





Western Maine Renewables 400 to the term

125

- Feet

250

Date:

05/2021













Not for Construction



































































⊐ Feet

250

Date:

05/2021

2225



Appendix B. Natural Resources Summary Tables



	Associated Wetland	Hydrology	MDEP NRPA Significant ¹	Pool Origin	First visit survey and counts			Second visit survey and counts			
Vernal Pool ID					Date ²	Wood Frog (Lithobates sylvaticus)	Spotted Salamander (Ambystoma maculatum)	Date ²	Wood Frog (Lithobates sylvaticus)	Spotted Salamander (Ambystoma maculatum)	Notes
VP19CP	N/A	Ephemeral	Yes	Natural	5/20/2020	0	57	5/26/2020	10	57	Bullfrog (<i>Lithobates</i> catesbeianus) 5/20/20
VP21DS	W68EI	Ephemeral	No	Non- natural	4/29/2020	100+	100+	5/18/2020	30	40+	
VP22DS	W68EI	Ephemeral	No	Non- natural	4/29/2020	7	0	5/18/2020	7	0	
VP40DS	W08EI	Ephemeral	Yes	Natural- modified	5/6/2020	14	15	5/18/2020	18	40+	Two pair of spring peepers (<i>Pseudacris crucifer</i>) observed mating along with presence of green frogs (<i>Rana clamitans</i>) during 5/18/20 visit
PVP41EI	W115EI	Unknown	No	Non- natural	12/22/2020	N/A	N/A	N/A	N/A	N/A	PVP identified during winter surveys
PVP42EI	W111	Unknown	No	Non- natural	12/22/2020	N/A	N/A	N/A	N/A	N/A	PVP identified during winter surveys
PVP43EI	W107EI	Unknown	No	Non- natural	1/28/2021	N/A	N/A	N/A	N/A	N/A	PVP identified during winter surveys

Table 1. Vernal Pool Survey Results for the Western Maine Renewable Energy Project, Moscow, Maine.

1 – Significance based on Maine Department of Environmental Protection (MDEP) Natural Resources Protection Act (NRPA) (38 Maine Revised Statutes Annotated §§480-A et seq.) and Maine Significant Wildlife Habitat Rules (Chapter 335). Available online at: http://www.maine.gov/dep/land/nrpa/index.html (MDEP 2014).

2 – Species count numbers are the highest numbers counted between the two surveys.

3 – Blue spotted salamander (*Ambystoma laterale*) and fairy shrimp (*Anostraca* spp.) were not observed in any of the pools identified on-Site. No vernal pool-dependent listed species were observed. PVP = potential vernal pool.



Table 2.	Wetland Delineation Results for the Western Maine Renewable Energy Project, Moscow, Maine.
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Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
W08EI	PEM/PSS/PFO	4.88	212,787.65	Large wetland complex characterized by pit/mound microtopography in forested areas, and high organic content in soils with sulfur odor in emergent areas. Contains VP04DS and S01EI. Common plants include bluejoint, Canada bunchberry, swamp dewberry, swamp violet, wild raisin, gray birch, and northern white cedar.	Yes
W11EI	PEM	0.02	898.36	A naturalized ditch along the edge of a USAF radar field. Common plants include swamp dewberry, highbush blueberry, horsetail, reed canary grass, blue flag iris, and broad leaf cattail.	No
W12EI	PFO	2.08	90,597.48	A large forested wetland complex that is connected to W13EI and W14EI offsite. A small portion of this wetland occurs as a naturalized ditch adjacent to an existing access road. Common plants include northern white cedar, red maple, black spruce, gray birch, wild rasin, bellwort, water avens, swamp violet and swamp dewberry.	No
W13EI	PFO	0.23	9,918.82	A large forested wetland complex that is connected to W12EI and W14EI offsite. Common plants include northern white cedar, red maple, black spruce, gray birch, winterberry holly, marginal wood fern, swamp violet, and creeping snowberry.	No
W14EI	PFO	1.55	67,343.12	A large forested wetland complex that is connected to W12EI and W13EI off site. A portion of this wetland occurs as a roadside ditch. Common plants include northern white cedar, red maple, black spruce, gray birch, winterberry holly, marginal wood fern, swamp violet, and creeping snowberry.	Yes
W15EI	PFO	0.16	6,885.38	A forested wetland that continues off site. A portion of this wetland contains a roadside ditch. Common plants include northern white cedar, wild rasin, red maple, winterberry holly, swamp dewberry and creeping snowberry.	No
W16EI	PFO	0.25	10,735.15	An isolated, forested wetland, with visible impacts from previous timber removal. Common plants include northern white cedar, red spruce, marginal wood fern, swamp violet, reed canary grass, and highbush blueberry.	No
W17DS	PFO/PSS	3.82	166,562.34	larger wetland complex within a USAF radar field. Contains S14DS. Common plants include northern white cedar, gray birch, black ash, red maple, meadowsweet, highbush blueberry, and winterberry holly.	Yes
W17EI	PFO	0.45	19,663.71	A forested wetland with visible impacts from previous timber removal. Contains S52EI, a tributary to Bassett Brook. Common plants include northern white cedar, winterberry holly, black spruce, and highbush blueberry.	Yes

Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
W18EI	PFO/PEM	0.05	2,241.53	An isolated seep wetland that drains into a roadside ditch. Common plants include northern white cedar, black spruce, sphagnum moss, swamp violet, interrupted fern, and water avens	No
W19EI	PFO	0.25	10,932.31	An isolated wetland with shallow soils. Common plants include balsam fir, red maple, meadowsweet, sensitive fern, and maple-leaf viburnum.	No
W20DS	PFO/EM1	1.29	56,200.29	Wetland occurs in a USAF radar field, contains S15DS and S15DS. Common plants include northern white cedar, red maple, balsam fir, meadowsweet, sensitive fern, horsetail, slender willow, and bluejoint.	Yes
W20EI	PFO	0.39	16,995.90	A small, forested, wetland that continues offsite. Common plants include sensitive fern, cinnamon fern, horsetail, swamp violet, northern white cedar, red maple, winterberry holly, and maple-leaf viburnum.	No
W21DS	PFO/EM1	0.62	27,102.37	Wetland occurs in a USAF radar field and continues outside of the Study Area. Common plants include northern white cedar, red maple, balsam fir, meadowsweet, sensitive fern, horsetail, slender willow, and bluejoint.	No
W29EI	PFO/PEM	0.38	16,459.80	A depressional wetland with soils that are shallow to bedrock; limit of excavation was 6-10 inches of dark organic muck. Common plants include black spruce, northern white cedar, red maple, wild rasin, bluejoint, slender willow, Canada bunchberry, and cinnamon fern.	No
W30EI	PEM/PFO	2.91	126,724.59	A larger wetland with seepy conditions on a hillslope; soils are shallow to bedrock and characterized by dark, muck. Common plants include cinnamon fern, tussock sedge, speckled alder, horsetail, slender willow, larch, red maple, jewelweed, interrupted fern, foam flower, and Canada bunchberry.	No
W33EI	PFO	1.09	47,428.50	A forested wetland with microtopography and a layer of sphagnum moss throughout; soils contain a dark surface with redoximorphic concentrations. Common plants include yellow birch, black ash, black spruce, larch, speckled alder, wild rasin, interrupted fern, and cinnamon fern.	No
W34EI	PEM	0.19	8,143.34	An emergent depressional wetland that is surrounded by upland forest. Common plants include swamp violet, joe-pye weed, cinnamon fern, sensitive fern, water avens, bellwort, tussock sedge, and bluejoint.	No
W35EI	PEM	0.06	2,746.31	A small depression with similar characteristics to Wetland W34EI. Common plants include swamp violet, joe-pye weed, cinnamon fern, sensitive fern, tussock sedge, and bluejoint.	No
W36EI	PEM	0.01	511.01	A small isolated, seep wetland; soils have a depleted matrix and redox concentrations. Common plants include sensitive fern, red maple, interrupted fern, and marginal wood fern.	No

Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
W37EI	PFO	0.07	3,039.67	An isolated depression surrounded by upland forest. Common plants include swamp violet, Canada bunchberry, joe-pye weed, cinnamon fern, sensitive fern, water avens and marginal wood fern.	No
W38EI	PFO	0.04	1,691.44	A forested wetland with microtopography and soils with containing a dark surface with redoximorphic concentrations. Common plants include tussock sedge, meadow rue, horsetail, interrupted fern, wild rasin, red maple, larch, black spruce, black ash and speckled alder.	No
W39EI	PFO	0.10	4,482.90	A small, isolated wetland surrounded by upland forest Common plants include swamp violet, Canada bunchberry, joe-pye weed, cinnamon fern, sensitive fern, water avens and marginal wood fern.	Yes
W40EI	PFO/PEM	0.38	16,697.37	A large, mostly forested wetland that continues outside the Study Area; soils are characterized by dark muck. Common plants include sensitive fern, cinnamon fern, swamp violet	No
W41EI	PEM	0.06	2,794.25	An emergent depression with dark organic soils. Common plants include Tussock sedge, bluejoint, sensitive fern, jewelweed, larch, and meadowsweet.	No
W42EI	PFO	0.05	2,250.08	An isolated depression with dark, mucky soils. Common plants include black ash, red spruce, speckled alder, fringed sedge, bellwort, strawberry, and striped maple.	Yes
W43EI	PFO	0.07	2,996.28	An isolated depression with dark mineral soils. Common plants include sensitive fern, interrupted fern, tussock sedge, fringed sedge, yellow bluebead-lilly, hobblebush, yellow birch, black ash, and striped maple.	Yes
W44EI	PEM	0.14	6,114.10	An isolated depression surrounded by upland forest. Common plants include swamp violet, Canada bunchberry, joe-pye weed, cinnamon fern, sensitive fern, water avens and marginal wood fern.	No
W47EI	PEM/PFO	0.18	7,745.87	Hillslope wetland with dominant upland vegetation. A small patch of blue flag iris and a small patch of swamp violet observed, but were not dominant, other plants include, red spruce, balsam fir, tussock sedge, red raspberry, sensitive fern, and meadowsweet.	No
W48EI	PFO	0.06	2,819.99	Forested wetland connected to S24EI. Common plants include black spruce, sensitive fern, bluejoint, red maple, and meadowsweet.	Yes
W49EI	PFO	0.05	2,041.11	Forested wetland connected to S24EI. Common plants include black spruce, sensitive fern, bluejoint, red maple, and meadowsweet.	Yes
W50EI	PEM	0.08	3,304.83	A grassy slope that leads to a roadside ditch. Common plants include meadow sweet, sensitive fern, and tussock sedge.	Yes

Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
W51EI	PEM/PSS	0.88	38,426.98	A large hillslope wetland that starts at the ditch Watercourse S25EI and continues outside of the study area. Common plants include sensitive fern, speckled alder, tussock sedge, and timothy grass.	No
W52EI	PFO	0.07	3,040.78	A hillslope wetland fed by two watercourses, S28EI and S27EI. Common plants include red maple, speckled alder, and cinnamon fern.	No
W53EI	PEM	0.29	12,484.21	Hillside with skidder trails that create drainages throughout. There are a mix of hydric and no- hydric vegetation, this area is likely naturalized due to previous disturbance. Common plants include Christmas fer, gooseberry, bluejoint, raspberry, marginal wood fern, and meadowsweet.	No
W54EI	PEM	0.04	1,736.58	Naturalized skidder trail with sensitive fern and cinnamon fern.	No
W55EI	PEM	0.05	1,988.05	An isolated, regenerating wetland characterized by impacted area due to timber harvesting activities. Common plants include tussock sedge, sensitive fern, black spruce and red maple.	No
W56EI	PFO	0.12	5,357.21	A small forested depression with depleted soils connected to S29EI. Common plants include jewelweed, cinnamon fern, sensitive fern, larch, and red maple.	Yes
W59EI	PEM	0.03	1,451.66	A naturalized skidder may be an old laydown area, soils are a dark fine sandy loam with a high organic content. Common plants include tussock sedge, New York fern, red raspberry, and jewelweed.	No
W60EI	PFO	0.23	9,966.57	Connected to Watercourse S32EI on both sides, soils are shallow to bedrock. Common plants include New York fern, bedstraw, jewelweed, water avens, black ash, red maple, and fringed sedge.	Yes
W61EI	PEM	0.21	9,013.32	A naturalized depression adjacent to the road and has a culvert inlet. Common plants include sensitive fern, cinnamon fern, joe-pye weed, blue flag iris, meadowsweet and jewelweed.	No
W63EI	PEM	0.09	3,921.84	A naturalized roadside depression that is fed by watercourse S36EI from the east. Common plants include meadowsweet, tussock sedge, and purple vetch.	No
W64EI	PEM/PSS/PFO	0.30	12,877.70	Connected to wetland W63EI through a culvert where it begins as a PEM but transitions from PSS to PFO farther away from the road, wetland continues outside of the Study Area. Common plants include speckled alder, black ash, red maple, sensitive fern, meadowsweet, water avens, broad leaf cattail, blue flag iris, and meadow rue.	No
Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
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W65EI	PFO	0.05	2,272.07	An isolated depression that appears to be a naturalized abandoned roadbed; bare ground makes up approximately 55% of the herbaceous layer. Common plants include swamp violet, sensitive fern, interrupted fern, red maple, white birch, and yellow birch.	No
W66EI	PEM	0.38	16,692.92	An isolated wetland adjacent to an existing electrical transmission line. Common plants include bluejoint, tussock sedge, sensitive fern, speckled alder, fringed sedge, and marginal wood fern.	No
W67EI	PEM	0.22	9,680.48	A roadside depression that has been influenced by a culvert that has been impacted by North American beaver; some standing water and saturated soils. Wetland contains watercourse S53EI. Common plants include bluejoint, tussock sedge, horsetail, sensitive fern, reed canary grass, and broad leaf cattail.	No
W68EI	PEM	0.70	30,607.03	A naturalized wetland between a road and an electrical transmission line. Wetland contains VP21DS and VP22DS. Common plants include broad leaf cattail, sensitive fern, blue flag iris, and bluejoint.	Yes
W69EI	PFO	0.10	4,423.08	An isolated depression surrounded by upland forest. Common plants include scirpus cyperinus, bluejoint, carex stricta, strawberry, yellow birch, red maple, bellwort, and canada bunchberry.	No
W70EI	PFO	0.02	836.40	A naturalized wetland in an old skidder path. Common plants include black birch, yellow birch, tussock sedge, cinnamon fern, and sensitive fern.	No
W71EI	PEM	0.29	12,425.68	A beaver impoundment in a roadside depression with a culvert partially clogged from beaver activity. Contains watercourse S53EI. Common plants include bluejoint, tussock sedge, sensitive fern, broad leaf cattail, and reed canary grass.	No
W81EI	PFO	1.45	63,057.88	A forested swamp that extends off site. Common plants include northern white cedar, red maple, black spruce, yellow birch, cinnamon fern, sensitive fern, royal fern, and Canada bunchberry.	No
W83EI	PEM/PSS	0.43	18,670.20	An emergent/scrub shrub wetland characterized by past disturbance from timber harvesting. Common plants include black ash, black spruce, swamp currant, sensitive fern, and bluejoint.	No
W86EI	PFO	0.18	7,863.86	Hillslope wetland with dominant upland vegetation. A small patch of harlequin blueflag and a small patch of swamp violet observed, but were not dominant, other plants include, red spruce, balsam fir, tussock sedge, red raspberry, sensitive fern, meadowsweet, and horsetail.	No
W89EI	PEM	0.03	728.45	An naturalized wetland near a recently harvested area. Common plants include tussock sedge, wood aster, yellow birch and red maple.	No
W90EI	PEM/PSS	0.84	36,752.91	An naturalized wetland in a USAF radar field. Common plants include cottongrass bullrush, meadowsweet, Queen Anne's lace, yarrow, wood aster, northern white cedar, and speckled alder.	No



Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
W92EI	PFO	2.97	129,210.06	A forested, regenerating wetland in a USAF radar field. Common plants include black spruce, white pine, northern white cedar, yarrow, sensitive fern, and tussock sedge.	No
W95EI	PFO	0.08	3,287.70	An isolated regenerating wetland in a USAF radar field. Common plants include northern white cedar, red spruce, red maple, eastern hemlock, winterberry holly, interrupted fern, sensitive fern, and reed canary grass.	No
W96EI	PFO	0.09	4,045.39	An isolated regenerating wetland in a USAF radar field. Common plants include northern white cedar, red spruce, red maple, eastern hemlock, winterberry holly, interrupted fern, sensitive fern, and reed canary grass.	No
W98EI	PEM/PSS	0.16	7,078.31	An isolated regenerating wetland in a USAF radar field. Common plants include northern white cedar, red spruce, red maple, eastern hemlock, winterberry holly, interrupted fern, sensitive fern, and reed canary grass.	No
W99EI	PEM/PSS	0.07	2,997.91	A naturalized wetland in a ditch between a substation/powerline and gravel road. Common plants include reed canary grass, interrupted fern, larch, black spruce, meadowsweet, quaking aspen, and red maple	No
W100EI	PEM/PSS	0.08	3,504.00	An emergent wetland in a highly disturbed previously developed site. Common Plants include reed canary grass, interrupted fern, larch, black spruce, meadowsweet, quaking aspen, and red maple.	No
W105EI	PEM/PSS	0.13	5,672.80	A naturalized ditch within a USAF radar field, adjacent to a road. Common plants include horsetail, sensitive fern, meadowsweet, and wood aster.	No
W106EI	PEM/PSS	0.06	2,766.97	A naturalized wet meadow wetland a USAF radar field. Common plants include reed canary grass, meadowsweet, purple vetch, bedstraw	No
W107EI	PEM	0.05	2,011.67	An emergent wetland in a previous landing area for a logging operation with sensitive fern, meadowsweet, and cottongrass bullrush, delineated in the winter 2021.	No
W108KN	PSS	0.08	3,667.27	A scrub shrub wetland with signs of disturbance from forestry operations. Common plants include sheep laurel, rhodora, gray birch, cottongrass bullrush, and wild rasin, delineated in the winter 2021.	No
W109EI	PEM	0.06	2,720.20	An emergent wetland in a previous logging landing area. Common plants include sensitive fern, sheep laurel, rhodora, and meadow sweet, delineated in the winter 2021.	No

Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
W110KN	PFO	0.01	637.33	A forested sloping wetland that extends off site. Common plants include yellow birch, red maple, and quaking aspen, delineated in the winter 2021.	No
W111EI	PFO	0.01	402.13	A small forested wetland that extends off site containing red maple and yellow birch, delineated in the winter 2021.	No
W112EI	PFO	0.10	4,212.32	A forested wetland with a perennial watercourse, S13EI, flowing through. This wetland contains red maple, yellow birch, and northern white cedar, delineated in the winter 2021.	Yes
W113KN	PSS/PFO	0.45	19,706.49	A large forested and scrub shrub wetland complex with two perennial tributaries (S13EI and S03EI) to Chase Pond. Balsam fir, speckled alder, and larch are the dominant tree species, delineated in the winter 2021.	Yes
W114EI	PFO	0.01	290.95	A small forested wetland that appears to be a borrow pit that is mapped as a potential vernal pool, delineated in the winter 2021.	No
W115EI	PFO	0.02	657.28	A small forested wetland that appears to be a borrow pit that is potential vernal pool PVP01EI. Contains yellow birch and speckled alder, delineated in the winter 2021.	No
W116KN	PFO	0.03	1,197.06	A small forested red maple swamp that contains S05KN. Red maple and red spruce are the dominant trees in this wetland, delineated in the winter 2021.	Yes
W117KN	PFO	0.06	2,467.93	A forested seep wetland on a side slope, delineated in the winter 2021.	No
W118KN	PSS/PFO	0.52	22,788.04	A large forested and scrub shrub swamp with beaver activity and possible Inland Wading Bird and Waterfowl Habitat. This wetland is connected to W120EI off site. Common plants includes northern white cedar and speckled alder, delineated in the winter 2021.	Yes
W119KN	PFO/PEM	0.05	1,961.05	A forested and emergent wetland that appears to be a possible borrow pit or naturalized area previously disturbed from timber harvesting activities. Northern white cedar, speckled alder, cottongrass bullrush, and sensitive fern are the common plants, delineated in the winter 2021.	No
W120EI	PEM	0.80	34,939.84	A large emergent swamp mapped as Inland Wading Bird and Waterfowl Habitat and beaver activity. This wetland is connected to W118KN offsite. Common plants includes speckled alder, sensitive fern, cottongrass bullrush, balsam fir, and yellow birch, delineated in the winter 2021.	Yes
W121EI	PEM	0.00	39.30	A small, naturalized emergent wetland on the side of the road. Common plants includes sensitive fern and cottongrass bullrush, delineated in the winter 2021	No

Wetland ID	Cowardian Classification ¹	Area (Acres)	Area (Sq. Ft.)	Summary Notes	Wetland of Special Significance ²
W122KN	PFO	0.04	1,933.89	A naturalized wetland occurring in a skidder trail. Common plants includes yellow birch and northern white cedar, delineated in the winter 2021.	No
W123NJ	PEM	6.09	265,318.11	Previously disturbed wetland within a USAF Radar Station field. Common plants include broad leaf cattail, sensitive fern, quaking aspen, and reed canary grass. A portion of this wetland was delineated in the winter of 2021.	No
W124EI	PSS	4.32	188,341.81	Previously disturbed logging yard and skidder trail(s). Common plants include S. Alba, Scirpus cubensus, red maple and Kalmia sp., delineated in the winter 2021	NO
W125EI	PEM	1.83	79,652.70	Previously disturbed logging road enterance, Common plants include Apirea, rodora calmia solidago, gray birch, delineated in the winter 2021	No
W126EI	PSS	0.30	13,053.06	Previously disturbed wetland within a transmission corridor. Common plants include white cedar, white birch, carex stricta, and meadow sweet, delineated in the winter 2021	No
WET-68-02	PEM/PSS	2.09	91,180.30	NECEC Wetland - Previously disturbed wetland within the existing CMP transmission corridor. Common plants include wool-grass, nodding sedge, rattlesnake mannagrass, fowl mannagrass, sensitive fern, cinnamon fern, wrinkle leaved goldenrod and spotted touch-me-not.	No
WET-68-03	PSS	0.06	2,730.83	NECEC Wetland - Previously disturbed wetland within the existing CMP transmission corridor. Common plants include speckled alder, meadowsweet species, pussy willow, balsam fir, sensitive fern, cinnamon fern, soft rush and spotted touch-me-not.	No

1 – PFO = palustrine forested; PEM = palustrine emergent; PSS = palustrine scrub-shrub; PFO/PSS = palustrine forested/palustrine scrub-shrub; PSS/PFO = palustrine scrub-shrub/palustrine forested; PFO/PEM = palustrine forested/palustrine emergent; PEM/PFO = palustrine emergent/palustrine forested; PEM/PSS= palustrine emergent/palustrine scrub-shrub; and PEM/PSO = palustrine emergent/palustrine scrub-shrub/palustrine forested (Cowardin et. al., 1979).

2 – Maine Wetlands of Special Significance (WOSS) designations, as defined in the Maine Department of Environmental Protection Natural Resource Protection Act (38 M.R.S.A. §§480-A et seq.) and the Maine Wetland Protection Rules (Chapter 310). Areas of significant habitat according to the Maine Department of Environmental Protection.



Watercourse ID	Flow Regime ¹	Length (feet)	Bank full Width (Feet)	Substrate	Bank Depth (Inches)	Notes/Related Resources
SO1EI	Intermittent	94	5	50% muck, 20% sand, 20% gravel, 10% cobbles	12	Intermittent watercourse inside W08EI that is connected to VP40DS
S14DS	Intermittent	417	1	Vegetated muck	6	Flows north/northwest and diffuses into Wetland W17DS.
S15DS	Intermittent	67	4	Vegetated	12	Previousy disturbed resource within USAN radar field, flows northwest toward W20DS.
S16DS	Intermittent	27	4	Vegetated muck	10	Short watercourse flowing northwest within wetland.
S21EI	Ephemeral	296	2	30% sand, 10% cobbles, 40% muck, 30% gravel	12	Flows southeast through Study Area toward Stream Road.
S24EI	Intermittent	227	3	40% cobbles, 40% gravel, 10% sand, 10% muck	12	Flows southeast from wetland W49EI, with a small contributing seep, eventually crossing a broken culvert and into wetland W48EI
S26EI	Intermittent	156	2	40% muck, 40% sand, 20% gravel	12	watercourse begins at culvert and flows Northeast toward S27EI and eventually W52EI
S27EI	Intermittent	77	2	40% muck, 40% sand, 20% gravel	12	This is connected to Watercourse S26EI
S28EI	Intermittent	120	2	30% cobbles, 20% muck, 30% sand, 20% gravel	12	This watercourse starts at the road side ditch and flows east over the road (there is no culvert) downslope to Wetland W48EI
S29EI	Ephemeral	102	2	Muck/vegetated bottom	12	Starts as sheet flow that channelizes and flows southeast into Wetland W56EI
S32EI	Intermittent	969	8	40% large cobbles, 40% sand, 20% gravel	12	Starts as sheet flow from an old skidder rut flows south through the Study Area briefily intersecting with wetland W60EI
S33EI	Intermittent	157	4	30% muck, 20% cobbles, 30% sand, 20% gravel	12	Short watercourse flows south to S32EI

Table 3. Watercourse Delineation Results for the Western Maine Renewable Energy Project, Moscow, Maine.

Watercourse ID	Flow Regime ¹	Length (feet)	Bank full Width (Feet)	Substrate	Bank Depth (Inches)	Notes/Related Resources
S36EI	Intermittent	73	2	40% muck, 40% sand, 20% gravel	12	Originates from Wetland W63EI and flows northeast beyond the Study Area boundary.
S51EI	Perennial	236	20	50% boulders, 50% cobbles	48	Bassett Brook flows south through an existing 7' culvert.
S52EI	Intermittent	237	4	50% sand, 50% cobbles	24	Tributary to Basset Brook, flows southwest from wetland W17EI and through a culvert.
S53EI	Ephemeral	830	6	50% cobbles, 50% sand	30	Watercourse flows west through wetlands W71EI and W67EI. A Tributary to Bassett Brook.
S54EI	Ephemeral	44	3	50% cobbles, 50% sand	30	Small tributary to S53EI.
S03EI	Ephemeral/ Intermittent	80	30	TBD	20	Watercourse was delineated during the winter, flows south under existing bridge.
S13EI	Perennial	68	12	TBD	TBD	Watercourse was delineated in the winter, large watercourse flowing west into the wetland complex that contributes to Chase Pond on the northeast side of the pond.
S55EI	Ephemeral	40	TBD	TBD	3	Watercourse was delineated in the winter, flows north into wetland W112EI
S56KN	Perennial	183	12	TBD	TBD	Watercourse was delineated in the winter, flows south, then along a roadside ditch (east) and through a culvert in the road toward the wetland connected to Chase Pond.
S57EI	Intermittent	72	TBD	TBD	TBD	Watercourse was delineated in the winter, flows southeast through an existing culvert in the road and toward the large wetland on the north side of Chase Pond.
S58EI	Intermittent	69	TBD	TBD	TBD	Watercourse was delineated in the winter, flows south through existing culvert in road and toward Chase Pond.
S59EI	Perennial	110	4	TBD	TBD	Watercourse was delineated in the winter, flows south through small bridge or box culvert in road and toward Chase Pond.
S60KN	Perennial	162	10	TBD	TBD	Watercourse was delineated in the winter, flows south through culvert, then along a roadside ditch (east) eventually turning south toward Chase Pond.

Watercourse ID	Flow Regime ¹	Length (feet)	Bank full Width (Feet)	Substrate	Bank Depth (Inches)	Notes/Related Resources
S61KN	Intermittent	41	TBD	TBD	TBD	Watercourse was delineated in the winter, flows south toward Chase Pond.
S62EI	Intermittent	86	TBD	TBD	TBD	Watercourse was delineated in the winter, flows east and through a culvert in the road, toward wetland W118KN.
S63KN	Perennial	98	6	TBD	TBD	Watercourse was delineated in the winter, flows south through culvert in road and toward Chase Pond.
S64KN	Intermittent	89	TBD	TBD	TBD	Watercourse was delineated in the winter, flows along ditch on north side of road, crosses road and flows south through wetland W116KN and toward Chase Pond.
S65KN	Intermittent	97	TBD	TBD	TBD	Watercourse was delineated in the winter, flows south toward existing road and then east along road as a ditch.
S66KN	Intermittent	105	TBD	TBD	TBD	Watercourse was delineated in the winter, flows northeast toward beaver impounded wetland W120EI.
S67EI	Intermittent	160	TBD	TBD	TBD	Watercourse was delineated in the winter. S53EI feet 16 & 17?
S68EI	Ephemeral	183	TBD	TBD	TBD	Watercourse was delineated in the winter.

1 – Perennial refers to a watercourse which has surface flow year-round during years of normal rainfall. Intermittent refers to watercourses that only have surface flow for part of the year. Ephemeral refers to watercourses or drainages that depend on rainfall or runoff for surface flow.

Appendix C. Maine State Vernal Pool Assessment Forms





egg mass) are <u>required</u> for all (ol AND b) the indicators (one example of each species observers.
Observer's Pool ID: VP19CP	MDIFW Pool ID:
. PRIMARY OBSERVER INFORMATION	N
a. Observer name: E. Irvin with C. Parris	<u>h</u>
b. Contact and credentials previously p	rovided?
. PROJECT CONTACT INFORMATION	
a. Contact name:	O other
b. Contact and credentials previously p	rovided? O No (submit Addendum 1) O Yes
c. Project Name: Western Maine Renewa	bles
. LANDOWNER CONTACT INFORMATI	ON
a. Are you the landowner? OYes ON	o If no, was landowner permission obtained for survey? ⊙Yes ◯No
b. Landowner's contact information (req	uired)
Name: Patriot Renewables, LLC	Phone:
Street Address: 549 South Street	City: Quincy State: MA Zip: 0226
a. Location Township: Moscow	.TION
a. Location Township: Moscow Brief site directions to the pool (using	TION mapped landmarks):
a. Location Township: <u>Moscow</u> Brief site directions to the pool (using Located west of Chase Pond Road and ea	mapped landmarks): ist of Chase Stream. GIS location provided.
 A. VERNAL POOL LOCATION INFORMA a. Location Township: <u>Moscow</u> Brief site directions to the pool (using Located west of Chase Pond Road and each b. Mapping Requirements 	mapped landmarks): ist of Chase Stream. GIS location provided.
 A. VERNAL POOL LOCATION INFORMA a. Location Township: <u>Moscow</u> Brief site directions to the pool (using Located west of Chase Pond Road and each b. Mapping Requirements i. USGS topographic map OR aerial 	mapped landmarks): ast of Chase Stream. GIS location provided. photograph with pool clearly marked.
 A. VERNAL POOL LOCATION INFORMA a. Location Township: <u>Moscow</u> Brief site directions to the pool (using Located west of Chase Pond Road and each b. Mapping Requirements i. USGS topographic map OR aerial ii. GPS location of vernal pool (use 	mapped landmarks): ist of Chase Stream. GIS location provided. photograph with pool clearly marked. Datum NAD83 / WGS84)
 A. VERNAL POOL LOCATION INFORMA a. Location Township: <u>Moscow</u> Brief site directions to the pool (using Located west of Chase Pond Road and each b. Mapping Requirements i. USGS topographic map OR aerial ii. GPS location of vernal pool (use Longitude/Easting: <u>-69.877781°</u> 	mapped landmarks): ast of Chase Stream. GIS location provided. photograph with pool clearly marked. Datum NAD83 / WGS84) Latitude/Northing: _45.130875°
 A. VERNAL POOL LOCATION INFORMA a. Location Township: <u>Moscow</u> Brief site directions to the pool (using Located west of Chase Pond Road and each b. Mapping Requirements i. USGS topographic map OR aerial ii. GPS location of vernal pool (use Longitude/Easting: <u>-69.877781°</u> Coordinate system: <u>NAD83</u> 	mapped landmarks): ast of Chase Stream. GIS location provided. photograph with pool clearly marked. Datum NAD83 / WGS84) Latitude/Northing: 45.130875°
 A. VERNAL POOL LOCATION INFORMA a. Location Township: Moscow Brief site directions to the pool (using Located west of Chase Pond Road and each b. Mapping Requirements i. USGS topographic map OR aerial ii. GPS location of vernal pool (use Longitude/Easting: -69.877781° Coordinate system: NAD83 Check one: GIS shapefile - send to Jason.Cza 	ATION
 A. VERNAL POOL LOCATION INFORMA a. Location Township: <u>Moscow</u> Brief site directions to the pool (using Located west of Chase Pond Road and each b. Mapping Requirements i. USGS topographic map OR aerial ii. GPS location of vernal pool (use Longitude/Easting: <u>-69.877781°</u> Coordinate system: <u>NAD83</u> Check one: O GIS shapefile - send to Jason.Cza O The pool perimete - Include map or spinal 	mapped landmarks): ast of Chase Stream. GIS location provided. photograph with pool clearly marked. Datum NAD83 / WGS84)
a. Location Township: Moscow Brief site directions to the pool (using Located west of Chase Pond Road and ea b. Mapping Requirements i. USGS topographic map OR aerial ii. GPS location of vernal pool (use Longitude/Easting: -69.877781° Coordinate system: NAD83 Check one: O GIS shapefile - send to Jason.Cza O The pool perimete - Include map or spi O The above GPS po	mapped landmarks): ist of Chase Stream. GIS location provided. photograph with pool clearly marked. Datum NAD83 / WGS84)

Maine State Vernal Po	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (<u>only if different</u> from indicator	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
 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 	□ Slow stream □ Dug pond or borrow pit □ Floodplain □ Dug pond or borrow pit age ☑ Mostly unvegetated pool □ Roadside ditch □ ATV or skidder rut □ Other:
c. Vernal pool status under the Natural Resources Pr	rotection Act (NRPA)
i. Pool Origin:	nnatural OUnknown
If modified, unnatural or unknown, describe any mod	dern or historic human impacts to the pool (required):
ii. Pool Hydrology	
Select the pool's <u>estimated</u> hydroperiod AND <u>provid</u>	<u>e rationale</u> in box (required):
O Permanent O Semi-permanent (drying partially in all years an completely in drought years)	 Ephemeral Unknown (drying out completely in most years)
Explain:	
 Maximum depth at survey: O 0-12" (0-1 ft.) O 12 Approximate size of pool (at spring highwater): Wide 	2-36" (1-3 ft.)
Predominate substrate in order of increasing hydror	period:
 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 by:	troperiod (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 ferns (e.g. sensitive fern cinnamon 	 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)
fern, interrupted fern, New York fern)	sedge, cattail, bulrushes)
 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)
Equipal indicators (check all that apply):	No vegetation in pool
■ Fachar Indicators (check an that appry).	Other:
iii. Inlet/Outlet Flow Permanency	ppol providing water flowing into or out of the pool).
Type of inflet or outlet (a seasonal of permanent on α	Anel providing water nowing into or out or the poor.
 Intermittent inlet O Other or Unknown (explored on outlet 	lain):





6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/20/2020, 5/26/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? Yes O No
- Was the entire pool surveyed for egg masses?
 Yes No; what % of entire pool surveyed? _____
- For each indicator species, indicate the exact number of egg masses, confidence level for species

determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR		E	gg Masse	s (or a	dult Fairy	Shrim	p)				Tad	pole	s/Lar	vae ⁴	
SPECIES	Visit #1	Visit #2	Visit #3	Con	fidence L	evel	Egg	Mass M	aturity ²	O	bserv	/ed	Co	nfide _evel	nce
Wood Frog	10	10	1.0	3	3		M	A		1					
Spotted Salamander	57	57		3	3	171	М	A			L.	D.			
Blue-spotted Salamander								1.00			Ľ				
Fairy Shrimp ³	1														

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 Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

■ Note any rare species associated with vernal pools. <u>Observations should be accompanied by photographs</u>.

		Method	of Veri	fication*	CI **		Method	l of Verit	fication*	CI **
	SPECIES	Р	Н	S		SPECIES	Р	Н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
	*Method of verifica	tion: P =	Photo	graphe	d, H = Ha	andled, S = Seen		<u> </u>		
	"CL - Confidence	ievei in :	species	s detern	nination:	1= <60%, 2= 60-95%, 3= >95%				
d. (Optional observe	er reco	mmer	datior):					
	SVP DPot	ential S	SVP	🗆 No	n Signifi	cant VP	I			
	Seneral vernal n		nmon	ts and	lor obse	arvations of other wildlife:				
0						tion to Maine Dant of Inland Fisheri		۱۸ <i>۱</i> :۱ ما:۴		
Sei	na completed form	n and s	upport	ing ao	cumenta	Attn: Vernal Pools	es and	VVIIdIIT	е	
						650 State Street, Bangor, ME	04401			
NOTE	: Digital submis	sion (t	o Jaso	on.Cza	piga@n	naine.gov) of vernal pool field form	s and ı	ohotod	araphs	is only
	acceptable for	projec	ts with	n 3 or f	ewer as	ssessed pools; <u>larger projects must</u>	be ma	iled a	s hard	copies.
For M		wieweed b					_	_	_	
<u></u>		viewea r			e:					
This po	ool is: Significant	L r	out lacki	ng critica	al data	\bigcirc does not meet to \bigcirc does not meet to \bigcirc does not meet to \bigcirc	IDEP ve	rnal poo	l criteria.	
Comm	ents:					<u> </u>				
		0/0047					_	_		
DEPLV	vuo91-82008 04/1	0/2017					Print Fo	orm	1	-age 3 of





egg mass) are <u>required</u> for all obser	vers.
Observer's Pool ID: VP40DS	MDIFW Pool ID:
. PRIMARY OBSERVER INFORMATION	
a. Observer name: E. Irvin with D. Santillo	
b. Contact and credentials previously provided	l? ♥ No (submit Addendum 1) ♥ Yes
. PROJECT CONTACT INFORMATION	
a. Contact name: \odot same as observer \bigcirc oth	er
b. Contact and credentials previously provided	? O No (submit Addendum 1) O Yes
c. Project Name: Western Maine Renewables	
. LANDOWNER CONTACT INFORMATION	
a. Are you the landowner? OYes ONo If n	o, was landowner permission obtained for survey? \odot Yes \bigcirc No
b. Landowner's contact information (required)	
Name: Patriot Renewables, LLC	Phone:
Street Address: 549 South Street	
c. Large Projects: check if separate project	City: Quincy State: MA Zip: 0226
 c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line) 	City: <u>Quincy</u> State: <u>MA</u> Zip: <u>0226</u> landowner data file submitted
c. Large Projects: check if separate project VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mappe Adjacent to road and electrical transmission line	City: <u>Quincy</u> State: <u>MA</u> Zip: <u>0226</u> a landowner data file submitted <u>e landmarks</u>):
 c. Large Projects: check if separate project c. Large Projects: check if separate project c. VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line) b. Mapping Requirements 	City: <u>Quincy</u> State: <u>MA</u> Zip: <u>0226</u> clandowner data file submitted <u>ed landmarks):</u>
 c. Large Projects: check if separate project c. Large Projects: check if separate project c. VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line. b. Mapping Requirements i. USGS topographic map OR aerial photog 	City: <u>Quincy</u> State: <u>MA</u> Zip: <u>0226</u> a landowner data file submitted <u>ad landmarks</u>): raph with pool clearly marked.
 c. Large Projects: check if separate project c. Large Projects: check if separate project c. VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line) b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum 	City: <u>Quincy</u> State: <u>MA</u> Zip: <u>0226</u> i landowner data file submitted <u>ed landmarks</u>): raph with pool clearly marked.
 c. Large Projects: check if separate project c. Large Projects: check if separate project c. VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum Longitude/Easting: 45.154913° 	City: Quincy State: MA Zip: 0226 i landowner data file submitted i landmarks): raph with pool clearly marked. n NAD83 / WGS84) Latitude/Northing: -69.857770°
 c. Large Projects: check if separate project c. Large Projects: check if separate project c. VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum Longitude/Easting: 45.154913° Coordinate system: NAD83 	City: Quincy State: MA Zip: 0226 a landowner data file submitted ad landmarks): raph with pool clearly marked. NAD83 / WGS84) Latitude/Northing: <u>-69.857770°</u>
 c. Large Projects: check if separate project c. Large Projects: check if separate project c. VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum Longitude/Easting: 45.154913° Coordinate system: NAD83 	City: Quincy State: MA Zip: 0226 alandowner data file submitted ad landmarks): raph with pool clearly marked. n NAD83 / WGS84) Latitude/Northing: -69.857770°
c. □ Large Projects: check if separate project A VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mappe Adjacent to road and electrical transmission line b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum Longitude/Easting: 45.154913° Coordinate system: NAD83 Check one: • GIS shapefile - send to Jason Czapiga@l	City: Quincy State: MA Zip: 0226 a landowner data file submitted ad landmarks): raph with pool clearly marked. NAD83 / WGS84) Latitude/Northing: <u>-69.857770°</u> maine gov: observer has reviewed shape accuracy (Best)
c. □ Large Projects: check if separate project • VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mappe Adjacent to road and electrical transmission line b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum Longitude/Easting: 45.154913° Coordinate system: NAD83 Check one: • GIS shapefile - send to Jason.Czapiga@r	City: Quincy State: MA Zip: 0226 I landowner data file submitted ad landmarks): raph with pool clearly marked. n NAD83 / WGS84) Latitude/Northing: -69.857770° maine.gov; observer has reviewed shape accuracy (Best) neated by multiple GPS points. (Excellent)
 c. Large Projects: check if separate project c. Large Projects: check if separate project c. VERNAL POOL LOCATION INFORMATION a. Location Township: Moscow Brief site directions to the pool (using mapped Adjacent to road and electrical transmission line b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum Longitude/Easting: 45.154913° Coordinate system: NAD83 Check one: O GIS shapefile - send to Jason.Czapiga@ O The pool perimeter is deli - Include map or spreadshe 	City: Quincy State: MA Zip: 0226 a landowner data file submitted ad landmarks): raph with pool clearly marked. NAD83 / WGS84) Latitude/Northing: -69.857770° maine.gov; observer has reviewed shape accuracy (Best) neated by multiple GPS points. (Excellent) et with coordinates.
c. Large Projects: check if separate project . VERNAL POOL LOCATION INFORMATION a. Location Township: <u>Moscow</u> Brief site directions to the pool (using mappe Adjacent to road and electrical transmission line b. Mapping Requirements i. USGS topographic map OR aerial photog ii. GPS location of vernal pool (use Datum Longitude/Easting: <u>45.154913°</u> Coordinate system: <u>NAD83</u> Check one: • GIS shapefile - send to Jason.Czapiga@ • The pool perimeter is deli - Include map or spreadshe • The above GPS point is a	City: Quincy State: MA Zip: 0226 I landowner data file submitted Ad landmarks): raph with pool clearly marked. NAD83 / WGS84) Latitude/Northing: <u>-69.857770°</u> maine.gov; observer has reviewed shape accuracy (Best) neated by multiple GPS points. (Excellent) et with coordinates. It the center of the pool. (Good)

Maine State Vernal Po	ool Assessment Form
5. VERNAL POOL HABITAT INFORMATION	
a. Habitat survey date (<u>only if different</u> from indicator	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
 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 	□ Slow stream □ Dug pond or borrow pit □ Floodplain □ Dug pond or borrow pit age □ Mostly unvegetated pool □ Roadside ditch □ ATV or skidder rut □ Other:
c. Vernal pool status under the Natural Resources Pr	rotection Act (NRPA)
i. Pool Origin: ONatural ONatural-Modified OU	nnatural OUnknown
If modified, unnatural or unknown, describe any mod	dern or historic human impacts to the pool (required):
Pool was likely disturbed during construction of the adja-	cent road and/or electrical transmission line.
 Select the pool's estimated hydroperiod AND provid 	e rationale in hox (required):
O Permanent O Semi-permanent (drying partially in all years an completely in drought years)	 Ephemeral Unknown d (drying out completely in most years)
Explain:	
 Maximum depth at survey: O 0-12" (0-1 ft.) O 12 Approximate size of pool (at spring highwater): Wice 	2-36" (1-3 ft.)
 Predominate substrate in order of increasing hydror 	period:
 Predominate substrate in order of moreasing rights, 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
Deel vegetation indicators in order of increasing by:	Verseried (sheek all that apply):
Fool vegetation indicators in order or increasing rive Terrestrial nonvascular spp. (e.g. haircap)	Toperiou (check all that apply).
moss, lycopodium spp.)	 ✓ Wet site terms (e.g. hoyar term, marsh term) ✓ Wet site shrubs (e.g. highbush blueberry, maleberry,
 Iady fern, bracken fern) Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) 	 Winterberry, mountain noily) 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, water shield, pond weed, bladderwort)
Faunal indicators (check all that apply);	No vegetation in pool
☐ Fish	✓ Other: spring peepers
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):
\bigcirc No inlet or outlet \bigcirc Permanent inlet or outlet	et (channel with well-defined banks and permanent flow)
Intermittent inlet O Other or Unknown (explored or outlet)	lain):





6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/6/2020, 5/20/2020

b. Indicator abundance criteria and pool survey effort

- Is pool depression bisected by 2 ownerships (straddler pool)? Yes No
- Was the entire pool surveyed for egg masses?
 Yes No; what % of entire pool surveyed?
- For each indicator species, indicate the exact number of egg masses, confidence level for species

determination, and egg mass maturity. Separate cells are provided for separate survey dates.

INDICATOR		Egg Masses (or adult Fairy Shrimp)												Tadpoles/Larvae ⁴				
SPECIES	Visit #1	Visit #2	Visit #3	Con	fidence l	evel	Egg Mass Maturity ²			Observed			Confidence Level					
Wood Frog	18	18		3	3	1111	M	A										
Spotted Salamander	40	40		3	3	1.11	М	A										
Blue-spotted Salamander									1									
Fairy Shrimp ³																		

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 Hatching

3-Fairy shrimp: X = present

4-Tadpoles/larvae: X = present

c. Rarity criteria

■ Note any rare species associated with vernal pools. <u>Observations should be accompanied by photographs</u>.

	0050150	Method	of Veri	ication*	CI **	00000	Method	of Veri	fication*	CI **
	SPECIES	Р	Н	S	02	SPECIES	Р	Н	S	
	Blanding's Turtle					Wood Turtle				
	Spotted Turtle					Ribbon Snake				
	Ringed Boghaunter					Other:				
	*Method of verificat **CL - Confidence I	ion: P = evel in s	Photo species	grapheo determ	d, H = Ha nination:	ndled, S = Seen 1= <60%, 2= 60-95%, 3= >95%				
d. (Optional observe	r recoi	nmer	dation	:	_				
	SVP DPot	ential S	SVP	🗆 No	n Signifi	cant VP Indicator Breeding Area				
е. С	Seneral vernal po	ool con	nmen	ts and/	or obse	ervations of other wildlife:				
Γ										
L										
Sor	od completed form	and s	Innort	ina doa	umenta	tion to: Maine Dent of Inland Fisheria	hae and	Wildlif	0	
Sei	id completed iom	i anu si	подд	ing doc	umenta	Attn: Vernal Pools	s anu	vviidiii	e	
						650 State Street, Bangor, ME	04401			
NOTE	: Digital submis	sion (te	o Jaso	on.Cza	piga@n	naine.gov) of vernal pool field forms	s and p	photog	graphs	is only
	acceptable for	project	s with	n 3 or f	ewer as	sessed pools; <u>larger projects must</u>	be ma	iled a	s hard	copies.
For MD	DIFW use only Re	viewed b	y MDIF	W Date):	Initials:				
This po	ol is: Significant	P	otentia	Ily Sign	ificant	Not Significant due to: Odoes not meet b	iological	criteria.		
		b	ut lacki	ng critica	l data	Odoes not meet N	IDEP vei	mal poo	l criteria.	
Comme	ents:									

Appendix D. Wetland Determination Data Forms





Northeast and Northcentral Region

Project/Site:	Western Ma	ine Renewa	able Energy I	⊃roject				Project #:	194-7130		Date:	09/09/20
Applicant:	Western Ma	ine Renewa	ables, LLC								County:	Somerset
Investigator #1	: Emmy Irvin				Investi	gator #2:					State:	ME
Soil Unit:	Colonel-Peru-	-Pillsbury as	sociation, 3 to	o 15 percent s	lopes		NW	/I/WWI Classification:	: Upland		Wetland ID:	W08EI
Landform:	Terrace	·			Loc	al Relief:	Linear				Sample Point:	Upland
Slope (%):	See topo map		Latitude:	45.151°	Lo	ongitude:	-69.858°		Datum:	NAD 83		
Are climatic/hy	drologic con	ditions on	the site ty	pical for thi	s time of	year? (If	no, explain i	n remarks)	🗆 Yes 🗵	No		
Are Vegetation	. □. Soil □.	or Hvdro	loav 🗆 sia	nificantlv di	sturbed?)		Are normal circumst	ances present	?		
Are Vegetation	□, Soil ☑,	or Hydro	logv ⊡ nat	urally probl	ematic?			□ Yes	⊡No່			
SUMMARY OF	FINDINGS	e										
Hydrophytic Ve	equation Pre	sent?							Hydric Soils	Present?		🗆 Ves 🖾 No
Wetland Hydro		+2							Is This Sam	ling Point	Within A Wetler	
Remarks:	Statewide	drought										
Romanio	otatomao	areagin										
		etere (Cl	aali hara i	findiaatara	ara nat	broopt	<u>ک</u>					
		ators (Cl	ieck nere l	i indicators	are not	present	ГЛ			Secondary		
<u>Primary</u>	<u>/.</u> A1 - Surface	Water				B9 - Wate	er-Stained	leaves		Secondary:	B6 - Surface Soil	Cracks
	A2 - High W	ater Table				B13 - Aqu	latic Fauna				B10 - Drainage F	Patterns
	A3 - Saturati	ion				B15 - Mar	l Deposits				B16 - Moss Trim	Lines
	B1 - Water M	Marks				C1 - Hydr	ogen Sulfi	de Odor			C2 - Dry-Season	Water Table
	B2 - Sedime	nt Deposits	3			C3 - Oxid	ized Rhizo	spheres on Living Roots			C8 - Crayfish Bu	rrows
	B3 - Drift De	posits				C4 - Pres	ence of Re	educed Iron			C9 - Saturation V	/isible on Aerial Imagery
	B4 - Algal M	at or Crust				C6 - Rece	ent Iron Re	duction in Tilled Soils			D1 - Stunted or S	Stressed Plants
	B5 - Iron De	posits ion Viaible /	on Aorial Ima	aoni		C/ - I nin	MUCK SUN	ace			D2 - Geomorphic	vitord
	B7 - Inunual B8 - Sparsel	Vegetate	d Concave S	ligery	L		piain in Re	marks)			D3 - Shallow Aqu	anaro anhic Relief
	bo - Oparser	ly vegetate		Junace							D5 - FAC-Neutra	l Test
Field Observa	tions											
Surface Water	Brosont?			Donthi		(in)						
Surface water	resent?			Depth:		(III.) (in.)			Wetland Hyd	drology Pr	resent?	Yes 🗹 No
Valer Table Pr			⊡ NO	Depth:		(IN.) (in.)						
Saturation Pres	sent?		⊡ No	Depth:		(IN.)						
Describe Record	ded Data (sti	ream gaug	ge, monitorii	ng well, aeri	al photos	, previous	s inspectio	ons), if available:		N/A		
Remarks:	Statewide	drought										
SOILS												
Map Unit Name	e:	Colonel-P	eru-Pillsbury	association,	3 to 15 pe	ercent slope	es S	eries Drainage Class	: Poorly draine	ed		
Taxonomy (Sul	bgroup):	Loamy, i	sotic, frigid	, shallow A	quic Hap	lorthods						
Profile Descri	ption (Describe to	o the depth needed	to document the inc	licator or confirm the	absence of indic	cators.) (Type: C	=Concentration,	D=Depletion, RM=Reduced Matrix, CS=0	Covered/Coated Sand Grai	ns; Location: PL=Po	ore Lining, M=Matrix)	
Тор	Bottom				Matrix	, , , , , -	-,		Mottles			Texture
Denth	Depth	Ho	rizon	Color (N	Moist)	%		Color (Moist)	%	Type	Location	(e.g. clav, sand, loam)
0	12			10YR	3/3	100						sandy loam

NRCS Hydric S	Soil Field Ir	ndicators (check he	ere if indica	tors are	not prese	nt 🖸:		Indicator	s for Proble	matic Soils ¹	
	A1- Histosol				S8 - Polvv	alue Belo	W Surface (LRR R. MLRA 149B)		A10 - 2 cm	MUCK (LRR K. L. MLRA 1	49B)
	A2 - Histic Er	pipedon			S9 - Thin	Dark Surf			A16 - Coast	Prairie Redox (I BR	κι B)
	A3 - Black Hi	istic			F1 - Loam	ny Mucky I			S3 - 5cm M	ucky Peat of Peat (
	A4 - Hydroge	n Sulfide			F2 - Loan	ny Gleved	Matrix		S7 - Dark S	urface (IPP K I M)	
	$\Delta 5 = \text{Stratified}$				F3 - Denk	ated Matri	v		S8 - Polyval	ue Below Surface	
	AJ - Stratillet	u Layers			TO - Depie				SO - Folyval		(LRR K, L)
	A11 - Deplet	ed Below Dark Surface			F6 - Read	Dark Su	ипасе	님	59 - Thin Da	ark Surface (LRR к, L)
	A12 - Thick L	Dark Surface			F7 - Deple	eted Dark	Surface		F12 - Iron-M	langanese Masses	6 (LRR K, L, R)
	S1 - Sandy N	/luck Mineral			F8 - Redo	ox Depress	sions		F19 - Piedm	iont Floodplain Soil	S (MLRA 149B)
	S4 - Sandy G	Bleyed Matrix							TA6 - Mesic	Spodic (MLRA 144A, 1	45, 149B)
	S5 - Sandy F	Redox							TF2 - Red F	Parent Material	
	S6 - Stripped	l Matrix							TF12 - Verv	Shallow Dark Surf	ace
	S7 - Dark Su	ITACE (I BB B MI BA 149B)							Other (Expl	ain in Remarks)	
								¹ Indicators o disturbed o	of hydrophytic veget r problematic.	ation and wetland hydrology	must be present, unless
Restrictive Layer (If Observed)	Type:	ledge		Depth:	12			Hydric Soil	Present?		Yes 🗹 No
Remarks:											



Project/Site:	Western Maine Renewable Energy Project	ct			Wetland ID: W08EI Sample Point Upland
VEGETATION	(Species identified in all uppercase are non-nativ	e species	.)		
Tree Stratum (Plo	ot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.	Betula papyrifera	5	N	FACU	
2.	Betula alleghaniensis	20	Y	FAC	Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)
3.	Picea rubens	10	Y	FACU	
4.					Total Number of Dominant Species Across All Strata: 8 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 37.5% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 $x 1 = 0$
	Total Cover =	35			FACW spp. 2 x 2 = 4
					FAC spp. 57 x $3 = 171$
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp. 50 x 4 = 200
1.	Picea rubens	10	Y	FACU	UPL spp. 10 x 5 = 50
2.	Acer rubrum	2	Ν	FAC	
3.	Viburnum acerifolium	10	Y	UPL	Total 119 (A) 425 (B)
4.					
5.					Prevalence Index = B/A = 3.571
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes I No Rapid Test for Hydrophytic Vegetation
10.					Yes I No Dominance Test is > 50%
	Total Cover =	22			☐ Yes
					Yes I No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t size: 2 meter radius)				Yes I No Problem Hydrophytic Vegetation (Explain) *
1.	Dryopteris marginalis	15	Y	FACU	
2.	Cornus canadensis	20	Y	FAC	ndicators of hydric soil and wetland hydrology must be
3.	Medeola virginiana	10	Y	FACU	present, unless distarbed of problematic.
4.	Coptis trifolia	2	Ν	FACW	Definitions of Vegetation Strata:
5.	Clintonia borealis	5	Ν	FAC	
6	Osmunda claytoniana	10	У	FAC	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.

11.				 	
12.				 	Herb - All herbaceous (non-woody) plants, regardless of size, and
13.				 	woody plants less than 3.28 ft. tall.
14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	62		
Woody Vine S	Stratum (Plot siz	e: 10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present 🛛 Yes 🗹 No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					

Additional Remarks:



Northeast and Northcentral Region

Project/Site:	Western Mai	ne Renewable Energy F	Proiect				Proiect #:	194-7130		Date:	09/09/20
Applicant:	Western Mai	ne Renewables, LLC	. eje et							County:	Somerset
Investigator #1	Emmy Irvin			Invest	igator #2:					State:	ME
Soil Unit:	Telos-Chesu	ncook association, 3 to	15 % slopes	6		NV	VI/WWI Classification:	: PEM		Wetland ID:	W08EI
Landform:	Terrace			Loc	cal Relief:	Linear				Sample Point:	Wetland
Slope (%):	See topo map	Latitude:	45.154245	L	ongitude:	-69.8578	81	Datum:	NAD 83		
Are climatic/hyd	drologic con	ditions on the site ty	oical for thi	s time o	f year? (If	no, explain	in remarks)	□ Yes ☑	No		
Are Vegetation	□, Soil ☑,	or Hydrology D sig	nificantly di	isturbed'	?		Are normal circumst	ances present	?		
Are Vegetation	□, Soil □,	or Hydrology □ nat	urally probl	lematic?			⊔ Yes	⊠ No			
SUMMARY OF	FINDINGS										
Hydrophytic Ve	getation Pre	sent?		☑ Yes	S 🗆 No	I		Hydric Soils	Present?		
Vvetland Hydro	logy Present	. <u>.</u>			S 🗆 NO			lis This Samp	ling Point V	vitnin A vvetian	a? ☑ Yes ⊔ No
Remarks:	Statewide	arought									
HYDROLOGY											
Wetland Hydr	ology Indic	ators (Check here i	f indicators	are not	present	口			Secondary:		
	⁻ A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface Soil	Cracks
	A2 - High Wa	ater Table			B13 - Aqu	uatic Faun	а			B10 - Drainage Pa	atterns
	A3 - Saturati	on			B15 - Mar	rl Deposits	8			B16 - Moss Trim L	_ines
	B1 - Water N B2 - Sedime	larks nt Deposits			C1 - Hydr	ogen Sulf	Ide Udor			C2 - Dry-Season V	Water Lable
	B2 - Sedimer B3 - Drift De	posits			C3 - Oxid C4 - Pres	ence of R	educed Iron			C9 - Saturation Vi	sible on Aerial Imagerv
	B4 - Algal Ma	at or Crust			C6 - Rece	ent Iron R	eduction in Tilled Soils			D1 - Stunted or St	tressed Plants
	B5 - Iron Dep	posits			C7 - Thin	Muck Sur	face			D2 - Geomorphic	Position
	B7 - Inundati	on Visible on Aerial Ima	igery	Ð	Other (Ex	plain in R	emarks)			D3 - Shallow Aqui	tard
	B8 - Sparsel	y Vegetated Concave S	urface							D4 - Microtopogra	iphic Relief Test
Field Observat	tions										
Fleid Observa	Dreeent?		Donth		(in)						
Surface water	Present?	□ Yes ☑ No	Depth:		(III.) (in.)			Wetland Hyd	drology Pr	esent? ☑	Yes 🗆 No
Saturation Proc	esent?		Depth:	0	(in.) (in.)						
Saturation Free			Deptil.	0	(11.)						
Describe Record	led Data (str	eam gauge, monitorir	ng well, aeri	al photos	s, previous	s inspecti	ons), if available:		N/A		
	\mathbf{a}										
Remarks:	Statewide	drought									
Remarks:	Statewide	drought									
Remarks:	Statewide	drought			- 0/ 1						
Remarks: SOILS Map Unit Name	Statewide	drought Telos-Chesuncook	association	n, 3 to 1	5 % slope	es S	Series Drainage Class:	somewhat po	oorly draine	d	
Remarks: SOILS Map Unit Name Taxonomy (Sub	Statewide of state	drought Telos-Chesuncook Loamy, isotic, frigid	association , shallow A	n, 3 to 1 quic Ha	5 % slope plorthods	es S	Series Drainage Class:	somewhat po	oorly draine	d	
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip	Statewide (e: ogroup): otion (Describe to	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind	association , shallow A	n, 3 to 1 Aquic Ha	5 % slope plorthods ^{icators.)} (Type: C	es S =Concentration	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C	Somewhat po	DORLY draine	d e Lining, M=Matrix)	Toyturo
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top	Statewide (bgroup): otion (Describe to Bottom	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind	association , shallow A	n, 3 to 1 Aquic Ha absence of indi Matrix	5 % slope plorthods icators.) (Type: C	SSS =Concentration	Depletion, RM=Reduced Matrix, CS=C	somewhat po Covered/Coated Sand Grain Mottles	Dorly draine	d e Lining, M=Matrix)	Texture
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth	Statewide of State	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon	association , shallow A licator or confirm the Color (I	n, 3 to 1 quic Ha absence of indi Matrix Moist)	5 % slope plorthods icators.) (Type: C %	SSS =Concentration	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist)	Somewhat po Covered/Coated Sand Grain Mottles %	Dorly draine	d e Lining, M=Matrix) Location	Texture (e.g. clay, sand, loam)
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0	Statewide of State	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon 	association , shallow A licator or confirm the Color (I 	n, 3 to 1 Aquic Ha absence of indi Matrix Moist) 	5 % slope plorthods icators.) (Type: C % 	SSS =Concentration	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/4	Somewhat po Covered/Coated Sand Grain Mottles % 	oorly draine	d e Lining, M=Matrix) Location 	Texture (e.g. clay, sand, loam) Organic hemic
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1	Statewide of State	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon 	association , shallow A licator or confirm the Color (I 2.5Y	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2	5 % slope plorthods ^{icators.)} (Type: C % 65	es S =Concentration 5Y	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1	Somewhat po Covered/Coated Sand Grain Mottles % 25	oorly draine	d e Lining, M=Matrix) Location M	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 	Statewide of ogroup): otion (Describe to Bottom Depth 1 18 	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon 	association , shallow A licator or confirm the Color (I 2.5Y 	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2 	5 % slope plorthods icators.) (Type: C % 65 	es S =Concentration 5Y 5YR	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4	Somewhat po Covered/Coated Sand Grain Mottles % 25 10	oorly draine ns; Location: PL=Por Type D C	d Location M M	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 	Statewide of ogroup): otion (Describe to Bottom Depth 1 18 	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon 	association , shallow A licator or confirm the Color (I 2.5Y 	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2 	5 % slope plorthods icators.) (Type: C % 65 	es S =Concentration 5Y 5YR 	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 	Somewhat po Covered/Coated Sand Grain Mottles % 25 10 	Dorly draine Type D C 	d e Lining, M=Matrix) Location M M M 	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 	Statewide of ogroup): otion (Describe to Bottom Depth 1 18 	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon	association , shallow A licator or confirm the Color (I 2.5Y 	n, 3 to 1 Aquic Ha absence of indi Matrix Moist) 3/2 	5 % slope plorthods icators.) (Type: C % 65 	es S =Concentration 5Y 5YR 	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 	Somewhat po Covered/Coated Sand Grain Mottles % 25 10 	oorly draine ns; Location: PL=Poi Type D C 	d e Lining, M=Matrix) Location M M M 	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 	Statewide of ogroup): otion (Describe to Bottom Depth 1 18 	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon	association , shallow A licator or confirm the Color (I 2.5Y 	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2 	5 % slope plorthods icators.) (Type: C % 65 	es S =Concentration 5Y 5YR 	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 	Somewhat po Covered/Coated Sand Grain Mottles % 25 10 	oorly draine ns; Location: PL=Pol Type D C 	d Location M M M 	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 	Statewide of ogroup): otion (Describe to Bottom Depth 1 18 	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon	association , shallow A licator or confirm the Color (I 2.5Y 	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2 	5 % slope plorthods icators.) (Type: C % 65 	es 5 =Concentration 5Y 5YR 	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 	Somewhat po Covered/Coated Sand Grain Mottles % 25 10 	oorly draine	d e Lining, M=Matrix) Location M M M 	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 	Statewide of ogroup): otion (Describe to Bottom Depth 1 18 	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon	association , shallow A licator or confirm the Color (I 2.5Y 	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2 	5 % slope plorthods icators.) (Type: C % 65 	es S =Concentration 5Y 5YR 	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 	Somewhat po Covered/Coated Sand Grain Mottles % 25 10 	oorly draine	d e Lining, M=Matrix) Location M M -	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 NRCS Hydric	Statewide of State	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon -	association , shallow A licator or confirm the Color (I 2.5Y ere if indica	n, 3 to 18 quic Ha absence of indi Matrix Moist) 3/2 tors are	5 % slope plorthods icators.) (Type: C % 65 not prese	es S =Concentration 5Y 5YR ent □):	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 	Somewhat po Covered/Coated Sand Grain Mottles % 25 10 	oorly draine	d The Lining, M=Matrix) Location M M M 	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 NRCS Hydric	Statewide of Digroup): Digroup Di	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon ndicators (check he	association , shallow A licator or confirm the Color (I 2.5Y ere if indica	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2 tors are	5 % slope plorthods icators.) (Type: C % 65 not prese S8 - Polyv S9 - Thin	es S =Concentration 5Y 5YR ent D: value Belo Dark Surf	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 w Surface (LRR R, MLRA 149B) ace (LRR R, MLRA 149B)	somewhat po Covered/Coated Sand Grain Mottles % 25 10 25 10 Indicator	oorly draine Type D C s for Proble A10 - 2 cm f A16 - Coast	d e Lining, M=Matrix) Location M M matic Soils ¹ Muck (LRR K, L, MLRA 1) Prairie Redox (LPP	Texture (e.g. clay, sand, loam) Organic hemic silt loam
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 NRCS Hydric	Statewide of ogroup): otion (Describe to Bottom Depth 1 1 18 Soil Field In A1- Histosol A2 - Histic E A3 - Black H	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon -	association , shallow A licator or confirm the Color (I 2.5Y ere if indica	n, 3 to 18 quic Ha absence of indi Matrix Moist) 3/2 tors are	5 % slope plorthods icators.) (Type: C % 65 not prese S8 - Polyv S9 - Thin F1 - Loan	es S =Concentration 5Y 5YR ent D: value Belo Dark Surf ny Muckv	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 w Surface (LRR R, MLRA 149B) ace (LRR R, MLRA 149B) Mineral (LRR K, L)	somewhat po Covered/Coated Sand Grain Mottles % 255 10 Indicators	oorly draine Type D C s for Proble A10 - 2 cm I A10 - 2 cm I A16 - Coast S3 - 5cm Mu	d e Lining, M=Matrix) Location M M -	Texture (e.g. clay, sand, loam) Organic hemic silt loam 49B) K, L, R) LRR K, L, R)
Remarks: SOILS Map Unit Name Taxonomy (Sub Profile Descrip Top Depth 0 1 NRCS Hydric	Statewide of Statewide of Sigroup): Deption (Describe to Bottom Depth 1 1 18 Soil Field In A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge	drought Telos-Chesuncook Loamy, isotic, frigid the depth needed to document the ind Horizon -	association , shallow A licator or confirm the Color (I 2.5Y ere if indica	n, 3 to 1 quic Ha absence of indi Matrix Moist) 3/2 3/2 tors are	5 % slope plorthods icators.) (Type: C % 65 S8 - Polyv S9 - Thin F1 - Loam F2 - Loam	es S =Concentration 5Y 5YR ent □): value Belo Dark Surf ny Mucky ny Gleyed	Series Drainage Class: D=Depletion, RM=Reduced Matrix, CS=C Color (Moist) 4/1 3/4 -	Somewhat po Covered/Coated Sand Grain Mottles % 255 10 25 10 Indicator	oorly draine Type D C s for Proble A10 - 2 cm f A10 - 2 cm f A10 - 2 cm f A16 - Coast S3 - 5cm Mu S7 - Dark Si	d e Lining, M=Matrix) Location M M matic Soils ¹ Muck (LRR K, L, MLRA 1 Prairie Redox (LRR Icky Peat of Peat (JIFface (LRR K, L, M)	Texture (e.g. clay, sand, loam) Organic hemic silt loam 49B) K, L, R) LRR K, L, R)
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Project/Site:	Western Maine Renewable Energy Projec	t			Wetland ID: W08EI Sample Point Wetland
/EGETATION	(Species identified in all uppercase are non-native	e species.)		
Tree Stratum (Pl	ot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 4 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: <u>Multiply by:</u>
10.					OBL spp. 105 x $1 = 105$
	Total Cover =	0			FACW spp. 35 x 2 = 70
					FAC spp. 0 $x 3 = 0$
Sapling/Shrub Str	atum (Plot size: 5 meter radius)				FACU spp. 0 x 4 = 0
1.					UPL spp. 0 x 5 = 0
2.					
3.					Total <u>140</u> (A) <u>175</u> (B)
4.					
5.					Prevalence Index = B/A = 1.250
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					Yes D No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes 🔲 No Dominance Test is > 50%
	Total Cover =	0			✓ Yes □ No Prevalence Index is ≤ 3.0 *
					Yes I No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 2 meter radius)				Yes INO Problem Hydrophytic Vegetation (Explain) *
1.	Typha angustifolia	30	Y	OBL	* Indicators of budging and upstand budgets and the
2.	Onoclea sensibilis	20	Y	FACW	ndicators of hydric soll and wetland hydrology must be
3.	Scirpus cyperinus	15	Ν	OBL	present, unless disturbed of problematic.
4.	Carex stricta	40	Y	OBL	Definitions of Vegetation Strata:
5.	Eutrochium maculatum	20	Y	OBL	
6	Symphyotrichum novae-angliae	5	Ν	FACW	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.	Spiraea tomentosa	10	Ν	FACW	height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and
13.					woody plants less than 3.28 ft. tall.

13.				 	woody plants less than 3.20 ft. tail.
14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	140		
Woody Vine S	Stratum (Plot size:	10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present 🗹 Yes 🗆 No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					

Additional Remarks:



Northeast and Northcentral Region

Project/Site: Applicant: Investigator #1: Soil Unit: Landform: Slope (%): Are climatic/hyd	Western Mai Western Mai Emmy Irvin Telos-Chesu Terrace See topo map	ne Renewable Energy F ne Renewables, LLC ncook association, 3 to Latitude: ditions on the site ty	Project 15 percent s 45.150300 pical for this	Investi lopes Loc s time of	gator #2: al Relief: ongitude: vear? (if	NV Linear -69.8536 no, explain	Project #: VI/WWI Classification	194-7130 : Upland 	NAD 83 No	Date: County: State: Wetland ID: Sample Point:	09/09/20 Somerset ME W20EI Upland
Are Vegetation	□, Soil □,	or Hydrology □ sigi	nificantly di	sturbed	?		Are normal circums	tances presen	t?		
Are Vegetation	□, Soil □, EINDINGS	or Hydrology □ nat	urally probl	ematic?			□ Yes	⊠ No			
Hydrophytic Ve	getation Pre	sent?		□ Yes	o ⊡ No			Hydric Soils	Present?		□ Yes ☑ No
Wetland Hydrol	ogy Present	?		□ Yes	⊠ No			Is This Samp	oling Point V	Within A Wetlan	d? □ Yes ☑ No
Remarks:	Drought										
HYDROLOGY											
Wetland Hydr	ology Indic	ators (Check here i	f indicators	are not	present	र्घ					
Primary	A1 - Surface A2 - High Wa A3 - Saturatio B1 - Water M B2 - Sedimen B3 - Drift Den B4 - Algal Ma B5 - Iron Den B7 - Inundatio B8 - Sparsel	Water ater Table on Marks nt Deposits posits at or Crust posits on Visible on Aerial Ima y Vegetated Concave S	gery urface		B9 - Wate B13 - Aqu B15 - Mar C1 - Hydr C3 - Oxid C4 - Pres C6 - Rece C7 - Thin Other (Ex	er-Stained latic Faur Deposit ogen Sulf ized Rhiz ence of R ent Iron R Muck Sul plain in R	l Leaves na s fide Odor ospheres on Living Roots Reduced Iron eduction in Tilled Soils rface emarks)		<u>Secondary:</u>	B6 - Surface Soil B10 - Drainage Pa B16 - Moss Trim I C2 - Dry-Season V C8 - Crayfish Burr C9 - Saturation Vi D1 - Stunted or St D2 - Geomorphic D3 - Shallow Aqui D4 - Microtopogra D5 - FAC-Neutral	Cracks atterns ₋ines Water Table rows sible on Aerial Imagery tressed Plants Position tard uphic Relief Test
Field Observat Surface Water Water Table Pr Saturation Pres	ions: Present? esent? ent?	□ Yes ☑ No □ Yes ☑ No □ Yes ☑ No	Depth: Depth: Depth:		(in.) (in.) (in.)			Wetland Hy	drology Pr	resent? □	Yes ⊠ No
Describe Record	led Data (str	eam gauge, monitorir	ng well, aeri	al photos	s, previous	sinspect	ions), if available:		N/A		
Remarks.	Statewide	urougni									
SOILS											
Map Unit Name	odronb).	Telos-Chesuncook ass	ociation, 3 to shallow A	o 15 perce quic Hai	ent slopes olorthods		Series Drainage Class	: Somewhat p	oorly draine	ed	
Profile Descrip	Dtion (Describe to	the depth needed to document the ind	icator or confirm the	absence of indi	cators.) (Type: C	=Concentration	, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grai	ins; Location: PL=Po	ore Lining, M=Matrix)	-
Тор	Bottom			Matrix				Mottles	<u> </u>	I	Texture
Depth	Depth	Horizon	Color (N	Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)
				4/2							
NRCS Hydric	Soil Field Ir	ndicators (check he	re if indica	tors are	not prese	nt ⊡):		Indicator	s for Proble	matic Soils ¹	
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratified A11 - Deplete A12 - Thick I S1 - Sandy M S4 - Sandy G S5 - Sandy F S6 - Stripped S7 - Dark Su	pipedon istic en Sulfide d Layers ed Below Dark Surface Dark Surface Auck Mineral Gleyed Matrix Redox d Matrix Irface (LRR R, MLRA 149B)			S8 - Polyv S9 - Thin F1 - Loan F2 - Loan F3 - Deple F6 - Redo F7 - Deple F8 - Redo	value Belo Dark Sur ny Mucky ny Gleyed eted Matr ox Dark S eted Dark ox Depres	bw Surface (LRR R, MLRA 1498) face (LRR R, MLRA 1498) Mineral (LRR K, L) I Matrix ix urface Surface ssions) 	A10 - 2 cm l A16 - Coast S3 - 5cm Mi S7 - Dark S S8 - Polyval S9 - Thin Da F12 - Iron-W F19 - Piedm TA6 - Mesic TF2 - Red F TF12 - Very Other (Expla	Muck (LRR K, L, MLRA 1 Prairie Redox (LRR ucky Peat of Peat (urface (LRR K, L, M) ue Below Surface (ark Surface (LRR K, L Manganese Masses nont Floodplain Soil Spodic (MLRA 144A, 1 Parent Material Shallow Dark Surf ain in Remarks) ation and wetland hydrology	49B) K, L, R) LRR K, L, R) (LRR K, L, R) 5 (LRR K, L, R) S (MLRA 149B) 45, 149B) GACE must be present, unless
Restrictive Layer (If Observed)	Туре:	None		Depth:				Hydric Soil	Present?		Yes 🛛 No
Remarks:											

TETRA TECH

WETLAND DETERMINATION DATA FORM

Northeast and Northcentral Region

Projec	t/Site:	Western Maine Renewable	Energy Projec	t			Wetland ID: W20EI Sample Point L
EGET	ATION	(Species identified in all upperca	ase are non-native	e species.)			
ree Sti	ratum (Plo	Spaciae Mame		0/ 0		la d Otatua	Dominance Test Workshoot
	1	<u>Species Name</u> Betula papyrifera	-	<u>% Cover</u> L	vominant V		
	1. 2	Betula papymera Betula alleghaniensis		35			Number of Dominant Species that are OBL EACW/ or EAC: 3 (A)
	<u>2.</u> 3			5	 		Number of Dominant Species that are ODE, $TACW, of TAC(A)$
	<u>.</u> Л			5	IN	I AC	Total Number of Dominant Species Across All Strata: 8 (B)
	4. 5						$\frac{1}{10}$
	5. 6						Percent of Dominant Species That Are OBLEACW or EAC: 37.5% (A/B)
	0. 7						Percent of Dominant Species That Are OBL, PACW, of PAC. 37.3 % (A/D)
	7. 8						Prevalence Index Worksheet
	0. Q						Total % Cover of:
	9. 10						$\frac{10 \tan \pi \cos \theta}{\cos \theta} = \frac{10 \tan \theta}{\cos \theta}$
	10.		Total Cover =	55			FACW spp 2 x 2 = 4
				00			$FAC spp. \qquad 77 \qquad X 3 = 231$
anling	Shrub Stra	atum (Plot size: 5 meter radius)					FACUspp. 50 x 4 = 200
aping/	1	Betula alleghaniensis		10	Y	FAC	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	2	Betula papyrifera		10	Ŷ	FACU	
	3.	Viburnum acerifolium		10	Ý	UPL	Total 139 (A) 485 (B)
	<u>4</u>						
	5.						Prevalence Index = $B/A = 3.489$
	<u>6</u> .						
	<u>.</u>						
	8.						Hydrophytic Vegetation Indicators:
	9.						□ Yes ☑ No Rapid Test for Hydrophytic Vegetation
	10.						\square Yes \square No Dominance Test is > 50%
			Total Cover =	30			\square Yes \square No Prevalence Index is $\leq 3.0^{*}$
							□ Yes ☑ No Morphological Adaptations (Explain) *
erh St	ratum (Plo	t size: 2 meter radius)					\Box Yes \Box No Problem Hydrophytic Vegetation (Explain) *
5.0 01	1.	Drvopteris marginalis		15	Y	FACU	
	2.	Cornus canadensis		20	Ý	FAC	* Indicators of hydric soil and wetland hydrology must be
	3.	Medeola virainiana		10	Ý	FACU	present, unless disturbed or problematic.
	<u> </u>	Coptis trifolia		2	Ň	FACW	Definitions of Vegetation Strata:
	5.	Clintonia borealis		2	N	FAC	
	6	Osmunda clavtoniana		5	N	FAC	Tree - Woody plants 3 in (7.6cm) or more in diameter at breast
	7.						height (DBH), regardless of height.
	8.						
	<u>ο.</u> α						Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
	0. 10						tall.
	10. 11						
	10. 11. 12						Horb - All herbaceous (non-woody) plants, regardless of size, and

Page 2 of 2

14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	54		
Woody Vine Stra	atum (Plot size:	10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present D Yes D No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					

Additional Remarks:



Northeast and Northcentral Region

Project/Site:	Western Mai	ne Renewa	able Energy F	Project				Project #:	194-7130		Date:	09/09/20	
Applicant:	Western Mai	ne Renewa	ables, LLC	,				,			County:	Somerset	
Investigator #1:	Emmy Irvin				Investig	gator #2:					State:	ME	
Soil Unit:	Telos-Chesuncoo	k association,	3 to 15 percent s	slopes, very stony	,		NM	I/WWI Classification:	: PFO		Wetland ID:	W20EI	
Landform:	Terrace				Loca	al Relief:	Linear				Sample Point:	Wetland	
Slope (%):	See topo map		Latitude:	45.150300	Lo	ongitude:	-69.8536	12	Datum:	NAD 83			
Are climatic/hyc	drologic con	ditions on	the site ty	pical for this	s time of	year? (If	no, explain i	n remarks)	🗆 Yes 🗆	No			
Are Vegetation	□,Soil □,	or Hydrol	ogy □ sigi	nificantly di	sturbed?	1		Are normal circumst	ances presen	t?			
Are Vegetation	□,Soil □,	or Hydrol	ogy □ nat	urally probl	ematic?			Yes	⊠ No				
SUMMARY OF	FINDINGS												
Hydrophytic Veg	getation Pre	sent?			⊠ Yes	🗆 No			Hydric Soils	Present?		🗆 Yes 🗆 No	
Wetland Hydrol	ogy Present	t?			⊠ Yes	□ No			Is This Samp	oling Point V	Within A Wetlan	d? ☑ Yes □ No	
Remarks:	Statewide	drought											
HYDROLOGY													
Wetland Hvdr	ology Indic	ators (Ch	neck here i	f indicators	are not	oresent	Ъ						
Primary:							7-			Secondary:			
	A1 - Surface	Water	□ B9 - Water-Stained Leaves □ B6 - Surface Soil Cracks										
	A2 - High Wa	ater Table		□ B13 - Aquatic Fauna □ B10 - Drainage Patterns									
	A3 - Saturati	on		□ B15 - Marl Deposits □ B16 - Moss Trim Lines									
	B1 - Water N	/larks nt Donooito		C1 - Hydrogen Sulfide Odor C2 - Dry-Season Water Table C3 - Oxidized Bhizeenberge on Living Boote C5 - C2 - Crevitien Burrowe									
	B2 - Seuime B3 - Drift De	ni Deposits nosits	•	C3 - Oxidized Rhizospheres on Living Roots C4 Processory of Reduced Irep C4 Processory of Reduced Irep C5 - C6 - Seturation Visible on Aerial Imager									
	B4 - Algal Ma	at or Crust				$C_{4} - \Gamma_{1}C_{3}$	ence of Re	eduction in Tilled Soils			D1 - Stunted or St	ressed Plants	
	B5 - Iron Dei	osits				C7 - Thin	Muck Sur	face			D2 - Geomorphic	Position	
	B7 - Inundati	on Visible o	on Aerial Ima	agery	ū	Other (Ex	plain in Re	emarks)			D3 - Shallow Aqui	tard	
	B8 - Sparsel	y Vegetated	d Concave S	Surface		,		,			D4 - Microtopogra	phic Relief	
											D5 - FAC-Neutral	Test	
Field Observat	tions:												
Surface Water	Present?	□ Yes	🗆 No	Depth:		(in.)			Watland Uv		acont?		
Water Table Pr	esent?	□ Yes	🗆 No	Depth:		(in.)			wetland Hy	arology Pr	esent?	res 🗆 no	
Saturation Pres	ent?	□ Yes	□ No	Depth:		(in.)							
Describe Record	led Data (str		e monitorir	na well aeri	al nhotos		inspectio	ns) if available:		N/A			
Bomorko:	Statowida	drought	e, montori	ig wen, aen		, previous	пэреси						
Remarks.	Slalewide	arougni											
SOILS							0				. d		
INIAP UNIT NAME):	Telos-Chesu	incook associat	tion, 3 to 15 per	cent slopes,	very stony	S	eries Drainage Class:	somewnat po	borly draine	a		
Taxonomy (Sub	ogroup):	Loamy, Is	sotic, trigid	, snallow A	quic Hap	lortnoas							
	DTION (Describe to	the depth needed	to document the inc	licator or confirm the	absence of indic	ators.) (Type: C	=Concentration,	D=Depletion, RM=Reduced Matrix, CS=0	Covered/Coated Sand Grai	ns; Location: PL=Po	re Lining, M=Matrix)	·	
Гор	Bottom				Matrix				Mottles				
Depth	Depth	Hoi	rizon	Color (N	vloist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)	
0	12			10YR	2/1	100						fine sandy loam	
12	20			10YR	3/2	100						fine sandy loam	

NRCS Hydric	Soil Field Iı	ndicators (check he	ere if indicat	tors are	not prese	ent ⊐):		Indicato:	s for Proble	matic Soils ¹			
	A1- Histosol				S8 - Polyv	alue Belo/	W Surface (LRR R, MLRA 149B)		A10 - 2 cm l	MUCK (LRR K, L, MLRA 14	49B)		
	A2 - Histic E	pipedon			S9 - Thin	Dark Surf	ace (LRR R, MLRA 149B)		A16 - Coast	Prairie Redox (LRR	K, L, R)		
	A3 - Black H	istic		□ F1 - Loamy Mucky Mineral (LRR K, L) □ S3 - 5cm Mucky Peat of Peat (LRR K, L, R)									
	A4 - Hydroge	en Sulfide			F2 - Loan	ny Gleyed	Matrix		S7 - Dark S	urface (LRR K, L, M)			
	A5 - Stratifie	d Layers			F3 - Deple	eted Matri	x		S8 - Polyval	ue Below Surface (LRR K, L)		
	A11 - Deplet	ed Below Dark Surface			F6 - Redo	ox Dark Su	urface		S9 - Thin Da	ark Surface (LRR к, L)		
\checkmark	A12 - Thick [Dark Surface			F7 - Deple	eted Dark	Surface		F12 - Iron-N	langanese Masses	(LRR K, L, R)		
	S1 - Sandy M	/luck Mineral			F8 - Redo	x Depres	sions		F19 - Piedm	ont Floodplain Soil	S (MLRA 149B)		
	S4 - Sandy C	Gleyed Matrix							TA6 - Mesic	Spodic (MLRA 144A, 1	45, 149B)		
	S5 - Sandy F	Redox							TF2 - Red P	arent Material			
	S6 - Stripped	d Matrix							TF12 - Very	Shallow Dark Surf	ace		
	S7 - Dark Su	IFFACE (LRR R, MLRA 149B)							Other (Expla	ain in Remarks)			
								¹ Indicators disturbed o	of hydrophytic vegeta or problematic.	ation and wetland hydrology r	nust be present, unless		
Restrictive Layer (If Observed)	Туре:	none		Depth:			Hydric Soil Present?						
Remarks:													



Northeast and Northcentral Region

Project/Site: V	Vestern Maine Renewable Energy Projec	t			Wetland ID: W20EI Sample Point w
EGETATION (S	Species identified in all uppercase are non-native	e species.)			
ree Stratum (Plot s	size: 10 meter radius)				Deminance Test Werksheet
1 <u> </u>	Frexinue piare	<u>% Cover</u> Do	minant		Dominance rest worksneet
1. <i>f</i>	-raxinus nigra	20	ř V		Number of Deminent Creation that are ODL (A) or (A)
<u> </u>		30	ľ V		Number of Dominant Species that are OBL, FACW, or FAC: 9 (A)
3. E	Setula papyrilera	<u> </u>	Y NI		Total Number of Deminerat Creasing Assocs All Strates (D)
<u>4.</u>		D 10		FACU	Total Number of Dominant Species Across All Strata: 10 (B)
5. F	Picea rubens	10	IN	FACU	Demonst of Deminant Creation That Are ODL EACIAL or EAC: $00.09((A/D)$
0	-				Percent of Dominant Species That Are OBL, FACW, or FAC: 90.0% (A/B)
<u> </u>	-				Brovalance Index Warkshoot
<u> </u>	-				
<u>9.</u>	-				<u>OPL app 10 X 1 = 10</u>
10	- Total Cover -				$\begin{array}{c c} \text{OBL spp.} & 10 & \text{X I} = & 10 \\ \hline \text{FACW spp.} & 22 = & 470 \\ \hline \end{array}$
		90			FACW spp. 86 $X Z = 172$
Conling/Chrub Stratu	(Plot size: E motor radius)				FAC spp. 55 \times 5 – 165
		10	V	FAC	$\frac{1121}{1121} = \frac{1121}{1121} = \frac{1121}{1121$
2 7	Thuja occidentalis	10	V	FACW	
<u> </u>	Populus grandidentata	1		FACU	Total 205 (A) 563 (B)
<u> </u>	-				
5 -	-				Prevalence Index = B/A = 2746
<u> </u>	-				
7 -	-				
8	-				Hydrophytic Vegetation Indicators:
9	-				Yes □ No Rapid Test for Hydrophytic Vegetation
10	-				\square Yes \square No Dominance Test is > 50%
	Total Cover =	21			\square Yes \square No Prevalence Index is $\leq 3.0^{*}$
					\Box Yes \Box No Morphological Adaptations (Explain) *
Herb Stratum (Plot s	ize: 2 meter radius)				\Box Yes \Box No Problem Hydrophytic Vegetation (Explain) *
1. A	Acer rubrum	10	Y	FAC	
2. (Dnoclea sensibilis	20	Y	FACW	* Indicators of hydric soil and wetland hydrology must be
3.	Solidago canadensis	2	N	FACU	present, unless disturbed or problematic.
4. F	Rubus hispidus	15	Y	FACW	Definitions of Vegetation Strata:
5. 0	Carex stricta	10	Y	OBL	
6 (Cornus canadensis	5	N	FAC	Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7. 5	Symphyotrichum novae-analiae	1	N	FACW	height (DBH), regardless of height.
8. A	<i>Medeola virginiana</i>	1	N	FACU	
<u> </u>	Aaianthemum canadense	5	N	FACU	Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10. F	Ribes lacustre	20	Y	FACW	tall.
11	-				
12	-				Herb - All herbaceous (non-woody) plants, regardless of size, and
12					woody plants less than 3.28 ft. tall.

14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	89		
Woody Vine Str	ratum (Plot size:	10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present 🗵 Yes 🗆 No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					

Additional Remarks:



Northeast and Northcentral Region

Project/Site:	Western Mai	ne Renewa	able Energy F	Project #: 194-7130 Date:									09/09/20
Applicant:	Western Mai	ne Renewa	ables, LLC									County:	Somerset
Investigator #1:	Emmy Irvin				Investi	gator #2:						State:	ME
Soil Unit:	Chesuncook-l	Elliottsville-7	Felos associat	ion, 3 to 15%			NV	VI/WWI Classification	: Upland	t		Wetland ID:	W47EI
Landform:	Terrace				Loc	al Relief:	Linear		·			Sample Point:	Upland
Slope (%):	See topo map		Latitude:	45.140627	Lo	ongitude:	-69.8696	469	D	atum: N	IAD 83		•
Are climatic/hyd	drologic con	ditions on	the site ty	pical for this	s time of	vear? (If	no, explain	in remarks)	□ Ye	s 🗹 N	No		
Are Vegetation	□. Soil □.	or Hvdro	loav □ sia	nificantly di	sturbed?	<u>, </u>		Are normal circums	tances p	resent?			
Are Vegetation	\Box Soil \Box	or Hydro	logy ⊟ eigi	urally probl	ematic?	•		□ Yes	⊡No				
SUMMARY OF		er ryare											
Hydrophytic Ve	getation Pre	sent?							Hydric	Soils Pr	resent?		🗆 Ves 🔽 No
Wetland Hydro	logy Present	190111: 19							le Thie	Sampli	a Point	Within A Wetla	
Remarks [.]	Statewide	drought								Sampin			
Kemarka.	Olalewide	arougin											
HTDROLOGY				_									
Wetland Hydr	ology Indic	ators (Cl	neck here i	f indicators	are not	present	Ĺ			_			
Primary		\\/_t_v			_			1		<u>S</u>	Secondary	/ <u>/</u> DC _ Cumfana Cali	l Ora alva
	A1 - Surface	vvater				B9 - Wate	er-Stained				BO - Surface Sol	Cracks	
	A3 - Saturati	on				B15 - Mai	l Deposits	а 5				B16 - Moss Trim	Lines
	B1 - Water M	/larks				C1 - Hydr	ogen Sulf	ide Odor] C2 - Dry-Season	Water Table
	B2 - Sedime	nt Deposits	3			C3 - Oxid	ized Rhizo	ospheres on Living Roots	i] C8 - Crayfish Bu	rrows
	B3 - Drift De	posits				C4 - Pres	ence of R	educed Iron				C9 - Saturation \	/isible on Aerial Imagery
	B4 - Algal Ma	at or Crust				C6 - Rece	ent Iron Re	eduction in Tilled Soils				D1 - Stunted or S	Stressed Plants
	B5 - Iron Dep	00SIIS on Vicible /	on Aorial Ima	aony		C7 - Thin Other (Ex	MUCK SUR	Tace				D2 - Geomorphic	; Position
	B8 - Sparsel	v Vegetate	d Concave S	lyery Surface	님							D3 - Shallow Aqu	anhic Relief
	De opareor	y vogotato] D5 - FAC-Neutra	il Test
Field Observat	tions:												
Surface Water	Drocont?			Donthi		(in)							
Surface water	Flesent?			Depth:		(III.) (in.)			Wetlar	nd Hydr	ology P	resent?	JYes ☑ No
Sofuration Drea			⊡ NO	Depth:		(III.) (in.)							
Saturation Pres	sent?		⊡ NO	Depth:		(in.)							
Describe Record	led Data (str	eam gaug	je, monitorir	ng well, aeri	al photos	s, previous	s inspecti	ons), if available:		N	/A		
Remarks:	Statewide	drought											
		_											
SOILS													
Map Unit Name):	Chesunco	ok-Elliottsville-	Telos associa	tion. 3 to 1	5%	S	eries Drainage Class	: moder	atelv we	ll draineo	d	
Taxonomy (Sut	paroup):	Coarse-l	oamv. isoti	c. friaid Aa	uic Hapl	orthods				j			
Profile Descrip	Dtion (Describe to	the depth needed	to document the inc	licator or confirm the	absence of indi	cators.) (Type: C	=Concentration.	D=Depletion. RM=Reduced Matrix. CS=	=Covered/Coated	d Sand Grains:	Location: PL=P	Pore Lining, M=Matrix)	
Тор	Bottom				Matrix	/ / //			Mottle	es			Texture
Denth	Denth	Но	rizon	Color (N	loist)	%		Color (Moist)	0/	<u>/</u>	Type	Location	(e.g. clav. sand. loam)
	12	110			5/2	100					- 366		fine sandy loam
0					515	100				-			
										-			
										-			

NRCS Hydric	Soil Field I	ndicators (check he	ere if indica		Indicators for Problematic Soils ¹											
	A1- Histosol				S8 - Polv	alue Belo	W Surface (LRR R. MLRA 149B)		A10 - 2 cm	MUCK (LRR K. L. MLRA 1)	49B)					
	A2 - Histic E	pipedon			S9 - Thin	Dark Surfa	ACE (LRR R. MLRA 149B)		A16 - Coast	Prairie Redox (LRR	, К. L. В)					
	A3 - Black H	istic			F1 - Loan	ny Mucky I			S3 - 5cm M	ucky Peat of Peat						
	A4 - Hydroge	en Sulfide			F2 - Loan	iv Gleved	Matrix		S7 - Dark S	urface (IBBK I M)						
	A5 - Stratifie	d Lavers			F3 - Denle	eted Matri	Y		S8 - Polyval	ue Below Surface (
	A11 Doplot	ad Balaw Dark Surface			F6 Bodo		n Irfana	$\square SQ = Thip Dark Surface (LRK K, L)$								
					FO - Reuc				59 - Hill Da)					
	A12 - Thick I	Jark Surface			F7 - Deple	eted Dark	Surface									
	S1 - Sandy N	/luck Mineral			F8 - Redo	ox Depress	sions	F19 - Piedmont Floodplain Soils (мLRA 149В)								
	S4 - Sandy C	Gleyed Matrix							TA6 - Mesic	Spodic (MLRA 144A, 1	45, 149B)					
	S5 - Sandy F	Redox							TF2 - Red F	Parent Material						
	S6 - Stripped	d Matrix							TF12 - Verv	[,] Shallow Dark Surf	ace					
	S7 - Dark Su	IFFACE (LRR R. MLRA 149B)							Other (Expl	ain in Remarks)						
								¹ Indicators o	of hydrophytic veget	ation and wetland hydrology i	must be present, unless					
								disturbed o	r problematic.							
Restrictive Layer (If Observed)	Туре:	NR		Depth:	12			Hydric Soil	Present?		Yes 🗹 No					
Remarks:																



Western Maine Renewable Energy Project Wetland ID: W47EI Sample Point Upland Project/Site: (Species identified in all uppercase are non-native species.) VEGETATION Tree Stratum (Plot size: 10 meter radius) **Dominance Test Worksheet** <u>Species Nam</u>e <u>% Cover</u> Dominant Ind.Status Betula lenta 75 FACU 1. Υ Number of Dominant Species that are OBL, FACW, or FAC: 1 (A) 2. 20 Υ FAC Acer rubrum 5 3. Fraxinus nigra Ν FACW Total Number of Dominant Species Across All Strata: 4 (B) 4. ---------5. -----------6. Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B) ---------7. --------8. **Prevalence Index Worksheet** ----------9. Total % Cover of: Multiply by: ---------OBL spp. 0 10. x 1 = ---------0 FACW spp. 5 x 2 = Total Cover = 100 10 35 FAC spp. x 3 = 105 FACU spp. 130 x 4 = Sapling/Shrub Stratum (Plot size: 5 meter radius) 520 FACU Acer pensylvanicum 5 Ν UPL spp. 0 x 5= 1. 0 2. Υ FACU Betula lenta 20 3. Acer rubrum 10 Ν FAC Total 170 (A) 635 (B) 4. ----------5. Prevalence Index = B/A = 3.735 ----------6. ---------7. ----------Hydrophytic Vegetation Indicators: 8. ----------9. 🗌 Yes --⊡ No Rapid Test for Hydrophytic Vegetation ---------10. 🗌 Yes Dominance Test is > 50% --🖸 No ------Total Cover = 35 🗌 Yes 🖸 No Prevalence Index is ≤ 3.0 * □ Yes ⊡ No Morphological Adaptations (Explain) * Herb Stratum (Plot size: 2 meter radius) 🗋 Yes 🖸 No Problem Hydrophytic Vegetation (Explain) * FACU Medeola virginiana 5 Ν 1. * Indicators of hydric soil and wetland hydrology must be 2. Υ 20 FACU Polystichum acrostichoides present, unless disturbed or problematic. Phegopteris hexagonoptera 5 Ν FACU 3. 5 Ν FAC **Definitions of Vegetation Strata:** 4. Athyrium angustum 5. -----------Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast 6 ---------height (DBH), regardless of height. 7. --------8. ----------

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

11.				 	
12.				 	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall
13.				 	
14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	35		
Woody Vine S	Stratum (Plot si	ze: 10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present 🛛 Yes 🗹 No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					

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Additional Remarks:

9.

10.

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Northeast and Northcentral Region

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Project/Site:	Western Mai	ne Renewał	wable Energy ProjectProject #: 194-7130Date: 09/09/									
Applicant:	Western Mai	ne Renewał	bles, LLC								County:	Somerset
Investigator #1:	Emmy Irvin				Investi	igator #2:					State:	ME
Soil Unit:	Chesuncook-l	Elliottsville-Te	elos associati	on, 3 to 15%			NW	/I/WWI Classification	: PFO		Wetland ID:	W47EI
Landform:	Terrace				Loc	al Relief:	Linear				Sample Point:	Wetland
Slope (%):	See topo map		Latitude:	45.140674	L	ongitude:	-69.8697	28	Datum:	NAD 83		
Are climatic/hyc	Irologic con	ditions on	the site typ	oical for thi	s time of	f year? (If	no, explain i	n remarks)	🗆 Yes 🗵	No		
Are Vegetation	□. Soil □.	or Hvdrold	oav 🗆 siar	nificantlv di	sturbed	?		Are normal circumst	ances present	t?		
Are Vegetation	re Vegetation □, Soil □, or Hydrology □ naturally problematic? □ Yes											
SUMMARY OF	FINDINGS	,	57	J 1								
Hvdrophytic Ve	petation Pre	sent?			⊡ Yes	No			Hvdric Soils	Present?		🗹 Yes 🗆 No
Wetland Hydrol	oav Present	t?			⊡ Yes				Is This Sam	olina Point	Within A Wetla	nd? Ves No
Remarks:	Statewide (drought			_ 100	- 110						
		areagin										
		(0)					``					
wetland Hydro	ology indic	ators (Ch	eck here if	Indicators	are not	present	\square			C asandamu		
Primary:	A1 - Surface	\M/ater				BQ _ Wate	or-Stained			Secondary:	B6 - Surface Soil	Cracks
	A2 - High Wa	ater Table				B13 - Agu	atic Fauna	20003			B10 - Drainage F	Patterns
	A3 - Saturati	on				B15 - Mar	I Deposits	5			B16 - Moss Trim	Lines
	B1 - Water M	/larks				C1 - Hydr	ogen Sulfi	de Odor			C2 - Dry-Season	Water Table
	B2 - Sedime	nt Deposits			√	C3 - Oxid	ized Rhizc	spheres on Living Roots			C8 - Crayfish Bu	rows
	B3 - Drift De	posits				C4 - Pres	ence of Ro	educed Iron			C9 - Saturation V	isible on Aerial Imagery
	B4 - Algal Ma B5 - Iron Der	at or Grust				CO - Rece	Muck Sur	face			D1 - Stunied of S	Position
	B7 - Inundati	on Visible o	n Aerial Ima	aerv		Other (Ex	plain in Re	emarks)			D3 - Shallow Aqu	uitard
	B8 - Sparsel	y Vegetated	Concave S	urface		- (D4 - Microtopogr	aphic Relief
											D5 - FAC-Neutra	l Test
Field Observat	ions:											
Surface Water	Present?	□ Yes	I No	Depth:		(in.)						
Water Table Pr	esent?	□ Yes	⊡ No	Depth:		(in.)			Wetland Hye	drology Pi	resent?	Yes 🗆 No
Saturation Pres	ent?	□ Yes	⊡ No	Depth [.]		(in.)						
			110			()		ana) if an aileblar		N1/A		
		eam gauge	e, monitorin	ig weil, aeri	ai photos	s, previous	sinspecti	ons), il avallable:		IN/A		
Remarks:	Statewide	drought										
SOILS												
Map Unit Name	:	Chesuncook	<-Elliottsville-	Telos associa	ition, 3 to 7	15%	S	eries Drainage Class	: moderately v	vell drained	1	
Taxonomy (Sub	group):	Coarse-lo	pamy, isotio	c, frigid Aq	uic Hapl	orthods						
Profile Descrip	tion (Describe to	the depth needed t	to document the indi	cator or confirm the	absence of indi	cators.) (Type: C	=Concentration,	D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Grai	ns; Location: PL=Po	ore Lining, M=Matrix)	
Тор	Bottom				Matrix				Mottles			Texture
Depth	Depth	Hor	izon	Color (I	Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)
0	14	-	-	10YR	4/1	80	10YR	2/1	10			fine sandy loam
		-	-				10YR	5/6	10	С	M	fine sandy loam
		-	-									

	-														
NRCS Hydric S	Soil Field I	ndicators (check he	ere if indica		Indicator	s for Proble	matic Soils ¹								
	A1- Histosol				S8 - Poly	/alue Belo	W Surface (LRR R, MLRA 149B)		A10 - 2 cm	MUCK (LRR K, L, MLRA 14	49B)				
	A2 - Histic E	pipedon			S9 - Thin	Dark Surfa	ACE (LRR R, MLRA 149B)		A16 - Coast	Prairie Redox (LRR	K, L, R)				
	A3 - Black H	istic			F1 - Loam	ny Mucky I	Mineral (LRR K, L)		S3 - 5cm M	ucky Peat of Peat (LRR K, L, R)				
	A4 - Hydroge	en Sulfide			F2 - Loan	ny Gleyed	Matrix		S7 - Dark S	urface (LRR K, L, M)					
	A5 - Stratifie	d Layers		v	F3 - Deple	eted Matrix	x		S8 - Polyval	lue Below Surface	LRR K, L)				
	A11 - Deplet	ed Below Dark Surface			F6 - Redo	ox Dark Su	urface	S9 - Thin Dark Surface (LRR к, L)							
	A12 - Thick [Dark Surface			F7 - Deple	eted Dark	Surface		F12 - Iron-M	langanese Masses	(LRR K. L. R)				
	S1 - Sandy M	Auck Mineral			F8 - Redo	x Depress	sions	F19 - Piedmont Floodplain Soils (MLRA 149B)							
	S4 - Sandy C	Gleved Matrix				•			TA6 - Mesic	Spodic (MLRA 144A, 1	45, 149B)				
	S5 - Sandy F	Redox							TF2 - Red F	Parent Material	. ,				
	S6 - Stripped	d Matrix							TF12 - Very	Shallow Dark Surf	ace				
	S7 - Dark Su	Irface (LRR R, MLRA 149B)							Other (Expla	ain in Remarks)					
								¹ Indicators o disturbed o	f hydrophytic veget r problematic.	ation and wetland hydrology r	nust be present, unless				
Restrictive Layer (If Observed)	Type:	LEDGE		Depth:	14			Hydric Soil	Present?		Yes 🗆 No				
Remarks:															



Western Maine Renewable Energy Project Wetland ID: W47EI Sample Point Wetland Project/Site: (Species identified in all uppercase are non-native species.) VEGETATION Tree Stratum (Plot size: 10 meter radius) **Dominance Test Worksheet** Species Name <u>% Cover</u> Dominant Ind.Status 30 FACW 1. Larix laricina Υ Number of Dominant Species that are OBL, FACW, or FAC: 3 (A) 2. 50 Υ FAC Acer rubrum 3. Fraxinus nigra 20 Ν FACW 4. Total Number of Dominant Species Across All Strata: 4 (B) ---------5. ---------6. Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B) ----------7. ---------8. **Prevalence Index Worksheet** ---------9. Total % Cover of: Multiply by: ---------OBL spp. 10. x 1 = ---------50 50 70 x 2 = Total Cover = 100 FACW spp. 140 65 FAC spp. x 3= 195 FACU spp. 0 Sapling/Shrub Stratum (Plot size: 5 meter radius) x 4 = 0 FACW Picea mariana 5 Ν 30 x 5= 1. UPL spp. 150 2. 5 FAC Acer rubrum Ν 3. 5 Fraxinus nigra Ν FACW (A) 535 Total 215 (B) 4. ----------5. --Prevalence Index = B/A =2.488 -------6. ---------7. ----------Hydrophytic Vegetation Indicators: 8. ---------9. 🗌 Yes --⊡ No Rapid Test for Hydrophytic Vegetation --------10. 🛛 Yes Dominance Test is > 50% --🗌 No ------Total Cover = 15 🕁 Yes 🗌 No Prevalence Index is ≤ 3.0 * 🛛 Yes ⊡ No Morphological Adaptations (Explain) * Herb Stratum (Plot size: 2 meter radius) 🗌 Yes 🖸 No Problem Hydrophytic Vegetation (Explain) * FACW Onoclea sensibilis 10 Ν 1. * Indicators of hydric soil and wetland hydrology must be 2. FAC 10 Ν Parathelypteris noveboracensis present, unless disturbed or problematic. 50 Υ OBL 3. Calamagrostis canadensis 30 Υ UPL **Definitions of Vegetation Strata:** 4. Fragaria vesca 5. ----------Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast 6 --------height (DBH), regardless of height. 7. ---------8. ----------

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

11.				 	
12.				 	Herb - All herbaceous (non-woody) plants, regardless of size, and
13.				 	
14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	100		
Woody Vine S	Stratum (Plot siz	e: 10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present 🗹 Yes 🗆 No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					

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Additional Remarks:

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Northeast and Northcentral Region

Project/Site:	Moscow Ren	ewable En	ergy Project					Project #	: 194-713	0	Date:	09/09/20		
Applicant:	Patriot Rene	wables									County:	Somerset		
Investigator #1:	Nicc Johnson	ו			Investi	gator #2:	Emmy Ir	vin			State:	ME		
Soil Unit:	Monarda-Telos	complex, 0 t	o 8 percent sloj	pes, very stony			NV	VI/WWI Classification	n: Upland		Wetland ID:	W106EI		
Landform:	Terrace				Loc	al Relief:	Linear		_		Sample Point:	Upland		
Slope (%):	See topo map		Latitude:	45.136905	Lo	ongitude:	-69.8302	2848	Da	tum: NAD 83	_			
Are climatic/hyc	Irologic con	ditions or	the site ty	pical for thi	s time of	^r year? (If	no, explain	in remarks)		🗆 No				
Are Vegetation	\Box , Soil \Box ,	or Hydro	logy 🛛 sig	nificantly d	sturbed?	?		Are normal circum	stances pre	esent?				
Are Vegetation	\Box , Soil \Box ,	or Hydro	logy 🛛 nat	urally prob	lematic?			□ Yes	⊡ No					
SUMMARY OF	FINDINGS													
Hydrophytic Ve	getation Pre	sent?			□ Yes	🖸 No)		Hydric S	oils Present?		🗆 Yes 🗹 No		
Wetland Hydrol	ogy Present	?			🗆 Yes	🗹 No	1		Is This S	Sampling Point	Within A Wetla	nd? 🛛 Yes 🗹 No		
Remarks:	Statewide	drought												
		•												
HYDROLOGY														
Wotland Hydr	ology India	ators (C	aack hara i	findicators	are not	procont	Ъ							
	biogy maic		IECK HEIE I	i inuicators	are not	present	Ļ			Secondary				
	A1 - Surface	Water				B9 - Wate	er-Stained	Leaves			<u>.</u> B6 - Surface Soi	l Cracks		
	A2 - High Wa	ater Table				B13 - Aqu	uatic Faun	a	\square B10 - Drainage Patterns					
	A3 - Saturati	on				B15 - Ma	rl Deposit	S			B16 - Moss Trim	Lines		
	B1 - Water M	larks				C1 - Hydr	ogen Sulf	ide Odor			C2 - Dry-Season	Water Table		
	B2 - Sedime	nt Deposits	6			C3 - Oxid	ized Rhiz	ospheres on Living Root	S		C8 - Crayfish Bu	rrows		
	B3 - Drift De B4 - Algel Ma	posits at or Crust				C6 - Rec	ence of R	eduction in Tilled Soils			D1 - Stunted or S	Stressed Plants		
	B5 - Iron Der	posits				C7 - Thin	Muck Sur	rface			D2 - Geomorphic	c Position		
	B7 - Inundati	on Visible	on Aerial Ima	agery		Other (Ex	plain in R	emarks)			D3 - Shallow Aqu	uitard		
	B8 - Sparsel	y Vegetate	d Concave S	Surface							D4 - Microtopogr	aphic Relief		
											D5 - FAC-Neutra	ıl Test		
Field Observat	ions:													
Surface Water	Present?	□ Yes	☑ No	Depth:		(in.)			Matlena					
Water Table Pr	esent?	🗆 Yes	⊡ No	Depth:		(in.)			wetiand	i Hydrology P		JYES ⊡ NO		
Saturation Pres	ent?	□ Yes	⊡ No	Depth:		(in.)								
Describe Record	od Data (str				al photos		- increat	ione) if available:		Ν/Δ				
			je, monitorii	ig well, ael	ai priotos	s, previous	sinspect	ions), il avaliable.		IN/A				
Remarks:	Statewide	arought												
SOILS														
Map Unit Name	:	Monarda-Telo	s complex, 0 to 8	percent slopes, v	ery stony		S	Series Drainage Clas	s: [E.g. mo	derately well, p	oorly, etc]			
Taxonomy (Sub	group):													
Profile Descrip	tion (Describe to	the depth needed	d to document the inc	licator or confirm the	absence of indi	cators.) (Type: C	=Concentration	, D=Depletion, RM=Reduced Matrix, CS	S=Covered/Coated S	and Grains; Location: PL=P	ore Lining, M=Matrix)			
Тор	Bottom				Matrix				Mottles			Texture		
Depth	Depth	Но	rizon	Color (I	Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)		
0	12			10YR	4/3	100						FINE SANDY LOAM		

NRCS Hydric	Soil Field Ir	ndicators (check he	ere if indica	tors are	not prese	Indicators for Problematic Soils ¹							
	A1- Histosol				S8 - Poly	/alue Belo	W Surface (LRR R, MLRA 149B)		A10 - 2 cm	MUCK (LRR K, L, MLRA 1	49B)		
	A2 - Histic E	pipedon			S9 - Thin	Dark Surfa	ACE (LRR R, MLRA 149B)		A16 - Coast	Prairie Redox (LRR	K, L, R)		
	A3 - Black H	istic			F1 - Loan	nv Muckv I	Mineral (LRR K. L)		S3 - 5cm M	uckv Peat of Peat	LRR K. L. R)		
	A4 - Hvdroge	en Sulfide			F2 - Loan	iv Gleved	Matrix		S7 - Dark S	urface (LRR K. L. M)	,		
	A5 - Stratifie	dlavers			F3 - Deple	eted Matri	X	\square S8 - Polyvalue Below Surface (LBB K L)					
	A11 - Deplet	ed Below Dark Surface			F6 - Redo	v Dark Si	Inface	$\square SQ = Thin Dark Surface (Intervention)$					
	A10 Thick				F7 Dept	of a Dark St		$\Box = 53 - 11 \text{ In Dark Surface (LRR K, L)}$					
	ATZ - THICK L						Surface	\square F12 - II 0I - Wallyallese Wasses (LRR K, L, R)					
	S1 - Sandy K	luck Mineral			F8 - Read	ox Depress	sions						
	S4 - Sandy G	Sleyed Matrix						LI I A6 - MESIC SPOCIC (MLRA 144A, 145, 149B)					
	S5 - Sandy F	Redox						TF2 - Red Parent Material					
	S6 - Stripped	l Matrix							TF12 - Very	^y Shallow Dark Surf	ace		
	S7 - Dark Su	IFFACE (LRR R, MLRA 149B)							Other (Expla	ain in Remarks)			
							-	¹ Indicators o disturbed o	of hydrophytic veget r problematic.	ation and wetland hydrology	must be present, unless		
Restrictive Layer (If Observed)	Туре:			Depth:				Hydric Soil	Present?		Yes 🗹 No		
Remarks:													



Project/Site:

Moscow Renewable Energy Project

Wetland ID: W106EI Sample Point Upland

VEGETATION	(Species identified in all uppercase are non-nati	ve species	5.)		
Tree Stratum (Plo	ot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:0 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. 0 $x 1 = 0$
	Total Cover =	= 0			FACW spp. 0 x 2 = 0
					FAC spp. 0 \mathbf{x} 3 = 0
Sapling/Shrub Stra	atum (Plot size: 5 meter radius)				FACU spp. 55 x 4 = 220
1.					UPL spp. 0 $x 5 = 0$
2.					
3.					Total 55 (A) 220 (B)
4.					
5.					Prevalence Index = B/A = 4.000
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☐ No Dominance Test is > 50%
	Total Cover =	= 0			 Yes No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	t size: 2 meter radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Solidago canadensis	30	Y	FACU	
2.	Rubus idaeus	15	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
3.	Anaphalis margaritacea	5	Ν	FACU	present, unless disturbed of problematic.
4.	Lupinus polyphyllus	5	N	FACU	Definitions of Vegetation Strata:
5.					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast
7.					height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft.
10.					tall.

Page 2 of 2

11.				 	
12.				 	Herb - All herbaceous (non-woody) plants, regardless of size, and
13.				 	woody plants less than 3.28 ft. tail.
14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	55		
Woody Vine	Stratum (Plo	size: 10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present 🛛 Yes 🗹 No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					
L					

Additional Remarks:



Northeast and Northcentral Region

								_						
Project/Site:	Western Mai	ine Renewa	able Energy F	Project				Project #:	194-7130		Date: 09/09/20			
Applicant:	Western Mai	stern Maine Renewables, LLC									Somerset			
Investigator #1:	Emmy Irvin Investigator #2: State:										State:	ME		
Soil Unit:	Monarda-Telos complex, 0 to 8 percent slopes NWI/WWI Classification: PEM/PSS										Wetland ID:	W106EI		
Landform:	Terrace	errace Local Relief: Linear									Sample Point:	Wetland		
Slope (%):	(%): See topo map Latitude: 45.156731 Longitude: -69.85413 Datum: NAD 83													
Are climatic/hyd	drologic con	ditions on	the site type	pical for thi	s time of	year? (If	no, explain i	n remarks)	🗆 Yes 🗹	No				
Are Vegetation	\Box , Soil \boxdot ,	or Hydrol	ogy 🗆 sigi	nificantly di	sturbed?)		Are normal circums	tances presen	t?				
Are Vegetation	\Box , Soil \boxdot ,	or Hydrol	ogy 🛛 nat	urally probl	ematic?			🗆 Yes	🗹 No					
SUMMARY OF	FINDINGS													
Hydrophytic Ve	getation Pre	esent?			⊡ Yes	🗆 No			Hydric Soils	Present?		🗆 Yes 🗹 No		
Wetland Hydrol	logy Presen	t?			⊡ Yes	🗆 No			Is This Samp	oling Point	Within A Wetlar	nd? 🗹 Yes 🗆 No		
Remarks:	Statewide	drought. A	Area is high	nly disturbe	d				-					
		0	0	5										
HYDROLOGY														
			a alu la ana H	(:			<u>بر</u>							
	ology indic	ators (Cr	neck nere i	rindicators	are not	present	ļ			Casandanu				
Primary:	Δ1 - Surface	Water				RQ _ Wate	er-Stained			Secondary:		Cracks		
	A2 - High W	ater Table				B13 - Aqu	uatic Fauna	3	□ B0 - Surface Soli Cracks					
	A3 - Saturati	on				B15 - Mar	l Deposits	-		B16 - Moss Trim	Lines			
	B1 - Water N	/larks				C1 - Hydr	ogen Sulfi	en Sulfide Odor 🛛 🗌 C2 - Dry-Season Water Table						
	B2 - Sedime	nt Deposits	;			C3 - Oxid	ized Rhizc	ospheres on Living Roots 🛛 C8 - Crayfish Burrows						
	B3 - Drift De	posits				C4 - Pres	ence of Reduced Iron							
	B4 - Algal Ma	at or Crust				C6 - Rece	ent Iron Re	eduction in Tilled Soils			D1 - Stunted or S	Stressed Plants		
	B5 - Iron De	posits ion Vicible (an Aprial Ima	a o ru		C/ - Thin	Muck Sur	face			D2 - Geomorphic	Position		
	B7 - Inundati B8 - Sparsel	Non visible (on Aeriai Ima d Concave S	lgery		Other (Ex	piain in Re	emarks)			D3 - Shallow Aqu	anhic Relief		
	Do - Opaisei	y vegetated									D5 - FAC-Neutra	I Test		
Field Observat	tions													
				D (1		(:)								
Surface water	Present?		⊡ No	Depth:		(In.)			Wetland Hy	drology Pi	resent?	Yes 🗆 No		
water Table Pr	esent?		✓ No	Depth:		(in.)			-					
Saturation Pres	sent?	∐ Yes	☑ No	Depth:		(in.)								
Describe Record	led Data (str	ream gaug	e, monitorir	ng well, aeri	al photos	, previous	s inspecti	ons), if available:		N/A				
Remarks:	Statewide	drought. A	Area is high	nlv disturbe	<u>,</u>		•							
	e la lo ma e	areagina /	a ea le riigi											
SOILS			Talaa				0	anian Duning and Olass						
	9 :	Monarda	- Telos com		s percen	t slopes	5	eries Drainage Class	: Somewnat p	ooriy drain	ea			
Taxonomy (Sub	ogroup):	Loamy, r	nixed, activ	/e, acid, fri	gid, shall	ow Aeric	Endoaq	uepts						
Profile Descrip	Dtion (Describe to	the depth needed	I to document the ind	licator or confirm the	absence of indic	cators.) (Type: C	=Concentration,	D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Gra	ins; Location: PL=Po	ore Lining, M=Matrix)	·		
Тор	Bottom				Matrix				Mottles			Texture		
Depth	Depth	Ho	rizon	Color (N	/loist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)		
0	10			2.5Y	5/3	100						silt loam		
	1	1								1	1			

NRCS Hydric Soil Field Indicators (check here if indicators are not present Image: Second													
	A1- Histosol				S8 - Poly	/alue Belo	W Surface (LRR R, MLRA 149B)		A10 - 2 cm	MUCK (LRR K, L, MLRA 1	49B)		
	A2 - Histic E	pipedon			S9 - Thin	Dark Surfa	ACE (LRR R. MLRA 149B)		A16 - Coast	Prairie Redox (LRR	K. L. R)		
	A3 - Black H	istic			F1 - Loan	ny Mucky I	Mineral (IBB K I)		S3 - 5cm M	ucky Peat of Peat (
	A4 - Hydroge	en Sulfide			F2 - Loan	iv Gleved	Matrix	\square S7 - Dark Surface (LRR K M)					
	Δ5 - Stratifie				F3 - Denk	ated Matri	v	$\square S8 = Polyvalue Below Surface (LBR K L)$					
	A11 Doplet	ad Balaw Dark Surface			F6 Doda		n Infana	$\Box = SO = Tory value Below Surface (ERR R, E)$					
	ATT - Depieu				FO - Reuc								
	A12 - Thick L	Jark Surface			F7 - Deple	eted Dark	Surface	LI F12 - Iron-Manganese Masses (LRR K, L, R)					
	S1 - Sandy N	luck Mineral			F8 - Redo	ox Depress	sions	F19 - Piedmont Floodplain Soils (мlга 149в)					
	S4 - Sandy G	Bleyed Matrix				🔲 ТА6 - Mesic Spodic (мlra 144а, 145, 149в)							
	S5 - Sandy F	Redox		TF2 - Red Parent Material									
	S6 - Stripped	l Matrix		TF12 - Very Shallow Dark Surface							ace		
	S7 - Dark Su	IFFACE (LRR R. MLRA 149B)						Other (Explain in Remarks)					
¹ Indicators of hydrophytic vegetation and wetland hydrology m disturbed or problematic.									must be present, unless				
Restrictive Layer (If Observed)	Type:	ledge		Depth:	10			Hydric Soil	Present?		Yes 🗹 No		
Remarks:	soils are hi	ghly disturbed					·						



Project/Site:

(Species identified in all uppercase are non-native species.) VEGETATION Tree Stratum (Plot size: 10 meter radius) **Dominance Test Worksheet** <u>Species Nam</u>e <u>% Cover</u> Dominant Ind.Status 1. --------2. Number of Dominant Species that are OBL, FACW, or FAC: 0 (A) ----------3. ----------4. Total Number of Dominant Species Across All Strata: 4 (B) ----------5. ---------6. Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) ---------7. ---------8. **Prevalence Index Worksheet** --------9. Total % Cover of: Multiply by: ---------OBL spp. 5 10. x 1= --------5 15 x 2= Total Cover = 0 FACW spp. 30 FAC spp. 0 x 3= 0 80_____ x 4 = Sapling/Shrub Stratum (Plot size: 5 meter radius) FACU spp. 320 FACU UPL spp. 0 Populus tremuloides 10 x 5= 1. У 0 2. Salix alba 5 FACW n 3. 5 Alnus incana FACW n 100 (A) 355 Total (B) 4. ----------5. Prevalence Index = B/A = 3.550 ----------6. ---------7. ----------Hydrophytic Vegetation Indicators: 8. ----------9. 🗌 Yes --⊡ No Rapid Test for Hydrophytic Vegetation ---------10. 🛛 Yes Dominance Test is > 50% --🗌 No ------Total Cover = 20 🗌 Yes 🖸 No Prevalence Index is ≤ 3.0 * □ Yes ⊡ No Morphological Adaptations (Explain) * Herb Stratum (Plot size: 2 meter radius) Problem Hydrophytic Vegetation (Explain) * 🖸 No □ Yes 5 OBL Scirpus cyperinus 1. n * Indicators of hydric soil and wetland hydrology must be 2. Spiraea alba 5 FACW n present, unless disturbed or problematic. Trifolium pratense 25 FACU 3. у 5 4. Rudbeckia hirta FACU **Definitions of Vegetation Strata:** n FACU 5. Galium aparine 10 У

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Wetland ID:

W106EI

Page 2 of 2

Sample Point Wetland

Western Maine Renewable Energy Project

11.				 	
12.				 	Herb - All herbaceous (non-woody) plants, regardless of size, and
13.				 	
14.				 	
15.				 	Woody Vines - All woody vines greater than 3.28 ft. in height.
		Total Cover =	80		
Woody Vine S	Stratum (Plot size	e: 10 meter radius)			
1.				 	
2.				 	
3.				 	Hydrophytic Vegetation Present 🗹 Yes 🗆 No
4.				 	
5.				 	
		Total Cover =	0		
Remarks:					

FACU

FACU

FACU

n

n

У

5

5

20

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Additional Remarks:

6

7.

8.

9.

10.

Vicia americana

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Symphyotrichum pilosum

Solidago canadensis

Appendix E. Representative Photographs

Vernal Pools

Photo: 01

Description: Vernal pool VP19CP, a significant vernal pool.

Date: May 6, 2020

Source: Tetra Tech, Inc.



Photo: 02

Description: Vernal pool VP19CP, a significant vernal pool. Photo depicts spotted salamander (*Ambystoma maculatum*) egg masses observed in the pool.

Date: May 20, 2020



Photo: 03

Description: Vernal pool VP40DS, a naturalmodified, significant vernal pool.

Date: May 6, 2020

Source: Tetra Tech, Inc.



Wetlands

Photo: 04

Description: Wetland W17DS, located adjacent to clearing near USAF Radar Station field road berm. Trees have buttressed roots with saturated soils present.

Date: June 2, 2020



Photo: 05

Description: Wetland W60EI; watercourse S32EI runs through the northeast section of the wetland.

Date: June 22, 2020

Source: Tetra Tech, Inc.



Photo: 06

Description: Wetland W08EI; typical forested wetland with shallow soils to bedrock. Dark organic soils with depleted matrix 2–6 inches above rock ledge. Date: June 2, 2020



Photo: 07

Description: Wetland W17EI; larger forested wetland with shallow soils.

Date: June 4, 2020

Source: Tetra Tech, Inc.



Photo: 08

Description: Typical regenerating trees in upland forested area.

Date: June 16, 2020


Photo: 09

Description: Wetland W34EI; depressional, emergent, wetland that is surrounded by upland forest.

Date: June 16,2020

Source: Tetra Tech, Inc.



Photo: 10

Description: Wetland W30EI; seepy wetland on hillslope shallow, dark organic muck over ledge/rock material; disturbed from timber harvest activities.

Date: June 15, 2020



Photo: 11

Description: Wetland W61EI; emergent, naturalized, depression adjacent to the road.

Date: June 23, 2020

Source: Tetra Tech, Inc.



Photo: 12

Description: Wetland W43EI; forested isolated depression.

Date: June 16, 2020



Photo: 13

Description: Wetland W21DS; emergent wetland in USAF Radar Station field. Some portions of the wetland continue into a forested area.

Date: May 5, 2020 Source: Tetra Tech, Inc.



Photo: 14

Description: Wetland W06KN continues off-Site and contains a watercourse that flows into Chase Pond.

Date: December 22, 2020



Watercourses

Photo: 15

Description: Ephemeral watercourse S24EI; flows southeast from wetlands W49EI to W48EI.

Date: June 17, 2020, 2020

Source: Tetra Tech, Inc.



Photo: 16

Description: Intermittent watercourse S32EI; crosses the Study Area. Ephemeral watercourse S33EI is a tributary to this watercourse, and both flow through wetland W59EI.

Date: June 22, 2020



Photo: 17

Description: Perennial watercourse S51EI (Bassett Brook); flows south and is crossed by a road proposed for accessing the western turbine pad locations.

Date: July 21, 2020

Source: Tetra Tech, Inc.



Photo: 18

Description: Watercourse S51EI (Bassett Brook); Photo of the approximately 7-foot culvert outlet with some damage.

Date: September 10, 2020



Photo: 19

Description: Intermittent watercourse S52EI; crosses a road that is proposed for accessing the western turbine locations.

Date: September 23, 2020

Source: Tetra Tech, Inc.



Photo: 20

Description: Watercourse S01KN flows south through a culvert in a road, towards Chase Pond.

Date: December 22, 2020



Photo: 21

Description: General overview photo of a USAF Radar Station field. Note stunted vegetation in foreground and regenerating forested area in background.

Date: June 4, 2020

Source: Tetra Tech, Inc.



Photo: 22 Description: Stream Road, facing south.

Date: June 23, 2020

