 - Eastern Ecotype Native Grass Mix
- ERNMX-187 - Southeastern U.S. Roadside Native Mix

Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Ernst Conservation Seeds has developed hundreds of mixes for these types of projects. For additional mixes, including state-specific mixes, please visit www.ernstseed.com.

DISCLAIMER: The information in this review of practices is the result of more than 50 years of experience in seed production. Ernst Conservation Seeds has been supplying seeds and consulting in the reseeding of tens of thousands of acres of roadsides, surfacemined lands, conservation and restoration sites in eastern North America, as well as growing and supplying seed and consulting in the planting of hundreds of thousands of acres of CRP/CREP-related areas for erosion control and wildlife habitat. All of these practices are opinion only and our best advice as a result of these experiences. These recommendations do not cover all of the conditions that will be encountered in the field. All of the information is for individual consideration. Ernst Conservation Seeds is not responsible for conditions that will be encountered in individual situations. The use of brand names does not represent our endorsement of a specific product; rather, it represents our experience only and has not necessarily been replicated in peer-reviewed research. The use of chemical pest control agents is subject to manufacturers' instructions and labeling, as well as federal, state and local regulations.

APPENDIX C
TOOLS AND SEEDING METHODS
PLANTING GUIDE

TOOLS AND SEEDING METHODS

MINIMUM-TILL EQUIPMENT

Minimum-till equipment is used to incorporate a portion of the surface vegetation into the soil and level uneven surfaces. One of the most common tools is a disc, which cuts through vegetation, sod or hard soil and partly turns or tills it into the soil surface.

Similar equipment that turns part of the vegetative residue into the soil surface is known as Aerway® or Turbo® Till. Chisel plows drag through and turn part of the surface vegetation into the soil. Chisel plows generally leave the soil surface rough, which will require further treatment with a disc or similar tool to make it smooth enough to plant and harvest.



ROTOTILLER

A rototiller is used to pulverize the soil with rotating blades and incorporate soil amendments and surface vegetation. Most units till up to 6" deep.



CHISEL PLOW

A chisel plow is a minimum-till plow because it does not dislodge or turn over the entire soil profile the way a moldboard plow does. Chisel plowing is primarily used for deep tillage loosening while leaving a high percentage of debris on top. The plow typically has C-shaped shanks mounted on dual coil springs and the frame, shanks and springs are of sufficient weight, size and strength to provide an 8"-12" cutting depth. The depth of a chisel plow can be adjusted to till shallow or deep. This plow is also used for breaking up hardpan and compacted areas, which is followed by a disc harrow, tandem disc harrow or offset disc harrow of sufficient weight and size to provide a 6"-8" cutting depth.



TRACKING

Tracking is the use of a crawler or rubber-tired tractor to make depressions and firm loose soil after construction or tilling. The depressions make local pockets in which seed and water can collect until they infiltrate the soil which aids in germination. The firm, but not compacted, seedbed will not dry out as quickly as loose soil.





DRILL SEEDING

Drill seeding is a mechanical means of creating a furrow (opening) in the soil surface and metering the seed in at a uniform rate.

Conventional drills are capable of working in tilled and partly tilled soil. No-till drills are designed to work in soil that has not been tilled because they have heavy openers to cut through vegetation and sod, making a furrow for seed placement. However, they can work in tilled soil with the proper adjustment. The unit contains discs equipped with springs that aid in loosening the soil. All drills should be equipped with a closing or packing wheel that follows the seed placement. A special seed box is required for handling small or fluffy seed like that of many wildflowers and native grasses. Drills that can meter fluffy seed, such as that of little bluestem, big bluestem and indiangrass, need special agitation and metering equipment to handle these seeds. Switchgrass can be planted using any drill with a small seed box that can meter low rates of small seed. A drill used to plant warm season grasses must be capable of placing seed 1/4"-1/2" deep into a firm seedbed.

Calibrating a drill or broadcast seeder depends on seed bulk density and required application rates. Many native and naturalized seed mixes contain a mix of large fluffy seed and small dense seed. Some drills have special seed boxes that can meter large fluffy seed. Many native seed mixes are planted at 10-20 lb per acre (1/4-1/2 lb per 1,000 sq ft).

A simple method for calibrating a seeder is to add a bulking agent (such as kitty litter) to create an even flow of seed. Add 40-50 lb of a bulking agent to 10 lb of seed and calibrate for 50-60 lb per acre (1 lb bulking agent to 1/4 lb of seed per 1,000 sq ft). Divide the seed into proportional areas of the project. Start seeding at a lower rate than the calculated rate. If possible, plan on seeding half of the seed in one direction and make a second pass with the remaining half of the seed in a direction perpendicular to the first direction.

A drill seeder is practical for seeding several acres or more in areas where slopes aren't too steep. It generally has an 8' minimum width and contains a seed hopper capable of seeding a 6' width and row spacing of approximately 7". Some of the best drills are manufactured by Truax Company, Inc.



HAND SEEDING

Seeding with machinery is not always effective or efficient for small plots or on difficult terrain. Hand seeding is easily accomplished when the seed is mixed with a bulking agent (such as kitty litter). Hand seeding means literally casting the seed onto the ground surface by hand. An experienced person can seed effectively with this method, while an inexperienced person can become effective with very little practice. The biggest challenge is coordinating the step-and-throw action to improve uniformity of seed placement. Divide the seeding area and seed mix into several small equal sections and hand cast the seed in two directions. Follow hand seeding up with hydromulch and a light raking or rolling to achieve good seed-to-soil contact. Do not roll or track the seed if the soil is wet.



HYDROSEEDING

A hydroseeder combines water, seed, fertilizer and, sometimes, hydromulch into a mix that is then pumped through a nozzle and sprayed uniformly over the area to be seeded. Hydroseeders can distribute this mix at a distance of 150' or more which allows for the ability to seed terrain that may not be accessible by other seeding methods; namely, steep slopes, roadside cuts or sites that are too wet. The use of hydromulch assists in seed placement and helps to reduce erosion on slopes. Depending on site conditions, the use of erosion control blankets or straw mulch may be needed to cover the seed. Many native seeds should be broadcast with little mulch in the mix. A small amount of mulch can be applied with the seed as a marker, but must be limited to a minimum as native seeds will not germinate if suspended in the mulch with little or no seed-to-soil contact. A secondary application of mulch may be applied on top.



BROADCAST SEEDING

A broadcast seeder consists of a hopper with a material regulating system in the bottom that feeds material either onto a spinner or directly onto the soil. This system is commonly used to spread seed, fertilizer, lime and other granular products. Some materials have difficulty getting through the regulating mechanism in some broadcast seeders. For these systems, the use of a flow-enhancing material (such as kitty litter) mixed with the seed will aid in uniformity and enable the system to handle the seed. Spread half of the seed in one direction (horizontally) and the remaining seed in the other direction (vertically). Follow by rolling or tracking the seed to achieve good seed-to-soil contact. Do not roll or track the seed if the soil is wet. Cover with a light layer of straw mulch.





CULTIPACKING

A cultipacker is an excellent way of covering the seed with a minimum amount of soil to ensure proper seed-to-soil contact. It resembles a large rolling pin with evenly spaced ridges and dimples. The cultipacker's primary functions are to break up clods, remove excess air spaces from loose soil and smooth the soil surface. This method consists of heavy-duty smooth, spoke or crowfoot rollers that provide clod-breaking and smoothing capabilities. As with any tillage, it is important not to overwork the soil or work it when it is too wet.



SPRAYER

Sprayers come in various sizes and styles, including common hand-held units like that shown here. These are often preferred for carefully targeted spraying of unwanted or invasive vegetation. Larger areas may be effectively sprayed using tractor- or ATV-drawn tank units.

Use of herbicides to control undesirable vegetation can be an important part of an integrated pest management (IPM) program when used according to the manufacturer's label. Prior to using any herbicide, read the label for safe handling and application information. Many herbicides are only available to licensed applicators. When these are needed, employ a licensed professional.



STRAW MULCHING

A straw-mulch blower is used to distribute mulch over a seeded area. It consists of a slide (or chute) in which to feed the mulch, chopper blades for chopping and breaking up the mulch and a blower for spreading the mulch over large areas. Straw mulch can be spread by hand in smaller areas. Note: To minimize potential weed issues, it is important to use weed-free straw.

DISCBINE MOWER

A discbine mower is a hay-harvesting machine with high-speed rotary discs that mow biomass for baling and assembles the material into a windrow.



ROTARY MOWER

A rotary mower easily mows existing vegetation. Heavy-duty rotary mowers can be utilized as brush hogs to tame heavy grass and light brush, such as multiflora rose, honeysuckle and small tree seedlings. Heavy vegetation on under-utilized fields is difficult to mow with a discbine or sickle bar mower.

NOTE: Mowing during the growing season should not be necessary after the establishment year unless it is being used in lieu of herbicides to control weeds. In such cases, mowing height should be no lower than 8".

To prevent succession of woody species, an important aspect of the maintenance program for an established meadow is an early spring mowing that is close to the ground (2"). Mowing should be done every one to three years in late winter or early spring, shortly before spring nesting season. This will leave cover and food for wildlife through the winter without disrupting the nesting of grassland birds.




In the second year, an adequate native meadow stand should have one to two plants per square foot, which will not (and should not) look like a lawn. Warm season grasses establish faster with good fertility and adequate, but not excessive, moisture. With ideal conditions, species may reach mature size in two years.



DISCLAIMER: The information in this review of practices is the result of more than 50 years of experience in seed production. Ernst Conservation Seeds has been supplying seeds and consulting in the reseeding of tens of thousands of acres of roadsides, surfacemined lands, conservation and restoration sites in eastern North America, as well as growing and supplying seed and consulting in the planting of hundreds of thousands of acres of CRP/CREP-related areas for erosion control and wildlife habitat. All of these practices are opinion only and our best advice as a result of these experiences. These recommendations do not cover all of the conditions that will be encountered in the field. All of the information is for individual consideration. Ernst Conservation Seeds is not responsible for conditions that will be encountered in individual situations. The use of brand names does not represent our endorsement of a specific product; rather, it represents our experience only and has not necessarily been replicated in peer-reviewed research. The use of chemical pest control agents is subject to manufacturers' instructions and labeling, as well as federal, state and local regulations.

APPENDIX D
LANDSCAPING ZONE KEY MAP



- 
 - ZONE A
 NATIVE TREE & SHRUB
 LANDSCAPE BUFFER WITH
 HIGH POLLINATOR SEED MIX
- 
 - ZONE B
 LAWN ACCESS TRACKS & ROW
 TYPICAL LAWN AREA
- 
 - ZONE C
 POLLINATOR FIELDS
 LOW POLLINATOR SEED MIX
 UNDER SOLAR PANELS

GRAPHIC SCALE
 0 250 500
 FEET
 SCALE: 1" = 500'

LANDSCAPING KEY MAP
COMMUNITY SOLAR FACILITIES & SOLAR PHOTOVOLTAIC FACILITY
LOVE LANE, LLC
PLATE 12, BLOCK 1301, LOTS 1.10, 1.11, 1.12, 1.13 & 1.14
 UPPER DEERFIELD TOWNSHIP, CUMBERLAND COUNTY, NEW JERSEY

D. Community Engagement Letters



Love Lane Partners LLC, 5 Woodcrest Lane, Old Tappan, New Jersey 07675

August 11, 2019

Bridgeton Area Chamber of Commerce
Attn: Tony Stanzione, Executive Director
76 Magnolia Avenue
Bridgeton, New Jersey 08302
(via email only to tony@cdcnj.com)

Re: Love Lane Solar
Community Solar Projects

Dear Tony,

Recently New Jersey enacted legislation and came out with a new program permitting the development of Community Solar projects in our state. Most people are not aware of the program as of yet, but that will surely change shortly when the New Jersey Board of Public Utilities ("NJBPU") Office of Clean Energy ("OCE") approves new projects this fall!

Basically, the Community Solar program allows developers, like Love Lane Partners, to develop large scale solar arrays and through a subscriber company to sell the power to local residences, businesses, farmers and industries within the electric company's territory the project is located in. For us, that is all of Cumberland County and anywhere in the Atlantic City Electric Co. territory.

Love Lane Partners received Upper Deerfield Township Board approval for a Use Variance and Site Plan approval for a 19+ Megawatt Community Solar project(s) on Love Lane across from the Cumberland Regional High School back in May. Our next step is to make an application to the NJBPU, OCE for acceptance in the Community Solar program.

If the project is accepted, our partner subscriber company will be looking to sell the power, roughly 45% of the power, to local residents, businesses, farmers and industry.

We have made a commitment to Upper Deerfield that when the time is appropriate, we intend to sell a lot of the power to the local Cumberland County community.

This will become a wonderful opportunity for Bridgeton Area businesses to buy clean, renewable solar energy at a discount of typically between 10% and 20% off their current overall bill. No investments, no costs – just sign a few forms and cut your electric bill and GO GREEN!

We would like to first inform your members that there is a good likelihood of the projects being accepted in the program in the near future. Upon acceptance by the NJBPU OCE we would like partner with your organization and local businesses in the Bridgeton/Upper Deerfield to be their solar energy provider.

At this early juncture, it is important for us to engage with the community to see if there is interest in the project? Is it your organizations opinion that many of the local businesses would like the opportunity to buy clean, renewable solar energy from a local source? Please respond to this letter with a letter of support/interest.

When the time is appropriate, we would like to meet with your organization and develop a collaborative effort to reach local businesses and inform them of the opportunity to save money and perhaps help draw new businesses to locate their businesses in the Bridgeton/Upper Deerfield area. Having the ability to buy 100% solar energy will be a powerful added tool to attract and retain businesses and we want to help!

I would like to discuss this opportunity further when you have an opportunity. I provided my cell phone number at the bottom of the email, call anytime.

I look forward to working with the Bridgeton Area Chamber of Commerce.

Sincerely,



John J. Renz
Member



PO Box 1063, 76 Magnolia Avenue
Bridgeton, New Jersey 08302
Telephone: (856) 455-1312 Fax: (856) 453-9795
Web Site: www.baccnj.com Email: bacc@baccnj.com
William Whelan, Chairman of the Board
Anthony Stanzione, Executive Director
Suzette Maldonado, Office Assistant

August 28, 2019

New Jersey Board of Public Utilities
44 South Clinton Avenue, 7th Floor
P.O. Office Box 350
Trenton, NJ 08625
Attn: Office of Clean Energy

RE: Love Lane Partners Community Solar Projects in Upper Deerfield

To the New Jersey Board of Public Utilities,

I am writing to express the Bridgeton Area Chamber of Commerce (BACC) support for Love Lane Partners 19+ Megawatt Community Solar project(s), that have been approved by Upper Deerfield Township, Cumberland County, NJ. The project site is located on Love Lane in Upper Deerfield across from the Cumberland Regional High School.

The BACC Board of Directors joins Upper Deerfield in supporting this project because it plans to sell about 45% of the power to municipalities, utility authorities, schools, residents, businesses, farmers and industry in Cumberland County. This will be an opportunity for Cumberland County local government entities, residents, businesses, farmers and industry to buy clean, renewable solar energy at a discount of typically between 10% and 20% off their current overall bill with no upfront capital investments. The project also supports New Jersey's goal of 50% renewable energy by 2030.

As the Chamber of Commerce for Upper Deerfield, we support the project because it will provide residents, public entities and businesses the opportunity to buy clean, renewable solar energy from a local source at a discounted rate which could help retain local businesses and may help draw new businesses to Upper Deerfield and Cumberland County.

Sincerely,

Tony Stanzione
Executive Director

cc: Mayor James Crilley, Upper Deerfield
Roy Spoltore, Township Administrator, Upper Deerfield



Hometown Heart with a Global Reach



Love Lane Partners LLC, 5 Woodcrest Lane, Old Tappan, New Jersey 07675

August 11, 2019

Cumberland Development Corporation
Attn: Tony Stanzione, Executive Director
76 Magnolia Avenue
Bridgeton, New Jersey 08302
(via email only to tony@cdcny.com)

Re: Love Lane Solar
Community Solar Projects

Dear Tony,

Recently New Jersey enacted legislation and came out with a new program permitting the development of Community Solar projects in our state. Most people are not aware of the program as of yet but, that is going to change shortly when the New Jersey Board of Public Utilities ("NJBP") Office of Clean Energy ("OCE") approves new projects this fall!

Basically, the Community Solar program allows developers, like Love Lane Partners, to develop large scale solar arrays and through a subscriber company to sell the power to local governmental entities, residences, businesses, farmers and industries within the electric company's territory the project is located in.

Love Lane Partners received Upper Deerfield Township Board approval for a Use Variance and Site Plan approval for a 19+ Megawatt Community Solar project(s) on Love Lane across from the Cumberland Regional High School back in May. Our next step is to make an application to the NJBP, OCE for acceptance in the Community Solar program.

If the project is accepted, our partner subscriber company will be looking to sell the power, roughly 45% of the power to municipalities, utility authorities, schools, residents, businesses, farmers and industry in Cumberland County.

We have made a commitment to Upper Deerfield that when the time is appropriate, we intend to sell the power to the local Cumberland County community.

This will become a wonderful opportunity for Cumberland County local government entities, residents, businesses, farmers and industry to buy clean, renewable solar energy at a discount of typically between 10% and 20% off their current overall bill. No investments, no costs – just sign a few forms and cut your electric bill and GO GREEN!

We would like to first inform your members that there is a good likelihood of the projects being accepted in the program in the near future. Upon acceptance by the NJBPU OCE we would like partner with community leaders and explore the opportunity to serve Cumberland County entities and be their solar energy provider.

At this early juncture, it is important for us to engage with the community to see if there is interest in the project? Is it your organizations opinion that many of the local entities would like the opportunity to buy clean, renewable solar energy from a local source? Please respond to this letter with a letter of support/interest.

When the time is appropriate, we would like to meet with your organization and develop a collaborative effort to reach local businesses and inform them of the opportunity to save money and perhaps help draw new businesses to locate their businesses to Cumberland County. Having the ability to buy 100% solar energy will be a powerful added tool to attract and retain businesses and we want to help!

I would like to discuss this opportunity further when you have an opportunity. I provided my cell phone number at the bottom of the email, call anytime.

I look forward to working with the Cumberland Development Corporation.

Sincerely,



John J. Renz
Member



Love Lane Partners LLC, 5 Woodcrest Lane, Old Tappan, New Jersey 07675

August 16, 2019

Cumberland County Improvement Authority
Kimberly Ayers, Senior Vice President
Economic Development
745 Lebanon Road
Millville, NJ 08332
(via email only to ed@ccia-net.com)

Re: Love Lane Solar
Community Solar Projects

Dear Kimberly,

Recently New Jersey enacted legislation and came out with a new program permitting the development of Community Solar projects in our state. Most people are not aware of the program as of yet but, that is going to change shortly when the New Jersey Board of Public Utilities ("NJBP") Office of Clean Energy ("OCE") approves new projects this fall!

Basically, the Community Solar program allows developers, like Love Lane Partners, to develop large scale solar arrays and through a subscriber company to sell the power to local governmental entities, residences, businesses, farmers and industries within the electric company's territory the project is located in and in our case that is Atlantic City Electric Co. territory, Cumberland County.

Love Lane Partners received Upper Deerfield Township Board approval for a Use Variance and Site Plan approval for an 18+ Megawatt Community Solar project(s) on Love Lane across from the Cumberland Regional High School back in May. Our next step is to make an application to the NJBP, OCE for acceptance in the Community Solar program.

If the project is accepted, our partner subscriber company will be looking to sell the power, roughly 45% of the power to municipalities, utility authorities, schools, residents, businesses, farmers and industry in Cumberland County.

We have made a commitment to Upper Deerfield that when the time is appropriate, we intend to sell the power to the local community.

This will become a wonderful opportunity for South Jersey's local government entities, residents, businesses, farmers and industry to buy clean, renewable solar energy at a discount of typically between 10% and 20% off their current overall bill. No investments, no costs – just sign a few forms and cut your electric bill and GO GREEN!

At this early juncture, it is important for us to engage with the community to see if there is interest in the project? Is it your organizations opinion that many of the local entities would like the opportunity to buy clean, renewable solar energy from a local source? Please respond to this letter with a letter of support/interest.

When the time is appropriate, we would like to meet with your organization and develop a collaborative effort to reach local businesses and inform them of the opportunity to save money and perhaps help draw new businesses to locate their businesses to Cumberland County. Having the ability to buy 100% solar energy will be a powerful added tool to attract and retain businesses and we want to help!

I would like to discuss this opportunity further when you have an opportunity. I provided my cell phone number at the bottom of the email, call anytime.

I look forward to working with the Cumberland County Improvement Authority.

Sincerely,

John J. Renz
Member



Love Lane Partners LLC, 5 Woodcrest Lane, Old Tappan, New Jersey 07675

August 11, 2019

Cumberland County Freeholders
The Board of Agriculture
Freeholder Joseph V. Sparacio, Freeholder Liaison
291 Morton Avenue
Millville, New Jersey 08332
(email only to josephsp@co.cumberland.nj.us)

Re: Love Lane Solar
Community Solar Projects

Dear Joseph,

Recently New Jersey enacted legislation and came out with a new program permitting the development of Community Solar projects in our state. Most people are not aware of the program as of yet but, that is going to change shortly when the New Jersey Board of Public Utilities ("NJBPU") Office of Clean Energy ("OCE") approves new projects this fall!

Basically, the Community Solar program allows developers, like Love Lane Partners, to develop large scale solar arrays and through a subscriber company to sell the power to local governmental entities, residences, businesses, farmers and industries within the electric company's territory the project is located in and in our case that is Atlantic City Electric Co. territory, most of South Jersey.

Love Lane Partners received Upper Deerfield Township Board approval for a Use Variance and Site Plan approval for a 19+ Megawatt Community Solar project(s) on Love Lane across from the Cumberland Regional High School back in May. Our next step is to make an application to the NJBPU, OCE for acceptance in the Community Solar program.

If the project is accepted, our partner subscriber company will be looking to sell the power, roughly 45% of the power to as many farmers as possible in Cumberland County and the surrounding communities.

We have made a commitment to Upper Deerfield that when the time is appropriate, we intend to sell the power to the local community and first and foremost among the local community, farmers are our preferred customer.

This will become a wonderful opportunity for South Jersey's local farmers to buy clean, renewable solar energy at a discount of typically between 10% and 20% off their current overall bill. No investments, no costs – just sign a few forms and cut your electric bill and GO GREEN!

As a marketing tool, I believe it would be a great idea for farmers who are farming organically to add a badge to their labels, 100% solar powered farm.

We would like to first inform the agricultural community that there is a good likelihood of the projects being accepted in the program in the near future. Upon acceptance by the NJBPU OCE we would like partner with agricultural community leaders and explore the opportunity to serve Cumberland County farmers and be their solar energy provider.

At this early juncture, it is important for us to engage with the community to see if there is interest in the project? Is it your opinion that many of the local farmers would like the opportunity to buy clean, renewable solar energy from a local source? Please respond to this letter with a letter of support/interest.

I would like to discuss this opportunity further when you have an opportunity. I provided my cell phone number at the bottom of the email, call anytime.

I look forward to working with the Cumberland County farming community.

Sincerely,



John J. Renz
Member



Love Lane Partners LLC, 5 Woodcrest Lane, Old Tappan, New Jersey 07675

August 11, 2019

Mr. Roy J. Spoltore, Township Administrator
Upper Deerfield Township Municipal Building
1325 State Highway 77
Seabrook, New Jersey 08302
(via email only)

Re: Love Lane Partners LLC
Community Solar Projects

Dear Roy,

Love Lane Partners LLC is currently preparing applications to the NJ Board of Public Utilities ("NJBPUP") Office of Clean Energy ("OCE") for acceptance and award of two of the four Community Solar projects recently approved by the Upper Deerfield Joint Land Use Board. Upon completion of the applications, I will forward a copy to your attention and the Land Use Board Secretary for the Township's files.

As discussed at the Land Use Board hearing, applications are being made on a project by project basis for the two of the four Community Solar projects by affiliated companies formed by Love Lane Partners LLC. The two applications that are being made are for Community Solar projects (1) CSF-1 Array #2 under Love Lane Solar 2 LLC, (2) CSF-2 Array #3 under Love Lane Solar 3 LLC. We anticipate making future applications for projects (3) CSF-3 Array #4 under Love Lane Solar 4 LLC and (4) CSF-4 Array #5 under Love Lane Solar 5 LLC next calendar year when the application period reopens at the NJBPUP.

As an aside, the Cumberland Regional High School selected and awarded Love Lane Partners LLC the Net-Metered Solar project, SPF-1 Array #1 to be developed under Love Lane Solar 1

LLC to provide solar power to the school facilities. Currently, Love Lane Solar 1 LLC has an interconnection application pending acceptance at Atlantic City Electric.

The purpose of this letter is to request that the Township respond to this letter and memorialize the Community Engagement demonstrated by Love Lane Partners in connection with Love Lane Partners LLC's Joint Land Use Board application for Use Variance, Site Plan and Subdivision applications for the projects. The NJBPU application defines this as a Letter of Support. I know that the Township cannot "support" our application but would you be kind and affirm the fact that Love Lane Partners has demonstrated Community Engagement as follows:

As part of the Application to the OCE for acceptance of the Community Solar projects (link to application <http://www.njcleanenergy.com/renewable-energy/programs/community-solar>) page 15 and 16 of 28, under section X. Community Engagement the OCE asks the applicant to respond and provide evidence to address the following mandatory *questions*:

X. Community Engagement

1. *The proposed community solar project is being developed by or in collaboration with the municipality in which the project is located.....* Yes ☐ No ☐

If "Yes" explain how and attach a letter of support from the municipality in which the project is located.

**Collaboration with the municipality should include, at minimum, one or more meetings with the relevant municipal authorities and clear evidence of municipal involvement and approval of the design, development, or operation of the proposed community solar project.*

Please give consideration and confirm that Love Lane Partners has had many meetings and discussions, both formal and informal, to discuss the service to the township's water facility and offer to help the Economic Development opportunities of the township and its local businesses by offering to have local businesses become subscribers to the Community Solar facilities.

In addition, the Mayor, Township Officials, Planning Board and Council Members, Land Use Board members and Professional Staff, Engineers, Planner and the Board Attorney along with the partners of Love Lane Partners LLC attended a Workshop meeting held on March 26, 2019 to discuss the details of the project and many topics including neighborhood impacts, cleanup of the contaminated soil, landscaping with pollinator plants and our commitment to service Low and Moderate Income subscribers.

A Joint Land Use Meeting and Public Hearing on April 15, 2019 where the public was allowed to comment on the matter and several neighbors and members of the community voiced their questions and concerns. Love Lane Partners responded to concerns and also agreed to make changes to their plans and made accommodations to address resident concerns. Love Lane

Partners also agreed to comply with the Board's recommendation and those of the Board's professionals.

3. *the proposed community solar project was developed, at least in part, through a community consultative process** ☐ Yes ☐ No

If yes please describe the consultative process.

**A community consultative process should include, at minimum, one or more opportunities for public intervention and outreach to the municipality and/or local community organizations.*

Love Lane Partners met with several neighbors prior to the public hearing and Love Lane Partners has been very cooperative and helpful addressing the community's concerns and comments raised at the public hearing.

As you can see from the questions posed by the OCE, the purpose of the Community Engagement section of the responses is to ensure the applicant of a Community Solar project meets and engages with the host community to ensure the community has a chance to be a part of the process. As I am sure you will agree, Love Lane Partners has done so and we pledge to continue to do so in the future.

We appreciate your professional considerations, please respond at your earliest convenience.

Sincerely,



John J. Renz
Member

Copy: Albert Marmero, Esq.

UPPER DEERFIELD TOWNSHIP



ADMINISTRATIVE OFFICE

Phone: (856) 451-3811 • Fax: (856) 451-1379

1325 State Highway 77
Seabrook, NJ 08302

August 21, 2019

NJ Board of Public Utilities
Office of Clean Energy
44 S. Clinton Avenue
Trenton, NJ 08625

Re: Love Lane Partners LLC
Community Solar Projects

To Whom It May Concern:

Please be advised that Love Lane Partners LLC received major subdivision approval to subdivide a 219.3 acre parcel into six lots with Love Lane Partners LLC retaining ownership of 5 lots consisting of approximately 126.35 acres at a meeting of the Upper Deerfield Township Planning Board on April 15, 2019. At the same meeting, Love Lane Partners LLC received approval for a use variance and bulk variances to construct solar arrays on all five parcels as well as preliminary site plan approval for their project.

Informal discussions about the potential solar project took place between Township officials and representatives of Love Lane Partners prior to a workshop meeting that was held on March 26, 2019. A preliminary meeting to discuss the project was held on February 13th at the municipal building for Love Lane Partners to provide a conceptual idea of the project. The Township provided Love Lane Partners LLC with electric bills from the adjacent municipal public water treatment facility on March 6th. Multiple phone conversions also took place prior to the workshop meeting.

Ownership of Love Lane Partners LLC along with their professionals attended the March 26th workshop meeting to provide an overview of the proposed Community Solar project on Love Lane to Township officials consisting of governing body representatives, Township Planner, Township Engineer, Planning Board Engineer and Township Administrator. At the meeting it was noted that one of the proposed parcels would be providing net-metered solar energy to Cumberland Regional High School, which will provide significant energy savings to the school and subsequently to taxpayers in Upper Deerfield Township whose children attend the high school. The Community Solar concept was presented and Township officials could see that elements of the program, such as the requirement that a percentage of the discounted energy must be made available to low and moderate income households which could potentially benefit Township residents in a 283 unit housing complex and other indigent residents in the Township.

At this meeting, the Township was also informed that Township industry and businesses would be eligible to receive energy savings as a subscriber through the program which would be helpful in reducing their operation costs and may be helpful in keeping a business from relocating to another state or location. Additionally, other topics of discussion included neighborhood impacts, cleanup of the contaminated soil and landscaping with pollinator plants. Township officials were also informed that representatives from Love Lane Partners have been meeting with adjoining property owners to discuss the proposed project.

The Upper Deerfield Planning Board (Land Use Board) met on April 15, 2019 for a regularly scheduled public meeting and held a public hearing on the Love Lane Partners LLC's applications for a Use Variance, Site Plan and Major Subdivision. This meeting was open to the public and all adjacent property owners within 200 feet of the 219 acre parcel were notified of the meeting by the applicant. The Planning Board and members of the public heard the presentation by Love Lane Partners LLC professionals regarding the proposed project and the benefits that Community Solar projects offered to municipalities. The meeting was then opened to the public for comment. Three neighboring property owners asked questions during the public hearing and the Love Lane Partners responded to their questions and concerns and agreed to make changes to their plans and make the accommodations to address the resident's concerns. Love Lane Partners also agreed to comply with the Planning Board's recommendation and those of the Board's professionals. Each application for a use and bulk variance, major subdivision and preliminary site plan were unanimously approved with seven affirmative votes and zero no votes by the Planning Board.

In conclusion, the Township has been informed of the solar project from the outset and the applicant has sought comments and suggestions of Township officials from the beginning of the process to current day.

Sincerely,



Roy J. Spoltore, Administrator



CUMBERLAND REGIONAL SCHOOL DISTRICT

65 Love Lane, Bridgeton, New Jersey 08302
Phone: 856-451-9400 / Fax: 856-455-9750
www.crhds.org



Steven W. Price
Superintendent/
Chief Educational Officer

Bruce D. Harbinson
School Business Administrator/
Assistant to Superintendent

September 5, 2019

NJ Board of Public Utilities
Office of Clean Energy
44 S. Clinton Avenue
Trenton, NJ 08625

Re: **Love Lane Partners LLC**
Community Solar Projects

To Whom It May Concern:

Please be advised that Love Lane Partners LLC ("Love Lane") received an award from Cumberland Regional High School District ("CRHSD") for a Power Purchase Agreement to supply solar energy to the District in March of 2019. As the project(s) have progressed Love Lane has made the district aware that in addition to the school's planned net metered project, they intend to develop 4 additional projects which will be designated for the Community Solar program.

Love Lane has continued to provide updates to the district as it has progressed and has included the CRHSD community in its plans. They have offered to make all the information about the energy produced available to the district to enhance the various educational disciplines. In addition, they have offered to work with our faculty to develop a curriculum that would help students better understand the complexities of development, construction and financing solar energy projects.

We understand from the township that Love Lane had major subdivision approval to subdivide a 219.3-acre parcel into six lots with Love Lane Partners LLC retaining ownership of 5 lots at the April 15, 2019 meeting of the Upper Deerfield Township Planning Board.

We fully support Love Lane Partners and appreciate their continued collaboration in the development of these exciting solar projects that will benefit both the school district and the local community.

Please feel free to reach out to me directly with any questions.

Sincerely,

Bruce Harbinson
School Business Administrator

E. Public Notice of JLUB Meeting

Daily Journal, Vineland

Publication Logo
Resolving

Publication Name:
Daily Journal, Vineland

Publication URL:

Publication City and State:
Vineland , NJ

Publication County:
Cumberland

Notice Popular Keyword Category:

Notice Keywords:
community solar

Notice Authentication Number:
201905211728004053956
2932413025

Notice URL:

[Back](#)

Notice Publish Date:
Thursday, April 04, 2019

Notice Content

PLEASE TAKE NOTICE THAT ON April 15, 2019 at 7:00 pm at the Municipal Building, State Highway 77, Seabrook, NJ, the Upper Deerfield Planning Board will hold a public hearing on the application of Love Lane Partners, LLC, at which time and place all interested persons will be given an opportunity to be heard. The location of the premises in question is known as Block 1301, Lot 1 on the Tax Map of Upper Deerfield and is located in both the R-1 and R-2 zoning districts. The applicant is seeking Use Variance approval, Preliminary Major Subdivision approval and Preliminary Major Site Plan approval to permit multiple community solar facilities and a solar photovoltaic facility at the subject property along with all ancillary equipment, infrastructure and access, and any other variances and/or waivers as may be determined to be needed. Applicant will also require bulk variance relief from lot frontage and lot size requirements. A copy of said application and documents are on file in the Board Office at the Upper Deerfield Township Municipal Building, Seabrook, and may be inspected during business hours by all interested parties prior to said meeting. Grace, Marmero, & Associates, LLP (856)848-6440 \$61.35

[Back](#)

F. Public Notice Property Owners 200' List

UPPER DEERFIELD TOWNSHIP



1325 Highway 77, Seabrook, NJ 08302

Phone: (856) 451-3148

Fax: (856) 451-1379

www.upperdeerfield.com

Tax Assessor

Brian P. Rosenberger, C.T.A.

brosenberger@upperdeerfield.com

I, Brian P. Rosenberger, C.T.A., Assessor of Upper Deerfield Township, Cumberland County, New Jersey, hereby certify that the attached is a list of property owners within Two Hundred (200) Feet of the following:

Block(s): 1301

Lot(s): 1

Owner's Name: WESTRUM UPPER DEERFIELD LLC

Property Location: LOVE LANE

3/22/2019

Date


Brian P. Rosenberger, C.T.A.

Assessor

Note: The following list has been provided pursuant to Municipal Land Use Law, N.J.S. 40:55D-12c. (See Attached Statute)

40:55D-12. Notice of applications. Notice pursuant to subsections a., b., d., e., f., g. and h. of this section shall be given by the applicant unless a particular municipal officer is so designated by ordinance; provided that nothing contained herein shall prevent the applicant from giving such notice if he so desires. Notice pursuant to subsections a., b., d., e., f., g. and h. of this section shall be given at least 10 days prior to the date of the hearing.

a. Public notice of a hearing shall be given for an extension of approvals for five or more years under subsection d. of section 37 of P.L.1975, c.291 (C.40:55D-49) and subsection b. of section 40 of P.L.1975, c.291 (C.40:55D-52); for modification or elimination of a significant condition or conditions in a memorializing resolution in any situation wherein the application for development for which the memorializing resolution is proposed for adoption required public notice, and for any other applications for development, with the following exceptions: (1) conventional site plan review pursuant to section 34 of P.L.1975, c.291 (C.40:55D-46), (2) minor subdivisions pursuant to section 35 of P.L.1975, c.291 (C.40:55D-47) or (3) final approval pursuant to section 38 of P.L.1975, c.291 (C.40:55D-50); notwithstanding the foregoing, the governing body may by ordinance require public notice for such categories of site plan review as may be specified by ordinance, for appeals of determinations of administrative officers pursuant to subsection a. of section 57 of P.L.1975, c.291 (C.40:55D-70), and for requests for interpretation pursuant to subsection b. of section 57 of P.L.1975, c.291 (C.40:55D-70). Public notice shall also be given in the event that relief is requested pursuant to section 47 or 63 of P.L.1975, c.291 (C.40:55D-60 or C.40:55D-76) as part of an application for development otherwise excepted herein from public notice.

In addition, public notice shall be given by a public entity seeking to erect an outdoor advertising sign on land owned or controlled by a public entity as required pursuant to section 22 of P.L.1975, c.291 (C.40:55D-31) or, if so provided by ordinance adopted pursuant to subsection g. of section 29.1 of P.L.1975, c.291 (C.40:55D-39), by a private entity seeking to erect an outdoor advertising sign on public land or on land owned by a private entity.

Public notice shall be given by publication in the official newspaper of the municipality, if there be one, or in a newspaper of general circulation in the municipality.

b. Except as provided in paragraph (2) of subsection h. of this section, notice of a hearing requiring public notice pursuant to subsection a. of this section shall be given to the owners of all real property as shown on the current tax duplicates, located in the State and within 200 feet in all directions of the property which is the subject of such hearing; provided that this requirement shall be deemed satisfied by notice to the (1) condominium association, in the case of any unit owner whose unit has a unit above or below it, or (2) horizontal property regime, in the case of any co-owner whose apartment has an apartment above or below it. Notice shall be given by: (1) serving a copy thereof on the property owner as shown on the said current tax duplicate, or his agent in charge of the property, or (2) mailing a copy thereof by certified mail to the property owner at his address as shown on the said current tax duplicate.

Notice to a partnership owner may be made by service upon any partner. Notice to a corporate owner may be made by service upon its president, a vice president, secretary or other person authorized by appointment or by law to accept service on behalf of the corporation. Notice to a condominium association, horizontal

property regime, community trust or homeowners' association, because of its ownership of common elements or areas located within 200 feet of the property which is the subject of the hearing, may be made in the same manner as to a corporation without further notice to unit owners, co-owners, or homeowners on account of such common elements or areas.

c. Upon the written request of an applicant, the administrative officer of a municipality shall, within seven days, make and certify a list from said current tax duplicates of names and addresses of owners to whom the applicant is required to give notice pursuant to subsection b. of this section. In addition, the administrative officer shall include on the list the names, addresses and positions of those persons who, not less than seven days prior to the date on which the applicant requested the list, have registered to receive notice pursuant to subsection h. of this section. The applicant shall be entitled to rely upon the information contained in such list, and failure to give notice to any owner, to any public utility, cable television company, or local utility or to any military facility commander not on the list shall not invalidate any hearing or proceeding. A sum not to exceed \$0.25 per name, or \$10.00, whichever is greater, may be charged for such list.

d. Notice of hearings on applications for development involving property located within 200 feet of an adjoining municipality shall be given by personal service or certified mail to the clerk of such municipality.

e. Notice shall be given by personal service or certified mail to the county planning board of a hearing on an application for development of property adjacent to an existing county road or proposed road shown on the official county map or on the county master plan, adjoining other county land or situated within 200 feet of a municipal boundary.

f. Notice shall be given by personal service or certified mail to the Commissioner of Transportation of a hearing on an application for development of property adjacent to a State highway.

g. Notice shall be given by personal service or certified mail to the State Planning Commission of a hearing on an application for development of property which exceeds 150 acres or 500 dwelling units. The notice shall include a copy of any maps or documents required to be on file with the municipal clerk pursuant to subsection b. of section 6 of P.L. 1975, c. 291 (C. 40:55D-10).

h. Notice of hearings on applications for approval of a major subdivision or a site plan not defined as a minor site plan under this act requiring public notice pursuant to subsection a. of this section shall be given: (1) in the case of a public utility, cable television company or local utility which possesses a right-of-way or easement within the municipality and which has registered with the municipality in accordance with section 5 of P.L.1991, c.412 (C.40:55D-12.1), by (i) serving a copy of the notice on the person whose name appears on the registration form on behalf of the public utility, cable television company or local utility or (ii) mailing a copy thereof by certified mail to the person whose name appears on the registration form at the address shown on that form; (2) in the case of a military facility which has registered with the municipality and which is situated within 3,000 feet in all directions of the property which is the subject of the hearing, by (i) serving a copy of the notice on the military facility commander whose name appears on the registration form or (ii) mailing a copy thereof by certified mail to the military facility commander at the address shown on that form.

i. The applicant shall file an affidavit of proof of service with the municipal agency holding the hearing on the application for development in the event that the applicant is required to give notice pursuant to this section.

j. Notice pursuant to subsections d., e., f., g. and h. of this section shall not be deemed to be required, unless public notice pursuant to subsection a. and notice pursuant to subsection b. of this section are required.

ADJACENT PROPERTY LISTING
TAXING DISTRICT 13 UPPER DEERFIELD TWP

PAGE 1
COUNTY 06 CUMBERLAND

PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS
1109 2	266 OLD DEERFIELD PIKE	3A	CHIARELLI, GIANFRANCO & VALENTINA 256 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1109 2 QFARM	266 OLD DEERFIELD PIKE	3B	CHIARELLI, GIANFRANCO & VALENTINA 256 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1109 3	131 LOVE LANE 2.01	15D	BETHEL BAPTIST CHURCH 131 LOVE LANE BRIDGETON NJ 08302
1109 4	90 SILVER LAKE RD CUMBERLAND REGIONAL	15A	CUMBERLAND REG SCH DIST 90 LOVE LANE BRIDGETON NJ 08302
1110 1	261 OLD DEERFIELD PIKE 2	3A	EYERMAN, KATHARINE ELSIE 254 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1110 1 QFARM	OLD DEERFIELD PIKE 2	3B	EYERMAN, KATHARINE ELSIE 254 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1208 1.02 QFARM	CORNWELL DR	3B	BENCH REALTY 9 HUNTINGDON FARM DRIVE GLEN MILLS PA 19342
1208 1.03	56 LOVE LANE (REAR)	15C	UPPER DEERFIELD TOWNSHIP 1325 HIGHWAY 77 SEABROOK NJ 08302
1208 3	104 CORNWELL DR	15C	ST OF NJ, DEPT OF LAW + PUBLIC SAF 25 MARKET ST TRENTON N J 08625
1208 3.01	102 CORNWELL DR	15C	ST OF NJ, DEPT OF LAW + PUBLIC SAF 25 MARKET ST TRENTON N J 08625
1301 1 QFARM	LOVE LANE	3B	WESTRUM UPPER DEERFIELD LLC 1300 VIRGINIA DR, STE 215 FORT WASHINGTON PA 19034
1301 1.01	242 OLD DEERFIELD PIKE	2	ALEXANDER, DONNA & KENNETH 242 OLD DERRFIELD PIKE BRIDGETON NJ 08302
1301 1.02	188 OLD DEERFIELD PIKE	2	FROLIO, JOSEPH + JOAN 188 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 1.03	192 OLD DEERFIELD PIKE	1	FROLIO, JOSEPH + JOAN 188 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 1.04	100 LOVE LANE	2	KARKOCHA, JOSEPH + KIMBERLY E 100 LOVE LANE BRIDGETON NJ 08302
1301 1.05	244 OLD DEERFIELD PIKE	2	WALLER, PAUL JR 244 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 1.06	130 LOVE LANE	2	KUMISKI, MARK R 130 LOVE LANE BRIDGETON NJ 08302
1301 1.07 QFARM	70 LOVE LANE	3B	PARISH OF THE HOLY CROSS 46 CENTRAL AVENUE BRIDGETON NJ 08302

ADJACENT PROPERTY LISTING
TAXING DISTRICT 13 UPPER DEERFIELD TWP

PAGE 2
COUNTY 06 CUMBERLAND

PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS
1301 1.08	96 LOVE LANE	2	STEWART, EDWIN F JR + CECELIA M 96 LOVE LANE BRIDGETON NJ 08302
1301 1.09	110 CORNWELL DR MAXXFIT	4A	J&L ENTERPRISE INVESTMENTS LLC 229 HARDING WAY PITTSBORO NJ 08318
1301 2	236 OLD DEERFIELD PK	2	KOBYLINSKI, VALENTINA V 236 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 3	234 OLD DEERFIELD PIKE	2	GLESSNER, LESLIE O + DEBORAH L 234 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 4	232 OLD DEERFIELD PIKE	2	GATES, CHRISTINA D 232 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 5	230 OLD DEERFIELD PIKE	2	BLAKE, ROBERT E + ALLISON L JOYCE 230 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 6	228 OLD DEERFIELD PIKE	2	HALDEMAN, EDWARD 1 UHLAND AVE BRIDGETON NJ 08302
1301 7	226 OLD DEERFIELD PIKE	2	JOYCE, TRACY A 226 OLD DEERFIELD PIKE BRIDGETON NJ 08302
1301 12	10 MERLIN DR	2	CARMAN, LINDA J 10 MERLIN DR BRIDGETON NJ 08302
1301 13	12 MERLIN DR	2	MCCLAIN, JOHN + BONNIE 12 MERLIN DR BRIDGETON NJ 08302
1301 14	14 MERLIN DR	2	WUZZARDO, JOHN J JR 14 MERLIN DRIVE BRIDGETON, NJ 08302
1301 15	16 MERLIN DR	2	CRACKOVICH, MICHAEL & BEVERLY 16 MERLIN DR BRIDGETON NJ 08302
1301 16	18 MERLIN DR	2	DOOLEY, TL & TM&WEICHMANN, BERTA T 18 MERLIN DRIVE BRIDGETON NJ 08302
1301 17	20 MERLIN DR	2	SCHAEFER, JOHN E 20 MERLIN DR BRIDGETON NJ 08302
1301 18	22 MERLIN DR LE-HERMAN & BARBARA	2	EVANS, MJ, HE JR, NW SR & HERMAN & BARBARA 22 MERLIN DR BRIDGETON NJ 08302
1301 19	19 MERLIN DR	2	MATSUMOTO, BRENDA 19 MERLIN DR BRIDGETON NJ 08302
1301 20	3 WOODMONT CIRCLE	2	DENNIS, FRANK & LINK, ANGELA 3 WOODMONT CIRCLE BRIDGETON NJ 08302
1301 21	17 MERLIN DR	2	MATHIAS, G. MICHAEL + TAMMY R. 17 MERLIN DR BRIDGETON NJ 08302

PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS	
1301 22	2 WOODMONT CIRCLE	2	DOOLEY, JEREMY A 2 WOODMONT CIRCLE BRIDGETON NJ	08302
1301 23	4 WOODMONT CIRCLE	2	OVERSTREET, DARREN & MANNO, D 826 VINELAND AVE BRIDGETON NJ	08302
1301 24	13 MERLIN DR	2	BURKE, HANNELE T 13 MERLIN DR BRIDGETON, NJ	08302
1301 25	11 MERLIN DR	2	ASCENCIO, FRANCISCA 11 MERLIN DR BRIDGETON NJ	08302
1301 26	9 MERLIN DR	2	MENDOLERA, JOSEPH + KAREN 9 MERLIN DR BRIDGETON NJ	08302
1301 27	7 MERLIN DR	2	YOUNG, WM L JR & TINA M 7 MERLIN DRIVE BRIDGETON NJ	08302
1301 28	5 MERLIN DR	2	LANE, JERRY + BARBARA 5 MERLIN DR BRIDGETON NJ	08302
1301 29	3 MERLIN DR	2	CALDWELL, SUZANNE E 377 TRENCH ROAD BRIDGETON NJ	08302
1301 30	220 OLD DEERFIELD PIKE	4A	MKE LLC 6 EUGENE COURT BRIDGETON, NJ	08302
1301 31	218 OLD DEERFIELD PIKE	2	MCPHERSON, ROBERT J JR 218 OLD DEERFIELD PIKE BRIDGETON NJ	08302
1301 33	214 OLD DEERFIELD PIKE	2	DAVIS, PHILIP C & YASMYNE F 214 OLD DEERFIELD PIKE BRIDGETON NJ	08302
1301 33.01	MERLIN DR (REAR)	1	ASCENCIO, FRANCISCA 11 MERLIN DR BRIDGETON NJ	08302
1301 34	212 OLD DEERFIELD PIKE	2	BULLOCK, CATHY JEAN 212 OLD DEERFIELD PK BRIDGETON NJ	08302
1301 35	210 OLD DEERFIELD PIKE	2	208-210 OLD DEERFIELD PIKE LLC 167 LOVE LANE BRIDGETON NJ	08302
1301 36	208 OLD DEERFIELD PIKE	2	208-210 OLD DEERFIELD PIKE LLC 167 LOVE LANE BRIDGETON NJ	08302
1301 37	170 OLD DEERFIELD PIKE	15E	LAUREL LAWN CEM ASSOC 485 CORAL AVE BRIDGETON NJ	08302
1301 37.01	184 OLD DEERFIELD PIKE	2	MORALES, CARLOS E & JODI E 184 OLD DEERFIELD PLACE BRIDGETON NJ	08302
1301 37.02	182 OLD DEERFIELD PIKE	2	HEBERT, DONALD J & SANDRA 182 OLD DEERFIELD PIKE BRIDGETON NJ	08302

ADJACENT PROPERTY LISTING
TAXING DISTRICT 13 UPPER DEERFIELD TWP

PAGE 4
COUNTY 06 CUMBERLAND

PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS	
1301 39	146 CORNWELL DR 40	2	LOATMAN, DAVID J III 265 CORNWELL DR BRIDGETON NJ	08302
1301 41	140 CORNWELL DR	2	KREWSON, BEVERLY 140 CORNWELL DR BRIDGETON NJ	08302
1301 42	134-136 CORNWELL DR	2	PANGBURN, MICHAEL E + VIKI L 136 CORNWELL DR BRIDGETON NJ	08302
1301 43	138 CORNWELL DR	2	POWELL, JOHN N + DAVID POWELL 20 PEACHTREE LANE BRIDGETON NJ	08302
1504 3	235 OLD DEERFIELD PIKE	2	HUNT FAMILY IRREVOCABLE TRUST%CAROL 235 OLD DEERFIELD PIKE BRIDGETON NJ	08302
1504 4	2 TUNBRIDGE DR	2	ZUEST, NANCY 2 TUNBRIDGE DR BRIDGETON NJ	08302
1504 5	231 OLD DEERFIELD PIKE	3A	ROGERS, DONALD O + URVE 14 TUNBRIDGE DR BRIDGETON NJ	08302
1504 5 QFARM	231 OLD DEERFIELD PIKE	3B	ROGERS, DONALD O + URVE 14 TUNBRIDGE RD BRIDGETON NJ	08302
1504 6	223 OLD DEERFIELD PIKE	2	CESTA, EDWARD J & MARY T 223 OLD DEERFIELD PIKE BRIDGETON NJ	08302
1504 7	221 OLD DEERFIELD PIKE	2	BARRICKMAN, BETH ANN 221 OLD DEERFIELD PIKE BRIDGETON NJ	08302
1504 8	OLD DEERFIELD PIKE	1	DELEONARDIS, JOHN + JUDITH 29 GRANADA DR BRIDGETON, NJ	08302
1801 18	LAUREL HEIGHTS DR	15C	UPPER DEERFIELD TOWNSHIP 1325 HIGHWAY 77 BRIDGETON NJ	08302
1801 19	CORNWELL DR	1	TANIMAE, TARMO FAMILY TRUST 972 BIGHORN ST OVIEDO FL	32765
1801 24	30 WESTWARD DR	2	YAMASAKI, RODNEY & SHELLY 726 BRIDGETON AVE BRIDGETON NJ	08302
1801 25	28 WESTWARD DR	2	GRANT, ISABEL & JEROME 28 WESTWARD DR BRIDGETON NJ	08302
1801 26	26 WESTWARD DR	2	RICHER, SHANDA A 26 WESTWARD DR BRIDGETON NJ	08302
1801 27	WESTWARD DRIVE	1	DILISI, SALVATORE & NANCY 7 RED SOX CIRCLE CINNAMINSON NJ	08077
1801 28	22 WESTWARD DR	2	GRESMER, FRANK W 22 WESTWARD DR BRIDGETON NJ	08302

ADJACENT PROPERTY LISTING
TAXING DISTRICT 13 UPPER DEERFIELD TWP

PAGE 5
COUNTY 06 CUMBERLAND

PROPERTY ID	PROPERTY LOCATION	CLASS	OWNERS NAME & ADDRESS	
1801 29	20 WESTWARD DR	2	BLANDINO, BARBARA ANNE 20 WESTWARD DR BRIDGETON NJ	08302
1801 30	18 WESTWARD DR	2	UREWICZ, STANLEY M + KATHRYN M 18 WESTWARD DR BRIDGETON NJ	08302
1801 31	16 WESTWARD DR	2	VAN SANT, DELORES 16 WESTWARD DR BRIDGETON NJ	08302
1801 32	14 WESTWARD DR	2	LIEDIKE, JACUES R + DARLENE M 14 WESTWARD DR BRIDGETON NJ	08302
1801 33	7 MALLARD LANE	2	HORSMAN, MEGAN P 7 MALLARD DR BRIDGETON NJ	08302
1801 37	95 CORNWELL DR	2	HALLQUIST, DALE 95 CORNWELL DR BRIDGETON NJ	08302
1801 38	30 LAUREL HEIGHTS DR	2	HAYES, LOUIS III & CASSANDRA REGINA 30 LAUREL HEIGHTS DR BRIDGETON NJ	08302
1808 1.01	LAUREL HEIGHTS DR	15C	UPPER DEERFIELD TWP 1325 HIGHWAY 77 SEABROOK NJ	08302
1808 1.02	LAUREL HEIGHTS DR	15C	TOWNSHIP OF UPPER DEERFIELD 1325 HIGHWAY 77 SEABROOK NJ	08302
2901 3	CITY LINE TO SEABROOK 1,4,5,6,7,8	15C	UPPER DEERFIELD TWP 1325 HIGHWAY 77 SEABROOK NJ	08302

NOTIFICATION LIST WITHIN 200 FEET OF BLOCK(S): 1301 LOT(S): 1

PLEASE NOTIFY ALL THOSE THAT ARE CHECKED BELOW:

Municipal Roads



Upper Deerfield Township
c/o Township Clerk
1325 Highway 77
Seabrook, NJ 08302

County Roads



Robert Brewer, Planning Board Director
Cumberland County Planning Board
164 West Broad Street
Bridgeton, N.J. 08302

State Highways



State of NJ DOT
Trenton Region ROW Office
1035 Parkway Avenue
Trenton, NJ 08625

Bostwick Lake, Clark Branch, Cohansey River, Cornwell Run, Foster Run, Harrow Run, Indian Fields Branch, Indian Run, Jackson Run, Loper Run, Mill Creek (Lebanon Branch), Muddy Run, Parsonage Run, Seely Lake, Stone Bridge Run, Sunset Lake, Thundergust Brook



NJDEP
Bureau of Coastal & Land Use Compliance & Enforcement
1510 Hooper Avenue
Toms River, N.J. 08753

Municipal Lines

Cumberland County



City of Bridgeton
c/o City Clerk
181 E. Commerce St
Bridgeton, N.J. 08302



Deerfield Township Municipal Bldg
c/o Township Clerk
PO Box 350
Rosenhayn, N.J. 08352-0350



Fairfield Township
c/o Township Clerk
PO Box 240
Fairton, N.J. 08320-0240



Hopewell Township
c/o Township Clerk
590 Shiloh Pike
Bridgeton, NJ 08302

Salem County



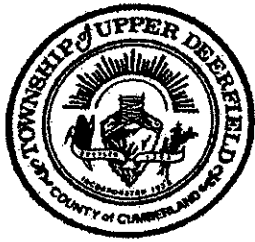
Alloway Township
c/o Township Clerk
P.O. Box 425
Alloway, N.J. 08001



Upper Pittsgrove Township
c/o Township Clerk
431 Route 77
Elmer, N.J. 08318



Pittsgrove Township
c/o Township Clerk
989 Centerton Road
Pittsgrove, N.J. 08318



UTILITY LIST FOR UPPER DEERFIELD TOWNSHIP

All of the following utility companies must be notified:

Atlantic City Electric
428 Ellis Street
Glassboro, NJ 08028

(Field Engineer & Construction Dept.)

Comcast Cable
1191 Fries Mill Road
Franklinville, NJ 08322

Conectiv *(Real Estate Dept.)*

Atlantic Regional Office
5100 Harding Highway Suite 399
Mays Landing, NJ 08330

(Right of Ways & Communication Dept.)

Cumberland County Dept. of Planning & Development
Attn: Robert Brewer, Sherry Riendeau
800 E. Commerce Street
Bridgeton, NJ 08302

NJ Dept. of Transportation
Commissioner of Transportation
1035 Parkway Avenue, CN 600
Trenton, NJ 08625

Public Service Electric & Gas Co.
Manager - Corporate Properties
80 Park Plaza, T6B
Newark, NJ 07102

(PSE&G) (Transmission or High Tension Lines)

South Jersey Gas
142 South Main Street
Glassboro, NJ 08028

Upper Deerfield Township
Superintendent of Utilities
1325 Highway 77
Seabrook, NJ 08302

Verizon Communications
10 Tansboro Road 2nd Floor
Berlin, NJ 08009

G. Jobs, Apprenticeship, Education



CUMBERLAND REGIONAL SCHOOL DISTRICT

65 Love Lane, Bridgeton, New Jersey 08302
Phone: 856-451-9400 / Fax: 856-455-9750
www.crhdsd.org



Steven W. Price
Superintendent/
Chief Educational Officer

Bruce D. Harbinson
School Business Administrator/
Assistant to Superintendent

September 5, 2019

NJ Board of Public Utilities
Office of Clean Energy
44 S. Clinton Avenue
Trenton, NJ 08625

**Re: Love Lane Partners LLC
Community Solar Projects**

To Whom It May Concern:

Please be advised that Love Lane Partners LLC ("Love Lane") received an award from Cumberland Regional High School District ("CRHSD") for a Power Purchase Agreement to supply solar energy to the District in March of 2019. As the project(s) have progressed Love Lane has made the district aware that in addition to the school's planned net metered project, they intend to develop 4 additional projects which will be designated for the Community Solar program.

Love Lane has continued to provide updates to the district as it has progressed and has included the CRHSD community in its plans. They have offered to make all the information about the energy produced available to the district to enhance the various educational disciplines. In addition, they have offered to work with our faculty to develop a curriculum that would help students better understand the complexities of development, construction and financing solar energy projects.

We understand from the township that Love Lane had major subdivision approval to subdivide a 219.3-acre parcel into six lots with Love Lane Partners LLC retaining ownership of 5 lots at the April 15, 2019 meeting of the Upper Deerfield Township Planning Board.

We fully support Love Lane Partners and appreciate their continued collaboration in the development of these exciting solar projects that will benefit both the school district and the local community.

Please feel free to reach out to me directly with any questions.

Sincerely,

Bruce Harbinson
School Business Administrator

MILLER BROS.

September 1, 2019

Bradd Forstein
SVP of Sales & Customer Development
CastleRock Energy Group
333 Westchester Ave West Building Suite W2100
White Plains, NY 10604
Phone: 215-370-0041
www.CRenergygroup.com

Subject: Love Lane, Upper Deerfield, Cumberland County Apprentice Program

Bradd,

Miller Bros. enjoys strong working relations with organized labor. Miller Bros. is signatory to 351 Local and the IBEW throughout the continental United States. Miller Bros. is also signatory to agreements with the Operating Engineers, Laborers and other Building Trades. In addition, Miller Bros. leadership takes an active role in industry negotiations with various IBEW local unions and also serve as Management Trustees on several IBEW benefit funds.

Local 351 Conducts an ongoing Training Center including Apprenticeships. Information about 351 Local's programs can be found here: <http://ibew351.org/training.aspx?zone=training&pID=7843>

Founded in 1989, Wampole-Miller, Inc (d/b/a Miller Bros) executes utility scale high voltage, substation and transmission construction. Our proven model includes: project expertise, full construction capabilities, 20+ years of audited financial statements, 500+ pieces of equipment, \$300+M bonding capacity ("A" AM Best Rated - Broker: Willis Towers Watson, Insurer: Zurich RE). We maintain investor owned utility (IOU) weekly safety (DART, OSHA, TRIR) and insurance (EMR) reporting and standards commensurate with our core utility business. Our licenses and approvals include: Federal, State, Department of Defense, and other intelligence agencies required security clearance. We are one of few electrical contractors that can simultaneously self-perform multiple utility scale projects.

Miller Bros provides turnkey Design Build and Engineering, Procurement and Construction (EPC) services to utility, industrial, government and Distributed Generation clients. Miller Bros brings together the diverse expertise required to deliver safe and reliable utility and distributed generation services including electrical and gas construction. Miller Bros. employs approximately 65 office staff, including engineers, project managers, estimators, experienced craft workers and more, processing over 500 weekly paychecks.

Miller Bros. enjoys strong working relations with organized labor. Miller Bros. is signatory to 351 Local and the IBEW throughout the continental United States. Miller Bros. is also signatory to agreements with the Operating Engineers, Laborers and other Building Trades. In addition, Miller Bros. leadership takes an active role in industry negotiations with various IBEW local unions and also serve as Management Trustees on several IBEW benefit funds.

MILLER BROS.

We have completed over 300 MW's of utility and distributed generation solar projects.

Miller Bros Solar manages over 2 GW's of solar assets (O&M) – the 5th largest in the nation.

OUR BUSINESS UNITS:

ELECTRIC UTILITY – power restoration / high & medium voltage / substation / transmission / distribution / underground / disaster response

GAS UTILITY – main and service installation and repair / low and high pressure / riser replacement, meter sets / horizontal directional drilling

COMMERCIAL / INDUSTRIAL – medium and high voltage private power services

TRANSIT – smart grid / fiber optic installation / switches / railway signalization / catenary

HEAVY & HIGHWAY – intelligent traffic systems / highway lighting / traffic signalization / boring & directional drilling / vertical drilling

RENEWABLE ENERGY – engineering / procurement / construction / solar O&M / performance contracting / Cogen / CHP / battery storage

If we can provide more information about Local 351's Training and Apprenticeship programs, please contact me as below. Thank you.

Sincerely,



Gerard deLisser

VP Development

Miller Bros

C: 917-687-2620

301 Alan Wood Road, Conshohocken, PA 19428

P: 610-832-1000 | F: 610-832-1005

H. Development Plans

- 1. Use Variance, Subdivision and Site Plans**
- 2. Delineation Map**
- 3. Remediation Plan**

- I. **CD of Application Package, All Files Electronic Copies**

J. Copies of Permits Received

Love Lane Solar

Community Solar Facilities Block 1301, Lots 1.10, 1.12, 1.13 & 1.14 Upper Deerfield, Cumberland County, NJ Approval / Permit / Status List

No.	Approval/Permit	Status / Notes
		(Complete) (In Process)

Upper Deerfield Joint Land Use Board (JLUB) and Municipal Approvals (Project Basis)

- | | | |
|-----|---|--------------------------|
| 1) | Use Variance Approval Entire Project | Resolution # 8-2019 |
| 2) | Overall Preliminary Subdivision Approval | Resolution # 8-2019 |
| 3) | Overall Preliminary Site Plan Approval | Resolution # 8-2019 |
| 4) | Preliminary & Final Subdivision Approval | |
| 5) | Final Site Plan Approval Net-Meter Project | |
| 6) | Final Site Plan Approval Community Project 1 | |
| 7) | Final Site Plan Approval Community Project 2 | |
| 8) | Final Site Plan Approval Community Project 3 | |
| 9) | Final Site Plan Approval Community Project 4 | |
| 10) | Preliminary & Final Site Plan Approval Express Feeder (if req.) | |
| 11) | Bond Estimate – Sitework Net-Meter Project | |
| 12) | Bond Estimate – Sitework Community Project 1 | |
| 13) | Bond Estimate – Sitework Community Project 2 | |
| 14) | Bond Estimate – Sitework Community Project 3 | |
| 15) | Bond Estimate – Sitework Community Project 4 | |
| 16) | Address/Block/Lot Assignment | Approved by Tax Assessor |
| 17) | Developer's Agreement (Overall) | Being prepared |

Cumberland County (Overall and Project Basis)

- 18) Cumberland County Approval Overall
- 19) Cumberland County Approval Express Feeder

Cumberland-Salem Soil Conservation District Certification (Project Basis)

- 20) Soil Conservation Cert./RFA Net-Meter Project
- 21) Soil Conservation Cert./RFA Community Project 1
- 22) Soil Conservation Cert./RFA Community Project 2
- 23) Soil Conservation Cert./RFA Community Project 3
- 24) Soil Conservation Cert./RFA Community Project 4
- 25) Soil Conservation Cert./RFA Express Feeder

Love Lane Solar

NJDEP Land Use Program (Overall and Project Basis)

- | | | |
|-----|--|-----------------|
| 26) | <i>NJDEP Permit Coordination & Environmental Review Letter</i> | <i>Received</i> |
| 27) | <i>NJDEP LOI Presence/Absence Determination</i> | <i>Received</i> |
| 28) | NJDEP Wetlands LOI Express Feeder | |
| 29) | NJDEP Wetlands General Permit 21 Express Feeder | |
| 30) | NJDEP Flood Hazard Individual Permit Express Feeder | |

NJDEP Site Remediation Program (Overall and Project Basis)

- | | | |
|-----|---|-----------------------------------|
| 31) | ASTM Std. Phase One Site Assessment Overall | Executive Summary |
| 32) | <i>NJDEP - LSRP Technical Consultation</i> | <i>Meeting held July 25, 2019</i> |
| 33) | NJDEP Remedial Action Work Plan – Net-Meter Project | |
| 34) | NJDEP Remedial Action Work Plan – Community Project 1 | |
| 35) | NJDEP Remedial Action Work Plan – Community Project 2 | |
| 36) | NJDEP Remedial Action Work Plan – Community Project 3 | |
| 37) | NJDEP Remedial Action Work Plan – Community Project 4 | |
| 38) | NJDEP Deed Restriction Approval | |
| 39) | LSRP Remedial Action Outcome – Net-Meter Project | |
| 40) | LSRP Remedial Action Outcome – Community Project 1 | |
| 41) | LSRP Remedial Action Outcome – Community Project 2 | |
| 42) | LSRP Remedial Action Outcome – Community Project 3 | |
| 43) | LSRP Remedial Action Outcome – Community Project 4 | |

NJDEP Historic Preservation Office (Overall and Project Basis)

- | | | |
|-----|---|-------------------------|
| 44) | <i>NJDEP HPO Clearance Letter Overall</i> | <i>Received 7/19/19</i> |
| 45) | NJDEP HPO Clearance Letter Express Feeder | |

NJDEP Forest Service, Office of Natural Lands Management (Overall and Project Basis)

- | | | |
|-----|--|---------------------------|
| 46) | <i>NJDEP NHP T&E Species Review Overall</i> | <i>Received - 4/12/19</i> |
| 47) | <i>NJDEP NHP T&E Species Review Express Feeder</i> | <i>Received - 4/12/19</i> |

U.S. Dept of Interior Fish and Wildlife (Overall Basis)

- | | | |
|-----|--|--------------------------|
| 48) | <i>USFWS Endangered Species Review Letter Overall</i> | <i>Received - 4/9/19</i> |
| 49) | <i>USFWS Endangered Species Review Letter Express Feeder</i> | <i>Received - 4/9/19</i> |

U.S. Dept of Environmental Protection (Overall Basis)

- | | | |
|-----|----------------------------|--|
| 50) | NEPA Categorical Exclusion | |
|-----|----------------------------|--|

A. NJDEP Permit Coordination and Environmental Review (PCER)

Don Brickner

From: Brunatti, Megan <Megan.Brunatti@dep.nj.gov>
Sent: Tuesday, July 2, 2019 6:37 PM
To: Don Brickner
Cc: John Renz; Ken Blechman; Foster, Ruth; Corleto, Joseph; West-Rosenthal, Jesse; Resnick, Matthew; Hill, Erin
Subject: RE: Request for Pre-Application Review, Love Lane Solar, Upper Deerfield, NJ

Dear Don,

The Office of Permit Coordination and Environmental Review distributed project information to various programs within the Department for the proposed Love Lane Solar project located in Upper Deerfield, Cumberland County. Below are preliminary comments of possible permits and action items this project may require (but not limited to) based on the information that was submitted on June 4, 2019: *** this is neither a comprehensive nor a technical summary ***

Division of Land Use Regulation – Matt Resnick: Matthew.Resnick@dep.nj.gov (609) 984-6216

The applicant is showing a wetland line on the subject property, with proposed construction north of and outside the regulated area. A Letter of Interpretation: Verification has previously been issued for this property and has subsequently expired. A presence/absence LOI is currently under review. Any impacts to wetlands and/or transition areas will require approvals from the Division of Land use Regulation under the Freshwater Wetlands Protection Act.

Division of Fish and Wildlife- Joseph Corleto: Joseph.Corleto@dep.nj.gov or (609)984-3859

Based on the potential of ground nesting birds and habitats in the immediate vicinity of this project, the NJDFW would recommend any ground clearing or site preparation be done outside the nesting season (4/1 to 8/31) to avoid impact to ground nesting birds. Additionally, the Division recommends avoiding trimming or removal of trees from (4/1 – 8/31) to protect nesting birds covered under the NJ Endangered & Non-game Species Conservation Act.

To avoid possible impacts to Little Brown and Tricolored Bats the NJDFW would recommend removal of highly suitable roost trees including snags (dead trees), shagbark hickories (*Carya ovata*), other trees with shaggy or exfoliating bark, and trees of any species over 5 inches DBH, be avoided between (4/1 to and 9/30).

Additionally, the contractor should instruct all employees and sub contractors to avoid any animals and, if possible, move any turtles to the closest suitable habitat outside the work zone and **release unharmed**.

County Soil Conservation District BMP's for prevention of sediment movement towards the Cornwell Run should be used at all times and maintained for function.

Bureau of Energy & Sustainability- Erin Hill: Erin.Hill@dep.nj.gov or (609) 633-1120

- The Community Solar Energy Pilot Program Application window opened April 9, 2019 and closes September 9, 2019 <https://www.bpu.state.nj.us/bpu/pdf/boardorders/2019/20190329/8E%20-%20Community%20Solar%20Energy%20Pilot%20Program%20Application%20Form.pdf>

- The proposed array is located on Forested & Agriculture Lands which are identified as “not preferred” per the Solar Siting Analysis.
- In the Community Solar Application and Evaluation Criteria, projects on Ag lands will receive zero points under the siting category. Application, page 28.
- Visit the BES solar siting webpage & NJ Community Solar Siting Tool <https://www.state.nj.us/dep/aqes/solar-siting.html>

State Historic Preservation Office- Jesse West-Rosenthal: Jesse.West-Rosenthal@dep.nj.gov or (609) 984-6019

Based upon the documentation submitted, there are no buildings, structures, sites, objects, or historic districts on or adjacent to the project location that are listed on, or that have been identified as eligible for listing on the New Jersey or National Registers of Historic Places. Although the project setting is sensitive for archaeological sites, based upon information on file at the HPO, the project only has a low potential for archaeological remains. Consequently, the HPO does not recommend further consideration prior to permit issuance.

Stormwater: Eleanor Krukowski (Eleanor.Krukowski@dep.nj.gov)

- Construction projects that disturb 1 acre or more of land, or less than 1 acre but are part of a larger common plan of development that is greater than 1 acre, are required to obtain coverage under the Stormwater construction general permit (5G3). Applicants must first obtain certification of their soil erosion and sediment control plan (251 plan) from their local soil conservation district office. Upon certification, the district office will provide the applicant with two codes process (SCD certification code and 251 identification code) for use in the DEPonline portal system application. Applicants must then become a registered user for the DEPonline system and complete the application for the Stormwater Construction General Authorization. Upon completion of the application the applicant will receive a temporary authorization which can be used to start construction immediately, if necessary. Within 3-5 business days the permittee contact identified in the application will receive an email including the application summary and final authorization.

Should circumstances or conditions become different than what was set forth in the information that was provided to the NJDEP, the comments and regulatory requirements provided above are subject to change and may no longer apply to this project. Statements made within this email do not represent a decision by the DEP on whether the proposed project will be permitted.

If upon review of the comments provided, you would like to contact the programs directly, we ask that you keep Permit Coordination copied on any correspondence so we may update our records. This email shall serve to satisfy the Community Solar Pilot Program application requirement that the Applicant shall meet with PCER.

Best Regards,
Megan

From: Don Brickner <Don.Brickner@marathonconsultants.com>
Sent: Tuesday, June 4, 2019 12:18 PM
To: Brunatti, Megan <Megan.Brunatti@dep.nj.gov>
Cc: John Renz <jrenz@crenergygroup.com>; Ken Blechman <kblechman@crenergygroup.com>
Subject: [EXTERNAL] Request for Pre-Application Review, Love Lane Solar, Upper Deerfield, NJ

Hi Megan,

Please see the attached documents in support of a request for review by the Office of Permit Coordination & Environmental Review. You will also receive a paper copy of this package via USPS.

We look forward to your response.

Regards,
Don

Donald W. Brickner
Marathon Engineering & Environmental Services, Inc.
553 Beckett Road, Suite 608
Swedesboro, New Jersey 08085

www.marathonconsultants.com

Phone: 856-241-9705

Fax: 856-241-9709

CONFIDENTIALITY NOTICE: This e-mail and any accompanying documents contains information belonging to the sender that is confidential and privileged. The information is intended only for the use of the individual(s) or entity(ies) named above. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or the taking of any action in reliance on the contents of this information is strictly prohibited. If you have received this e-mail in error, please reply as such and delete the e-mail.

B. NJDEP LOI Absence Determination



State of New Jersey

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Land Use Regulation
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.nj.gov/dep/landuse

CATHERINE R. McCABE
Commissioner

AUG 30 2019

Love Lane Partners c/o Victor Naar
5 Woodcrest Lane
Old Tappan, NJ 07675

RE: Letter of Interpretation: Presence/Absence Determination
File No.: 0613-04-0007.1
Activity Number: FWW190001
Applicant: LOVE LANE PARTNERS, LLC
Block: 1301; Lot: Portion of 1 (Proposed Lots 1.10, 1.11, 1.12, 1.13 & 1.14)
Upper Deerfield Twp., Cumberland County

Dear Mr. Naar:

This letter is in response to your request for a Letter of Interpretation from the Division of Land Use Regulation indicating the presence or absence of freshwater wetlands and waters on the referenced property.

In accordance with agreements between the State of New Jersey Department of Environmental Protection, the U.S. Army Corps of Engineers Philadelphia and New York Districts, and the U.S. Environmental Protection Agency, the NJDEP, Division of Land Use Regulation is the lead agency for establishing the extent of State and Federally regulated wetlands and waters. The USEPA and/or USACE retains the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, the Division of Land Use Regulation has determined that **freshwater wetlands and waters are not present** on the referenced property. In addition, the Department has determined that **no part of the above referenced property occurs within a transition area or buffer** as designated in N.J.A.C. 7:7A-3.3(d)1 and 2.

Please be advised that any surface water features on the site or adjacent to the site may possess flood hazard areas and/or riparian zones and development within these areas may be subject to the Flood Hazard Area Control Act rules at N.J.A.C. 7:13. The Department can verify the extent of flood hazard areas and/or riparian zones through a flood hazard area verification under the application procedures set forth at N.J.A.C. 7:13-5.1.

Pursuant to the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A), you are entitled to rely upon this jurisdictional determination for a period of five years from the date of this letter. This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have

been conducted on this site. This determination does not affect your responsibility to obtain any State, Federal, county or municipal permits which may be required.

In accordance with N.J.A.C. 7:7A-21, any person who is aggrieved by this decision may request a hearing within 30 days of the date the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, Mail Code 401-04L, P.O. Box 402, 401 East State Street, 7th Floor, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist found at www.state.nj.us/dep/landuse/forms. Hearing requests received after 30 days of publication notice may be denied. The DEP Bulletin is available on the Department's website at www.state.nj.us/dep/bulletin. In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see the website www.nj.gov/dep/odr for more information on this process.

Please contact April Grabowski of our staff by e-mail at April.Grabowski@dep.nj.gov or (609) 777-0454 should you have any questions regarding this letter. Be sure to indicate the Department's file number in all communication.

Sincerely,



Ryan J. Anderson, Manager
Division of Land Use Regulation

c: Township Clerk
Township Construction Official
Agent

C. NJDEP Natural Heritage Program Review Letter



State of New Jersey

MAIL CODE 501-04

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF PARKS & FORESTRY

NEW JERSEY FOREST SERVICE

OFFICE OF NATURAL LANDS MANAGEMENT

P.O. BOX 420

TRENTON, NJ 08625-0420

Tel. (609) 984-1339 Fax (609) 984-0427

PHILIP D. MURPHY

Governor

SHEILA Y. OLIVER

Lt. Governor

CATHERINE R. McCABE

Commissioner

April 12, 2019

Jonathan Tortu
Marathon Engineering & Environmental Services, Inc.
553 Beckett Road, Suite 608
Swedesboro, NJ 08085

Re: Love Lane Solar
Block(s) - 1301, Lot(s) - 1
Upper Deerfield Township, Cumberland County

Dear Mr. Tortu:

Thank you for your data request regarding rare species information for the above referenced project site.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.3) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Natural Heritage Data Request Form into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for occurrences of rare wildlife species or wildlife habitat in the immediate vicinity (within ¼ mile) of the referenced site. Additionally, the Natural Heritage Database was checked for occurrences of rare plant species or ecological communities within ¼ mile of the site. Please refer to Table 2 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented within the immediate vicinity of the site. Detailed reports are provided for all categories coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

We have also checked the Landscape Project habitat mapping and Biotics Database for all occurrences of rare wildlife species or wildlife habitat within one mile of the referenced site. Please refer to Table 3 (attached) to determine if any rare wildlife species or wildlife habitat is documented within one mile of the project site. Detailed reports are provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on the project site.

For requests submitted as part of a Flood Hazard Area Control Act (FHACA) rule application, we report records for all rare plant species and ecological communities tracked by the Natural Heritage Program that may be on, or in the immediate vicinity of, your project site. A subset of these plant species are also covered by the FHACA rules when the records are located within one mile of the project site. One mile searches for FHACA plant species will only report precisely located occurrences for those wetland plant species identified under the FHACA regulations as being critically dependent on the watercourse. Please refer to Table 3 (attached) to determine if any precisely located rare wetland plant species covered by

NHP File No. 19-3907542-16513

the FHACA rules have been documented. Detailed reports are provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on, or in the immediate vicinity of, the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1, 2 and 3 (attached) to determine if any priority sites are located on, in the immediate vicinity, or within one mile of the project site.

A list of rare plant species and ecological communities that have been documented from the county (or counties), referenced above, can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html>. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2010.pdf.

Beginning May 9, 2017, the Natural Heritage Program reports for wildlife species will utilize data from Landscape Project Version 3.3. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive web application at the following URL, <https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7>, or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

For additional information regarding any Federally listed plant or animal species, please contact the U.S. Fish & Wildlife Service, New Jersey Field Office at <http://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html>.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf>.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,



Robert J. Cartica
Administrator

c: NHP File No. 19-3907542-16513

Mail Code 501-04 Department of Environmental Protection New Jersey Forest Service Office of Natural Lands Management P.O. Box 420 Trenton, New Jersey 08625-0420 Tel. (609) 984-1339 Fax. (609) 984-1427		<h1 style="margin: 0;">Invoice</h1>	
		Date	Invoice #
		4/12/2019	16513
Bill to: Marathon Engineering & Environmental Services, Inc. 553 Beckett Road, Suite 608 Swedesboro, NJ 08085		Make check payable to: DEP - Office of Natural Lands Management And forward with a copy of this statement to: Mail Code 501-04 Office of Natural Lands Management P.O. Box 420 Trenton, New Jersey 08625-0420	
Quantity (hrs.)	Description	Rate (per hr.)	Amount
1	Natural Heritage Database search for locational information of rare species and ecological communities. Project: 19-3907542-16513	\$ 70.00	\$ 70.00
Jonathan Tortu Project Name: Love Lane Solar		Total	\$ 70.00

Table 1: On Site Data Request Search Results (6 Possible Reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites On Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

**Rare Wildlife Species or Wildlife Habitat on the
Project Site Based on Search of
Landscape Project 3.3 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
<i>Aves</i>	Wood Thrush	Hylocichla mustelina	Breeding Sighting	2	NA	Special Concern	G4	S3B,S4N

Vernal Pool Habitat on the
Project Site Based on Search of
Landscape Project 3.3

Vernal Pool Habitat Type	Vernal Pool Habitat ID
Potential vernal habitat area	365
Total number of records:	1

Other Animal Species
On the Project Site Based on
Additional Species Tracked by
Endangered and Nongame Species Program

Scientific Name	Common Name	Federal Protection Status	State Protection Status	Grank	Srank
<i>Invertebrate Animals</i>					
<i>Dargida rubripennis</i>	Pink Streak			G3G4	S3
Total number of records:		1			

Table 2: Vicinity Data Request Search Results (6 possible reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Immediate Vicinity of the Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites within the Immediate Vicinity	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat In the Immediate Vicinity of Project Site Based on Search of Landscape Project 3.3	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat In the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

**Rare Wildlife Species or Wildlife Habitat Within the
Immediate Vicinity of the Project Site Based on Search of
Landscape Project 3.3 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
<i>Aves</i>	Wood Thrush	Hylocichla mustelina	Breeding Sighting	2	NA	Special Concern	G4	S3B,S4N

**Vernal Pool Habitat
In the Immediate Vicinity of
Project Site Based on Search of
Landscape Project 3.3**

Vernal Pool Habitat Type		Vernal Pool Habitat ID
Potential vernal habitat area		365
Total number of records:	1	

Other Animal Species
In the Immediate Vicinity of the Project Site Based on
Additional Species Tracked by
Endangered and Nongame Species Program

Scientific Name	Common Name	Federal Protection Status	State Protection Status	Grank	Srank
<i>Invertebrate Animals</i>					
Dargida rubripennis	Pink Streak			C3C4	S3
Total number of records:		1			

Table 3: Within 1 Mile for FHACA Searches (6 possible reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Rare Plant Species Occurrences Covered by the Flood Hazard Area Control Act Rule Within One Mile of the Project Site Based on Search of Natural Heritage Database	Yes	1 page(s) included
2. Natural Heritage Priority Sites within 1 mile	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat Within One Mile of the Project Site Based on Search of Landscape Project 3.3	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species Within One Mile of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

Rare Plant Species Covered by the
Flood Hazard Area Control Act Rule Within
One Mile of the Project Site Based on Search of
Natural Heritage Database

Scientific Name	Common Name	Federal Protection Status	State Protection Status	Regional Status	Grank	Srank	Identified	Last Observed
<i>Vascular Plants</i>								
<i>Helonias bullata</i>	Swamp-pink	LT	E	LP, HL	G3	S3	Y	2012-05-26
Total number of records:		1						

**Rare Wildlife Species or Wildlife Habitat Within
One Mile of the Project Site Based on Search of
Landscape Project 3.3 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Strank
<i>Aves</i>	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Bald Eagle	Haliaeetus leucocephalus	Nest	4	NA	State Endangered	G5	S1B,S2N
	Barred Owl	Strix varia	Non-breeding Sighting	3	NA	State Threatened	G5	S2B,S2N
	Brown Thrasher	Toxostoma rufum	Breeding Sighting	2	NA	Special Concern	G5	S3B,S4N
	Savannah Sparrow	Passerculus sandwichensis	Breeding Sighting	3	NA	State Threatened	G5	S2B,S4N
	Wood Thrush	Hylocichla mustelina	Breeding Sighting	2	NA	Special Concern	G4	S3B,S4N

**Vernal Pool Habitat Within
One Mile of the Project Site
Based on Search of
Landscape Project 3.3**

Vernal Pool Habitat Type	Vernal Pool Habitat ID
Potential vernal habitat area	346
Potential vernal habitat area	365
Total number of records:	2

Other Animal Species Within
One Mile of the Project Site Based on
Additional Species Tracked by
Endangered and Nongame Species Program

Scientific Name	Common Name	Federal Protection Status	State Protection Status	Grank	Srank
<i>Invertebrate Animals</i>					
Dargida rubripennis	Pink Streak			C3C4	S3
Total number of records:		1			

D. USFWS T&E Review Letter



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
Phone: (609) 646-9310 Fax: (609) 646-0352

<http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>



In Reply Refer To:
Consultation Code: 05E2NJ00-2019-SLI-0943
Event Code: 05E2NJ00-2019-E-01992
Project Name: Love Lane Solar

April 09, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species that may occur in your proposed action area and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*)

If the enclosed list indicates that any listed species may be present in your action area, please visit the New Jersey Field Office consultation web page as the next step in evaluating potential project impacts: <http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>

On the New Jersey Field Office consultation web page you will find:

- habitat descriptions, survey protocols, and recommended best management practices for listed species;
- recommended procedures for submitting information to this office; and
- links to other Federal and State agencies, the Section 7 Consultation Handbook, the Service's wind energy guidelines, communication tower recommendations, the National Bald Eagle Management Guidelines, and other resources and recommendations for protecting wildlife resources.

The enclosed list may change as new information about listed species becomes available. As per Federal regulations at 50 CFR 402.12(e), the enclosed list is only valid for 90 days. Please return to the ECOS-IPaC website at regular intervals during project planning and implementation to obtain an updated species list. When using ECOS-IPaC, be careful about drawing the boundary of your Project Location. Remember that your action area under the ESA is not limited to just the footprint of the project. The action area also includes all areas that may be indirectly affected

through impacts such as noise, visual disturbance, erosion, sedimentation, hydrologic change, chemical exposure, reduced availability or access to food resources, barriers to movement, increased human intrusions or access, and all areas affected by reasonably foreseeable future that would not occur without ("but for") the project that is currently being proposed.

We appreciate your concern for threatened and endangered species. The Service encourages Federal and non-Federal project proponents to consider listed, proposed, and candidate species early in the planning process. Feel free to contact this office if you would like more information or assistance evaluating potential project impacts to federally listed species or other wildlife resources. Please include the Consultation Tracking Number in the header of this letter with any correspondence about your project.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
(609) 646-9310

Project Summary

Consultation Code: 05E2NJ00-2019-SLI-0943

Event Code: 05E2NJ00-2019-E-01992

Project Name: Love Lane Solar

Project Type: POWER GENERATION

Project Description: Construction of a ground-mounted solar facility.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.46811244396441N75.22393998741208W>



Counties: Cumberland, NJ

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Swamp Pink <i>Helonias bullata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4333	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31

NAME	BREEDING SEASON
Wood Thrush <i>Hylocichla mustelina</i>	Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (l)

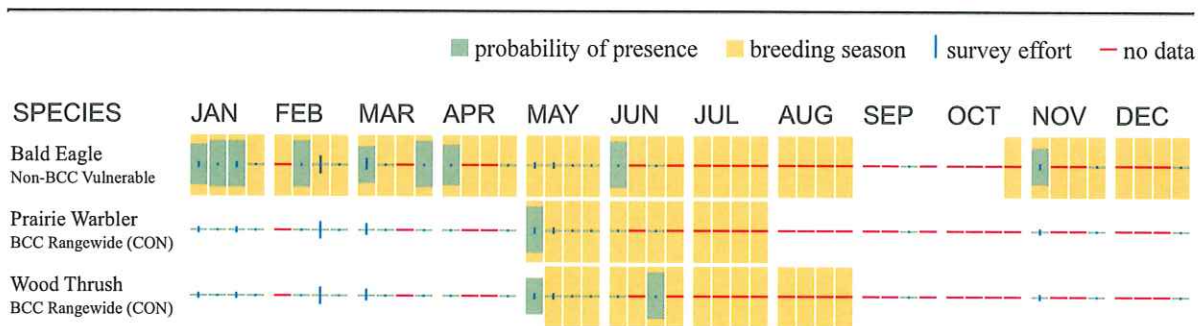
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or

[permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In

contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

E. NJDEP HPO Clearance Letter



MARATHON

Engineering & Environmental Services

WWW.MARATHONCONSULTANTS.COM

19-2381-2 JWR
RECEIVED

JUN 17 2019

HISTORIC PRESERVATION OFFICE

HP0-62019-141

June 14, 2019

LLP 001.01

via FedEx

**Katherine Marcopul, Deputy State Historic Preservation Officer
New Jersey Department of Environmental Protection
Historic Preservation Office
501 E. State Street, Fourth Floor
Trenton, New Jersey 08609**

**RE: Request for Section 106 Review
Love Lane Solar
Block 1301, Lot 1 (part of)
Upper Deerfield Township, Cumberland County, New Jersey
Project Proponent: Love Lane Partners, LLC**

Dear Ms. Marcopul:

Marathon Engineering & Environmental Services, Inc. ("Marathon") is assisting Love Lane Partners, LLC with the above referenced project. The purpose of this letter is to request Section 106 review by the State Historic Preservation Office.

Love Lane Partners, LLC proposes the development of a phased, ground-mounted photovoltaic Community Solar Facilities and a Solar Photovoltaic Facility on the above referenced site. It is the intent of Love Lane Partners, LLC to apply to enter this project into the Community Solar Energy Pilot Program administered by the New Jersey Board of Public Utilities (BPU). Section 106 review is required as part of the BPU application process.

We are not aware of a previous cultural resources survey covering the Project Site.

The Project Site does not contain any properties or features that are listed in the New Jersey or National Registers of Historic Places for Cumberland County (last updated March 27, 2019). There are no existing buildings within the project's limit of disturbance. The Project Site is currently used for agricultural purposes (i.e., crop field and plant nursery stock).

According to NJDEP's GeoWeb, the Project Site does not contain a documented historic property¹ or historic district².

The following documents are enclosed for your review:

1. USGS site location map;
2. Road map;
3. Aerial photograph figure;
4. Color photographs of the site;
5. Project description;
6. Preliminary Major Subdivision Plan and Details, Community Solar Facilities & Solar Photovoltaic Facility, Plate 13, Block 1301, Lot 1, Upper Deerfield Township, Cumberland County, New Jersey; prepared by Consulting Engineer Services; dated March 29, 2019; revised April 21, 2019; including one (1) sheet.

Please contact me with any questions or comments.

Sincerely,

Marathon Engineering & Environmental Services, Inc.



Donald W. Brickner
Senior Environmental Scientist

Enclosures

cc: Kenneth Blechman, Managing Member, Love Lane Solar, LLC (via e-mail,
w/ enclosures)
John Renz, Chief Development Officer, Love Lane Solar, LLC (via e-mail,
w/ enclosures)

P:\LLP00101\Correspondence\SHPO ltr_LLP00101_2019-06-14.docx

I concur with your finding that there are no historic properties affected within the project's area of potential effects. Consequently, pursuant to 36 CFR 800.4(u)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

¹ NJDEP Historic Properties of New Jersey (edition 20190129)

² NJDEP Historic Districts of New Jersey (edition 20190129)

Katherine G. Marcopul
Katherine J. Marcopul
Deputy State Historic Preservation Officer

Date

NP

F. Upper Deerfield JLUB Resolution of Approval 8-2019

RESOLUTION 8-2019

Township of Upper Deerfield Planning Board

Applicant's Name: Love Lane Partners, LLC

Application No.: P-5-19

Property: Block 1301, Lot 1 – Love Lane

Application For: Use Variance, Bulk Variances, Preliminary Major Site Plan Approval and Preliminary Major Subdivision Approval

Public Hearing: April 15, 2019

Findings of Fact:

1. Applicant was represented by Albert K. Marmero, Esq., who appeared and presented the application on its behalf.
2. Applicant is the contract purchaser of Block 1301, Lot 1, which is an irregularly shaped parcel consisting of 219.3 acres split by the R-1 / R-2 zoning boundary. The property is presently vacant and was previously used as a nursery. It has frontage on Love Lane, Old Deerfield Pike, and Cornwell Drive.
3. The property was previously the subject of numerous applications including one for a 174-unit residential development in 2005 and one for a solar power generating facility in 2011.
4. Applicant now proposes a community solar facility, ancillary equipment, infrastructure, and access on six (6) new lots. Overhead feeders are proposed to Cumberland Regional High School, the nearby water tower, and an express feeder to the substation on Laurel Street.

5. Proposed lot 1.10 would consist of 19.40 acres, lot 1.11 would consist of 12.72 acres, lot 1.12 would consist of 25.85 acres, lot 1.13 would consist of 28.07 acres, lot 1.14 would consist of 39.39 acres, and remainder lot 1 would be reduced from 219.3 to 92.95 acres.

6. A solar photovoltaic facility is proposed for each of the new lots, with no construction on remainder lot 1. Each site will contain a separate, fenced, ground-mounted solar array with access drive from Love Lane.

7. A future cluster residential development is contemplated for lot 1, subject to the results of Applicant's environmental investigation.

8. The solar facilities are not permitted uses in either the R-1 or R-2 zones, and therefore a use variance is required. A use variance was previously granted for a solar use in 2011.

9. Utility-scale solar generating facilities are permitted in the Township's General Industry and Eco-Industrial zones, subject to the criteria set forth in Ordinance 405-56.

10. The proposed solar use has been recognized as inherently beneficial, therefore satisfying the positive criteria.

11. The property was contaminated with lead and arsenic due to historical pesticide use, which contamination severely limits its development potential.

12. There are wetlands on the property, which are indicated on the Plan, along with associated buffers and transition area.

13. The community solar concept is new in the State, with the first projects anticipated to receive approval in the fall. Applicant anticipates that it will take several rounds of applications to get all five individual projects approved. Because of the nature of these State

approvals, and the extensive remediation required, Applicant requests seven (7) years to apply for final approvals.

14. Applicant concedes that, due to the uncertain nature of the contamination, remediation, and State approval process, it will be required to return to the Board for Preliminary and Final approvals for each individual lot.

15. As currently proposed, and based on the criteria set forth in Ordinance 405-56 of the Township Code, Applicant would require Bulk Variances for setbacks, lot area, and lot width.

16. The Board received and considered the following:

- A. Correspondence from Mr. Marmero dated April 1, 2019.
- B. Development Application dated March 29, 2019.
- C. Use Variance, Preliminary Major Subdivision & Site Plan by Consulting Engineer Services, dated March 29, 2019.
- D. Electric power distribution plan dated March 28, 2019.
- E. Sample electrical detail sheet dated March 28, 2019.

17. Bradd Forstein, a member of the Applicant LLC, was sworn and gave testimony in favor of the Application. Mr. Forstein testified regarding his experience in developing solar projects, the concept of community solar, and the Cumberland Regional High School bid award and connection to the project.

18. John Renz, a member of the Applicant LLC and the Project Manager, was sworn and gave testimony in favor of the Application. Mr. Renz testified regarding the history of the parcel and previous approvals granted by the Board.

19. The Historically Applied Pesticides ("HAP") Notice was marked exhibit A-1 and received into evidence.

20. Mr. Renz testified regarding the need for a 6' fence, in order to meet standards set by the NJDEP. Applicant therefore requests a variance for fence height.

21. If approved, the solar projects would connect via overhead wires to the Laurel Street substation in Bridgeton. The project has not yet received Atlantic City Electric approvals.

22. Because the individual solar projects would be built over a number of years, the Applicant suggested bonding for any buffering required between the individual lots. The bonding would be in place to guarantee the installation of buffering in the event that less than the five proposed individual projects were completed.

23. Applicant's Engineer, Mike Brown, PE, CME of Consulting Engineer Services was sworn and qualified as an expert witness.

24. A color rendering of the Site Plan was marked A-2 for identification and received into evidence.

25. Mr. Brown testified that the project would have a negligible effect on traffic, as the panels rarely require maintenance. Property maintenance, including mowing, would be contracted. Pollinator grasses will be planted.

26. Articulating panels, which increase output by 25-30%, are planned for the project.

27. No significant grading is required and runoff will be reduced.

28. Although Township Officials previously indicated a preference for flag lots with separate driveways, the Applicant was agreeable to considering a shared 40' right-of-way at the time of final approvals.

29. James A. Miller, AICP, PP, Applicant's Planner, was sworn and qualified as an expert.

30. Mr. Miller gave testimony in support of Applicant's request for a use variance and the balancing test under the Sica case. He noted the State's energy policies and the benefits of the proposed remediation of the parcel. The proposed use has been deemed inherently beneficial, and therefore Applicant has satisfied the positive criteria.

31. The proposed use would be safe and secure, would produce no emissions or noise, and is passive in nature. The site would be completely buffered so as to not be visible from neighboring properties, Love Lane, or Old Deerfield Pike.

32. The Board next received and considered the April 15, 2019 Report of Board Planner Randall Scheule, PP/AICP who was present and participated in the hearing. Mr. Scheule advised the Board regarding Applicant's requested waivers and deferrals.

33. The Board also received and considered the April 15, 2019 Report of Board Engineer J. Michael Fralinger, Jr., PE, CME, who was present and participated in the hearing.

34. The Board next voted unanimously to deem the application Complete after granting waivers/deferrals for:

- A. Waiver for plat scale at 1" = 200'
- B. Deferral for metes and bounds descriptions of the parcel
- C. Deferral for block and lot numbers
- D. Deferral of existing and proposed property lines
- E. Waiver for photograph of premises
- F. Waiver for constraints provision calculations
- G. Deferral for wooded areas indicating predominant species and size

- H. Deferral for location of trees 6" or more in diameter
- I. Deferral for location and description of monuments to be set
- J. Deferral for proposed site easements
- K. Deferral for an environmental impact report
- L. Deferral of landscaping plan
- M. Deferral of Stormwater Management Report

These Checklist items will be addressed by the Applicant upon submission of development applications for the individual lots for site plan approval.

35. The Applicant discussed the required utility cross-easements and the necessity for right-of-way dedications.

36. The Board then opened the meeting to the public.

37. Joe Karkocha, of 100 Love Lane, was sworn and gave testimony. Mr. Karkocha would like to see the property finally used for something. He complained about runoff from the repaving of Love Lane and traffic.

38. Edwin F. Stewart, Jr., of 96 Love Lane, was sworn and gave testimony. Mr. Stewart had concerns with the proposed buffering at the rear of his property. He would like the Applicant's fence as far as possible from his property line, pending the results of Applicant's further investigation of the limits of contamination. Mr. Stewart also complained about cars parking along Love Lane during High School sporting events.

39. Tammy Joe Hutchins was sworn and questioned the Applicant regarding positioning of the fence and buffering.

40. There being no further members of the public who wished to testify, the meeting was closed to the public.

41. The Board found that compliance was had with each of the various requirements of the Open Public Meetings Law, P.L. 1975 c. 231.

42. After hearing summation from Applicant's counsel, the Board discussed the application and, at the Chairman's request, bifurcated the Use Variance vote from the site plan, subdivision, and bulk variance votes.

43. The Planning Board has carefully considered this matter and, based upon the representations and testimony presented on the Applicant's behalf, as well as the information set forth in the application materials, and the input from the Board's professionals, and by unanimous vote, finds that good cause exists for the granting of preliminary major site plan approval and preliminary major subdivision approval, along with the N.J.S.A. 40:55D-70(d)(1) use variance, subject to conditions. The Board further finds that the proposed use, which had been approved via use variance for the same site in 2011, is an inherently beneficial one which satisfies the positive criteria. The Board additionally finds, by clear and convincing evidence, that special reasons exist for granting the use variance, and that the proposed use does not present a detriment to the public good, and will not substantially impair the intent and purpose of the Township zoning plan or zoning ordinance.

NOW THEREFORE BE IT RESOLVED by the Board that, for the foregoing reasons, preliminary major site plan approval, and preliminary major subdivision approval, along with the requested use and bulk variance relief and all requested or otherwise applicable design waivers and deferrals for the Applicant's proposal as depicted on the plan and described herein, are hereby granted subject to the following conditions:

1. That compliance be had with all other applicable requirements of the Upper Deerfield Township Development Ordinance and Building Code.

2. That applicant obtain approvals from all other agencies having jurisdiction including, but not limited to the Cumberland County Planning Board, State of New Jersey, and Atlantic City Electric. Proof thereof shall be provided to the Planning Board Secretary.

3. That Applicants must comply with all representations made through any representative during the course of applicant's presentation to the Board, and in all documents filed with the application.

4. That Applicant rectify any financial responsibility to the Township related to the review of this application.

5. Applicant shall provide written confirmation to the Planning Board Secretary once lot numbers are assigned by the Township Tax Assessor.

6. Applicant shall return to the Board for Preliminary and Final Major Subdivision approval, and Preliminary and Final Major Site Plan approval, as to each of the six (6) individual lots. Any application for Final Approval must be filed on or before April 15, 2026, as set forth below, subject to any future extension granted by the Board.

7. When applying for any such Final Approval, Applicant's plan shall address the Technical comments set forth by the Board's professionals in their respective April 15, 2019 Reports (which are attached hereto for clarity), and any additional comments that may be forthcoming from the Board's professionals.

8. If the project is constructed in phases, as proposed, Applicant shall post a bond, in an amount set by the Board Engineer, to cover the installation of all buffering and fencing required to be installed between and along the perimeter of the individual lots by Township Ordinance, in the event the future phases of the project are never completed.

9. Should Applicant receive Final Approvals, an Engineer's estimate of site improvements shall be submitted by the Applicant to the Board Engineer for review and determination of the performance bond and inspection escrow amounts.

10. Prior to commencing construction, Applicant shall enter a Developer's Agreement with Upper Deerfield Township regarding the project, which agreement shall specifically address (among other issues) right-of-way access and traffic control during remediation.

11. The Planning Board Planner, and Planning Board Engineer, are hereby delegated the authorization to approve minor Site Plan changes requested, provided that such minor changes are consistent with the Planning Board's approval. Any such changes shall be reported to the Planning Board at its next regular meeting.

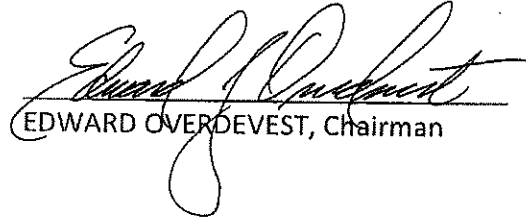
BE IT FURTHER RESOLVED that due to the nature of the project, the approval process, and the extent of the proposed improvements, Applicant shall file for Final Major Plan Approval and Final Major Subdivision Approval within seven (7) years, i.e. on or before April 15, 2026.

BE IT FURTHER RESOLVED that prior approvals for Block 1301, Lot 1 are hereby vacated.

BE IT FURTHER RESOLVED that a Certified copy of this Resolution be furnished to Applicants and Notice of this action be advertised as required by Law.

The undersigned, Chairman of the Upper Deerfield Township Planning Board, hereby certifies that the above is a true copy of a Resolution adopted by said Board on May 20, 2019, to memorialize the Board's action taken on April 15, 2019.

Upper Deerfield Township Planning Board


EDWARD OVERDEVEST, Chairman

ATTEST:


VICKI VAGNARELLI, Secretary

Memorialized - May 20, 2019

G. Upper Deerfield JLUB Resolution of Approval 23-2011

RESOLUTION #23-2011

Township of Upper Deerfield Planning Board

Applicant's Name: Millennium Land Development, L.L.C.
Application No.: 2-6-11
Property: Block 1301, Lot 1
Application For: Use Variance for Solar Production
Public Hearing Dates: June 13 (completeness), July 11, September 12 and
November 14, 2011

Findings of Fact:

1. Applicant was represented by Alan Fox, Esquire, who appeared and presented the application on its behalf.
2. The Planning Board accepts as factual, the plans and documents submitted by, and on behalf of applicant:
 - a. Upper Deerfield Township Zoning Variance Information Sheet.
 - b. Upper Deerfield Township Development Application Form.
 - c. Upper Deerfield Township Schedules "A" and "C".
 - d. Correspondence from Joseph Raday to Vicki Vagnarelli, dated April 29, 2011, requesting waivers/variances for drawing scale, fence height, and use.
 - e. Correspondence from Joseph Raday to Vicki Vagnarelli, dated April 29, 2011, regarding traffic.
 - f. Stormwater Management Report, ABR Consultants, LLC, April 26, 2011.

- g. Environmental Impact Statement, ABR Consultants, LLC, April 2011.
- h. N.J. DEP Letter of Interpretation/Line Verification, February 25, 2005.
- i. Plan of survey, Pennell Land Surveying, LLC, June 10, 2004.
- j. Use Variance Plan/Site Plan, (24 sheets) ABR Consultants, LLC, April 12, 2011.

3. The Board also received and considered the May 23, 2011, Completeness Review Report of Robert C. DuBois, P.E., Board Engineer.

4. The Board also received and considered the June 9, 2011, Report, of Randall Scheule, PP/AICP, Planning Board Planner, covering both completeness and the public hearing.

5. At its June 13, 2011, meeting, the Planning Board adopted a Resolution deeming the application complete and scheduling the Public Hearing for July 11, 2011.

6. The property affected by this application comprises 219.3 acres, and is designated as Block 1301, Lot 1. It is dual zoned, partially being in the R-1 Zone, and the rest being in the R-2 Residential Zone.

7. Applicant proposed a photovoltaic solar-powered electricity production system at the property originally planned for 128,000 solar panels.

8. Professional Engineer, Joseph Raday, of ABR Consultants testified first, and went over the site plan.

9. The solar generated powered electric generating facility will comply with all setbacks.

10. There will be no removal of trees protected under the Township's tree ordinance.

11. Applicant proposes to add tree buffering near the property lines in the vicinity of all residences.

12. The facility will be setback 500 feet from both roads.

13. The facility will be setback 100 feet from all property lines.

14. A fence will be erected around the entire facility as per the requirements of the New Jersey DEP.

15. The facility will be designed to generate 20 mega watts of electricity.

16. There will be entrances to the facility from Old Deerfield Pike, and from Love Lane.

17. The panels will be installed in two phases.

18. Mr. Raday next addressed the presence of arsenic contamination on the site.

19. Evidence before the Board indicated that a preliminary remedial investigation, and remedial action work report was prepared by Damiano Long Engineering, and Planning, LLC, of Camden, New Jersey, dated June 3, 2005.

20. Mr. Raday testified that applicant's representatives met with New Jersey Department of Environmental Protection representatives on the site. In addition to the fencing of the entire property with a chain-link fence, the DEP will require the capping of the arsenic contaminated area with topsoil over planted with grass.

21. Mr. Raday also testified regarding an area of wetlands restoration that is being required by the New Jersey DEP.

22. Exhibits introduced into evidence by Mr. Raday included:

APP-1 - Sheet C-4, overall site plan.

APP-2 – Arsenic Remediation Report.

APP-3 - Department of Environmental Protection, December 1, 2008, letter regarding Wetlands Restoration.

APP-1.01 – A smaller version of Exhibit APP-1, and

APP-4 – Cross sections dated April 27, 2011, respecting buffering.

23. Applicant next called Dan Shaffer, who was qualified as an expert electrical engineer, respecting solar energy production. Mr. Shaffer described the photovoltaic panels, the inverters which will convert DC voltage to AC power, the placement of electric lines and poles, the ground screws, the proposed location of the inverters, maintenance of the panels and the expected life span of the panels.

24. Applicant next called Justin Murphy, an attorney and a renewable energy consultant, who testified regarding Solar Renewal Energy Credits (“S-Recs”). Mr. Murphy introduced and testified regarding three Exhibits:

APP-5 – pending Senate Bill 2888.

APP-6 – pending Senate Bill 2557, and

APP-7 – pending Senate Bill 2371.

Mr. Murphy explained each of the items of pending legislation, and how, if ultimately enacted into law, they could benefit the Upper Deerfield community. Mr. Murphy also testified regarding the negative criteria.

25. Applicant next called Bruce Martin, managing partner of Millennium. Mr. Martin testified that the rollback taxes to be generated from the conversion of the property are estimated to be \$60,000.00.

26. Mr. Martin also testified that, if, pending legislation is enacted, the solar generating facility will be obligated to pay \$7,000.00 per year, per megawatt, to the municipality, thereby generating \$140,000.00 of the tax income to the Township in the first year.

27. Applicant next called Lawrence McKnight of Westrum Upper Deerfield Development, L.L.C. – Owner of the property. Mr. McKnight is a real estate developer, and a professional engineer, licensed in Pennsylvania, and in New Jersey.

28. Mr. McKnight testified regarding the 174 lot residential subdivision previously approved for this site.

29. Mr. McKnight testified regarding the infrastructure costs, land costs, arsenic remediation expense and the anticipated marketing price per house. It was Mr. McKnight's opinion, that the recent recession and downturn in the economy has killed the previously approved 174-house subdivision project, making it no longer economically feasible. Mr. McKnight testified that the erection of the 174-homes will not be feasible at any time within the next three to five years due to market conditions. Mr. McKnight testified that there is no lender interest in this type of project, as there is no profit to be made.

30. Applicant next called, Expert Witness, John Garruto, of Mt. Laurel, who is a real estate broker. Mr. Garruto testified regarding sales trends in both Upper Deerfield Township, and in Cumberland County. Mr. Garruto gave testimony regarding the number of homes for sale during the period from June, 2010, to June, 2011, the number of homes sold, the average number of days on the market, the average listing price, the average selling price, the number of homes currently for sale in Upper Deerfield, and the average number of homes sold per month over the past 12 months. Mr. Garruto also provided similar testimony and statistics for Cumberland County as a whole.

31. In Mr. Garruto's opinion, the arsenic contamination of the site will have a devastating impact on any residential development of this parcel.

32. Applicant next called, Professional Planner, Barbara Allen Wooley-Dillon who gave testimony regarding the inherently beneficial nature of the proposed use, the site

suitability, and her opinions regarding the master plan's omission of this use from the schedule of permitted uses in the R-1, and R-2 Zones.

33. Ms. Wooley-Dillon testified that the solar production use is generally considered an agricultural type use around the State.

34. Ms. Wooley-Dillon introduced three exhibits each of which she authored:

APP-8 – a 15-page analysis of farmland in Upper Deerfield Township, which concluded that there are 13,404 acres available for agricultural use in the Township.

APP-9 – an analysis of vacant land in Upper Deerfield Township which concluded that there are 763.43 acres of vacant land available, and

APP-10 – an analysis of the potential impact of 174 new dwelling units being constructed in the Township.

35. In Ms. Wooley-Dillon's opinion, the solar energy production use is compatible with the Township's Redevelopment Plan in that some of the energy can be sold to energy consumers in the Township's Redevelopment Zone.

36. Ms. Wooley-Dillon testified regarding the negative impact, and substantial detriment comparing the solar energy production use with the previously approved 174 lot residential use. In continuing to compare the two uses, she gave testimony regarding the impact of impervious coverage, the impact on schools, as well as the impact on fire protection, EMS services, the County landfill, State Police, and traffic.

37. Ms. Wooley-Dillon testified that the capping of the arsenic contamination would generally benefit the community.

38. It is also Ms. Wooley-Dillon's opinion that the solar production facility would be a minimally intense use, and that the granting of the use variance would substantially outweigh any detriments.

39. At the applicant's request, the continuation of the Public Hearing scheduled for August 8, 2011, was postponed.

40. The public hearing on the application continued on September 12, 2011, at which time applicant, through counsel, consented to a waiver of the 120 day Time for Decision deadline, contained in NJSA 40:55D-61.

41. The meeting was opened to the public at which time Christopher Schubert, Esquire, as attorney for the property owner Westrum Upper Deerfield, LLC, made argument on behalf of his client. Counsel for the property owner offered argument that economic conditions are not the same in 2011 as when the property was approved for a 174 lot residential subdivision in 2005. Mr. Shubert argued that a denial of the use variance to Millennium would constitute inverse condemnation by the Township requiring the Township to buy the property from Mr. Shubert's client. Counsel for the property owner further argued that the granting of the use variance to Millennium would guarantee the remediation of the arsenic contamination and restoration of wetlands on the property. Mr. Shubert noted that the property is presently fallow and should be put to a productive use.

42. Lynn Maun of the Township Environmental Commission next spoke. She raised, what she termed "a few concerns":

A. Regarding the arsenic contamination, Ms. Maun wanted to know whether there was a new remediation plan for the Millennium use.

She stated that, according to her information, approximately 96 acres of the 219.3 acres are contaminated with arsenic.

B. She asked about soil disturbance and the timing of site work, and the possibility of airborne arsenic contamination drifting onto adjoining

properties, including the Cumberland Regional High School.

- C. She questioned the viability of the vegetation within the 500 foot setbacks between each of the two roads, and the solar panel array. She expressed the opinion that the present vegetation is not attractive, and she asked whether the chain link fence could be set back from the property lines along the roadways.

43. Firth Bowden of Richards Road next testified. He has a solar installation at his home. He testified that the Carll's Corner substation of Atlantic Electric is "saturated". He asked where the electric generated at the Millennium site would go. He asked how the property would be categorized for tax assessment purposes if the solar array is installed.

44. Rebuttal argument and testimony came next. Alan Fox, counsel for applicant, repeated that the previously approved residential use was not economically viable. Mr. Fox agreed that an alternative use could be farming, but the farming use would not guarantee remediation of the arsenic contamination nor restoration of wetlands that would occur through the Millennium solar development. Mr. Fox mentioned the previous testimony of pending legislation which could result in payments to the Township of \$7,000.00 per year, per mega watt, if that legislation passes and is signed into law.

45. Regarding the environmental issues raised by Lynn Maun, no Millennium remediation plan presently exists. Millennium would have to formulate a plan for encapsulating the arsenic contaminated soil, and the plan would have to meet Department of Environmental Protection Commercial standards.

46. Joseph Raday, professional engineer, testified that the DEP was requiring that the fencing surrounding the site be located only five feet off the property line.

47. Through Mr. Raday, Applicant introduced Exhibit "App 11" which was a Sample Location Plan II and which showed the areas of arsenic contamination on the site.

48. Lawrence McKnight next testified on behalf of property owner Westrum Upper Deerfield, LLC. Mr. McKnight conceded that Westrum knew of the arsenic contamination when the property was purchased, but that the dramatic change in the economy eliminated the viability of remediating the contamination to a standard necessary for residential use of the property. Mr. McKnight offered his opinion that Millennium's arsenic remediation offered such a substantial benefit to the community that it outweighed any negative impact of the proposed solar project.

49. Bruce Martin of Millennium testified regarding the airborne pollution factors which would accompany residential development of the site versus virtually no airborne contamination that would ensue from the solar use of this property.

50. Mr. Fox argued that the arsenic contamination will be addressed by Millennium to the satisfaction of the DEP if the solar use is approved. Mr. Fox agreed that it would be the responsibility of the developer (or later owner, at that time, as the case may be) to remove the solar improvements at the end of their useful life. He argued that the panels have a value for recycling purposes. Mr. Fox suggested that possibly a performance bond to remove the panels at the end of their useful life could be a condition of approval.

51. Dan Schaffer, Professional Engineer, testified that applicant will pay for infrastructure upgrades, most of which will involve resizing the electrical transmission wires. He answered the question of lay citizen, Firth Bowden, regarding the routing and transmission of the power that would be generated at the proposed solar facility.

52. Township Planner, Randall Scheule, PP/AICP, next gave his report to the Board. Mr. Scheule's original report was dated June 9, 2011. It was supplemented and replaced by his report dated August 4, 2011.

Mr. Scheule's testimony covered the following points:

A. This parcel is right in the middle of the Township's residential growth area, and is, in the planner's opinion, critical to the success of the town center redevelopment plan.

B. The Township has already made significant capital expenditures to provide the infrastructure to accommodate the residential development of this parcel. Development of the solar facility instead of residential at this location would not make efficient use of the Township's existing capital investments related to utility and infrastructure capacity.

C. The growth area concept adopted by the Township Committee and incorporated in the master plan proposes future land use concentrating intense development in a relatively small area in the South-central portion of the Township to include commercial uses, higher density residential use, and the redevelopment area. This part of the master plan, and redevelopment plan, coupled with infrastructure investment, is designed to encourage the retention of agriculture elsewhere in the Township, and the protection of natural resources through a centers-based growth strategy.

D. Planner Scheule's analysis finds unencumbered vacant land in the Township (i.e. Land without prior approvals, or prior development constraints) to be extremely limited. Aside from the subject parcel, the next largest parcel within the targeted growth area is Block 1808/Lot 3 comprising only 18.7 acres.

E. Only five percent (5%) of the Township's residentially zoned land is vacant, and the subject site represents the last remaining vacant residentially zoned parcel of twenty (20) or more acres within the growth area.

F. A 2006 Master Plan Reexamination Report was cited as supporting the growth area's proximity to the Township's infrastructure improvements. Planner Scheule characterized the Millennium site as being "strategically located in the Township's growth area...providing a critical linkage of land use continuity between adjacent residential areas, and the town center..."

G. In Mr. Scheule's opinion, conversion of the subject property to a non-residential use would be inconsistent with the Master Plan and would deprive the town center of 174 potential nearby households whose consumer demands would otherwise benefit retail and other commercial uses there.

H. Imposing the solar electric power generation use, which the Planner characterized as commercial/industrial in nature, in an area planned for homes, would be inconsistent with the surrounding area.

I. Contrasted with the solar use, residential use of the site would be accompanied by associated improvements to Love Lane, including road widening, curbing and sidewalks. These would advance the master plan goals to link and improve vehicular and pedestrian access to the town center.

J. The subject's site is within a State-approved sewer service area. The New Jersey DEP is in the process of revising sewer service areas state-wide with many of the revised service areas being significantly reduced in size.

K. The Master Plan and Zoning Ordinance recognize that new residential homes, on the Millennium site, would constitute the highest and best use. On the other hand,

utilizing the subject property, adjacent to the town center, in the redevelopment area, to generate electricity would constitute a substantial detriment to the public, to the Master Plan, and to the zoning ordinance.

53. In rebuttal to Mr. Scheule's conclusions, during cross-examination by Mr. Fox, attorney for Millennium, Mr. Scheule agreed that some benefit would be derived by the Township from the development of the site for solar energy production. These include:

- a. Supporting the goal of energy conservation.
- b. Supporting the goal of maximizing the use of renewable energy resources.
- c. Discouraging traffic congestion.
- d. Assuring remediation of the arsenic contamination and wetlands encroachment which occurred under prior ownership of the parcel, but which would go unresolved, at least for the time being, if the Millennium solar energy project does not receive its use variance.

54. Planner Scheule concluded that the positive factors advanced by applicant did not outweigh the negative impacts upon the Master Plan, Zoning Ordinance, Redevelopment Plan, and the town-center-based growth strategy of the Township.

55. Mr. Fox then argued that the detriment of the proposed development must be substantial in nature, and not merely incidental. Mr. Fox argued that 174 units are not significant in number in light of the existing number of housing units in the Township.

56. Mr. Fox argued that the overall impact upon the Township from this proposed solar project, which requires no variances, outweighs the detrimental impacts identified by Planner Scheule. The overall impact focus, as argued by Mr. Fox, includes the impact on

schools, municipal services, and congestion, which would flow from the residential development of the same parcel. Mr. Fox added that, if the Millennium use variance is denied, the property owner will sue the Township for inverse condemnation.

57. Mr. Fox also argued that Randall Scheule's report constituted an impermissible net opinion.

58. Applicant also challenged the current relevance of the Master Plan and argued that the residential zoning designation does not give the property owner a viable economic use option in light of the dramatic downturn in the economy, which has occurred in the intervening time period since the 2005 residential development was approved.

59. Mr. Fox also argued that particular suitability of the site for a solar electric power generation use because of the underlying arsenic contamination problem, and the proximity of the electric generation facility to the town center and commercial uses, both those existing and to those be developed in the future under the Master Plan.

60. The Board received and considered from Mr. Fox a seven page letter addressed to Board Solicitor, Theodore H. Ritter, dated September 9, 2011.

61. The Board next resumed its consideration of the application at the Board's meeting of September 12, 2011. Millennium first recalled witness Bruce Martin, who described the location of the contaminated area of the property using a blown-up Google aerial photograph. The contaminated area comprises approximately 96 acres located on the northerly side of the parcel.

62. Mr. Martin also discussed the status of the Payment In Lieu Of Taxes Legislation. A change in use will result in roll back taxes of approximately \$60,000.00, and annual property taxes of approximately \$25,000.00.

63. Mr. Martin testified that a change of use from Agricultural would trigger an obligation to remediate of the environmental conditions.

64. Mr. Martin introduced Exhibits "APP-12", and "APP-13" which are a Preliminary Remediation Report by Damiano Long from 2005, and a Supplemental Remediation Report, by ABR Consultants, also from 2005. Mr. Martin read excerpts from the reports. Mr. Martin emphasized that the arsenic residential use remediation plans did not propose removal of the contaminated soil, but only reburying it after blending it with uncontaminated soil.

65. The remediation plan for residential uses of the property called for the excavation of 230,000 cubic yards of dirt which he approximated to occupying the space of a football field, sixty stories in height. Mr. Martin then contrasted the industrial use remediation, which would involve covering the arsenic with a thickly planted ground cover, and fencing the affected area.

66. Mr. Martin next introduced Exhibit "APP 14" a model deed notice, thirteen pages in length, required by the Department of Environmental Protection as part of the residential remediation standards.

67. Mr. Martin then introduced Exhibit "APP 15" which was a letter from Paul Braungart, dated September 19, 2011, on behalf of Regional Capital Group, in which the author questioned the availability of private residential mortgage funding for prospective home purchasers due to the model deed notice required by the DEP. (Applicant's Exhibit APP 15).

68. Mr. Martin next related his recent conversations with the DEP, that resumption the agricultural use could be undertaken with no restrictions, no remediation, no notice to

neighboring property owners, and without a requirement for implementation of any safety measures to protect arsenic migration by air, or by surface water runoff.

69. In his opinion as a residential real estate developer, the 96 acres of contaminated land is not usable for housing.

70. Mr. Martin concluded by asking for permission to amend Millennium's use variance application to call for two distinctly separate aspects of development of the 219.3 acre property. The contaminated area would be developed for a ten megawatt solar energy production facility, while the remaining 123 +/-, acres would be developed by Westrum for residential use. He felt that 175 to 200 homes could be constructed on the residential portion if the individual lots were downsized from those originally approved in 2005. The amended application would also require a minor subdivision. Westrum Upper Deerfield, LLC would have to apply for a use variance for higher density for the residential development on the southerly portion of the tract. Westrum was requesting the opportunity to come before the Board with a concept plan for the roads, lots and utility layouts and the possible residential density variance.

71. Justin Michael Murphy, Esquire, next testified for Millennium. He discussed the mounting of the solar panels on racks, the ground screws, and the pending PILOT legislation.

72. The public hearing was then reopened. Christopher Schubert, attorney for Westrum Upper Deerfield, LLD spoke about the amended plan which Westrum supports, and which Mr. Schubert deemed an "elegant solution" to the competing exclusive solar or exclusive residential options for the development of these 219.3 acres.

73. Lawrence McKnight of Westrum next testified. He stated that clustering of the residential units would make residential development economically feasible. He cautioned

that 30 acres of the non-contaminated portion of the site are wetlands, which are subject to their own State restrictions.

74. Several Board members questioned whether 174 homes would fit on the remaining residential acreage.

75. Member of the public, Sandra Morrissey spoke and raised questions about the amended application.

76. Member of the public, Dean Hawk next spoke and suggested that the Board should avoid having the developer create a Homeowner's Association which Mr. Hawk stated causes nothing but trouble for the homeowners.

77. At that point, the Board granted applicant's request to table the application pending presentation of a minor subdivision plan, and a conceptual plan by Westrum Upper Deerfield, LLC, for the residential development of the approximate 123 non-contaminated acres abutting Old Deerfield Pike, and Cornwell Drive.

78. The property-owner applicant, Westrum Upper Deerfield, LLC, again came before the Board on October 12, 2011, on a related application seeking conceptual major subdivision plan review for the southerly portion of the property. After several hours of discussion, with the Board and staff, Westrum's representatives, and members of the public, including Bruce Martin of Millennium, the Board asked Westrum to file a minor subdivision application to separate the northerly portion of the property, proposed to be developed by Millennium for solar energy use, from the southerly portion of the property, proposed to be developed by Westrum for residential use.

79. The Board heard the joint application of Westrum Upper Deerfield, L.L.C. and Millennium Land Development, L.L.C. on November 14, 2011. This application included a minor subdivision which the Board granted resulting in Lot 1 fronting Love Lane, having

111.69 acres and Lot 1.01, fronting Old Deerfield Pike and Cornwell Drive, having 107.61 acres.

80. The testimony at the November 14, 2011 hearing indicated that the solar use would occur on Lot 1 and residential development through Westrum would occur on Lot 1.01.

81. Bruce Martin of Millennium testified that Lot 1 would be deed restricted against any future subdivision for residential use.

82. At the November 14, 2011 hearing, the Board also took testimony from Engineer Joseph J. Raday, property owner Lawrence McKnight, Site Designer Robert Heuser and Planner Barbara A. Wooley-Dillon.

83. Additional input was received from members of the public Dean Hawk, Lynn Maun and Nancy Ridgway. None were in opposition to the use variance for solar production as proposed by Millennium.

84. Prior to acting upon the Millennium Application for use variance for solar production, the Board took the following actions on related applications affecting Block 1301, Lot 1.

- A. Granted a minor subdivision creating Lot 1 and Lot 1.01;
- B. Granted a density variance to property owner Westrum Upper Deerfield, L.L.C. for a clustered residential development of newly created Lot 1.01 comprising the southern half of the 219.3 (pre-subdivision) acre parcel; and
- C. Granted bulk variances to Westrum for the development of 160 single-family dwellings in a clustered concept plan.

The Planning Board has very carefully considered this matter over a protracted period of time. The Board finds and determines that the objective of the Township Master Plan to

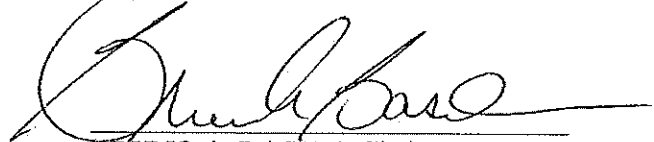
encourage residential development adjacent to the planned Town Center has been accomplished by the splitting of Block 1301, Lot 1 into northerly and southerly sections. Taking into consideration the unique circumstances affecting the northerly portion of the tract, now designated as Block 1301, Lot 1, particularly the environmental conditions, the Board does find that applicant has proven special reasons for the granting of a use variance to allow solar energy production in the R-1 and R-2 zones. The Board further finds that the applicant has clearly and convincingly proven that the granting of the use variance for solar production on the environmentally problematic Block 1301, Lot 1 can be granted without substantial detriment to the public good and without substantially impairing the intent or purpose of the zone plan or the zoning ordinance of the Township of Upper Deerfield particularly given the companion Resolutions and approvals which the Board has adopted on related applications and co-applications of Westrum Upper Deerfield, L.L.C., heard on the same evening.

NOW, THEREFORE, BE IT RESOLVED by the Upper Deerfield Township Planning Board that the Board does hereby grant a use variance to Millennium Land Development, L.L.C. to allow a solar energy production facility on Block 1301, newly sized Lot 1, comprising 111.69 acres and fronting on Love Lane, subject to the following conditions:

1. Subject to Major Site Plan review and approval by this Board;
2. Subject to the inclusion of a restriction in the Deed for newly sized Lot 1 precluding future subdivision of Lot 1 for residential use.
3. Compliance by applicant with all other applicable requirements of Upper Deerfield Township ordinances and its building code.

BE IT FURTHER RESOLVED that a Certified copy of this Resolution be furnished to applicant and Notice of this action be advertised as required by Law.

Upper Deerfield Planning Board


BRUNO A. BASILE, Chairman

ATTEST:


VICKI VAGNARELLI, Secretary

Memorialized November 21, 2011



- NOTES:
1. THIS PLAN IS INTENDED FOR ILLUSTRATION OF SOIL REMEDIATION ITEMS ONLY (PROPOSED SUBDIVISION, LANDSCAPING, AND OTHER DETAILS TO BE SHOWN ON SEPARATE PLANS).
 2. OUTBOUND AND EXISTING FEATURES ARE BASED UPON PLAN ENTITLED "PLAN OF SURVEY FOR DAMIANO LONG, LLC"
 3. LIMIT OF CONTAMINATION AND SOIL TEST LOCATIONS ARE BASED UPON HISTORICALLY APPLIED PESTICIDES (HAP) NOTICE DATED 08/23/18 AND PLANT ENTITLED "SAMPLE LOCATION PLAN" PREPARED BY ABR CONSULTANTS, LLC, DATED 07/06/07.
 4. ALL SOLAR PANEL AREAS WILL BE PLANTED WITH NATIVE GRASS SPECIES FAVORABLE TO POLLINATORS, AND THE LANDSCAPE BUFFERS WILL LIKEWISE BE PLANTED WITH NATIVE TREES AND SHRUBS FAVORABLE TO POLLINATOR SPECIES. ALL OTHER AREAS WILL BE PLANTED WITH A STANDARD GRASS SEED MIXTURE.



DATE	REVISIONS

- LEGEND
- PROPERTY OUTBOUND CENTERLINE
 - STREAM CENTERLINE
 - EXISTING DRIVEWAY
 - PROPOSED DRIVEWAY
 - EXISTING LOT LINE
 - PROPOSED LOT LINE
 - FRESHWATER/WETLANDS BOUNDARY LINE
 - FRESHWATER/WETLANDS TRANSITION
 - FLOOD PLAIN LINE
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - EXISTING CURB
 - PROPOSED CURB
 - EXISTING EDGE OF PAVEMENT
 - PROPOSED EDGE OF PAVEMENT
 - PROPOSED FENCE
 - EXISTING BLOCK NUMBER
 - EXISTING LOT NUMBER
 - PROPOSED BLOCK NUMBER
 - PROPOSED LOT NUMBER
 - SOIL TEST LOCATION
 - PROPOSED SECURITY SIGN
 - LIMIT OF CONTAMINATION
 - ARRAY FIELDS (WITH POLLINATOR GRASSES)
 - LANDSCAPE BUFFER
 - REMEDATION AREA

