SOLUTIONS



Corporate Office

465 South Main Street PO Box 639 Brewer, Maine 04412 207.989.4824

www.ces-maine.com



MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATURAL RESOURCES PROTECTION ACT INDIVIDUAL PERMIT APPLICATION

FOR

SOLID WASTE PROCESSING AND RECYCLING FACILITY HAMPDEN, MAINE

Applicants: Municipal Review Committee, Inc. 395 State Street Ellsworth, ME 04605 207.664.1700

> Fiberight LLC 1450 South Rolling Road Baltimore, MD 21227 410.340.9387

> > **JUNE 2015** JN: 11293.001

Application Prepared By:

CES, Inc. 465 South Main Street P.O. Box 639 Brewer, ME 04412 207.989.4824



MRC, INC. – FIBERIGHT LLC SOLID WASTE PROCESSING AND RECYCLING FACILITY HAMPDEN, MAINE

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Good Standing Certification

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JN: 10973.002/11293.001 NRPA PERMIT APPLICATION

APPLICATION FOR A NATURAL RESOURCES PROTECTION ACT PERMIT

→ PLEASE TYPE OR PRINT IN BLACK INK ONLY

1. Name of	1. Municipal Review Committee, Inc.			5 Name of Agent: CE			CES,	CES, INC.					
Applicant:		2. Fiberight LLC			•			(Attn:	Attn: Roger St.Amand)				
2. Applicant's Mailing Address:	1. 395 State St., Ellsworth, ME 04605 2. 1450 South Rolling Rd., Baltimore, MD, 21227			6 Agent's P.(P.O. I	P.O. BOX 639 BREWER, ME 04412						
3. Applicant's 1. 207-664-1700 Daytime Phone #: 2. 800-728-9886					7 Agent's Daytime Phone #: (207) 989-4824								
4 Applicant's Email Address glounder@			mrema	nine.org	l .	nt's Email A	ddress	: rs	tamand	@ces-m	naine	.con	<u>1</u>
Required from either or agent:													
9. Location of Activity: (Nearest Road, Street,	Rt.#) CO	LDBROOK	ROAD		10. Town:	HAMPDE	DEN 11. Count		ınty: PE	PENOBSCOT			
12A. Significant Ground	dwater well	?	□Y	es OR	×	No							
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	☑ Fresh	water Wetla				ount of Imp	act:		Fill: 6	62,442			
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19. Deed Reference N	umbers:	Book#: 283			20. Map and Lot No					Map #: 09/14		Lot#:35,36, 37,39,07	
21. DEP Staff Previous Contacted:	sly	Jim Beyer		: Att. 13		art of a r project:		Yes No		After-t	he-		Yes
23. Resubmission						revious		ect					
of Application?	⊠ No	application		NED.	_	n	nanage		D .	**7	43	, [
24. Written Notice of Violation?	☐ Yes → ⊠ No			ff involved:				25.		ous We ation:	tiand	a	☑ Yes ☐ No
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☐ Topographic Map				graphic Mar			1			essmen	t (Att	ach	ment 12),
			Copy of Public Notice/Public Information Meeting Documentation				if required ☑Compensation Plan (Attachment 13), if						
☐ Photos of Area ☐ Wetlands Delineation Re				ation Report required									
Statement of Avoidance & Minimization (Attachment 1) th						☑ Appendix A and others, if required☑ Statement/Copy of cover letter to MHPC							
			ement/Copy of cover letter to MHPC cription of Previously Mined										
			inclu	ıding descrip	tion of h	ow wetland				quired (
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<u>IMPORTANT</u>: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following:

DEP SIGNATORY REQUIREMENT

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor a permit be issued.

CORPS SIGNATORY REQUIREMENT

USC Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry shall be fines not more than \$10,000 or imprisoned not more than five years or both. I authorize the Corps to enter the property that is subject to this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

DEP SIGNATORY REQUIREMENT

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the address located on the front page of this application (see #4 for the applicant and #8 for the agent)."

SIGNATURE OF AGENT/APPLICANT

Date: June 19th 2015

NOTE: Any changes in activity plans must be submitted to the DEP and the Corps in writing and must be approved by both agencies prior to implementation. Failure to do so may result in enforcement action and/or the removal of the unapproved changes to the activity.

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Fri Jun 05 2015 08:57:09. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status			
MUNICIPAL REVIEW COMMITTEE, INC.	19910436ND	NONPROFIT CORPORATION (T13-B) GOOD STANDING				
Filing Date	Expiration Date	Jurisdiction				
06/07/1991 N/A		MAINE				
Other Names		(A=Assumed ; F=Former)				
COMMITTEE TO ANA	ALYZE PERC, INC.	F				

Clerk/Registered Agent

DANIEL G. MCKAY P.O. BOX 1210 BANGOR, ME 04402 1210

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Click on a link to obtain additional information.

List of Filings View list of filings

Obtain additional information:

Additional Addresses Plain Copy Certified copy
Short Form without Long Form with

Certificate of Existence (more info) amendments amendments

<u>(\$10.00)</u> <u>(\$10.00)</u>

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files. If you encounter problems, visit the <u>troubleshooting page</u>.



STATE OF MAINE

Department of the Secretary of State
Bureau of Corporations, Elections and Commissions
101 State House Station
Augusta, Maine 04333-0101

May 20, 2015

TRACEY STUART-PAUL FIBERIGHT LLC 107 FOREST DRIVE CATONSVILLE MD 21228

> ATTESTED COPIES WR DCN: 2151402230006

Enclosed please find copies of documents recently placed on file with our office. Each copy has been attested as a true copy of the original and serves as your evidence of filing. We recommend that you retain these permanently with your records.

Charter#: 20150853FC Legal Name: FIBERIGHT LLC

FOREIGN QUALIFICATION

DCN: 2151402230007 Page(s)

Total Pages

FOREIGN LIMITED LIABILITY COMPANY

STA

OREIGN QUALIFICATION UCT ACTIVITIES Company in Jurisdiction of Organization)	Deputy Secretary of State A True Copy When Attested By Signature
Company in Jurisdiction of Organization)	A True Copy When Attesfed By Signature
	Deputy Secretary of State
§1622, the undersigned limited liability con	npany executes and delivers the following Statement of Foreign
intions required by 31 MRSA § 1508.1 ("lur "," "LLC," "L.C." or "LC" or, in the case	jurisdiction of organization does not contain one of the words or hited liability company" or "limited company" or the abbreviation of a low-profit limited liability company, "L3C" or "I3c"), the with this requirement is: * (If not applicable, so indicate.)
the fictitious name under which it seeks a	jurisdiction of organization is unavailable pursuant to 31 MRSA authority to conduct activities in the State of Maine is: (If not
Form MLLC-5 accompanies this application	on. (See 31 MRSA § 1624.1)
F formation: 10/3/2007 Jun	isdiction where formed: Delaware
orest Drive, Catonsville, MD 21228	
(physical location - street	(not P.O. Box), city, state and zip code)
ox 21171, Catonsville, MD 21228	
(mailing add	tress if different from above)
eign limited liability company is a foreign lim	ited liability company as defined in 31 MRSA §1502.11.
ture of the business or purpose(s) to be conduc	ted or promoted in the State of Maine is:
waste processing of trash into biofue	Is
1 3	name of the limited liability company in the viations required by 31 MRSA § 1508.1 ("lin C.," "L.C." "L.C." or "LC" or, in the case sed name to be used in this State in compliance mame of the limited liability company in the the fleritions name under which it seeks able, so indicate.) Form MLLC-5 accompanies this application of formation: 10/3/2007 June 10/3/2007 June 2008 Sox 21171, Catonsville, MD 21228 (physical location - street Box 21171, Catonsville, MD 21228 (mailing add)

File No. 20150853FC Pages 5 Fee Paid \$ 250

SIXTH:	The Registered Agent is a: (select either a Commercial or Noncommercial Registered Agent)									
	V	Commercial Registered Agent	CRA Public Number: P10098							
		Michael E. High								
	(name of commercial registered agent)									
		Noncommercial Registered Agent								
		(name of noncommercial registered agent)								
		(physical location, not P.O. Box – street, city, state and zip code)								
		(mailing	address if different from above)							
SEVENTH:		ant to 5 MRSA §105.2, the registered aga d liability company.	ent listed above has consented to serve as the registered agent for this							
EIGHTH:	The na	ame and business, residence and mailing a	ddress of each manager (if any):							
	NAME ADDRESS									
	Стаів	g Stuart-Paul	107 Forest Drive, Catonsville, MD 21228							
	Rich	ard Golden	3 Drumlin Road, Weston, MA 02493							
	Jame	s Long	PO Box 972, Great Falls VA 22066							
	V	Names and addresses of additional managers are attached as Exhibit, and made a part hereof.								
NINTII;	The da	ne date on which the foreign limited liability company commenced or expects to commence conducting activities in								
	the Sta	ate of Maine is 6/1/15								
TENTH:	Check	only if applicable								
	This is a professional limited liability company qualified pursuant to 13 MRSA Chapter 22-A to provide the following professional services (see 13 MRSA, chapter 22-A for information on what constitutes professional services):									
		(lype of professi	onal services)							

ELEVENTH:	(Check if applicable)			
	The foreign limited liability company is governed by an agreement that establishes or provides for the establishment of designated series having separate rights, powers or duties with respect to specified property or obligations of the foreign limited liability company or profits and losses associated with specified property or obligations. Additional information required pursuant to MRSA 31 §1622.2.1 are attached hereto as Exhibit, and made a part hereof.			
TWELFTH:	This statement of qualification is accompanied by a certificate of existence or such other document that the Secretary State determines to be suitable for purposes of proving the valid existence of the foreign limited liability compa under the law of the State or other jurisdiction listed in item Third. The certificate or other document must not ha been issued more than 90 days before the delivery of this statement to the office of the Secretary of State.			
Dated <u>5/11/15</u>	(Adviorized Signature**)			
	Craig P. Stuart-Paul CEO (Type or print name and capacity)			

The execution of this statement constitutes an oath or affirmation under the penalties of false swearing under 17-A MRSA §453.

Please remit your payment made payable to the Maine Secretary of State.

Submit completed form to:

Secretary of State

Division of Corporations, UCC and Commissions

101 State House Station Augusta, ME 04333-0101

Telephone Inquiries: (207) 624-7752

Email Inquiries: CEC.Corporations@Maine.gov

^{*}The limited liability company name as used in the State of Maine must contain one of the following: "limited liability company" or "limited company" or the abbreviation "L.L.C.," "L.C." or "L.C" or, in the case of a low-profit limited liability company, "L3C" or "13c"—see 31 MRSA 1508). If the limited liability company's name in its jurisdiction of organization complies with 31 MRSA § 1508 with the addition of these words, then no fictitious name filing is required pursuant to 31 MRSA §§ 1622.2.A and 1624.1.

^{**}Statement MUST be signed by at least one authorized person (31 MRSA §1676.18).

Exhibit 2

Part 8 - Managers

Steve Ragiel 2740 Centenary St. Houston, TX 77005

Philip Sheibley 281 Turtleback Road New Cannan, CT 06840



PAGE 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF

DELAWARE, DO HEREBY CERTIFY "FIBERIGHT LLC" IS DULY FORMED UNDER

THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND

HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW,

AS OF THE FOURTEENTH DAY OF MAY, A.D. 2015.

4434359 8300

150652638

Jeffrey W. Dullock, Secretary of State
AUTHENTY CATION: 2379502

DATE: 05-14-15

You may verify this certificate online at corp.delaware.gov/authver.shtml



ATTACHMENT 1 ACTIVITY DESCRIPTION

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



ATTACHMENT 1

ACTIVITY DESCRIPTION

OVERVIEW

Municipal Review Committee, Inc. (MRC) and Fiberight LLC (Fiberight) have prepared this joint application to construct and operate a regional Solid Waste Processing and Recycling Facility in Hampden, Maine, to process municipal solid waste (MSW) (the Facility). MRC and Fiberight have partnered together to develop the Facility to manage MSW generated in 187 MRC member municipal communities in north, central, and eastern Maine. The new Facility is needed in part as a result of contracts set to expire on March 31, 2018, between MRC member municipalities and Penobscot Energy Recovery Company (PERC).

PROJECT DESCRIPTION

The proposed project consists of a 144,000 square foot waste processing Facility with associated office space, parking, and access areas and a 30 foot wide paved access road extending from Coldbrook Road approximately 4,460 linear feet. The Facility development site (Site) encompasses approximately 10 acres.

GENERAL EXISTING CONDITIONS

The project Site is located approximately 4,000 feet east of Coldbrook Road, and in an undeveloped area bounded by Coldbrook Road to the west, Interstate 95 to the north, and an electrical utility corridor to the east. The proposed 90 +/- acre project boundary is located within larger parcels owned by HO Bouchard and/or Hickory Hill Development Corporation. The proposed project boundaries are preliminary, and the Applicants have retained an option to acquire needed area in the general vicinity. Access to the Site will be by a proposed 100 foot wide easement corridor generally following an existing gravel access road that extends from Coldbrook Road to the proposed development area.

SITE AND RESOURCE CONDITIONS

Access Road: The proposed 100 foot wide access easement contains a mix of sports fields, agricultural fields, and undeveloped forestlands. The developed portion of the Site adjacent to Coldbrook Road was previously permitted under a Site Location of Development Act (SLODA) permit. The corridor extends from the soccer fields and onto an existing access road that continues to the Bangor Gas pipeline. This existing road crosses a large forested wetland area to access the development Site. Near the middle of the forested wetland is a small intermittent stream bordered by a scrub shrub wetland.

Development Site: The majority of the Facility project area is undeveloped forestland with a mix of uplands and wetlands. Previous activities included timber harvesting and recreational use. The Site was once agricultural fields and has reverted to forest. From the existing gas pipeline on the southwestern corner, the terrain climbs and upland dominates the northern portion of the Site. Here, second growth white pine on moderately sloping upland terrain occurs. Moving south and away from the development Site, the landscape flattens out and is dominated by forested wetland with 25-30% upland inclusions interspersed throughout. These upland islands are generally small and interspersed with wetlands. The forested wetlands south



and east of the main development Site contain two intermittent streams and several vernal pools scattered throughout. Alder scrub-shrub wetlands dominate along the intermittent streams. The streams converge in the southern portion of the Site flow southerly into Souadabscook Stream.

Protected Natural Resources:

Wetlands: The Site is dominated by a large wetland complex, identified as <u>Wetland 15A-1</u>. The upper elevations of this wetland, located in the northeastern portions of the Site, are forested wetlands (PFO1&4E) that are seasonally saturated. Soils in this wetland consisted of an organic or dark mineral surface horizon underlain by depleted and mottled silt loam subsoil. Evidence of hydrology in this wetland consisted of pit and mound microtopography, soil saturation to the ground surface, water stained leaves, and drainage patterns.

Vernal Pools: The vernal pool survey identified a total of 44 vernal pools on the Site. In general, the vernal pools on the Site are natural or natural-modified pools with ephemeral hydrology. Some pools had evidence of impact or modification as a result of the timber harvesting activity on the Site, primarily in the form of skidder or other equipment ruts or roads in the pools. Ditches and rutted areas throughout the Site that contained evidence of amphibian breeding, but did not meet the definition or criteria to constitute a vernal pool, were also identified. Of the 44 vernal pools on the Site, eight pools meet the MDEP Significant vernal pool criteria.

Wildlife Habitat: A review of published wildlife species and habitat data and consultation with State and Federal Agencies was completed. The large forested habitat extending out from the Site to the north is mapped by the Maine Department of Inland Fisheries and Wildlife (MDIFW) as an indeterminate value Deer Wintering Area (DWA). A review of the Site was conducted in March of 2015 with MDIFW Regional Wildlife biologists. Within the access corridor and the proposed development area, it was determined past harvesting activities on the Site had removed much of the softwood component and the residual stands did not currently provide suitable wintering areas.

Rare, Threatened, or Endangered Species: A review in March of 2015 was completed by contacting the MNAP and USFWS to identify potential Listed Species and/or critical habitats. No State listed species or habitats were identified. The USFWS review in March did not indicate any potential for Listed Species. In May; however, the Northern Long Eared Bat (NLEB) was listed as Threatened. Because the Site is within the area where these bats may occur, on-site surveys are being conducted and additional information will be submitted to determine if the NLEB is present.

PROPOSED CONSTRUCTION AND PROJECT IMPACTS

The proposed project includes development of the solid waste processing facility and construction of a 30 foot wide paved access road utilizing the existing footprint of the gravel access road extending from Coldbrook Road to the Site. The proposed road will be located as much as possible on the existing gravel road to avoid and minimize additional impacts to protected natural resources.

The proposed road will alter approximately 29,500 square feet of freshwater forested wetlands, expand an existing crossing of an intermittent stream, and clear vegetation within MDEP and Army Corps regulated vernal pool habitat areas. The impacted wetland areas are dominated by red maple—balsam fir on hydric mineral soils of lacustrine and marine sediments.



The proposed processing Facility development will alter approximately 46,000 square feet of forested wetlands. The alterations are the result of fill and clearing necessary for the Facility. The Facility itself has been located to maximize the use of available uplands and minimize wetland impacts and clearing within vernal pool habitats. Table 1 below summarizes the proposed impacts:

TABLE 1: WETLAND IMPACT SUMMARY					
DEVELOPMENT AREA	IMPACT AMOUNT				
Access Road – Wetland Fill	16,729 SF				
Access Road – Wetland Clearing	12,735 SF				
Access Road – Total Wetland Alteration	29,464 SF				
Processing Facility – Wetland Fill	45,713 SF				
Processing Facility – Wetland Clearing	0 SF				
Clearing within 250FT of MDEP SVP	19,481				
Clearing within 750FT of ACOE Vernal Pool	429,417				

AVOIDANCE AND MINIMIZATION

Under the Maine Natural Resource Protection Act and Section 404 of the Federal Clean Water Act, the project is required to avoid and minimize disturbance to natural resources and to ensure that no unreasonable impact will occur. The proposed project has been designed to avoid and minimize impacts to freshwater wetlands and protected natural resources to the greatest practical extent. The Alternatives Analysis in Section 2 describes the selection criteria and alternatives reviewed in a regional context and the various factors that were assessed and evaluated in locating the Facility.

Within this Site, several methods were employed to avoid and reduce impacts to protected resources.

Access Road: Within the 100 foot easement, the proposed road was sited to utilize existing developed areas, uplands, and avoid wetlands where possible. This included avoiding large amounts of wetland impacts by utilizing the existing access road and fill areas in place for several decades. An existing stream crossing will be improved and will avoid a new crossing. The road footprint was designed to meet the minimum width allowed by town roadway standards. The initial road alignment was shifted to avoid wetlands, and the fill slopes were reduced from a 4:1 slope to 3:1 to further minimize wetland impacts. These design changes reduced overall wetland impact by approximately 17%.

Processing Facility Site: The proposed processing Facility and associated improvements are designed based on the required capacity needed to process the projected waste volume. MRC has done extensive research to determine these projected volumes and size the Facility appropriately. The Facility development area was located and designed within the available property to avoid impacting wetlands and protected natural resources as much as possible. The facility and infrastructure were situated to utilize the largest area of uplands present. Within this large upland are smaller wetland inclusions. Impacts to these smaller areas were minimized as much as possible. Examples of minimization efforts included keeping the Facility at or near grade as much as possible to reduce fill extensions into wetland areas and reducing fill slopes



along the southern edge of the Site using 3:1 slopes. Impacts were further reduced where possible by siting stormwater structures and improvements within less desirable upland areas that were available, rather than closer to the building or in more convenient construction locations.



ATTACHMENT 2 ALTERNATIVE ANALYSIS

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



ATTACHMENT 2

ALTERNATIVES ANALYSIS

OVERVIEW

This Alternatives Analysis sets forth why a practical alternative does not exist to the proposed alteration in this application, taking into consideration the purpose and need of the project and avoidance and minimization measures.

Purpose: The purpose of the project is to develop a solid waste processing and recycling facility to provide municipal solid waste (MSW) disposal services to MRC's member communities and other non-MRC communities that have historically relied on Penobscot Energy Recovery Company (PERC) for MSW disposal, and other Maine communities that contract with MRC and Fiberight for solid waste disposal (the "Facility").

Need: MRC and Fiberight (the "Applicants") have partnered together to develop the Facility to manage MSW generated in 187 municipal communities and from other non-MRC communities in north, central, and eastern Maine. In accordance with 38 M.R.S. § 1305, municipalities need to provide "solid waste disposal services for domestic and commercial solid waste generated within the municipality". In addition, solid waste management (such as solid waste disposal services for municipalities) must be consistent with the State's Solid Waste Management Hierarchy (38 M.R.S. § 2101), which sets forth the following order of priority:

- A. Reduction of waste generated at the source, including both amount and toxicity of the waste;
- B. Reuse of waste:
- C. Recycling of waste;
- D. Composting of biodegradable waste;
- E. Waste processing that reduces the volume of waste needing disposal, including incineration; and
- F. Land disposal of waste.

The existing PERC facility, which currently provides MSW services, represents waste processing in the fifth order of priority under the State's hierarchy. Conversely, the proposed Facility utilizes methods of solid waste management that have higher priority in the State's hierarchy, including the conversion of solid wastes to renewable fuels (reuse of waste), sale of recyclables (recycling of waste), conversion of biodegradables (composting), and overall reduction of waste volume. The proposed solid waste management approach would incentivize local waste reduction, reuse and recycling by rewarding these communities that generate less MSW with lower disposal fees. The current PERC approach provides disincentives for local waste reduction efforts by applying a penalty for each community that does not meet its Guaranteed Annual Tonnage (GAT). Moreover, due to expiring disposal agreements, changes in financial arrangements (e.g., expiration of an existing power purchase agreement), and other factors, PERC is not anticipated to be economically viable post-2018. Accordingly, the proposed Facility is needed to (i) ensure that municipalities comply with their obligation under state law to provide "solid waste disposal services for domestic and commercial solid waste generated within the municipality"; (ii) achieve better consistency with the State's Solid Waste Management Hierarchy; and (iii) provide an economically viable solid waste processing facility to serve the solid waste management needs for MRC member and other contracting municipalities.



CRITERIA FOR ALTERNATIVES ANALYSIS

Numerous alternatives were considered and evaluated prior to the selecting the Site for the Facility. Each alternative was assessed for meeting the project purpose and need, taking into consideration avoidance and minimization measures. Specific siting criteria considered as part of this analysis included:

- Proximity to Waste Centroid;
- Suitable Site Characteristics (e.g., property size, developable area, access, available utilities, etc.);
- Willing Landowner, Host Community, and Community Impact;
- MDEP Solid Waste Siting Regulations;
- Economic Impact; and
- Environmental Impact.

Below are more detailed descriptions of each criteria.

Proximity to Waste Centroid: Because the Facility will serve a large regional waste disposal need, it is necessary for the Facility to be located as centrally as practical to the communities MRC serves. Locating a Facility as close to the center of all of their members will minimize environmental and economic impacts by reducing fuel consumption and emissions, traffic congestion, and associated transportation costs. With respect to infrastructure development at a local level, a new regional processing Facility located as close to the center of their members would result in less disruption and minimization of environmental impacts at a local level. For example, if the regional processing facility was to be located significantly further away, local transfer stations and waste management methods would likely change to accommodate additional storage capacity and other infrastructure to reduce potential increased costs associated with transportation. An engineering calculation determined the regional centroid of waste generated by MRC member communities is located in Hampden, Maine.

Suitable Site Characteristics: The Facility must be capable of providing sufficient capacity to accept and process the estimated volumes of waste generated in the MRC communities. Based on current waste generation data, the annual waste capacity proposed to be accepted and processed is estimated to be in the range of 150,000 to 200,000 tons per year. In addition, the Facility must be able to process up to 650 tons/day of waste to account for seasonal variation. To accommodate these volumes of waste, the minimum developable area necessary to accommodate the processing facility and the associated infrastructure requires a development footprint of approximately ten acres with a large in-door area to receive and process waste.

Moreover, a suitable site must also have close proximity to major transportation corridors and be accessible to vehicles transporting solid waste and products derived from the Facility's operations.

Further important development considerations include a site's distance to local residents and other commercial operations in the area.

Willing Landowner, Host Community and Availability of Properties: Development of the Facility will need to have the regulatory approval of the local community as well as a willing seller of properly zoned property.



MDEP Solid Waste Siting Regulations: Because the Facility is classified as a solid waste processing facility, the improvements and development must, among other laws and regulations, comply with the Maine Department of Environmental Protection's (MDEP) Solid Waste Management Regulations (SWMR) in accordance with 06 096 CMR Chapter 409, Processing Facilities. In order to meet the regulatory requirements for licensing, the following key site selection criteria are necessary. The waste handling area at a proposed processing facility may not be located:

- Closer than 100 feet to the solid waste boundary of an active, inactive, or closed solid waste landfill;
- Within a 100 year flood plain;
- In, on, over, or adjacent to a protected natural resource without first obtaining a permit pursuant to 38 M.R.S.A. section 480-A et seq.:
- Closer than 300 feet to off-site water supply wells or water supply springs;
- Closer than 100 feet to public roads and property boundaries; and
- ♦ Closer than 10,000 feet to any airport runway used by turbojet aircraft, or within 5,000 feet of any airport runway used by only piston-type aircraft, when putrescible waste is to be handled outdoors in an uncovered or exposed condition.

Economic Impact: The cost per ton for MSW is a significant part of MRC member communities' budgets. Alternatives were evaluated based on the potential to provide a disposal cost within the market range. Alternatives above the market range would not be economically viable as communities would default to land disposal (landfilling) which is not as consistent with the State's Solid Waste Management Hierarchy.

Environmental Impact: The potential environmental impact taking into consideration avoidance and minimization of impacts was also evaluated in the site alternative search/analysis.

DETAILED SITE ALTERNATIVE SEARCH/ANALYSIS

The Applicants reached out to Municipal Economic Development personnel within the region for existing developed site suggestions that meet the above criteria, and to gain a sense of the level of interest in developing a solid waste processing facility in any of these communities. Several previously developed sites were provided and considered by the Applicants; however, these sites did not meet the necessary sizing requirements and were very close to residents and commercial operations. As a result, these sites were eliminated from further consideration. Below is a description of the alternatives analyzed by the Applicants:

1. Alternative 1 - No Action

This alternative proposes no action be undertaken. Under this scenario, MRC would not plan for future changes to solid waste handling which would result in a non-regional approach to solid waste management.

- Proximity to Waste Centroid: If no action is taken, then it is uncertain how MRC member and contracting municipalities will continue to manage MSW due to viability issues with PERC post-2018 and significant increases in solid waste costs, which could, among other things, shift regional solid waste processing/disposal services to regional landfills outside the waste centroid.
- <u>Suitable Site Characteristics:</u> If no action is taken there are no suitable site characteristics to evaluate.



- Willing Landowner, Willing Host Community and community Impact: If no action is taken MRC member communities will, to the extent available, utilize existing solid waste processing and disposal facilities to manage solid waste.
- MDEP Solid Waste Siting Regulations: If no action is taken, no siting requirements would apply.
- ♦ <u>Economic Impact:</u> If no action is taken, MRC anticipates the cost per ton to dispose MSW at the PERC facility will increase beyond the market rate and result in land disposal (e.g., landfilling) instead of processing.
- Environmental Impact: No action results in the least impact to wetlands and protected natural resource areas by not constructing a new facility; however, it has the largest overall environmental impact in terms of waste management and limited landfill capacity needs.

A "no action" alternative is not practical because it does not achieve the project purpose and need.

2. Alternative 2 - Utilize an Existing Developed Industrial Site

MRC evaluated the potential to utilize several existing sites within the region (e.g., former Verso Paper mill located in Bucksport, former HoltraChem facility located in Orrington, Old Town Fuel and Fiber facility located in Old Town, PERC property in Orrington, and the future industrial park in Brewer) to redevelop as the Fiberight facility.

- <u>Proximity to Waste Centroid:</u> All of these sites are several miles further from the
 waste centroid than the Hampden site. This would increase transportation costs
 and associated environmental impacts (fuel consumption, exhaust, traffic
 movement).
- <u>Suitable Site Characteristics:</u> Some of these sites would provide suitable area to site the facility. However, the cost to purchase the existing facilities, extend infrastructure in some cases and perform the demolition/retrofitting would not be as economically viable as developing the Hampden site.
- Willing Landowner, Willing Host Community and Community Impact: Some of the landowners were not willing sellers. Based on discussions with economic development personal and other community leaders, a solid waste processing facility at these locations received much less support than the Hampden site. A willing host community is one of the key components of a successful solid waste permitting process.
- ♦ MDEP Solid Waste Siting Regulations: Some of the siting requirements mentioned above were not met for some of these sites. All of these previously developed sites had residents and/or commercial operations in closer proximity than the Hampden site.
- ♦ <u>Economic Impact:</u> The cost to purchase the existing facilities and perform the demolition/retrofitting would not be as economically viable as developing the Hampden site.



Environmental Impact: If any of these previously developed sites met the criterial listed above, the environmental impacts from development would be less. However, all of these sites are several miles further from the waste centroid than the Hampden site which would increase associated environmental impacts (fuel consumption, exhaust, traffic congestion) from the extra transportation.

3. Alternative 3 - H.O. Bouchard Property Hampden

This alternative was developed through discussion with the Town of Hampden and the landowner. The town is very supportive of the proposed facility and site development.

- Proximity to Waste Centroid: The Hampden property provides the closest alternative to the waste centroid and will reduce the overall transportation cost and associated environmental impacts (fuel consumption, exhaust, traffic congestion).
- Suitable Site Characteristics: The Site provides suitable size for a waste processing facility. This site and property would allow MRC to own a large parcel of land (approximately 90 acres) in order to maintain a significant buffer from local residents and other commercial operations in the area while being adjacent to existing transportation and utility corridors necessary to serve the needs of the project. The site's close proximity to existing infrastructure while affording a significant buffer to neighboring land uses makes this property uniquely situated to serve the overall needs of the Facility.
- Willing Landowner, Willing Host Community and Community Impact: The landowner (H.O. Bouchard) is willing to sell the size property needed for this project and has entered into an Option Agreement with the MRC. The Community (Town of Hampden) through its Town Council members has made informal public expressions of support for the concept of the proposed processing facility within the Town. The Facility is subject to local regulatory review and approval. Town Council members have expressed an interest, subsequent to the conclusion of the local regulatory approval process, should the Facility gain approval, in working with Fiberight and the MRC to develop a Host Community Agreement. The proposed location is consistent with the Town's Comprehensive Plan and zoning (Industrial) for this area. The Town of Hampden informally expressed a willingness to host a solid waste processing facility. Mutual benefits to community due to future development plans, property seller, operator, owner; close proximity to gas pipeline and other infrastructure and utilities were identified.
- ♦ <u>MDEP Solid Waste Siting Regulations:</u> This would be a viable site to meet the solid waste siting requirements.
- ♦ <u>Economic Impact:</u> The Hampden property will require development of a new site. The costs for development will result in economically viable disposal rates for MRC members.
- Environmental Impact: The environmental impacts from this site include approximately 73,000 square feet of impact to wetlands and protected natural resources. The proposed facility has been designed to avoid and minimize impacts to the greatest practical extent including utilizing an existing access road and maximizing use of upland areas. See Section 1- Avoidance and Minimization for additional details. The impacted wetlands are previously disturbed forested



wetlands and are not high value resources. As mentioned above, this alternative would have the least environmental impacts associated with transportation (fuel consumption, exhaust, traffic congestion) due to its location and proximity to the waste centroid.

SUMMARY/CONCLUSION

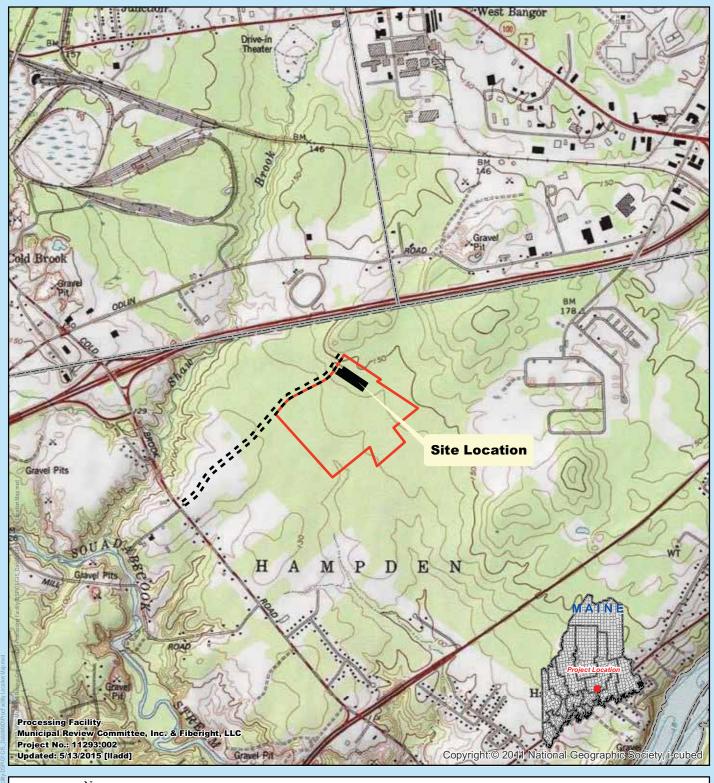
Of the alternatives investigated, Alternative 3 – Hampden-HO Bouchard Property best met the site selection criteria and will have the least overall cumulative impact on the environment and still meet the proposed project purpose and need.

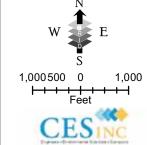


ATTACHMENT 3 TOPOGRAPHIC MAP

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION

USGS Topographic Map





Legend

- - Proposed Road Location
- Proposed Building Location
- Proposed Facility Property Boundary
- Town Boundaries

MAP NOTES:

- 1: ADMINISTRATIVE BOUNDARIES COURTESY OF THE MAINE OFFICE OF GIS (MEGIS).
- 2: TOPOGRAPHIC MAP IS USGS 1:24,000 TOPOGRAPHIC QUADRANGLE. PUBLISHED BY USGS, 2011. ACQUIRED FROM ESRI, 2015.



ATTACHMENT 4 SITE PHOTOGRAPHS

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION





Photo No. 1

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: Looking east at typical wetland area by WF-M802 near access road.

Photo By: RST





Photo No. 2

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: Looking east at existing access road.

Photo By: RST







Photo No. 3

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:

Typical Scrub-Shrub wetland complex along access road by stream crossing.

Photo By: RST





Photo No. 4

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:

Existing road/ vegetation at proposed clearing area within vernal pool habitat by Station 35+-00.

Photo By: RST







Photo No. 5

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:
Typical disturbed
forested wetland
along access road by
WF-M20.

Photo By: RST





Photo No. 6

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:
Forested wetland 151A at end of existing road at pipeline intersection looking southeast.

Photo By: RST







Photo No. 7

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: Typical forested wetland by wetland

wetland by wetland point 15-A1-36 near proposed facility.

Photo By: RST





Photo No. 8

Photo Date: May 5, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: Typical vernal pool and associated wetland complex at VP-1-15.

Photo By: RST







Photo No. 9

Photo Date: November 10, 2014

Site Location: Coldbrook Road Hampden, Maine

Description: Typical upland located on the Site.

Photo By: RST





Photo No. 10

Photo Date: November 5, 2014

Site Location: Coldbrook Road Hampden, Maine

Description: Harvested forestland at proposed development Site.

Photo By: RST







Photo No. 11

Photo Date: May 6, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:
Wetland 15-1b typical
cut over forested
wetland and rutted
area.

Photo By: JES





Photo No. 12

Photo Date: June 3, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:
Forested wetl

Forested wetland near wetland data 15-A1-73 and proposed facility.

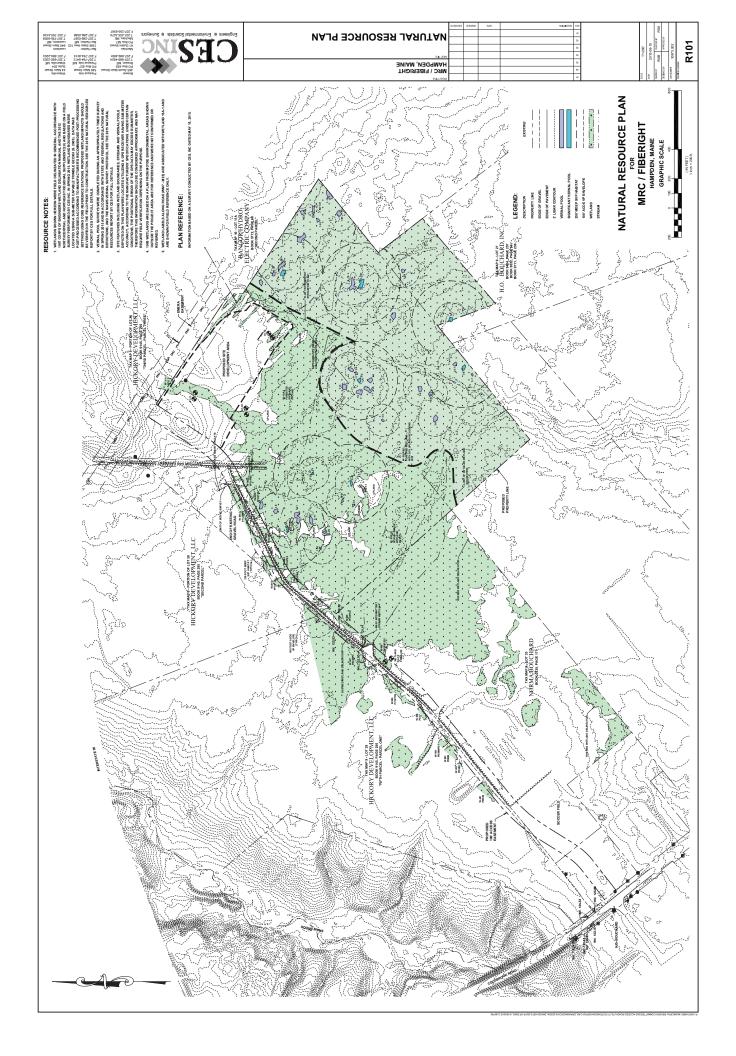
Photo By: JES

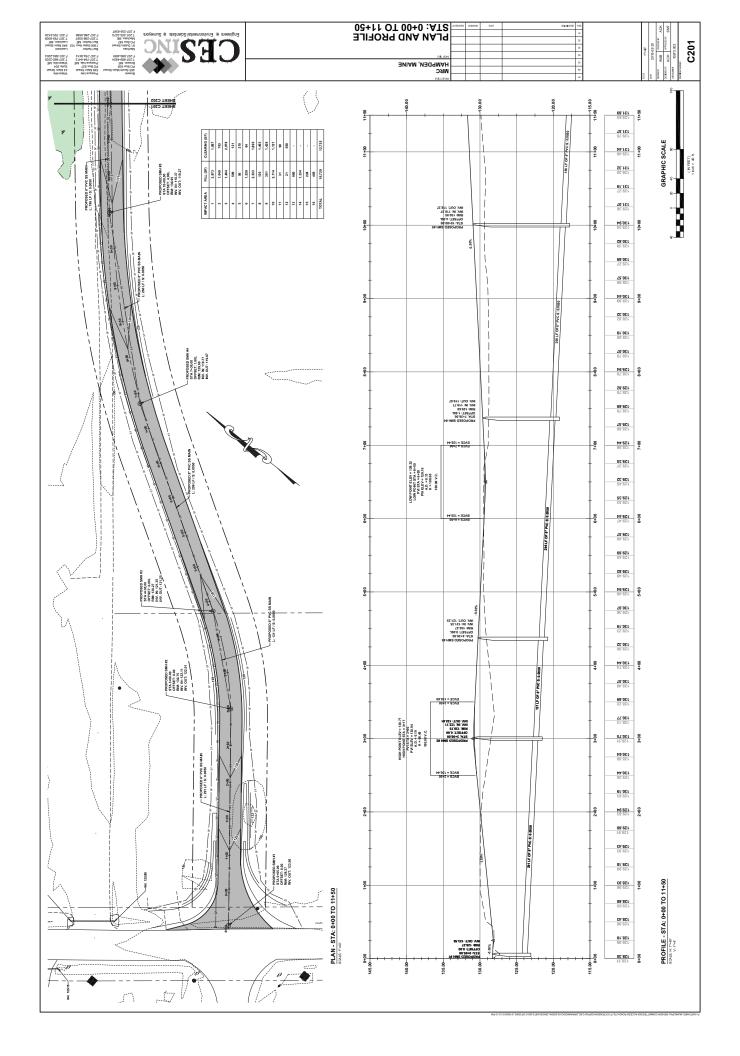




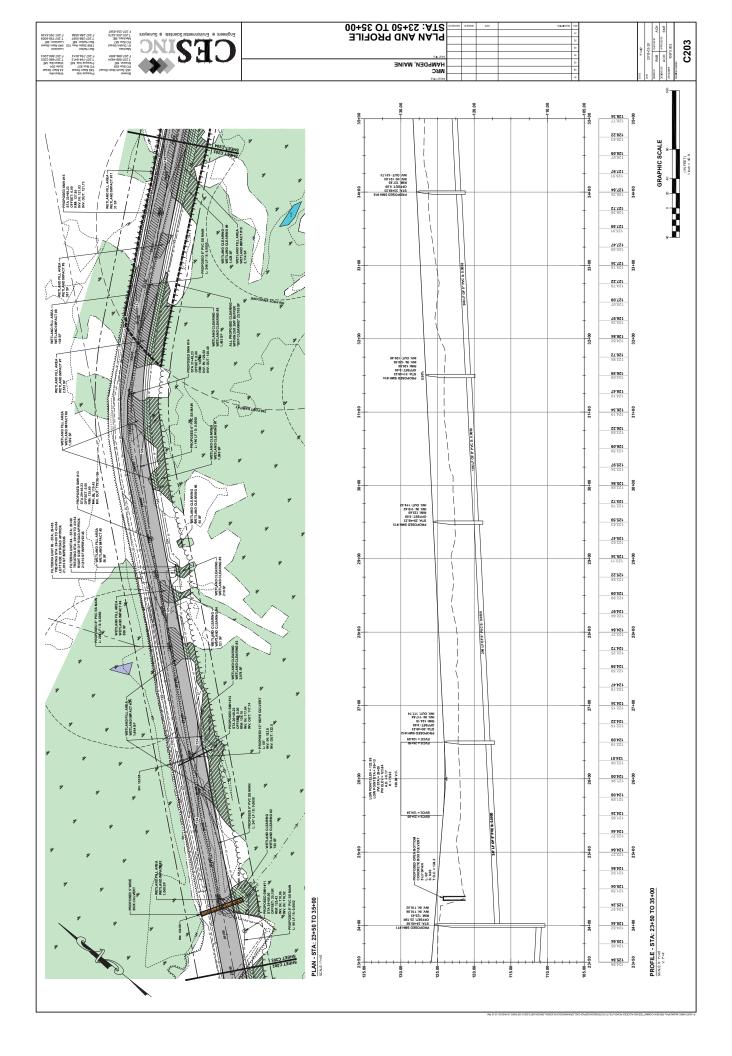
ATTACHMENT 5 SITE PLANS

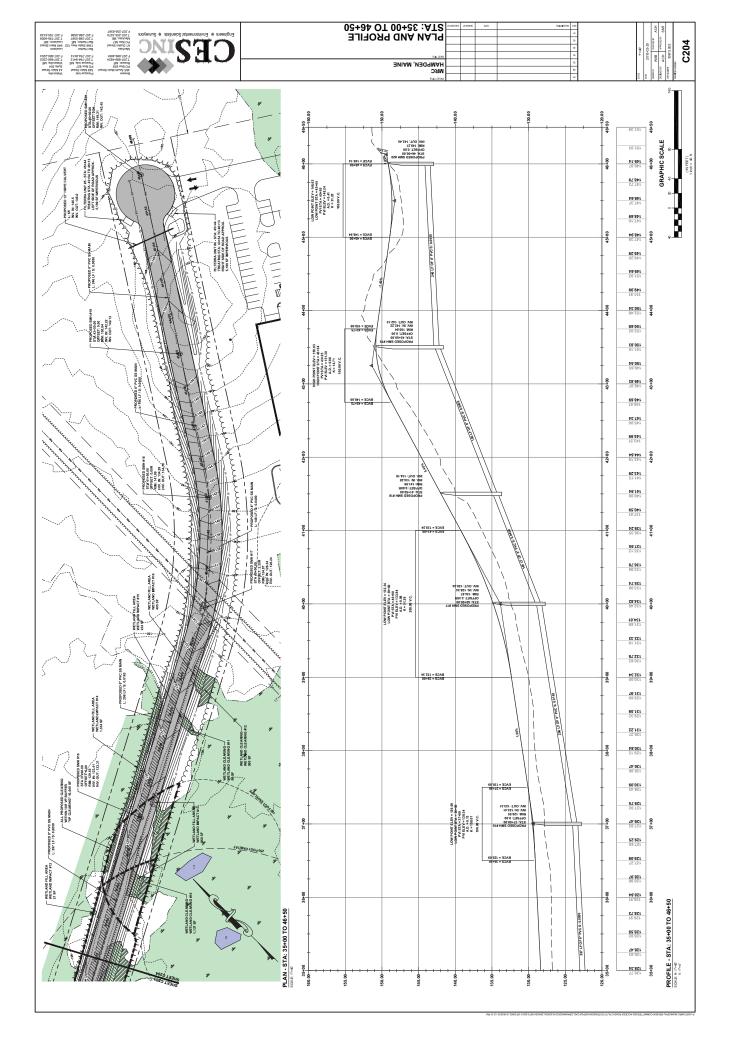
JN: 10973.002/11293.001 NRPA PERMIT APPLICATION

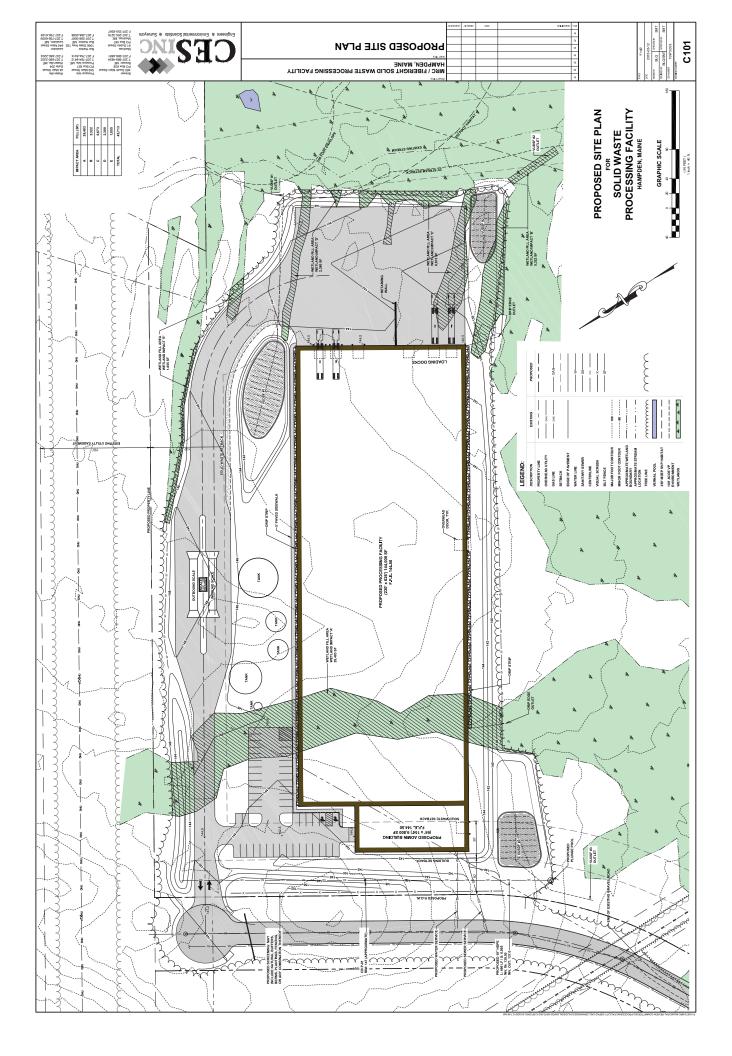


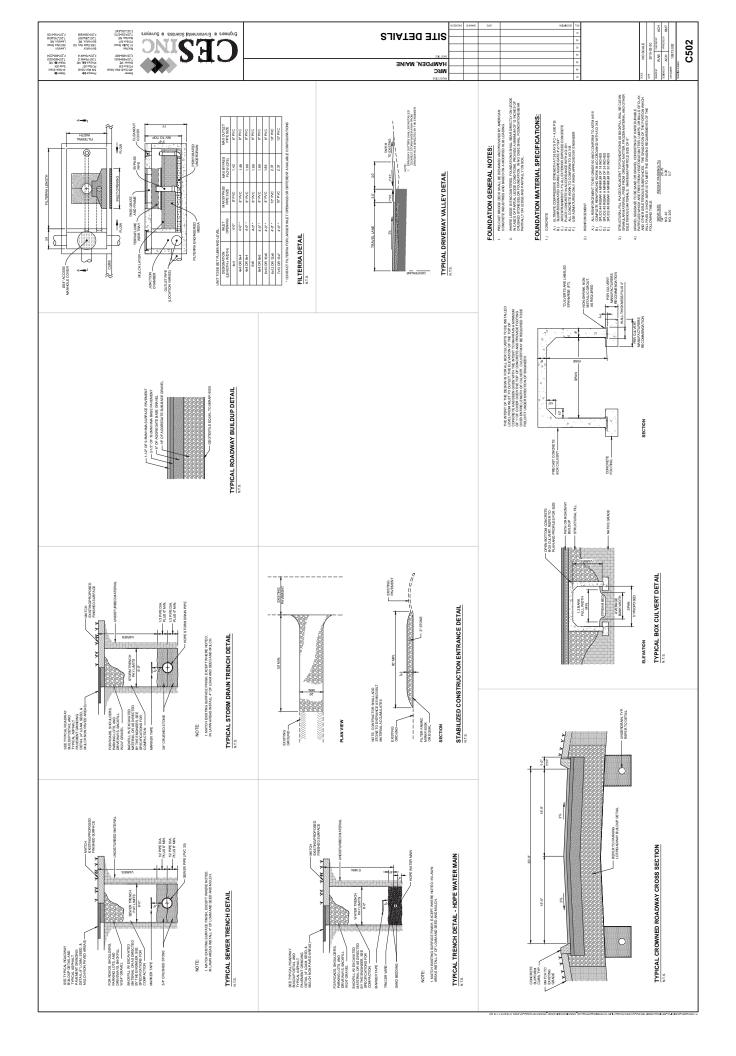








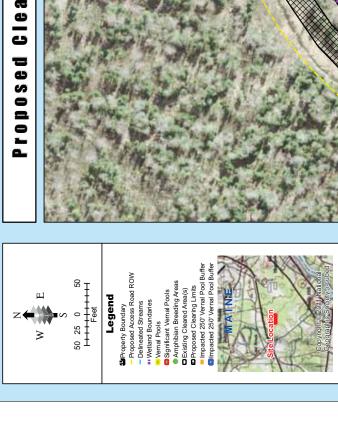






ATTACHMENT 6 ADDITIONAL PLANS

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



Waste Processing Facility Project No.: 10973.002 Updated: 6/23/2015 [Iladd] MRC & Fiberight

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Waste Processing Facility Project No.: 10973.002 Updated: 6/22/2015 [Iladd]

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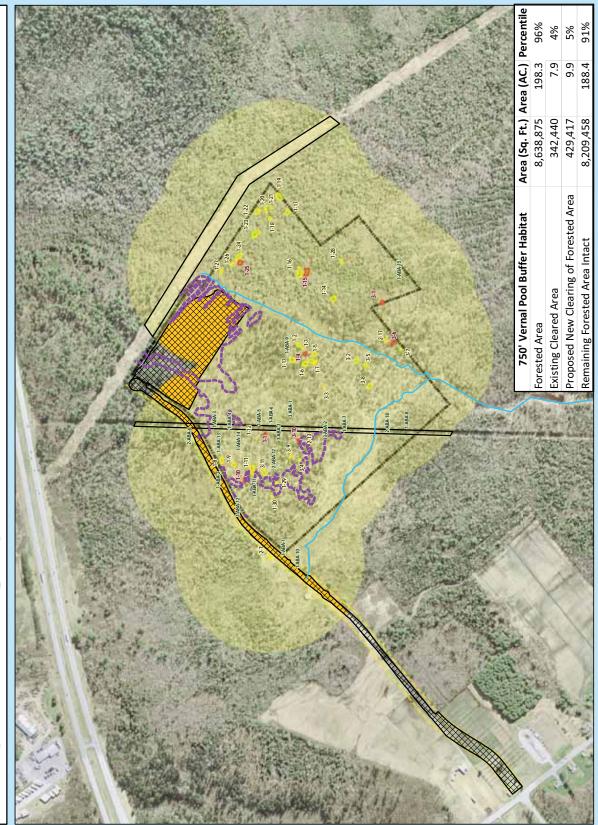
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NORTH ARROW IS REFERENCED TO GRID NORTH



Vernal Pool Resources Impact within 750-ft of Clearing Proposed





ATTACHMENT 7 CONSTRUCTION PLAN

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



ATTACHMENT 7

CONSTRUCTION PLAN

INTRODUCTION

The proposed project includes construction of a solid waste processing facility, parking areas, and associated access road.

Existing Site Conditions: The site is dominated by undeveloped forestland. An existing 15 foot wide gravel road extends from Coldbrook Road to the project site.

Construction Overview: The construction of the project involves two major phases; construction of the main road, and associated utilities and construction of the processing facility.

Construction Plan: The following sequence of construction would be typical for this type of development.

- 1. Install erosion control measures.
- 2. Clear and grub the roadway areas.
- Install utilities.
- 4. Construct road and stormwater treatment systems for the road.
- 5. Clear and grub the processing facility site area
- 6. Construct buildings, parking areas, and stormwater treatment systems on the site.

At this time, construction is anticipated to begin in the Summer of 2016 and be completed by Winter 2017.

Approximately 3,000 linear feet of the proposed access road is located on the existing roads. These areas are mostly cleared and have existing gravel base and culverts. These cleared areas will be expanded to accommodate the new roadway. The proposed paths follow the existing roads as much as possible.

Operations in Wetlands and Protected Resource Areas: Clearing of vegetation and construction operations in/or near protected resources including within wetlands, Riparian buffers, in and adjacent to Significant Wildlife Habitat and associated Critical Terrestrial Habitat, will be strictly controlled to avoid unnecessary impacts and minimize disturbance to wetlands, water bodies, and sensitive areas. All sensitive areas will be marked and clearly identified in the field prior to construction beginning. By carefully planning the clearing practices, timing, and access routes, the clearing can be accomplished with the least amount of impacts to wetland and protected resources. Any temporary impacts will be restored post construction.

General Principals:

- Avoid operating in wet weather.
- Minimize trips and machine operations.
- Limit clearing and impacts to understory vegetation.
- Employ appropriate BMPs.
- Install and maintain erosion control devices.
- Concentrate traffic and access within uplands and existing roads.

Access Routes: The project will be built from Coldbrook Road using the existing gravel access road and temporary roads/travel corridors within the construction limits as needed.

JN: 10973.002/11293.001 ATTACHMENT 7



ATTACHMENT 8

EROSION AND SEDIMENTATION CONTROL PLAN

SEE MDEP CHAPTER 500 STATE STORMWATER PERMIT, SECTION 04: EROSION AND SEDIMENTATION AND MDEP CHAPTER 409 APPLICATION ATTACHMENT 18 STORMWATER AND EROSION CONTROL

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



ATTACHMENT 9 NATURAL RESOURCE REPORT

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION

SOLUTIONS



Corporate Office

465 South Main Street PO Box 639 Brewer, Maine 04412 207.989.4824

www.ces-maine.com



NATURAL RESOURCE SURVEY REPORT

OF

PROPOSED SOLID WASTE PROCESSING AND RECYCLING FACILITY

FOR

MUNICIPAL REVIEW COMMITTEE, INC. - FIBERIGHT LLC HAMPDEN, MAINE

> Applicants: Municipal Review Committee, Inc. 395 State Street Ellsworth, ME 04605 207.664.1700

> > Fiberight LLC 1450 South Rolling Road Baltimore, MD 21227 410.340.9387

JUNE 2015 JN: 10973.002/11293.001

Application Prepared By:

CES, Inc. 465 South Main Street P.O. Box 639 Brewer, ME 04412 207.989.4824



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APP	Appendix A - Site Location Map Appendix B - Photographs Appendix C - Natural Resources Site Plan (See NRPA Attachment 5) Appendix D - Regulatory Information Appendix E - Wetland Data Forms	



1.0 INTRODUCTION

CES, Inc. (CES) has completed natural resource surveys for the proposed solid waste processing and recycling facility located on Coldbrook Road in Hampden, Mane (the Site). Natural resources surveys were conducted on the Site in November 2014, and January, May, and June 2015 on the approximately 90-acre parcel and along the access road to the Site.

The purpose of the natural resource surveys was to identify protected natural resources, such as wetlands and streams, which are jurisdictional to State and/or Federal agencies. The primary agencies typically involved in the permitting process are the Maine Department of Environmental Protection (MDEP) and the U.S. Army Corps of Engineers (ACOE).

2.0 METHODOLOGY

Prior to conducting the field surveys, CES reviewed existing Geographic Information System (GIS) data available from the MDEP and Maine Department of Inland Fisheries and Wildlife (MDIFW) and digital aerial photography. This data included significant wildlife habitat information. CES also reviewed preliminary data from the Maine Office of GIS, including National Wetlands Inventory (NWI) mapped wetlands, USDA – Natural Resources Conservation Service soil survey data, and the United States Geological Survey (USGS) 7.5' topographic map for the Bangor, Maine quadrangle.

2.1 Natural Resources Reconnaissance

Preliminary natural resource mapping was completed on the Site in November 2014 to identify approximate areas of uplands and wetlands.

2.2 Wetland Delineation

The wetland delineation process began with a review of the existing NWI data and aerial photography. CES scientists then visited the Site and identified jurisdictional wetlands based on the 1987 ACOE Wetland Delineation Manual and the routine determination method as outlined in the 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region. The U.S. Fish and Wildlife Service (USFWS) Cowardin classification system outlined in Classification of Wetland and Deepwater Habitats of the United States and the 2012 Regional Supplement were then used to characterize the wetlands identified.

Wetlands are defined as follows:

"...Areas that are inundated or saturated by surface or groundwater water at frequency and duration sufficient to support and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetland generally includes swamps, marshes, bogs and similar areas."[taken from the EPA Regulations listed at 40 CFR 230.3(t)]

The following three parameters are used to determine if a wetland exists: hydric soils; evidence of wetland hydrology; and a predominance of hydrophytic vegetation.



A general walk-through of the Site was conducted to assess and categorize the natural communities present and potential wetland areas. Transects were completed and soils, hydrology, and vegetation were assessed and determined to be wetland or upland. Information gained from these transects was used to delineate the boundary separating upland from jurisdictional wetland based on changes in natural communities, vegetation, soil characteristics, and evidence of hydrology.

Jurisdictional streams were identified using the definition provided in MRSA Title 38 §480-B (9). All natural and artificial watercourses on-site were assessed.

Surveys for vernal pools and other breeding areas (amphibian breeding areas) were completed in the Spring of 2015, and have been reported under separate cover.

2.3 GPS Mapping and Flagging

All features were point located in the field using a sub-meter capable mapping grade GPS. Data was post-processed according to manufacturer's recommended post-processing settings using CORS reference stations. Pink "Wetland Delineation" flags were sequentially numbered and hung along wetland boundaries on the Site. Blue flagging was sequentially numbered and hung along the Spring high water mark of vernal pools.

3.0 RESULTS AND DISCUSSION

3.1 General Project Area Overview

The Site is located on Coldbrook Road in Hampden, Maine as shown on **Appendix A** (Site Location Map). The Site is an approximately 90-acre undeveloped parcel, which is accessed from Coldbrook Road via a gravel access road. The Site is approximately 2 miles north of downtown Hampden and 0.5-mile southeast of the Interstate 95 exit.

The Site is characterized by undeveloped forestland and old agricultural fields. A selective harvest was performed on the Site 10 to 15 years ago; indications of this activity (in particular, haul/skid roads) were observed throughout the Site. Indications of historical agricultural use were also observed on the Site, namely stone walls and foundations; and land which appeared to be drained. The Site is accessed via a gravel road from Coldbrook Road. The Bangor Gas pipeline corridor bisects the Site north to south.

The Site is dominated by a large wetland and stream complex, with areas of upland in the northeast portion of the Site. Uplands on the Site are dominated by red maple (*Acer rubrum*), balsam fir (*Abies balsamea*), white pine (*Pinus strobus*), white ash (*Fraxinus alba*), and quaking aspen (*Populus tremuloides*). Red maple and balsam fir dominate in the forested wetlands on the Site, with smaller areas of scrub shrub alder wetlands along the stream corridors. Topography within the Site consists of flat to gently sloping upland and wetland areas which slope to the southwest. The wetland areas are drained by two streams, which converge and flow southerly to Souadabscook Stream.

According to information provided in the USDA – Natural Resources Conservation Service soil survey, the soils on the Site are dominated by loam and silt-loam textured soils derived from glaciomarine sediment. Areas of shallow to bedrock soil derived from fine-textured till are mapped in the northeast portion of the Site. Hydric soils, which are a component of wetlands, are mapped along portions of the access road and the southern and western portions of the Site.



3.2 Natural Resource Survey Results

3.2.1 Wetlands

The following paragraphs briefly discuss the wetlands found on the Site. Within this discussion, the descriptive wetland classification, based on the Cowardin classification system or the ACOE wetland parameter indicator, follow as capital letters and numbers in parenthesis throughout the text. The Natural Resource Site Plan, included in the NRPA in Attachment 5, shows the location of the wetlands. Representative photographs of each wetland are included in **Appendix B**.

The Site is dominated by a large wetland complex, identified as Wetland 15A-1. The upper elevations of this wetland, located in the northeastern portions of the Site, are red maple-green ash forested wetlands (PFO1&4E) that are seasonally saturated. In these areas, wetland vegetation is dominated by red maple with green ash (Fraxinus pennsylvanica) present in the tree stratum. The shrub stratum is dominated by Morrow's honeysuckle (Lonicera morrowii), with balsam fir, green ash, red maple, quaking aspen, and balsam poplar (*Populus balsamifera*) present. The herb stratum in the forested potions of Wetland 15A-1 is dominated by dwarf raspberry (Rubus pubescens) with goldenrod (Solidago cf. rugosa), sensitive fern (Onoclea sensibilis), green ash, and red maple. Greater than 50 percent of the dominant vegetation across all strata is currently listed as having a regional wetland indicator status of facultative or wetter (Vegetation Indicator 2). Soils in this wetland consisted of an organic or dark mineral surface horizon underlain by depleted and mottled silt loam subsoil. These soils met the requirements of Hydric Soil Indicator A11 (Depleted Below Dark Surface). Evidence of hydrology in this wetland consisted of pit and mound microtopography, soil saturation to the ground surface, water stained leaves, and drainage patterns (Hydrology Indictors D4, A3, B9, and B10). The existing Site access road crosses forested and scrub-shrub portion of Wetland <u>15A-1</u>. This portion of <u>Wetland 15A-1</u> is a complex of forested and scrub-shrub wetland with vegetation, soils, and hydrology similar to what is described above.

Portions of this wetland, identified as <u>Wetland 15A-1B</u> are a forested wetland complex, and contain approximately 80% forested wetland with 20% upland inclusions. These upland inclusions were not mapped, due to the size of the inclusions, the complexity of the landscape, and the distance from the proposed Site improvement and associated wetland impact areas. Wetland vegetation, hydric soils, and indicators of wetland hydrology in <u>Wetland 15A-1B</u> were similar to those in <u>Wetland 15A-1</u>. The Bangor Gas pipeline crosses the <u>Wetland 15A-1B</u> wetland complex. Areas of disturbed, emergent (PEM1) wetlands are located along the pipeline.

The lower portions of this wetland are associated with the intermittent streams and identified as <u>Wetland 15A-1C</u>. These wetlands are scrub-shrub alder wetlands (PSS1Fb) which are semi-permanently flooded. In these wetlands, spare red maple, balsam fir, and green ash may be present in places in the tree stratum. The shrub stratum is dominated by speckled alder, red maple, winterberry (*Ilex verticillata*) and Morrow's honeysuckle, with meadowsweet (*Spirea latifolia*), and balsam fir also present. The herb stratum is dominated by sensitive fern, meadowsweet, dwarf raspberry, and horsetail (*Equisetum* spp.). Soils in this wetland consisted of an organic or dark mineral surface horizon underlain by depleted and mottled silt loam subsoil. In places, the surface organic or mineral surface horizon was eroded. These soils met the requirements of Hydric Soil Indicator A11 (Depleted Below Dark Surface). Evidence of hydrology in this wetland consisted of soil saturation to the ground surface, water stained leaves, and drainage patterns (Hydrology Indictors A3, B9, and B10).



Appendix D contains State and Federal regulatory information pertaining to wetlands. ACOE wetland determination data forms are included in **Appendix E**.

3.2.2 Streams

Two streams were identified on the Site: <u>Stream 15A-S1</u> is an intermittent, silt, and mud substrate stream that is approximately 24 inches bankfull width. This stream originates in the northeast portion of *Wetland 15A-1* and flows to the southeast.

<u>Stream M8-S1</u> is an intermittent, silt, mud, and clay substrate stream that is approximately 44 inches bankfull width. This stream originates in the southwest portion of the Site, in <u>Wetland 15A-1C</u>, and flows to the southeast. <u>Stream M8-S1</u> passes through an existing 24 inch culvert under the Site access road.

Streams <u>M8-S1</u> and <u>15A-S1</u> converge in the southern portion of the Site, and flow to the south, into the Souadabscook Stream, approximately 1.3 miles south of the Site.

4.0 SUMMARY

Natural resource surveys have been completed by CES for the Site on Coldbrook Road in Hampden, Maine, as shown on the Natural Resource Plan, included in NRPA Attachment 5. CES identified one jurisdictional wetlands complex on the Site. This wetland complex consists of forested wetland (PFO1&4E), forested wetland/upland complex, and scrub-shrub wetland (PSS1Fb). Two intermittent streams were identified on the Site.

REFERENCES

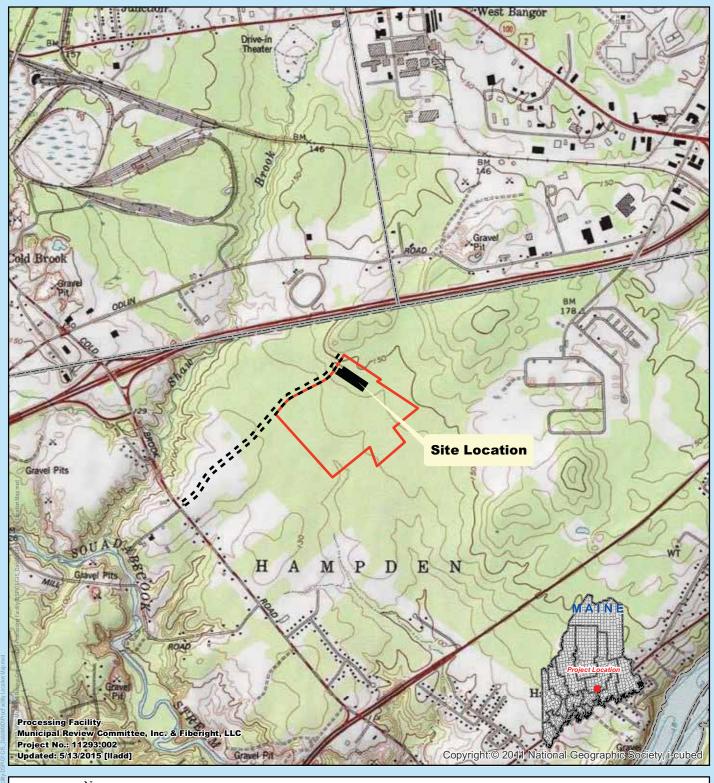
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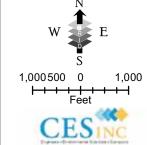


APPENDIX A SITE LOCATION MAP

JN: 10973.002/11293.001 NATURAL RESOURCES REPORT

USGS Topographic Map





Legend

- - Proposed Road Location
- Proposed Building Location
- Proposed Facility Property Boundary
- Town Boundaries

MAP NOTES:

- 1: ADMINISTRATIVE BOUNDARIES COURTESY OF THE MAINE OFFICE OF GIS (MEGIS).
- 2: TOPOGRAPHIC MAP IS USGS 1:24,000 TOPOGRAPHIC QUADRANGLE. PUBLISHED BY USGS, 2011. ACQUIRED FROM ESRI, 2015.



APPENDIX B PHOTOGRAPHS





Photo No. 1

Photo Date: June 9, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:

View of Wetland 15A-1, red maple- green ash forested wetland.

Photo By: JES





Photo No. 2

Photo Date: June 9, 2015

Site Location:

Coldbrook Road Hampden, Maine

Description:

View of forested portion of Wetland 15A-1.

Photo By: JES





Photo No. 3

Photo Date: June 9, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of forested portion of Wetland 15A-1.

Photo By: JES





Photo No. 4

Photo Date: June 9, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of scrub-shrub portion of Wetland 15A-1.

Photo By: JES







Photo No. 5

Photo Date: June 15, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:

View of scrub-shrub alder Wetland 15A-1C.

Photo By: JES





Photo No. 6

Photo Date: June 15, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of forested wetland/ upland complex Wetland 15A-1B.

Photo By: JES





Photo No. 7

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of forested wetland/ upland complex Wetland

15A-1B.

Photo By: JES





Photo No. 8

Photo Date: May 7, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:View of Stream 15A-S1.

Photo By: RST





Photo No. 9

Photo Date: May 7, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:View of Stream 15A-S1.

Photo By: RST



Photo No. 10

Photo Date: June 4, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of Stream M8-S1

Photo By: RST







Photo No. 11

Photo Date: June 4, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of Stream M8-S1.

Photo By: RST





Photo No. 12

Photo Date: June 4, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of scrub-shrub alder wetland surrounding Stream M8-S1.

Photo By: RST





APPENDIX C NATURAL RESOURCES SITE PLAN

SEE NRPA ATTACHMENT 5

JN: 10973.002/11293.001 NATURAL RESOURCES REPORT



APPENDIX D REGULATORY INFORMATION

JN: 10973.002/11293.001 NATURAL RESOURCES REPORT



APPENDIX D

REGULATORY INFORMATION

REGULATORY INFORMATION

Alterations to jurisdictional wetlands and natural resources are subject to Federal, State, and local regulations. Wetlands are regulated by the State of Maine under the Natural Resources Protection Act (NRPA) and enforced by the MDEP according to the Department rules and Chapter 310, Wetland and Water Bodies Protection Rules. Wetlands are regulated by the ACOE under Section 404 of the Clean Water Act.

1.0 Wetland Regulations

1.1 State Regulations: Under the MDEP rules, a wetland may be classified as a "Wetlands of Special Significance" (WOSS) or not. Wetlands that do not meet the definition of a WOSS are typically eligible for reduced permitting or exemption for minor alteration (less than 4,300 square feet). This exemption may not apply for Federal or local agencies should the wetland contain significant wildlife habitat, such as a significant vernal pool, or wetlands which contain or are adjacent to other important natural resources. Non-WOSS wetland alterations of greater than 4,300 square feet to 14,999 square feet typically require a Tier 1 NRPA Permit. A Tier 1 permit does not require in-depth wetland characterizations, delineation, functional assessment or compensation and mitigation. Tier 2 permits cover alterations of 15,000 square feet to 43,560 square feet (one acre). Alteration greater than one acre or any alteration to a WOSS requires a Tier 3 (Individual) NRPA permit. Tier 2 and Tier 3 NRPA permit applications generally include in-depth wetland delineation, characterization, functional assessment, and compensation and mitigation. Determination of application requirements is often made in consultation with the MDEP Project Manager during a pre-application meeting.

Under the NRPA, any proposed alterations must avoid and minimize impacts to natural resources to the greatest extent. Compensation for impacts to natural resources is typically required when impacts exceed the Tier 1 level.

The NRPA also regulates activity adjacent to certain wetlands. Adjacent is defined as within 75 feet of the wetland boundary. Wetlands containing significant wildlife habitat or 20,000 square feet of open water are two examples. See the NRPA text for complete details.

1.2 Federal Regulations: The ACOE regulates all fill in waters of the United States. Most wetland alterations are permitted through the MDEP as a joint streamlined permit process under the General Permit (GP) issued by the ACOE. Under the GP, application materials prepared for the MDEP generally fulfill ACOE submission requirements. The current GP regulates activities which have "no more than minimal individual, secondary, and cumulative adverse effects on the aquatic environment...". These activities are separated into Category 1 and Category 2 activities. Activities which meet the Category 1 standard generally require submission of the MDEP permit application or ACOE Category 1 Notification Form. Those activities which do not qualify for Category 1 may qualify for Category 2 review under the ACOE GP. Activities which do not meet the ACOE GP conditions are reviewed as individual permits. Determination of the level of review necessary and application requirements is made based on the activity involved, and often in consultation with the ACOE Project Manager during a pre-application meeting.



Certain wetlands, vernal pools and other significant resources may require additional review under the ACOE individual permit process.

2.0 Vernal Pools - Significant Wildlife Habitat

Vernal pools are also regulated at the local, State, and Federal level, and each has slightly differing definitions and standards.

2.1 State Regulations: Under the MDEP *Chapter 335 - Significant Wildlife Habitat Rules*, Significant Vernal Pools are regulated as Significant Wildlife Habitat under the NRPA permitting process. A vernal pool is defined under the rules as follows:

"A natural, temporary to semipermanent body of water occurring in a shallow depression that typically fills in the spring or fall and may dry during the summer. Vernal pools have no permanent inlet and no viable populations of predatory fish."

A Significant Vernal Pool is determined based on abundance of egg masses of pool breeding amphibians, the presence of fairy shrimp, or documented use by a listed endangered or threatened species. The abundance criteria are:

- ♦ Forty (40) or more wood frog (*Rana sylvatica*) egg masses;
- Twenty (20) or more spotted salamander (Ambystoma maculatum) egg masses;
- ♦ Ten (10) or more Blue Spotted salamander (Ambystoma laterale) egg masses; and
- Presence of fairy shrimp (Eubranchipus spp.) in any life stage.

The area under State jurisdiction includes the pool depression and 250 foot critical habitat buffer around the pool. Alteration within the 250 buffer may be allowed under a Permit by Rule process, if impacts are not within wetlands, and are less than 25 percent of the habitat area. Alterations greater than this will require an Individual NRPA Permit be obtained.

The State Site Location of Development Act (SLODA) also regulates Significant Wildlife Habitat and Significant Vernal Pools. Under Site Law, a setback of up to 500 feet may be required for ecologically significant wildlife resources within a project that require a Site Permit.

- 2.2 Federal Regulations: At the Federal level, the ACOE also regulates vernal pools and special aquatic sites under the Maine General Permit (GP). A vernal pool is defined there as follows:
- "...Temporary to permanent bodies of water occurring in shallow depressions that fill during the spring and fall and may dry during the summer. Vernal pools have no permanent or viable populations of predatory fish. Vernal pools provide the primary breeding habitat for wood frogs, spotted salamanders, blue-spotted salamanders, and fairy shrimp, and provide habitat for other wildlife including several endangered and threatened species."

The ACOE regulates activities within 750 feet of vernal pools. The GP requires that disturbance within 750 feet of a vernal pool shall be minimized to the maximum extent possible. It is important to note that the ACOE must have jurisdiction over the project (i.e. wetland impacts are proposed) before buffers are mandated.



APPENDIX E WETLAND DATA FORMS

JN: 10973.002/11293.001 NATURAL RESOURCES REPORT

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC,INC./ Fiberight, LLC	City/County: Ha	ampden/Penobscot Cty, ME	Sampling Date: 6/3/2015		
Applicant/Owner: MRC,INC./ FIBERIGHT,LLC.		State:	ME Sampling Point: M802U		
Investigator(s): CES, RST	Section, Towns	hip, Range:	<u> </u>		
Landform (hillside, terrace, etc.):	•	ave, convex, none):	Slope (%):		
Subregion (LRR or MLRA) LRR R, MLRA 141 Lat:		Long:	Datum:		
Soil Map Unit Name:		NWI class	ification:		
Are climatic / hydrologic conditions on the site typical for	or this time of year? Yes		n in Remarks.)		
Are Vegetation N, Soil Y, or Hydrology	-	Are "Normal Circumstances" p			
Are Vegetation N , Soil N , or Hydrology	N naturally problematic?	(If needed, explain any answer	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site ma		int locations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes X	No Is the Sam	ipled Area			
Hydric Soil Present? Yes			No X		
Wetland Hydrology Present? Yes	No X If yes, option	onal Wetland Site ID: M8-U			
HYDROLOGY					
Wetland Hydrology Indicators:		·	icators (minimum of two required)		
Primary Indicators (minimum of one is required; check			oil Cracks (B6)		
1 	Water-Stained Leaves (B9)		Patterns (B10)		
	Aquatic Fauna (B13)		Lines (B16)		
	Marl Deposits (B15)		on Water Table (C2)		
	Hydrogen Sulfide Odor (C1)		Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)		
-	Oxidized Rhizospheres on Livin	· · · · · · · · · · · · · · · · · · ·			
-	Presence of Reduced Iron (C4)		r Stressed Plants (D1)		
	Recent Iron Reduction in Tilled	· /	nic Position (D2)		
	Thin Muck Surface (C7)		quitard (D3)		
	Other (Explain in Remarks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)		FAC-Neuti	ral Test (D5)		
Field Observations:					
Surface Water Present? Yes No	Depth (inches):				
Water Table Present? Yes No	Depth (inches):	<u>.</u>			
Saturation Present? Yes No	Depth (inches):	Wetland Hydrology Preser	nt? Yes No X		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring we	ell, aerial photos, previous inspe	ections), if available:			
Remarks:					

BETUVEGETATION scientific names of plants. Sampling Point: M802U Absolute Dominant Indicator 35) Tree Stratum (Plot size: % Cover Status **Dominance Test worksheet:** Species? POPULUS TREMULOIDES 10 FACU No **Number of Dominant Species** BETULA POPULIFOLIA Yes FAC That Are OBL, FACW, or FAC: (A) 50 3. ACER RUBRUM Yes FAC **Total Number of Dominant** PRUNUS SEROTINA 20 No FACU Species Across All Strata: 4 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: 110 =Total Cover Total % Cover of: Multiply by: Sapling/Shrub Stratum (Plot size: 15 OBL species x 1 = PRUNUS VIRGINIANA **FACU FACW** species 30 x 2 = x 3 = 2. ABIES BALSAMEA 10 Yes FAC FAC species 70 210 3. ACER RUBRUM 10 Yes FAC **FACU** species 150 x 4 = 600 4. **VIBURNUM CASSINOIDES** FACU UPL species 0 x 5 = 5. 250 Column Totals: (A) 870 (B) 6. Prevalence Index = B/A = 3.48 **Hydrophytic Vegetation Indicators:** 1 - Rapid Test for Hydrophytic Vegetation =Total Cover X 2 - Dominance Test is >50% Herb Stratum (Plot size: MAIANTHEMUM CANADENSE 70 FACU 3 - Prevalence Index is ≤3.01 Yes 4 - Morphological Adaptations¹ (Provide supporting VACCINIUM ANGUSTIFOLIUM FACU 2 data in Remarks or on a separate sheet) 10 3. PTERIDIUM AQUILINUM No **FACU** 5 Problematic Hydrophytic Vegetation¹ (Explain) 4 ARALIA NUDICAULIS No **FACU** 5. ¹Indicators of hydric soil and wetland hydrology must 6. be present, unless disturbed or problematic. 7. **Definitions of Vegetation Strata:** 8. Tree – Woody plants 3 in. (7.6 cm) or more in diameter 9. at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. **Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 105 =Total Cover Woody Vine Stratum (Plot size: ____) Woody vines - All woody vines greater than 3.28 ft in height. 2. Hydrophytic Vegetation Yes X No Present? =Total Cover Remarks: (Include photo numbers here or on a separate sheet.)

SOIL Sampling Point: M802U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Feature					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-3	10YR 3/3						Loamy/Clayey	SILT LM	
3-5	10YR 4/2						Loamy/Clayey		
5-12	10YR 4/4						Loamy/Clayey		
12-14	2.5Y 5/3		5Y 5/2	15	D	M	Loamy/Clayey	C/D REDOX	
14-22	5Y 5/2		5Y 6/1	25	D	M	Loamy/Clayey	FIRM	
¹ Type: C=	Concentration, D=Dep	oletion, RM		S=Cover	ed or Co	ated San	d Grains. ² Loca	ation: PL=Pore Lining, M=Matrix.	
	oil Indicators:	· · · · · · · · · · · · · · · · · · ·	· · · ·					Problematic Hydric Soils ³ :	
Histos	sol (A1)		Polyvalue Below	/ Surface	(S8) (LR	RR,	2 cm Muck	(A10) (LRR K, L, MLRA 149B)	
Histic	Epipedon (A2)	-	MLRA 149B)				Coast Prai	irie Redox (A16) (LRR K, L, R)	
	Histic (A3)		Thin Dark Surface (S9) (LRR R, MLRA 1498					ky Peat or Peat (S3) (LRR K, L, R)	
Hydro	gen Sulfide (A4)	-	High Chroma Sa					Below Surface (S8) (LRR K, L)	
	fied Layers (A5)	-	Loamy Mucky M			-		Surface (S9) (LRR K, L)	
	ted Below Dark Surfac	ce (A11)	Loamy Gleyed N			,	Iron-Manganese Masses (F12) (LRR K, L, R)		
	Dark Surface (A12)	` ′ -	Depleted Matrix		,		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	y Mucky Mineral (S1)	-	Redox Dark Sur)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
	y Gleyed Matrix (S4)	-	Depleted Dark Surface (F7)					nt Material (F21)	
	y Redox (S5)	-	Redox Depressions (F8)					ow Dark Surface (TF12)	
	, ,	-	Marl (F10) (LRR K, L)					plain in Remarks)	
Stripped Matrix (S6)							Outer (EXP	sam in remaine)	
Dark Surface (S7)									
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.									
Restrictive Layer (if observed):									
Type:									
Depth (inches):						Hydric Soil Pres	sent? Yes No X		
Remarks:									
Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version									
7.0 March	2013 Errata. (http://so	ıls.usda.go	v/use/nydric)						

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC,INC./ Fiberight, LLC	City/County: Hampden/penobscot cty, ME Sampling Date: 6/3/2015
Applicant/Owner: MRC,INC./ FIBERIGHT,LLC.	State: ME Sampling Point: M802W
Investigator(s): CES, RST	Section, Township, Range:
Landform (hillside, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): LRR R, MLRA 141 Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time o	
, ,	
Are Vegetation N, Soil Y, or Hydrology Y signific	
Are Vegetation N, Soil N, or Hydrology N natural	
SUMMARY OF FINDINGS – Attach site map showir	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: M8-W
Remarks: (Explain alternative procedures here or in a separate re	eport.)
	•
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	
 -	med Leaves (B9) X Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fau	
X Saturation (A3) Marl Depos	
	Sulfide Odor (C1) Crayfish Burrows (C8)
	hizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) f Reduced Iron (C4) Stunted or Stressed Plants (D1)
	Reduction in Tilled Soils (C6) Geomorphic Position (D2)
	Surface (C7) Shallow Aquitard (D3)
l 	ain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inc	ches):
Water Table Present? Yes X No Depth (inc	
Saturation Present? Yes X No Depth (inc	ches): 0 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial ph	notos, previous inspections), if available:
Demodes	
Remarks:	

<u>Free Stratum</u> (Plot size: 35)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
. ACER RUBRUM	30	Yes	FAC	
2. SALIX SPP.	10	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3	_			Total Number of Dominant
i	_			Species Across All Strata: 7 (B)
	_			Percent of Dominant Species
i	_			That Are OBL, FACW, or FAC: 85.7% (A/B
· -	_			Prevalence Index worksheet:
	40	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15	.)			OBL species 0 x 1 = 0
. PRUNUS VIRGINIANA	20	Yes	FACU	FACW species 30 x 2 = 60
. SPIRAEA LATIFOLIA	10	Yes	FACW	FAC species80 x 3 =240
. ALNUS RUGOSA	10	Yes	FACW	FACU species30 x 4 =120
•				UPL species0 x 5 =0
<u></u>	_			Column Totals: 140 (A) 420 (E
<u></u>	_			Prevalence Index = B/A = 3.00
. <u></u>	_			Hydrophytic Vegetation Indicators:
	40	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
lerb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
EQUISETUM ARVENSE	30	Yes	FAC	X 3 - Prevalence Index is ≤3.0 ¹
. SOLIDAGO RUGOSA	20	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
. RUBUS IDAEUS	10	No	FACU	data in Remarks or on a separate sheet)
·	_			Problematic Hydrophytic Vegetation ¹ (Explain)
·	_			¹ Indicators of hydric soil and wetland hydrology must
	_			be present, unless disturbed or problematic.
·	_			Definitions of Vegetation Strata:
·	_			Tree – Woody plants 3 in. (7.6 cm) or more in diamet
·	_			at breast height (DBH), regardless of height.
0	_			Sapling/shrub – Woody plants less than 3 in. DBH
1	_			and greater than or equal to 3.28 ft (1 m) tall.
2	_			Herb – All herbaceous (non-woody) plants, regardles
	60	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size:)			Woody vines – All woody vines greater than 3.28 ft i
·	_			height.
·	_			
	_			Hydrophytic Vegetation
				Present? Yes X No No
·		=Total Cover		

SOIL Sampling Point: M802W

Profile De	escription: (Describe to the	depth needed to docu	ment th	e indicato	or or con	firm the absence	of indicators.)
Depth	Matrix	Redox	k Feature	es			
(inches)	Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	5Y 5/1					Loamy/Clayey	SILT LM, GLEYED
10-16	5GY 5/1	10YR 4/4	25			Loamy/Clayey	GLEYED
		_					
		_					
		_					
¹ Type: C=	Concentration, D=Depletion,	RM=Reduced Matrix C:	S=Cove	red or Coa	ated San	d Grains ² Lo	cation: PL=Pore Lining, M=Matrix.
	oil Indicators:	Title Houdood Matrix, O.	0010	04 0. 000	atou ouri		or Problematic Hydric Soils ³ :
_	sol (A1)	Polyvalue Below	Surface	(S8) (LR	R R.		ick (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)	MLRA 149B)		() (-,		rairie Redox (A16) (LRR K, L, R)
	Histic (A3)	Thin Dark Surfac	e (S9) (LRR R. M	LRA 149		icky Peat or Peat (S3) (LRR K, L, R)
	ogen Sulfide (A4)	High Chroma Sa					e Below Surface (S8) (LRR K, L)
	fied Layers (A5)	Loamy Mucky M			-		rk Surface (S9) (LRR K, L)
	eted Below Dark Surface (A1				 L)		
		·		<u>~)</u>			nganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	? Depleted Matrix					nt Floodplain Soils (F19) (MLRA 149B)
	y Mucky Mineral (S1)	Redox Dark Surf					podic (TA6) (MLRA 144A, 145, 149B)
	y Gleyed Matrix (S4)	Depleted Dark S					ent Material (F21)
Sand	y Redox (S5)	Redox Depression	ons (F8)			Very Sha	allow Dark Surface (TF12)
Stripp	ed Matrix (S6)	Marl (F10) (LRR	K, L)			Other (E	xplain in Remarks)
Dark	Surface (S7)						
3, ,, ,							
	s of hydrophytic vegetation ar re Laver (if observed):	nd wetland nydrology mus	st be pre	esent, unie	ess aistur	bed or problematic	i.
Type:	e Layer (ii observed).						
Depth (i	nches):					Hydric Soil Pro	esent? Yes X No
Remarks:						L	
Data form	is revised from Northcentral	and Northeast Regional	Supplem	ent Versi	on 2.0 to	reflect the NRCS F	Field Indicators of Hydric Soils version
7.0 March	2013 Errata. (http://soils.usd	a.gov/use/hydric)					•

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC,INC./ Fiberig	ght, LLC	City	//County: <u>Har</u>	npden/Penobsc	ot cty, ME	Sampli	ing Date:	6/9/20	15
Applicant/Owner: MRC,INC./ F	IBERIGHT,LLC.				State:	ME :	Sampling	Point:	A15 1-13 U
Investigator(s): CES, JES		Sec	ction, Townshi	p, Range:				•	
Landform (hillside, terrace, etc.):		Local	relief (concav	e, convex, none	e):		Slo	pe (%):	
Subregion (LRR or MLRA): LRR	R. MLRA 141 Lat:			Long:			Datun		
Soil Map Unit Name:					NWI classi				
Are climatic / hydrologic conditio	ns on the site typical fr	or this time of year?	Vas	Y No	(If no, explain	_	rke)		
Are Vegetation N , Soil	,,	,	_	re "Normal Circ	•			X N	lo
Are Vegetation N , Soil				f needed, explai	•				
SUMMARY OF FINDINGS				·	•		,	tures,	etc.
Hydrophytic Vegetation Present	t? Yes X	No	Is the Samp	led Area					
Hydric Soil Present?	Yes		within a We	tland?	Yes	No	X		
Wetland Hydrology Present?	Yes	No X	If yes, option	al Wetland Site	ID: A15-1 -1	3 U			
Remarks: (Explain alternative p		,							
HYDROLOGY									
Wetland Hydrology Indicators					econdary Indi	icators (mi	inimum of	two roc	uirod)
Primary Indicators (minimum of		(all that annly)		<u>5</u>	Surface So			two req	<u>julieu)</u>
Surface Water (A1)	one is required, enecin	Water-Stained Leav	ves (B9)	_	Drainage F		. ,		
High Water Table (A2)		Aquatic Fauna (B13			Moss Trim				
Saturation (A3)		Marl Deposits (B15)			Dry-Seaso	•	,		
Water Marks (B1)		Hydrogen Sulfide O	dor (C1)	_	Crayfish B				
Sediment Deposits (B2)		Oxidized Rhizosphe	eres on Living	Roots (C3)	Saturation	Visible or	n Aerial Im	agery (C9)
Drift Deposits (B3)		Presence of Reduce	ed Iron (C4)	<u> </u>	Stunted or	Stressed	Plants (D	1)	
Algal Mat or Crust (B4)		Recent Iron Reduct	Soils (C6)	Geomorph	ic Position	n (D2)			
Iron Deposits (B5)		Thin Muck Surface		Shallow Ad	quitard (D3	3)			
Inundation Visible on Aeria	I Imagery (B7)	Other (Explain in Re	emarks)	_	Microtopog	graphic Re	elief (D4)		
Sparsely Vegetated Conca	ve Surface (B8)			_	FAC-Neutr	al Test (D)5)		
Field Observations:									
Surface Water Present?	Yes No	Depth (inches):							
	Yes No								
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):		Wetland Hydro	ology Presen	it? Y	Yes	_ No	X
Describe Recorded Data (strea	m gauge monitoring w	vell aerial photos pr	revious inspec	rtions) if availah	ıle.				
Describe Recorded Data (Stream	m gauge, monitoring w	ren, denai priotos, pr	CVIOUS ITISPEC	olions), ii avallat	nc.				
Remarks:									
Nomans.									

Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
25	Yes	FACU	Number of Dominant Species
20	Yes	FACW	That Are OBL, FACW, or FAC: 6 (A)
15	Yes	FAC	Total Number of Dominant
10	No	FACW	Species Across All Strata: 10 (B)
			Percent of Dominant Species
			That Are OBL, FACW, or FAC: 60.0% (A/B
			Prevalence Index worksheet:
70	=Total Cover		Total % Cover of: Multiply by:
			OBL species 0 x 1 = 0
30	Yes	FACU	FACW species 50 x 2 = 100
25	Yes	FACU	FAC species 70 x 3 = 210
10	No	FACU	FACU species 100 x 4 = 400
10	No	FACW	UPL species 0 x 5 = 0
15	No	FAC	Column Totals: 220 (A) 710 (B
			Prevalence Index = B/A = 3.23
			Hydrophytic Vegetation Indicators:
90	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
10	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
20	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
10	Yes	FACW	data in Remarks or on a separate sheet)
10	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
10	Yes	FAC	<u> </u>
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			Definitions of Vegetation Strata:
			Tree – Woody plants 3 in. (7.6 cm) or more in diamete
			at breast height (DBH), regardless of height.
			Sapling/shrub – Woody plants less than 3 in. DBH
			and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardles:
60	=Total Cover		of size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in
			height.
			Hydrophytic Vegetation
			Present? Yes X No
	25 20 15 10 70 30 25 10 10 15 90 10 20 10 10 10 10	25	25

SOIL Sampling Point: A15 1-13 U

Profile Description: (Describe to the de	pth needed to docu	ment the	indicato	r or con	firm the absence of	indicators.)	
Depth Matrix		x Feature:	S				
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
2-0					Mucky Peat	Oi	
0-6 10YR 3/2					Loamy/Clayey	silt loam, very friable)
6-15 10YR 3/4					Loamy/Clayey	cobbly silt loam, friabl	le
¹ Type: C=Concentration, D=Depletion, RI	———— И=Reduced Matrix. C	S=Covere	ed or Coa	ted San	d Grains. ² Locat	ion: PL=Pore Lining, M=Ma	atrix.
Hydric Soil Indicators:			<i>y</i> a <i>v</i> . <i>v v</i> .			Problematic Hydric Soils ³ :	
Histosol (A1)	Polyvalue Below	Surface	(S8) (LR	R R,		(A10) (LRR K, L, MLRA 14	
Histic Epipedon (A2)	MLRA 149B)		, , ,	,		ie Redox (A16) (LRR K, L, F	
Black Histic (A3)	Thin Dark Surfac	ce (S9) (L	RR R. M	LRA 149		y Peat or Peat (S3) (LRR K,	-
Hydrogen Sulfide (A4)	High Chroma Sa					Below Surface (S8) (LRR K,	-
Stratified Layers (A5)	Loamy Mucky M			-		Surface (S9) (LRR K, L)	_,
Depleted Below Dark Surface (A11)	Loamy Gleyed M			., –,		nese Masses (F12) (LRR K	I R)
Thick Dark Surface (A12)	Depleted Matrix		,			floodplain Soils (F19) (MLRA	-
Sandy Mucky Mineral (S1)	Redox Dark Surf					lic (TA6) (MLRA 144A, 145 ,	
			7)				, 1490)
Sandy Gleyed Matrix (S4)	Depleted Dark S	,	/)			Material (F21)	
Sandy Redox (S5)	Redox Depression					w Dark Surface (TF12)	
Stripped Matrix (S6)	Marl (F10) (LRR	K, L)			Other (Expi	ain in Remarks)	
Dark Surface (S7)							
³ Indicators of hydrophytic vegetation and v	vetland hydrology mu	st be pres	sent, unle	ss distur	bed or problematic.		
Restrictive Layer (if observed):							
Type:							
Depth (inches):					Hydric Soil Prese	ent? Yes No	<u> </u>
Remarks:					•		
Data form is revised from Northcentral and	•	Suppleme	ent Versi	on 2.0 to	reflect the NRCS Fiel	d Indicators of Hydric Soils v	version
7.0 March 2013 Errata. (http://soils.usda.g	ov/use/hydric)						

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC,INC./ Fiberight, LLC	City/County: Hampden/Penobscot cty, ME Sampling Date: 6/9/2015
Applicant/Owner: MRC,INC./ FIBERIGHT,LLC.	State: ME Sampling Point: A15 1-13 w
Investigator(s): CES, JES	Section, Township, Range:
Landform (hillside, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): LRR R, MLRA 141 Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of	
, 0	
Are Vegetation N, Soil Y, or Hydrology Y significa	
Are Vegetation N, Soil N, or Hydrology N naturall	
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: A15 1-13 W
Remarks: (Explain alternative procedures here or in a separate re	
Tremane. (Explain alternative procedures here of in a separate re	porta
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	
Surface Water (A1) Water-Stain	ed Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fau	ma (B13) Moss Trim Lines (B16)
X Saturation (A3) Marl Deposi	its (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen S	ulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rh	nizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of	f Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron	Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck S	Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Expla	ain in Remarks) X Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inc	
Water Table Present? Yes X No Depth (inc	hes):0-3
Saturation Present? Yes X No Depth (inc	hes): 0 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:
Remarks:	
Remarks.	

Tree Stratum (Plot size:

Fraxinus pennsylvanica

Ulmus americana

Populus tremuloides

Populus balsamifera

Fraxinus pennsylvanica

Lonicera morrowii

Acer rubrum

Abies balsamea

Rubus pubescens

Fraxinus pennsylvanica

Solidago rugosa

Acer rubrum

Geum rivale

Pinus strobus

Acer rubrum

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SOIL Sampling Point: A15 1-13 W

	cription: (Describe	to the de	pth needed to docu	ıment th	e indicat	or or con	firm the absence o	of indicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 3/2						Loamy/Clayey	mucky silt loam, very friable
7-15	2.5Y 5/1		2.5Y 3/2	20			Loamy/Clayey	gravelly silt loam, friable
15-18	5Y 5/2		10YR 4/6	25			Loamy/Clayey	gravelly silt loam, firm
	Concentration, D=Depl	etion, RN	1=Reduced Matrix, C	S=Cove	red or Co	ated Sand		ation: PL=Pore Lining, M=Matrix. Problematic Hydric Soils ³ :
-			Polyvaluo Polov	y Surface	(C2)/I D	D D		k (A10) (LRR K, L, MLRA 149B)
Histoso	Epipedon (A2)	-	Polyvalue Belov MLRA 149B)	v Suriace	(30) (LR	KK,		nirie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surfa	ce (S9) (IRRR M	II RA 140		ky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)	-	High Chroma S					Below Surface (S8) (LRR K, L)
	ed Layers (A5)	-	Loamy Mucky M			-		Surface (S9) (LRR K, L)
	ed Below Dark Surface	- (Δ11)	Loamy Gleyed I			V , L)		ganese Masses (F12) (LRR K, L, R)
	Park Surface (A12)	- (AII)	Depleted Matrix		<u>~)</u>			Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)	-			١			
		-	Redox Dark Sur					odic (TA6) (MLRA 144A, 145, 149B)
	Gleyed Matrix (S4) Redox (S5)	-	Depleted Dark S	,	,			nt Material (F21) low Dark Surface (TF12)
	` '	-	Redox Depress					· · · · · · · · · · · · · · · · · · ·
	d Matrix (S6)	-	Marl (F10) (LRF	(K, L)			Other (Ex	plain in Remarks)
Dark Si	urface (S7)							
	of hydrophytic vegetat Layer (if observed):	ion and w	vetland hydrology mu	ıst be pre	esent, unl	ess distur	bed or problematic.	
Type:								
Depth (in	ches):						Hydric Soil Pres	sent? Yes X No
Remarks:	s revised from Northce	entral and	Northeast Regional	Supplem	nent Versi	on 2 0 to	reflect the NRCS Fig	eld Indicators of Hydric Soils version
	2013 Errata. (http://soil		•	Сарріон	10111 1 0101	011 2.0 10		ola maisaisis si riyans sone version

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC,INC./ Fib	eright, LLC	(City/County: H	ampden/penobsco	ot cty, ME	Sampli	ing Date:	6/3/20	15	
Applicant/Owner: MRC,INC.	/ FIBERIGHT,LLC		_		State:	ME :	Sampling	Point:	A15 1-36U	
Investigator(s): CES, RST		S	Section, Towns	ship, Range:		•		-		
Landform (hillside, terrace, et	c.):	Loc	cal relief (conc	ave, convex, none				pe (%):		
Subregion (LRR or MLRA): L	·							-		
Soil Map Unit Name:	THE TOTAL				NWI classi					
·	itiana an tho sito t		-2 Vas	V No		-				
Are climatic / hydrologic cond				X No				V N	.,	
Are Vegetation N, Soil							_	<u> </u>	°	
Are Vegetation N, Soil SUMMARY OF FINDIN				(If needed, explai	,		,	tures,	etc.	
Hydrophytic Vagatation Broa		. V No	le the Sem	anlad Araa						
Hydrophytic Vegetation Pres Hydric Soil Present?		No X	within a W	npled Area	Yes	No	X			
Wetland Hydrology Present?		No X		onal Wetland Site		_ '''-				
Remarks: (Explain alternative					-					
HYDROLOGY										
Wetland Hydrology Indicat	ors:			<u>s</u>	econdary Indi	cators (m	inimum of	two req	uired)	
Primary Indicators (minimum	of one is required				Surface So		` '			
Surface Water (A1)		Water-Stained L		_	Drainage F					
High Water Table (A2)		Aquatic Fauna (I		_	Moss Trim					
Saturation (A3)		Marl Deposits (B			Dry-Seaso					
Water Marks (B1)		Hydrogen Sulfide			Crayfish B	`	,		00)	
Sediment Deposits (B2)		Oxidized Rhizos		_	Saturation				J9)	
Drift Deposits (B3) Algal Mat or Crust (B4)		Presence of Red		_	Stunted or		•	1)		
Iron Deposits (B5)			Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)				Geomorphic Position (D2) Shallow Aquitard (D3)			
Inundation Visible on Ae	rial Imagery (B7)	Other (Explain in	,	_	Microtopog					
Sparsely Vegetated Cor			i rtomanto)	_	FAC-Neutr					
Field Observations:		,								
Surface Water Present?	Yes No	Depth (inches)								
Water Table Present?	Yes No									
Saturation Present?		Depth (inches)		Wetland Hydro	ology Presen	it?	Yes	No	Χ	
(includes capillary fringe)										
Describe Recorded Data (str	eam gauge, moni	toring well, aerial photos,	previous insp	ections), if availab	ole:					
Remarks:										

 VEGETATION – Use scientific names of plants.
 Sampling Point:
 A15 1-36U

	Absolute	Dominant	Indicator	<u> </u>
<u>Tree Stratum</u> (Plot size:35)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	50	Yes	FAC	Number of Dominant Species
2. Abies balsamea	20	Yes	FAC	That Are OBL, FACW, or FAC:6 (A)
3				Total Number of Dominant
4	•			Species Across All Strata: 9 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 66.7% (A/B)
7				Prevalence Index worksheet:
	70	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1. abies balsamea	40	Yes	FAC	FACW species 0 x 2 = 0
2. Fraxinus americana	10	No	FACU	FAC species 140 x 3 = 420
3. Lonicera morrowii	15	Yes	FACU	FACU species 45 x 4 = 180
4.				UPL species 0 x 5 = 0
5				Column Totals: 185 (A) 600 (B)
6				Prevalence Index = B/A = 3.24
7				Hydrophytic Vegetation Indicators:
	65	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
1. aralia nudicaulis	10	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹
2. maianthemum canadense	10	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting
3. acer rubrum	10	Yes	FAC	data in Remarks or on a separate sheet)
4. clintonia borealis	10	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. trientalis borealis	10	Yes	FAC	1
6.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				
0				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11				
12.	50	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)		- Total Gover		of size, and woody plants less than 5.25 ft tail.
`				Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.	•			Hydrophytic
3.	•			Vegetation No. No.
4.		T + + 0		Present?
		=Total Cover		l .
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

SOIL Sampling Point: A15 1-36U

ches) Color (moist) % Color (moist) % Type Loc² Texture Remarks 109.3 10YR 3/3	Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks Loamy/Clayey SILT LM Loamy/Clayey L12 10YR 4/2 L14 2.5Y 5/3 5Y 5/2 15 D M Loamy/Clayey FIRM Loamy/Clayey C/D REDOX Loamy/Clayey C/D REDOX Loamy/Clayey FIRM Loamy/Clayey C/D REDOX Loamy/Clayey FIRM Loamy/Clayey C/D REDOX FIRM Loamy/Clayey Loamy/Claye Loamy/Clayey Loamy/Clayey Loamy/Clayey Loamy/Claye Loamy/Clayey Loamy/Clayey		scription: (Describe	to the de				or or con	firm the absence of in	dicators.)
10YR 3/3	Loamy/Clayey Loamy/Clayey	epth nches)		%				Loc ²	Texture	Remarks
2-14 2.5Y 5/3 5Y 5/2 15 D M Loamy/Clayey 2-14 2.5Y 5/3 5Y 5/2 15 D M Loamy/Clayey 2-14 2.5Y 5/2 5Y 6/1 25 D M Loamy/Clayey 4-22 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-22 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-23 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-24 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-25 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-26 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-27 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-28 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-29 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 5/2 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M M Loamy/Clayey FIRM 4-20 5Y 6/1 25 D M Loamy/Clayey FIRM 4-20 5 D M Loamy/Clayey FIRM 4-2	Loamy/Clayey Loamy/Clayey Loamy/Clayey C/D REDOX 4-22 5Y 5/3 5Y 5/2 15 D M Loamy/Clayey FIRM Loamy/Clayey C/D REDOX FIRM Loamy/Clayey C/D REDOX FIRM Loamy/Clayey C/D REDOX FIRM Loamy/Clayey Indicators of Pyolenatic Hydric Soils PE-Pore Lining, M-Matrix Loamy Loamy Loamy Loamy Loamy/Clayey FIRM Loamy/Clayey FIRM Loamy/Clayey FIRM Loamy/Claye Loamy/Clayey Loamy/Claye Loamy/Claye Loamy/Claye Loamy/Claye Loamy Loamy/Claye Loamy/Claye	0-3	,		(, , , ,		71			
2.14 2.5Y 5/3 5Y 5/2 15 D M Loamy/Clayey C/D REDOX 4.22 5Y 5/2 5Y 6/1 25 D M Loamy/Clayey FIRM Per C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location: PL=Pore Lining, M=Matrix, dric Soil Indicators for Problematic Hydric Soils*: Histosol (A1)	pe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Black Histic (A3) Black Histic (A4) Black Histic (A5) Black Hist	3-5								
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix, dric Soil Indicators:	pe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coaled Sand Grains. Pelovalia Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils*: Pelovalia Below Surface (S8) (LRR R, Indicators for Problematic Hydric Soils*: 1 Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Som Mucky Peat or Peat (S3) (LRR K, L, R) Polyvaliae Below Surface (S8) (LRR K, L, R) Polyvaliae Below Surface (S8) (LRR K, L) Polyvaliae Below Surface (S8) (LRR K, L) Polyvaliae Below Surface (S8) (LRR K, L) Polyvaliae Below Surface (A11) Loamy Gleyed Matrix (F2) Informaganese Masses (F12) (LRR K, L) Polyvaliae Below Surface (A11) Loamy Gleyed Matrix (F2) Informaganese Masses (F12) (LRR K, L) Polyvaliae Below Surface (A11) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 149B, Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Redox Dark Surface (F7) R	5-12	10YR 4/4							
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Cocation: PL=Pore Lining, M=Matrix.** **Indicators:** Histosol (A1)	pe: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Coation: PL=Pore Lining, M=Matrix.	12-14	2.5Y 5/3		5Y 5/2	15	D	М	Loamy/Clayey	C/D REDOX
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Thick Dark Surface (A12) Depleted Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Depth (inches): Hydric Soil Present? Yes No X emarks:	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X marks: ta form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	14-22	5Y 5/2		5Y 6/1	25	D	M	Loamy/Clayey	FIRM
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Thick Dark Surface (A12) Depleted Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Depth (inches): Hydric Soil Present? Yes No X emarks:	Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X marks: ta form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version						_			
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Histosol (A1)	Histosol (A1)	ype: C=C	Concentration, D=De	pletion, RI	M=Reduced Matrix, C	S=Cover	ed or Coa	ated Sand		•
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Marl (F10) (LRR K, L) Dother (Explain in Remarks) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Myric Soil Present? Myes No X Marks:	Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR K, L) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Marl (F10) (LRR K, L) Depleted Dark Surface (S7) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Hydric Soil Present? Mesic Spodic (TA6) (MLRA 144A, 145, 149B, 149	/dric Soil	Indicators:							•
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Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149E Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149E Mesic Spodic (TA6) (MLRA 149E	Hydrogen Sulfide (A4)	Histic E	Epipedon (A2)		MLRA 149B)				Coast Prairie	Redox (A16) (LRR K, L, R)
Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149E Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149E Mesic Spodic (TA6) (MLRA 149E	Hydrogen Sulfide (A4)	Black H	Histic (A3)		Thin Dark Surfa	ce (S9) (LRR R, N	ILRA 149	BB) 5 cm Mucky F	Peat or Peat (S3) (LRR K, L, R)
Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S9) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149E) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Marl (F10) (LRR K, L) Other (Explain in Remarks) Depth (inches): Hydric Soil Present? Yes No X Marks: Ita form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version									
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Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? Yes No X Marks: Ita form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	Thick D	Oark Surface (A12)		Depleted Matrix	(F3)			Piedmont Flo	odplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Marl (F10) (LRR K, L) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Type: Depth (inches): Hydric Soil Present? Yes No X Marl (F10) (LRR K, L) Other (Explain in Remarks) Hydric Soil Present? Yes No X	Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Marl (F10) (LRR K, L) Diark Surface (S7) Ma						١			
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X	Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X marks: ta form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version									
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Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X emarks:	Dark Surface (S7) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X marks: ta form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	_ Sandy	Redox (S5)		Redox Depressi	ons (F8)			Very Shallow	Dark Surface (TF12)
dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Itype: Depth (inches): Hydric Soil Present? Yes No X Permarks:	dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): Type: Depth (inches): marks: ta form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	Strippe	d Matrix (S6)		Marl (F10) (LRR	k K, L)			Other (Explain	n in Remarks)
strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X Pemarks:	Strictive Layer (if observed): Type: Depth (inches): Marks: Ita form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	Dark S	urface (S7)							
Type:	Type:				vetland hydrology mu	st be pre	sent, unle	ess distur	rbed or problematic.	
Depth (inches): Hydric Soil Present? Yes No X emarks:	Depth (inches):	Type:	Layer (II observed)	•						
	ta form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version		ches):						Hydric Soil Present	? Yes No_X
	ta form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	-marks							<u> </u>	
			s revised from North	central and	Northeast Regional	Supplem	ent Versi	on 2.0 to	reflect the NRCS Field I	ndicators of Hydric Soils version
		ivial CIT 2	2013 Errata. (Http://st	ilis.usua.y	ov/use/riyuric)					
warch 2013 Errata. (http://sons.usua.gov/use/nyunc)										
March 2013 Errata. (http://soiis.usua.gov/use/nyunc)										
r March 2013 Effata. (http://solis.usua.gov/use/hyunc)										
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wardt 2013 Effata. (http://soils.usua.gov/use/nyufic)										

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC,INC./ Fiberight, LLC	City/County: Hampden/penobscot cty, ME Sampling Date: 6/3/2015
Applicant/Owner: MRC,INC./ FIBERIGHT,LLC.	State: ME Sampling Point: A15-1-36W
Investigator(s): CES, RST	Section, Township, Range:
Landform (hillside, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this	
, ,	significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation N, Soil N, or Hydrology N	
	showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	No Is the Sampled Area
	No within a Wetland? Yes No
Wetland Hydrology Present? Yes N	No If yes, optional Wetland Site ID: M8-U
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all t	<u> </u>
	ter-Stained Leaves (B9) Drainage Patterns (B10)
	matic Fauna (B13) Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Irogen Sulfide Odor (C1) Crayfish Burrows (C8)
	dized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
	sence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D2)
	cent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Shallow Aguitant (D2)
<u> </u>	n Muck Surface (C7) Shallow Aquitard (D3)
	er (Explain in Remarks) X Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	noth (inches)
	epth (inches):
(includes capillary fringe)	epth (inches): 4 Wetland Hydrology Present? Yes X No X
Describe Recorded Data (stream gauge, monitoring well, a	perial photos, previous inspections), if available:
	as the second suppositions, it are made to
Remarks:	

VEGETATION – Use scientific names of plants.

Sampling Point: A15-1-36W

T 01 1 (DI 1 : 05)	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 35)	% Cover	Species?	Status	Dominance Test worksheet:
Acer rubrum Fraxinus pennsylvannica	60 20	Yes Yes	FAC FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
3		165	FACV	
4.				Total Number of Dominant Species Across All Strata: 6 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 66.7% (A/B)
7				Prevalence Index worksheet:
	80	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)		.,		OBL species 0 x 1 = 0
1. abies balsamea	20	Yes	FAC	FACW species 100 x 2 = 200
2. Populus tremuloides	20	Yes	FACU	FAC species 90 x 3 = 270
3. Lonicera morrowii	40	Yes	FACU	FACU species 60 x 4 = 240
4.				UPL species 0 x 5 = 0
5.		·		Column Totals: 250 (A) 710 (B)
6.		· ——		Prevalence Index = B/A = 2.84
7.	80	=Total Cover		Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)	- 60	- Total Cover		X 2 - Dominance Test is >50%
1. Rubus pubescens	70	Yes	FACW	$\frac{\times}{X}$ 2 - Dominance Test is >30 % \times 3 - Prevalence Index is $\leq 3.0^{1}$
Acer rubrum	10	No	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Carex debilis	10	No No	FACW	data in Remarks or on a separate sheet)
4.	10	110	TACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5.				
6.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
	90	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				
3				Hydrophytic Vegetation
4				Present? Yes X No No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

SOIL Sampling Point: A15-1-36W

Depth Matrix Redox Features Color (moist) % Color (moist) % Texture Remarks	Profile Desc	ription: (Describe	to the de	pth needed to docu	ıment th	e indicat	or or con	firm the absence of i	ndicators.)		
2.0 10yr 2/1	· —										
CampyClayer Silt loam Loamy/Clayer C/D REDOX				Color (moist)	<u></u> %	Type ¹	Loc ²				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.											
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Concentration, R=Restrictive Layer (If observed): Type: C=Concentration, D=Depletion Advised Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Concentration, D=Depletion, R=Reduced R=Re	0-4							Loamy/Clayey	silt loam		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Thype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Third Carl Sufface (S8) (LRR R, Index I	4-11	5y 4/2		5y 5/2	20	d	<u>m</u>	Loamy/Clayey	C/D REDOX		
Hydric Soil Indicators: Histosol (A1)	11-18	5Y 5/1						Loamy/Clayey	C/D REDOX		
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)		-									
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)											
Hydric Soil Indicators: Histosol (A1)		_									
Hydric Soil Indicators: Histosol (A1)											
Histosol (A1)			oletion, RN	M=Reduced Matrix, C	S=Cover	ed or Coa	ated Sand				
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Som Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surfac	-								•		
Black Histic (A3)		. ,	•			(S8) (LR	RR,				
Hydrogen Sulfide (A4)				•							
Stratified Layers (A5)											
Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L, R) Thick Dark Surface (A12) X Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Jark Surface (S7) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No X Remarks: Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version			!				-				
Thick Dark Surface (A12) X Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.* Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No X Remarks: Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version			(0.4.4)				(, L)				
Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes X No X Remarks: Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version			ce (A11)			2)					
Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No X Remarks: Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version											
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Stripped Matrix (S6)									. ,		
Dark Surface (S7) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No X Remarks: Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version											
3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version				IVIAII (F IU) (LRF	(K, L)			Other (Expla	alli ili Remarks)		
Restrictive Layer (if observed): Type: Depth (inches): Remarks: Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	Bark out	11400 (01)									
Type:	³ Indicators of	f hydrophytic vegeta	ation and v	vetland hydrology mu	ust be pre	sent, unle	ess distur	bed or problematic.			
Depth (inches):		,									
Remarks: Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version											
Data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version	Depth (incl	hes):						Hydric Soil Prese	nt? Yes X No X		
· · · · · · · · · · · · · · · · · · ·											
				•	Supplem	ient Versi	on 2.0 to	reflect the NRCS Field	d Indicators of Hydric Soils version		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC, INC / Fiberight, LLC	City/County: Ha	impden / Penobscot County	Sampling Date: 6/9/2015
Applicant/Owner: MRC, INC / Fiberight, LLC		State:	ME Sampling Point: A15 1-73U
Investigator(s): CES, JES	Section, Townsh	nip, Range:	
Landform (hillside, terrace, etc.):		ve, convex, none):	Slope (%):
Subregion (LRR or MLRA): LRR R, MLRA 141 Lat:		Long:	
Soil Map Unit Name:		NWI classi	
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes		n in Remarks.)
Are Vegetation N , Soil Y , or Hydrology Y		Are "Normal Circumstances" p	•
Are Vegetation N, Soil N, or Hydrology N		(If needed, explain any answer	
SUMMARY OF FINDINGS – Attach site map	_	,	,
Hydrophytic Vegetation Present? Yes X	No Is the Sam	nled Area	
	No X within a We		No X
		nal Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a se	parate report.)		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indi	icators (minimum of two required)
Primary Indicators (minimum of one is required; check all	that apply)		oil Cracks (B6)
	ater-Stained Leaves (B9)		Patterns (B10)
	uatic Fauna (B13)		Lines (B16)
l — —	arl Deposits (B15)		on Water Table (C2)
l —	drogen Sulfide Odor (C1)		urrows (C8)
I — — — — — — — — — — — — — — — — — — —	idized Rhizospheres on Livin		Visible on Aerial Imagery (C9)
l 	esence of Reduced Iron (C4)		Stressed Plants (D1)
	cent Iron Reduction in Tilled in Muck Surface (C7)		nic Position (D2) quitard (D3)
l · · · · · ·	ner (Explain in Remarks)		graphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	ici (Expiaiii iii Nemarko)		ral Test (D5)
Field Observations:			
Surface Water Present? Yes No D	Pepth (inches):		
Water Table Present? Yes No D	Depth (inches):		
	Depth (inches):	Wetland Hydrology Presen	nt? Yes No X
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspe	ections), if available:	
Remarks:			

VEGETATION – Use scientific names of plants.

· · · · · · · · · · · · · · · · · ·	Absolute	Dominant	Indicator	
ree Stratum (Plot size: 35)	% Cover	Species?	Status	Dominance Test worksheet:
. Abies balsamea	20	Yes	FAC	Number of Dominant Species
Picea rubens	5	Yes	FACU	That Are OBL, FACW, or FAC: 4 (A)
·				Total Number of Dominant
·				Species Across All Strata: 6 (B)
i				Percent of Dominant Species
i				That Are OBL, FACW, or FAC: 66.7% (A/B
	-			Prevalence Index worksheet:
	25	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)			OBL species 0 x 1 = 0
. Populus tremuloides	45	Yes	FACU	FACW species 13 x 2 = 26
Abies balsamea	30	Yes	FAC	FAC species105 x 3 =315
Prunus serotina	5	No	FACU	FACU species 60 x 4 = 240
Fraxinus pennsylvanica	10	No	FACW	UPL species0 x 5 =0
i	_			Column Totals: 178 (A) 581 (B
j	_			Prevalence Index = B/A = 3.26
	-			Hydrophytic Vegetation Indicators:
	90	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
lerb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
. Osmunda claytoniana	20	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
Cornus canadensis	20	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Trientalis borealis	10	No	FAC	data in Remarks or on a separate sheet)
. Acer rubrum	5	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
Lonicera morrowii	5	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
Fraxinus pennsylvanica	3	No	FACW	be present, unless disturbed or problematic.
·	_			Definitions of Vegetation Strata:
3.				Tree – Woody plants 3 in. (7.6 cm) or more in diamete
)	_			at breast height (DBH), regardless of height.
0				Sapling/shrub – Woody plants less than 3 in. DBH
1	_			and greater than or equal to 3.28 ft (1 m) tall.
2				Herb – All herbaceous (non-woody) plants, regardles
	63	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size:)			Woody vines – All woody vines greater than 3.28 ft in
·				height.
2				Hydrophytic
3				Vegetation
l				Present? Yes X No No
		=Total Cover		

SOIL Sampling Point: A15 1-73U

Profile Des	scription: (Describe	to the de	oth needed to docu	ument th	e indicat	or or con	firm the absence	of indicators			
Depth	Matrix			x Feature					,		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
0-0							Muck		2 inch Oa		
0-3	10YR 2/2						Loamy/Clayey	Bh	n, friable, gran	ular	
3-9	10YR 4/3						Loamy/Clayey	Bw	v, friable, gran	ıular	
9-16	2.5Y 5/4						Loamy/Clayey				
16-18	5Y 6/2		10YR 5/6	15	<u>C</u>	M	Loamy/Clayey	Promine	nt redox conc	entrations	S
:											
	Concentration, D=Dep I Indicators: ol (A1)	oletion, RM	I=Reduced Matrix, 0				Indicators fo	r Problemati	ore Lining, Mi ic Hydric Soi R K, L, MLRA	ls³:	
	Epipedon (A2)	-	MLRA 149B)		` / `	ŕ			A16) (LRR K ,		
	Histic (A3)		Thin Dark Surfa		LRR R, N	ILRA 149			eat (S3) (LRF)
Hydrog	gen Sulfide (A4)	_	High Chroma S	ands (S1	1) (LRR k	(, L)	Polyvalue	e Below Surfa	ace (S8) (LRF	R K, L)	
Stratifie	ed Layers (A5)	_	Loamy Mucky N	/lineral (F	1) (LRR I	(, L)	Thin Dar	k Surface (S9	9) (LRR K, L)		
Deplet	ed Below Dark Surfac	e (A11)	Loamy Gleyed I	Matrix (F2	2)		Iron-Man	ganese Mass	ses (F12) (LR	RK, L, R	2)
Thick [Dark Surface (A12)	-	Depleted Matrix	(F3)			Piedmon	t Floodplain S	Soils (F19) (M	LRA 149	B)
Sandy	Mucky Mineral (S1)	_	Redox Dark Su	rface (F6)		Mesic Sp	odic (TA6) (N	VILRA 144A,	145, 149E	3)
Sandy	Gleyed Matrix (S4)	_	Depleted Dark S	Surface (l	F7)			ent Material (F	,		
Sandy	Redox (S5)	_	Redox Depress	ions (F8)			Very Sha	llow Dark Su	ırface (TF12)		
Strippe	ed Matrix (S6)	_	Marl (F10) (LRF	R K, L)			Other (Ex	kplain in Rem	narks)		
Dark S	urface (S7)										
³ Indicators	of hydrophytic vegeta	tion and w	etland hydrology mu	ust be pre	esent, unl	ess distur	rbed or problematic				
	Layer (if observed)		, 0,	· ·			T .				
Type:											
Depth (in	ches):						Hydric Soil Pre	sent?	Yes	No_X	·
	s revised from Northo 2013 Errata. (http://so		•	Supplem	nent Versi	on 2.0 to	reflect the NRCS F	ield Indicator	s of Hydric So	oils versio	on

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: MRC, INC / Fiberight, LLC	City/County: Hampden / Penobscot County Sampling Date: 6/9/2015
Applicant/Owner: MRC, INC / Fiberight, LLC	State: ME Sampling Point: A15 1-73W
Investigator(s): CES, JES	Section, Township, Range:
Landform (hillside, terrace, etc.):	Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): LRR R, MLRA 141 Lat:	Long: Datum:
Soil Map Unit Name:	NWI classification:
Are climatic / hydrologic conditions on the site typical for this t	
Are Vegetation N , Soil Y , or Hydrology Y si	\ \ \ \ \ \ \ \ \ \ \ \
Are Vegetation N, Soil N, or Hydrology N na	
	owing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	
Wetland Hydrology Present? Yes X No	
Remarks: (Explain alternative procedures here or in a separ	
Remarks. (Explain alternative procedures here of in a separ	ate report.)
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	at apply) Surface Soil Cracks (B6)
Surface Water (A1)X Water	-Stained Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquat	ic Fauna (B13) Moss Trim Lines (B16)
X Saturation (A3) Marl D	Deposits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydro	gen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidiz	red Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	nce of Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recer	nt Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)Thin N	Muck Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other	(Explain in Remarks) X Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Dept	:h (inches):
Water Table Present? Yes No Dept	th (inches):
Saturation Present? Yes X No Dept	th (inches): 7 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, ael	rial photos, previous inspections), if available:
Percedus	
Remarks:	

VEGETATION – Use scientific names of plants.

	olants.			Sampling Point: A15 1-73W
Tree Stratum (Plot size:35)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
. Abies balsamea	20	Yes	FAC	Number of Dominant Species
. Populus tremuloides	5	No	FACU	That Are OBL, FACW, or FAC: 5 (A)
. Acer rubrum	5	No	FAC	Total Number of Dominant
				Species Across All Strata: 6 (B)
•				Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B
	-			Prevalence Index worksheet:
		T		
	30	=Total Cover		Total % Cover of: Multiply by:
apling/Shrub Stratum (Plot size: 15)			OBL species 0 x 1 = 0
. Acer rubrum	30	Yes	FAC	FACW species 80 x 2 = 160
Lonicera morrowii	25	Yes	FACU	FAC species75 x 3 =225
. Spiraea latifolia	20	No	FACW	FACU species 50 x 4 = 200
Abies balsamea	20	No	FAC	UPL species 0 x 5 = 0
. Populus tremuloides	10	No	FACU	Column Totals: 205 (A) 585 (B
·				Prevalence Index = B/A = 2.85
. <u> </u>				Hydrophytic Vegetation Indicators:
	105	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
erb Stratum (Plot size: 5)		1		X 2 - Dominance Test is >50%
Onoclea sensibilis	20	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹
. Spiraea latifolia	15	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting
. Rubus pubescens	15	Yes	FACW	data in Remarks or on a separate sheet)
. Lonicera morrowii	10	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
. Carex intumescens	10	No	FACW	<u> </u>
i.			17.077	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
·	<u> </u>			Definitions of Vegetation Strata:
·				Definitions of Vegetation Strata.
·				Tree – Woody plants 3 in. (7.6 cm) or more in diamet at breast height (DBH), regardless of height.
0.				
1				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
2.	_			
	70	=Total Cover		Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size:)			Woody vines – All woody vines greater than 3.28 ft in
·				height.
				Hydrophytic
				Vegetation Present? Yes X No
·	_	=Total Cover		100 <u>A</u> 10 <u>—</u>
		- Total Cover		

SOIL Sampling Point: A15 1-73W

Profile Des	scription: (Describe	to the de	epth needed to docu	ment th	e indicat	or or con	firm the absence	of indicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-0	40)/D 4/0						Mucky Peat	1 inch Oi
0-5	10YR 4/2						Loamy/Clayey	A, friable
5-14	2.5Y 4/2		10YR 4/6	15	<u>C</u>	<u>M</u>	Loamy/Clayey	Prominent redox concentrations
14-18	5Y 5/1		7.5YR 4/6	20	С	M	Loamy/Clayey	Prominent redox concentrations
								-
¹ Type: C=0	Concentration, D=Dep	etion. RI	——————————————————————————————————————	S=Cove	red or Co	ated Sand	d Grains. ² Loo	cation: PL=Pore Lining, M=Matrix.
	I Indicators:	00,						or Problematic Hydric Soils ³ :
Histoso	ol (A1)		Polyvalue Below	/ Surface	(S8) (LR	RR,	2 cm Mu	ick (A10) (LRR K, L, MLRA 149B)
	Epipedon (A2)		MLRA 149B)					rairie Redox (A16) (LRR K, L, R)
	Histic (A3)		Thin Dark Surface					icky Peat or Peat (S3) (LRR K, L, R)
	gen Sulfide (A4)		High Chroma Sa			-		e Below Surface (S8) (LRR K, L)
	ed Layers (A5) ed Below Dark Surface	e (A11)	Loamy Mucky M Loamy Gleyed N			 L)		rk Surface (S9) (LRR K, L) nganese Masses (F12) (LRR K, L, R)
	Dark Surface (A12)	,,,,,	X Depleted Matrix		-/			nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Sur)			podic (TA6) (MLRA 144A, 145, 149B)
Sandy	Gleyed Matrix (S4)		Depleted Dark S	Surface (l	F7)		Red Pare	ent Material (F21)
	Redox (S5)		Redox Depressi	, ,				allow Dark Surface (TF12)
	ed Matrix (S6)		Marl (F10) (LRR	K , L)			Other (E	xplain in Remarks)
Dark S	surface (S7)							
³ Indicators	of hydrophytic vegetat	ion and v	wetland hvdrologv mu	st be pre	esent. unl	ess distur	bed or problematic	:
	Layer (if observed):							
Type:								
Depth (in	iches):						Hydric Soil Pre	esent? Yes X No
Remarks:							1	
			0	Supplem	nent Versi	on 2.0 to	reflect the NRCS F	Field Indicators of Hydric Soils version
7.0 March 2	2013 Errata. (http://soil	s.usda.g	ov/use/hydric)					
								I

SOLUTIONS



Corporate Office

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www.ces-maine.com



VERNAL POOL SURVEY REPORT

OF

PROPOSED SOLID WASTE PROCESSING AND RECYCLING FACILITY

FOR

MUNICIPAL REVIEW COMMITTEE, INC. - FIBERIGHT LLC HAMPDEN, MAINE

> Applicants: Municipal Review Committee, Inc. 395 State Street Ellsworth, ME 04605 207.664.1700

> > Fiberight LLC 1450 South Rolling Road Baltimore, MD 21227 410.340.9387

JUNE 2015 JN: 10973.002/11293.001

Application Prepared By:

CES, Inc. 465 South Main Street P.O. Box 639 Brewer, ME 04412 207.989.4824



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1.0 INTRODUCTION

CES, Inc. (CES) has completed vernal pool surveys for the proposed Solid Waste Processing Facility off Coldbrook Road in Hampden, Maine (Site), by conducting appropriately timed vernal pool surveys in April and May 2015 on the Site's approximately 90-acre project parcel.

The purpose of the vernal surveys was to identify jurisdictional vernal pools. Jurisdictional vernal pools are regulated by the U.S. Army Corps of Engineers (ACOE) and by the Maine Department of Environmental Protection (MDEP) as significant wildlife habitat.

2.0 METHODOLOGY

Prior to conducting the field surveys, CES reviewed existing Geographic Information System (GIS) data available from the MDEP and Maine Department of Inland Fisheries and Wildlife (MDIFW), as well as digital aerial photography. This data included significant wildlife habitat information. CES also reviewed preliminary data from the Maine Office of GIS, including National Wetlands Inventory (NWI) mapped wetlands and the United States Geological Survey (USGS) 7.5' topographic map for the Bangor, Maine quadrangle.

2.1 Vernal Pool Survey

Vernal pool surveys were completed on the Site in April and May 2015. Vernal pools and other breeding areas (identified as amphibian breeding areas [ABA]) were assessed and characterized according to the definitions under MDEP Rule Chapter 335: Significant Wildlife Habitat and under Section 404 of the Clean Water Act as required by the ACOE. The vernal pool surveys were conducted in general accordance with the current version of the Maine Association of Wetland Scientists Vernal Pool Survey Protocol (April 2014). In this respect, a vernal pool is a temporary water body that provides habitat for breeding of amphibians, fairy shrimp, and certain rare, threatened, or endangered species. Amphibian breeding areas are features which support amphibian breeding but do not meet one of the MDEP Rule criteria, such as "natural" or "no permanent inlet or outlet".

CES scientists conducted vernal pool field work on the Site on April 23, May 5, 6, 8, 12, 13, and 14, 2015. Transect surveys were conducted on April 23, May 5, 6, and 8, to identify potential vernal pools and breeding areas on the Site. These areas were identified by the presence of indicator species breeding activity. Two surveys were conducted to account for both the early season and late season timing of the breeding activity associated with vernal pools. Vernal pools were assessed and MDIFW issued vernal pool data collection sheets were completed. Vernal pool boundaries were identified based on the Spring high water mark and located with a mapping grade GPS, as noted in Section 2.2. Amphibian breeding areas were located with one location point in the center of the area, using mapping grade GPS.

2.2 GPS Mapping and Flagging

All features were point located in the field using a sub-meter capable mapping grade GPS. Data was post-processed according to manufacturer's recommended post-processing settings using CORS reference stations. Yellow glo flagging was sequentially numbered and hung along the Spring high water mark of vernal pools. A single flag was hung marking an amphibian breeding area.

1



3.0 RESULTS AND DISCUSSION

3.1 General Project Area Overview

The Site is located on Coldbrook Road in Hampden, Maine as shown on **Appendix A** (Site Location Map). The Site is an approximately 90-acre undeveloped parcel, which is accessed from Coldbrook Road via a gravel access road. The Site is approximately 2 miles north of downtown Hampden and 0.5-mile southeast of the Interstate 95 exit.

The Site is characterized by undeveloped forestland and old agricultural fields. A selective harvest was performed on the Site 10 to 15 years ago; indications of this activity (in particular, haul/skid roads) were observed throughout the Site. Indications of historical agricultural use were also observed on the Site, namely stone walls and foundations; and land which appeared to be drained. The Bangor Gas pipeline corridor bisects the Site north to south.

The Site is dominated by a large wetland and stream complex, with areas of upland in the northeast portion of the Site. Uplands on the Site are dominated by red maple (*Acer rubrum*), balsam fir (*Abies balsamea*), white pine (*Pinus strobus*), white ash (*Fraxinus alba*), and quaking aspen (*Populus tremuloides*). Red maple and balsam fir dominate in the forested wetlands on the Site, with smaller areas of scrub shrub alder wetlands along the stream corridors. Topography within the Site consists of flat to gently sloping upland and wetland areas which slope to the southwest. The wetland areas are drained by two streams, which converge and flow southerly to Souadabscook Stream.

3.2 Vernal Pool Survey Results

The following section describes the vernal pools and amphibian breeding areas observed on the Site. Egg mass counts given for a vernal pool or breeding area are the highest observed egg mass counts for the noted species. The Vernal Pool Plan, included in **Appendix C**, shows the location of the vernal pools identified on the Site. Representative photographs of each vernal pool are included in **Appendix D**. A Vernal Pool Summary Table is included in **Appendix B**, which gives egg mass counts and brief descriptions of all vernal pools and amphibian breeding areas on the Site. **Appendix E** contains MDIFW Vernal Pool Data Sheets for each vernal pool.

The vernal pool survey identified a total of 44 vernal pools on the Site, identified as Vernal Pools (VP) 1-1 to 1-30, 2-13, 2-17, and 3-1 to 3-11. In general, the vernal pools on the Site are natural pools with ephemeral hydrology. The vernal pools ranged from primarily devoid of vegetation to densely vegetated. In vegetated pools, vegetation consisted of: speckled alder (*Alnus incana*), winterberry (*Ilex vertcillata*), meadowsweet (*Spirea latifolia*), sensitive fern (*Onoclea sensibilis*) and sedges and grasses. The substrate in these pools was dominated by mineral soil, leaf litter, with limited organic matter/muck. Some pools had evidence of impact or modification as a result of the timber harvesting activity on the Site, primarily in the form of skidder or other equipment ruts or roads in the pools.

Of the 44 vernal pools on the Site, eight pools meet the MDEP Significant vernal pool criteria. These pools are described below.

VP 1-1 is an ephemeral pool that is natural, with possible modification by construction of the gas pipeline. This VP is primarily devoid of vegetation; meadowsweet, sensitive fern, and winterberry comprised the limited (30%) vegetation cover. Indicator species breeding activity consisted of 7 wood frog egg masses, 4 spotted salamander egg masses, and 100 blue spotted salamander egg masses.



VP 1-4 is a natural, ephemeral pool dominated by winterberry. Indicator species breeding activity consisted of wood frog tadpoles, 3 spotted salamander egg masses, and 77 blue spotted salamander egg masses.

VP 1-10 is an ephemeral, natural pool dominated by meadowsweet and red maple (*Acer rubrum*). This pool contained 9 wood frog, 12 spotted salamander, and 11 blue spotted salamander egg masses.

VP 1-15 is an ephemeral, natural pool dominated by winterberry and speckled alder. Indicator species breeding activity consisted of 27 wood frog egg masses, 27 spotted salamander egg masses, and approximately 53 blue spotted salamander egg masses.

Vernal pool 1-25 is a natural, ephemeral isolated depression dominated by winterberry, speckled alder and sedges (*Carex lacustris*). This pool contained 2 spotted salamander egg masses and approximately 78 blue spotted salamander egg masses.

Vernal pool 3-1 is an ephemeral, natural pool that is primarily devoid of vegetation with some speckled alder growth around the pool edge. This pool contained 14 wood frog, 19 spotted salamander, and 13 blue spotted salamander egg masses.

Vernal pool 3-6 is a natural, ephemeral pool which is dominated by speckled alder and meadowsweet. Indicator breeding species activity in this pool consisted of wood frog tadpoles, 12 spotted salamander, and 27 blue spotted salamander egg masses.

Vernal pool 3-10 is an ephemeral, natural pool that is devoid of vegetation, with some meadowsweet around the pools edge. This pool contained 2 wood frog, 21 spotted salamander, and 50 blue spotted salamander egg masses.

Based on these observations, all breeding areas identified as VPs meet the MDEP definition of a "vernal pool"; vernal pools VP 1-1, 1-4, 1-10, 1-15, 1-25, 3-1, 3-6, and 3-10 meet MDEP biological criteria (egg mass counts) to be considered Significant vernal pools.

The vernal pool survey identified 21 amphibian breeding areas (ABA), which were identified as ABA 1-1 through 1-15, 2-6, 2-12, 2-18, and ABA 3-1 through 3-3. These ABAs are ponded ruts or pools along the gas pipeline, ponded skidder ruts associated with timber harvesting on the Site, and ponded road ditches along the Site access road. These features were identified as ABAs if they contained egg masses during the vernal pool survey.

All VPs and ABAs are jurisdictional if ACOE jurisdiction is triggered on the Site.

4.0 SUMMARY

Vernal pool surveys have been completed by CES for the Site located on Coldbrook Road in Hampden, Maine. CES scientists identified a total of 44 vernal pools on the Site; eight of these vernal pools meet MDEP "Significant" standards based on biological criteria. The vernal pool survey identified 21 amphibian breeding areas (ABA). The vernal pools and amphibian breeding areas are jurisdictional if ACOE jurisdiction is triggered on the Site.



REFERENCES

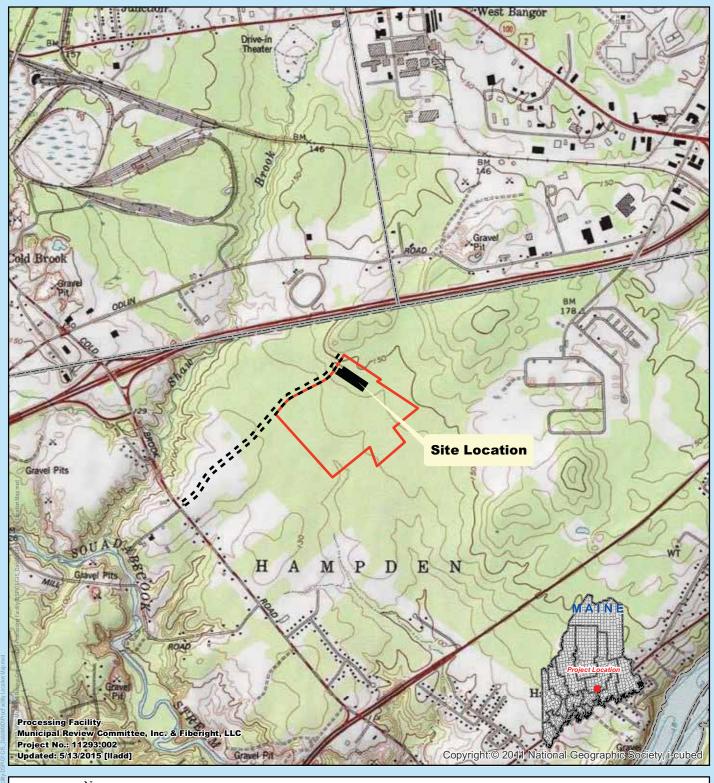
1.	Maine Association of Wetland Scientists Vernal Pool Technical Committee Vernal Surv	/ey
	Protocol. April 2014.	_

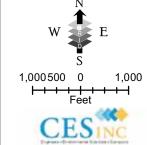


APPENDIX A SITE LOCATION MAP

JN: 10973.002/11293.001 VERNAL POOL REPORT

USGS Topographic Map





Legend

- - Proposed Road Location
- Proposed Building Location
- Proposed Facility Property Boundary
- Town Boundaries

MAP NOTES:

- 1: ADMINISTRATIVE BOUNDARIES COURTESY OF THE MAINE OFFICE OF GIS (MEGIS).
- 2: TOPOGRAPHIC MAP IS USGS 1:24,000 TOPOGRAPHIC QUADRANGLE. PUBLISHED BY USGS, 2011. ACQUIRED FROM ESRI, 2015.



APPENDIX B VERNAL POOL SUMMARY TABLE

JN: 10973.002/11293.001 VERNAL POOL REPORT



						EGG MASS COUNTS	S	
VERNAL POOL IDENTIFICATION	WETLAND/UPLAND	MDEP DEFN?	MDEP SIGNIF?	ORIGIN	WF	SS	BS	OTHER INDICATOR?
1-1	WL	>	٨	Natural/ modified	7	4	100	z
1-2	WL	>		Natural	_	0	9	z
1-3	WL	>	Z	Natural/ modified	2	∞	2	z
4	WL	>	>	Natural	⊢	က	77	z
1-5	WL	>	z	Natural/ modified	2	0	0	z
1-6	WL	>	z	Natural/ modified	19	16	0	z
1-7	WL	>	z	Natural/ modified	4	-	0	z
1-8	WL	>	z	Natural/ modified	5	-	0	z
1-9	WL	>	Z	Natural	7	0	0	z
1-10	WL/ UL complex	>	>	Natural	6	12	1	z
1-11	WL	>	z	Natural/ modified	_	က	0	z
1-12	WL	>	z	Natural	က	က	0	z
1-13	WL	>	z	Natural/ modified	1	17	0	z
1-14	WL/ UL complex	>	Z	Natural	7	0	0	z
1-15	WL	>	>	Natural	27	27	53	z
1-16	WL	>	z	Natural	5	9	0	z
1-17	WL/ UL complex	>	z	Natural	7	7	0	z
1-18	WL/ UL complex	>	z	Natural	5	o	0	z
1-19	WL/ UL complex	>	z	Natural	0	2	0	z
1-20	WL/ UL complex	>	z	Natural	က	17	0	z
1-21	WL	>	z	Natural	_	0	0	z
1-22	WL/ UL complex	>	z	Natural	0	ო	0	z
1-23	WL	>	z	Natural	5	9	0	z
1-24	WL	>	Z	Natural	7	19	0	z
1-25	WL/ UL complex	>	>	Natural	0	2	78	z
1-26	WL	>	z	Natural	က	2	0	z
1-27	WL/ UL complex	>	z	Natural	⊢	0	0	z
1-28	UL	>	z	Natural	20	0	0	z
1-29	WL/ UL complex	z	z	Natural	0	0	0	z
1-30	WL/ UL complex	>	z	Natural	9	က	0	z
2-7	WL	>	z	Natural	_	0	0	z
2-13	WL/ UL complex	>	z	Natural	0	2	0	z
2-17	WL/ UL complex	>	z	Natural	⊢	0	0	z
3-1	WL/ UL complex	>-	>	Natural	41	19	13	z

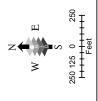


					Ш	EGG MASS COUNTS	(0)	CES
VERNAL POOL IDENTIFICATION	WETLAND/UPLAND	MDEP DEFN?	MDEP SIGNIF?	ORIGIN	WF	SS	BS	OTHER INDICATOR?
3-2	nr	>-	z	Natural	0	е	0	z
3-3	WL/ UL complex	>	z	Natural	2	7	0	z
3-4	WL/ UL complex	>	z	Natural	0	_	0	z
3-5	WL/ UL complex	>	z	Natural	_	20	2	z
3-6	WL/ UL complex	>	>	Natural	⊢	12	27	z
3-7	WL/ UL complex	>	z	Natural	7	9	0	z
3-8	WL/ UL complex	>	z	Natural/ modified	F	_	0	z
3-9	WL	>	z	Natural/ modified	6	0	_	z
3-10	WL/ UL complex	>	>	Natural	7	21	20	z
3-11	WL/ UL complex	>	z	Natural/ modified	4	0	0	z
1-ABA-1			z	manmade	0	80	0	
1-ABA-2			z	manmade	7	2	0	
1-ABA-3			z	manmade	2	7	0	
1-ABA-4			z	manmade	10	7	0	
1-ABA-5			z	manmade	0	6	0	
1-ABA-6			z	manmade	0	25	0	
1-ABA-7			z	manmade	11	2	0	
1-ABA-8			z	manmade	0	17	0	
1-ABA-9			z	manmade	_	0	0	
1-ABA-10			z	manmade	_	1	0	
1-ABA-11			z	manmade	2	0	0	
1-ABA-12			z	manmade	7	0	0	
1-ABA-13			z	manmade	4	0	0	
1-ABA-14			z	manmade	_	0	0	
1-ABA-15			z	manmade	_	0	0	
2-ABA-6			z	manmade	0	65	0	
2-ABA-12			z	manmade	0	7	0	
2-ABA-18			z	manmade	80	0	0	
3-ABA-1			z	manmade	7	o	0	
3-ABA-2			z	manmade	~	0	0	
3 ABA-3			z	manmade	2	3	0	



APPENDIX C VERNAL POOL PLAN

JN: 10973.002/11293.001 VERNAL POOL REPORT



Legend

- Delineated Streams
 Wetland Boundaries
 Vernal Pools
- Significant Vernal PoolsAmphibian Breeding Areas
- Property BoundaryProposed Access Road ROW



Waste Processing Facility Project No.: 10973.002 Updated: 6/24/2015 [rstamand]

2. VERNAL POOL, SURVEYS WERE COMPLETED DURING A APPROPRIATELY TIMED SURVEY IN SPRING 2015 AND IN ACCORDANCE WITH TASTER AND FEDERAL REGULATION WIND DEFENTIONS, AND THE MAWIS VERNAL 2011 DRAFT POOL, SURVEY PROTOCOL.

3. STE FEATURES, INCLUDING WETLAND BOUNDARIES, STREAMS, HOV VERNAL POOLS DEPICTED ON THIS PLAN WERE LOCATED UTILIZING A GPS RECEIVER HAVING SUB-METER ARCURROY.

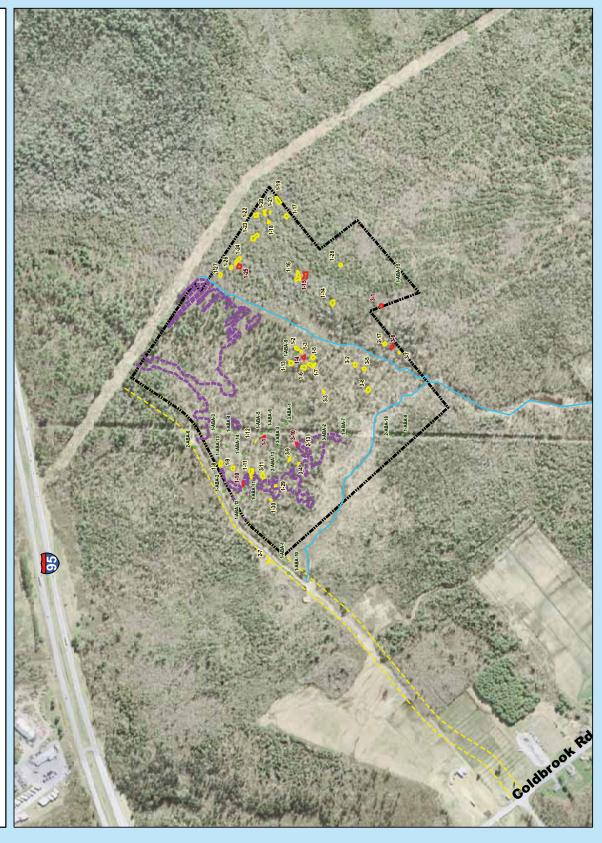
H: IMAGERY ACQUIRED FROM ESRI. IMAGERY IS 0.3-METER JC-G IMAGERY COURTES Y OF MICROSOFT (2010).

5: MAP IS PROJECTED USING MAINE STATE PLANE COCRDIMATES, EMST ZONE, WITH UNITS OF U.S. SURVEY REET AND MEETERNOCES THE NORTH AMERICAN DATUM OF 1983 (NADS3).

NORTH ARROW IS REFERENCED TO GRID NORTH.



P l a n Survey P 0 0 I Vernal





APPENDIX D VERNAL POOL PHOTOGRAPHS

JN: 10973.002/11293.001 VERNAL POOL REPORT



MRC, INC. - FIBERIGHT LLC, WASTE PROCESSING FACILITY VERNAL POOL SURVEY REPORT



Photo No. 1

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-1.

Photo By: JES





Photo No. 2

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-2.

Photo By: JES





MRC, INC. - FIBERIGHT LLC, WASTE PROCESSING FACILITY VERNAL POOL SURVEY REPORT



Photo No. 3

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-3.

Photo By: JES





Photo No. 4

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-4.

Photo By: JES





MRC, INC. - FIBERIGHT LLC, WASTE PROCESSING FACILITY VERNAL POOL SURVEY REPORT



Photo No. 5

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-5.

Photo By: JES





Photo No. 6

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-6.

Photo By: JES







Photo No. 7

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-7.

Photo By: JES





Photo No. 8

Photo Date: May 6, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-8.







Photo No. 9

Photo Date: May 6, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-9.

Photo By: RST





Photo No. 10

Photo Date: May 12, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-10.







Photo No. 11

Photo Date: May 6, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-11.

Photo By: RST





Photo No. 12

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-12.







Photo No. 13

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-13.

Photo By: RST





Photo No. 14

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-14.







Photo No. 15

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-15.

Photo By: RST





Photo No. 16

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-16.







Photo No. 17

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-17.

Photo By: RST





Photo No. 18

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-18.







Photo No. 19

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-19.

Photo By: RST





Photo No. 20

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-20.







Photo No. 21

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-21.

Photo By: RST





Photo No. 22

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-22.







Photo No. 23

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-23.

Photo By: RST





Photo No. 24

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-24.







Photo No. 25

Photo Date: May 8, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-25.

Photo By: RST





Photo No. 26

Photo Date:

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-26.

Photo By:





Photo No. 27

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-27.

Photo By: JES





Photo No. 28

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-28.







Photo No. 29

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-29.

Photo By: JES





Photo No. 30

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 1-30







Photo No. 31

Photo Date: May 12, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 2-7.

Photo By: JES





Photo No. 32

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 2-13.







Photo No. 33

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 2-14.

Photo By: JES





Photo No. 34

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-1.





Photo No. 35

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-2.

Photo By: JES





Photo No. 36

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-3.







Photo No. 37

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-4.

Photo By: JES





Photo No. 38

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-5.







Photo No. 39

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-6.

Photo By: JES





Photo No. 40

Photo Date: May 14, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-7.





Photo No. 41

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-8.

Photo By: JES





Photo No. 42

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-9.







Photo No. 43

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-10.

Photo By: JES





Photo No. 44

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of VP 3-11.





Photo No. 45

Photo Date: May 13, 2015

Site Location:

Coldbrook Road Hampden, Maine

Description: View of ABA 1-11, typical of the amphibian breeding areas found in the harvested portions the Site.

Photo By: **JES**





Photo No. 46

Photo Date: May 13, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:

View of ABA 1-5. This ABA is typical of the amphibian breeding areas found along the gas pipeline on Site.







Photo No. 47

Photo Date: May 13, 2015

Site Location: Coldbrook Road

Hampden, Maine

Description:
View of ABA 1-6. This
ABA is typical of the
amphibian breeding
areas found along the
gas pipeline on Site.

Photo By: JES





Photo No. 48

Photo Date: May 12, 2015

Site Location: Coldbrook Road Hampden, Maine

Description: View of ABA 1-10, the road ditch along the Site access road.







Photo No. 49

Photo Date: May 12, 2015

Site Location: Coldbrook Road

Hampden, Maine

Description: View of ABA 1-10, road ditch along the Site access road.

Photo By: **JES**





Photo No. 50

Photo Date: May 12, 2015

Site Location: Coldbrook Road Hampden, Maine

Description:

View of ABA 1-12, a breeding area created by a skid road in a wetland.





APPENDIX E VERNAL POOL DATA FORMS

JN: 10973.002/11293.001 VERNAL POOL REPORT





bserver's Pool ID: <u>1-1</u>	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	y)
b. Contact and credentials previously provided?	O No (submit Addendum 1) Yes
PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● othe	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	P ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	vcling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each conprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	, was landowner permission obtained for survey? $$ Yes $$ N
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
01 (1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	
c. Large Projects: check if separate project I	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u> landowner data file submitted
c. Large Projects: check if separate project l VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	landowner data file submitted
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	d landmarks):
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted
vernal projects: check if separate project I vernal pool location information a. Location Township: Hampden Brief site directions to the pool (using mapped from Interstate 95, exit at Cold Brook Road (exit is on the left.	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked.
 Large Projects: check if separate project In the Vernal Pool Location Information Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. Mapping Requirements: At least 2 of the 3 real USGS topographic map with pool clearly real USGS topographic map with pool clearly real USGS topographic map with pool clearly real uses. 	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked.
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked.
C. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked. learly marked.
C. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512456.0156 Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked. learly marked.
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512456.0156 Check Datum: NAD27 NAD83 / WG: Check one: GIS shapefile - send to Jason.Czapiga@mai	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked. learly marked. titude/Northing: 4957613.9906 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512456.0156 Lai Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile - send to Jason.Czapiga@mai The pool perimeter is delinea	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked. learly marked. titude/Northing: 4957613.9906 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) atted by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
·	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☒ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	•
c. Vernal pool status under the Natural Resources Pr	otection Act (NRPA)
i. Pool Origin: ○ Natural ● Natural-Modified ○ U	nnatural C Unknown
If modified, unnatural or unknown, describe any mod	dern or historic human impacts to the pool (required):
Possibly modified by pipeline construction	
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provide</u> ○ Permanent	Ephemeral
Explain:	iii most years)
Based on depth and size of pool, and substrate	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wid Predominate substrate in order of increasing hydrop 	th: <u>30</u>
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	
○ Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	roperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	☐ Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
	No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	C4b cur
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent change	
	t (channel with well-defined banks and permanent flow) ain):

VERNAL POO				MATION				
a. Indicator su	_							
b. Indicator at								
			•		es? • Yes No; wha	•	•	
					ct number of egg masses arate cells are provided			ies
INDICATOR					r adult Fairy Shrimp)	Tac	dpoles/Larv	
SPECIES		#	(Confidence Level ¹	Egg Mass Maturity ²	Observed		Confidence Level ¹
Wood Frog	7	5	3	3	A H	Т	3	
Spotted Salamander	2	4	3	3	M A			
Blue-spotted Salamander	53	100	3	3	M A			
Fairy Shrimp ³	0	0						
3-Fairy Shrimp: X	= pres	sent			nd embryos), A= Advanced (lo			
(labeled with					•		<u> </u>	<u>IOtograpiia</u>
SPECIES			of Verification	n* CL**	SPECIES	N	lethod of Ver	CL**
Blanding's Tu	rtle	P	H S		Wood Turtle		Р Н П	S
Spotted Turtle	Э				Ribbon Snake			
Ringed Bogha					Other:			
					landled, S = Seen 1 = <60%, 2= 60-95%, 3= 3	>95%		
e. General ver	Po	tential S\	VP ☐ N	Non Signii	ficant VP Indicator servations of other wild red by meadow sweet, sen	life:	interberry.	
·					ation to: Maine Dept. of Attn: Vernal Po 650 State Stree maine.gov) of vernal poo	ols et, Bangor, ME 0	4401	
accept	able 1	for projec	cts with 3	or fewer a	assessed pools; larger pr			
MDIFW use only			MDIFW D		Initials:) dags not most biol	aniaal aritaria	
s pool is: Sign	ifican		otentially Si it lacking crit	_	Not Significant due to:	does not meet blok does not meet MD		
mments:								





	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szille	ery)
b. Contact and credentials previously provided	? ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name: C same as observer oth	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Rec	cycling Facility
species egg mass) are <u>required</u> for i	s of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey? $$ Yes $$ No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u>
VEDNAL BOOL LOCATION INFORMATION	
a. Location Township: Hampden	
a. Location Township: Hampden Brief site directions to the pool (using mappe	· · · · · · · · · · · · · · · · · · ·
a. Location Township: Hampden Brief site directions to the pool (using mappe	
a. Location Township: <u>Hampden</u> Brief site directions to the pool (using mappe From Interstate 95, exit at Cold Brook Road (exi is on the left.	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
 a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of the second seco	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
Brief site directions to the pool (using mappe From Interstate 95, exit at Cold Brook Road (exi is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of X GPS data (complete section below). GPS location of vernal pool	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
Brief site directions to the pool (using mappe From Interstate 95, exit at Cold Brook Road (exi is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of X GPS data (complete section below). GPS location of vernal pool	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. clearly marked.
a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exi is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool of GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512673.0704 Check Datum: ○ NAD27 ● NAD83 / WG Check one: ● GIS shapefile	must be submitted (check those submitted): marked. clearly marked. atitude/Northing: 4957535.3712
a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exi is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool of GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512673.0704 Check Datum: ○ NAD27 ● NAD83 / WG Check one: ● GIS shapefile - send to Jason.Czapiga@ma	must be submitted (check those submitted): marked. clearly marked. datitude/Northing: 4957535.3712 GS84 Coordinate system: UTM-m aine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent)
From Interstate 95, exit at Cold Brook Road (exi is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool of GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512673.0704 Check Datum: NAD27 NAD83 / WGCheck one: GIS shapefile - send to Jason.Czapiga@ma	must be submitted (check those submitted): marked. clearly marked. dititude/Northing: 4957535.3712 GS84 Coordinate system: UTM-m aine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	e Cother:
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: Natural Natural-Modified U If modified, unnatural or unknown, describe any mo	Jnnatural O Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	Ephemeral
Based on size and presence of terrestrial vegetation in	nool
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydronic 	dth: 40
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	
	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	<u> </u>
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	Ino vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)

VEDNIAL	DOOL ING	10476	- INIE		TION						
. VERNAL					ATION						
	or survey			/13				_			
	or abunda										
■ Was t	he entire p	ool sur	veyed	for eg	g masse	es? • Yes ONo; what	t % of pool sur	veyed	?		
						ct number of egg masses arate cells are provided f				ies	
INDICATO)R					adult Fairy Shrimp)	Т	adpole	s/Larva		
SPECIES		#		Co	nfidence Level ¹	Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood Fro	g 1	0		3	3		N				
Spotted Salamand	er 0	0									
Blue-spott Salamand		3		3	3	Α					
Fairy Shri	mp ³ 0	0									
c. Rarity ■ Note a		ecies a				pools. <u>Observations sho</u>	ould be accom	panied	l by ph	notogra	phs
<u>(labele</u>	a with obs		of Veri			ind datej.		Method	d of Veri	fication*	
SPECII	ES	Р	Н	S	- CL**	SPECIES		Р	Н	S	CL**
Blandir	ıg's Turtle					Wood Turtle					
Spotted	d Turtle					Ribbon Snake					
Ringed	Boghaunter					Other:					
**CL - 0 d. Option SVF e. Genera	Confidence al observe	er reco ential s	species mmer SVP mmen	deterring determined at least to the determined	mination: n: on Signif	andled, S = Seen 1= <60%, 2= 60-95%, 3= > icant VP Indicator E ervations of other wildlerry	Breeding Area				
NOTE: Di	gital submi	ssion (to Jas	on.Cza	apiga@n	ation to: Maine Dept. of I Attn: Vernal Poo 650 State Stree naine.gov) of vernal pool ssessed pools; larger pro	ols t, Bangor, ME field forms an	04401 d phot	l ograp	hs is or	
or MDIFW us	e only Re	eviewed	by MDIF	W Dat	e:	Initials:					
his pool is:	Significant		Potentia out lacki			Not Significant due to:) does not meet bi				
Comments:											





INSTRUCTIONS: Complete all 3 pages of form as thorough	hly as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 1-3	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)	
b. Contact and credentials previously provided? No ((submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other CES, In	ıc. (R. St.Amand)
b. Contact and credentials previously provided? No	(submit Addendum 1)
c. Project Name: Solid Waste Processing and Recycling Fa	icility
	ne pool and b) the indicators (one example of each ressional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
•	andowner permission obtained for survey? O Yes O No
b. Landowner's contact information (required)	
	Phone:
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
c. Large Projects: check if separate project landowr	ner data file submitted
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landm	arks):
From Interstate 95, exit at Cold Brook Road (exit 180). Gis on the left.	o 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marked Large scale aerial photograph with pool clearly m GPS data (complete section below). 	
GPS location of vernal pool	
-	orthing: 4957524.3714
Check Datum: NAD27 NAD83 / WGS84	Coordinate system: UTM-m
Check one:	·
	observer has reviewed shape accuracy (best)
 The pool perimeter is delineated by Include map or spreadsheet with coord 	
C The above GPS point is at the center	er of the pool. (good)
	tely m ○ /ft ○ in the compass direction of

a. Habitat survey date (only if different from indicator survey dates on page 3): b. Wetland habitat characterization © Pool associated with larger wetland complex Stoodplain depression Other:	5. VERNAL POOL HABITAT INFORMATION	
■ Choose the best descriptor for the landscape setting:	a. Habitat survey date (only if different from indicator	survey dates on page 3):
Sloalated depression Pool associated with larger wetland complex Check all wetland types that best apply to this pool: Forested swamp Net meadow Shrub swamp Lake or Pond Cove Peatland (fen or bog) Abandoned beaver flowage C. Vernal pool status under the Natural Resources Protection Act (NRPA) I. Pool Origin: Natural Natural-Modified Unnatural Unknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale for opinion. Permanent Semi-permanent (drying partially in all years and completely in drought years) Explain: Based on terrestrial vegetation in pool Maximum depth at survey: ○ 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) > 60" (>5 ft.) Approximate size of pool (at spring highwater): Width: 25 m ft. Length: 15 m ft. Predominate substrate in order of increasing hydroperiod: Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) Pool vegetation indicators in order of increasing hydroperiod: Mineral soil (sphagnum moss present) Pool vegetation indicators in order of increasing hydroperiod (check all that apply): Terrestrial nonvascular spp. (e.g. shinktos abbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Sphagnum moss (check all that apply): Fish Bullfrog or Green Frog tadpoles Iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):	b. Wetland habitat characterization	
Forested swamp	○ Isolated depression	· · · · · · · · · · · · · · · · · · ·
i. Pool Origin: Natural Natural-Modified Unnatural Unknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale for opinion. Permanent Semi-permanent (drying partially in all years and completely in drought years) Explain: Based on terrestrial vegetation in pool Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.) Approximate size of pool (at spring highwater): Width: 25	 ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flo 	Floodplain wage Isolated pool
If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): Iii. Pool Hydrology	-	
Select the pool's <u>estimated</u> hydroperiod AND <u>provide rationale</u> for opinion. Permanent Semi-permanent (drying partially in all years and completely in drought years) Explain: Based on terrestrial vegetation in pool Maximum depth at survey: ○ 0-12" (0-1 ft.) ● 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) Approximate size of pool (at spring highwater): Width: 25 ○ m ● ft Length: 15 ○ m ● ft Predominate substrate in order of increasing hydroperiod: Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) Pool vegetation indicators in order of increasing hydroperiod (check all that apply): Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Dry site ferns (e.g. sensitive fern, lady fern, bracken fern) Moist site rems (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool Fish Bullfrog or Green Frog tadpoles Final inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):		
 ■ Maximum depth at survey: ○ 0-12" (0-1 ft.)	■ Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u> ○ Permanent ○ Semi-permanent (drying partially in all years an completely in drought years)	Ephemeral
 ■ Maximum depth at survey: ○ 0-12" (0-1 ft.)	Based on terrestrial vegetation in pool	
 ■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):	 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydrog Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	Ith: 25
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) □ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) □ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) □ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) □ Sphagnum moss (anchored or suspended) ■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site ferns (e.g. royal fern, marsh fern) Wet site ferns (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site ferns (e.g. royal fern, marsh fern) Wet site ferns (e.g. royal fern, marsh fern) Wet site ferns (e.g. royal fern, marsh fern) Wet site ferns (e.g. highbush blueberry, maleberry, mountain holly) Wet site shrubs (e.g. highbush blueberry, mountain holly) Wet site ferns (e.g. highbush blueberry, mountain holly) Wet site ferns (e.g. highbush blueberry, mountain holly) Wet site shrubs (e.g. highbush blueberry, mountain holly)	O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Faunal indicators (check all that apply): Fish Bullfrog or Green Frog tadpoles Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):		droperiod (check all that apply):
 □ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) □ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) □ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) □ Sphagnum moss (anchored or suspended) ■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): 		Wet site ferns (e.g. royal fern, marsh fern)
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Faunal indicators (check all that apply): Fish Bullfrog or Green Frog tadpoles iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):	Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	winterberry, mountain holly)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool Faunal indicators (check all that apply): Fish Bullfrog or Green Frog tadpoles Other: iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):		,
□ Sphagnum moss (anchored or suspended) water shield, pond weed, bladderwort) □ No vegetation in pool ■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles □ Other: □ Water shield, pond weed, bladderwort) □ No vegetation in pool ■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles □ Other: □ Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):	· · ·	
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):		water shield, pond weed, bladderwort)
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):	, , , , , , , , , , , , , , , , , , , ,	
Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):	☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
(e) No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)	Type of inlet or outlet (a seasonal or permanent chan	
○ Intermittent inlet ○ Other or Unknown (explain):		

: VED	NAL POC	N IND	ICATO	JD INE	ODM/	ATION						
						ATION						
	dicator su	-			/13				_			
	dicator al				,		0 0 V - 0 N - 1 - 1	0/ . f l		0		
				-		_	s? • Yes ONo; what				•	
							ct number of egg masses, arate cells are provided fo				ies	
INDI	ICATOR					asses (or infidence	adult Fairy Shrimp) Egg Mass	Т	adpole	s/Larva	ae Confide	
SPE	CIES		#		Co	Level 1	Maturity ²	Observe	ed		Leve	
Woo	d Frog	2	0		3			Т			3	
Spo	tted ımander	8	8		3	3	А					
	e-spotted imander	2	0		3							
Fair	y Shrimp ³	0	0									
c. Ra ■ N	iry Shrimp: X arity crite lote any ra abeled wit	ria ire spe	cies a				pools. <u>Observations sho</u>	uld be accom	panied	l by ph	<u>iotogra</u>	phs
	aboloa Wit	11 0000		of Verif					Method	l of Veri	fication*	01 **
	SPECIES		Р	Н	S	CL**	SPECIES		Р	Н	S	CL**
E	Blanding's Τι	ırtle					Wood Turtle					
(Spotted Turtl	е					Ribbon Snake					
F	Ringed Bogha	unter					Other:					
e. G	*CL - Confidence of the confid	pserve Pot rnal pot	er reco ential s pol cor	species mmen SVP mmen	dation No ts and	mination: 1: on Signif /or observsweet a		reeding Area				
	E: Digital	submi	ssion (to Jaso	on.Cza	apiga@n	Attn: Vernal Poo 650 State Street naine.gov) of vernal pool ssessed pools; larger pro	ls , Bangor, ME field forms an	04401 d phot	ograpl	hs is or	
or MDII	FW use only	Z Re	viewed l	by MDIF	W Dat	e:	Initials:					
his poo	l is: Sigr	nificant		Potentia out lacki			Not Significant due to:	does not meet bi does not meet M				
Commer	nts:											





server's Pool ID: 1-4	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
. Observer name: <u>CES, Inc. (R. St.Amand, J. Szillery)</u>			
. Contact and credentials previously provided? C	No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
i. Contact name: ○ same as observer ● other CE	ES, Inc. (R. St.Amand)		
. Contact and credentials previously provided?	No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and Recyclin	ng Facility		
NOTE: <u>Clear photographs or digital images</u> of a species egg mass) are <u>required</u> for nonp			
ANDOWNER CONTACT INFORMATION			
a. Are you the landowner? \bigcirc Yes $lacktriangle$ No \Box If no, wa	as landowner permission obta	ained for survey? (Yes ON
b. Landowner's contact information (required)			
Name: Hickory Development LLC			
Name: Hickory Development, LLC	Phone:		
	Phone: City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project land	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION 1. Location Township: Hampden	City: <u>Hampden</u> downer data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land)	City: Hampden downer data file submitted ndmarks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION 1. Location Township: Hampden	City: Hampden downer data file submitted ndmarks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 180)	City: Hampden downer data file submitted ndmarks): O). Go 0.5 miles south on Cold E	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. b. Mapping Requirements: At least 2 of the 3 mus USGS topographic map with pool clearly man	City: Hampden downer data file submitted ndmarks): O). Go 0.5 miles south on Cold Est be submitted (check those ked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 Large Projects: check if separate project land FERNAL POOL LOCATION INFORMATION Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. Mapping Requirements: At least 2 of the 3 mus USGS topographic map with pool clearly mark Large scale aerial photograph with pool clearly	City: Hampden downer data file submitted ndmarks): O). Go 0.5 miles south on Cold Est be submitted (check those ked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. b. Mapping Requirements: At least 2 of the 3 mus USGS topographic map with pool clearly man	City: Hampden downer data file submitted ndmarks): O). Go 0.5 miles south on Cold Est be submitted (check those ked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. b. Mapping Requirements: At least 2 of the 3 must consider the second	City: Hampden downer data file submitted ndmarks): O). Go 0.5 miles south on Cold Est be submitted (check those ked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION Location Township: Hampden Brief site directions to the pool (using mapped land) From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. Mapping Requirements: At least 2 of the 3 must be compared to the second	City: Hampden downer data file submitted ndmarks): O). Go 0.5 miles south on Cold E st be submitted (check those ked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land) From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. b. Mapping Requirements: At least 2 of the 3 must with pool clearly mand with pool with pool clearly mand with pool w	City: Hampden downer data file submitted ndmarks): 0). Go 0.5 miles south on Cold for the submitted (check those riked. ly marked. de/Northing: 4957517.9416	Brook Road. Access rosubmitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. D. Mapping Requirements: At least 2 of the 3 must is on the left. D. Was topographic map with pool clearly man ix Large scale aerial photograph with pool clearly ix GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512650.8563 Latitude	City: Hampden downer data file submitted Indmarks): O). Go 0.5 miles south on Cold for the submitted (check those riked. Ity marked. Ide/Northing: 4957517.9416 Coordinate system: UTM-	Brook Road. Access rossubmitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. b. Mapping Requirements: At least 2 of the 3 mustion is on the left. C. Mapping Requirements: At least 2 of the 3 mustic large scale aerial photograph with pool clearly man Cargo GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512650.8563 Check Datum: NAD27 NAD83 / WGS84 Check one: GIS shapefile	City: Hampden downer data file submitted Indmarks): O). Go 0.5 miles south on Cold for the submitted (check those riked. Ity marked. Ide/Northing: 4957517.9416 Coordinate system: UTM- gov; observer has reviewed shaped by multiple GPS points. (ex	State: ME Brook Road. Access ro submitted): -m De accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180 is on the left. b. Mapping Requirements: At least 2 of the 3 must is on the left. c. Mapping Requirements: At least 2 of the 3 must is on the left. GPS topographic map with pool clearly mark is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512650.8563 Check Datum: NAD27 NAD83 / WGS84 Check one: GIS shapefile - send to Jason.Czapiga@maine.g The pool perimeter is delineated.	City: Hampden downer data file submitted Indmarks): O). Go 0.5 miles south on Cold Ext be submitted (check those rked. Ity marked. Ide/Northing: 4957517.9416 Coordinate system: UTM- gov; observer has reviewed shaped by multiple GPS points. (excoordinates.	State: ME Brook Road. Access ro submitted): -m De accuracy (best)	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicate	or survey dates on page 3):
b. Wetland habitat characterization	
	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver floware ☐ Emergent marsh ☐ Active beaver floware	ge Cther:
c. Vernal pool status under the Natural Resources I	Protection Act (NRPA)
i. Pool Origin: ● Natural ○ Natural-Modified ○ If modified, unnatural or unknown, describe any me	Unnatural O Unknown odern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provious</u> ○ Permanent ○ Semi-permanent (drying partially in all years a completely in drought years) Explain:	 Ephemeral
Based on depth and terrestrial vegetation in pool	
■ Predominate substrate in order of increasing hydro	ridth: 35 m • ft Length: 25 m • ft pperiod:
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
, ,	
■ Pool vegetation indicators in order of increasing hy Terrestrial nonvascular spp. (e.g. haircap	
moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) ☐ Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	- No vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): let (channel with well-defined banks and permanent flow)

Indicator al	_	dates:						-			
				for eac	n masse	es?	of pool surv	veved	?		
■ For each ir	ndicato	r spec	ies, in	dicate	the exac	ct number of egg masses, co arate cells are provided for s	onfidence le	vel fo	r speci	es	
NDICATOR						r adult Fairy Shrimp)	Та	adpole	s/Larva		
PECIES		#			nfidence Level ¹	Egg Mass Maturity ²	Observe	d		Confide Leve	
Vood Frog	0	0					Υ			3	
potted alamander	0	3			3						
lue-spotted salamander	32+	77		3	3	А					
airy Shrimp ³	0	0					·				
Note any ra (labeled wit		erver n	ame, p	ool loo		l pools. <u>Observations should</u> und date).					phs_
SPECIES			d of Veri	ı	CL**	SPECIES	1		of Verif		CL**
Blanding's Tu	urtle	P	Н	S		Wood Turtle		<u>Р</u>	Н	S	
2.0											
Spotted Turtl	е					Ribbon Snake					
Ringed Bogha	unter erificat	ion: P =				Other: andled, S = Seen					
*Method of v **CL - Confid Optional ob	verificated ence I	er reco	species ommer SVP mmen	deterring deterring determined at least termined	mination: 1: on Signif	Other:	eding Area				
*Method of v **CL - Confid Optional ob SVP General ver Pool vegetar end complete	rerificate dence I pserve Potenal potention is a submission is submission.	er reco ential solutions dominated and solutions	species mmer SVP mmen ated by	s determined at least one on the state of th	mination: n: on Signif /or observery cumenta	Other: andled, S = Seen 1= <60%, 2= 60-95%, 3= >956 ficant VP	eding Area and Fisheries Bangor, ME (04401 I phot	ograph	e ns is or	
*Method of v **CL - Confid Optional ob SVP General ver Pool vegetar end complete	rerificate dence I poserve Potenal poserve tion is a submissable for the submissable f	cion: P = evel in er reco ential sool con domination and so ession (or projection)	species mmer SVP mmen ated by support	s determined at least one on the state of th	mination: n: on Signif /or observery cumenta apiga@n fewer a	other: andled, S = Seen 1 = <60%, 2 = 60-95%, 3 = >956 ficant VP	eding Area and Fisheries Bangor, ME (04401 I phot	ograph	e ns is or	





server's Pool ID:1-5	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
. Observer name: <u>CES, Inc. (R. St.Amand, J. Szillery)</u>			
. Contact and credentials previously provided?	No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name: \bigcirc same as observer \odot other \subseteq	ES, Inc. (R. St.Amand)		
o. Contact and credentials previously provided?	No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and Recycli	ng Facility		
NOTE: <u>Clear photographs or digital images</u> of species egg mass) are <u>required</u> for non			
ANDOWNER CONTACT INFORMATION	and the demonstrate of the late		
a. Are you the landowner? O Yes No If no, w	vas landowner permission obta	ained for survey? (∪ Yes ∪ No
b. Landowner's contact information (required)			
Name: Hickory Dovolonment 117			
Name: Hickory Development, LLC			-: 0444
Street Address: P.O. Box 249 c. Large Projects: check if separate project lan	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project lan VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: Hampden downer data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project lan VERNAL POOL LOCATION INFORMATION	City: Hampden downer data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project lan VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: Hampden downer data file submitted andmarks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu	City: Hampden adowner data file submitted andmarks): 30). Go 0.5 miles south on Cold E	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land) From Interstate 95, exit at Cold Brook Road (exit 18 is on the left.	City: Hampden downer data file submitted andmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land) From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly ma	City: Hampden downer data file submitted andmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. D. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly material projects and inclear in the left. GPS data (complete section below).	City: Hampden downer data file submitted andmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 E. Large Projects: check if separate project land /ERNAL POOL LOCATION INFORMATION I. Location Township: Hampden Brief site directions to the pool (using mapped land) From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. I. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly mandown in the pool clearly mandown in the pool clear in the pool c	City: Hampden downer data file submitted andmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly ma X Large scale aerial photograph with pool clea GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512651.0772 Latitu	City: Hampden downer data file submitted downer data file submitted dandmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked. 11 rly marked. 12 rly marked.	State: ME Brook Road. Access ro submitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land) From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly material projects in the pool clear project land GPS data (complete section below). GPS location of vernal pool	City: Hampden downer data file submitted downer data file submitted dandmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked. 31) Inde/Northing: 4957495.0433 4 Coordinate system: UTM-	State: ME Brook Road. Access ro submitted): -m	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly ma Large scale aerial photograph with pool clear GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512651.0772 Check Datum: NAD27 NAD83 / WGS8-Check one: GIS shapefile	City: Hampden downer data file submitted downer data file submitted andmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked. In the cold of the cold	State: ME Brook Road. Access ro submitted): -m De accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land) From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly material photograph with pool clearly material photog	City: Hampden adowner data file submitted andmarks): 30). Go 0.5 miles south on Cold East be submitted (check those arked. ande/Northing: 4957495.0433 4 Coordinate system: UTM- agov; observer has reviewed shaped by multiple GPS points. (excoordinates.	State: ME Brook Road. Access ro submitted): -m De accuracy (best)	

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on nage 3).
b. Wetland habitat characterization	our voy dutes on page o/
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ● Pool as	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ○ Natural Natural-Modified ○ L	Innatural C Unknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
Portion may be modified by skid road	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	 Ephemeral
Based on terrestrial vegetation in pool, depth of pool a	and substrate
 Maximum depth at survey: O-12" (0-1 ft.) 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland) 	dth: 20
mosses present) Mineral soil (sphagnum moss present)	
■ Pool vegetation indicators in order of increasing hydrogeneous Terrestrial nonvascular spp. (e.g. haircap	
moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	- No vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	
	t (channel with well-defined banks and permanent flow)
Other or Unknown (export or outlet	ain):

. VERNAL POC	L IND	OICATO	OR INF	ORMA	NOITA						
a. Indicator si	urvey	dates:	5/5,5	/13				_			
b. Indicator a	bunda	ance ci	riteria								
■ Was the en	ntire p	ool sur	veyed	for eg	g masse	es? • Yes ONo; what	% of pool sur	veyed	?		
						ct number of egg masses, arate cells are provided fo				ies	
INDICATOR											
SPECIES		#		Co	ntidence Level ¹	Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood Frog	2	0		3			Т			3	
Spotted Salamander	0	0									
Blue-spotted Salamander	0	0									
Fairy Shrimp ³	0	0									
c. Rarity crite Note any ra (labeled wit	re spe					pools. Observations shound date).	uld be accom	panied	l by ph	notogra	ph <u>s</u>
				fication*	- CL**			Method	of Veri	fication*	CL**
SPECIES		Р	Н	S	- CL	SPECIES		Р	Н	S	CL
Blanding's Tu	ırtle					Wood Turtle					
Spotted Turtl	е					Ribbon Snake					
Ringed Bogha						Other: andled, S = Seen					
d. Optional ob	serve Pot	er reco	mmer SVP	ndation No	n: on Signif	1= <60%, 2= 60-95%, 3= >9 icant VP Indicator B ervations of other wildling	reeding Area				
NOTE: Digital	submi	ssion (to Jas	on.Cza	apiga@r	ation to: Maine Dept. of Ir Attn: Vernal Poo 650 State Street naine.gov) of vernal pool to assessed pools; larger pro	ls , Bangor, ME ïeld forms an	04401 d phot	ograp	hs is or	
or MDIFW use only	<u>/</u> Re	eviewed	by MDIF	W Dat	e:	Initials:					
nis pool is: Sigr	nificant			ally Sigr		Not Significant due to:	does not meet bi does not meet M				
omments:											





server's Pool ID: 1-6	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
ı. Observer name: <u>CES, Inc. (R. St.Amand, J. Sziller</u>	ry)		
. Contact and credentials previously provided?	² ○ No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name:	er CES, Inc. (R. St.Amand)		
o. Contact and credentials previously provided?	P ○ No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and Recy	ycling Facility		
NOTE: <u>Clear photographs or digital images</u> species egg mass) are <u>required</u> for n			
ANDOWNER CONTACT INFORMATION			
a. Are you the landowner? O Yes No If no	o, was landowner permission obta	lined for survey? () Yes ∪ No
b. Landowner's contact information (required)			
Name: Hickory Development, LLC			0444
Street Address: P.O. Box 249 c. Large Projects: check if separate project I	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: <u>Hampden</u> landowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION	City: <u>Hampden</u> landowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: <u>Hampden</u> landowner data file submitted d landmarks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project In the Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left.)	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold B	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left.	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Bomust be submitted (check those smarked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project I /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 round USGS topographic map with pool clearly round in the left.	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Bomust be submitted (check those smarked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r X Large scale aerial photograph with pool cl	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Bomust be submitted (check those smarked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project I /ERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r X Large scale aerial photograph with pool cl X GPS data (complete section below). GPS location of vernal pool	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Bomust be submitted (check those smarked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r X Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Benarks be submitted (check those smarked. learly marked. titude/Northing: 4957517.3123	rook Road. Access rosubmitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate project In Large State (In Large State St	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold B must be submitted (check those s marked. learly marked. titude/Northing: 4957517.3123	rook Road. Access rosubmitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate project In the Large Projects: At least 2 of the 3 reaction of the Large Scale aerial photograph with pool clearly in the Large Scale	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Be must be submitted (check those s marked. learly marked. titude/Northing: 4957517.3123 S84 Coordinate system: UTM-r ine.gov; observer has reviewed shape ated by multiple GPS points. (exc	rook Road. Access rousubmitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r X Large scale aerial photograph with pool cl X GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512626.5368 Check Datum: NAD27 NAD83 / WGC Check one: GIS shapefile - send to Jason.Czapiga@mai The pool perimeter is delinea	City: Hampden landowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold B must be submitted (check those s marked. learly marked. titude/Northing: 4957517.3123 S84 Coordinate system: UTM-r ine.gov; observer has reviewed shape ated by multiple GPS points. (exceptith coordinates.	rook Road. Access rousubmitted):	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	•
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ○ Natural ⊙ Natural-Modified ○ U	Innatural C Unknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
Impacted by skid road through pool	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent ○ Semi-permanent (drying partially in all years are completely in drought years) Explain:	Ephemeral
Based on depth of pool and terrestrial vegetation in po	ool
 Maximum depth at survey: 0-12" (0-1 ft.) 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydrogen 	dth: 35
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion
○ Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	☐ Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	✓ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) —
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	The vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	et (channel with well-defined banks and permanent flow)
Other or Unknown (expl	ain):

	-	dates: <u>5/</u>						_		
. Indicator a				aa maaa	002 @ Vo	s O No: wh	at % of pool cur	vovod2		
							at % of pool sur es, confidence le		acies	
							for separate su			
NDICATOR			adpoles/La	arvae						
NDICATOR SPECIES		# Confidence Egg Mass Level 1 Maturity 2		Observe	ed	Confide Leve				
Wood Frog	19	0	3	Level	A	Waturity	T		3	
Spotted Salamander	16	12	3	3	M	A				
Blue-spotted Salamander	0	0								
airy Shrimp ³	0	0					i	!	· ·	·
3-Fairy Shrimp: ン	urity: F (= pre	= Fresh (<2			nd embryos),	A= Advanced (lo	oose matrix, curved	embryos), ł	H= Hatched o	or Hatch
. Rarity crite ■ Note any ra		ecies ass	ociated w	vith verna	l pools. <u>Ob</u>	servations sh	nould be accom	panied by	photograp	ohs
(labeled wit	h obs				and date).					
SPECIES			f Verification	CL**	SPECIES			Method of \		CL**
Blanding's Tu	ırtle	P			Wood Turtle	е		Р Н П		
Spotted Turtl	е				Ribbon Sna	ke				
Ringed Bogha					Other:					
*Method of \ **CL - Confid			0 1	•	,	Seen = 60-95%, 3=	>95%			
. Optional ok	serv	er recom	mendatio	on:						
-					ficant VP	☐ Indicator	Breeding Area			
				ion oigiii	iodini vi	maioatoi	Diocamig / moa			
General ver	nal p	ool com	nents an	d/or obs	ervations	of other wild	dlife:			
	tion d	ominated	hy meadc	wsweet a	and sneckled	l alder				
Pool vegeta	tion a	ommatea	by meado	, wsweet a	Tid speckied	addei				
Pool vegeta										
Pool vegeta										
	d for	m and suր	porting d	ocumenta		aine Dept. of ttn: Vernal Po	f Inland Fisherie	s and Wil	dlife	
	d for	m and sup	pporting d	ocumenta	A	ttn: Vernal Po			dlife	
end complete OTE: Digital	subm	ission (to	Jason.Cz	zapiga@r	Af 69 maine.gov)	ttn: Vernal Po 50 State Stre of vernal poo	ools	04401 d photogr	aphs is on	
end complete OTE: Digital	subm table	iission (to for projec	Jason.Cz	zapiga@r or fewer a	Af 69 maine.gov)	ttn: Vernal Po 50 State Stre of vernal po ools; larger p	ools et, Bangor, ME ol field forms an	04401 d photogr	aphs is on	





	MDIFW Pool ID:
. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szille	ry)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	ycling Facility
species egg mass) are <u>required</u> for r	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey? C Yes C No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u>
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	
Duief eite directions to the most /voice recome	
Brief site directions to the pool (using mappe	·
	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit
From Interstate 95, exit at Cold Brook Road (exit is on the left.	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool c	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool c GPS data (complete section below). GPS location of vernal pool	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool c GPS data (complete section below). GPS location of vernal pool	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool c GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512632.2203 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool c GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512632.2203 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@ma	must be submitted (check those submitted): marked. elearly marked. Stitude/Northing: 4957498.9255 ES84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent)
From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool c GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512632.2203 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@ma The pool perimeter is deline	must be submitted (check those submitted): marked. dearly marked. Second Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on page 3).
b. Wetland habitat characterization	aurvey dates on page o/
■ Choose the best descriptor for the landscape setting:	
○ Isolated depression	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: □ Forested swamp □ Wet meadow □ Lake or Pond Cove □ Peatland (fen or bog) □ Abandoned beaver flowag □ Emergent marsh □ Active beaver flowag	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ○ Natural ● Natural-Modified ○ U	Innatural O Unknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
Portion modified by skid road / skid activity	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent ○ Semi-permanent (drying partially in all years ar completely in drought years) Explain:	 Ephemeral
Based on pool depth, substrate, and terrestrial vegeta	tion
 ■ Maximum depth at survey:	dth: 20 m • ft Length: 40 m • ft
mosses present)	rodificted to doop out portion
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hydrogeneous	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) — winterberry, mountain holly) — winterberry, mountain holly) — winterberry, maleberry, maleberry, maleberry, maleberry, mountain holly) — winterberry, maleberry, maleberry, maleberry, maleberry, maleberry, mountain holly) — winterberry, maleberry, mountain holly) — winterberry, mountain holly) — winterberry, maleberry,
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	ino vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	nel providing water flowing into or out of the pool):
No inlet or outlet Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
Other or Unknown (exp	lain):

VERNAL POO	L IND	OICATO	R INF	ORMA	ATION								
a. Indicator su	ırvey	dates:	5/5 , 5/	/13						-			
b. Indicator ab	ounda	ance cr	iteria										
■ Was the en	itire p	ool sur	veyed	for egg	g masse	s? • Ye	s (No;	what % of p	ool sur	veyed?	?		
■ For each in determinati								asses, confic ded for sepa				es	
INDICATOR													
SPECIES		#		Confidence Egg Mass Observed		ved Confider Level							
Wood Frog	4	0		3		А			Т			3	
Spotted Salamander	1	1		3	3	М	A						
Blue-spotted Salamander	0	0											
Fairy Shrimp ³	0	0											
1-Confidence leve 2-Egg mass matu 3-Fairy Shrimp: X	rity: F: = pres	= Fresh (d embryos),	A= Advanc	ed (loose matri	x, curved	embryo	s), H= I	Hatched (or Hatching
■ Note any rai	re spe						servation	s should be	accomp	oanied	by ph	otogra	<u>ohs</u>
(labeled with	1 008	Method				<u>na aate)</u> .				Method	of Verit	fication*	
SPECIES		P	H	S	CL**	SPECIES				P	Н	S	CL**
Blanding's Tu	rtle					Wood Turt	le						
Spotted Turtle	9					Ribbon Sna	ake						
Ringed Bogha						Other:							
*Method of vertical **CL - Confident								, 3= >95%					
d. Optional ob	Pot	ential S	SVP	☐ No	n Signifi			ator Breedin	g Area				
Send complete NOTE: Digital s accepta	submi	ssion (t	to Jaso	on.Cza	ıpiga@m	A 6 naine.gov	ttn: Verna 50 State :	al Pools Street, Bang	or, ME	04401 d photo	ograpl	ns is or	
or MDIFW use only	Re	eviewed b	y MDIF	W Date	e:	Initi	als:						
nis pool is: Sign	ificant			Illy Sign		Not Sign	nificant due	to: Odoes no					
omments:													





	MDIFW Pool ID:
. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	ry)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name:	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	ycling Facility
species egg mass) are <u>required</u> for r	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey? $$ Yes $$ No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u>
a. Location Township: Hampden	al londer arts V
a. Location Township: Hampden Brief site directions to the pool (using mappe	·
a. Location Township: Hampden Brief site directions to the pool (using mappe	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit
a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left.	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
 a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool c 	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
 a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is USGS topographic map with pool clearly X Large scale aerial photograph with pool c X GPS data (complete section below). GPS location of vernal pool 	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
 a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 of USGS topographic map with pool clearly Large scale aerial photograph with pool column GPS data (complete section below). GPS location of vernal pool 	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
 a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 of USGS topographic map with pool clearly in Large scale aerial photograph with pool configuration in Complete section below). GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512389.3444 Check Datum: ONAD27 NAD83 / WG Check one: GIS shapefile 	t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is USGS topographic map with pool clearly □ Large scale aerial photograph with pool c □ GPS location of vernal pool Longitude/Easting: 512389.3444 Check Datum: ○ NAD27 ○ NAD83 / WG Check one: ○ GIS shapefile - send to Jason.Czapiga@ma	must be submitted (check those submitted): marked. elearly marked. SS84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent)
Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is USGS topographic map with pool clearly Large scale aerial photograph with pool c S GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512389.3444 La Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@ma The pool perimeter is deline	must be submitted (check those submitted): marked. dearly marked. SS84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent) vith coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	·
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ○ Natural Natural-Modified ○ L	Innatural C Unknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
Pool modified by skid tracks, portions deep	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	Ephemeral
■ Maximum depth at survey: ■ 0-12" (0-1 ft.) ■ Approximate size of pool (at spring highwater): Wide substrate in order of increasing hydrogen substrate in order or ord	dth: 20
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	▼ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
■ Faunal indicators (check all that apply):	No vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	X Other: green frog
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow) ain):

. VERNAL POC	L IND	DICATO	OR INF	ORMA	ATION							
a. Indicator si	urvey	dates:	5/6 5/	′12					_			
b. Indicator a	bunda	ance ci	riteria									
■ Was the en	ntire p	ool sur	veyed	for egg	g masse	s? • Ye	s	it % of pool sur	veyed	?		
								s, confidence lo for separate su			ies	
INDICATOR			Egg Masses (or a					Т	Tadpoles/Larvae			
SPECIES		#			nfidence Level ¹		Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood Frog	5	0		3		А		Т			3	
Spotted Salamander	1	0		3		М						
Blue-spotted Salamander	0	0										
Fairy Shrimp ³	o	0										
c. Rarity crite Note any ra (labeled wit	re spe						servations sho	ould be accom	panied	d by ph	<u>notogra</u>	phs
				fication*	CL**				Method of Verification*		fication*	CL**
SPECIES		Р	Н	S	OL.	SPECIES			Р	Н	S	CL
Blanding's Tu						Wood Turtl	e					
Spotted Turtl						Ribbon Sna	ke					
*Method of v						Other:						
d. Optional ob	oserve Pot	er reco tential (mmer SVP	ndatior No	1: on Signif	icant VP		Breeding Area				
Send complete NOTE: Digital accept	submi	ission (to Jas	on.Cza	apiga@n	A 6 naine.gov)	ttn: Vernal Po 50 State Stree of vernal pool	ols et, Bangor, ME	04401 ad phot	l tograp	hs is or	
or MDIFW use only	<u>/</u> Re	eviewed	by MDIF	W Date	e:	Initia	als:					
nis pool is: Sigr	nificant			ally Sigr		☐ Not Sigr	_	does not meet b				
omments:												





INSTRUCTIONS: Complete all 3 pages o	f form as thoroughly as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 1-9	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	ON
a. Observer name: CES, Inc. (R. St.Amai	nd, J. Szillery)
b. Contact and credentials previously	provided? ○ No (submit Addendum 1)
2. PROJECT CONTACT INFORMATIO	N
a. Contact name: O same as observ	/er
b. Contact and credentials previously	provided? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processin	ng and Recycling Facility
species egg mass) are <u>requ</u>	al images of a) the pool and b) the indicators (one example of each uired for nonprofessional observers and encouraged for all observers.
3. LANDOWNER CONTACT INFORMA	
•	No If no, was landowner permission obtained for survey? Yes No
b. Landowner's contact information (r	• ,
	Phone:
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
VERNAL POOL LOCATION INFORM a. Location Township: Hampden Brief site directions to the pool (using the state of the pool)	
. ,	,
is on the left.	Road (exit 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site
b. Mapping Requirements: At least a USGS topographic map with po K Large scale aerial photograph v GPS data (complete section be	vith pool clearly marked.
GPS location of vernal pool	
Longitude/Easting: 512377.9205	Latitude/Northing: 4957689.7187
Check Datum: ○ NAD27	D83 / WGS84 Coordinate system: UTM-m
	rapiga@maine.gov; observer has reviewed shape accuracy (best)
	er is delineated by multiple GPS points. (excellent) readsheet with coordinates.
·	oint is at the center of the pool. (good)
	pool is approximately m \infty /ft \infty in the compass direction of om the above GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool:	
Forested swamp Wet meadow	Slow stream
☐ Shrub swamp ☐ Lake or Pond Cove	Floodplain
☐ Peatland (fen or bog)☐ Abandoned beaver fl☐ Active beaver flowag	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin:	Jnnatural ○ Unknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provice</u>	•
○ Permanent ○ Semi-permanent (drying partially in all years ar	Ephemeral
completely in drought years)	
Explain:	
Based on depth of organic and presence of vegetation	n in pool
■ Maximum depth at survey:	
■ Predominate substrate in order of increasing hydro	
Mineral soil (bare, leaf-litter bottom, or upland mosses present)	Organic matter (peat/muck) shallow or restricted to deepest portion
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hy	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	X Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
☐ Moist site ferns (e.g. sensitive fern, cinnamon	▼ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool):
No inlet or outlet Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
	lain):

. VERNAL POO	DL IND	DICATO	OR INF	ORMA	NOITA							
a. Indicator s	urvey	dates:	5/6,5	/12					_			
b. Indicator a	bunda	ance ci	riteria									
■ Was the e	ntire p	ool sur	veyed	for egg	g masse	s? • Yes	○ No; wha	at % of pool sur	veyed	?		
								s, confidence lo for separate su			ies	
INDICATOR						adult Fairy		Т	adpole	s/Larva		
SPECIES		#		Co	nfidence Level ¹		gg Mass Maturity ²	Observe	ed		Confide Leve	
Wood Frog	7	0		3		А-Н		Υ			3	
Spotted Salamander	0	0										
Blue-spotted Salamander	0	0										
Fairy Shrimp ³	0	0										
c. Rarity crite Note any ra (labeled with	are spe						ervations sh	ould be accom	panied	d by ph	notogra	phs
				fication*	CL**				Method	d of Veri	fication*	CL**
SPECIES		Р	H	S		SPECIES			Р	Н	S	<u> </u>
Blanding's T						Wood Turtle						
Spotted Turt						Ribbon Snak	e 					
Ringed Bogha						Other: andled, S = S						
d. Optional ol	oserve Pot	er reco	mmer SVP	ndation No	n: on Signif	icant VP		Breeding Area				
NOTE: Digital accept	submi	ission (to Jas	on.Cza	apiga@r	At 65 naine.gov)	n: Vernal Po 0 State Stree of vernal poo	ools et, Bangor, ME	04401 ad phot	l tograpi	hs is or	
or MDIFW use only	<u>∕</u> Re	eviewed	by MDIF	W Dat	e:	Initial	s:					
nis pool is: Sign	nificant			ally Sigr		☐ Not Signi		does not meet b				
omments:												





server's Pool ID: 1-10	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
a. Observer name: <u>CES, Inc. (R. St.Amand, J. S</u>	zillery)		
. Contact and credentials previously provid	ded? ○ No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name: O same as observer 💿	other CES, Inc. (R. St.Amand)		
o. Contact and credentials previously provid	ded? ○ No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and	Recycling Facility		
	for nonprofessional observers and <u>e</u>		
ANDOWNER CONTACT INFORMATION		d f 0 /	3.V. O.N.
a. Are you the landowner? O Yes No		ied for survey?) Yes ∪No
b. Landowner's contact information (require	,		
	Dhono:		
Name: Hickory Development, LLC			7 : 0444
Street Address: P.O. Box 249 c.	City: Hampden ject landowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate proj VERNAL POOL LOCATION INFORMATIO a. Location Township: Hampden	City: Hampden ject landowner data file submitted DN		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate projects. VERNAL POOL LOCATION INFORMATION	City: Hampden ject landowner data file submitted DN		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate projects. VERNAL POOL LOCATION INFORMATIO a. Location Township: Hampden	City: Hampden ject landowner data file submitted ON pped landmarks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if separate projects. VERNAL POOL LOCATION INFORMATION. Location Township: Hampden Brief site directions to the pool (using map of the left). From Interstate 95, exit at Cold Brook Road is on the left.	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Bro	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate proj /ERNAL POOL LOCATION INFORMATIO a. Location Township: Hampden Brief site directions to the pool (using map) From Interstate 95, exit at Cold Brook Road is on the left.	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Browner arly marked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if separate projects. /ERNAL POOL LOCATION INFORMATION. Location Township: Hampden Brief site directions to the pool (using map of the left). From Interstate 95, exit at Cold Brook Road is on the left. D. Mapping Requirements: At least 2 of the USGS topographic map with pool clear.	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Browner arly marked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: Check if	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Browner arly marked.	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate projects. Large Scale aerial photograph with pool clear Carlot Projects. GPS data (complete section below).	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Browner arly marked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if separate projects. WERNAL POOL LOCATION INFORMATION. Location Township: Hampden Brief site directions to the pool (using map of the left). From Interstate 95, exit at Cold Brook Road is on the left. D. Mapping Requirements: At least 2 of the large scale aerial photograph with pool clear in the left. GPS data (complete section below). GPS location of vernal pool	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Bro e 3 must be submitted (check those su arly marked. ool clearly marked. Latitude/Northing: 4957664.9974	ook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Bro e 3 must be submitted (check those su arly marked. ool clearly marked. Latitude/Northing: 4957664.9974	ook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if separate projects. WERNAL POOL LOCATION INFORMATION. Location Township: Hampden Brief site directions to the pool (using map of the left). From Interstate 95, exit at Cold Brook Road is on the left. D. Mapping Requirements: At least 2 of the left. D. Wap	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Broden arly marked. Tool clearly marked. Tool clearly marked. Latitude/Northing: 4957664.9974 WGS84 Coordinate system: UTM-medine.gov; observer has reviewed shape belineated by multiple GPS points. (exce	State: ME Dook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if separate projects. Large Projects: check if separate projects. Large Projects: check if separate projects. VERNAL POOL LOCATION INFORMATION INFORMA	City: Hampden ject landowner data file submitted ON pped landmarks): (exit 180). Go 0.5 miles south on Cold Broden arly marked. Tool clearly marked. Tool clearly marked. Latitude/Northing: 4957664.9974 WGS84 Coordinate system: UTM-medine.gov; observer has reviewed shape belineated by multiple GPS points. (exce	State: ME Dook Road. Access ro	

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on nage 3):
b. Wetland habitat characterization	survey dates on page o/
■ Choose the best descriptor for the landscape setting:	
O Isolated depression Pool as	ssociated with larger wetland complex upland / wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ● Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	Jnnatural ○ Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Orange Semi-permanent (drying partially in all years are completely in drought years) Explain: 	Ephemeral
Ехріант.	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland 	dth: 35
mosses present) Mineral soil (sphagnum moss present)	restricted to deepest portion Organic matter (peat/muck) deep and widespread
, ,	
■ Pool vegetation indicators in order of increasing hydrogeneous Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	
	et (channel with well-defined banks and permanent flow)
Other or Unknown (export or outlet	lain):

. Indicator s	ιιτνω	v dates: 5/6	5.5/12					
. Indicator s								
				na massi	es? (a) Ye	es ONo: what	t % of pool surveye	2d?
■ For each in	ndica	tor species	, indicate	the exa	ct number	of egg masses	s, confidence level to or separate survey	for species
dotominat	1011, 6	and egg ma			or adult Fair	·		les/Larvae
NDICATOR SPECIES		#		onfidence Level 1		Egg Mass Maturity ²	Observed	Confidence Level ¹
Nood Frog	9	0	3		А		Υ	3
Spotted Salamander	11	12	3	3		А		
Blue-spotted Salamander	11	11	3	3		Α		
airy Shrimp ³	0	0						
Rarity crite Note any ra (labeled with	are sp				•	oservations sho	ould be accompanie	ed by photographs
SPECIES		Method of \	/erification	* CL**	SPECIES		Meth	od of Verification* CL**
Blanding's To	ırtle	P H	S		Wood Turi	tle	P	H S
Spotted Turt					Ribbon Sna			
Ringed Bogha					Other:			
		ation: P = Ph				Seen 2= 60-95%, 3= >		
	Po	otential SVF	P [N	on Signi		Indicator E		
OTE: Digital	subn	nission (to J	lason.Cz	apiga@l	A 6 maine.gov	Attn: Vernal Pool 550 State Stree) of vernal pool	t, Bangor, ME 0440	01 otographs is only
accep							ojects must be mai	led as hard copies.
MDIEW use only		Reviewed by M	IDIFW Da	ite:	Initi	als.		
MDIFW use only pool is: Sign	•	nt Pote	entially Sig	nificant	☐ Not Sig	nificant due to:) does not meet biologic	





ISTRUCTIONS: Complete all 3 pages of form as the	oroughly as possible. Most fields are <u>required</u> for pool registratio
Observer's Pool ID: 1-11	MDIFW Pool ID:
. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery))
b. Contact and credentials previously provided?	No (submit Addendum 1) Yes
. PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other	CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	
c. Project Name: Solid Waste Processing and Recycle	, -
species egg mass) are <u>required</u> for no	of a) the pool and b) the indicators (one example of each onprofessional observers and <u>encouraged</u> for all observers.
. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? O Yes O No If no,	was landowner permission obtained for survey? O Yes O No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	Phone:
Street Address: P.O. Box 249	City: Hampden State: ME Zip: 04444
c. Large Projects: check if separate project la	ndowner data file submitted
a. Location Township: Hampden Brief site directions to the pool (using mapped)	landmarks).
	•
is on the left.	80). Go 0.5 miles south on Cold Brook Road. Access road to the Site
b. Mapping Requirements: At least 2 of the 3 mm USGS topographic map with pool clearly mm X Large scale aerial photograph with pool clear GPS data (complete section below).	arked.
GPS location of vernal pool	
· '	tude/Northing: 4957644.6047
Check Datum: NAD27 NAD83 / WGS8	84 Coordinate system:UTM-m
Check one:	e.gov; observer has reviewed shape accuracy (best)
 The pool perimeter is delineat Include map or spreadsheet with 	ted by multiple GPS points. (excellent) h coordinates.
○ The above GPS point is at the	e center of the pool. (good)
The center of the pool is appropriate the content of the pool is appropriate.	oximately m \infty /ft \infty in the compass direction of ve GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	· ·
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ○ Natural Natural-Modified ○ U	nnatural O Unknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
Possible skidder disturbance	
O Permanent (drying partially in all years an completely in drought years) Explain: Based on pool size, depth and substrate and presence	in most years)
 Maximum depth at survey: • 0-12" (0-1 ft.) 12 Approximate size of pool (at spring highwater): Wid Predominate substrate in order of increasing hydrol 	lth: 70
mosses present)	· · · · · · · · · · · · · · · · · · ·
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
■ Faunal indicators (check all that apply):	No vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow) ain):

	L INDIC	ATOR IN	IFORM <i>F</i>	ATION			
a. Indicator su	rvey da	ites: <u>4/23</u>	, 5/6 , 5/	13			
b. Indicator ab							
	•	•	•	•	s? • Yes ONo; what 9	•	•
					et number of egg masses, arate cells are provided for		
INDICATOR					adult Fairy Shrimp)	Tac	dpoles/Larvae
SPECIES		#		onfidence Level ¹	Egg Mass Maturity ²	Observed	Confidence Level ¹
Wood Frog	1 0		3			Υ	3
Spotted Salamander	0 3			3			
Blue-spotted Salamander	0 0						
Fairy Shrimp ³	0 0						
3-Fairy Shrimp: X C. Rarity criter	= present	t			nd embryos), A= Advanced (loose pools. <u>Observations shou</u>		
(labeled with						ilu ne accompa	anieu by photographs
SPECIES	М	lethod of Ve	1	CL**	SPECIES	_	Method of Verification*
Blanding's Tu	rtle	Р Н П	S		Wood Turtle	[P
Spotted Turtle	,				Ribbon Snake		
Ringed Bogha	unter				Other:		
					andled, S = Seen 1= <60%, 2= 60-95%, 3= >9	5%	
	Poten	ntial SVP	☐ No	on Signifi	icant VP		
N OTE : Digital s	submiss	ion (to Ja	son.Cza	apiga@m	tion to: Maine Dept. of In Attn: Vernal Pools 650 State Street, naine.gov) of vernal pool fi ssessed pools; larger proj	s Bangor, ME 0 ield forms and	4401 photographs is only
			NEW Dat		1.38.1		
MDIEW use only							
MDIFW use only s pool is: Sign			tially Sign	nificant	Initials: Not Significant due to: Od		ogical criteria. EP vernal pool criteria.





bserver's Pool ID: 1-12	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	y)
b. Contact and credentials previously provided?	○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ⊚ othe	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	No (submit Addendum 1) • Yes
c. Project Name: Solid Waste Processing and Recy	vcling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each conprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	, was landowner permission obtained for survey? $$
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Ot	
c. Large Projects: check if separate project I	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u> andowner data file submitted
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	andowner data file submitted
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	andowner data file submitted d landmarks):
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	andowner data file submitted
vernal pool location information a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left.	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project In the Vernal Pool Location Information a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 mapping Indicate the Cold Brook Road (exit is on the left.) USGS topographic map with pool clearly mapping Requirements are in the Cold Brook Road (exit is on the left.)	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r X Large scale aerial photograph with pool cl X GPS data (complete section below). GPS location of vernal pool	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r X Large scale aerial photograph with pool cl X GPS data (complete section below). GPS location of vernal pool	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked.
C. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512444.0162 Late Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked.
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512444.0162 Lar Check Datum: NAD27 NAD83 / WG: Check one: GIS shapefile - send to Jason.Czapiga@mai	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked. titude/Northing: 4957634.8418 S84 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r Large scale aerial photograph with pool cl GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512444.0162 Late Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile - send to Jason.Czapiga@mai The pool perimeter is delined	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked. titude/Northing: 4957634.8418 S84 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicator	survey dates on nage 3).
b. Wetland habitat characterization	curvey dates on page o/
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Pool as	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Shrub swamp ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage. ☐ Emergent marsh ☐ Active beaver flowage.	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: Natural Natural-Modified U If modified, unnatural or unknown, describe any mod	Innatural O Unknown dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u> ○ Permanent	Ephemeral
Based on pool depth, size, substrate	
 ■ Maximum depth at survey:	lth: 20
Mineral soil (bare, leaf-litter bottom, or upland mosses present)	Organic matter (peat/muck) shallow or restricted to deepest portion
○ Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	The vegetation in pass
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent chan	
	t (channel with well-defined banks and permanent flow)
○ Intermittent inlet ○ Other or Unknown (expl	ain):

. VERNAL POO	L INC	DICATO	OR INF	ORMA	ATION							
a. Indicator su	ırvey	dates:	5/6,5	/13					_			
b. Indicator al	bunda	ance ci	riteria									
■ Was the er	ntire p	ool sur	veyed	for egg	g masse	es? • Ye	es ONo; wha	it % of pool sur	veyed	?		
								s, confidence lo for separate su			ies	
INDICATOR						r adult Fair		Т	adpole	s/Larva		
SPECIES		#		Co	nfidence Level ¹	•	Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood Frog	3	0		3		А		0				
Spotted Salamander	1	3		3	3	А	А					
Blue-spotted Salamander	0	0										
Fairy Shrimp ³	0	0										
c. Rarity crite ■ Note any ra (labeled wit	re spe						oservations sho	ould be accom	panied	d by ph	notogra	phs
				fication*	CL**				Method	d of Veri	fication*	CL**
SPECIES		Р	Н	S		SPECIES			Р	Н	S	
Blanding's Tu						Wood Tur						
Spotted Turtle						Ribbon Sn	ake					
*Method of v						Other:			Ш			
d. Optional ob	serve Pot	er reco	mmer SVP	ndation No	1: on Signif	ïcant VP		Breeding Area				
NOTE: Digital accept	submi	ission (to Jas	on.Cza	apiga@n	, 6 naine.gov	Attn: Vernal Po 550 State Stree) of vernal pool	ols et, Bangor, ME	04401 ad phot	l tograp	hs is or	
or MDIFW use only	<u>r</u> Re	eviewed	by MDIF	W Dat	e:	Init	als:					
nis pool is: Sign	ificant			ally Sigr		☐ Not Sig	_	does not meet b				
omments:												





bserver's Pool ID: 1-13	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	ry)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name:	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	ycling Facility
species egg mass) are <u>required</u> for r	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey? $$ Yes $$ No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	Phone:
0	
c. Large Projects: check if separate project	
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe	landowner data file submitted d landmarks):
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe	landowner data file submitted d landmarks):
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left.	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
Example Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. D. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool c X GPS data (complete section below). GPS location of vernal pool	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool c X GPS data (complete section below). GPS location of vernal pool	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly I Large scale aerial photograph with pool c GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512636.692 Check Datum: ONAD27 NAD83 / WG Check one: GIS shapefile	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool c GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512636.692 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@ma	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. dearly marked. destal Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent)
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool c SC GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512636.692 La Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@ma The pool perimeter is deline	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked. stitude/Northing: 4957548.9934 eS84 Coordinate system: UTM-m sine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	· ·
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ○ Natural ● Natural-Modified ○ U	nnatural C Unknown
If modified, unnatural or unknown, describe any mod	dern or historic human impacts to the pool (required):
Some impact by skidders	
O Permanent	in most years)
■ Maximum depth at survey: ■ 0-12" (0-1 ft.) 12 ■ Approximate size of pool (at spring highwater): Wide substrate in order of increasing hydrogen substrate in order or order order or order or order or order order or order or order or order or order order order or order or order or order order or order order order or order	Ith: <u>45</u>
mosses present)	· · · · · · · · · · · · · · · · · · ·
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)☐ No vegetation in pool
■ Faunal indicators (check all that apply):	140 vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow) ain):

. VERNAL POC	DL IN	DICATO	R INFO	RMATION	N							
a. Indicator su	urvey	/ dates:5	5/8 , 5/13	<u> </u>								
b. Indicator al	bund	ance cri	teria									
■ Was the er	ntire	pool surv	eyed for	egg mas	sses? •	Yes ON	o; what % of po	ool surv	eyed?_			
							nasses, confide vided for separ					
INDICATOR			Eg			airy Shrimp)		Ta	dpoles/l			
SPECIES		#		Confiden Level		Egg Mas Maturit	SS /2 C	bserved			nfiden Level	
Wood Frog	11	1	3	3	A-	-н н		Υ		111	3	
Spotted Salamander	12	17	3	3	М	А						
Blue-spotted Salamander	0	0										
Fairy Shrimp ³	0	0										
3-Fairy Shrimp: X	urity: F (= pre	= Fresh (<			ound embry	yos), A= Advar	nced (loose matrix	, curved e	mbryos)	, H= Hato	hed or	Hatching
■ Note any ra (labeled wit	re sp						ns should be a	accompa	anied b	y photo	graph	<u>1S</u>
SPECIES			of Verificat	CL**	* SPEC	IES		N		f Verificat		CL**
Blanding's Tu	urtle	P	<u>н</u> 5	3	Wood				<u>Р</u> [H S	<u> </u>	
Spotted Turtl	е				Ribbon	Snake						
Ringed Bogha	aunter				Other:							
*Method of v							%, 3= >95%		I		ı	
d. Optional ob SVP	Po	otential S	VP [Non Sig			cator Breeding	g Area				
Pool domina	ated k	oy meado	wsweet a	and grasse	es							
Send complete	ed for	m and su	pporting	ı documei	ntation to	Attn: Veri				/ildlife		
NOTE: Digital accept							al pool field for ger projects m					
or MDIFW use only	<u>/</u> F	Reviewed by				Initials:						
nis pool is: Sigr	nifican			Significant critical data		Significant do	ue to: Odoes not Odoes not				teria.	
omments:												





bserver's Pool ID:1-14	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	ry)
b. Contact and credentials previously provided?	P ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● othe	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	? O No (submit Addendum 1) • Yes
c. Project Name: Solid Waste Processing and Recy	ycling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey?
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
O	
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted d landmarks):
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left.	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped from Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is USGS topographic map with pool clearly Ix Large scale aerial photograph with pool of	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. USGS topographic map with pool clearly in Large scale aerial photograph with pool of in GPS data (complete section below). GPS location of vernal pool	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. USGS topographic map with pool clearly Image in the left is complete section below). GPS data (complete section below).	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left.) b. Mapping Requirements: At least 2 of the 3 of the left. USGS topographic map with pool clearly in Large scale aerial photograph with pool color in GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512785.3335 Check Datum: ONAD27 NAD83 / WG Check one: GIS shapefile	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked.
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clarge scale aerial photograph with pool clearly is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512785.3335 La Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked. titude/Northing: 4957447.7914 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clearly Scale aerial photograph with pool clearly Scale aerial photograph with pool of Scale GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512785.3335 La Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai The pool perimeter is deline	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked. titude/Northing: 4957447.7914 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex upland/wetland complex
■ Check all wetland types that best apply to this pool: □ Forested swamp □ Wet meadow □ Lake or Pond Cove □ Peatland (fen or bog) □ Emergent marsh □ Active beaver flowag	e Cther:
c. Vernal pool status under the Natural Resources P	· · · · · · · · · · · · · · · · · · ·
i. Pool Origin: ● Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	Innatural C Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Organization of Semi-permanent (drying partially in all years are completely in drought years) Explain: 	Ephemeral
Based on size, depth, terrestrial vegetation in pool	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydromal soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth: 40
■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon	 Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	— No vogetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char No inlet or outlet Permanent inlet or outlet	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)
Intermittent inlet Other or Unknown (explored)	lain):

. VERNA	J POO	ם ווו	ICATO	JR INE	ORM	ΔΤΙΩΝ							
a. Indic						ATION							
b. Indic					/ 1 -					_			
					for ea	a massa	s2 @ Ve	s ONo: wha	at % of pool sur	havav	2		
		•		•	•	•			s, confidence l	•		ioc	
									for separate su			ies	
INDICA	TOR						adult Fairy		Т	adpole	s/Larva		
SPECIE			#		Co	onfidence Level ¹		Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood F	rog	2	1		3	3	М	Н	Υ			3	
Spotted Salama		0	0										
Blue-sp Salama		0	0										
Fairy Sh	nrimp ³	0	0										
c. Rarit ■ Note	any ra	ria re spe	cies a				pools. <u>Ob</u> nd date).	servations sh	ould be accom	panied	l by ph	notogra	phs
(labe	JICA WILI	1 0030			fication*		ila datej.			Method	d of Veri	fication*	Q1 44
SPE	CIES		Р	Н	S	- CL**	SPECIES			Р	Н	S	CL**
Blan	ıding's Tu	rtle					Wood Turt	е					
Spot	tted Turtle)					Ribbon Sna	ke					
Ring	ed Bogha	unter					Other:						
**CL d. Optio	- Confidence - Con	serve Potenal po	evel in er reco	species mmer SVP mmen	deternation Notes and	mination: n: on Signifi	icant VP	e= 60-95%, 3= 2	Breeding Area				
	Digital s	submis	ssion (to Jas	on.Cza	apiga@n	A 6 naine.gov)	ttn: Vernal Po 50 State Stree of vernal poo	Inland Fisherie ools et, Bangor, ME I field forms an rojects must be	04401 ad phot	l ograp	hs is or	
or MDIFW	use only	Re	viewed l	by MDIF	W Dat	te:	Initia	als:					
his pool is:	Sign	ificant			ally Siging critic		Not Sign		does not meet b				
comments:													





INSTRUCTIONS: Complete all 3 pages of form as thoroughly	as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 1-15	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)	
b. Contact and credentials previously provided? No (su	ubmit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● other CES, Inc.	(R. St.Amand)
b. Contact and credentials previously provided? ○ No (se	ubmit Addendum 1) Yes
c. Project Name: Solid Waste Processing and Recycling Faci	lity
, , , ,	pool and b) the indicators (one example of each ssional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? ○ Yes ● No If no, was lan	downer permission obtained for survey? Yes No
b. Landowner's contact information (required)	
	Phone:
Street Address: P.O. Box 249	City: Hampden State: ME Zip: 04444
c. Large Projects: check if separate project landowne	r data file submitted
4 VERNAL ROOF LOCATION INFORMATION	
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landman	
From Interstate 95, exit at Cold Brook Road (exit 180). Go is on the left.	0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be s USGS topographic map with pool clearly marked. Large scale aerial photograph with pool clearly man GPS data (complete section below). 	·
GPS location of vernal pool	
Longitude/Easting: 512851.579 Latitude/Nor	thing: 4957515.2961
3	coordinate system:UTM-m
Check one:	
	server has reviewed shape accuracy (best)
 The pool perimeter is delineated by m Include map or spreadsheet with coording 	
○ The above GPS point is at the center	of the pool. (good)
The center of the pool is approximateldegrees from the above GPS	y m ○ /ft ○ in the compass direction of

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on nage 3).
b. Wetland habitat characterization	autrey dates on page o/
 ■ Choose the best descriptor for the landscape setting: ○ Isolated depression ● Pool as 	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ● Natural ○ Natural-Modified ○ Ull If modified, unnatural or unknown, describe any model.	Unnatural O Unknown dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	 Ephemeral
Based on pool depth and size, substrate	
■ Maximum depth at survey: • 0-12" (0-1 ft.) • 12 • Approximate size of pool (at spring highwater): Wide the size of pool (at spring highwater): Wid	dth: 50
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
, ,	, , ,
■ Pool vegetation indicators in order of increasing hydrogeneous Terrestrial nonvascular spp. (e.g. haircap	<u> </u>
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern,	 Wet site ferns (e.g. royal fern, marsh fern) Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	
	et (channel with well-defined banks and permanent flow)
Other or Unknown (export or outlet	lain):

VERNAL POO	L IN	DICATO	RINF	ORMA	ATION								
a. Indicator su	-			14									
b. Indicator al													
■ Was the er			-									_	
■ For each in determinati								sses, confide ed for separ				ies	
INDICATOR						adult Fair			Та	dpoles	s/Larva		
SPECIES		#			nfidence Level ¹		Egg Mass Maturity ²	0	bserved	t		Confide Leve	
Wood Frog	27	0		3		Н			0				
Spotted Salamander	27	26		3	3	А	А						
Blue-spotted Salamander	33	53		3	3	Α	Α						
Fairy Shrimp ³	0	0					· · · · · · · · · · · · · · · · · · ·		·			·	
1-Confidence leve 2-Egg mass matu 3-Fairy Shrimp: X	ırity: F (= pre	= Fresh (nd embryos)	, A= Advance	d (loose matrix,	curved 6	embryo	s), H= I	Hatched (or Hatchin
c. Rarity criteNote any ra (labeled wit	ire sp						oservations	should be a	ıccomp	<u>anied</u>	by ph	otogra	<u>phs</u>
			of Verifi		CL**				1	Method	of Veri	fication*	CL**
SPECIES Blanding's Tu	urtlo	P	Н	S	02	SPECIES Wood Tur	tlo			P	Н	S	
Blanding's Tu						Ribbon Sn							
Ringed Bogha						Other:	uno						
*Method of v	erifica							2- >059/					
d. Optional ob SVP e. General ver Pool is 50% of Caddis fly pr	nal p	otential S oool con ated with	SVP nment h winte	No	n Signifi /or obse , and spe	ervations	of other w	tor Breeding	ı Area				
Send complete NOTE: Digital:	subm	nission (t	to Jaso	on.Cza	piga@m	naine.gov	Attn: Vernal 350 State S) of vernal p	Pools treet, Bango	or, ME (ms and)4401 photo	ograpl	hs is or	
r MDIFW use only	<u>/</u> R	Reviewed b	v MDIF	W Date	ə:	Init	ials:						
is pool is: Sign	_	ıt 🗀 F	Potentia out lackir	lly Sign	ificant			o: Odoes not					
omments:											,,,,,		





Observer's Pool ID: 1-16	MDIFW Pool ID:
. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)	
b. Contact and credentials previously provided?	
, , ,	,
PROJECT CONTACT INFORMATION	
a. Contact name:	CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	○ No (submit Addendum 1) ● Yes
c. Project Name: Solid Waste Processing and Recyc	ling Facility
	of a) the pool and b) the indicators (one example of each onprofessional observers and <u>encouraged</u> for all observers.
LANDOWNER CONTACT INFORMATION	
	was landowner permission obtained for survey? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
c. \square Large Projects: check if separate project la	ndowner data file submitted
a. Location Township: Hampden Brief site directions to the pool (using mapped	landmarks):
From Interstate 95, exit at Cold Brook Road (exit 1	80). Go 0.5 miles south on Cold Brook Road. Access road to the Site
is on the left.	
 b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly m Large scale aerial photograph with pool clear GPS data (complete section below). 	parked.
GPS location of vernal pool	
Longitude/Easting: 512849.2349 Latit	tude/Northing: 4957533.1906
Check Datum: O NAD27 NAD83 / WGS	84 Coordinate system: UTM-m
Check one: GIS shapefile	
	e.gov; observer has reviewed shape accuracy (best)
The pool perimeter is delineatInclude map or spreadsheet with	ted by multiple GPS points. (excellent) h coordinates.
○ The above GPS point is at the	e center of the pool. (good)
-	oximately m /ft / in the compass direction of
	ve GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	e Cther:
c. Vernal pool status under the Natural Resources P	•
i. Pool Origin: ● Natural ○ Natural-Modified ○ U If modified, unnatural or unknown, describe any mod	Innatural C Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Orange of Semi-permanent (drying partially in all years and completely in drought years) Explain: 	Ephemeral
Based on substrate, depth, terrestrial vegetation in po	ol
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wideline Predominate substrate in order of increasing hydrogeneous experience. 	dth: 40
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	No vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	anel providing water flowing into or out of the pool): ot (channel with well-defined banks and permanent flow) ain):

: VED	NAL POC	N IND	IC A T C	JD INIE	OPM/	TION						
						ATION						
	dicator su	-			14				_			
	dicator al				,		0 0 V 0 0 N 1 1	. (0/		0		
				-	_		s? • Yes ONo; wha					
							ct number of egg masse arate cells are provided				ies	
INDI	ICATOR						adult Fairy Shrimp)	Т	adpole	s/Larva		
SPE	CIES		#			nfidence Level ¹	Egg Mass Maturity ²	Observe	ed		Confide Leve	
Woo	d Frog	5	0		3			0				
Spo	tted ımander	6	6		3	3	А					
	e-spotted imander	0	0									
Fair	y Shrimp ³	0	0									
c. Ra ■ N	iry Shrimp: X arity crite lote any ra abeled wit	ria ire spe	ecies a				pools. <u>Observations sh</u> nd date).	nould be accom	panied	l by ph	notogra	<u>phs</u>
Ì		0.00		of Veri		CL**			Method	d of Veri	fication*	CL**
,	SPECIES		Р	Н	S	CL""	SPECIES		Р	Н	S	CL
E	Blanding's Τι	ırtle					Wood Turtle					
	Spotted Turtl	е					Ribbon Snake					
F	Ringed Bogha	unter					Other:					
e. Ge	*CL - Confidence of the confid	pserve Pot rnal po	er reco ential s pol con	species mmer SVP mmen 6 veget	dation No ts and	nination: n: n Signifi /or obse	andled, S = Seen 1= <60%, 2= 60-95%, 3= icant VP Indicator ervations of other wild erberry and speckled alde ation to: Maine Dept. of Attn: Vernal Po	Breeding Area	es and	Wildlif	ře –	
NOT								et, Bangor, ME ol field forms an	d phot	ograp		
or MDII	FW use only	<u>/</u> Re	viewed l	by MDIF	W Date	e:	Initials:					
his poo	l is: Sigr	ificant			ally Sigr		Not Significant due to: (does not meet bi				
Commer	nts:											





bserver's Pool ID:1-17	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	ry)
b. Contact and credentials previously provided?	P ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● othe	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	ycling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey? $$ Yes $$ No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	Phone:
0	
c.	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u> landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted d landmarks):
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left.	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped from Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is USGS topographic map with pool clearly is Large scale aerial photograph with pool of	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is a USGS topographic map with pool clearly in Large scale aerial photograph with pool of IX GPS data (complete section below). GPS location of vernal pool	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is used to be a simple of the second seco	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. USGS topographic map with pool clearly is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512997.1461 Larcheck Datum: NAD27 NAD83 / WG Check one: GIS shapefile	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. USGS topographic map with pool clearly in Large scale aerial photograph with pool clearly in Large scale aerial photograph with pool clearly in Carlos Complete section below). GPS location of vernal pool Longitude/Easting: 512997.1461 Large Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked. titude/Northing: 4957562.1816 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clarge scale aerial photograph with pool clearly is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512997.1461 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai The pool perimeter is deline.	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked. titude/Northing: 4957562.1816 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent) vith coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
☐ Isolated depression☐ Floodplain depression☐ Other: 	ssociated with larger wetland complex upland/ wetland complex
■ Check all wetland types that best apply to this pool:	_
Forested swamp Wet meadow	Slow stream
X Shrub swamp	Floodplain
☐ Peatland (fen or bog) ☐ Abandoned beaver fl☐ Emergent marsh ☐ Active beaver flowage	
c. Vernal pool status under the Natural Resources P	
i. Pool Origin: ● Natural ○ Natural-Modified ○ し	
	odern or historic human impacts to the pool (required):
ii modilied, dimatural of unknown, describe any mo	dem of historic human impacts to the poor (required).
ii. Pool Hydrology	
■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u>	<u>le rationale</u> for opinion.
O Permanent O Semi-permanent	EphemeralUnknown
(drying partially in all years ar	
completely in drought years)	in most years)
Explain:	
Based on depth, substrate, terrestrial vegetation	
■ Maximum depth at survey:	2-36" (1-3 ft.)
■ Approximate size of pool (at spring highwater): Wie	
Predominate substrate in order of increasing hydro	period:
Mineral soil (bare, leaf-litter bottom, or upland	 Organic matter (peat/muck) shallow or
mosses present)	restricted to deepest portion
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hy	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.)	X Wet site shrubs (e.g. highbush blueberry, maleberry,
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon	Wet site graminoids (e.g. blue-joint grass, tussock
fern, interrupted fern, New York fern)	sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort)
■ Faunal indicators (check all that apply):	No vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
_ 1 isin	UIGI
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool):
No inlet or outlet Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
	lain):

VERNAL POO				MATION					
a. Indicator su	_	_							
b. Indicator at									
			-		es? • Yes ONo; what				
					ct number of egg masses arate cells are provided fo				
INDICATOR					r adult Fairy Shrimp)	Ta	adpoles/Lar		
SPECIES		#		Confidence Level ¹	Egg Mass Maturity ²	Observe	d	Confide Leve	
Wood Frog	11	0	3		Н	Υ		3	
Spotted Salamander	6	7	3	3	A				
Blue-spotted Salamander	0	0							
Fairy Shrimp ³	0	0							
3-Fairy Shrimp: X . Rarity criter	= pre	esent			nd embryos), A= Advanced (loo				
■ Note any ra (labeled with					l pools. <u>Observations sho</u> ind date).	ould be accomp	panied by p	hotograp	<u>shs</u>
			f Verification		,		Method of Ve	erification*	CL**
SPECIES	41.	Р	H S		SPECIES		P H	S	<u> </u>
Blanding's Tu					Wood Turtle				
Spotted Turtle				1	Ribbon Snake Other:				
		_	hotograr	hed. H = H	andled, S = Seen				
					1= <60%, 2= 60-95%, 3= >9	95%			
	Po	otential SV	/P _	Non Signif	icant VP				
NOTE: Digital s	subm	nission (to	Jason.C	Czapiga@r	ation to: Maine Dept. of I Attn: Vernal Poo 650 State Street maine.gov) of vernal pool assessed pools; larger pro	ols t, Bangor, ME field forms and	04401 d photogra	phs is on	
r MDIFW use only	F	Reviewed by	MDIFW I	Date:	Initials:				
is pool is: Sign		nt ⊡Po		Significant	Not Significant due to:	does not meet bid			
mments:						AUGO HOLIHOGE	JE1 1011.6. p.	JOI GITTELLE	





INSTRUCTIONS: Complete all 3 pages of form as thoroughly	as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 1-18	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)	
b. Contact and credentials previously provided? C No (su	ubmit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● other CES, Inc.	(R. St.Amand)
b. Contact and credentials previously provided? No (so	ubmit Addendum 1) Yes
c. Project Name: Solid Waste Processing and Recycling Faci	lity
, , , , ,	pool and b) the indicators (one example of each ssional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? ○ Yes ● No If no, was land	downer permission obtained for survey? O Yes O No
b. Landowner's contact information (required)	
	Phone:
Street Address: P.O. Box 249	City: Hampden State: ME Zip: 04444
c. Large Projects: check if separate project landowne	r data file submitted
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landmar	ks):
From Interstate 95, exit at Cold Brook Road (exit 180). Go is on the left.	0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be s USGS topographic map with pool clearly marked. Large scale aerial photograph with pool clearly marked. GPS data (complete section below). 	
GPS location of vernal pool	
Longitude/Easting: 512982.6775 Latitude/Nor	thing: 4957605.6873
Check Datum: NAD27 NAD83 / WGS84 C	oordinate system:UTM-m
Check one:	· ·
	server has reviewed shape accuracy (best)
 The pool perimeter is delineated by m Include map or spreadsheet with coording 	
○ The above GPS point is at the center	of the pool. (good)
 The center of the pool is approximatel degrees from the above GPS 	y m ○ /ft ○ in the compass direction of

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on nage 3).
b. Wetland habitat characterization	our voy dation on page o/
■ Choose the best descriptor for the landscape setting: ○ Isolated depression	ssociated with larger wetland complex upland/wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage ☐ Emergent marsh ☐ Active beaver flowage c. Vernal pool status under the Natural Resources P i. Pool Origin: ⑥ Natural ○ Natural-Modified ○ L	Slow stream Floodplain owage Isolated pool De Other:
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	 Ephemeral
Based on size, depth, substrate, vegetation	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wie Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland 	dth: 26 m • ft Length: 20 m • ft
mosses present) Mineral soil (sphagnum moss present)	
■ Pool vegetation indicators in order of increasing hy	
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char No inlet or outlet Permanent inlet or outlet	
	et (channel with well-defined banks and permanent flow) lain):

VERNAL POOL				ATION							
a. Indicator sur	-		/14								
b. Indicator abu			£		-0 O V	o Navi	hat 0/ af maal a		0		
	•	-	•				hat % of pool su	-		ioo	
							ses, confidence l d for separate si			ies	
INDICATOR					r adult Fairy	Shrimp)		radpole			
SPECIES	#		Co	nfidence Level ¹	•	Egg Mass Maturity ²	Observ	ed		Confide Leve	
Wood Frog 5	2		3	3	А	Н	Υ			3	
Spotted 7	9		3	3	М	A					
Blue-spotted 0	0										
Fairy Shrimp ³ 0	0					· · · · ·					
3-Fairy Shrimp: X = c. Rarity criteria ■ Note any rare	present species a	associa	ted wit	h vernal	l pools. <u>Ot</u>		(loose matrix, curved		,		
(labeled with		<u>name, բ</u> d of Veri			ind date). ⊤			Method	l of Veri	fication*	
SPECIES	P	H	S	CL**	SPECIES			P	H	S	CL**
Blanding's Turtle	е				Wood Turl	le					
Spotted Turtle					Ribbon Sna	ake					
Ringed Boghaun	ter				Other:						
**CL - Confidence d. Optional obset SVP e. General verna Pool about 80	Potential	ommer SVP ommen	ndation No ts and	n: on Signif I/or obs	icant VP	Indicate	or Breeding Area	1			
Send completed NOTE: Digital su acceptab	bmission	(to Jas	on.Cza	apiga@r	A 6 naine.gov	attn: Vernal F 50 State Str of vernal po	Pools reet, Bangor, ME	04401 nd phot	ograpl	hs is or	
r MDIFW use only	Reviewed	by MDIF	W Dat	e:	Initi	als:	_				
is pool is: Signifi	cant	Potentia but lacki			Not Sig	nificant due to	does not meet b				
mments:											





bserver's Pool ID: 1-19	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	ry)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name:	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	ycling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey? $$
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	Phone:
0	
c.	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u> landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted d landmarks):
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left.	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is USGS topographic map with pool clearly Ix Large scale aerial photograph with pool of	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. USGS topographic map with pool clearly IX Large scale aerial photograph with pool of IX GPS data (complete section below). GPS location of vernal pool	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
 Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped from Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 of the USGS topographic map with pool clearly X Large scale aerial photograph with pool of X GPS data (complete section below). GPS location of vernal pool 	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Large scale aerial photograph with pool clearly in the left is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 513035.1448 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clarge scale aerial photograph with pool clearly is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 513035.1448 La Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked. ditude/Northing: 4957582.8682 SS84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) lated by multiple GPS points. (excellent)
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clearly IX Large scale aerial photograph with pool clearly IX Large scale aerial photograph with pool clearly IX GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 513035.1448 La Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai The pool perimeter is deline	d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. elearly marked. stitude/Northing: 4957582.8682 eS84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other: □ Other: □	sociated with larger wetland complex ipland/ wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Active beaver flowag ☐ C. Vernal pool status under the Natural Resources Pool in Pool Origin: ☐ Natural Or unknown, describe any moon describe any describe and describe and describe and describe and describe and describe any	e Other: rotection Act (NRPA)
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Orange Semi-permanent (drying partially in all years are completely in drought years) Explain: 	EphemeralUnknown
Based on depth, substrate, presence of terrestrial vege	tation
 ■ Maximum depth at survey:	of the derivative of the deriv
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
	, , ,
■ Pool vegetation indicators in order of increasing hyd Terrestrial nonvascular spp. (e.g. haircap	
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern,	Wet site ferns (e.g. royal fern, marsh fern)Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	▼ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	Two vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow) ain):

. VERNAL POO	DL IND	OICATO	OR INF	ORMA	ATION						
a. Indicator s					111011						
b. Indicator a	-							_			
				for eac	n masse	es? • Yes ONo; what	% of pool sur	veved	?		
			-		_	ct number of egg masses,				ies	
determinat	ion, ar	nd egg	mass			arate cells are provided fo					
INDICATOR					asses (or infidence	r adult Fairy Shrimp) Egg Mass		adpole	s/Larva	ae Confide	nce
SPECIES		#			Level 1	Maturity ²	Observe	ed -		Leve	
Wood Frog	0	0					0				
Spotted Salamander	2	1		3	3	А					
Blue-spotted Salamander	0	0									
Fairy Shrimp ³	0	0									
3-Fairy Shrimp: >	<pre>< = pres ria are spe</pre>	ent ecies a	ssocia	ted wit	h vernal	nd embryos), A= Advanced (loos pools. <u>Observations sho</u>					
(labelea Wil	000			fication*		lita datoj.		Method	d of Veri	fication*	01 **
SPECIES		Р	Н	S	CL**	SPECIES		Р	Н	S	CL**
Blanding's T	urtle					Wood Turtle					
Spotted Turt	le					Ribbon Snake					
Ringed Bogha						Other:					
**CL - Confi d. Optional of SVP e. General ve	dence oserve Pot rnal po	er reco ential s	species mmer SVP mmen	deterring deterring determined at least termined	mination: n: on Signif	andled, S = Seen 1= <60%, 2= 60-95%, 3= >9 icant VP	reeding Area				
NOTE: Digital	submi	ssion (to Jas	on.Cza	apiga@n	Atton to: Maine Dept. of In Attn: Vernal Poo 650 State Street naine.gov) of vernal pool ssessed pools; larger pro	ls , Bangor, ME field forms an	04401 d phot	l ograp	hs is or	
or MDIFW use only	<u>V</u> Re	eviewed l	by MDIF	W Dat	e:	Initials:					
his pool is: Sign	nificant			ally Sigr		Not Significant due to:	does not meet bi				
omments:											





Observer's Pool ID: 1-20	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMAT	ΓΙΟΝ
a. Observer name: CES, Inc. (R. St.Am	and, J. Szillery)
b. Contact and credentials previous	ly provided? ○ No (submit Addendum 1)
2. PROJECT CONTACT INFORMATI	ON
a. Contact name:	erver • other CES, Inc. (R. St.Amand)
b. Contact and credentials previous	ly provided? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Process	ing and Recycling Facility
species egg mass) are <u>re</u> d	ital images of a) the pool and b) the indicators (one example of each quired for nonprofessional observers and encouraged for all observers.
3. LANDOWNER CONTACT INFORM	
•	No If no, was landowner permission obtained for survey? Yes No
b. Landowner's contact information	
	Phone:
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
VERNAL POOL LOCATION INFOR a. Location Township: Hampden Brief site directions to the pool (use)	
. ,	
I	ok Road (exit 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site
is on the left.	
L	with pool clearly marked.
b. Mapping Requirements: At leas USGS topographic map with p Large scale aerial photograph	oool clearly marked. with pool clearly marked.
b. Mapping Requirements: At leas USGS topographic map with p Large scale aerial photograph GPS data (complete section b	oool clearly marked. with pool clearly marked.
b. Mapping Requirements: At leas USGS topographic map with p Large scale aerial photograph GPS data (complete section b	bool clearly marked. n with pool clearly marked. pelow). Latitude/Northing: 4957615.5432
b. Mapping Requirements: At least USGS topographic map with particles are a scale aerial photograph GPS data (complete section by GPS location of vernal pool Longitude/Easting: 513005.6917	bool clearly marked. n with pool clearly marked. pelow). Latitude/Northing: 4957615.5432
b. Mapping Requirements: At leas USGS topographic map with p Large scale aerial photograph GPS data (complete section b GPS location of vernal pool Longitude/Easting: 513005.6917 Check Datum: NAD27 NAD27 Check one: GIS shapefile - send to Jason.0	cool clearly marked. In with pool clearly mar
b. Mapping Requirements: At least USGS topographic map with possible Large scale aerial photograph GPS data (complete section by GPS location of vernal pool Longitude/Easting: 513005.6917 Check Datum: NAD27 Nad27 Nad27 Send to Jason. Complete section by Nad27 Nad	bool clearly marked. n with pool clearly marked. pelow). Latitude/Northing: 4957615.5432 IAD83 / WGS84 Coordinate system: UTM-m
b. Mapping Requirements: At leas USGS topographic map with p Large scale aerial photograph GPS data (complete section b GPS location of vernal pool Longitude/Easting: 513005.6917 Check Datum: NAD27 N Check one: GIS shapefile - send to Jason. C The pool perime - Include map or s	Latitude/Northing: 4957615.5432 IAD83 / WGS84 Coordinate system: UTM-m Czapiga@maine.gov; observer has reviewed shape accuracy (best) ter is delineated by multiple GPS points. (excellent)

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other:	sociated with larger wetland complex upland/ wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Emergent marsh ☐ Active beaver flowage c. Vernal pool status under the Natural Resources P	e Cother:
i. Pool Origin: ● Natural ○ Natural-Modified ○ L	Jnnatural ○ Unknown
	dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	 Ephemeral
Based on depth, presence of terrestrial vegetation, sul	ostrate
 Maximum depth at survey:	dth: 20
moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	anel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)

VERNAL POO					NOITA						
a. Indicator s	-			/14				_			
b. Indicator a									_		
			•		•	es? • Yes ONo; what	•	•		_	
						ct number of egg masses arate cells are provided f				ies	
INDICATOR						r adult Fairy Shrimp)	Т	adpole	s/Larva		
SPECIES		#		Co	nfidence Level ¹	Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood Frog	0	3		3	3	Н	Υ			3	
Spotted Salamander	3	17		3	3	А					
Blue-spotted Salamander	0	0									
Fairy Shrimp ³ 1-Confidence lev	- 1	0									
3-Fairy Shrimp: 2	x = pres e ria are sp	sent ecies a	ssocia	ted wit	h verna	nd embryos), A= Advanced (loc l pools. <u>Observations sho</u>					
(labeled Wi	ui obs	_	d of Veri					Method	d of Veri	fication*	
SPECIES		Р	Н	S	CL**	SPECIES		Р	H	S	CL**
Blanding's T	urtle					Wood Turtle					
Spotted Turt	le					Ribbon Snake					
Ringed Bogh	aunter					Other:					
d. Optional ol ☐ SVP	bserv □ Po rnal p	er reco	ommer SVP mmen	ndation	n: on Signil I/or obs	1= <60%, 2= 60-95%, 3= > ficant VP Indicator I ervations of other wildI	Breeding Area				
NOTE: Digital	subm	ission (to Jas	on.Cza	apiga@r	ation to: Maine Dept. of Attn: Vernal Poo 650 State Stree maine.gov) of vernal pool assessed pools; larger pro	ols t, Bangor, ME field forms an	04401 d phot	l ograp	hs is or	
r MDIFW use onl	у R	eviewed	by MDIF	-W Dat	e:	Initials:					
is pool is: Sig		t 🔲	Potentia	ally Sigr	nificant	Not Significant due to:) does not meet bi				
omments:											





bserver's Pool ID: 1-21	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	y)
b. Contact and credentials previously provided?	○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name:	r CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	O No (submit Addendum 1) Yes
c. Project Name: Solid Waste Processing and Recy	cling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each onprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	, was landowner permission obtained for survey? $$ Yes $$ N
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Ctroot Address DO Poy 240	
c. Large Projects: check if separate project I	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u> andowner data file submitted
c. Large Projects: check if separate project I VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	andowner data file submitted
c. Large Projects: check if separate project Inverse Project I	andowner data file submitted d landmarks):
c. Large Projects: check if separate project Inverse Projects: check if separate project Inverse Project Inver	andowner data file submitted
c. Large Projects: check if separate project Inverse Projects: check if separate project Inverse Project Inver	andowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Signary to the Si
c. Large Projects: check if separate project Inverse Projects: check if separate project Inverse Project Inver	andowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Signary to the Si
C. Large Projects: check if separate project In VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 rown in USGS topographic map with pool clearly rown in Large scale aerial photograph with pool clearly GPS data (complete section below). GPS location of vernal pool	andowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Signary to the Si
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 r USGS topographic map with pool clearly r X Large scale aerial photograph with pool clearly r GPS data (complete section below). GPS location of vernal pool	andowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sin must be submitted (check those submitted): marked. early marked. titude/Northing: 4957601.9712
C. Large Projects: check if separate project Inverse I	andowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sin must be submitted (check those submitted): marked. early marked. titude/Northing: 4957601.9712
c. Large Projects: check if separate project Inversal Pool Location Information a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 mapped Inversal Pool Large scale aerial photograph with pool clearly mapped Inversal Pool Large Scale aerial photograph with pool clearly mapped Inversal Pool Longitude/Easting: 513006.679 Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile send to Jason.Czapiga@main.	andowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Simust be submitted (check those submitted): marked. early marked. titude/Northing: 4957601.9712 S84 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
c. Large Projects: check if separate project Inverse I	andowner data file submitted d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. early marked. titude/Northing: 4957601.9712 S84 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) atted by multiple GPS points. (excellent) rith coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
•	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag	e Other:
c. Vernal pool status under the Natural Resources P	
i. Pool Origin: ● Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	Ephemeral
Explain:	
Based on depth, size, substrate, terrestrial vegetation	
 Maximum depth at survey: • 0-12" (0-1 ft.)	Ath: 15
■ Pool vegetation indicators in order of increasing hyd	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)Wet site graminoids (e.g. blue-joint grass, tussock
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
■ Faunal indicators (check all that apply):	No vegetation in pool
Fish Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char	
	t (channel with well-defined banks and permanent flow) ain):

VERNAL POO					ATION								
a. Indicator s				/14						-			
b. Indicator a				_		0 0 1/	O. 1.1			14	_		
■ Was the er	•		•	•	•			-		•			
For each ir determinat						ct number o arate cells a						ies	
	T					r adult Fairy	Shrimp)				s/Larva		
INDICATOR SPECIES		#		Co	nfidence Level ¹	• E	Egg Mass Maturity ²		Observe	d		Confide Leve	
Wood Frog	1	1		3	3		A		N				<u> </u>
Spotted Salamander	0	0								 			
Blue-spotted Salamander	0	0											
Fairy Shrimp ³	0	0								: 			
a-Fairy Shrimp: X a. Rarity crite ■ Note any ra (labeled wit	ria ire spe	ecies a					ervations s	should be	accomp	oanied	l by ph	notogra	<u>phs</u>
tiancica wit	11 0000			fication*						Method	of Veri	fication*	01 **
SPECIES		Р	Н	S	- CL**	SPECIES				Р	Н	S	CL**
Blanding's Tu	ırtle					Wood Turtle							
Spotted Turtl	е					Ribbon Snak	е						
Ringed Bogha	aunter					Other:							
. Optional ob	Pot	er reco	mmer SVP mmen	ndation	n: on Signif I/or obs	1= <60%, 2= ficant VP ervations c	☐ Indicato	or Breedin	g Area				
Send complete NOTE: Digital accept	submi	ssion (to Jas	on.Cza	apiga@r	Att 65	tn: Vernal F 0 State Str of vernal po	Pools reet, Bango pol field for	or, ME	04401 d phot	ograpl	hs is or	
MDIFW use only	<u>/</u> Re	viewed	by MDIF	W Dat	:e:	Initial	s:	_					
s pool is: Sigr	nificant			ally Sigi		☐ Not Signi	ficant due to:	does not					
nments:													





bserver's Pool ID: 1-22	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	y)
b. Contact and credentials previously provided?	○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name:	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	² ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	vcling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each conprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	, was landowner permission obtained for survey? $$
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	
c. Large Projects: check if separate project	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u> andowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	andowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	andowner data file submitted d landmarks):
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	andowner data file submitted
vernal pool location information a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left.	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is used to be a separate project. USGS topographic map with pool clearly is Large scale aerial photograph with pool clearly is used.	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
Example Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. D. Mapping Requirements: At least 2 of the 3 is a USGS topographic map with pool clearly in Large scale aerial photograph with pool of IX GPS data (complete section below). GPS location of vernal pool	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is a USGS topographic map with pool clearly in Large scale aerial photograph with pool of Image of I	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clarge scale aerial photograph with pool clearly is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512999.5445 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked.
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clarge scale aerial photograph with pool clearly is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512999.5445 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked. titude/Northing: 4957636.6822 S84 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
C. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. Clarge scale aerial photograph with pool clearly is Large scale aerial photograph with pool clearly is GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512999.5445 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@mai The pool perimeter is deline.	d landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. early marked. titude/Northing: 4957636.6822 S84 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex ipland/ wetland complex
■ Check all wetland types that best apply to this pool: X Forested swamp Wet meadow X Shrub swamp Lake or Pond Cove Peatland (fen or bog) Abandoned beaver flowage X Emergent marsh Active beaver flowage	
c. Vernal pool status under the Natural Resources P	• •
i. Pool Origin: ● Natural ○ Natural-Modified ○ U If modified, unnatural or unknown, describe any mod	nnatural O Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Organization Semi-permanent (drying partially in all years and completely in drought years) Explain: 	Ephemeral
Схріант.	
Based on substrate, size, terrestrial vegetation	
 Maximum depth at survey: • 0-12" (0-1 ft.)	Ith: 30
■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon	 Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	· · · · · · · · · · · · · · · · · · ·
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow)
Intermittent inlet Other or Unknown (expl or outlet	ain):

VERNAL POO	DL IND	DICATO	OR INF	ORMA	NOITA									
a. Indicator s	urvey	dates	5/8,5	/14							_			
b. Indicator a												_		
■ Was the er			-		_								_	
■ For each ir determinat													ies	
INDICATOR						or adult l				Т	adpole	s/Larva		
SPECIES		#		Co	nfidenc Level ¹	е		gg Mass Maturity ²		Observe	ed		Confide Leve	
Wood Frog	0	0												
Spotted Salamander	3	3		3	3	N	И	A						
Blue-spotted Salamander	0	0												
Fairy Shrimp ³	0	0												
2-Egg mass matu 3-Fairy Shrimp: > c. Rarity crite Note any ra (labeled wit	<pre>c = pres ria are spee</pre>	ent ecies a	ssocia	ted wit	h verna	al pools	s. <u>Obs</u> e							
(labeled Wit	.11 000		of Veri				<u>,</u> .				Method	l of Veri	fication*	G) did
SPECIES		Р	Н	S	CL**	SPEC	CIES				Р	Н	S	CL**
Blanding's Tu	urtle					Wood	d Turtle							
Spotted Turtl	e					Ribbo	n Snake	ı						
Ringed Bogha	aunter					Other	r:							
**CL - Confidence of the confi	Poternal povegeta	tential sool con	mmer SVP mmen	ndation Note ts and	n: on Sign I /or ob s	ificant \	VP [Indica	tor Breed	ling Area				
Send complete NOTE: Digital accept	submi	ission (to Jas	on.Cza	apiga@	maine.	Attı 650 gov) o	n: Vernal) State S f vernal p	Pools treet, Bar pool field	ngor, ME	04401 d phot	ograp	hs is or	
r MDIFW use only	<u>/</u> Re	eviewed	by MDIF	W Dat	e:		Initials	:						
is pool is: Sigr		: 🖂	Potentia	ally Sigr	nificant	Not			~	not meet bi				
omments:												,		





server's Pool ID: 1-23	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
. Observer name: CES, Inc. (R. St.Amand, J. Szillery)			
. Contact and credentials previously provided?	No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
i. Contact name: ○ same as observer other	CES, Inc. (R. St.Amand)		
o. Contact and credentials previously provided?	No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and Recycl	ing Facility		
NOTE: <u>Clear photographs or digital images</u> of species egg mass) are <u>required</u> for not			
ANDOWNER CONTACT INFORMATION			0
a. Are you the landowner? ○ Yes O No If no, w	was landowner permission obta	ained for survey? () Yes ⊖ No
b. Landowner's contact information (required)			
Ni Ilialiam Davialam manatili C			
Name: Hickory Development, LLC			
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar VERNAL POOL LOCATION INFORMATION	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar VERNAL POOL LOCATION INFORMATION	City: <u>Hampden</u> ndowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: Hampden ndowner data file submitted andmarks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 miles.	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold But the submitted (check those	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 Large Projects: check if separate project lar FERNAL POOL LOCATION INFORMATION Location Township: Hampden Brief site directions to the pool (using mapped lar From Interstate 95, exit at Cold Brook Road (exit 18 is on the left.	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold E ust be submitted (check those arked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar /ERNAL POOL LOCATION INFORMATION I. Location Township: Hampden Brief site directions to the pool (using mapped la separate project lar From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. I. Mapping Requirements: At least 2 of the 3 mg USGS topographic map with pool clearly magnetic projects and projects are project lar Description: Large Projects: Check if separate project lar Mapping Requirements: At least 2 of the 3 mg USGS topographic map with pool clearly magnetic project lar Description: Large Projects: Check if separate project large pr	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold E ust be submitted (check those arked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 Large Projects: check if separate project lar FERNAL POOL LOCATION INFORMATION Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. Mapping Requirements: At least 2 of the 3 multiple USGS topographic map with pool clearly maximum Large scale aerial photograph with pool clear ISGS GPS data (complete section below).	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold E ust be submitted (check those arked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 Large Projects: check if separate project large Projects: All Projects and Projects: All Projects and Projects: check if separate project large project la	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold E ust be submitted (check those arked. arly marked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project large Projects: Hampden Brief site directions to the pool (using mapped large projects) is on the left. From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. D. Mapping Requirements: At least 2 of the 3 must be projected by the separate project large project	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold E ust be submitted (check those arked. arly marked.	State: ME Brook Road. Access ro submitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la separate project lar From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly may Large scale aerial photograph with pool clear GPS data (complete section below). GPS location of vernal pool	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold for the co	State: ME Brook Road. Access ro submitted): -m	
Street Address: P.O. Box 249 c. Large Projects: check if separate project large Projects: check if separate projects large Projects large Projects: check if separate projects large Projects large Projects: check if separate projects large Projects: chec	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold B ust be submitted (check those arked. arly marked. ude/Northing: 4957640.4651 ac.gov; observer has reviewed shaped by multiple GPS points. (ex	State: ME Brook Road. Access ro submitted): -m De accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate project lar VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la separate project lar From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly material photograph with pool clear photograph photograph with pool clear photograph photograph with pool clear photograph photo	City: Hampden ndowner data file submitted andmarks): 80). Go 0.5 miles south on Cold E ust be submitted (check those arked. arly marked. ude/Northing: 4957640.4651 adde/Northing: 4957640.4651 accordinate system: UTM- accordinates.	State: ME Brook Road. Access ro submitted): -m De accuracy (best)	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
-	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool:	
Forested swamp Wet meadow	Slow stream
X Shrub swamp	Floodplain
☐ Peatland (fen or bog) ☐ Abandoned beaver fl☐ Emergent marsh ☐ Active beaver flowag	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ● Natural ○ Natural-Modified ○ U	Jnnatural ○ Unknown
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
ii Pool Hydrology	
ii. Pool Hydrology■ Select the pool's <u>estimated</u> hydroperiod AND <u>provice</u>	de rationale for oninion
O Permanent O Semi-permanent	Ephemeral
(drying partially in all years ar	
completely in drought years)	in most years)
Explain:	
Based on depth, substrate, vegetation	
■ Maximum depth at survey:	2-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)
■ Approximate size of pool (at spring highwater): Wie	dth: 70
■ Predominate substrate in order of increasing hydro	period:
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion
Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hy	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	X Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle)	Floating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool):
No inlet or outlet Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
	lain):

/ERNAL PO					ATION								
i. Indicator s o. Indicator a	-			/ 14									
o. indicator a Was the e				for ea	n maeea	s2 (a) Ve	s ONo. w	hat % of no	ol surve	have	2		
■ For each i			_	_	_							iae	
								ed for separa				163	
INDICATOR				Egg Ma	asses (or	adult Fairy	Shrimp)				s/Larva		
SPECIES		#			nfidence Level ¹		Egg Mass Maturity ²	0	bserved			Confide Leve	
Wood Frog	5	0		3	Level	Н	Waturity		Υ			3	<u> </u>
Spotted Salamander	6	4		3	3	М	A						
Blue-spotted Salamander													
Fairy Shrimp ³													
a-Fairy Shrimp:: Rarity crite Note any ra (labeled wi	e ria are spe	ecies as					servations	should be a	ccompa	anied	by ph	<u>iotogra</u>	phs
\labolog \tag{\tag{\tag{\tag{\tag{\tag{\tag{	tii obc.			fication*		liu uuto _j .			М	lethod	of Veri	fication*	21 ++
SPECIES		Р	Н	S	CL**	SPECIES				Р	Н	S	CL**
Blanding's T	urtle					Wood Turt	le		[
Spotted Turi	le					Ribbon Sna	ike		ſ				
Ringed Bogh	aunter					Other:							
. Optional o	bserve Pot	er reco tential S	mmer SVP mmen	ndation No ts and	n: on Signif l/or obse	icant VP	of other w	or Breeding	Area				
Gend completo Send completo IOTE: Digital accep	submi	ission (i	to Jas	on.Cza	apiga@n	A 6 naine.gov)	ttn: Vernal 50 State St of vernal p	Pools reet, Bango	r, ME 04 ms and	4401 photo	ograpl	hs is or	
MDIFW use onl	<u>У</u> Re	eviewed b	by MDIF	W Date	e:	Initia	als:						
pool is: Sig	nificant			ally Sigr		─ Not Sigi	nificant due to	o: Odoes not r					
nments:													





INSTRUCTIONS: Complete all 3 pages of form as tho	roughly as possible. Most fields are <u>required</u> for pool registrati
Observer's Pool ID: 1-24	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: <u>CES, Inc. (R. St.Amand, J. Szillery)</u>	
b. Contact and credentials previously provided?	No (submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: \bigcirc same as observer \bigcirc other \bigcirc	ES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	No (submit Addendum 1) Yes
c. Project Name: Solid Waste Processing and Recyclin	ng Facility
species egg mass) are <u>required</u> for non	a) the pool and b) the indicators (one example of each professional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
	vas landowner permission obtained for survey? ○ Yes ○ No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped lage)	
	<u> </u>
From Interstate 95, exit at Cold Brook Road (exit 18 is on the left.	0). Go 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 mu USGS topographic map with pool clearly ma Large scale aerial photograph with pool clea GPS data (complete section below). 	rked.
GPS location of vernal pool	
Longitude/Easting: 512888.2539 Latitu	de/Northing: 4957681.0077
Check Datum: O NAD27 NAD83 / WGS8	4 Coordinate system: UTM-m
Check one:	
	gov; observer has reviewed shape accuracy (best)
The pool perimeter is delineateInclude map or spreadsheet with	d by multiple GPS points. (excellent) coordinates.
○ The above GPS point is at the	center of the pool. (good)
The center of the pool is approxdegrees from the above	ximately m /ft in the compass direction of e GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
•	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Lake or Pond Cove ☐ Abandoned beaver flowag ☐ Covernal pool status under the Natural Resources P	e Cother:
i. Pool Origin: ● Natural ○ Natural-Modified ○ U	•
	dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	 Ephemeral
Explain:	
Based on size of pool and substrate	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth: 50 m • ft Length: 25 m • ft
■ Pool vegetation indicators in order of increasing hydrogen	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	⋈ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)⋈ Wet site graminoids (e.g. blue-joint grass, tussock
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	140 vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char	
	et (channel with well-defined banks and permanent flow)
 Intermittent inlet Other or Unknown (export or outlet) 	lain):

. VERNA	L POO	L IND	ICATO	OR INF	ORMA	ATION						
a. Indic												
b. Indic		-							_			
					for ea	a masse	s?	t % of pool sur	veved	?		
■ For	each in	dicato	or spec	ies, in	dicate	the exac	ct number of egg masses arate cells are provided for	, confidence le	evel fo	r spec	ies	
INDICA	TOP						adult Fairy Shrimp)	Т	adpole	s/Larva		
SPECIE			#		Co	nfidence Level ¹	Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood F	rog	0	7			3	Н	Υ			3	,,
Spotted Salama		15	19		3	3	А					
Blue-sp Salama		0	0									
Fairy Sh	nrimp ³	0	0									
	any ra	e spe					pools. <u>Observations sho</u> nd date).	ould be accom	paniec	l by ph	notogra	phs
				of Veri		CL**			Method	of Veri	fication*	CL**
	CIES		P	H	S	OL .	SPECIES		Р	Н	S	
	iding's Tu						Wood Turtle					
	tted Turtle						Ribbon Snake					
	ed Boghau					<u> </u>	Other: andled, S = Seen					
d. Optio	onal ob	Serve Pot	er reco ential S	mmer SVP mmen	ndation No ts and	n: on Signif l /or obs e	1= <60%, 2= 60-95%, 3= > icant VP Indicator Exervations of other wildlings, winterberry, and speckless.	Breeding Area				
	Digital s	submi	ssion (to Jas	on.Cza	apiga@n	ntion to: Maine Dept. of I Attn: Vernal Poo 650 State Stree naine.gov) of vernal pool ssessed pools; larger pro	ols t, Bangor, ME field forms an	04401 d phot	ograpl	hs is or	
or MDIFW	use only	Re	viewed l	by MDIF	W Dat	e:	Initials:					
his pool is:	Signi	ificant			ally Sigr		Not Significant due to:	does not meet bi				
comments:												





server's Pool ID: 1-25	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)			
o. Contact and credentials previously provided? C No	(submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name: ○ same as observer ● other CES,	Inc. (R. St.Amand)		
b. Contact and credentials previously provided? C No	(submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and Recycling I	Facility		
NOTE: <u>Clear photographs or digital images</u> of a) species egg mass) are required for nonpro			
openio egg maoo, are <u>requires</u> ioi nonpre		<u></u>	
LANDOWNER CONTACT INFORMATION			
a. Are you the landowner? \bigcirc Yes $lacktriangle$ No \Box If no, was	landowner permission obt	ained for survey? (Yes ON
b. Landowner's contact information (required)			
Name: Hickory Development, LLC	Phono:		
Hamo. Thereby bevelopment, LLC	FIIONE		
	City: Hampden		Zip: <u>0444</u>
	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249	City: Hampden		_ Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project landov VERNAL POOL LOCATION INFORMATION	City: <u>Hampden</u> wner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project landov VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: Hampden wner data file submitted marks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180).	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marke	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold be submitted (check those d.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marke USGS topographic map with pool clearly marke	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold be submitted (check those d.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marke	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold be submitted (check those d.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marke USGS topographic map with pool clearly marke	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold be submitted (check those d.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be complete section below). GPS data (complete section below). GPS location of vernal pool	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold be submitted (check those d.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be complete section below). GPS data (complete section below). GPS location of vernal pool	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold be submitted (check those d. marked.	Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marke USGS topographic map with pool clearly marke Carge scale aerial photograph with pool clearly GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512873.0028 Latitude/	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold in the cold in	Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marke USGS topographic map with pool clearly marke Charge scale aerial photograph with pool clearly GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512873.0028 Latitude/ Check Datum: NAD27 NAD83 / WGS84 Check one: GIS shapefile	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold in the cold in	Brook Road. Access rosubmitted): -m pe accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate project landow VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land From Interstate 95, exit at Cold Brook Road (exit 180). is on the left. b. Mapping Requirements: At least 2 of the 3 must be completed as a complete section below). Check Data (complete section below). GPS location of vernal pool Longitude/Easting: 512873.0028 Check Datum: NAD27 NAD83 / WGS84 Check one: GIS shapefile - send to Jason.Czapiga@maine.gov The pool perimeter is delineated by	City: Hampden wner data file submitted marks): Go 0.5 miles south on Cold in the cold in	Brook Road. Access rosubmitted): -m pe accuracy (best)	

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	- carrey autos en page ey.
■ Choose the best descriptor for the landscape setting: ○ Isolated depression	ssociated with larger wetland complex wetland / upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ● Natural ○ Natural-Modified ○ Ull If modified, unnatural or unknown, describe any model.	Innatural O Unknown dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	 Ephemeral
Based on depth, substrate, vegetation	
■ Maximum depth at survey: O-12" (0-1 ft.) Approximate size of pool (at spring highwater): Wie Predominate substrate in order of increasing hydro	dth: <u>30</u>
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hy	
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	
	et (channel with well-defined banks and permanent flow)
○ Intermittent inlet ○ Other or Unknown (exp	lain):

VERNAL POOL INDICATOR INFORMATION														
a. Indicator s	-		•	/14							_			
b. Indicator a														
■ Was the e			-	_	_									
■ For each in determinat										onfidence le separate su			ies	
INDICATOR	NDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae Confidence Egg Mass Cheered Confidence													
SPECIES		#		Co	nfidend Level ¹	е		gg mas Maturit		Observe	ed		Leve	
Wood Frog	0	0												
Spotted Salamander	2	0						 						
Blue-spotted Salamander	35	78		3	3		М	Α						
Fairy Shrimp ³	0	0												
. Rarity crite ■ Note any ra (labeled with	are sp							ervatic	ns should	l be accom	panied	l by ph	notogra	p <u>hs</u>
SPECIES		Method	d of Veri	fication*	- CL**	SDI	ECIES				Method	of Veri	fication*	CL**
Blanding's To	urtla	P	Н	S			od Turtle				P	Н	S	
Spotted Turt							oon Snak	e						
Ringed Bogha						Oth								
*Method of		ition: P	<u>'</u> = Photo	graphe	 ed, H = I			Seen						
**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area General vernal pool comments and/or observations of other wildlife: Pool is 90% vegetated with winterberry, speckled alder, grasses														
end completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 OTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.														
<u> </u>		or proj	ecis w	101 3 01	lewei	asses	seu po	OIS, IAI	ger projec	ots must be	Hiane	u as II	aru cop	es.
MDIFW use only		eviewed					Initial							
s pool is: Sigi	nificant		Potentia but lacki			N	ot Signi	f icant du		es not meet bi es not meet M				
nments:														





bserver's Pool ID: 1-26	MDIFW Pool ID:
PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Sziller	ry)
b. Contact and credentials previously provided?	P ○ No (submit Addendum 1)
PROJECT CONTACT INFORMATION	
a. Contact name:	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recy	ycling Facility
species egg mass) are <u>required</u> for n	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers
LANDOWNER CONTACT INFORMATION	
	o, was landowner permission obtained for survey? $$ Yes $$ No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>0444</u>
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	landowner data file submitted
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	landowner data file submitted d landmarks):
	landowner data file submitted
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left.	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
WERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped from Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is USGS topographic map with pool clearly X Large scale aerial photograph with pool of	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
WERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is used to be a second proof of the sec	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked.
WERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped from Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is used to be use	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked.
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped from Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is used to be us	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked.
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 is on the left. USGS topographic map with pool clearly IX Large scale aerial photograph with pool of IX GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512870.337 La Check Datum: ○ NAD27 ● NAD83 / WG Check one: ● GIS shapefile - send to Jason.Czapiga@mai	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked. titude/Northing: 4957697.0346 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 □ USGS topographic map with pool clearly □ Large scale aerial photograph with pool clearly □ GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512870.337 La Check Datum: ○ NAD27 ○ NAD83 / WG Check one: ○ GIS shapefile - send to Jason.Czapiga@mai ○ The pool perimeter is deline	landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Sit must be submitted (check those submitted): marked. learly marked. titude/Northing: 4957697.0346 S84 Coordinate system: UTM-m ine.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
	ssociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver fl ☐ Emergent marsh ☐ Active beaver flowage	e Other:
c. Vernal pool status under the Natural Resources P	•
i. Pool Origin: ● Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	Jnnatural C Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	Ephemeral
Based on depth, substrate, presence of vegetation	
 ■ Maximum depth at survey:	dth: 20
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
,, ,	, , ,
■ Pool vegetation indicators in order of increasing hy	<u> </u>
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	- No vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)

VERNAL POOL					ATION								
a. Indicator sui	-			14									
b. Indicator ab				_							_		
■ Was the ent													
■ For each inc determination												ies	
INDICATOR	DICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae Confidence Egg Mass Charvad Confidence												
SPECIES		#			nfidence Level ¹		Egg Mass Maturity ²	С	bserved	t		Confide	
Wood Frog	3 0			3					0				
Spotted , Salamander ,	2 2			3	3	М	А						
Blue-spotted Salamander	0 0												
Fairy Shrimp ³	0 0												
3-Fairy Shrimp: X =c. Rarity criteriNote any rare (labeled with)	a e speci	es ass					servations	should be a	accomp	anied	by ph	<u>iotogra</u>	phs
(Idbolod With		ethod of				na aatoj.			1	Method	of Veri	fication*	01.44
SPECIES		P I	1	S	CL**	SPECIES				Р	Н	S	CL**
Blanding's Tur	tle					Wood Turtl	е						
Spotted Turtle						Ribbon Sna	ke						
Ringed Boghau	nter					Other:							
d. Optional obs	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% *Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area General vernal pool comments and/or observations of other wildlife: Pool vegetation is about 70% vegetated with winterberry												
Send completed NOTE: Digital so accepta	ubmissi	ion (to	Jasc	on.Cza	piga@n	A 69 naine.gov)	ttn: Vernal 50 State St of vernal p	Pools reet, Bango	or, ME (ms and	04401 I phot	ograpl	hs is or	
r MDIFW use only	Revie	wed by	MDIF	W Date	e:	Initia	ıls:						
s pool is: Signif		Pot	tentia	Ily Sign	ificant			o: Odoes not					
mments:													





server's Pool ID: 1-27	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)			
o. Contact and credentials previously provided?	No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name: \bigcirc same as observer \odot other \bigcirc	ES, Inc. (R. St.Amand)		
b. Contact and credentials previously provided?	No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and Recyclin	ng Facility		
NOTE: <u>Clear photographs or digital images</u> of species egg mass) are <u>required</u> for non			
LANDOWNER CONTACT INFORMATION			
a. Are you the landowner? O Yes No If no, w	vas landowner permission obta	ained for survey?	Yes ON
b. Landowner's contact information (required)	·	•	
, , ,	5.		
Maille, Hickory Developillett, LLC	Phone:		
Name: Hickory Development, LLC Street Address: P.O. Box 249			Zip: 04444
	City: Hampden		_ Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION	City: Hampden		_ Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION	City: <u>Hampden</u> downer data file submitted		_ Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: <u>Hampden</u> downer data file submitted andmarks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 must	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B	State: ME	
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Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. D. Mapping Requirements: At least 2 of the 3 must be some small subject to the series of the 3 must be some scale aerial photograph with pool clearly materials.	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. D. Mapping Requirements: At least 2 of the 3 must be some six of the last 2 of the 3 must be some six of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the last 2 of the 3 must be some six of the 3 must b	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. D. Mapping Requirements: At least 2 of the 3 must is on the left. USGS topographic map with pool clearly mat in Large scale aerial photograph with pool clear in GPS data (complete section below). GPS location of vernal pool	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s rked. rly marked.	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. D. Mapping Requirements: At least 2 of the 3 must is on the left. D. Was topographic map with pool clearly maix Large scale aerial photograph with pool clear ix GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512852.1188 Latitude	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s rked. rly marked. de/Northing: 4957723.2957	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 must is on the left. C. Mapping Requirements: At least 2 of the 3 must is on the left. GPS topographic map with pool clearly mat in Large scale aerial photograph with pool clear in Kernal GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512852.1188 Check Datum: NAD27 NAD83 / WGS84	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s rked. rly marked. de/Northing: 4957723.2957	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la from Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 must is on the left. C. Mapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left. G. Wapping Requirements: At least 2 of the 3 must is considered and in the left.	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s rked. rly marked. de/Northing: 4957723.2957 4 Coordinate system: UTM-	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 must is on the left. c. Mapping Requirements: At least 2 of the 3 must is on the left. GPS topographic map with pool clearly mat Large scale aerial photograph with pool clearly mat GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512852.1188 Latitus Check Datum: NAD27 NAD83 / WGS84 Check one: GIS shapefile - send to Jason.Czapiga@maine. The pool perimeter is delineate	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s rked. rly marked. de/Northing: 4957723.2957 4 Coordinate system: UTM- gov; observer has reviewed shap red by multiple GPS points. (exc	State: ME Brook Road. Access ro submitted): m be accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 must is on the left. c. Mapping Requirements: At least 2 of the 3 must is on the left. GPS topographic map with pool clearly maximum is Large scale aerial photograph with pool clear is Capable in Capable	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s rked. rly marked. de/Northing: 4957723.2957 4 Coordinate system: UTM- gov; observer has reviewed shap and by multiple GPS points. (excoordinates.	State: ME Brook Road. Access ro submitted): m be accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate project land VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped la From Interstate 95, exit at Cold Brook Road (exit 18 is on the left. b. Mapping Requirements: At least 2 of the 3 must is on the left. c. Mapping Requirements: At least 2 of the 3 must is on the left. GPS topographic map with pool clearly mat Large scale aerial photograph with pool clearly mat GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512852.1188 Latitus Check Datum: NAD27 NAD83 / WGS84 Check one: GIS shapefile - send to Jason.Czapiga@maine. The pool perimeter is delineate	City: Hampden downer data file submitted andmarks): 0). Go 0.5 miles south on Cold B st be submitted (check those s rked. rly marked. de/Northing: 4957723.2957 4 Coordinate system: UTM- gov; observer has reviewed shap ad by multiple GPS points. (exc coordinates. center of the pool. (good)	State: ME Brook Road. Access ro submitted): m be accuracy (best) cellent)	ad to the Sit

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other: \(\frac{1}{2} \)	ssociated with larger wetland complex wetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Emergent marsh ☐ Active beaver flowag c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ● Natural ○ Natural-Modified ○ Ulf modified, unnatural or unknown, describe any model.	Jnnatural C Unknown dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	Ephemeral
Based on size, depth, terrestrial vegetation in pool	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydrol 	dth: 35
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	X Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow) lain):

	VERNAL POOL INDICATOR INFORMATION											
a. Ind	dicator su	ırvey	dates:	5/8,5	/14				_			
b. In	dicator al	ounda	nce cr	riteria								
■ ∨	Vas the er	ntire po	ool sur	veyed	for eg	g masse	s? • Yes ONo; w	hat % of pool sur	veyed	?		
							et number of egg mass arate cells are provide				ies	
INDI	INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae											
	Confidence Egg Mass Observed Confidence		Confide Leve									
Wood	d Frog	0	0		Y 3							
Spott Salar	ted mander	0	0									
	spotted mander	0	0									
Fairy	Shrimp ³	0	0									
c. Ra ■ No	ry Shrimp: X a rity crite ote any ra abeled wit	ria re spe	ecies a				pools. <u>Observations s</u> nd date).	should be accom	panied	l by ph	otogra	<u>phs</u>
<u>(16</u>	ibelea wit	11 0030		l of Verif					Method	l of Veri	fication*	
s	PECIES		Р	Н	S	CL**	SPECIES		Р	Н	S	CL**
В	landing's Tu	ırtle					Wood Turtle					
S	potted Turtle	е					Ribbon Snake					
R	inged Bogha	unter					Other:					
d. Op	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% d. Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area e. General vernal pool comments and/or observations of other wildlife: Pool is 95% vegetated, with vegetation dominated by alder and winterberry											
	E: Digital :	submi	ssion (to Jaso	on.Cza	ıpiga@n	tion to: Maine Dept. of Attn: Vernal F 650 State Str naine.gov) of vernal po ssessed pools; larger	Pools reet, Bangor, ME ool field forms an	04401 d phot	ograpl	hs is or	
or MDIF	W use only	Z Re	viewed l	by MDIF	W Date	e:	Initials:	_				
This pool	is: Sign	ificant			ally Sigr		Not Significant due to:	does not meet bi				
Comment	ts:											





server's Poo	ol ID: <u>1-28</u>		N	IDIFW Pool ID:		
PRIMARY OF	BSERVER INF	ORMATION				
a. Observer n	ame: CES, Inc. ((R. St.Amand, J. S	Szillery)			
. Contact an	d credentials p	reviously provi	ded?○ No (subn	nit Addendum 1)	Yes	
PROJECT CO	ONTACT INFO	ORMATION				
a. Contact na	me: \bigcirc same	as observer 💿	other CES, Inc. (R	. St.Amand)		
o. Contact an	d credentials p	previously provi	ided? ○ No (subr	nit Addendum 1)	Yes	
c. Project Na	me: Solid Waste	e Processing and	Recycling Facility			
					cators (one example	
spec	ies egg mass _,) are <u>required</u>	tor nonprotessi	onal observers and	d <u>encouraged</u> for a	II observers
ANDOWNE	R CONTACT I	INFORMATION	N .			
a. Are you the	e landowner?	○ Yes No	If no, was landow	wner permission obt	tained for survey?	○ Yes ○ No
. Landowner	's contact info	rmation (require	ed)			
Name: Hick	rom i Doviolonma	ant IIC		Dhanai		
	cory Developme	errit, LLC		Phone:		
	ress: <u>P.O. Box 2</u>			Phone: City: Hampden	State: ME	Zip: <u>0444</u>
Street Add	ress: <u>P.O. Box 2</u>	49				Zip: <u>0444</u>
Street Addi	ress: <u>P.O. Box 2</u> Projects: check	49 if separate pro	oject landowner d	City: <u>Hampden</u>		Zip: <u>0444</u>
Street Addi	ress: <u>P.O. Box 2</u> Projects: check	49 if separate pro	oject landowner d	City: <u>Hampden</u>		Zip: <u>0444</u>
Street Addic. Large F VERNAL PO	ress: <u>P.O. Box 2</u> Projects: check OL LOCATIO! Township: <u>Han</u>	49 t if separate pro N INFORMATION npden	oject landowner d	City: <u>Hampden</u> ata file submitted		Zip: <u>0444</u>
Street Addic. Large F VERNAL PO a. Location Brief site di	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0	49 If separate pro NINFORMATION INFORMATION INFORMATIO	oject landowner d ON apped landmarks	City: <u>Hampden</u> ata file submitted		
Street Addic. Large F VERNAL PO a. Location Brief site di From Inters is on the lef	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 it.	49 If separate pro NINFORMATION INFORMATION INFORMATIO	oject landowner d ON apped landmarks (exit 180). Go 0.5	City: <u>Hampden</u> ata file submitted): miles south on Cold	State: ME Brook Road. Access r	
Street Addic. Large For La	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 t.	49 N INFORMATION	oject landowner d ON apped landmarks (exit 180). Go 0.5	City: <u>Hampden</u> ata file submitted	State: ME Brook Road. Access r	
Street Addic.	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 6 it. Requirements: opographic ma	A if separate pro N INFORMATION INFORMATIO	oject landowner d ON apped landmarks (exit 180). Go 0.5	City: Hampden ata file submitted): miles south on Cold mitted (check those	State: ME Brook Road. Access r	
Street Addiction Large For Large For Large For Large Street Addiction Location Brief site di From Intersis on the lef Mapping R USGS to Karge Street	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 t. Requirements: copographic macale aerial pho	A if separate pro N INFORMATION INFORMATIO	oject landowner d ON apped landmarks I (exit 180). Go 0.5 ne 3 must be sub- early marked. ool clearly marke	City: Hampden ata file submitted): miles south on Cold mitted (check those	State: ME Brook Road. Access r	
Street Addic. Large F VERNAL PO a. Location Brief site di From Inters is on the lef D. Mapping R USGS t X Large s X GPS da	Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 it. Requirements: opographic mate aerial photographic state aerial photographic state (complete state (com	A if separate pro NINFORMATION INFORMATION	oject landowner d ON apped landmarks I (exit 180). Go 0.5 ne 3 must be sub- early marked. ool clearly marke	City: Hampden ata file submitted): miles south on Cold mitted (check those	State: ME Brook Road. Access r	
Street Addiction Large F /ERNAL PO Location Brief site di From Inters is on the lef USGS t X Large s X GPS da GPS locat	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 it. Requirements: opographic ma cale aerial pho ata (complete s ion of vernal	A if separate pro N INFORMATION INFORMATIO	oject landowner d ON apped landmarks (exit 180). Go 0.5 ne 3 must be sub- early marked. ool clearly marker	City: Hampden ata file submitted): miles south on Cold mitted (check those	State: ME Brook Road. Access r	
Street Addic. Large F VERNAL PO a. Location Brief site di From Inters is on the lef D. Mapping R USGS t X Large s X GPS da GPS locat Longitude/	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 t. Requirements: opographic ma cale aerial pho ata (complete s ion of vernal Easting: 51287	A t least 2 of the prograph with pool clear to below).	pject landowner d ON apped landmarks (exit 180). Go 0.5 ne 3 must be sub- early marked. ool clearly marker Latitude/Northi	City: Hampden ata file submitted): miles south on Cold mitted (check those d.	Brook Road. Access r	
Street Addic. Large F VERNAL PO a. Location Brief site di From Inters is on the lef D. Mapping R USGS t X Large s X GPS da GPS locat Longitude/ Check Dat	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 it. Requirements: opographic macale aerial pho ata (complete s ion of vernal personal p	A if separate process is separate process in separate process in separate process is separate process in separate process in separate process is separate process in separate process in separate process is separate process in s	pject landowner d ON apped landmarks (exit 180). Go 0.5 ne 3 must be sub- early marked. ool clearly marker Latitude/Northi	City: Hampden ata file submitted): miles south on Cold mitted (check those d.	Brook Road. Access r	
Street Addic. Large F VERNAL PO a. Location Brief site di From Inters is on the lef D. Mapping R USGS t X Large s X GPS da GPS locat Longitude/ Check Dat	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 it. Requirements: cale aerial pho ata (complete s ion of vernal Easting: 51287 um: NAD27	A if separate process is separate process if separate process if separate process is separate process is separate process in separate process is separate process in separate process is separate process in separate process in separate process is separate process in separate process in separate process is separate process in separate process in separate process in separate process is separate process in s	pject landowner d DN apped landmarks (exit 180). Go 0.5 apped 3 must be subsected be subsected by the su	City: Hampden ata file submitted): miles south on Cold mitted (check those d.	Brook Road. Access r	
Street Addic. Large F VERNAL PO a. Location Brief site di From Inters is on the lef D. Mapping R USGS t X Large s X GPS da GPS locat Longitude/ Check Dat	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 it. Requirements: copographic mata (complete serial photostata (complete s	At least 2 of the property of the proof with pool (least proof the proof to proof the proof to proof to proof the proof to proof	oject landowner d ON apped landmarks I (exit 180). Go 0.5 The 3 must be subsearly marked, ool clearly marked Latitude/Northi WGS84 Coo @maine.gov; obser	City: Hampden ata file submitted c: miles south on Cold mitted (check those d. ng: 4957428.8602 rdinate system: UTM ever has reviewed sha iple GPS points. (ex	Brook Road. Access resubmitted):	
Street Addic. Large F VERNAL PO a. Location Brief site di From Inters is on the lef D. Mapping R USGS t X Large s X GPS da GPS locat Longitude/ Check Dat	ress: P.O. Box 2 Projects: check OL LOCATION Township: Han rections to the tate 95, exit at 0 it. Requirements: cale aerial pho ata (complete s ion of vernal Easting: 51287 um: NAD27 GIS shal - send to - Include	At least 2 of the proof with pool clear below). pool (wing match as a pool of the proof with pool of the proof wi	oject landowner d ON apped landmarks I (exit 180). Go 0.5 The 3 must be subsearly marked. The cool clearly marked. WGS84 Cool @maine.gov; observelineated by mult	City: Hampden ata file submitted c): miles south on Cold mitted (check those d. ng: 4957428.8602 rdinate system: UTM ever has reviewed shall iple GPS points. (exercise)	Brook Road. Access resubmitted):	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
•	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Emergent marsh ☐ Active beaver flowag c. Vernal pool status under the Natural Resources P	e Cther:
i. Pool Origin: Natural Natural-Modified	•
	dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	 Ephemeral
Explain:	
Based on size, depth, substrate, terrestrial vegetation	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth: 20 m • ft Length: 30 m • ft
■ Pool vegetation indicators in order of increasing hydrological	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon	 Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock
fern, interrupted fern, New York fern)	sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)☐ No vegetation in pool
■ Faunal indicators (check all that apply):	— No vogetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent char	
	et (channel with well-defined banks and permanent flow)
 Intermittent inlet Other or Unknown (export or outlet) 	lain):

VERNAL POO	VERNAL POOL INDICATOR INFORMATION											
a. Indicator s	urvey	dates	5/8,5	/14								
b. Indicator a												
	•		•					nat % of pool	•			
								es, confidence d for separate			ies	
INDICATOR	NDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae Confidence Egg Mass Channel Confidence											
SPECIES		#		Confidence Egg Mass Observed Level 1 Maturity 2		erved		Leve				
Wood Frog	0	20		3 A-H Y			3					
Spotted Salamander	0	0										
Blue-spotted Salamander	0	0										
Fairy Shrimp ³	0	0										
3-Fairy Shrimp: 3c. Rarity criteNote any ra	1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95% 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatch 3-Fairy Shrimp: X = present ■ Rarity criteria ■ Note any rare species associated with vernal pools. Observations should be accompanied by photographs (labeled with observer name, pool location, and date).											
(labeled Wil	111 003	_	d of Veri						Method	d of Veri	fication*	
SPECIES		Р	Н	S	CL**	SPECIES			Р	Н	S	CL**
Blanding's T	urtle					Wood Turtle						
Spotted Turt	le					Ribbon Snak	е					
Ringed Bogha						Other:						
d. Optional ol	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% *Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area General vernal pool comments and/or observations of other wildlife: Pool is about 85% vegetated with meadowsweet, alder, and grasses											
NOTE: Digital	deend completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 IOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.											
or MDIFW use only	y Re	eviewed	by MDIF	W Dat	e:	Initial	s:	_				
nis pool is: Sign		: 🖂	Potentia but lacki	ılly Sigr	nificant			does not me				
omments:												





INSTRUCTIONS: Complete all 3 pages of form as thoroug	ghly as possible. Most fields are <u>required</u> for pool registrati
Observer's Pool ID: 1-29	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)	_
b. Contact and credentials previously provided? No	(submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name:	Inc. (R. St.Amand)
b. Contact and credentials previously provided? C No	o (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recycling F	Facility
species egg mass) are <u>required</u> for nonpro	the pool and b) the indicators (one example of each ofessional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
•	landowner permission obtained for survey? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped land)	
	,
is on the left.	Go 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marked Large scale aerial photograph with pool clearly result GPS data (complete section below). 	d.
GPS location of vernal pool	
Longitude/Easting: 512334.2632 Latitude/	Northing: 4957586.9739
Check Datum: NAD27 NAD83 / WGS84	Coordinate system: UTM-m
Check one: GIS shapefile - send to Jason.Czapiga@maine.gov	v; observer has reviewed shape accuracy (best)
 The pool perimeter is delineated by Include map or spreadsheet with cool 	
○ The above GPS point is at the cen	iter of the pool. (good)
The center of the pool is approximadegrees from the above GF	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other: ○ Other:	sociated with larger wetland complex vetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage ☐ Active beaver flowage ☐ C. Vernal pool status under the Natural Resources Proposition of the Natural Resource	otection Act (NRPA)
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u> ○ Permanent	EphemeralUnknown
Based on pool depth and size, presence of terrestrial ve	egetation
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wice Predominate substrate in order of increasing hydrogen 	of the land of the
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
	, , ,
■ Pool vegetation indicators in order of increasing hyd Terrestrial nonvascular spp. (e.g. haircap	
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern,	 Wet site ferns (e.g. royal fern, marsh fern) ✓ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	140 vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow) ain):

VERNAL POOL IN				ATION							
a. Indicator surve			5/13					_			
b. Indicator abun					. O V O N	.l	-f l		0		
■ Was the entire		-								·	
For each indicated determination,					et number of egg arate cells are pr					ies	
INDICATOR					adult Fairy Shrim		Т	adpole	s/Larva		
SPECIES	#			nfidence Level ¹	Egg M Matur		Observe	ed		Confide Leve	
Wood Frog	0						0				
Spotted Salamander	0										
Blue-spotted Salamander	0										
Fairy Shrimp ³	0							:			
 2-Egg mass maturity: 3-Fairy Shrimp: X = pr c. Rarity criteria Note any rare s (labeled with ob 	esent pecies as	ssociat	ted wit	h vernal	pools. Observat						
(labeled with or	Method				Tid date <u>)</u> .			Method	l of Veri	fication*	
SPECIES	Р	H	S	CL**	SPECIES			P	H	S	CL**
Blanding's Turtle					Wood Turtle						
Spotted Turtle					Ribbon Snake						
Ringed Boghaunte					Other:						
d. Optional obser	ver recording Section 1988	mmen	datior ☐ No	n: on Signif	1= <60%, 2= 60-9 icant VP In	dicator Bre	eding Area				
Send completed fo NOTE: Digital sublacceptable	mission (1	to Jaso	on.Cza	ıpiga@n	Attn: Ve 650 Sta	ernal Pools te Street, B nal pool fie	angor, ME	04401 d phot	ograpl	hs is or	
r MDIFW use only	Reviewed b	y MDIF	W Date	e:	Initials:						
s pool is: Significa	nt 🗀 F	otentia	Illy Sign	ificant	☐ Not Significant	~	es not meet bi				
mments:						<u></u>			, , , ,		





INSTRUCTIONS: Complete all 3 pages of form as thoroughly	<i>y</i> as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 1-30	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (R. St.Amand, J. Szillery)	
b. Contact and credentials previously provided? No (so	ubmit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other CES, Inc.	(R. St.Amand)
b. Contact and credentials previously provided? O No (se	ubmit Addendum 1) Yes
c. Project Name: Solid Waste Processing and Recycling Faci	lity
, , , ,	pool and b) the indicators (one example of each ssional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? ○ Yes ● No If no, was lan	downer permission obtained for survey? Yes No
b. Landowner's contact information (required)	
	Phone:
Street Address: P.O. Box 249	City: Hampden State: ME Zip: 04444
c. Large Projects: check if separate project landowne	r data file submitted
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landman	·ks):
From Interstate 95, exit at Cold Brook Road (exit 180). Go is on the left.	0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be so USGS topographic map with pool clearly marked. \overline{\times} Large scale aerial photograph with pool clearly marked. \overline{\times} GPS data (complete section below). 	
GPS location of vernal pool	
Longitude/Easting: 512301.554 Latitude/No	thing: 4957596.858
<u> </u>	coordinate system:UTM-m
Check one:	·
·	server has reviewed shape accuracy (best)
 The pool perimeter is delineated by m Include map or spreadsheet with coording 	
○ The above GPS point is at the center	of the pool. (good)
The center of the pool is approximateddegrees from the above GPS	y m ○ /ft ○ in the compass direction of

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on nage 3):
b. Wetland habitat characterization	autrey dates on page o/
■ Choose the best descriptor for the landscape setting:	
O Isolated depression Pool as	ssociated with larger wetland complex wetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Shrub swamp ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)
i. Pool Origin: ● Natural ○ Natural-Modified ○ Uland If modified, unnatural or unknown, describe any model.	Jnnatural O Unknown dern or historic human impacts to the pool (required):
ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent	Ephemeral
Based on depth and presence of cat tail in pool	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland 	dth: 24
mosses present) Mineral soil (sphagnum moss present)	restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hydrogen	, , ,
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	
	et (channel with well-defined banks and permanent flow)
Other or Unknown (export or outlet	lain):

. VERNAL PO	OL IN	DICATO	RINFORM	ATION						
a. Indicator s	surve	y dates:4	/23 , 5/13					_		
b. Indicator a	abunc	lance cri	teria							
■ Was the e	entire	pool surv	eyed for eg	gg masse	es? • Yes	No; what %	of pool sur	veyed?_		
					ct number of egg arate cells are p					
INDICATOR					r adult Fairy Shrim		Т	adpoles/L		
SPECIES		#	C	onfidence Level ¹	e Egg M Matu		Observe	ed	Confide Leve	
Wood Frog	6	0	3		F		Т		3	
Spotted Salamander	0	3		3	А					
Blue-spotted Salamander	0	0								
Fairy Shrimp ³	0	0					·			
3-Fairy Shrimp:	turity: X = pre	F= Fresh (<			nd embryos), A= Adv	vanced (loose r	natrix, curved	l embryos),	H= Hatched o	or Hatching
■ Note any r (labeled wi	are sp				l pools. <u>Observa</u> and date).	tions should	be accom	panied by	/ photograp	<u>ohs</u>
SPECIES			of Verification	* CL**	SPECIES				Verification*	CL**
Blanding's T	Γurtle	P	H S		Wood Turtle			P	H S	
Spotted Tur	tle				Ribbon Snake					
Ringed Bogh	naunter				Other:					
					landled, S = Seen 1 = <60%, 2= 60-9	95%, 3= >95%	6	1	'	
	□ Р	otential S	VP N	on Signi	ficant VP					
Dominated	l by ca	t tails								
Send complet	ed for	m and su	pporting do	ocument		Dept. of Inla ernal Pools ate Street, B			ldlife	
					maine.gov) of ver assessed pools; l					
or MDIFW use on	ly F	·	MDIFW Da		Initials:					
his pool is: Sig	ınificar		otentially Signt lacking critical		Not Significant	~	es not meet bi es not meet M			
omments:										





Observer's Pool ID:2-7	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORM	ATION
a. Observer name: CES, Inc. (J. Szille	ery)
b. Contact and credentials previous	usly provided? ○ No (submit Addendum 1)
2. PROJECT CONTACT INFORMA	TION
a. Contact name:	server other CES, Inc. (R. St.Amand)
b. Contact and credentials previou	usly provided? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Proce	essing and Recycling Facility
species egg mass) are <u>r</u>	igital images of a) the pool and b) the indicators (one example of each required for nonprofessional observers and encouraged for all observers.
B. LANDOWNER CONTACT INFOR	
·	s ● No If no, was landowner permission obtained for survey? ○ Yes ○ No
b. Landowner's contact informatio	,
	C Phone:
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
4. VERNAL POOL LOCATION INFO a. Location Township: <u>Hampden</u> Brief site directions to the pool	
	<u> </u>
From Interstate 95, exit at Cold Bi is on the left.	rook Road (exit 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site
b. Mapping Requirements: At least USGS topographic map with X Large scale aerial photograp X GPS data (complete section	ph with pool clearly marked.
GPS location of vernal pool	
Longitude/Easting: 512149.767	Latitude/Northing: 4957601.1304
Check Datum: ○ NAD27	NAD83 / WGS84 Coordinate system: UTM-m
Check one: GIS shapefile	n.Czapiga@maine.gov; observer has reviewed shape accuracy (best)
	neter is delineated by multiple GPS points. (excellent) r spreadsheet with coordinates.
	S point is at the center of the pool. (good)
	he pool is approximately m / /ft in the compass direction of
	s from the above GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: X Forested swamp Wet meadow Lake or Pond Cove Peatland (fen or bog) Emergent marsh Active beaver flowage	e Cther:
c. Vernal pool status under the Natural Resources P	•
i. Pool Origin: ● Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	Innatural C Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Of Semi-permanent (drying partially in all years are completely in drought years) Explain: 	Ephemeral
Based on depth of organic matter, size of pool, and pro-	esence of vegetation in nool
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydromatic states and pool (here leaf litter bettern or upland) 	odth: 5-7
Mineral soil (bare, leaf-litter bottom, or upland mosses present)Mineral soil (sphagnum moss present)	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hydrogeneous Terrestrial nonvascular spp. (e.g. haircap	
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern,	 ✓ Wet site ferns (e.g. royal fern, marsh fern) ✓ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
■ Faunal indicators (check all that apply):	No vegetation in pool
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	anel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)

VERNAL POOI								
a. Indicator su	-					_		
b. Indicator ab				0 0 V 0 N		ıo Abou	ı+ 70 0/	
				es? O Yes O No;				
				ct number of egg mas arate cells are provid			ies	
INDICATOR				r adult Fairy Shrimp)	Т	adpoles/Larva		
SPECIES	#		Confidence Level ¹	Egg Mass Maturity ²	Observe	ed	Confiden Level	
Wood Frog	1 0	3		М	Υ		3	
Salamander	0 0							
Blue-spotted Salamander	0 0							
Fairy Shrimp ³	0 0							
3-Fairy Shrimp: X C. Rarity criter	= present			nd embryos), A= Advance I pools. <u>Observations</u>				
(labeled with					0.10010 20 2.22	parine a ~ y r	1010g	<u>10</u>
SPECIES		od of Verification	On* CL**	SPECIES		Method of Verit		CL**
Blanding's Tur	tle	H S		Wood Turtle		P H	S	
Spotted Turtle]	Ribbon Snake				
Ringed Boghau	unter			Other:				
				andled, S = Seen 1= <60%, 2= 60-95%,	3= >95%			
	Potentia	I SVP	Non Signit	ficant VP				
NOTE : Digital s	ubmissior	n (to Jason.C	Szapiga@r	ation to: Maine Dept Attn: Vernal 650 State S maine.gov) of vernal assessed pools; large	l Pools Street, Bangor, ME pool field forms an	04401 nd photograph	ns is only	
·						- manoa ao m		
r MDIFW use only		d by MDIFW		Initials:	to. O does not most be	ialagiaal aritaria		
s pool is: Signi	ficant _	Potentially S but lacking cr		Not Significant due t	o: Odoes not meet b			
mments:								





Observer's Pool ID:2-13	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (J. Szillery)	
b. Contact and credentials previously provided?	? ○ No (submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other	er CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided	? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Rec	ycling Facility
species egg mass) are <u>required</u> for I	of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers.
B. LANDOWNER CONTACT INFORMATION	
•	o, was landowner permission obtained for survey?
b. Landowner's contact information (required)	
No. 11 Calcama Davida manage 11 C	
	Phone:
Street Address: P.O. Box 249 c. Large Projects: check if separate project	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> landowner data file submitted
Street Address: P.O. Box 249 c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> landowner data file submitted d landmarks):
Street Address: P.O. Box 249 c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> landowner data file submitted
Street Address: P.O. Box 249 c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exit	City: Hampden State: ME Zip: 04444 landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of	City: Hampden State: ME Zip: 04444 landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
Street Address: P.O. Box 249 c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of Complete Section Below). GPS location of vernal pool	City: Hampden State: ME Zip: 04444 landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
Street Address: P.O. Box 249 c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool of GPS data (complete section below). GPS location of vernal pool	City: Hampden State: ME Zip: 04444 landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. elearly marked.
c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exists on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Image in the left. b. Mapping Requirements: At least 2 of the 3 GPS topographic map with pool clearly Image in the left. GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512421.9668 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile	City: Hampden State: ME Zip: 04444 landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. elearly marked.
c. Large Projects: check if separate project 1. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of X GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512421.9668 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@ma	City: Hampden State: ME Zip: 04444 landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. elearly marked. ditude/Northing: 4957506.5022 essa Coordinate system: UTM-m eline.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent)
c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exists on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of X GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512421.9668 Check Datum: NAD27 NAD83 / WG Check one: GIS shapefile - send to Jason.Czapiga@ma The pool perimeter is deline	City: Hampden State: ME Zip: 04444 landowner data file submitted d landmarks): t 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. elearly marked. elearly marked. stitude/Northing: 4957506.5022 eS84 Coordinate system: UTM-m eline.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
 ■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ● Other: 	ssociated with larger wetland complex wetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Emergent marsh ☐ Active beaver flowag c. Vernal pool status under the Natural Resources P	e Cther:
i. Pool Origin: Natural ○ Natural-Modified ○ L	
	dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	 Ephemeral
Based on depth, substrate, and vegetation in pool	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Win Predominate substrate in order of increasing hydro 	dth: 20
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
,, ,	, , ,
 Pool vegetation indicators in order of increasing hy Terrestrial nonvascular spp. (e.g. haircap 	<u> </u>
moss, lycopodium spp.)	✓ Wet site ferns (e.g. royal fern, marsh fern)✓ Wet site shrubs (e.g. highbush blueberry, maleberry,
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	— No vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)
or outlet	мп)

VERNAL POOL			TION					
a. Indicator surv	_					_		
b. Indicator abu				0 0 V O N I	0/	10		
		-		s? • Yes ONo; what				
				t number of egg masses arate cells are provided f				
INDICATOR				adult Fairy Shrimp)	Т	adpoles/Lai		
SPECIES	#		nfidence Level ¹	Egg Mass Maturity ²	Observe	ed	Confide Leve	
Wood Frog	0				N			
Spotted Salamander	2	 	3	А				
Blue-spotted Salamander	0							
Fairy Shrimp ³	0							
2-Egg mass maturity 3-Fairy Shrimp: X = c. Rarity criteria	present	4 hrs), M= Ma	ture (roun	d embryos), A= Advanced (loc	ose matrix, curved	l embryos), H	= Hatched o	or Hatchin
■ Note any rare (labeled with o				pools. <u>Observations sho</u> nd date).	ould be accom	panied by	<u>photogra</u> j	<u>phs</u>
SPECIES		f Verification*	CL**	SPECIES		Method of V	erification*	CL**
Blanding's Turtle				Wood Turtle				
Spotted Turtle				Ribbon Snake				
Ringed Boghaunt				Other:				
		0 1		andled, S = Seen 1= <60%, 2= 60-95%, 3= >	95%	<u> </u>	<u> </u>	
	Potential SV	′P ∏ No	n Signifi	cant VP				
NOTE: Digital sul	bmission (to	Jason.Cza	piga@m	tion to: Maine Dept. of I Attn: Vernal Poo 650 State Stree	ols t, Bangor, ME field forms an	04401 d photogra	aphs is on	
· .	le for project	is with 3 or	rewer as	ssessed pools; larger pro	ojects must be	malled as	nard cop	nes.
r MDIFW use only is pool is: Signific		MDIFW Date tentially Sign		Initials: Not Significant due to:	does not meet hi	ological criter	ria	
		lacking critica			does not meet M			
mments:								





oserver's Pool ID: 2-17	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
a. Observer name: CES, Inc. (J. Szillery)	_		
o. Contact and credentials previously provided? No	(submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name: ○ same as observer ● other CES, In	nc. (R. St.Amand)		
b. Contact and credentials previously provided? ○ No	(submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing and Recycling Fa	acility		
NOTE: <u>Clear photographs or digital images</u> of a) the species egg mass) are <u>required</u> for nonpro			
species egg mass) are <u>required</u> for nonpro-	essional observers and	encouraged for all	observers
LANDOWNER CONTACT INFORMATION			
a. Are you the landowner? \bigcirc Yes $lacktriangle$ No \bigcirc If no, was la	andowner permission obta	ained for survey?	Yes ON
b. Landowner's contact information (required)			
Name: Hickory Development, LLC	Phone:		
Street Address: P.O. Box 249	City: Hampden	State: ME	_ Zip: <u>0444</u>
c. Large Projects: check if separate project landow	ner data file submitted		
VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden			
Brief site directions to the pool (using mapped landm	narks):		
From Interstate 95, exit at Cold Brook Road (exit 180). Gis on the left.	50 0.5 miles south on Cold E	Brook Road. Access ro	ad to the Sit
b. Mapping Requirements: At least 2 of the 3 must be			
b. mapping requirements. At least 2 of the o must be	e submitted (check those	submitted):	
USGS topographic map with pool clearly marked	•	submitted):	
		submitted):	
USGS topographic map with pool clearly marked		submitted):	
☐ USGS topographic map with pool clearly marked ☐ Large scale aerial photograph with pool clearly m		submitted):	
USGS topographic map with pool clearly marked X Large scale aerial photograph with pool clearly m X GPS data (complete section below). GPS location of vernal pool		submitted):	
☐ USGS topographic map with pool clearly marked ☐ X Large scale aerial photograph with pool clearly m ☐ GPS data (complete section below). GPS location of vernal pool	narked.		
☐ USGS topographic map with pool clearly marked ☐ Large scale aerial photograph with pool clearly m ☐ GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512685.4773 Latitude/N	narked. Northing: 4957319.2052 Coordinate system: UTM-	<u>.</u> .m	
☐ USGS topographic map with pool clearly marked ☐ Large scale aerial photograph with pool clearly m ☐ GPS data (complete section below). ☐ GPS location of vernal pool Longitude/Easting: 512685.4773 Check Datum: ○ NAD27 ● NAD83 / WGS84 Check one: ● GIS shapefile	narked. Northing: 4957319.2052 Coordinate system: UTM- observer has reviewed shape multiple GPS points. (exceptions)	m ne accuracy (best)	
USGS topographic map with pool clearly marked I Large scale aerial photograph with pool clearly m I GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512685.4773 Latitude/N Check Datum: ○ NAD27 ● NAD83 / WGS84 Check one: ● GIS shapefile - send to Jason.Czapiga@maine.gov; ○ The pool perimeter is delineated by - Include map or spreadsheet with coor	Northing: 4957319.2052 Coordinate system: UTMobserver has reviewed shap multiple GPS points. (excludinates.	m ne accuracy (best)	
USGS topographic map with pool clearly marked	lorthing: 4957319.2052 Coordinate system: UTM- observer has reviewed shap multiple GPS points. (ex- dinates. er of the pool. (good)	e accuracy (best)	on of

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other: \(\frac{1}{2} \)	sociated with larger wetland complex vetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Emergent marsh ☐ Active beaver flowag c. Vernal pool status under the Natural Resources P	e Other:
i. Pool Origin: Natural ○ Natural-Modified ○ U	
	dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Of Semi-permanent (drying partially in all years are completely in drought years) Explain: 	Ephemeral
Based on depth and size of pool, and terrestrial vegeta	tion
 ■ Maximum depth at survey:	dth: 20
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd ☐ Terrestrial nonvascular spp. (e.g. haircap	
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern,	 Wet site ferns (e.g. royal fern, marsh fern) ✓ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	▼ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	The vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow) ain):

VERNAL POOL II			ORMA	ATION						
a. Indicator surve							_			
b. Indicator abun								_		
	•	•			es? • Yes O No; what '	•	-			
					ct number of egg masses, arate cells are provided fo				ies	
INDICATOR					adult Fairy Shrimp)	Т	adpole			
SPECIES	#			nfidence Level ¹	Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood Frog	0					Υ			3	
Spotted Salamander	0									
Blue-spotted Salamander	0									
Fairy Shrimp ³	0									
3-Fairy Shrimp: X = prc. Rarity criteria■ Note any rare s(labeled with object)	species a				pools. <u>Observations shou</u>	ıld be accom	panied	l by ph	otogra	<u>phs</u>
figneted with or		d of Veri			<u> </u>		Method	l of Verit	fication*	
SPECIES	Р	H	S	CL**	SPECIES		P	Н	S	CL**
Blanding's Turtle					Wood Turtle					
Spotted Turtle					Ribbon Snake					
Ringed Boghaunte	r 🗆				Other:					
d. Optional obser	rver reco Potential S	ommer SVP	idatior No	1: on Signif	1= <60%, 2= 60-95%, 3= >9 icant VP Indicator Biervations of other wildlif	reeding Area				
NOTE: Digital sub	mission (to Jase	on.Cza	apiga@n	ation to: Maine Dept. of In Attn: Vernal Pool 650 State Street, naine.gov) of vernal pool f ssessed pools; larger proj	s Bangor, ME ield forms an	04401 d phot	ograpl	hs is or	
r MDIFW use only	Reviewed I	by MDIF	W Date	e:	Initials:					
s pool is: Significa			ally Sign		Not Significant due to:	loes not meet bi				
mments:						1000 1101 11.001	DE:	mar po-	orice	





INSTRUCTIONS: Complete all 3 pages of form as thoroug	hly as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 3-1	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (A. Pierce, J. Szillery)	_
b. Contact and credentials previously provided? No	(submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● other CES, Ir	nc. (R. St.Amand)
b. Contact and credentials previously provided? No	(submit Addendum 1)
c. Project Name: Solid Waste Processing and Recycling Fa	acility
, , , , ,	ne pool and b) the indicators (one example of each fessional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? ○ Yes ● No If no, was la	andowner permission obtained for survey?
b. Landowner's contact information (required)	
	Phone:
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
c. Large Projects: check if separate project landow	ner data file submitted
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landm	narks):
From Interstate 95, exit at Cold Brook Road (exit 180). Gis on the left.	50 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marked Large scale aerial photograph with pool clearly m GPS data (complete section below). 	
GPS location of vernal pool	
-	lorthing: 4957328.7277
Check Datum: NAD27 NAD83 / WGS84	Coordinate system: UTM-m
Check one:	
·	observer has reviewed shape accuracy (best)
 The pool perimeter is delineated by Include map or spreadsheet with coor 	
○ The above GPS point is at the cent	er of the pool. (good)
 The center of the pool is approxima degrees from the above GP 	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
	sociated with larger wetland complex vetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage ☐ Emergent marsh ☐ Active beaver flowage	e Other:
c. Vernal pool status under the Natural Resources P	• •
i. Pool Origin: ● Natural ○ Natural-Modified ○ U If modified, unnatural or unknown, describe any mod	nnatural C Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Of Semi-permanent (drying partially in all years and completely in drought years) Explain: 	Ephemeral
Схріант.	
Based on pool size and depth	
 Maximum depth at survey: • 0-12" (0-1 ft.)	Ith: 25 m • ft Length: 30 m • ft
■ Pool vegetation indicators in order of increasing hyd	, , ,
Terrestrial nonvascular spp. (e.g. haircap	Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon	✓ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)✓ Wet site graminoids (e.g. blue-joint grass, tussock
fern, interrupted fern, New York fern)	sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)	Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily,
Sphagnum moss (anchored or suspended)	water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	· ·
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent chan	
	t (channel with well-defined banks and permanent flow) ain):

VERNAL POO	L IN	DICATOR	INFORM	IATION						
a. Indicator su	urvey	/ dates: <u>5/</u>	<u>/</u> 8 , 5/14					_		
b. Indicator al										
			-				hat % of pool su			
							ses, confidence le ed for separate su			
INDICATOR					r adult Fair		Т	adpoles/L		
SPECIES		#		Confidence Level ¹	•	Egg Mass Maturity ²	Observe	ed	Confide Leve	
Wood Frog	14		3		M		Т		3	
Spotted Salamander	19	11	3	3	F	A				
Blue-spotted Salamander	0	13		3		А				
Fairy Shrimp ³	0	0								
1-Confidence leve 2-Egg mass matu 3-Fairy Shrimp: X	ırity: F (= pre	= Fresh (<2			nd embryos)	, A= Advanced	(loose matrix, curved	d embryos),	H= Hatched of	or Hatchino
-	ire sp					oservations :	should be accom	panied by	y photograp	<u>ohs</u>
SPECIES			f Verification	CL**	SPECIES				Verification*	CL**
Blanding's Tu	ırtle				Wood Tur	tle				
Spotted Turtle	е				Ribbon Sna	ake				
Ringed Bogha	unter				Other:					
*Method of v **CL - Confid						Seen 2= 60-95%, 3	= >95%	1		
d. Optional ob	Po	otential SV	/P	lon Signi			or Breeding Area	ı		
Pool is 30%	veget	ated arour	nd edges v	with specl	kled alder					
Send complete	ed for	m and sup	porting d	ocumenta	A	Attn: Vernal I	of Inland Fisherie Pools reet, Bangor, ME		ildlife	
							ool field forms an projects must be			
r MDIFW use only	<u>/</u> R	Reviewed by				als:				
is pool is: Sign	nifican		tentially Si t lacking crit		☐ Not Sig	nificant due to	does not meet b			
mments:										





Observer's Pool ID:3-2	MDIFW Pool ID:
 PRIMARY OBSERVER INFORMATION a. Observer name: CES, Inc. (A. Pierce, J. Szillery) 	
<u> </u>	
b. Contact and credentials previously provided	? ○ No (submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● oth	ner CES, Inc. (R. St.Amand)
b. Contact and credentials previously provided	I? ○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Red	cycling Facility
species egg mass) are <u>required</u> for	s of a) the pool and b) the indicators (one example of each nonprofessional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
•	o, was landowner permission obtained for survey? O Yes O No
b. Landowner's contact information (required)	
Name at Higher Douglands and H.C.	E:
	Phone:
	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> t landowner data file submitted
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> t landowner data file submitted ed landmarks):
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> t landowner data file submitted
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper) From Interstate 95, exit at Cold Brook Road (ex	City: Hampden State: ME Zip: 04444 t landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper From Interstate 95, exit at Cold Brook Road (exis on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly X Large scale aerial photograph with pool of the second control	City: Hampden State: ME Zip: 04444 t landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper is on the left. b. Mapping Requirements: At least 2 of the 3 using scale aerial photograph with pool clearly using scale aerial photograph with pool of GPS location of vernal pool	City: Hampden State: ME Zip: 04444 t landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked.
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper is on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Image is called a least 2 of the 3 GPS data (complete section below). GPS location of vernal pool	City: Hampden State: ME Zip: 04444 t landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. clearly marked. clearly marked.
c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped is on the left.) b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Image is called a least 2 of the 3 GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512664.0501	City: Hampden State: ME Zip: 04444 t landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. clearly marked. clearly marked.
c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper from Interstate 95, exit at Cold Brook Road (exis on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Interstate 2 using Large scale aerial photograph with pool Interstate 3 using Interstate 2 using Interstate 3 using Inter	City: Hampden State: ME Zip: 04444 t landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): marked. clearly marked. clearly marked.
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mappe) From Interstate 95, exit at Cold Brook Road (exis on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool Separate GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512664.0501 Check Datum: NAD27 NAD83 / WCCheck one: GIS shapefile - send to Jason.Czapiga@ma	City: Hampden State: ME Zip: 04444 It landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site formust be submitted (check those submitted): or marked. clearly marked. clearly marked. attitude/Northing: 4957283.4518 GS84 Coordinate system: UTM-m aine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent)
Street Address: P.O. Box 249 c. Large Projects: check if separate project 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapper from Interstate 95, exit at Cold Brook Road (exis on the left. b. Mapping Requirements: At least 2 of the 3 USGS topographic map with pool clearly Large scale aerial photograph with pool Seps data (complete section below). GPS location of vernal pool Longitude/Easting: 512664.0501 Longitude/Easting: 512664.0501 Check Datum: NAD27 NAD83 / WCCheck one: GIS shapefile - send to Jason.Czapiga@maccheck.	City: Hampden State: ME Zip: 04444 t landowner data file submitted ed landmarks): it 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site s must be submitted (check those submitted): marked. clearly marked. clearly marked. attitude/Northing: 4957283.4518 GS84 Coordinate system: UTM-m aine.gov; observer has reviewed shape accuracy (best) eated by multiple GPS points. (excellent) with coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting:	
•	sociated with larger wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage C. Vernal pool status under the Natural Resources P i. Pool Origin: ○ Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	e
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	 Ephemeral
Explain:	
Based on pool depth, substrate	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydro Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	dth: 30
■ Pool vegetation indicators in order of increasing hydrogen	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap	☐ Wet site ferns (e.g. royal fern, marsh fern)
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)Wet site graminoids (e.g. blue-joint grass, tussock
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	— No vogetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)
or outlet	GIII J

. VERN	IAL POO	LIND	ICATO	OR INF	ORMA	ATION							
	licator su					111011							
	licator at	-								_			
					for ea	n masse	s? • Yes	○ No: wha	at % of pool su	rveved	?		
		•		•					s, confidence	-		ies	
									for separate s			103	
INDIC	CATOR						adult Fairy			Tadpole	s/Larva		
SPEC			#		Co	nfidence Level ¹	E	Egg Mass Maturity ²	Observ	ed .		Confide Leve	
Wood	l Frog	0	0										
Spotte	ed nander	3	3		3	3	F	Α					
	spotted nander	0	0										
Fairy	Shrimp ³	0	0							·			
3-Fairy c. Rai	y Shrimp: X rity crite	= preseria ria re spe	ent ecies as	ssocia	ted wit	h vernal	pools. Obs		ould be accon				
<u>(iai</u>	Delea Wit	11 0030		l of Veri						Method	d of Veri	fication*	Q1 44
SF	PECIES		Р	Н	S	CL**	SPECIES			Р	Н	S	CL**
ВІ	anding's Tu	ırtle					Wood Turtle						
Sp	ootted Turtle	е					Ribbon Snak	е					
Ri	nged Bogha	unter					Other:						
d. Opr	CL - Confid tional ob SVP	eserve Pot	er reco ential S	species mmer SVP mmen	dation No	mination: n: on Signif	icant VP ervations o	= 60-95%, 3= >	Breeding Area	1			
	∷ Digital :	submi	ssion (to Jas	on.Cza	apiga@n	At 65 naine.gov)	tn: Vernal Po 0 State Stree of vernal poo	Inland Fisheri ools et, Bangor, ME ol field forms a rojects must b	E 04401	l tograp	hs is or	
or MDIF\	W use only	Re	viewed l	by MDIF	W Dat	e:	Initial	s:					
his pool i	s: Sign	ificant			ally Sigr		☐ Not Signi		does not meet b				
Comments	s:												





INSTRUCTIONS: Complete all 3 pages of form as thoroug	hly as possible. Most fields are required for pool registration
Observer's Pool ID: 3-3	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (A. Pierce, J. Szillery)	_
b. Contact and credentials previously provided? No	(submit Addendum 1) Yes
2. PROJECT CONTACT INFORMATION	
a. Contact name: ○ same as observer ● other CES, In	nc. (R. St.Amand)
b. Contact and credentials previously provided? No	(submit Addendum 1)
c. Project Name: Solid Waste Processing and Recycling Fa	acility
, , , , , ,	he pool and b) the indicators (one example of each fessional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
	andowner permission obtained for survey? ○ Yes ○ No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
c. Large Projects: check if separate project landow	ner data file submitted
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landn	narks):
From Interstate 95, exit at Cold Brook Road (exit 180). Gis on the left.	Go 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marked X Large scale aerial photograph with pool clearly m X GPS data (complete section below). 	l.
GPS location of vernal pool	
Longitude/Easting: 512567.9006 Latitude/N	Northing: 4957468.8066
Check Datum: NAD27 NAD83 / WGS84	Coordinate system: UTM-m
Check one:	·
·	observer has reviewed shape accuracy (best)
 The pool perimeter is delineated by Include map or spreadsheet with coor 	
○ The above GPS point is at the cent	er of the pool. (good)
The center of the pool is approximadegrees from the above GP	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicate	or survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other:	ssociated with larger wetland complex wetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Emergent marsh ☐ Active beaver flowage	ge
c. Vernal pool status under the Natural Resources F	• •
i. Pool Origin: ● Natural ○ Natural-Modified ○ I If modified, unnatural or unknown, describe any modern of the control of the	odern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provious</u> ○ Permanent Orange of Semi-permanent (drying partially in all years a completely in drought years) Explain: 	 Ephemeral
Based on pool depth, substrate, and terrestrial vegeta	
■ Maximum depth at survey: O-12" (0-1 ft.) Approximate size of pool (at spring highwater): Wi Predominate substrate in order of increasing hydro	idth: 20
Mineral soil (bare, leaf-litter bottom, or upland mosses present)	Organic matter (peat/muck) shallow or restricted to deepest portion
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hy	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	No vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow) blain):

VERNAL POC					ATION								
a. Indicator su	-			/13						_			
b. Indicator al				_							_		
■ Was the er	•		•	0.					•	•			
■ For each ir determinat								nasses, con /ided for sep				ies	
INDICATOR						r adult Fai			Т	adpole	s/Larva		
SPECIES		#		Co	nfidence Level ¹	•	Egg Mas Maturity		Observe	ed		Confide Leve	
Wood Frog	5			3		М			Т			3	
Spotted Salamander	0	2			3		A						
Blue-spotted Salamander	0	0											
Fairy Shrimp ³	0	0											
2-Egg mass matu 3-Fairy Shrimp: X c. Rarity crite Note any ra (labeled wit	(= pres ria ire spe	ent ecies a	ssocia	ted wit	h verna	l pools. <u>C</u>	bservatio						
(labeled wit	11 003			fication*						Method	l of Veri	fication*	
SPECIES		Р	Н	S	CL**	SPECIES	3			Р	Н	S	CL**
Blanding's Tu	urtle					Wood Tu	rtle						
Spotted Turtl	е					Ribbon Si	nake						
Ringed Bogha	aunter					Other:							
**CL - Confidence of the confi	Pot	er reco	mmer SVP mmen	ndation No ts and	n: on Signit	ficant VP	☐ Indi	cator Breed	ing Area				
Send complete NOTE: Digital accept	submi	ssion (to Jas	on.Cza	apiga@r	maine.gov	Attn: Verr 650 State	nal Pools Street, Bar	ngor, ME forms an	04401 d phot	ograp	hs is or	
r MDIFW use only	<u>/</u> Re	eviewed	by MDIF	-W Dat	e:	Ini	tials:						
is pool is: Sigr	nificant			ally Sigr		☐ Not Sig	gnificant du	le to: Odoes	not meet bi not meet M				
mments:													





server's Pool ID: <u>3-4</u>	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION			
ı. Observer name: <u>CES, Inc. (A. Pierce, J. Sz</u>	zillery)		
. Contact and credentials previously pro	ovided? O No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name:	• other CES, Inc. (R. St.Amand)		
o. Contact and credentials previously pro	ovided? O No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing a	nd Recycling Facility		
	<u>mages</u> of a) the pool and b) the indica ed for nonprofessional observers and		
ANDOWNER CONTACT INFORMATIO			_
	o If no, was landowner permission obta	ined for survey? (Yes ON
. Landowner's contact information (requ	,		
Name: Hickory Development, LLC	Dhono:		
Street Address: P.O. Box 249	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 Large Projects: check if separate p	City: <u>Hampden</u> project landowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 Large Projects: check if separate p VERNAL POOL LOCATION INFORMAT Location Township: Hampden	City: <u>Hampden</u> project landowner data file submitted TION		Zip: <u>0444</u>
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r	City: Hampden project landowner data file submitted TION mapped landmarks):	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r	City: <u>Hampden</u> project landowner data file submitted TION	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Rois on the left.	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Bill f the 3 must be submitted (check those s	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Roi is on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Brother files a must be submitted (check those solearly marked.	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Rois on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of Large scale aerial photograph with	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Bit of the 3 must be submitted (check those south pool clearly marked.	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Roi is on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of Large scale aerial photograph with GPS data (complete section below	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Bit of the 3 must be submitted (check those south pool clearly marked.	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Rois on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of Large scale aerial photograph with GPS data (complete section below GPS location of vernal pool	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Brown files the 3 must be submitted (check those solearly marked. In pool clearly marked.	State: ME	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Roi is on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of Large scale aerial photograph with GPS data (complete section below GPS location of vernal pool Longitude/Easting: 512390.9011	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Bit of the 3 must be submitted (check those solearly marked. of pool clearly marked.	rook Road. Access rosubmitted):	
Street Address: P.O. Box 249 E. Large Projects: check if separate pools. Large Projects: check if separate pools. Location Township: Hampden Brief site directions to the pool (using reserved in the left). From Interstate 95, exit at Cold Brook Rosis on the left. Mapping Requirements: At least 2 of Separate Sepa	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Bit of the 3 must be submitted (check those solearly marked. of pool clearly marked.	rook Road. Access rosubmitted):	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Roi is on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of Large scale aerial photograph with GPS data (complete section below GPS location of vernal pool Longitude/Easting: 512390.9011 Check Datum: NAD27 NAD83 Check one: GIS shapefile	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Bit of the 3 must be submitted (check those solearly marked. of pool clearly marked.	rook Road. Access rosubmitted):	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Rois on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of Large scale aerial photograph with GPS data (complete section below GPS location of vernal pool Longitude/Easting: 512390.9011 Check Datum: NAD27 NAD83 Check one: GIS shapefile - send to Jason.Czapig	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Brown and the submitted (check those south a pool clearly marked. pool clearly marked. pool clearly marked. y). Latitude/Northing: 4957528.7272 3 / WGS84 Coordinate system: UTM-rega@maine.gov; observer has reviewed shapes delineated by multiple GPS points. (exceptions)	rook Road. Access rousubmitted):	
Street Address: P.O. Box 249 Large Projects: check if separate p /ERNAL POOL LOCATION INFORMAT Location Township: Hampden Brief site directions to the pool (using r From Interstate 95, exit at Cold Brook Roi is on the left. Mapping Requirements: At least 2 of USGS topographic map with pool of Large scale aerial photograph with GPS data (complete section below GPS location of vernal pool Longitude/Easting: 512390.9011 Check Datum: NAD27 NAD83 Check one: GIS shapefile - send to Jason.Czapig The pool perimeter is - Include map or spread	City: Hampden project landowner data file submitted TION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold Brown and the submitted (check those south a pool clearly marked. pool clearly marked. pool clearly marked. y). Latitude/Northing: 4957528.7272 3 / WGS84 Coordinate system: UTM-rega@maine.gov; observer has reviewed shapes delineated by multiple GPS points. (exceptions)	rook Road. Access rousubmitted):	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other: \(\frac{1}{2} \)	ssociated with larger wetland complex wetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Lake or Pond Cove ☐ Abandoned beaver flowag ☐ C. Vernal pool status under the Natural Resources P ☐ Natural ☐ Natural-Modified ☐ Lake or Pond Cove ☐ Abandoned beaver flowag ☐ Active beaver flowag ☐ Natural ☐ Natural ☐ Natural-Modified ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Natural ☐ Natural ☐ Natural ☐ Natural-Modified ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowag ☐ Natural ☐	e
	dern or historic human impacts to the pool (required):
in modified, difficultation of differential describe diffy me	deriver instene maman impacts to the poor (required).
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Of Semi-permanent (drying partially in all years are completely in drought years) Explain: 	Ephemeral
Based on size, depth, substrate	
 Maximum depth at survey: • 0-12" (0-1 ft.) • 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydron Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) Pool vegetation indicators in order of increasing hydron Terrestrial nonvascular spp. (e.g. haircap 	dth: 15
moss, lycopodium spp.)	✓ Wet site ferns (e.g. royal fern, marsh fern)✓ Wet site shrubs (e.g. highbush blueberry, maleberry,
Dry site ferns (e.g. spinulose wood fern,	winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
☐ Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	1.0
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow) lain):

VERN	IAL POO	I IND	ICATO	DR INE	ORMA	ATION							
	icator su					TION							
	licator st	-			17								
					for one	n massa	s2 @ Ves	○ No: wha	at % of pool su	ırvavad	2		
		•		•	•				s, confidence	•		ioc	
									for separate s			162	
INDIC	INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae										nco		
SPEC	SPECIES # Confidence Egg Mass Observed Confidence Level Level Level												
Wood	Frog	0	0										
Spotte Salam	ed nander	1	0		3		F						
	spotted nander	0	0										
Fairy	Shrimp ³	0	0										
c. Rar ■ No		ria re spe	ecies a				pools. <u>Obs</u> nd date).	ervations sh	ould be accor	npanied	d by ph	notogra	phs
		0500		of Veri		CL**	<u> </u>			Method	d of Veri	fication*	CL**
SF	PECIES		Р	Н	S	- CL**	SPECIES			Р	Н	S	CL**
Bla	anding's Tu	ırtle					Wood Turtle						
Sp	ootted Turtle	е					Ribbon Snak	е					
Rin	nged Bogha	unter					Other:						
e. Ger	tional ob SVP [neral ver	pserve Pot rnal po	er reco ential s pol cor	mmer SVP mmen	dation No ts and	mination: 1: on Signif /or obse	icant VP ervations of the control of	Indicator of other wild er, meadowsv	Breeding Area Ilife: weet, grasses				
	:: Digital :	submi	ssion (to Jas	on.Cza	apiga@n	At 65 naine.gov)	n: Vernal Po 0 State Stree of vernal poo	Inland Fisher ools et, Bangor, MI ol field forms a rojects must b	E 04401	l tograpi	hs is or	
or MDIFV	r MDIFW use only Reviewed by MDIFW Date: Initials:												
his pool is	s: Sign	ificant			ally Sigr		☐ Not Signi		does not meet				
Comments	Judes not meet with a poor circula.												





server's Pool ID:3-5	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMATION	N .		
a. Observer name: <u>CES, Inc. (A. Pierce, J. S</u>	zillery)		
. Contact and credentials previously pro	ovided? O No (submit Addendum 1)	Yes	
PROJECT CONTACT INFORMATION			
a. Contact name: O same as observer	other CES, Inc. (R. St.Amand)		
o. Contact and credentials previously pre	rovided? O No (submit Addendum 1)	Yes	
c. Project Name: Solid Waste Processing a	and Recycling Facility		
species egg mass) are <u>require</u> ANDOWNER CONTACT INFORMATI	ed for nonprofessional observers and	l <u>encouraged</u> for al	l observers
	o If no, was landowner permission obta	ained for survey?	Voc ONo
b. Landowner's contact information (requ		airieu ioi survey?	J Tes ONC
` .	,		
Name: Hickory Development, LLC			7in, 0444
Street Address: P.O. Box 249 c. Large Projects: check if separate	City: Hampden project landowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate parameters VERNAL POOL LOCATION INFORMA a. Location Township: Hampden	City: Hampden project landowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate VERNAL POOL LOCATION INFORMA	City: Hampden project landowner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate VERNAL POOL LOCATION INFORMA a. Location Township: Hampden Brief site directions to the pool (using	City: Hampden project landowner data file submitted	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate parameters VERNAL POOL LOCATION INFORMA a. Location Township: Hampden Brief site directions to the pool (using From Interstate 95, exit at Cold Brook Rollis on the left. b. Mapping Requirements: At least 2 of the pool of the left.	City: Hampden project landowner data file submitted ATION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold B	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if	City: Hampden project landowner data file submitted ATION mapped landmarks): oad (exit 180). Go 0.5 miles south on Cold B of the 3 must be submitted (check those south marked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate parameters. VERNAL POOL LOCATION INFORMA a. Location Township: Hampden Brief site directions to the pool (using) From Interstate 95, exit at Cold Brook Rollis on the left. D. Mapping Requirements: At least 2 on USGS topographic map with pool	City: Hampden project landowner data file submitted ATION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold B of the 3 must be submitted (check those south on pool clearly marked. In pool clearly marked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate parameters. Hampden Brief site directions to the pool (using From Interstate 95, exit at Cold Brook Regis on the left. D. Mapping Requirements: At least 2 on USGS topographic map with pool X Large scale aerial photograph with X GPS data (complete section below	City: Hampden project landowner data file submitted ATION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold B of the 3 must be submitted (check those south on pool clearly marked. In pool clearly marked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects. Hampden Brief site directions to the pool (using project projects) From Interstate 95, exit at Cold Brook Register on the left. Mapping Requirements: At least 2 or USGS topographic map with pool projects are all photograph with projects of the project projects of the project proje	City: Hampden project landowner data file submitted ATION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold B of the 3 must be submitted (check those south on pool clearly marked. In pool clearly marked.	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate posterior check is consistent check if separate posterior check is consistent check if separate posterior check is consistent check if separate posterior check is check if separate posterior check is check if separate posterior check is check if separate poster	City: Hampden project landowner data file submitted ATION mapped landmarks): oad (exit 180). Go 0.5 miles south on Cold E of the 3 must be submitted (check those south on clearly marked. In pool clearly marked.	State: ME Brook Road. Access ro submitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate posterior check posterior check if separate posterior check is separate posterior check if separate posterior check is separate posterior check if separate posterior check is separate pos	City: Hampden project landowner data file submitted ATION mapped landmarks): oad (exit 180). Go 0.5 miles south on Cold E of the 3 must be submitted (check those south on clearly marked. In pool clearly marked.	State: ME Brook Road. Access ro submitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate paragraphic check if separate paragraphic check if separate paragraphic check and check is on the pool (using paragraphic check paragraphic che	City: Hampden project landowner data file submitted ATION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold E of the 3 must be submitted (check those south on clearly marked. In pool	State: ME Brook Road. Access ro submitted): -m be accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects in the project project project projects in the project projec	City: Hampden project landowner data file submitted ATION mapped landmarks): pad (exit 180). Go 0.5 miles south on Cold B of the 3 must be submitted (check those south on clearly marked. In pool	State: ME Brook Road. Access ro submitted): -m be accuracy (best)	

5. VERNAL POOL HABITAT INFORMATION a. Habitat survey date (only if different from indicato	r survey dates on nage 3).
b. Wetland habitat characterization	Survey dates on page o/
■ Choose the best descriptor for the landscape setting:	
O Isolated depression Pool as	ssociated with larger wetland complex upland/ wetland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage	e Other:
c. Vernal pool status under the Natural Resources P	• •
i. Pool Origin: ● Natural ○ Natural-Modified ○ Ulf modified, unnatural or unknown, describe any model.	dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provio</u> ○ Permanent	Ephemeral
Ехріант.	
■ Maximum depth at survey: O-12" (0-1 ft.) Approximate size of pool (at spring highwater): Wie Predominate substrate in order of increasing hydro	dth: 20
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hy	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	✓ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) ——————————————————————————————————
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool
■ Faunal indicators (check all that apply):	2 No vogetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
iii. Inlet/Outlet Flow Permanency	
Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool):
No inlet or outlet Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
Other or Unknown (exp	lain):

VERNAL POC)L IN	DICATOR	RINFORM	ATION					
a. Indicator s	urvey	/ dates: <u>5/</u>	/8 , 5/14				_		
b. Indicator a	bund	ance crit	eria						
■ Was the er	ntire p	oool surve	eyed for eg	g masse	s? • Yes ONo; w	hat % of pool sur	veyed?		
					ct number of egg mass arate cells are provide			ies	
INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae									
SPECIES	Confidence Egg Mass Charged Confidence				Confiden				
Wood Frog	1		3		М	Т		3	
Spotted Salamander	20	13	3	3	A				
Blue-spotted Salamander	0	2		3	A				
Fairy Shrimp ³	0	0							
1-Confidence lev 2-Egg mass matu 3-Fairy Shrimp: X	urity: F (= pre	= Fresh (<2			nd embryos), A= Advanced	(loose matrix, curved	l embryos), H=	Hatched or	· Hatching
-	re sp				pools. Observations s	should be accom	panied by pl	<u>notograpl</u>	<u>hs</u>
SPECIES			f Verification	* CL**	SPECIES		Method of Ver		CL**
Blanding's Tu	urtle	P	H S		Wood Turtle		Р Н П	S	
Spotted Turtl	е				Ribbon Snake				
Ringed Bogha	aunter				Other:				
					andled, S = Seen 1= <60%, 2= 60-95%, 3	= >95%	1		
e. General ver	nal p	otential SV	/P □ N ments and	on Signif d/or obse	icant VP Indicate				
P0011S 15-20	J% ve	getateu ai	Ouna eage	S WILLI THE	eadowsweet				
Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401									
NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.									
r MDIFW use only	<u>/</u> R		MDIFW Da		Initials:	_			
is pool is: Sigr	nifican		tentially Sig t lacking critic		Not Significant due to	does not meet bi			
mments:									





server's Pool ID:3-6	_	MDIFW Pool ID:		
PRIMARY OBSERVER INFORMA	ATION			
a. Observer name: <u>CES, Inc. (A. Pier</u> c	ce, J. Szillery)	_		
o. Contact and credentials previous	sly provided? O No ((submit Addendum 1)	Yes	
PROJECT CONTACT INFORMAT	ΓΙΟΝ			
a. Contact name:	server other CES, Ir	nc. (R. St.Amand)		
o. Contact and credentials previou	sly provided? O No	(submit Addendum 1)	Yes	
c. Project Name: Solid Waste Proces	ssing and Recycling Fa	acility		
NOTE: <u>Clear photographs or di</u> species egg mass) are <u>re</u>				
ANDOWNER CONTACT INFOR				_
a. Are you the landowner? O Yes		andowner permission obt	ained for survey? (Yes ONG
b. Landowner's contact information	` ' '			
	•			
Name: Hickory Development, LLC				
Street Address: P.O. Box 249 c. Large Projects: check if sepa	arate project landowi	City: Hampden		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separation info	arate project landowi	City: Hampden		Zip: <u>0444</u> -
Street Address: P.O. Box 249 c. Large Projects: check if separation info	arate project landowi	City: Hampden ner data file submitted		Zip: <u>0444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separation in the control of the contro	arate project landowing principles of the project landowing mapped landm	City: Hampden ner data file submitted narks):	State: ME	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects:	preserved and own arate project landown preserved landman with the land management of the land management and land management	City: Hampden ner data file submitted narks): to 0.5 miles south on Cold e submitted (check those	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check if	preserved and own arate project landown preserved landown using mapped landown ook Road (exit 180). Got ast 2 of the 3 must be pool clearly marked	City: Hampden ner data file submitted narks): to 0.5 miles south on Cold e submitted (check those	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: projects: check if separate projects: Hampden price projects: project	arate project landown DRMATION using mapped landmook Road (exit 180). Go ast 2 of the 3 must be pool clearly marked with pool clearly marked on with pool clearly marked with marked with marked so the second clearly marked with pool clearly mar	City: Hampden ner data file submitted narks): to 0.5 miles south on Cold e submitted (check those	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate Pool Location INFO a. Location Township: Hampden Brief site directions to the pool (or From Interstate 95, exit at Cold Brown is on the left. b. Mapping Requirements: At lease USGS topographic map with X Large scale aerial photograp	arate project landown DRMATION using mapped landmook Road (exit 180). Go ast 2 of the 3 must be pool clearly marked with pool clearly marked on with pool clearly marked with marked with marked so the second clearly marked with pool clearly mar	City: Hampden ner data file submitted narks): to 0.5 miles south on Cold e submitted (check those	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: projects: check if separate projects: projects projects: projects projects: projects projects projects: projects projects projects: projects projects projects: p	preserved and own arrate project landown open mapped landmook Road (exit 180). Go ast 2 of the 3 must be pool clearly marked the with pool clearly maked below).	City: Hampden ner data file submitted narks): to 0.5 miles south on Cold e submitted (check those	State: ME Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate Pool Location INFO a. Location Township: Hampden Brief site directions to the pool (unit From Interstate 95, exit at Cold Brown is on the left. b. Mapping Requirements: At lease USGS topographic map with Impure Interstate International Interstate Int	preserved and own arrate project landown preserved landown properties of the 3 must be provided by the provided landown project landown provided landown project landown provided landown project land	City: Hampden ner data file submitted narks): to 0.5 miles south on Cold e submitted (check those narked.	Brook Road. Access ro	
Street Address: P.O. Box 249 c. Large Projects: check if separate Large Projects: check one: P.O. Box 249 VERNAL POOL LOCATION INFORM INFORMATION	arate project landown DRMATION using mapped landmook Road (exit 180). Go ast 2 of the 3 must be pool clearly marked which pool clearly maked below). Latitude/N NAD83 / WGS84	City: Hampden ner data file submitted narks): io 0.5 miles south on Cold e submitted (check those narked.	Brook Road. Access rosubmitted):	
Street Address: P.O. Box 249 c. Large Projects: check if separate projects: check one: P.O. Box 249 WERNAL POOL LOCATION INFORM INFORMATION INFORMAT	arate project landown DRMATION using mapped landmook Road (exit 180). Go ast 2 of the 3 must be pool clearly marked with pool clearly maked below). Latitude/N NAD83 / WGS84 .Czapiga@maine.gov;	City: Hampden ner data file submitted narks): io 0.5 miles south on Cold e submitted (check those harked. lorthing: 4957301.3562 Coordinate system: UTM observer has reviewed sha multiple GPS points. (ex	Brook Road. Access rosubmitted): -m pe accuracy (best)	
Street Address: P.O. Box 249 c. Large Projects: check if separate version of the pool (version) a. Location Township: Hampden Brief site directions to the pool (version) From Interstate 95, exit at Cold Brown is on the left. b. Mapping Requirements: At least USGS topographic map with X Large scale aerial photograp X GPS data (complete section GPS location of vernal pool Longitude/Easting: 512678.297 Check Datum: NAD27 Check one: GIS shapefile - send to Jason. The pool perimal pool pool pool pool pool pool pool po	arate project landown DRMATION using mapped landmook Road (exit 180). Go ast 2 of the 3 must be pool clearly marked which pool clearly marked who with pool clearly modelow). Latitude/N NAD83 / WGS84 .Czapiga@maine.gov; eter is delineated by spreadsheet with coordinated.	City: Hampden ner data file submitted narks): io 0.5 miles south on Cold e submitted (check those harked. lorthing: 4957301.3562 Coordinate system: UTM observer has reviewed sha multiple GPS points. (ex	Brook Road. Access rosubmitted): -m pe accuracy (best)	

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
 ■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ● Other: 	ssociated with larger wetland complex wetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Emergent marsh ☐ Active beaver flowage	ge Other:
c. Vernal pool status under the Natural Resources F	• •
i. Pool Origin: ● Natural ○ Natural-Modified ○ Ull If modified, unnatural or unknown, describe any model.	Jnnatural ○ Unknown odern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Orange of the provided of the pool's <u>estimated</u> of the provided of the prov	 Ephemeral
Based on size, depth, substrate, terrestrial vegetation	
 ■ Maximum depth at survey:	dth: 20
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
	, , ,
■ Pool vegetation indicators in order of increasing hy	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)No vegetation in pool
■ Faunal indicators (check all that apply):	in two vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)

: VED	NAL POO	I INIT	NC A TC	D INE	ODM	ATION						
						ATION						
	dicator su	-			/14				_			
	dicator al				,		0 0 V ON	h (0/) f ()		0		
				-		_	s? • Yes ONo; w					
							ct number of egg mas arate cells are provide				ies	
INDI	INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae											
SPE	SPECIES # Confidence Egg Mass Observed Confidence Level 1 Maturity 2 Level 1											
Woo	d Frog	0						Υ			3	
Spot Sala	ted mander	12	4		3	3	A					
	-spotted mander	0	27			3	A					
Fairy	/ Shrimp ³	0	0									
c. Ra ■ N	ry Shrimp: X arity crite ote any ra abeled wit	r ia re spe	ecies a				pools. <u>Observations</u>	should be accom	panied	l by ph	notogra	phs
710	aboled wit	11 000		of Verif			<u> </u>		Method	l of Veri	fication*	
5	SPECIES		Р	Н	S	CL**	SPECIES		Р	Н	S	CL**
E	Blanding's Tu	ırtle					Wood Turtle					
8	Spotted Turtle	е					Ribbon Snake					
F	Ringed Bogha	unter					Other:					
d. Op	CL - Confidence of the Confide	eserve Pot	er reco ential S	species mmen	dation No	mination: n: on Signif	andled, S = Seen 1= <60%, 2= 60-95%, 3 icant VP Indicatervations of other we meadowsweet	tor Breeding Area				
	E: Digital :	submi	ssion (to Jas	on.Cza	apiga@n	ation to: Maine Dept. Attn: Vernal 650 State St naine.gov) of vernal p ssessed pools; larger	Pools treet, Bangor, ME pool field forms an	04401 d phot	ograpl	hs is or	
or MDIF	W use only	Re	eviewed l	by MDIF	W Dat	e:	Initials:					
his pool	is: Sign	ificant			ally Sigr		Not Significant due to	~				
commen	mments:											





Observer's Pool ID:3-7	MDIFW Pool ID:
Observer's Foot ID. 37	MIDITYY FOOI ID.
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (A. Pierce, J. Szillery)	
b. Contact and credentials previously provided?	○ No (submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name:	rCES, Inc. (R. St.Amand)
b. Contact and credentials previously provided?	○ No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recyc	cling Facility
species egg mass) are <u>required</u> for no	of a) the pool and b) the indicators (one example of each onprofessional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
·	was landowner permission obtained for survey?
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
Street Address: P.O. Box 249 c. Large Projects: check if separate project la VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> andowner data file submitted
Street Address: P.O. Box 249 c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> andowner data file submitted
Street Address: P.O. Box 249 c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped)	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u> andowner data file submitted
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit	City: Hampden State: ME Zip: 04444 andowner data file submitted landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): narked.
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly n Large scale aerial photograph with pool clearly n	City: Hampden State: ME Zip: 04444 andowner data file submitted landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): narked.
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly n Large scale aerial photograph with pool clearly n GPS data (complete section below). GPS location of vernal pool	City: Hampden State: ME Zip: 04444 andowner data file submitted landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site must be submitted (check those submitted): narked.
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly n Large scale aerial photograph with pool clearly n GPS data (complete section below). GPS location of vernal pool	City: Hampden State: ME Zip: 04444 andowner data file submitted I landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site nust be submitted (check those submitted): narked. early marked. itude/Northing: 4957283.4518
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly m USGS topographic map with pool clearly m Carge scale aerial photograph with pool clearly m GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512664.0501 Lati	City: Hampden State: ME Zip: 04444 andowner data file submitted I landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site nust be submitted (check those submitted): narked. early marked. itude/Northing: 4957283.4518
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly m Large scale aerial photograph with pool clearly m GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512664.0501 Lati Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile	City: Hampden State: ME Zip: 04444 andowner data file submitted I landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site nust be submitted (check those submitted): narked. early marked. itude/Northing: 4957283.4518
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly n Large scale aerial photograph with pool clearly n GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512664.0501 Lati Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile - send to Jason.Czapiga@mair	City: Hampden State: ME Zip: 04444 andowner data file submitted I landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site nust be submitted (check those submitted): narked. early marked. itude/Northing: 4957283.4518 684 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) ated by multiple GPS points. (excellent)
c. Large Projects: check if separate project la 4. VERNAL POOL LOCATION INFORMATION a. Location Township: Hampden Brief site directions to the pool (using mapped From Interstate 95, exit at Cold Brook Road (exit is on the left. b. Mapping Requirements: At least 2 of the 3 m USGS topographic map with pool clearly n Large scale aerial photograph with pool clearly n GPS data (complete section below). GPS location of vernal pool Longitude/Easting: 512664.0501 Lati Check Datum: NAD27 NAD83 / WGS Check one: GIS shapefile - send to Jason.Czapiga@mair The pool perimeter is delinea	City: Hampden State: ME Zip: 04444 andowner data file submitted I landmarks): 180). Go 0.5 miles south on Cold Brook Road. Access road to the Site nust be submitted (check those submitted): narked. early marked. itude/Northing: 4957283.4518 684 Coordinate system: UTM-m ne.gov; observer has reviewed shape accuracy (best) ted by multiple GPS points. (excellent) th coordinates.

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicato	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other: \(\frac{1}{2} \)	sociated with larger wetland complex vetland/ upland complex
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Emergent marsh ☐ Active beaver flowag	e Other:
c. Vernal pool status under the Natural Resources P	
i. Pool Origin: ● Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	Innatural C Unknown dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Of Semi-permanent (drying partially in all years are completely in drought years) Explain: 	Ephemeral
based on depth, size, and presence of terrestrial veget	ation
 ■ Maximum depth at survey:	odth: 15
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) 	 Organic matter (peat/muck) shallow or restricted to deepest portion Organic matter (peat/muck) deep and widespread
, , ,	. , , , , , , , , , , , , , , , , , , ,
■ Pool vegetation indicators in order of increasing hyd	
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
lady fern, bracken fern)Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☐ No vegetation in pool
■ Faunal indicators (check all that apply):	140 vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	nel providing water flowing into or out of the pool): t (channel with well-defined banks and permanent flow) ain):

VERNAL POO					ATION								
a. Indicator s	-			/14									
b. Indicator a							V	M. L.	10/ . 5		10		
■ Was the ei			-		_								
■ For each ir determinat												eies	
INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae Confidence Egg Mass Cheerval Confidence													
SPECIES		#		Co	nfidence Level ¹	9		viass urity ²	Obs	served		Confide	
Wood Frog	2	0		3		М	- 1		0				
Spotted Salamander	6	6		3	3		А						
Blue-spotted Salamander	0	0											
Fairy Shrimp ³	0	0											
3-Fairy Shrimp: >Rarity criteNote any ra (labeled with	ria are spe	ecies a						ations sho	ould be acc	companie	d by pł	notogra	phs
\labeled Wit	000		d of Veri				<u>57</u> .			Metho	d of Ver	ification*	01 **
SPECIES		Р	Н	S	CL**	SPECI	ES			Р	Н	S	CL**
Blanding's Tu	urtle					Wood	Turtle						
Spotted Turtl	е					Ribbon	Snake						
*Method of v						Other:							
**CL - Confi	Pot	er reco	ommer SVP mmen	ndation No ts and	n: on Signii /or obs	ficant V ervatio	P [I	ndicator l	Breeding A	ırea			
end completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 IOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.													
MDIFW use only	/ Re	eviewed	hy MDIF	W Dat	Φ.		Initials:						
s pool is: Sign		: 🖂 '	Potentia	ally Sigr	nificant			~	does not me				
but lacking critical datadoes not meet MDEP vernal pool criteria.													





INSTRUCTIONS: Complete all 3 pages of form as thorough	hly as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 3-8	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (A. Pierce, J. Szillery)	
b. Contact and credentials previously provided? No ((submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other CES, Ir	nc. (R. St.Amand)
b. Contact and credentials previously provided? No	(submit Addendum 1)
c. Project Name: Solid Waste Processing and Recycling Fa	ncility
, , , , ,	ne pool and b) the indicators (one example of each fessional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
•	andowner permission obtained for survey? O Yes O No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
c. Large Projects: check if separate project landow	ner data file submitted
4 VERNAL ROOF LOCATION INFORMATION	
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landm	
From Interstate 95, exit at Cold Brook Road (exit 180). G is on the left.	to 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marked Large scale aerial photograph with pool clearly m GPS data (complete section below). 	
GPS location of vernal pool	
Longitude/Easting: 512572.3977 Latitude/N	lorthing: 4957359.2854
Check Datum: NAD27 NAD83 / WGS84	Coordinate system: UTM-m
Check one:	
	observer has reviewed shape accuracy (best)
The pool perimeter is delineated by - Include map or spreadsheet with coord	
○ The above GPS point is at the center	
The center of the pool is approximated the degrees from the above GPS.	tely m ○ /ft ○ in the compass direction of

5. VERNAL POOL HABITAT INFORMATION										
a. Habitat survey date (only if different from indicator survey dates on page 3):										
b. Wetland habitat characterization										
 ■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ● Other: 	ssociated with larger wetland complex wetland/ upland complex									
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage										
c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)									
i. Pool Origin: ○ Natural Natural-Modified ○ L										
If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):									
Impacted by skid road										
O Permanent O Semi-permanent (drying partially in all years ar completely in drought years) Explain:	in most years)									
Based on depth, substrate, and terrestrial vegetation i ■ Maximum depth at survey: • 0-12" (0-1 ft.) 12	,									
■ Approximate size of pool (at spring highwater): Wie	dth: 50 m ft Length: 20 m ft									
■ Predominate substrate in order of increasing hydro	period:									
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	Organic matter (peat/muck) shallow or restricted to deepest portion									
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread									
■ Pool vegetation indicators in order of increasing hy	droperiod (check all that apply):									
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	☐ Wet site ferns (e.g. royal fern, marsh fern)									
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)									
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)									
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)									
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)									
■ Faunal indicators (check all that apply):	No vegetation in pool									
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:									
iii. Inlet/Outlet Flow Permanency										
Type of inlet or outlet (a seasonal or permanent char	nnel providing water flowing into or out of the pool):									
No inlet or outlet Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)									
Other or Unknown (exp	lain):									

. VERN	IAL POO	L IND	ICATO	OR INF	ORMA	ATION						
a. Ind	vernal Pool Indicator Information a. Indicator survey dates: 5/8, 5/13											
b. Ind	b. Indicator abundance criteria											
■ W	as the er	ntire p	ool sur	veyed	for egg	g masse	s? • Yes ONo; what	% of pool sur	veyed	?		
							et number of egg masses, arate cells are provided fo				ies	
INDIC	INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae											
SPEC		Contidence F00 Mass Contidence										
Wood	l Frog	0	0			2010.		Т			3	
Spotte	ed nander	1	1		3	3	А					
	spotted nander	0	0									
Fairy	Shrimp ³	0	0									
■ No	 c. Rarity criteria Note any rare species associated with vernal pools. <u>Observations should be accompanied by photographs</u> (labeled with observer name, pool location, and date). 											
Ì				of Veri		CL**			Method	of Veri	fication*	CL**
	PECIES		Р	H	s		SPECIES		P	Н	s	
	anding's Tu						Wood Turtle					
<u> </u>	ootted Turtle						Ribbon Snake					
	nged Bogha						Other:					
d. Op	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% d. Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area e. General vernal pool comments and/or observations of other wildlife:											
	Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.											
or MDIF\	r MDIFW use only Reviewed by MDIFW Date: Initials:											
his pool i	s pool is: Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.											
comments												





INSTRUCTION	NS: Complete all 3 pages of form as t	thoroughly as possible. Most fie	elds are <u>required</u> for pool registratio
Observer's P	Pool ID:3-9	MDIFW Pool ID:	
1. PRIMARY	OBSERVER INFORMATION		
a. Observe	r name: <u>CES, Inc. (A. Pierce, J. Szillery)</u>		
b. Contact	and credentials previously provided?	? O No (submit Addendum 1)	Yes
2. PROJECT	CONTACT INFORMATION		
a. Contact	name:	er CES, Inc. (R. St.Amand)	
b. Contact	and credentials previously provided	? ○ No (submit Addendum 1)	Yes
c. Project N	Name: Solid Waste Processing and Rec	ycling Facility	
sp	ear photographs or digital images ecies egg mass) are <u>required</u> for r		
	NER CONTACT INFORMATION		
•	the landowner? O Yes O No If no	o, was landowner permission obt	tained for survey? () Yes () No
	ner's contact information (required)		
	lickory Development, LLC		
Street A	ddress: P.O. Box 249	City: <u>Hampden</u>	State: ME Zip: 04444
a. Location	POOL LOCATION INFORMATION Township: Hampden directions to the pool (using mappe	ud landmarks):	
		<u> </u>	
is on the	erstate 95, exit at Cold Brook Road (exit left.	t 180). Go 0.5 miles south on Cold	Brook Road. Access road to the Site
☐ USG: ☒ Large	g Requirements: At least 2 of the 3 S topographic map with pool clearly e scale aerial photograph with pool c data (complete section below).	marked.	submitted):
GPS loc	cation of vernal pool		
Longitud	de/Easting: <u>512400.3306</u> La	atitude/Northing: 4957551.6434	
Check D	Datum: ONAD27 NAD83 / WG	SS84 Coordinate system: UTM	<u>1-m</u>
Check o	one:	nine.gov; observer has reviewed sha	ine accuracy (best)
		eated by multiple GPS points. (ex	- , ,
	The above GPS point is at the state of		
	The center of the pool is appropriate the center of the pool is appropriate to the center of th		n the compass direction of
		ove GPS point. (acceptable)	

a. Habitat survey date (only if different from indicator survey dates on page 3): b. Wetland habitat characterization © Choos the best descriptor for the landscape setting: □ Isolated depression □ Check all wetland types that best apply to this pool: □ Check all wetland types that best apply to this pool: □ Check all wetland types that best apply to this pool: □ Forested swamp □ Lake or Pond Cove □ Floodplain □ Peatland (fen or bog) □ Abandoned beaver flowage □ Isolated pool □ Emergent marsh □ Active beaver flowage □ Cher: □ C. Vornal pool status under the Natural Resources Protection Act (NRPA) i. Pool Origin: ○ Natural ⓒ Natural-Modified ○ Unnatural ○ Unknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): Skid road through portion of pool	5. VERNAL POOL HABITAT INFORMATION										
■ Choose the best descriptor for the landscape setting:	a. Habitat survey date (only if different from indicator survey dates on page 3):										
C Isolated depression	b. Wetland habitat characterization										
Forested swamp	○ Isolated depression										
i. Pool Origin: ○ Natural ● Natural-Modified ○ Unnatural ○ Unknown If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): Skid road through portion of pool ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale for opinion. ○ Permanent ○ Semi-permanent (drying partially in all years and completely in drought years) Explain: Based on size, depth, and presence of terrestrial vegetation in pool ■ Maximum depth at survey: ② 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) ■ Approximate size of pool (at spring highwater): Width: 25 ○ m ③ ft Length: 20 ○ m ④ ft ■ Predominate substrate in order of increasing hydroperiod: ② Mineral soil (bare, leaf-litter bottom, or upland mosses present) ② Mineral soil (sphagnum moss present) □ Pool vegetation indicators in order of increasing hydroperiod: ③ Mineral soil (sphagnum moss present) □ Pool vegetation indicators in order of increasing hydroperiod (check all that apply): □ Terrestrial nonvascular spp. (e.g. shindussh blueberry, maleberry, mountain holly) □ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) □ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) □ Sphagnum moss (anchored or suspended) ■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): ⑥ No inlet or outlet (Permanent inlet or outlet (channel with well-defined banks and permanent flow)	 ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flo 	Floodplain wage Isolated pool									
If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required): Skid road through portion of pool ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale for opinion. Permanent Semi-permanent (drying partially in all years and completely in drought years) Explain: Based on size, depth, and presence of terrestrial vegetation in pool Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.) Approximate size of pool (at spring highwater): Width: 25 m of ft Length: 20 m of t Predominate substrate in order of increasing hydroperiod: Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) Pool vegetation indicators in order of increasing hydroperiod (check all that apply): Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Faunal indicators (check all that apply): Fish Bullfrog or Green Frog tadpoles Bullfrog or Green Frog tadpoles Wet site flowing into or out of the pool): No vegetation in pool of the pool): No vegetation in pool of the pool): No vegetation in pool of the pool):	c. Vernal pool status under the Natural Resources P	rotection Act (NRPA)									
ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale for opinion. ○ Permanent ○ Semi-permanent (drying partially in all years and completely in drought years) Explain: Based on size, depth, and presence of terrestrial vegetation in pool ■ Maximum depth at survey: ② 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) ■ Approximate size of pool (at spring highwater): Width: 25 ○ m ③ ft Length: 20 ○ m ④ ft ■ Predominate substrate in order of increasing hydroperiod: ⑤ Mineral soil (bare, leaf-litter bottom, or upland mosses present) ○ Mineral soil (sphagnum moss present) ○ Pool vegetation indicators in order of increasing hydroperiod (check all that apply): □ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) □ Dy site ferns (e.g. spinulose wood fern, lady fern, bracken fern) ○ Moist site rems (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) ○ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) □ Sphagnum moss (anchored or suspended) ■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): ⑥ No inlet or outlet ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow)	i. Pool Origin: ○ Natural ● Natural-Modified ○ U	Innatural C Unknown									
ii. Pool Hydrology Select the pool's estimated hydroperiod AND provide rationale for opinion. ○ Permanent	If modified, unnatural or unknown, describe any mod	dern or historic human impacts to the pool (required):									
■ Select the pool's estimated hydroperiod AND provide rationale for opinion. ○ Permanent ○ Semi-permanent (drying partially in all years and completely in drought years) Explain: Based on size, depth, and presence of terrestrial vegetation in pool ■ Maximum depth at survey: ● 0-12" (0-1 ft.) ○ 12-36" (1-3 ft.) ○ 36-60" (3-5 ft.) ○ >60" (>5 ft.) ■ Approximate size of pool (at spring highwater): Width: 25 ○ m ● ft Length: 20 ○ m ● ft ■ Predominate substrate in order of increasing hydroperiod: ● Mineral soil (bare, leaf-litter bottom, or upland mosses present) ○ Mineral soil (sphagnum moss present) ● Pool vegetation indicators in order of increasing hydroperiod (check all that apply): □ Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) □ Dry site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, Sey York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. sensitive fern, cinnamon fern, interrupted fern, New Yor	Skid road through portion of pool										
Explain: Based on size, depth, and presence of terrestrial vegetation in pool Maximum depth at survey: • 0-12" (0-1 ft.)	 Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u> Permanent Semi-permanent (drying partially in all years an 	 Ephemeral									
Based on size, depth, and presence of terrestrial vegetation in pool ■ Maximum depth at survey:		in most years)									
■ Maximum depth at survey:											
 ■ Approximate size of pool (at spring highwater): Width: 25	Based on size, depth, and presence of terrestrial veget	ation in pool									
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) Mineral soil (sphagnum moss present) Pool vegetation indicators in order of increasing hydroperiod (check all that apply):	■ Approximate size of pool (at spring highwater): Wic	dth: 25									
 ■ Pool vegetation indicators in order of increasing hydroperiod (check all that apply):	Mineral soil (bare, leaf-litter bottom, or upland	Organic matter (peat/muck) shallow or									
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) □ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) □ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) □ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) □ Sphagnum moss (anchored or suspended) □ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles □ Wet site ferns (e.g. royal fern, marsh fern) □ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) □ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) □ Aquatic vascular spp. (e.g. pickerelweed, arrowhead) □ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) □ No vegetation in pool □ Other:	O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread									
moss, lycopodium spp.) Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Faunal indicators (check all that apply): Fish Bullfrog or Green Frog tadpoles Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)	■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):									
 □ Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) □ Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) □ Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) □ Sphagnum moss (anchored or suspended) ■ Faunal indicators (check all that apply): □ Fish □ Bullfrog or Green Frog tadpoles □ Other: □ Other: □ No inlet or outlet ○ Permanent inlet or outlet (channel with well-defined banks and permanent flow) 		Wet site ferns (e.g. royal fern, marsh fern)									
 Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Faunal indicators (check all that apply): Fish Bullfrog or Green Frog tadpoles Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) Aquatic vascular spp. (e.g. pickerelweed, arrowhead) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool Other: iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow) 	Dry site ferns (e.g. spinulose wood fern,	winterberry, mountain holly)									
 Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool Fish Bullfrog or Green Frog tadpoles Other:	Moist site ferns (e.g. sensitive fern, cinnamon										
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended) Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool Faunal indicators (check all that apply): Fish Bullfrog or Green Frog tadpoles Other: iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)	·	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)									
■ Faunal indicators (check all that apply): ☐ Fish ☐ Bullfrog or Green Frog tadpoles ☐ Other: iii. Inlet/Outlet Flow Permanency Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): ⑥ No inlet or outlet ☐ Permanent inlet or outlet (channel with well-defined banks and permanent flow)	jewelweed, blue flag iris, swamp candle)	water shield, pond weed, bladderwort)									
 □ Fish □ Bullfrog or Green Frog tadpoles □ Other:	■ Faunal indicators (check all that apply):	140 vegetation in poor									
Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool): No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)	_ ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	Other:									
	Type of inlet or outlet (a seasonal or permanent chan										

VERNAL POOL INDICATOR INFORMATION												
a. Indicator survey dates: 5/8,5/13												
 b. Indicator abundance criteria ■ Was the entire pool surveyed for egg masses? Yes No; what % of pool surveyed?												
	•		•					-	-			
								ses, confidence d for separate s			ies	
NDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae												
SPECIES		#			nfidence Level 1		Egg Mass Maturity ²	Observ	/ed		Confide Leve	
Wood Frog	9	1	:	3	3	Α	Н	Υ			3	
Spotted Salamander	0	0										
Blue-spotted Salamander	0	1			3							
Fairy Shrimp ³	0	0										
2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (loose matrix, curved embryos), H= Hatched or Hatching 3-Fairy Shrimp: X = present c. Rarity criteria ■ Note any rare species associated with vernal pools. Observations should be accompanied by photographs												
(labeled with							001 14410	onouna do acos.	пране	1 v j p	10109	<u> </u>
SPECIES		Method o			CL**	SPECIES				of Veri		CL**
Blanding's Tu	rtle	Р	H	S		Wood Turtle	e		P	Н	S	
Spotted Turtle						Ribbon Sna	ke					
Ringed Boghau	unter					Other:						
*Method of ve								= >95%			l I	
**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% d. Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area e. General vernal pool comments and/or observations of other wildlife:												
Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.												
acceptable for projects with 5 of fewer assessed pools, larger projects must be mailed as hard copies.												
r MDIFW use only Reviewed by MDIFW Date: Initials:												
s pool is: Signi	ificant			Ily Sign ng critica		Not Sign	ificant due to:	Odoes not meet I				
nments:												





INSTRUCTIONS: Complete all 3 pages of form as thorough	ly as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID:3-10	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (A. Pierce, J. Szillery)	
b. Contact and credentials previously provided? No (s	submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other CES, In-	c. (R. St.Amand)
b. Contact and credentials previously provided? O No (submit Addendum 1)
c. Project Name: Solid Waste Processing and Recycling Fa	cility
	e pool and b) the indicators (one example of each essional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
·	ndowner permission obtained for survey?
b. Landowner's contact information (required)	
	Phone:
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
c. Large Projects: check if separate project landown	er data file submitted
4 VERNAL ROOF LOCATION INFORMATION	
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landma	
From Interstate 95, exit at Cold Brook Road (exit 180). Go is on the left.	o 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marked. Large scale aerial photograph with pool clearly max GPS data (complete section below). 	·
GPS location of vernal pool	
•	orthing:4957533.249
	Coordinate system:UTM-m
Check one:	,
·	observer has reviewed shape accuracy (best)
 The pool perimeter is delineated by Include map or spreadsheet with coord 	
The above GPS point is at the cente	
 The center of the pool is approximate degrees from the above GPS 	ely m /ft in the compass direction of

5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (only if different from indicator	r survey dates on page 3):
b. Wetland habitat characterization	
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other: \(\frac{1}{2} \)	sociated with larger wetland complex vetland/ upland complex
■ Check all wetland types that best apply to this pool: □ Forested swamp □ Wet meadow □ Lake or Pond Cove □ Peatland (fen or bog) □ Abandoned beaver flowag	e Cther:
c. Vernal pool status under the Natural Resources P	
i. Pool Origin: ● Natural ○ Natural-Modified ○ L If modified, unnatural or unknown, describe any mo	dern or historic human impacts to the pool (required):
 ii. Pool Hydrology ■ Select the pool's <u>estimated</u> hydroperiod AND <u>provided</u> ○ Permanent Of Semi-permanent (drying partially in all years are completely in drought years) Explain: 	Ephemeral
Based on pool size, depth, and substrate	
 Maximum depth at survey: 0-12" (0-1 ft.) 12 Approximate size of pool (at spring highwater): Wide Predominate substrate in order of increasing hydrogen 	dth: 35 m • ft Length: 20 m • ft
 Mineral soil (bare, leaf-litter bottom, or upland mosses present) 	Organic matter (peat/muck) shallow or restricted to deepest portion
O Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread
■ Pool vegetation indicators in order of increasing hyd	droperiod (check all that apply):
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)
Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)	Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 ☐ Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) ☒ No vegetation in pool
■ Faunal indicators (check all that apply):	No vegetation in poor
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:
	anel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)

VERNAL POOL INDICATOR INFORMATION												
a. Indicator survey dates: 5/8,5/13												
b. Indicator abundance criteria ■ Was the entire pool surveyed for egg masses? ● Yes ○ No; what % of pool surveyed?												
			•		•			·	-			
								ses, confidenced for separate			eies	
NDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae												
SPECIES		#		Co	onfidence Level ¹	9	Egg Mass Maturity ²	Obs	erved		Confide Leve	
Wood Frog	0	2			2		Н	Y			3	
Spotted Salamander	21	19		3	3	F	А					
Blue-spotted Salamander	50	27		3	3	F	А					
Fairy Shrimp ³	o	0										
c. Rarity crite ■ Note any ra	are sp						oservations	should be acc	ompanied	d by ph	notogra	phs
(Idaborod Wit	000	_	d of Veri			<u> </u>			Method	d of Veri	ification*	01 **
SPECIES		Р	Н	S	- CL**	SPECIES			Р	Н	S	CL**
Blanding's Tu	urtle					Wood Tur	tle					
Spotted Turtl	е					Ribbon Sn	ake					
Ringed Bogha	aunter					Other:						
*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area General vernal pool comments and/or observations of other wildlife: Pool generally devoid of vegetation - few meadowsweet along edge												
Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.												
MDIFW use only Reviewed by MDIFW Date: Initials:												
s pool is: Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.												
ments:												





INSTRUCTIONS: Complete all 3 pages of form as thorough	nly as possible. Most fields are <u>required</u> for pool registration
Observer's Pool ID: 3-11	MDIFW Pool ID:
1. PRIMARY OBSERVER INFORMATION	
a. Observer name: CES, Inc. (A. Pierce, J. Szillery)	
b. Contact and credentials previously provided? No (submit Addendum 1)
2. PROJECT CONTACT INFORMATION	
a. Contact name: O same as observer o other CES, In	ıc. (R. St.Amand)
b. Contact and credentials previously provided? O No	(submit Addendum 1)
c. Project Name: Solid Waste Processing and Recycling Fa	cility
	ne pool and b) the indicators (one example of each resional observers and <u>encouraged</u> for all observers.
3. LANDOWNER CONTACT INFORMATION	
•	andowner permission obtained for survey? O Yes O No
b. Landowner's contact information (required)	
Name: Hickory Development, LLC	
Street Address: P.O. Box 249	City: <u>Hampden</u> State: <u>ME</u> Zip: <u>04444</u>
c. Large Projects: check if separate project landown	ner data file submitted
4 VERNAL ROOF LOOATION INFORMATION	
4. VERNAL POOL LOCATION INFORMATION	
a. Location Township: Hampden	
Brief site directions to the pool (using mapped landm	
From Interstate 95, exit at Cold Brook Road (exit 180). G is on the left.	o 0.5 miles south on Cold Brook Road. Access road to the Site
 b. Mapping Requirements: At least 2 of the 3 must be USGS topographic map with pool clearly marked Large scale aerial photograph with pool clearly m GPS data (complete section below). 	
GPS location of vernal pool	
Longitude/Easting: 512359.2283 Latitude/N	orthing: 4957616.3946
Check Datum: NAD27 NAD83 / WGS84	Coordinate system: UTM-m
Check one:	
	observer has reviewed shape accuracy (best)
 The pool perimeter is delineated by Include map or spreadsheet with coord 	
C The above GPS point is at the center	er of the pool. (good)
The center of the pool is approximate degrees from the above GPS	tely m O /ft O in the compass direction of

5. VERNAL POOL HABITAT INFORMATION											
a. Habitat survey date (only if different from indicator survey dates on page 3):											
b. Wetland habitat characterization											
■ Choose the best descriptor for the landscape setting: ○ Isolated depression ○ Floodplain depression ○ Other:	ssociated with larger wetland complex wetland/ upland complex										
■ Check all wetland types that best apply to this pool: ☐ Forested swamp ☐ Wet meadow ☐ Lake or Pond Cove ☐ Peatland (fen or bog) ☐ Abandoned beaver flowage											
c. Vernal pool status under the Natural Resources F	Protection Act (NRPA)										
i. Pool Origin: O Natural O Natural-Modified O I	Jnnatural ○ Unknown										
If modified, unnatural or unknown, describe any mo	odern or historic human impacts to the pool (required):										
Some skidder impact											
O Permanent O Semi-permanent (drying partially in all years a completely in drought years) Explain: Based on pool size, depth, presence of vegetation	, , ,										
■ Maximum depth at survey: O-12" (0-1 ft.) Approximate size of pool (at spring highwater): Wi Predominate substrate in order of increasing hydro	idth: 50 m • ft Length: 25 m • ft										
Mineral soil (bare, leaf-litter bottom, or upland mosses present)	Organic matter (peat/muck) shallow or restricted to deepest portion										
○ Mineral soil (sphagnum moss present)	Organic matter (peat/muck) deep and widespread										
■ Pool vegetation indicators in order of increasing hy	droperiod (check all that apply):										
Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)	Wet site ferns (e.g. royal fern, marsh fern)										
Dry site ferns (e.g. spinulose wood fern,	▼ Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)										
lady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)	▼ Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)										
Moist site vasculars (e.g. skunk cabbage,	Aquatic vascular spp. (e.g. pickerelweed, arrowhead)										
jewelweed, blue flag iris, swamp candle) Sphagnum moss (anchored or suspended)	 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) No vegetation in pool 										
■ Faunal indicators (check all that apply):	ino vegetation in poor										
☐ Fish ☐ Bullfrog or Green Frog tadpoles	Other:										
	nnel providing water flowing into or out of the pool): et (channel with well-defined banks and permanent flow)										

. VERN	NAL POC	L INC	DICATO	OR INF	ORMA	ATION							
a. Ind	a. Indicator survey dates: 5/8, 5/13												
b. Inc	b. Indicator abundance criteria												
■ \/	/as the er	ntire p	ool sur	veyed	for eg	g masse	s? • Ye	s	t % of pool sur	veyed	?		
									s, confidence lo for separate su			ies	
INDIC	INDICATOR Egg Masses (or adult Fairy Shrimp) Tadpoles/Larvae												
SPEC			#		Co	nfidence Level ¹		Egg Mass Maturity ²	Observe	ed		Confide Leve	
Wood	d Frog	4	1		3	3	A H T					3	
Spott Salar	ed nander	0	0										
	spotted nander	0	0										
Fairy	Shrimp ³	0	0										
■ No	 3-Fairy Shrimp: X = present c. Rarity criteria ■ Note any rare species associated with vernal pools. Observations should be accompanied by photographs (labeled with observer name, pool location, and date). 												
Ì	DECIEC		Method	of Veri	fication*	- CL**	CDECIEC			Method	of Veri	fication*	CL**
	PECIES		P	H	S		SPECIES			Р	Н	s	
	landing's Tu						Wood Turtl						
	potted Turtl						Ribbon Sna	ke					
	inged Bogha						Other:						
d. Op	*Method of verification: P = Photographed, H = Handled, S = Seen **CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95% d. Optional observer recommendation: SVP Potential SVP Non Significant VP Indicator Breeding Area e. General vernal pool comments and/or observations of other wildlife:												
	Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife Attn: Vernal Pools 650 State Street, Bangor, ME 04401 NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.												
or MDIF	r MDIFW use only Reviewed by MDIFW Date: Initials:												
his pool	s pool is: Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.												
Comment													



ATTACHMENT 10

NOTICE OF INTENT TO FILE, ABUTTER LIST, NEWSPAPER AD, CERTIFIED MAIL

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION

PUBLIC NOTICE FILING AND CERTIFICATION

The DEP Rules, Chapter 2, require an applicant to provide public notice for all projects requiring new or amended licenses from more than two bureaus with the exception of minor revisions and condition compliance applications. In the notice, the applicant must describe the proposed activity and where it is located. "Abutter" for the purposes of the notice provision means any person who owns property that is BOTH (1) adjoining and (2) within one mile of the delineated project boundary, including owners of property directly across a public or private right of way.

- 1. **Newspaper:** You must publish the Notice of Intent to File in a newspaper circulated in the area where the activity is located. The notice must appear in the newspaper within 30 days prior to the filing of the application with the Department. You may use the attached Notice of Intent to File form, or one containing identical information, for newspaper publication and certified mailing.
- 2. Abutting Property Owners: You must send a copy of the Notice of Intent to File by certified mail to the owners of the property abutting the activity. Their names and addresses can be obtained from the town tax maps or local officials. They must receive notice within 30 days prior to the filing of the application with the Department.
- 3. Municipal Office: You must send a copy of the Notice of Intent to File and a dúplicate of the entire application to the Municipal Office.

See ATTACHMENT 5 – ABUTTERS for a list of the names and addresses of the owners of abutting property.

Attached is a narrative responsive to any significant issues relevant to the Licensing Criteria that were raised at the Public Informational Meeting.

CERTIFICATION

By signing below, the applicant or authorized agent certifies that:

- 1. A Notice of Intent to File was published in a newspaper circulated in the area where the project site is located within 30 days prior to filing the application;
- 2. A certified mailing of the Notice of Intent to File was sent to all abutters within 30 days of the filing of the application;
- 3. A certified mailing of the Notice of Intent to File, and a duplicate copy of the application was sent to the town office of the municipality in which the project is located; and
- 4. Provided notice of, if required, and held a public informational meeting in accordance with Chapter 2, Rules Concerning the Processing of Applications, Section 13, prior to filing the application. Notice of the meeting was sent by certified mail to abutters and to the town office of the municipality in which the project is located at least ten days prior to the meeting. Notice of the meeting was also published once in a newspaper circulated in the area where the project site is located at least seven days prior to the meeting.

Two Public Informational Meetings were held on	April 27, 2015 and May 5, 2015
Approximately 66 members of the public a	attended the Public Informational Meetings.
Sent I	- June 18 2015
Signature of Applicant or authorized agent	Date



ABUTTER'S LIST

MAP	LOT	NAME / ADDRESS		
09	035	H.O. Bouchard, Inc. P.O. Box 249 Hampden ME 04444-0249		
	027			
	037			
14	001			
	001-01			
09	035-A	Bouchard Sports Center, LLC P.O. Box 249 Hampden, ME 04444-0249		
09	032	Hickory Development, LLC P.O. Box 249 Hampden, ME 04444-0249		
	034			
	036			
	038			
	039			
	040			
	042			
14	007			
	800			
10	011-A	Emera Maine P.O. Box 932 Bangor, ME 04402-0932		

JN: 10973.002/11293.001 ABUTTER'S LIST

PUBLIC NOTICE OF INTENT TO FILE

Please take notice that the Municipal Review Committee, Inc. (MRC) of 395 State Street, Ellsworth, Maine 04605, (207) 664-1700 and Fiberight, LLC (Fiberight), 1450 South Rolling Road, Baltimore, Maryland 21227, (410) 340-9387 are intending to file joint applications with the Maine Department of Environmental Protection (Department) on or about June 22, 2015 pursuant to the provisions of: 38 M.R.S.A., Section 1301 et seq. (Maine's Solid Waste Management Act and implementing regulations); 38 M.R.S.A Section 420-D (Stormwater Management and implementing regulations); 38 M.R.S.A Section 590 (Licensing and implementing regulations); and 38 M.R.S.A. Section 480-A et seq. (Natural Resources Protection Act and implementing regulations).

The following is a listing of regulations under which MRC and Fiberight will seek permits: 06 096 CMR Chapters 400 and 409: Solid Waste General Provisions and Processing Facilities; 06 096 CMR Chapter 310: Wetlands and Waterbodies Protection: 06 096 CMR Chapter 335: Significant Wildlife Habitat; 06 096 CMR Chapter 500: Stormwater Management; and 06 096 CMR Chapter 115: Major and Minor Source Air Emission License Regulation.

The applications are for a proposed municipal solid waste (MSW) processing and recycling facility (Facility) to be located in Hampden, Maine. The proposed Facility will be located on a 90 acre parcel of land approximately one mile to the northeast of the Coldbrook Road and ¼ mile to the southeast of I-95. The parcel will be owned by MRC and the Facility and infrastructure will be owned and operated by Fiberight. To access the Facility site, a 4,620-foot access roadway with utilities located opposite Bryer Lane intersecting Coldbrook Road will be owned and constructed by MRC as part of this project.

According to Department regulations, interested parties must be publicly notified, written comments invited, and if justified, an opportunity for public hearing given. A request for a public hearing, or that the Board of Environmental Protection assume jurisdiction of an application(s), must be received by the Department, in writing, no later than 20 days after the application(s) are accepted by the Department as complete for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comments on the applications will be accepted throughout the processing of the applications.

The applications and supporting documentation will be available for review at the Maine Department of Environmental Protection, Division of Technical Services, Bureau of Remediation and Waste Management at the Augusta, Maine DEP regional office, during normal working hours. A copy of the applications and supporting documentation may also be seen at the municipal office in Hampden, Maine.

Send all correspondence to: David Burns, P.E., Project Manager, Maine Department of Environmental Protection, Division of Technical Services, Bureau of Remediation and Waste Management, 17 State House Station, Augusta, Maine 04333-0017 (207) 287-2651 or 1-800-452-1942).

F2 Saturday/Sunday, June 13-14, 2015, Bangor Daily News

Legal Notices PUBLIC NOTICE OF INTENT TO FILE

Please take notice that the Municipal Review Committee, Inc. (MRC) of 395 State Street, Ellsworth, Maine 04605, (207) 664-1700 and Fiberight, LLC (Fiberight), 1450 South Rolling Road, Baltimore, Maryland 21227, (410) 340-9387 are intending to file joint applications with the Maine Department of Environmental Protection (Department) on or about June 22, 2015 pursuant to the provisions of: 38 M.R.S.A., Section 1301 et seq. (Maine's Solid Waste Management Act and implementing regulations); 38 M.R.S.A. Section 420-D (Stormwater Management and implementing regulations); 38 M.R.S.A. Section 590 (Licensing and implementing regulations); and 38 M.R.S.A. Section 480-A et seq. (Natural Resources Protection Act and implementing regulations).

The following is a listing of regulations under which MRC and Fiberight will seek permits: 06 096 CMR Chapters 400 and 409: Solid Waste General Provisions and Processing Facilities; 06 096 CMR Chapter 310: Wetlands and Waterbodies Protection: 06 096 CMR Chapter 335: Significant Wildlife Habitat; 06 096 CMR Chapter 500: Stormwater Management; and 06 096 CMR Chapter 115: Major and Minor Source Air Emission License Regulation.

The applications are for a proposed municipal solid waste (MSW) processing and recycling facility (Facility) to be located in Hampden, Maine. The proposed Facility will be located on a 90 acre parcel of land approximately one mile to the northeast of the Coldbrook Road and 1/4 mile to the southeast of 1-95. The parcel will be owned by MRC and the Facility and infrastructure will be owned and operated by Fiberight. To access the Facility site, a 4,620-foot access roadway with utilities located opposite Bryer Lane intersecting Coldbrook Road will be owned and constructed by MRC as part of this project.

According to Department regulations, interested parties must be publicly notified, written comments invited, and if justified, an opportunity for public hearing given. A request for a public hearing, or that the Board of Environmental Protection assume Jurisdiction of an application(s), must be received by the Department, in writing, no later than 20 days after the application(s) are accepted by the Department as complete for processing. A public hearing may or may not be held at the discretion of the Commissioner or Board of Environmental Protection. Public comments on the applications will be accepted throughout the processing of the applications.

The applications and supporting documentation will be available for review at the Maine Department of Environmental Protection, Division of Technical Services, Bureau of Remediation and Waste Management at the Augusta, Maine DEP regional office, during normal working hours. A copy of the applications and supporting documentation may also be seen at the municipal office in Hampden,

Send all correspondence to: David Burns, P.E., Project Manager, Maine Department of Environmental Protection, Division of Technical Services, Bureau of Remediation and Waste Management, 17 State House Station, Augusta, Maine 04333-0017 ((207) 287-2651 or 1-800-452-1942).

June 13, 2015



CERTIFIED MAIL LIST & RECEIPTS (Mailed 06/22/2015)

HO Bouchard, Inc. PO Box 249 Hampden, ME 04444-0249

Hickory Development, LLC PO Box 249 Hampden, ME 04444

Bouchard Sports Center, LLC PO Box 249 Hampden, ME 04444

Emera Maine PO Box 932 Bangor, ME 04402-0932

Town of Hampden 106 Western Avenue Hampden, ME 04444-1428





ATTACHMENT 11 MHPC/ TRIBAL LETTERS

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



March 5, 2015

Mr. Earle G. Shettleworth, Jr., Director Maine Historic Preservation Commission 55 Capitol Street 65 State House Station Augusta, ME 04333-0065



Re: Proposed Waste Processing Facility and Access Road | Hampden, Maine

Dear Mr. Shettleworth:

CES, Inc. is assisting with the design and permitting of a proposed waste processing facility and associated access road in Hampden, Maine. We respectfully request your review of the site and its immediate surroundings for the potential presence of structures or areas of historical significance to the Maine Historical Preservation Commission.

The site is located on Cold Brook Road in Hampden, Maine. The site is undeveloped and accessed via a gravel road. There are no buildings or structures on or adjacent the project site greater than 50 years of age. Proposed site improvements consist of the construction of a waste processing facility and improvements to the access road. For your reference, the site location is indicated on the attached portion of the U.S.G.S. 7.5' Bangor, Maine quadrangle map.

Your response can be emailed to rstamand@ces-maine.com), faxed to 207-989-4881, or mailed to CES, Inc., 465 South Main Street, P.O. Box 639 Brewer, Maine 04412. If you have any questions, please do not hesitate to contact us.

Sincerely, CES, Inc.

Roger St. Amand, CSS, LSE Project Manager

R\$A/qdr Enc.

Based on the information submitted, I have concluded that there will be no historic properties affected by the proposed undertaking, as defined by Section 106 of the National Historic Preservation Act.

Consequently, pursuant to 36 CFR 800.4(d)(1), no further Section 106 consultation is required unless additional resources are discovered during project implementation pursuant to 36 CFR 800.13.

Kirk F. Mohney,

Deputy State Historic Preservation Officer

Maine Historic Preservation Commission

Mr Earle Shettleworth | 03.05.2015 | 10973.003 / 11293.001



June 25, 2015

Passamaquoddy Tribe of Indians Pleasant Point Reservation Attn: Mr. Donald Soctomah, THPO P.O. Box 343 Perry, Maine 04667

Re: NRPA Individual Permit and Army Corps of Engineers General Permit Application for MRC-Fiberight Proposed Waste Processing Facility and Access Road | Hampden, Maine

Dear Mr. Soctomah:

CES, Inc. is assisting the Municipal Review Committee (MRC) and Fiberight, LLC with the design and permitting of a proposed solid waste processing and recycling facility and associated access road in Hampden, Maine. The site is located on Coldbrook Road in Hampden, Maine. The site is undeveloped and accessed via a gravel road. Proposed site improvements consist of the construction of a waste processing facility and improvements to the access road.

For your reference, the site location is indicated on the attached portion of the U.S.G.S. 7.5' Bangor, Maine quadrangle map. The permit application for the proposed project can be found online:

http://www.ces-clientaccess.com/hampdenprocfacility

User: ces-maine PW: !2014Proc

A hardcopy is also available by request to us at (207) 989-4824 or by email to rstamand@ces-maine.com. These materials are sent for your review as required for US Army Corps of Engineers permitting requirements. Please contact us if you have any questions or concerns.

Sincerely, CES, Inc.

Roger St.Amand, CSS, LSE, LF, CPESC

Senior Project Scientist

RSA/jok Enc.

Mr. Donald Soctomah | 06.25.2015 | 10973.002/11293.001





June 25, 2015

Penobscot Indian Nation Indian Island Reservation Attn: Ms. Bonnie Newsom, THPO 12 Wabanaki Way Indian Island, Maine 04468

Re: NRPA Individual Permit and Army Corps of Engineers General Permit Application for MRC-Fiberight Proposed Waste Processing Facility and Access Road | Hampden, Maine

Dear Ms. Newsom:

CES, Inc. is assisting the Municipal Review Committee (MRC) and Fiberight, LLC with the design and permitting of a proposed solid waste processing and recycling facility and associated access road in Hampden, Maine. The site is located on Coldbrook Road in Hampden, Maine. The site is undeveloped and accessed via a gravel road. Proposed site improvements consist of the construction of a waste processing facility and improvements to the access road.

For your reference, the site location is indicated on the attached portion of the U.S.G.S. 7.5' Bangor, Maine quadrangle map. The permit application for the proposed project can be found online:

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A hardcopy is also available by request to us at (207) 989-4824 or by email to rstamand@ces-maine.com. These materials are sent for your review as required for US Army Corps of Engineers permitting requirements. Please contact us if you have any questions or concerns.

Sincerely, CES, Inc.

Roger St.Amand, CSS, LSE, LF, CPESC

Senior Project Scientist

RSA/jok

Ms. Bonnie Newsom | 06.25.2015 | 10973.002/11293.001



June 25, 2015

Aroostook Band of Micmacs Attn: Victoria Higgins, Chief 7 Northern Road Presque Isle, Maine 04769

Re: NRPA Individual Permit and Army Corps of Engineers General Permit Application for MRC-Fiberight Proposed Waste Processing Facility and Access Road | Hampden, Maine

Dear Ms. Higgins:

CES, Inc. is assisting the Municipal Review Committee (MRC) and Fiberight, LLC with the design and permitting of a proposed solid waste processing and recycling facility and associated access road in Hampden, Maine. The site is located on Coldbrook Road in Hampden, Maine. The site is undeveloped and accessed via a gravel road. Proposed site improvements consist of the construction of a waste processing facility and improvements to the access road.

For your reference, the site location is indicated on the attached portion of the U.S.G.S. 7.5' Bangor, Maine quadrangle map. The permit application for the proposed project can be found online:

http://www.ces-clientaccess.com/hampdenprocfacility

User: ces-maine PW: !2014Proc

A hardcopy is also available by request to us at (207) 989-4824 or by email to rstamand@ces-maine.com. These materials are sent for your review as required for US Army Corps of Engineers permitting requirements. Please contact us if you have any questions or concerns.

Sincerely, CES, Inc.

Roger St.Amand, CSS, LSE, LF, CPESC

Senior Project Scientist

RSA/jok

Ms. Victoria Higgins | 06.25.2015 | 10973.002/11293.001



June 25, 2015

Houlton Band of Maliseet Indians Attn: Sharri Venno, Environmental Planner 88 Bell Road Littleton, Maine 04730

Re: NRPA Individual Permit and Army Corps of Engineers General Permit Application for MRC-Fiberight Proposed Waste Processing Facility and Access Road | Hampden, Maine

Dear Ms. Venno:

CES, Inc. is assisting the Municipal Review Committee (MRC) and Fiberight, LLC with the design and permitting of a proposed solid waste processing and recycling facility and associated access road in Hampden, Maine. The site is located on Coldbrook Road in Hampden, Maine. The site is undeveloped and accessed via a gravel road. Proposed site improvements consist of the construction of a waste processing facility and improvements to the access road.

For your reference, the site location is indicated on the attached portion of the U.S.G.S. 7.5' Bangor, Maine quadrangle map. The permit application for the proposed project can be found online:

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User: ces-maine PW: !2014Proc

A hardcopy is also available by request to us at (207) 989-4824 or by email to rstamand@ces-maine.com. These materials are sent for your review as required for US Army Corps of Engineers permitting requirements. Please contact us if you have any questions or concerns.

Sincerely, CES, Inc.

Roger St.Amand, CSS, LSE, LF, CPESC

Senior Project Scientist

RSA/jok Enc.

Ms. Sharri Venno | 06.25.2015 | 10973.002/11293.001



June 25, 2015

Passamaquoddy Tribe of Indians Indian Township Reservation Attn: Donald Soctomah, THPO P.O. Box 301 Princeton, Maine 04668

Re: NRPA Individual Permit and Army Corps of Engineers General Permit Application for MRC-Fiberight Proposed Waste Processing Facility and Access Road | Hampden, Maine

Dear Mr. Soctomah:

CES, Inc. is assisting the Municipal Review Committee (MRC) and Fiberight, LLC with the design and permitting of a proposed solid waste processing and recycling facility and associated access road in Hampden, Maine. The site is located on Coldbrook Road in Hampden, Maine. The site is undeveloped and accessed via a gravel road. Proposed site improvements consist of the construction of a waste processing facility and improvements to the access road.

For your reference, the site location is indicated on the attached portion of the U.S.G.S. 7.5' Bangor, Maine quadrangle map. The permit application for the proposed project can be found online:

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A hardcopy is also available by request to us at (207) 989-4824 or by email to rstamand@ces-maine.com. These materials are sent for your review as required for US Army Corps of Engineers permitting requirements. Please contact us if you have any questions or concerns.

Sincerely, CES. Inc.

Roger St.Amand, CSS, LSE, LF, CPESC

Senior Project Scientist

RSA/jok Enc.

Mr. Donald Soctomah | 06.25.2015 | 10973.002/11293.001



June 25, 2015

Mr. Dean Bennett, Director Community & Economic Development Town of Hampden 106 Western Avenue Hampden, ME 04444

Re: NRPA Individual Permit and Army Corps of Engineers General Permit Application for MRC-Fiberight Proposed Waste Processing Facility and Access Road | Hampden, Maine

Dear Mr. Bennett:

CES, Inc. is assisting the Municipal Review Committee (MRC) and Fiberight, LLC with the design and permitting of a proposed solid waste processing and recycling facility and associated access road in Hampden, Maine. The site is located on Coldbrook Road in Hampden, Maine. The site is undeveloped and accessed via a gravel road. Proposed site improvements consist of the construction of a waste processing facility and improvements to the access road.

For your reference, the site location is indicated on the attached portion of the U.S.G.S. 7.5' Bangor, Maine quadrangle map. The permit application for the proposed project can be found online:

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A hardcopy is also available by request to us at (207) 989-4824 or by email to rstamand@ces-maine.com. These materials are sent for your review as required for US Army Corps of Engineers permitting requirements. Please contact us if you have any questions or concerns.

Sincerely, CES, Inc.

Roger St.Amand, CSS, LSE, LF, CPESC

Senior Project Scientist

RSA/jok Enc.

Mr. Earle Shettleworth, Jr. | 06.25.2015 | 10973.002/11293.001



ATTACHMENT 12 FUNCTIONAL ASSESSMENT

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



ATTACHMENT 12

WETLAND FUNCTIONAL ASSESSMENT

INTRODUCTION

This Functional Assessment (FA) was prepared for the proposed MRC-Fiberight solid waste processing and recycling facility in Hampden, Maine.

SITE AND PROJECT OVERVIEW

The project area is located in the lower Penobscot watershed (HUC#01020005) and is characterized by undeveloped forestland and old agricultural fields. The development road and improvements will occupy approximately 10 acres of the site. The area is dominated by a large wetland stream complex that extends north and south from the project area. Forested wetlands with red maple and balsam fir dominate, with smaller areas of scrub shrub alder wetlands along the stream corridors. This assessment considers the wetland area as a contiguous unit on the landscape.

EXECUTIVE SUMMARY

The FA indicates the principal functions of the wetlands within the Site are Flood Flow Alteration, Production Export, and Wildlife Habitat. Minor secondary functions include Groundwater Recharge/Discharge, Recreation, Fish and Shellfish Habitat, and potential Endangered Species Habitat. A minimal loss of flood flow alteration and wildlife habitat functions area is anticipated due to the clearing and development of the facility.

METHODOLOGY

This analysis was performed using "The Highway Methodology Workbook Supplement, Wetland Functions and Values" by the US Army Corps of Engineers. The methods outlined in this workbook provide a descriptive approach to wetland functions and values and incorporate both wetland science and human judgment in assessing a site. Portions of the methodology directly address stream functions and values. In cases where wetland properties were the only criteria for assessing a function or value, a broader interpretation of the property was used to include stream characteristics. For example, some of the functions identify the diversity in plant community structure as a consideration; in these cases, the diversity of habitats within the stream, such as riffles and pools, were considered a similar metric.

The USACE Highway Methodology Workbook Supplement defines functions and values as follows:

Functions: Functions are self-sustaining properties of a wetland ecosystem that exist in the absence of society. Functions result from both living and non-living components of a specific wetland. These include all processes necessary for the self-maintenance of the wetland ecosystem such as primary production and nutrient cycling, among others. Therefore, functions relate to the ecological significance of wetland properties without regard to subjective human values.

Values: Values are benefits to society that derive from one or more functions and the physical characteristics associated with a wetland. The value of a particular wetland function, or combination thereof, is based on human judgment of the worth, merit, quality, or importance attributed to those functions.



The evaluation first determines the particular functions and values that occur and why, followed by a determination of what functions and values are principal. Functions and values can be principal if they are an important physical component of a wetland ecosystem, and/or are considered of special value to society, from a local, regional, and/or national perspective. These include eight functions and five values. An assessment for each item follows.

This analysis considers the effects of direct and indirect impacts of the proposed construction and development of the site and the potential impacts to the wetland functions and values that might occur.

GROUNDWATER RECHARGE/DISCHARGE

This function evaluates the effectiveness of the wetland in providing a groundwater recharge and discharge area for aquifers. This wetland provides some function for both recharge and discharge.

<u>Groundwater Recharge</u>: The wetland is large in relation to the watershed and has the potential to function as a groundwater recharge area in the mid and upper areas.

<u>Groundwater Discharge</u>: The lower portion of the wetland would function as a discharge point in association with the intermittent stream in the lower part of the basin. The adjacent land is largely undeveloped so there is currently limited potential for downstream use by private wells.

FLOOD FLOW ALTERATION

This function evaluates the wetland's ability to hold flood waters and reduce flood damage to adjacent areas. This wetland is located on a broad gently sloping area with fine grained mineral soils. The wetland is large in relation to the watershed and provides detention of runoff and overland flow within it. The complex microtopography associated with the pit/mound areas provides a landscape complexity that improves the flood flow storage capacity of the wetland. This is a primary function of the wetland.

FISH AND SHELLFISH HABITAT

This function evaluates the ability of the wetland and associated watercourses to provide habitat for fish and shellfish. The intermittent streams within the large wetland do have the ability to provide some fish habitat. The small size of the stream and limited available watershed results in portions of the stream drying out seasonally. The shallow nature and silt mud bottom is not conducive to cold water fisheries, or species that require deeper water habitats. This function is present but limited.

SEDIMENT/TOXICANT/PATHOGEN RETENTION

This function in a wetland ameliorates water quality degradation through the ability of the wetland to trap sediments and pollutants from runoff from surrounding areas before entering surface water. This wetland has the potential to provide this function based on the presence of fine grained soils, extended water retention times, and the presence of intermittent streams. The surrounding areas are largely undeveloped and so there are limited sources of sediments and toxicants. The primary source would be through occasional forest harvesting operations. These have the potential to introduce sediment through erosion if best management practices are not observed.



NUTRIENT REMOVAL/RETENTION/TRANSFORMATION

This function evaluates the ability of the wetlands to retain and break down nutrients in the runoff water from adjacent uplands. This wetland has limited potential to provide this function based on the presence of fine grained soils and extended water retention times and the presence of intermittent streams. The surrounding areas are largely undeveloped and so there are limited sources for nutrients to be introduced

PRODUCTION EXPORT

This function evaluates the effectiveness of the wetland to produce food or useable products for society, and/or other living organisms. This wetland provides forest products for logs, fiber and fuel, as well as habitat for large and small game species including white tail deer, and turkeys, both of which are utilized from the area.

SEDIMENT/SHORELINE STABILIZATION

This function considers the effectiveness of the wetland to stabilize stream banks and shorelines against erosion. Wetlands that provide the sediment/shoreline stabilization function are present and have limited capacity due to the intermittent stream and gentle topography. These result in a lack of erosion potential within the landscape.

WILDLIFE HABITAT

This function considers the effectiveness of the wetland to provide habitat for various types and populations of wildlife associated with wetland habitats. A primary function of this wetland is wildlife habitat. The large undeveloped forested block provides habitat for several species of wildlife. It is part of a mapped Deer Wintering area by the Maine Department of Inland fisheries and Wildlife. Several other mammals and amphibians also utilize the area. A number of vernal pools were present in the wetland. These provide primary breeding habitat for several species, including wood frogs and spotted salamanders. These areas in turn provide food for other species that prey on amphibians, including green and bullfrogs, raccoons and herons.

RECREATION

This value considers the suitability of the wetland to provide non-consumptive and consumptive opportunities such as hiking, canoeing, boating, fishing, hunting, or other active or passive recreational activities. The Site is private land with limited public access and is located in close to a population center/urbanized area. An ITS trail runs through the property along the gas pipeline. Hunting and snowmobiling are the primary recreational use, though access is controlled by the landowner. The wetland currently provides some recreational value but has the potential to provide more capacity for recreation.

EDUCATIONAL/SCIENTIFIC VALUE

This value considers the suitability of the resources as a site for an "outdoor classroom" or as location for scientific study or research. The resources on Site do not have significant educational or scientific value and are located within a privately owned area with limited public access. Marginal access to the area, and low visual/aesthetic quality indicate this is not a value of the resources on the Site.

UNIQUENESS/HERITAGE

This value considers the effectiveness of the resources on Site to provide certain special values, which are valuable relative to aspects of public health, recreation, and habitat diversity. The wetland and natural communities on-site are common regionally and no unique sites were observed. Uniqueness/heritage is not a value associated with the resources on the Site.



VISUAL QUALITY/AESTHETICS

This value considers the visual and aesthetic quality or usefulness of the resources in the wetland. The diversity of plant community structure and interspersion of vegetative classes is relatively low and there are limited opportunities for viewing wetland areas. This is not a value for this wetland.

ENDANGERED SPECIES HABITAT

This value considers the suitability of the stream to support threatened or endangered species. The mature forestland associated with the wetland may have the potential to provide summer roosting habitat for the federally listed Northern Long Eared Bats, *Myotis septentrionalis*, (NLEB). The presence of bats has not been confirmed, but the area contains older saw log sized trees greater than 14" in DBH, dead or dying snags, that could provide roosting habitat.

CONCLUSION

The results of the FA indicate the principal functions of the wetlands within the Site are: Flood Flow Alteration, Production Export and Wildlife Habitat. Minor secondary functions include Groundwater Recharge/Discharge, Recreation, Fish and Shellfish Habitat and potential Endangered Species Habitat.

The proposed project is expected to have limited impacts to the wetland functions and values as impact will be confined to areas along an existing access road, and within a small corner of the larger wetland. Alterations from filling and clearing will occur on less than 1% of the wetland area. The alterations are located at the edge of the wetlands and maintain the core area which provides most of functions and values associated with the site. A minimal loss of flood flow alteration and wildlife habitat area is anticipated due to the clearing and development of the facility.



ATTACHMENT 13 COMPENSATORY MITIGATION PLAN

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



ATTACHMENT 13

COMPENSATORY MITIGATION PLAN

A. GENERAL INFORMATION

1. The plan and documentation are submitted here as a part of a joint MDEP NRPA and Army Corps of Engineers Section 404 CWA Permit Application and constitute a complete package.

2. Site Location:

- a. Locus Map for the project and mitigation site is attached (see Attachment 3);
- b. Aerial Maps for the project and mitigation sites are attached (see Attachment 6);
- c. Mitigation Site Geographic Location: N-44°.-46'-90" W-68° -50'-23"; and
- d. Watershed HUC Code: Lower Penobscot Watershed, HUC#01020005.

The Applicants propose to jointly construct a solid waste processing and recycling facility and associated access roads and improvements in Hampden, Maine. The facility will serve as a solid waste processing site for over 187 member communities within the region. The site is located east of the Coldbrook Road. The proposed construction will result in alterations to freshwater wetlands, an intermittent stream crossing, and limited clearing of forested areas within critical terrestrial habitats for vernal pools which have been addressed separately. For this project, mitigation is required for impacts to natural resources.

B. IMPACT AREAS

The proposed access road and processing facility will impact approximately 75,000 square feet of freshwater forested wetland, a limited portion of vernal pool critical habitat, and one stream crossing. Mitigation will be required to compensate for the direct and indirect wetland alteration associated with the project. (See Section 1 of the NRPA for a summary of the impacts.)

The development has two main phases or components. The first phase is construction of a 4,460 linear foot access road to access the processing facility location. The second component is construction of the facility itself and its associated infrastructure. The proposed access road has been sited to avoid and minimize impacts by using and existing road that extends through the largest wetland areas. Only minimal impacts associated with upgrading this road to meet the design requirements will be needed.

Within the facility site, development has been located to maximize use of uplands and avoid wetlands and vernal pool areas. The clearing for the development will result in less than 25% non-forested area within the critical terrestrial habitat within the 250 foot and 750 foot buffers, respectively. The access road will make full use of the existing disturbed areas to minimize impacts to wetlands, and will involve minor additional clearing within 100 feet of a non-significant vernal pool. For the processing site, all new disturbances will be located greater than 100 feet from any vernal pool depression, and any past disturbances within the 100 foot vernal pool envelope will be restored, or allowed to revegetate. Based on these criteria, the project will meet the MDEP Permit by Rule Standards for State regulated vernal pools, and ACOE Category 1 standards as outlined under the current Maine General Permit for the Corps.



Meeting these standards, mitigation is not required for these vernal pool impacts. The clearing and wetland impacts have been minimized to the greatest extent practical by clustering development and reducing the footprint of structures as well as designing the roadway and site to allow for wildlife movement and habitat connectivity. See *Natural Resource Impact Table* located in Attachment 1.

Wetland and Stream Functions and Values: The wetlands associated with project include mostly forested wetlands that are part of a large forested wetland and stream complex that extends off site in all cardinal directions. The forested wetlands within the site were previously disturbed by a timber harvest in the mid-1990s.

The principal functions and values of the impacted wetlands identified in Section 12 of the NRPA include Flood Flow Alteration, Production Export, Wildlife Habitat, and Recreation, Secondary Functions include and Sediment/Toxicant retention and Nutrient Removal from future up-gradient developed areas. The project will result in minor losses to the primary functions and values resulting from fill and clearing with the wetland and additional developed area.

Type and Purpose of Work: Wetland and natural resource alterations will occur as part of the road and processing facility construction and will consist of fill and clearing for proposed access roads, parking lots, and building areas. The proposed activities have been designed to maximize use of previously disturbed areas and limit new disturbance. The impacts to critical terrestrial habitat occur due to clearing and grading activities associated with the site development and stormwater structures. Impacts include removal of forest cover and conversion of forest floors to other stabilized bases including gravel, pavement, and developed area.

Wetland fill and the stream crossing are associated with the access road construction and are required to access the proposed development area. The stream crossing at the unnamed tributary to Souadabscook Stream will be located at an existing culvert crossing. This culvert will be updated and improved to provide improved aquatic passage by using a pipe arch or clear span box to maintain stream flow and habitat connectivity. Minimal additional clearing is needed along the existing access road.

Relationship of Impact Area to Watershed and Regional Plans: The project site is located west of the greater Bangor urban area. For the resources impact, the wetland impacts are associated with previously disturbed areas and old agricultural fields. The relatively large size of the wetland area reduces the effects of the impact and allows for the primary functions and values to be retained.

Mitigation Area: <u>Background Information</u>: The project impacts will require mitigation for natural resource impacts. No other impacts to Significant Wildlife Habitats and vernal pool resources beyond what is allowed under the Permit by Rules and General Permit Category I criteria are expected.

Mitigation Alternatives: The alternatives analysis for the proposed project mitigation included a detailed review of the potential impacts and losses that might occur from the project. Potential alternatives for mitigation include:



- 1. On-Site, In-Kind;
- 2. On-Site, Out-of-Kind;
- 3. Off Site, In-Kind; and
- 4. In-lieu Fee (ILF) Program.

The project impacts and potential mitigation strategies were reviewed and compared to develop suitable compensation goals. On-site wetland creation/ restoration was not a suitable option due to the lack of previously impacted areas, and a relatively natural state. Using the In-Lieu Fee (ILF) program for compensation was considered, but was ultimately found to be unsuitable. The most suitable strategy for compensation was deemed to be On-Site, In-Kind mitigation through Preservation using the adjacent area. The remainder of the parcel is a critical habitat block that will enhance and provide an anchor for local conservation efforts.

COMPENSATORY MITIGATION WORKSHEET							
Impact Type	Area (SF)	Area (Acres)	Restoration Ratio	ACOE Preservation Ratio	Minimum Preservation Area Required (Acres)		
Forested Wetland	75,177	1.73	(3:1)	(15:1)	26		
SWH/Vernal Pool		N/A			N/A		

Mitigation Parcel Summary: The proposed mitigation site is approximately 80 acres, see attached Exhibit B. Using the ACOE recommended ratios for preservation of 15:1 would require a preservation site of approximately 26 acres. The proposed Preservation Area of 80 acres results in an approximately 40:1 ratio.

- Approximately 80 % of the site is freshwater wetland with the remainder uplands.
- The mitigation site includes approximately 3,000 linear feet of streams and drainages.
- ♦ The mitigation parcel also contains over 40 mapped vernal pools and associated critical habitat.
- Additional wildlife habitat includes 70 acres designated as indeterminate value Deer wintering area by the Maine Department of Inland Fisheries and Wildlife (MDIFW).
 Other species identified on the parcel include beaver, fox, coyote, deer, and small mammals, and several migratory birds common to the region.

The soils within the parcel are composed of somewhat poorly and poorly drained hydric glaciolacustrine sediments. Soil texture range from silt loams to silty clay loam

The existing vegetation within the site is dominated by forest communities. On the upland areas, Spruce-Fir-Broom-Moss coniferous forests are the dominant natural community. Within wetland areas, mixed forested wetland communities include Spruce-Fir-Cinnamon Fern Forest and Red Maple-Sensitive Fern Swamp. Smaller areas of Alder shrub Thickets around beaver flowages and scrub-shrub wetlands are found along the riparian areas of the larger brooks and stream systems.

The surrounding land use is dominated by large undeveloped forest tracts to the north and west owned by the previous landowner.



USFWS/NOAA SHPO Review: The proposed mitigation site is currently undeveloped and will be retained for preservation only with no mitigation construction or development impacts. Based on consultation with the Corps there is no potential for impacts to listed species or to historic resources that may be present at the site and review by these agencies is not required.

Mitigation Proposed: The proposed mitigation for the project is to preserve ~80 acre parcel through deed Covenants and Restrictions to be held by MRC. The Covenants and Restrictions will protect the wetlands and riparian corridors, vernal pool resources, and wildlife habitat identified on the site.

Site Specific and Landscape Level Functions and Values: The mitigation parcel functions and values are similar to the impacted wetlands, and in some cases, include these wetlands outside the development area. The principle functions and values include wildlife habitat and flood flow alteration and provide for in-kind compensation for the habitat impacts from the proposed development. Additional wetland functions and values that would be retained and enhanced include Recreation and Visual Quality/Aesthetics.

Target Fish/Wildlife Species: There is no specific target wildlife for the mitigation site, but it will provide habitat for several species known to occur in the area and amphibians that require vernal pool habitat for breeding and life cycle completion. These include wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), and blue-spotted salamanders (*Ambystoma laterale*). The preservation of this parcel will protect the vernal pools and the adjacent forested habitat within the parcel from future development or habitat alteration that could adversely impact the natural resources on-site. Other wildlife will also benefit by the creation of a large habitat block that can serve to connect to future conservation parcels planned in the area.

Reference Site: Since no wetland or habitat creation is proposed, there is no requirement of reference sites. The adjacent conservation parcels could be utilized for reference to ensure the site is providing suitable habitat if necessary.

Design Constraints: The constraints on the mitigation parcel are primarily based on the surrounding land use. The mitigation design is focused on preservation of the site. The adjacent land use to the south side is conservation oriented and would protect the habitat areas.

Construction Oversight: The proposed mitigation project will not involve any wetland creation or other construction outside the main development that will require professional oversight.

Construction Timing: There is no proposed construction within the mitigation parcel so this item is not relevant.

Responsible Parties: The mitigation parcel Covenants and Restrictions will be held by MRC, a non-profit organization. It will hold the Covenants and Restrictions on the parcel and be responsible for maintenance and managing the parcel in accordance with the conditions of the Covenants and Restrictions.

Potential to Attract Waterfowl and Other Bird Species that may be a Threat to Aircraft: The mitigation parcel is located greater than 10,000 feet from an airport and should not pose a threat to aircraft.



Aquatic Resource Checklist Information Appended: A checklist has not been compiled for this project.

C. GRADING PLAN

No grading is planned for the mitigation parcel.

D. EROSION CONTROLS

No erosion controls will be needed as there is no construction.

E. INVASIVE SPECIES

Risks: Within the undeveloped areas, limited ground disturbance is planned resulting in a low risk of invasive species becoming further established. Along the stream corridor in the eastern section invasive honeysuckle, *Lonicera morrowii* is rampant. MRC will monitor the site for invasive species and manage invasive plants in accordance with the recommended management guidelines for its adjacent holdings. Control of any invasive will be completed in accordance with the State and /or Federal guidelines.

F. OFF-ROAD VEHICLE USE

Recreational off road motorized vehicle use will be managed and limited on the property as outlined in the Declaration of Covenants and Restrictions attached in **Appendix A**.

G. PRESERVATION

The property will be preserved in perpetuity through Deed Covenants and Restrictions, the form of which is attached as **Appendix A**.

Adequate Buffers: The proposed Covenants and Restrictions will cover almost the entire property providing an adequate buffer.

Wetlands within Development are Protected along with Appropriate Buffers: See item above.

Preservation Language Included: The proposed Covenants and Restrictions is attached in Appendix A; Within 30 days of the date of permit issuance and prior to initiation of permitted work in aquatic resources, the permittee shall execute and record the preservation document with the Registry of Deeds for Penobscot County and the State of Maine. A copy of the executed and recorded document must then be sent to the Corps of Engineers within 180 days of the date the Corps approves it.

Preservation Site Plan: The proposed mitigation site plan is included as **Appendix B**.

Documentation of Acceptance: MRC as Co-Applicant for the Project will accept the deed Covenants and Restrictions.



H. MONITORING PLAN

The parcel will be monitored annually to ensure the site is being maintained according to the requirements of the mitigation plan and the Deed Covenants and Restrictions

I. ASSESSMENT PLAN

No assessment plan is required or expected other than the periodic monitoring.

J. CONTINGENCY

Since there is no construction or creation of mitigation, the preservation of the parcel in perpetuity will ensure the mitigation values are protected and a contingency is not required.

K. LONG-TERM STEWARDSHIP

The long term steward ship of the parcel will be managed by the MRC in perpetuity as defined under the Covenants and Restrictions.

L. FINANCIAL ASSURANCES

Stewardship fees for the long term monitoring and maintenance of the parcel is not proposed due to the acceptance of the parcel by a non-profit organization that will benefit their mission.

M. OTHER COMMENTS

Not Applicable.

JN: 10973.002/11293.001 NRPA ATTACHMENT 13

APPENDIX A

DECLARATION OF COVENANTS AND RESTRICTIONS

THIS DECLARATION OF COVENANTS AND RESTRICTIONS is made this
RECITALS
WHEREAS, the Declarant holds title to certain real property situated in Hampden, Maine described in a deed from XXXX to MRC dated XX, xx, 2015, and recorded in Book xx Page xx at the Penobscot County Registry of Deeds, and the Declarant is the successor in title to by deeds recorded in Book, Page, (and Book, Page,) all in said Registry; and
WHEREAS, Declarant desires to place certain deed covenants, under the terms and conditions herein, over a portion of said real property (hereinafter referred to as the "Covenant Area") described as follows:
SEE Exhibit A
WHEREAS, pursuant to the Natural Resources Protection Act, Title 38 M.R.S.A. Section 480-A et seq. and Chapter 310 of regulations promulgated by the Maine Department of Environmental Protection (the "Wetland Protection Rules"), Declarant has agreed, in satisfaction of paragraph of the Order, to impose certain covenants and restrictions on the Covenant Area as more particularly set forth herein and has agreed that such covenants and agreements may be enforced by the Maine Department of Environmental Protection (hereinafter the "MDEP") or any successor in interest.
NOW, THEREFORE, the Declarant hereby declares that the Covenant Area is and shall forever be held, transferred, sold, conveyed, occupied and maintained subject to the covenants, conditions and restrictions set forth herein (sometimes referred to as the "Covenants and Restrictions"). The Covenants and Restrictions shall run with the Covenant Area and shall be binding on all parties having any right, title and interest in and to the Covenant Area, or any portion thereof, and their heirs, personal representatives, successors, and assigns. Any present or future owner or occupant of the Covenant Area or any portion thereof, by the acceptance of a deed of conveyance of all or part of the Covenant Area or an instrument conveying any interest therein, whether or not the deed or instrument shall so express, shall be deemed to have accepted the Covenant Area subject to the Covenants and Restrictions and shall agree to be bound by, to comply with and to be subject to each and every one of the Covenants and Restrictions hereinafter set forth.

- 1. <u>Restrictions on Covenant Area.</u> No man-made structures, temporary or permanent, no alterations to the surface or terrain, no cutting or alteration of vegetation, and no disposal of waste, are permitted on the Protected Property, except that Grantor has reserved the following rights, for itself, and its successors and assigns:
 - a. **MINOR STRUCTURES:** Grantor reserves the right to locate and maintain anywhere on the Protected Property, only those minor structures necessary or appropriate to enhance the

opportunity for low-impact outdoor recreation, education, nature observation and study; provided that all such structures must be designed and located to blend with the natural surroundings and preserve the substantially undisturbed natural resources on the Protected Property. Examples of permitted minor structures for such purposes are boundary markers, unlighted informational and interpretive signs, rustic walkways, culverts, footpath bridges, hand rails, bog bridges, benches, and barriers necessary to protect fragile natural resources or prevent unauthorized use. Grantor also reserves the right to maintain existing power, communication, and other utilities along roadways, grant utility service easements in connection with permitted structures, and to bury the same underground after notice in writing to Grantee.

- b. **VEGETATION MANAGEMENT:** Grantor reserves the right to alter vegetation anywhere on the Protected Property as necessary to cut or remove deadwood, leaners and blowdowns, to remove hazards to human safety, to manage the forest to maintain and improve the aesthetics and health of the forest, to combat active fire, and with the prior written consent of Grantee, to prevent fire or combat disease or exotic intrusion; all subject to the requirement of maintenance of a substantially natural and forested landscape. Commercial forest management is prohibited, but this should not be construed to prohibit the sale or removal of trees or vegetation cut on the Protected Property in the proper exercise of the above rights.
- c. **Waste Disposal and Water Protection:** In order to assure the preservation of the high quality scenic, natural and ecological character of the Protected Property, the following specific restrictions, subject to any more restrictive local, state, and/or federal laws and regulations, are imposed on the Protected Property:
 - i. The direct discharge of treated or untreated sewage or gray water waste into waters on or about the Protected Property is strictly prohibited, and shall be disposed of otherwise in accordance with applicable laws and regulations.
 - ii. It is forbidden to dispose of or store rubbish, garbage, debris, unserviceable or abandoned vehicles or equipment, parts thereof, or any other unsightly or offensive waste material on the Protected Property, except that compost and vegetative slash and debris may be allowed to remain on the Protected Property in accordance with applicable laws and regulations, and waste generated by permitted uses on the Protected Property may be stored temporarily in appropriate receptacles for removal at reasonable intervals.

Any activity on or use of the Covenant Area inconsistent with the purpose of these Covenants and Restrictions is prohibited. Prior to undertaking any changes in the use of the Covenant Area, the Declarant, its successors and assigns, shall consult with the MDEP regarding the proposed changes to determine the effect of such changes on the conservation values of the Covenant Area. The MDEP shall have the right to approve such changes in use if such uses do not impair or impede the conservation values of the Covenant Area or the purpose of the Covenants and Restrictions.

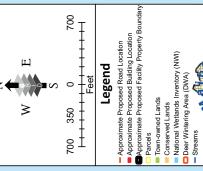
2. <u>Enforcement.</u> The MDEP may enforce any of the Covenants and Restrictions set forth in Section 1 above. Any future alterations of the Covenant Area must receive the prior approval in writing from the MDEP.

- 3. <u>Binding Effect.</u> The restrictions set forth herein shall be binding on any present or future owner of the Covenant Area. If the Covenant Area is at any time owned by more than one owner, each owner shall be bound by the foregoing restrictions but only to the extent that any of the Covenant Area is included within such owner's property.
- 4. <u>Amendment.</u> Any provision contained in this Declaration may be amended or revoked only by the recording of a written instrument or instruments specifying the amendment or the revocation signed by the owner or owners of the Covenant Area and by the MDEP (or any successor thereto).
- 5. <u>Effective Provisions of Declaration.</u> Each provision of this Declaration, and any agreement, promise, covenant and undertaking to comply with each provision of this Declaration, shall be deemed a covenant running with the land as a burden and upon the title to the Covenant Area.
- 6. <u>Severability.</u> Invalidity or unenforceability of any provision of this Declaration in whole or in part shall not affect the validity of enforceability of any other provision or any valid and enforceable part of a provision of this Declaration.
- 7. <u>Governing Law.</u> This Declaration shall be governed by and interpreted in accordance with the laws of the State of Maine.

Municipal Review Committee, Inc.					
BY: ITS:					
STATE OF MAINE (County), ss.			, 20_	_·	
Personally appeared before me the above named Committee, Inc. (company), (), and acknowledged the deed in (his/her) said capacity and the free act and deed	e foregoing	instrume	ent to be (hi	s/her) free	
	Notary P	ublic			

EXHIBIT A

Legal Description of the Protected Property



- Town-owned Lands



1: SITE DATA DEVELOPED BY CES, INC. DECEMBER, 2015.

S. ABUTTING PARCEL DATA AND LOT
NUMBERS DOLUNGES OF THE TOWN OF
LOT NUMBERS POPULATED FOR AND THE
MAP LOT FIELD. ALL PARCEL
MAP LOT FIELD. ALL PARCEL
ADVIONARIES SHOULD BE CONSIDERED
APPROXIMATE THIS MAP DOES NOT
REPESENT A SURVEY.

3. OWNERSHIP RECORD OF LOT 09-0-037 IS BASED OFF OF THE LATEST ASSESSMEN RECORD WHICH WAS UPDATED MORE RECENTLY THAN ARCHIVE GIS DATA RECORDS.

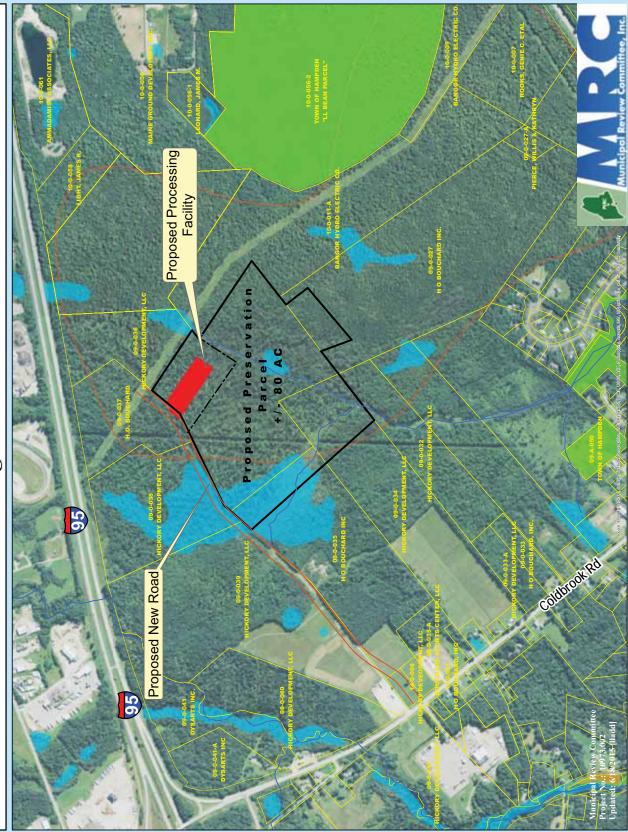
4. BASE MAPPING LAYERS ARE SERVER-BASED IMAGERY, TOPOGRAPHIG IMAGES, OF TERRAIN DEPICTIONS COURTESY OF ESRI. AGQUIRED OCT., 2014. S: MAP IS PROJECTED USING THE UNIVERSAL TRANSVERSE MERCATOR (UTM) PROJECTION, ZONE 19 NORTH, METERS AND REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83).

6: NORTH ARROW IS REFERENCED TO GRID NORTH.

7: INTENDED FOR REFERENCE PUR-POSES ONLY. THE MRD & GEG. INC. AND THEIR AFFILIATES ARE NOT RESPONSIBLE FOR THE MISUSE OF THIS MAP OR DATA DEPIDITED HERRIN. ALL AGREGGES ARE



Plan Mitigation





ATTACHMENT 14

MDEP APPENDIX A VISUAL EVALUATION FIELD SURVEY

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION

APPENDIX A: MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST

(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: <u>MRC, Fiberight, LLC</u>	Phone: 20 ′	<u>7-664-1700</u>	
Application Type:NRPA- Wetland Fill/Alteration	<u>n</u>		
Activity Type: (brief activity description) Construct 144,0	000 square foot Soli	d Waste Pro	cessing and Recycling
facility, 4,400 linear foot access road, and associat	ed infrastructure n	ear Coldbroo	ok Road in Hampden,
Maine			
Activity Location: Town: <u>Hampden</u> Coursell GIS Coordinates, if known: UTM Northing: 5023286 UTM	rt: <u>Penobscot</u> Easting: <u>536410</u>		
Date of Survey: June, 2015 Observer:	CES, Inc. (RST)	Phon	e: <u>989-4824</u>
	Distance Between the Proposed Visibility Activity and Resource (in Miles)		
1. Would the activity be visible from:	$0^{-1/4}$	1/4-1	1+
A. A National Natural Landmark or other outstanding natural feature?			⊠ No
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge?			⊠ No
C. A state or federal trail?			⊠ No
D. A public site or structure listed on the National Register of Historic Places?			⊠ No
E. A National or State Park?			⊠ No
F. 1) A municipal park or public open space?		\boxtimes	\boxtimes
2) A publicly owned land visited, in part, for the use, observation, enjoyment and appreciation of natural or man-made visual qualities?			⊠ No
3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river?			⊠
2. What is the closest estimated distance to a similar act	ivity?		⊠ N/A
3. What is the closest distance to a public facility intended for a similar use?			⊠ N/A
4. Is the visibility of the activity seasonal? (i.e., screened by summer foliage, but visible during	other seasons)	□Yes	⊠ No
5. Are any of the resources checked in question 1 used be during the time of year during which the activity wil		□Yes	⊠ No

- A listing of National Natural Landmarks and other outstanding natural features in the State of Maine can be found at: www.nature.nps.gov/nnl/Registry/USA_map/states/Maine/maine.htm. In addition, unique natural areas are listed in the Maine Atlas and Gazetteer published by DeLorme.
- Most Maine State and National Wildlife Refuges, Sanctuaries, and Preserves and State Game Refuges are listed in the Maine Atlas and Gazetteer published by DeLorme.
- Most State and federal trails are listed in the Maine Atlas and Gazetteer published by DeLorme. In addition, the Maine Department of Conservation maintains a list of state parks with trails that can be searched by county at: www.state.me.us/doc/parks/programs/db search/index.html
- Maine sites and structures listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, as amended, can be searched by town at: www.cr.nps.gov/nr/research/nris.htm
- In addition, State historic sites can be found at: www.state.me.us/doc/parks/programs/db_search/index.html A partial listing of historic sites in Maine can be found in the Maine Atlas and Gazetteer published by DeLorme.
- A listing of Maine State Parks can be found at: www.state.me.us/doc/parks/programs/db_search/index.html or in the Maine Atlas and Gazetteer published by DeLorme. Acadia National Park on Mount Desert Island is Maine's only National Park.

For guidance on completing this field survey checklist, please contact Licensing staff in the Division of Land Resource Regulation at the following offices:

(Headquarters)
Central Maine Regional Office
17 State House Station
Ray Building, Hospital Street
Augusta, Maine 04333
(207) 287-3901 or
toll free at 1-800-452-1942

Eastern Maine Regional Office 106 Hogan Road Bangor, Maine 04401 (207) 941-4570 or toll free at 1-888-769-1137

Northern Maine Regional Office 1235 Central Drive Presque Isle, Maine 04769 (207) 764-0477 or toll free at 1-888-769-1053 Southern Maine Regional Office 312 Canco Road Portland, Maine 04103 (207) 822-6300 or toll free at 1-888-769-1036



ATTACHMENT 15 RIGHT, TITLE, INTEREST

JN: 10973.002/11293.001 NRPA PERMIT APPLICATION



ATTACHMENT 15

TITLE, RIGHT, INTEREST

Included in this Attachment, the MRC has acquired an *Option to Purchase* the property necessary for the development of the proposed Facility from HO Bouchard, Inc. and Hickory Development, LLC. The MRC and Fiberight estimate that approximately 95 +/- acres will be acquired which includes a 90 acre parcel where the Facility will be developed and a five acre parcel for a new 4,460 foot road to access the processing plant. Fiberight will retain ownership of the Facility and will lease the property owned by the MRC as outlined in the *Development Agreement between MRC and Fiberight* included in this Attachment.

JN: 10973.002/11293.001 ATTACHMENT 14

OPTION TO PURCHASE

H. O. Bouchard, Inc., a Maine corporation with a place of business in Hampden, Maine and Hickory Development, LLC, a Maine limited liability company with a place of business in said Hampden (hereinafter collectively referred to as Seller), grants to Municipal Review Committee, Inc., a Maine nonprofit corporation with a place of business in Ellsworth, Maine (hereinafter referred to as Buyer), an option to purchase, upon the terms and conditions set forth below, the real estate, together with any improvements thereon and all easement and access rights thereto, including those described in conveyances to Seller and those exercised by Seller, located easterly of Coldbrook Road in Hampden, Penobscot County, Maine, generally depicted on Exhibit A attached hereto, together with an easement for a right of way for all purposes, including utility services, along the private road depicted on Exhibit A (hereinafter collectively referred to as the Property).

TERMS AND CONDITIONS:

- 1. Option Term. This Option shall be for a term commencing on the date of this agreement through March 31, 2017. This Option shall expire if not exercised on or before March 31, 2017.
- 2. <u>Exercise of Option</u>. Buyer shall exercise this Option, if at all, at any time during the term of this Option, and any renewals thereof, by giving written notice delivered by hand or by certified mail, return receipt requested, at the address provided below. Upon exercise of this option, the terms and provisions herein shall govern the purchase and sale of the Property.
- 3. Option Consideration. Buyer shall pay to Seller an initial option consideration of twelve thousand dollars (\$12,000.00), payable within five (5) business days after Seller's execution of this agreement. Upon exercise of this Option, the initial option consideration and any additional option consideration shall be deemed an earnest money deposit and applied toward the purchase price. Except as provided herein, if the Option is not exercised, the Option Consideration shall be retained by Seller.
- 4. <u>Restrictions during Option Term.</u> During the term of this Option, and any renewals thereof, and prior to closing, Seller agrees not to sell the Property, offer to sell, mortgage, encumber, or otherwise transfer or dispose of or alter the Property without prior written consent of Buyer.
- 5. <u>Inspection</u>. Within thirty (30) days of the date of this agreement, Seller shall provide Buyer with copies of all existing engineering and environmental site assessments and reports. Seller grants to Buyer, Buyer's duly authorized agents and employees, the right, during the term of this Option and prior to Closing to enter upon the Property to conduct whatever tests and inspections of the Property that Buyer deems necessary. In the event the results of such tests and inspections are unsatisfactory to Buyer, Buyer may terminate this agreement upon written notice to Seller, which

written notice must be delivered to Seller not later than twenty (20) days prior to closing. Buyer shall defend, indemnify and hold Seller harmless from and against any and all claims, demands, suits and actions of any person or entity arising out of Buyer's tests and inspections.

- 6. <u>Property</u>. Prior to exercise of the Option by Buyer, if any, Buyer shall cause the Property to be surveyed by a licensed Maine surveyor. The survey shall depict:
- a. a parcel of land containing not less than ninety (90) acres and not more than one hundred twenty (120) acres in substantially the same location and configuration as depicted on Exhibit A, and bounded northeasterly by land and/or easements now or formerly of Bangor Hydro Electric Company, bounded southerly and southwesterly by land now or formerly of Seller, and bounded northerly by the centerline of said private road referred to above; and

b. a private road leading from Coldbrook Road to the northeasterly corner of the Property. The width of said private road shall be not less than the width required by any laws, rules and regulations applicable to Buyer's intended use of the Property.

The final configuration and location of the parcel of land and the private road will be determined by a joint evaluation of the parties, including a determination as to the most favorable location for said private road and utility connections, and is subject to Seller's approval which shall not unreasonably be withheld, conditioned or delayed.

UPON EXERCISE OF THIS OPTION, THIS AGREEMENT SHALL BE CONSIDERED A PURCHASE AND SALE AGREEMENT AND THE FOLLOWING PARAGRAPHS 1 - 6 SHALL APPLY TO CONVEYANCE OF THE PROPERTY.

- 1. <u>Purchase Price</u>. The total purchase price for the Property shall be based on the valuation of \$3,300.00 per acre. For purposes of determining the Purchase Price, the number of acres comprising the Property as finally configured will be rounded up or down to the nearest whole acre. After application of the option consideration/deposit, the remaining purchase price shall be paid to Seller with cash or by bank check or certified check at closing.
- 2. <u>Deed.</u> At the closing of the sale, Seller shall deliver to Buyer or Buyer's agent a duly executed and acknowledged quitclaim deed with covenant conveying to Buyer good and marketable title to the Property, free of all encumbrances other than easements, restrictions or agreements of record which do not have a material adverse effect on the value of Property or the Buyer's intended use of the Property, and existing laws, ordinances, or regulation governing the use of the Property.
- 3. <u>Title Documents</u>. Examination of the title shall be the responsibility of Buyer at Buyer's sole expense. Within thirty (30) days of the date of this agreement, Seller shall provide Buyer with copies of all existing title abstracts, title insurance policies or other title or survey information which Seller may have in Seller's possession. If Buyer finds title to the Property not to be good and marketable or subject to any easements, restrictions or agreements of record which have a material adverse effect on the value of Property or the Buyer's intended use of the Property ("defect or defects"), then the closing shall be delayed for not more than thirty (30) days in order for Seller to cure

the defect or defects. If such defect or defects cannot be removed by Seller (Seller having used reasonable efforts), Buyer may, at Buyer's sole option, either (a) terminate this agreement, in which case all parties shall be released from their obligations hereunder and the option consideration/deposit shall be returned to Buyer, or (b) accept such title as Seller can convey and consummate purchase of the Property in accordance with this agreement.

- 4. <u>Possession</u>. Exclusive possession of the Property shall be delivered to Buyer at the time of the delivery of said deed.
- 5. <u>Closing</u>. The closing of the sale contemplated hereby shall take place at the offices of Eaton Peabody, 80 Exchange Street, Bangor, Maine, within sixty (60) days of Seller's receipt of notice of Buyer's exercise of the option as stated herein or such earlier date as specified by Buyer in its notice of exercise, unless delayed in accordance with the terms hereof.
- 6. Conditions of Closing. It is a condition of Closing that the private road accessing the Property shall be accepted as a public way by the Town of Hampden and that utilities, including but not limited to water and sewer, to service the Property are installed and connected to their respective service systems providers. Buyer shall be responsible for construction of the private road to standards required by the Town of Hampden for acceptance as a public way and Buyer shall have the right, at any time after the date of this agreement, to enter onto lands of Seller for purposes incidental to the same. Seller shall cooperate with Buyer in connection with any applications required for such construction and acceptance.
- 7. <u>Closing Adjustments.</u> Real property taxes and any other assessments, utility charges or other charges levied against the Property shall be prorated as of the date of the closing. Real property taxes shall be prorated based on the fiscal year of the Town of Hampden. State of Maine transfer tax shall be shared equally by Buyer and Seller. Seller shall pay all charges for recording any documents necessary to remove encumbrances from record title to the Property.
- 8. <u>Confidentiality</u>. Except to the extent required by law or as otherwise agreed by both parties in writing, neither party will disclose or use, and will direct its representatives not to disclose or use, to the detriment of the other party, the existence of this agreement, the letter of intent dated November 7, 2014, or any information concerning its subject matter unless such disclosure or use is required by law or unless such information already is publicly available through no fault of the disclosing party. If disclosure is required by law, the disclosing party shall provide to the other party notice of its intended disclosure in a manner calculated, to the greatest extent practicable under the circumstances, to afford the other party opportunity to challenge such disclosure. Upon written request of a party, the other party will promptly return or destroy any such information furnished to it.
- 9. <u>Publicity</u>. Neither party will publicly disclose the existence of this agreement or said letter of intent or the terms described herein or therein without the prior written consent of the other party.
 - 10. Costs. Unless otherwise specifically agreed in writing, each party shall be

responsible for its own costs and expenses incurred with respect to any of the matters set forth in this agreement, including, but not limited to, legal fees, accounting fees and consulting fees. Each party agrees to indemnify the other against any claim for finder's fees or broker's commissions arising out of any commitment made by the indemnifying party.

- 11. <u>Default</u>. In the event Buyer fails to fulfill any of Buyer's obligations hereunder, this agreement shall, at the option of Seller, be terminated, and Buyer's said option considerations/deposit shall be retained by Seller as Seller's sole remedy. In the event Seller fails to fulfill any of Seller's obligations hereunder, then the option considerations/deposit shall be returned to Buyer and Buyer, at Buyer's option, may pursue its remedies at law or in equity, including but not limited to specific performance.
- Notices. Any notice by either party to the other, as provided herein, shall be in writing and shall be effective if delivered by certified mail, return receipt requested, or by reputable overnight courier to the following address:

a. If to Seller, 349 Coldbrook Road

Hampden, ME 04444 Attn: Brian Bouchard

b. If to Buyer, c/o Karen A. Huber, Esq.

Eaton Peabody P.A.
P.O. Box 1210
80 Exchange Street
Bangor, ME 04402-1210
khuber@eatonpeabody.com

13. General Provisions.

a. This agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns. Buyer may assign this agreement, provided that Buyer shall give written notice to Seller after such assignment of the name and address for any assignee.

1. 1.

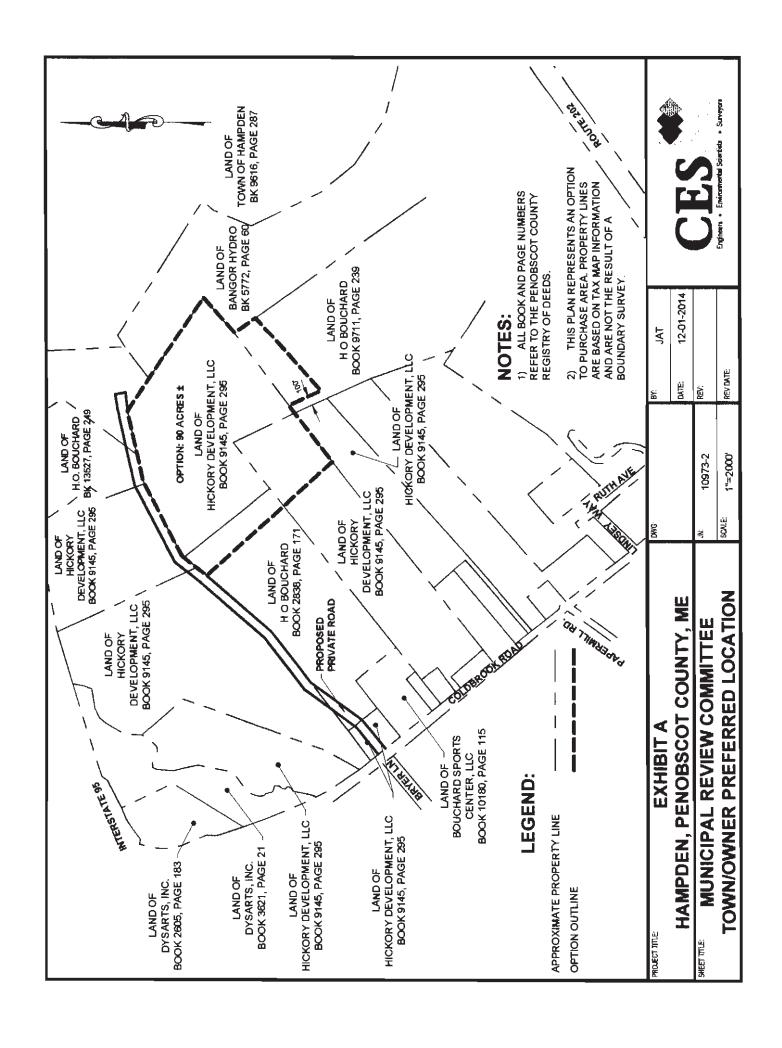
- b. This agreement constitutes the entire agreement between the parties, supersedes all prior negotiations and understandings between them, and shall not be altered or amended except by a written amendment signed by Seller and Buyer.
- c. This agreement may be simultaneously executed in any number of counterparts, each of which when duly executed and delivered shall be an original; but such counterparts shall constitute but one and the same agreement. For purposes of this agreement, a facsimile signature shall be deemed an original.

- d. Seller agrees that it shall keep the terms of this agreement and the transaction contemplated herein confidential, except as may be set forth in the Memorandum of Option contemplated below. Seller acknowledges and agrees that breach of this agreement could result in irreparable harm to Buyer and that money damages would not be a sufficient remedy for any breach of this agreement by Seller. In the event of any breach, Buyer shall be entitled to specific performance and injunctive relief as remedies for any such breach. Such remedies will not be deemed to be the exclusive remedies for a breach of this agreement by Seller but will be in addition to all other remedies available at law or in equity to Buyer. Seller's obligations under this provision shall survive closing.
- e. The parties agree that this Option shall not be recorded. A Memorandum of this Option to Purchase may be prepared for recording for the purpose of giving notice to third persons of the existence of this agreement.
- f. If any provision of this agreement is found to be invalid or unenforceable, such finding shall not affect the validity or enforceability of any other provision hereof.
- g. This agreement shall be construed and enforced in accordance with and governed by the laws of the State of Maine.
- h. For purposes of this agreement, the date of this agreement shall be the date Seller executes this agreement.

[THIS SPACE LEFT INTENTIONALLY BLANK. SIGNATURES CONTINUED ON THE NEXT PAGE.]

In witness whereof, the parties hereto have hereunto set their hands and seals as of the date set forth below.

Witness:	H.O. Bouchard, Inc.
Ву:	Brian Bouchard, Its President Duly Authorized Date:
Witness:	Hickory Development, LLC
By:_5	Brian Bouchard, Its July Authorized Date:, 2014
	Municipal Review Committee, Inc.
	By Gregory Lounder, Its Executive Director, Duly Authorized Date: Queen the second of



MEMORANDUM OF OPTION TO PURCHASE REAL ESTATE

Optionor:	H. O. Bouchard, Inc. Hickory Development, LLC
Optionee:	Municipal Review Committee, Inc.
Property:	A certain lot or parcel of land containing not less than 90 acres and not more than 120 acres located on the easterly side of the Coldbrook Road in Hampden, Maine, in substantially the same location and configuration as generally depicted on Exhibit A, and bounded northeasterly by land and/or easements now or formerly of Bangor Hydro Electric Company, bounded southerly and southwesterly by land now or formerly of Optionor, and bounded northerly by the centerline of a private road leading from Coldbrook Road to the northeasterly comer of the Property in substantially the same location as depicted on Exhibit A.
Date of Option:	Dec / ,2014
Term of Option:	Commences on Dec. / 2014 until December 31, 2016.
Renewal Term:	None.
	SS WHEREOF, H. O. Bouchard, Inc. and Hickory Development, LLC have instrument to be signed by the undersigned, duly authorized, as of this
Witness:	Brian Bouchard, Its Duly Authorized
Witness:	By: Sem Smiles Brian Bouchard, Its

STATE OF MAINE

Penobscot County

Personally appeared before me, the above named Brian Bouchard, as Resident of H. O. Bouchard, Inc., and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said corporation.

I-legalus 1 Januar Notary Public/Attorney at Law

Elizabet A. Lauria Print or type name as signed

ELIZABETHA LAVIN Notary Public • State of Maine My Commission Expires April 6, 2020