

APPENDIX E

VERNAL POOL SURVEY RESULTS,
PHOTGRAPHIC DOCUMENTATION, AND
DATA FORMS

APPENDIX E
Canton Mountain Wind Project
2010 and 2011 Vernal Pool Survey Summary

| Resource Identification | | Survey Year | Associated Wetland | Approx. Size (feet) | Pool Type ² | Natural or Unnatural | MDEP SVP Criteria Met | Egg Masses ³ | | Presence | | Notes |
|--|----------------------------------|-------------|--------------------|---------------------|------------------------|----------------------|-----------------------|-------------------------|----|----------|--------------|--|
| Plan ID | Field IDs ¹ | | | | | | | SS | WF | Tadpoles | Fairy Shrimp | |
| ACCESS ROAD VERNAL POOL RESOURCES | | | | | | | | | | | | |
| 1BVP | CA_34BVP_BA504 CA_34BVP_BA523 | 2011 | CAWBK6 | 15x35 | BVP | N | No | 0 | 0 | No | No | Shallow pool in oxbow of Ludden Brook –no egg masses. |
| 2NVP | CA_33NVP_BA504 CA_33NVP_BA523 | 2011 | CAWBK6 | 20x75 | NVP | N | No | 1 | 0 | No | No | Shallow pool in oxbow of Ludden Brook-some egg masses not significant. |
| 3BVP | CA_32BVP_BA504 CA_32BVP_BA523 | 2011 | CAWBK6 | 10x35 | BVP | N | No | 0 | 0 | No | No | Shallow pool in oxbow of Ludden Brook – no egg masses. |
| 4NVP | CA_31NVP_BA504 CA_31NVP_BA523 | 2011 | CAWBK6 | 15x50 | NVP | N | No | 2 | 0 | No | No | Shallow pool in oxbow of Ludden Brook – some egg masses, not significant. |
| 5NVP | CA_35NVP_BA504 CA_35NVP_BA523 | 2011 | CAWBK12 | 15x200 | NVP | N | No | 1 | 0 | No | No | Shallow pool in PFO wetland. Unlikely to support breeding activity. Lone egg mass was ¼ out of water at 1 st survey and was gone at 2 nd survey. |
| 6NVP | CA_3NVP_BA415 CA_3NVP_BA506 | 2010 | | 40x50 | NVP | N | No | 17 | 0 | No | No | Flooded pit and mound mixed PFO/PSS wetland adjacent to gravel access road. Evidence of skidder ruts and road fill in and around pool. |
| RIDGELINE VERNAL POOL RESOURCES | | | | | | | | | | | | |
| 7NVP | CR_2NVP_BA418 CR_2NVP_BA506 | 2010 | | 150x300 | NVP | N | No | 17 | 5 | No | No | Natural vernal pool in sphagnum bog within forested wetland on ridgeline. |
| 8NVP | CR_1NVP_BA418 CR_1NVP_BA506 | 2010 | | 50x200 | NVP | N | No | 17 | 0 | No | No | Natural vernal pool in forested wetland in low elevation area on ridgeline. |
| 9PSVP | CR_11SVP_BA421 CR_11SVP_BA506 | 2010 | | 60x80 | SVP | N | Yes | 145 | 57 | Yes | No | Large potentially partially quarried significant vernal pool near northeast ridge of Canton Mountain. |
| 10BVP | CR_13BVP_BA506 | 2010 | | 5x6 | BVP | N | No | 0 | 0 | No | No | Small and shallow natural puddle in forest. |
| 11BVP | CR_10BVP_BA506 | 2010 | | 8x12 | BVP | N | No | 0 | 0 | No | No | Small natural puddle – DRY ON 5/06/2010 |
| 12BVP | CR_8BVP_BA421 CR_8BVP_BA507 | 2010 | | 15x30 | BVP | N | No | 0 | 0 | No | No | Small and shallow natural puddle in forest. |

APPENDIX E

**Canton Mountain Wind Project
2010 and 2011 Vernal Pool Survey Summary**

| Resource Identification | | Survey Year | Associated Wetland | Approx. Size (feet) | Pool Type ² | Natural or Unnatural | MDEP SVP Criteria Met | Egg Masses ³ | | Presence | | Notes |
|--|----------------------------------|-------------|--------------------|---------------------|------------------------|----------------------|-----------------------|-------------------------|----|----------|--------------|--|
| Plan ID | Field IDs ¹ | | | | | | | SS | WF | Tadpoles | Fairy Shrimp | |
| 13BVP | CR_6BVP_BA421 | 2010 | CRWBJ4 | 20X30 | BVP | N | No | 0 | 0 | No | No | Small and shallow natural puddle in forest. |
| 14NVP | CR_7NVP_BA421 CR_7NVP_BA507 | 2010 | | 20x30 | NVP | N | No | | | No | No | Natural vernal pool located as ponded portion of wetland near outlet of large kettle-hole bog on top of Canton Mountain; |
| 15BVP | CR_4BVP_BA419 CR_4BVP_BA507 | 2010 | | 100x220 | BVP | N | No | 0 | 0 | No | No | Small and shallow natural puddle in forest. |
| 16BVP | CR_14BVP_BA504 CR_14BVP_BA523 | 2011 | | 5x20 | BVP | N | No | 0 | 0 | No | No | Very shallow pool in forested wetland. Drainage enters pool from the northwest where wetland becomes flat, creating pool. |
| 17BVP | CR_5BVP_BA421 CR_5BVP_BA507 | 2010 | | 15x35 | BVP | N | No | 0 | 0 | No | No | Small and shallow natural puddle in forest. |
| 18BVP | CR_3BVP_BA419 CR_3BVP_BA507 | 2010 | | 10x100 | BVP | N | No | 0 | 0 | No | No | Small and shallow natural puddle in forest. |
| TRANSMISSION LINE VERNAL POOL RESOURCES | | | | | | | | | | | | |
| 1 SVP | RT-9SVP-FA0421 | 2010 | SRW_TW6 | 70x120 | SVP | N | Yes | 41 | 0 | No | No | Large pool with 41 spotted egg masses observed during breeding season. Located east of proposed transmission corridor. Deemed significant by Maine DIFW. |
| 2 ABA | RT-2ABA-FA0419 | 2010 | | 8x3.5 | ABA | U | No | 0 | 4 | No | No | Four wood frog egg masses found in skidder ruts. |

¹ Two field IDs represent vernal pools field surveyed for egg masses on two dates during the survey year in order to capture peak breeding activity for both salamanders and wood frogs – the last three digits in the ID represent the survey month and day.

² **BVP** Pool meets Maine Natural Resources Protection Act (NRPA) definition of a vernal pool but no evidence of indicator species (egg masses, spermatophores, RTE, etc.).

NVP Pool meets Maine NRPA definition of a vernal pool but did not meet egg mass count or RTE criteria for a determination as a significant vernal pool.

PSVP Pool meets Maine NRPA definition of a vernal pool and meets egg mass count or RTE criteria for a determination as a significant vernal pool, potential is used when significance has not yet been confirmed by the Maine Department of Inland Fisheries and Wildlife.

³ **SS** = Spotted Salamander, **WF** = Wood Frog, **BS** = Blue spotted salamander.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 1BVP
Vernal Pool: CA_34_BVP_BA504
CA_34_BVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Natural depression in rocky oxbow of Ludden Brook. No egg masses were present at time of survey. Facing north. Needs a revisit (was revised on 05.23.11).



Photo No.: 2
Plan ID: 1BVP
Vernal Pool: CA_34_BVP_BA504
CA_34_BVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Looking east.



Photo No.: 3
Plan ID: 1BVP
Vernal Pool: CA_34_BVP_BA504
CA_34_BVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 1BVP

Vernal Pool: CA_34_BVP_BA504
CA_34_BVP_BA523

Date: May 4, 2011

Photographer: David Brenneman

Comments: Looking west.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 2NVP
Vernal Pool: CA_33NVP_BA504
CA_33NVP_BA523
Date: May 4, 2011
Photographer: Lauren Leclerc

Comments: Natural vernal pool in rocky oxbow of Ludden Brook containing one spotted salamander egg mass. Facing northeast. Needs a revisit (was revised on 11.23.11).



Photo No.: 2
Plan ID: 2NVP
Vernal Pool: CA_33NVP_BA504
CA_33NVP_BA523
Date: May 4, 2011
Photographer: Lauren Leclerc

Comments: Looking east at pool.



Photo No.: 3
Plan ID: 2NVP
Vernal Pool: CA_33NVP_BA504
CA_33NVP_BA523
Date: May 4, 2011
Photographer: Lauren Leclerc

Comments: Looking southwest.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 2NVP

Vernal Pool: CA_33NVP_BA504
CA_33NVP_BA523

Date: May 4, 2011

Photographer: Lauren Leclerc

Comments: Looking west.



Photo No.: 5

Plan ID: 2NVP

Vernal Pool: CA_33NVP_BA504
CA_33NVP_BA523

Date: May 4, 2011

Photographer: David Brenneman

Comments: Spotted salamander egg mass.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 3BVP
Vernal Pool: CA_32_BVP_BA504
CA_32_BVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Natural vernal pool in rocky oxbow of Ludden Brook. No egg masses were present at time of survey. Facing southeast. Needs a revisit (was revised on 11.23.11).



Photo No.: 2
Plan ID: 3BVP
Vernal Pool: CA_32_BVP_BA504
CA_32_BVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Looking southwest.



Photo No.: 3
Plan ID: 3BVP
Vernal Pool: CA_32_BVP_BA504
CA_32_BVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Looking north.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 3BVP

Vernal Pool: CA_32_BVP_BA504
CA_32_BVP_BA523

Date: May 4, 2011

Photographer: David Brenneman

Comments: Looking northeast.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 4NVP
Vernal Pool: CA_31NVP_BA504
CA_31NVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Natural vernal pool in rocky oxbow of Ludden Brook containing two spotted salamander egg masses. Looking southeast. Needs a revisit (was revised on 11.23.11).



Photo No.: 2
Plan ID: 4NVP
Vernal Pool: CA_31NVP_BA504
CA_31NVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Looking east.



Photo No.: 3
Plan ID: 4NVP
Vernal Pool: CA_31NVP_BA504
CA_31NVP_BA523
Date: May 4, 2011
Photographer: David Brenneman

Comments: Looking north.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 4NVP

Vernal Pool: CA_31NVP_BA504
CA_31NVP_BA523

Date: May 4, 2011

Photographer: David Brenneman

Comments: Looking southwest.



Photo No.: 5

Plan ID: 4NVP

Vernal Pool: CA_31NVP_BA504
CA_31NVP_BA523

Date: May 4, 2011

Photographer: David Brenneman

Comments: Spotted salamander egg mass.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 5NVP
Vernal Pool: CA_35NVP_BA504
CA_35NVP_BA523
Date: May 4, 2011
Photographer: Lauren Leclerc

Comments: Natural pool in forested wetland containing one spotted salamander egg mass. Possible historic stream channel filled in with soil and leaf litter. Looking northeast. Needs a revisit (was revisited on 11.23.11).



Photo No.: 2
Plan ID: 5NVP
Vernal Pool: CA_35NVP_BA504
CA_35NVP_BA523
Date: May 4, 2011
Photographer: Lauren Leclerc

Comments: Looking east.



Photo No.: 3
Plan ID: 5NVP
Vernal Pool: CA_35NVP_BA504
CA_35NVP_BA523
Date: May 4, 2011
Photographer: Lauren Leclerc

Comments: Looking southwest.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 5NVP

Vernal Pool: CA_35NVP_BA504
CA_35NVP_BA523

Date: May 4, 2011

Photographer: Lauren Leclerc

Comments: Looking west.



Photo No.: 5

Plan ID: 5NVP

Vernal Pool: CA_35NVP_BA504
CA_35NVP_BA523

Date: May 4, 2011

Photographer: Lauren Leclerc

Comments: Spotted salamander egg mass.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 6NVP
Vernal Pool: CA_3NVP_BA415
CA_3NVP_BA506
Date: April 15, 2010
Photographer: David Brenneman

Comments: Looking east at natural vernal pool. No wood frog egg masses found at time of survey. Fourteen spotted salamander egg masses found. Should have a revisit (was revised on 5.06.10).



Photo No.: 2
Plan ID: 6NVP
Vernal Pool: CA_3NVP_BA415
CA_3NVP_BA506
Date: April 15, 2010
Photographer: David Brenneman

Comments: Looking south.



Photo No.: 3
Plan ID: 6NVP
Vernal Pool: CA_3NVP_BA415
CA_3NVP_BA506
Date: April 15, 2010
Photographer: David Brenneman

Comments: Looking west.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 6NVP

Vernal Pool: CA_3NVP_BA415
CA_3NVP_BA506

Date: April 15, 2010

Photographer: David Brenneman

Comments: Spotted salamander egg mass
in pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 7NVP
Vernal Pool: CR_2NVP_BA418
CR_2NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward

Comments: Looking northeast at natural vernal pool containing five wood frog egg masses and four spotted salamander egg masses.



Photo No.: 2
Plan ID: 7NVP
Vernal Pool: CR_2NVP_BA418
CR_2NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward

Comments: Looking northwest.



Photo No.: 3
Plan ID: 7NVP
Vernal Pool: CR_2NVP_BA418
CR_2NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward

Comments: Looking southeast.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4
Plan ID: 7NVP
Vernal Pool: CR_2NVP_BA418
CR_2NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward
Comments: Looking southwest.



Photo No.: 5
Plan ID: 7NVP
Vernal Pool: CR_2NVP_BA418
CR_2NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward
Comments: Spotted salamander egg mass.



Photo No.: 6
Plan ID: 7NVP
Vernal Pool: CR_2NVP_BA418
CR_2NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward
Comments: Wood frog egg mass.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1

Plan ID: 8NVP

Vernal Pool: CR_1NVP_BA418
CR_1NVP_BA506

Date: April 18, 2010

Photographer: Heather Storlazzi-Ward

Comments: Looking east at natural vernal pool with spotted salamander egg masses.



Photo No.: 2

Plan ID: 8NVP

Vernal Pool: CR_1NVP_BA418
CR_1NVP_BA506

Date: April 18, 2010

Photographer: Heather Storlazzi-Ward

Comments: Looking north.



Photo No.: 3

Plan ID: 8NVP

Vernal Pool: CR_1NVP_BA418
CR_1NVP_BA506

Date: April 18, 2010

Photographer: Heather Storlazzi-Ward

Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4
Plan ID: 8NVP
Vernal Pool: CR_1NVP_BA418
CR_1NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward
Comments: Looking west.



Photo No.: 5
Plan ID: 8NVP
Vernal Pool: CR_1NVP_BA418
CR_1NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward
Comments: Spotted salamander egg mass.



Photo No.: 6
Plan ID: 8NVP
Vernal Pool: CR_1NVP_BA418
CR_1NVP_BA506
Date: April 18, 2010
Photographer: Heather Storlazzi-Ward
Comments: Spotted salamander egg mass.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Appears to be a natural depression in the landscape that has been enhanced. Pool found in historic quarry area (with apparent cut stone) at ridge top. Significant numbers of wood frog egg masses found. Raptor survey crew said that pool was iced over 1 week prior. Needs further visit for spotted salamanders. Photo facing north.



Photo No.: 2
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing east.



Photo No.: 3
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Granite slabs found around pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Isolated depression adjacent to pool appears to be connected at high water (see notes and sketch, GPS center point flag 7 taken here).



Photo No.: 5
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing north.



Photo No.: 6
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 7
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Spotted salamander egg mass.



Photo No.: 8
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing west at pool.



Photo No.: 9
Plan ID: 9PSVP
Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Wood frog adult found in pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 10

Plan ID: 9PSVP

Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Wood frog egg masses.



Photo No.: 11

Plan ID: 9PSVP

Vernal Pool: CR_11SVP_BA421
CR_11SVP_BA506

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Old road adjacent to pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 10 BVP
Vernal Pool: CR_13BVP_BA421
CR_13BVP_BA506

Date: April 21, 2010

Photographer: David Brenneman

Comments: Facing east at small natural pool. Small drainage exiting pool.



Photo No.: 2
Plan ID: 10 BVP
Vernal Pool: CR_13BVP_BA421
CR_13BVP_BA506

Date: April 21, 2010

Photographer: David Brenneman

Comments: Facing north.



Photo No.: 3
Plan ID: 10 BVP
Vernal Pool: CR_13BVP_BA421
CR_13BVP_BA506

Date: April 21, 2010

Photographer: David Brenneman

Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 10 BVP

Vernal Pool: CR_13BVP_BA421
CR_13BVP_BA506

Date: April 21, 2010

Photographer: David Brenneman

Comments: Facing west at pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 11BVP
Vernal Pool: CR_10BVP_BA421
CR_10BVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Small natural feature on ridge plateau. Narrow drainage from CR_11VP_BA421. No egg masses found. Photo facing east.



Photo No.: 2
Plan ID: 11BVP
Vernal Pool: CR_10BVP_BA421
CR_10BVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing north.



Photo No.: 3
Plan ID: 11BVP
Vernal Pool: CR_10BVP_BA421
CR_10BVP_BA506
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 11BVP

Vernal Pool: CR_10BVP_BA421
CR_10BVP_BA506

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Facing west at pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 12BVP
Vernal Pool: CR_8BVP_BA421
CR_8BVP_BA507
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing east at pool complex. Natural feature lacking vegetation. No egg masses present at time of survey.



Photo No.: 2
Plan ID: 12BVP
Vernal Pool: CR_8BVP_BA421
CR_8BVP_BA507
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing north.



Photo No.: 3
Plan ID: 12BVP
Vernal Pool: CR_8BVP_BA421
CR_8BVP_BA507
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 12BVP

Vernal Pool: CR_8BVP_BA421
CR_8BVP_BA507

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Facing west.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 13BVP
Vernal Pool: CR_6VP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing south.



Photo No.: 2
Plan ID: 13BVP
Vernal Pool: CR_6VP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing south.



Photo No.: 3
Plan ID: 13BVP
Vernal Pool: CR_6VP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 14NVP
Vernal Pool: CR_7NVP_BA421
CR_7NVP_BA507
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Kettle bog on top of ridge. Pools “ringing” outer boundary of bog with raised sphagnum mound in center. Photo facing east. No egg masses found in bog at time of survey.



Photo No.: 2
Plan ID: 14NVP
Vernal Pool: CR_7NVP_BA421
CR_7NVP_BA507
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing north.



Photo No.: 3
Plan ID: 14NVP
Vernal Pool: CR_7NVP_BA421
CR_7NVP_BA507
Date: April 21, 2010
Photographer: Rodney Kelshaw

Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 14NVP

Vernal Pool: CR_7NVP_BA421
CR_7NVP_BA507

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Looking west at bog.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 15BVP
Vernal Pool: CR_4BVP_BA419
CR_4BVP_BA507
Date: April 19, 2010
Photographer: Rodney Kelshaw

Comments: Looking east at natural pool complex. No egg masses found.



Photo No.: 2
Plan ID: 15BVP
Vernal Pool: CR_4BVP_BA419
CR_4BVP_BA507
Date: April 19, 2010
Photographer: Rodney Kelshaw

Comments: Looking north at pool complex.



Photo No.: 3
Plan ID: 15BVP
Vernal Pool: CR_4BVP_BA419
CR_4BVP_BA507
Date: April 19, 2010
Photographer: Rodney Kelshaw

Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 15BVP

Vernal Pool: CR_4BVP_BA419
CR_4BVP_BA507

Date: April 19, 2010

Photographer: Rodney Kelshaw

Comments: Looking west.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 16BVP
Vernal Pool: CR_14BVP_BA504
CR_14BVP_BA523
Date: May 4, 2010
Photographer: Lauren Leclerc

Comments: Small pool in natural drainage swale. No egg masses were present at time of survey. Looking north. Needs a revisit (revised on 05.23.10).



Photo No.: 2
Plan ID: 16BVP
Vernal Pool: CR_14BVP_BA504
CR_14BVP_BA523
Date: May 4, 2010
Photographer: Lauren Leclerc

Comments: Looking east.



Photo No.: 3
Plan ID: 16BVP
Vernal Pool: CR_14BVP_BA504
CR_14BVP_BA523
Date: May 4, 2010
Photographer: Lauren Leclerc

Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 16BVP

Vernal Pool: CR_14BVP_BA504
CR_14BVP_BA523

Date: May 4, 2010

Photographer: Lauren Leclerc

Comments: Looking west.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 17BVP
Vernal Pool: CR_5BVP_BA421
CR_5BVP_BA507

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Looking north at shallow natural pool. No egg masses present.



Photo No.: 2
Plan ID: 17BVP
Vernal Pool: CR_5BVP_BA421
CR_5BVP_BA507

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Looking south.



Photo No.: 3
Plan ID: 17BVP
Vernal Pool: CR_5BVP_BA421
CR_5BVP_BA507

Date: April 21, 2010

Photographer: Rodney Kelshaw

Comments: Looking west.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 1
Plan ID: 18BVP
Vernal Pool: CR_3BVP_BA419
CR_3BVP_BA507
Date: April 19, 2010
Photographer: David Brenneman
Comments: Looking east at natural vernal pool lacking egg masses.



Photo No.: 2
Plan ID: 18BVP
Vernal Pool: CR_3BVP_BA419
CR_3BVP_BA507
Date: April 19, 2010
Photographer: David Brenneman
Comments: Looking north.



Photo No.: 3
Plan ID: 18BVP
Vernal Pool: CR_3BVP_BA419
CR_3BVP_BA507
Date: April 19, 2010
Photographer: David Brenneman
Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables

Project: Canton Mountain Wind Project – Spring 2010 and 2011 Vernal Pool Surveys



Photo No.: 4

Plan ID: 18BVP

Vernal Pool: CR_3BVP_BA419
CR_3BVP_BA507

Date: April 19, 2010

Photographer: David Brenneman

Comments: Looking west.



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: CA-34NP-BAS04 MDIFW Pool ID: _____

CA-348NP-BAS23

1. PRIMARY OBSERVER INFORMATION

- a. Observer name: Lauren Leclerc, David Brenneman
b. Contact and credentials previously provided? No (submit Addendum 1) Yes

2. PROJECT CONTACT INFORMATION

- a. Contact name: same as observer other Kathleen Miller
b. Contact and credentials previously provided? No (submit Addendum 1) Yes
c. Project Name: Canton Mountain Wind

NOTE: Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required for nonprofessional observers and encouraged for all observers.

3. LANDOWNER CONTACT INFORMATION

- a. Are you the landowner? Yes No If no, was landowner permission obtained for survey? Yes No
b. Landowner's contact information (required)
Name: Linwood + Roxanne Worster Phone: (207) 897-5572
Street Address: 387 Chesterville Rd City: Chesterville State: ME Zip: 04938
c. Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Canton

Brief site directions to the pool (using mapped landmarks):

Drive north on Ludden lane approx 750 feet from Canton Point rd
The VP is approx. 30' to the west of Ludden lane adjacent to the river!

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

- USGS topographic map with pool clearly marked.
Large scale aerial photograph with pool clearly marked.
GPS data (complete section below).

GPS location of vernal pool

Longitude/Easting: 393614.828 Latitude/Northing: 4927704.523

Check Datum: NAD27 NAD83 / WGS84 Coordinate system: UTM

- Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (best)
The pool perimeter is delineated by multiple GPS points. (excellent) - Include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (good)
The center of the pool is approximately m /ft in the compass direction of degrees from the above GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

1 BVP

- Choose the best descriptor for the landscape setting:
 - Isolated depression
 - Floodplain depression
 - Pool associated with larger wetland complex
 - Other: rocky oxbow

- Check all wetland types that best apply to this pool:

| | | |
|--|---|---|
| <input type="checkbox"/> Forested swamp | <input type="checkbox"/> Wet meadow | <input type="checkbox"/> Slow stream |
| <input type="checkbox"/> Shrub swamp | <input type="checkbox"/> Lake/Pond | <input checked="" type="checkbox"/> Floodplain overflow / oxbow |
| <input type="checkbox"/> Peatland (fen or bog) | <input type="checkbox"/> Abandoned beaver flowage | <input type="checkbox"/> Headwater seepage |
| <input checked="" type="checkbox"/> Emergent marsh | <input type="checkbox"/> Active beaver flowage | <input type="checkbox"/> Other: _____ |

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):

Pool is area of river oxbow, immediately adjacent to current river location.

ii. Pool Hydrology

- Select the pool's estimated hydroperiod AND provide rationale for opinion.

| | | | |
|------------------------------------|--|--|----------------------------------|
| <input type="checkbox"/> Permanent | <input type="checkbox"/> Semi-permanent (drying partially in all years and completely in drought years) | <input checked="" type="checkbox"/> Ephemeral (drying out completely in most years) | <input type="checkbox"/> Unknown |
|------------------------------------|--|--|----------------------------------|

Explain:

Shallow depth & emergent vegetation (grasses) & moss species growing in the bottom of the pool.

■ Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 15 m ft Length: 35 m ft

- Predominate substrate in order of increasing hydroperiod:

| | |
|--|--|
| <input checked="" type="checkbox"/> ^{Rocks} Mineral soil (bare, leaf-litter bottom, or upland mosses present) | <input type="checkbox"/> Organic matter (peat/muck) shallow or restricted to deepest portion |
| <input type="checkbox"/> Mineral soil (sphagnum moss present) | <input type="checkbox"/> Organic matter (peat/muck) deep and widespread |

- Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

| | |
|---|--|
| <input checked="" type="checkbox"/> Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) | <input type="checkbox"/> Wet site ferns (e.g. royal fern, marsh fern) |
| <input type="checkbox"/> Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) | <input type="checkbox"/> Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) |
| <input type="checkbox"/> Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) | <input checked="" type="checkbox"/> Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) |
| <input type="checkbox"/> Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) | <input type="checkbox"/> Aquatic vascular spp. (e.g. pickerelweed, arrowhead) |
| <input type="checkbox"/> Sphagnum moss (anchored or suspended) | <input type="checkbox"/> Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) |
| | <input type="checkbox"/> No vegetation in pool |

■ Faunal indicators (check all that apply): None observed

Fish Bullfrog or Green Frog tadpoles Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

No inlet or outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)

Intermittent ^{inlet} or ^{outlet} Other or Unknown (explain): _____

Inlet: upslope, rocky oxbow Outlet: drainage to river

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5-4-2011, 5/23/2011

1 BVP

b. Indicator abundance criteria

- Was the entire pool surveyed for egg masses? Yes No; what % of 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 SPECIES | 5-4 | | 5/23 | | Egg Masses (or adult Fairy Shrimp) | | Tadpoles/Larvae | | | |
|---------------------------|-------|----|-------|----|------------------------------------|--------------------------------|-----------------|---|-------------------------------|---|
| | Count | CL | Count | CL | Confidence Level ¹ | Egg Mass Maturity ² | Observed | | Confidence Level ¹ | |
| Wood Frog | 0 | 0 | 0 | 0 | - | - | 0 | 0 | - | - |
| Spotted Salamander | 0 | 0 | 0 | 0 | - | - | 0 | 0 | - | - |
| Blue-spotted Salamander | 0 | 0 | 0 | 0 | - | - | 0 | 0 | - | - |
| Fairy Shrimp ³ | 0 | 0 | 0 | 0 | - | - | | | - | - |

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%
 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching
 3-Fairy Shrimp: X = present

c. Rarity criteria None observed

- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations should be accompanied by photographs (labeled with observer name, pool location, and date).

| SPECIES | Method of Verification* | | | CL** | SPECIES | Method of Verification* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

*Method of verification: P = Photographed, H = Handled, S = Seen
 **CL - Confidence level in species determination: 1 = <60%, 2 = 60-95%, 3 = >95%

d. Optional observer recommendation:

SVP Potential SVP Non Significant VP Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Pool unlikely to have indicator sp egg masses @ and visit as no EM seen in this visit & no spermatophores.

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: Significant Potentially Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.

Comments: _____



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: CA-33VP-BA504 MDEW Pool ID: _____

1. PRIMARY OBSERVER INFORMATION

CA-33VP-BA523

- a. Observer name: Lauren Leclerc, David Breneman
b. Contact and credentials previously provided? No (submit Addendum 1) Yes

2. PROJECT CONTACT INFORMATION

- a. Contact name: same as observer other Kathleen Miller
b. Contact and credentials previously provided? No (submit Addendum 1) Yes
c. Project Name: Canton Mountain Wind

NOTE: Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required for nonprofessional observers and encouraged for all observers.

3. LANDOWNER CONTACT INFORMATION

- a. Are you the landowner? Yes No If no, was landowner permission obtained for survey? Yes No
b. Landowner's contact information (required)
Name: Linwood + Roxanne Worster Phone: (207) 897-5572
Street Address: 387 Chesterville Road City: Chesterville State: ME Zip: 04938
c. Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: DIXFIELD

Brief site directions to the pool (using mapped landmarks):

FROM INT. OF WIDDEN LANE AND CANTON POINT RD FOLLOW WIDDEN LANE NORTH
750'. POOL IS 35' ON WEST SIDE OF ROAD

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

- USGS topographic map with pool clearly marked.
Large scale aerial photograph with pool clearly marked.
[X] GPS data (complete section below).

GPS location of vernal pool

Longitude/Easting: 393600.212 Latitude/Northing: 4927721.559
Check Datum: NAD27 [X] NAD83 / WGS84 Coordinate system: UTM

- Check one: [X] GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (best)
The pool perimeter is delineated by multiple GPS points. (excellent)
- Include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (good)
The center of the pool is approximately ___ m / ft ___ in the compass direction of ___ degrees from the above GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

2 NVP

Choose the best descriptor for the landscape setting:

- Isolated depression
- Floodplain depression
- Pool associated with larger wetland complex
- Other: oxbow

Check all wetland types that best apply to this pool:

- Forested swamp
- Shrub swamp
- Peatland (fen or bog)
- Emergent marsh
- Wet meadow
- Lake/Pond
- Abandoned beaver flowage
- Active beaver flowage
- Slow stream
- Floodplain overflow / oxbow
- Headwater seepage
- Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):

ii. Pool Hydrology

Select the pool's estimated hydroperiod AND provide rationale for opinion.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years)
- Ephemeral (drying out completely in most years)
- Unknown

Explain:

FED BY LYDGEN BROOK (FLOOD STRESS). WAS NEARLY DRY IN AUGUST OF 2010.

Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

Approximate size of pool (at spring highwater): Width: 20 m ft Length: 75 m ft

Predominate substrate in order of increasing hydroperiod:

- 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 hydroperiod (check all that apply):

- Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- Sphagnum moss (anchored or suspended)
- Wet site ferns (e.g. royal fern, marsh fern)
- Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- No vegetation in pool

Faunal indicators (check all that apply): None OBS

- Fish
- Bullfrog or Green Frog tadpoles
- Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- No inlet or outlet
- Intermittent inlet or outlet
- Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Other or Unknown (explain): _____

CA-33NVP-BA523

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5/4/2011, 5/23/2011

2 NVP

b. Indicator abundance criteria

- Was the entire pool surveyed for egg masses? Yes No; what % of 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 SPECIES | 5/4 | | 5/23 | | Egg Masses (or adult Fairy Shrimp) | | Tadpoles/Larvae | | | |
|---------------------------|-------|-------|-------------------------------|-------------------------------|------------------------------------|--------------------------------|-----------------|---|-------------------------------|---|
| | Count | Count | Confidence Level ¹ | Confidence Level ¹ | Egg Mass Maturity ² | Egg Mass Maturity ² | Observed | | Confidence Level ¹ | |
| Wood Frog | 0 | 0 | - | - | - | - | 0 | 0 | - | - |
| Spotted Salamander | 1 | 1 | 3 | 3 | M | A | 0 | 0 | - | - |
| Blue-spotted Salamander | 0 | 0 | - | - | - | - | 0 | 0 | - | - |
| Fairy Shrimp ³ | 0 | 0 | - | - | | | | | | |

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%
 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching
 3-Fairy Shrimp: X = present

c. Rarity criteria NONE OBS

- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations should be accompanied by photographs (labeled with observer name, pool location, and date).

| SPECIES | Method of Verification* | | | CL** | SPECIES | Method of Verification* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

*Method of verification: P = Photographed, H = Handled, S = Seen
 **CL - Confidence level in species determination: 1 = <60%, 2 = 60-95%, 3 = >95%

d. Optional observer recommendation:

- SVP Potential SVP Non Significant VP Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: **Maine Dept. of Inland Fisheries and Wildlife**
 Attn: Vernal Pools
 650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: Significant Potentially Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.

Comments: _____



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: CA-32VP-BA501 MDIFW Pool ID: _____

CA-32BVP-8A523

1. PRIMARY OBSERVER INFORMATION

- a. Observer name: Lauren Leclerc, David Brenneman
b. Contact and credentials previously provided? No (submit Addendum 1) Yes

2. PROJECT CONTACT INFORMATION

- a. Contact name: same as observer other Kathleen Miller
b. Contact and credentials previously provided? No (submit Addendum 1) Yes
c. Project Name: Canton Mountain Wind

NOTE: Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required for nonprofessional observers and encouraged for all observers.

3. LANDOWNER CONTACT INFORMATION

- a. Are you the landowner? Yes No If no, was landowner permission obtained for survey? Yes No
b. Landowner's contact information (required)
Name: Linwood + Roxanne Worster Phone: (207) 897-5572
Street Address: 387 Chesterville Road City: Chesterville State: ME Zip: 04938
c. Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: DIXFIELD

Brief site directions to the pool (using mapped landmarks):

TAKE CAUTION POINT RD TO LUDDEN LANE. FOLLOW LUDDEN LANE NORTH FOR ~ 750'. POOL IS ON WEST SIDE OF RD (~35' FROM RD)

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

- USGS topographic map with pool clearly marked.
Large scale aerial photograph with pool clearly marked.
GPS data (complete section below).

GPS location of vernal pool

Longitude/Easting: 393591.438 Latitude/Northing: 4927724.136

Check Datum: NAD27 NAD83 / WGS84 Coordinate system: UTM

- Check one: GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (best)
The pool perimeter is delineated by multiple GPS points. (excellent) - Include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (good)
The center of the pool is approximately ___ m /ft ___ in the compass direction of ___ degrees from the above GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

3 BVP

■ Choose the best descriptor for the landscape setting:

- Isolated depression
- Floodplain depression
- Pool associated with larger wetland complex
- Other: EX BOW

■ Check all wetland types that best apply to this pool:

- Forested swamp
- Shrub swamp
- Peatland (fen or bog)
- Emergent marsh
- Wet meadow
- Lake/Pond
- Abandoned beaver flowage
- Active beaver flowage
- Slow stream
- Floodplain overflow / oxbow
- Headwater seepage
- Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale for opinion.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years)
- Ephemeral (drying out completely in most years)
- Unknown

Explain:

SHALLOW POOL FED BY OVERFLOW FROM UPRIVER BROOK @ FLOOD STAGE.

■ Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 10 m ft Length: 35 m ft

■ Predominate substrate in order of increasing hydroperiod:

- 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 hydroperiod (check all that apply):

- Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- Sphagnum moss (anchored or suspended)
- Wet site ferns (e.g. royal fern, marsh fern)
- Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- No vegetation in pool

■ Faunal indicators (check all that apply): NONE CBS

- Fish
- Bullfrog or Green Frog tadpoles
- Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- No inlet or outlet
- Intermittent inlet or outlet
- Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Other or Unknown (explain): _____

6. VERNAL POOL INDICATOR INFORMATION

3 BVP

a. Indicator survey dates: 5/4/2011, 5/23/2011

b. Indicator abundance criteria

- Was the entire pool surveyed for egg masses? Yes No; what % of 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 SPECIES | 5/4 | | 5/23 | | Egg Masses (or adult Fairy Shrimp) | | Tadpoles/Larvae | | | |
|---------------------------|------------|-------------------------------|------------|-------------------------------|------------------------------------|----------|-----------------|----------|-------------------------------|--|
| | Egg Masses | Confidence Level ¹ | Egg Masses | Confidence Level ¹ | Egg Mass Maturity ² | Observed | Observed | Observed | Confidence Level ¹ | |
| Wood Frog | 0 | - | 0 | - | - | 0 | 0 | 0 | - | |
| Spotted Salamander | 0 | - | 0 | - | - | 0 | 0 | 0 | - | |
| Blue-spotted Salamander | 0 | - | 0 | - | - | 0 | 0 | 0 | - | |
| Fairy Shrimp ³ | 0 | - | 0 | - | - | | | | | |

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%
 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching
 3-Fairy Shrimp: X = present

c. Rarity criteria NONE OBS

- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations should be accompanied by photographs (labeled with observer name, pool location, and date).

| SPECIES | Method of Verification* | | | CL** | SPECIES | Method of Verification* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

*Method of verification: P = Photographed, H = Handled, S = Seen
 **CL - Confidence level in species determination: 1 = <60%, 2 = 60-95%, 3 = >95%

d. Optional observer recommendation:

- SVP Potential SVP Non Significant VP Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
 Attn: Vernal Pools
 650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: Significant Potentially Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.

Comments:



Maine State Vernal Pool Assessment Form 4 NVP



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: CA-31VP-BAS04 MDJEW Pool ID: _____
CA-31VP-BAS03

1. PRIMARY OBSERVER INFORMATION

- a. Observer name: Lauren Leclerc, David Brennehan
- b. Contact and credentials previously provided? No (submit Addendum 1) Yes

2. PROJECT CONTACT INFORMATION

- a. Contact name: same as observer other Kathleen Miller
- b. Contact and credentials previously provided? No (submit Addendum 1) Yes
- c. Project Name: Canton Mountain Wind

NOTE: Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required for nonprofessional observers and encouraged for all observers.

3. LANDOWNER CONTACT INFORMATION

- a. Are you the landowner? Yes No If no, was landowner permission obtained for survey? Yes No
- b. Landowner's contact information (required)
Name: Linwood + Roxanne Worster Phone: (207) 897-5572
Street Address: 387 Chesterville Road City: Chesterville State: ME Zip: 04938
- c. Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: DIXFIELD

Brief site directions to the pool (using mapped landmarks):

CANTON POINT RD @ INTERSECTION OF LIDDEN LAKE HEAD NORTH ON LIDDEN LAKE ROAD IN OXBOW 750' NORTH ALONG RD. POOL IS 35' WEST OF ROAD.

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

- USGS topographic map with pool clearly marked.
- Large scale aerial photograph with pool clearly marked.
- GPS data (complete section below).

GPS location of vernal pool

Longitude/Easting: 393578.97 Latitude/Northing: 4927748.71
Check Datum: NAD27 NAD83 / WGS84 Coordinate system: UTM

- Check one: GIS shapefile
- send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (best)
- The pool perimeter is delineated by multiple GPS points. (excellent)
- Include map or spreadsheet with coordinates.
 - The above GPS point is at the center of the pool. (good)
 - The center of the pool is approximately _____ m /ft _____ in the compass direction of _____ degrees from the above GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

4 NVP

■ Choose the best descriptor for the landscape setting:

- Isolated depression
- Floodplain depression
- Pool associated with larger wetland complex
- Other: OXBOW OF BROOK

■ Check all wetland types that best apply to this pool:

- Forested swamp
- Shrub swamp
- Peatland (fen or bog)
- Emergent marsh
- Wet meadow
- Lake/Pond
- Abandoned beaver flowage
- Active beaver flowage
- Slow stream
- Floodplain overflow / oxbow
- Headwater seepage
- Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):

ii. Pool Hydrology

■ Select the pool's estimated hydroperiod AND provide rationale for opinion.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years)
- Ephemeral (drying out completely in most years)
- Unknown

Explain:

SHALLOW ROCKY CHANNEL ONLY RECEIVES WATER FROM BROOK @ FLOOD STAGE IN SPRING AND FALL.

■ Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

■ Approximate size of pool (at spring highwater): Width: 15 m ft Length: 50 m ft

■ Predominate substrate in order of increasing hydroperiod:

- 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 hydroperiod (check all that apply):

- Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- Sphagnum moss (anchored or suspended)
- Wet site ferns (e.g. royal fern, marsh fern)
- Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- No vegetation in pool

■ Faunal indicators (check all that apply): NONE OBS

- Fish
- Bullfrog or Green Frog tadpoles
- Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- No inlet or outlet
- Intermittent inlet or outlet
- Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Other or Unknown (explain): _____

6. VERNAL POOL INDICATOR INFORMATION

4 NVP

a. Indicator survey dates: 5/4/2011, 5/23/2011

b. Indicator abundance criteria

- Was the entire pool surveyed for egg masses? Yes No; what % of 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 SPECIES | 5/4 | | 5/23 | | Egg Masses (or adult Fairy Shrimp) | | Tadpoles/Larvae | | | |
|---------------------------|------------|-------------------------------|------------|-------------------------------|------------------------------------|----------|-----------------|----------|-------------------------------|--|
| | Egg Masses | Confidence Level ¹ | Egg Masses | Confidence Level ¹ | Egg Mass Maturity ² | Observed | Observed | Observed | Confidence Level ¹ | |
| Wood Frog | 0 | - | 0 | - | - | 0 | 0 | 0 | - | |
| Spotted Salamander | 2 | 3 | 2 | 3 | M | 0 | 0 | 0 | - | |
| Blue-spotted Salamander | 0 | - | 0 | - | - | 0 | 0 | 0 | - | |
| Fairy Shrimp ³ | 0 | - | 0 | - | - | | | | | |

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%
 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching
 3-Fairy Shrimp: X = present

c. Rarity criteria NONE OBSERVED

Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations should be accompanied by photographs (labeled with observer name, pool location, and date).

| SPECIES | Method of Verification* | | | CL** | SPECIES | Method of Verification* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

*Method of verification: P = Photographed, H = Handled, S = Seen
 **CL - Confidence level in species determination: 1 = <60%, 2 = 60-95%, 3 = >95%

d. Optional observer recommendation:

- SVP Potential SVP Non Significant VP Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Oxbow, mineral rocky bottom, cobble/boulders throughout

Send completed form and supporting documentation to: Maine Dept. of Inland Fisheries and Wildlife
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: Significant Potentially Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.

Comments:



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: CA-35NP BAS04 MDPFW Pool ID: CA-35NP-BAS23

1. PRIMARY OBSERVER INFORMATION

- a. Observer name: Lauren Leclerc, David Brenneman
b. Contact and credentials previously provided? No (submit Addendum 1) Yes

2. PROJECT CONTACT INFORMATION

- a. Contact name: same as observer other Kathleen Miller
b. Contact and credentials previously provided? No (submit Addendum 1) Yes
c. Project Name: Canton Mountain Wind

NOTE: Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required for nonprofessional observers and encouraged for all observers.

3. LANDOWNER CONTACT INFORMATION

- a. Are you the landowner? Yes No If no, was landowner permission obtained for survey? Yes No
b. Landowner's contact information (required)
Name: Joaquin + Crystal Mills Phone: (207) 320-0941
Street Address: 140 Ludden Lane City: Canton State: ME Zip: 04221
c. Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

a. Location Township: Canton

Brief site directions to the pool (using mapped landmarks):

From Canton Point Road travel north along Ludden Lane approx 500 feet Pool is approx 75' to east of Ludden Lane (across the road) from a road-off road.

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

- USGS topographic map with pool clearly marked.
Large scale aerial photograph with pool clearly marked.
X GPS data (complete section below).

GPS location of vernal pool

Longitude/Easting: 393569.406 Latitude/Northing: 4928963.850
Check Datum: NAD27 X NAD83 / WGS84 Coordinate system: UTM

- Check one: X GIS shapefile - send to Jason.Czapiga@maine.gov; observer has reviewed shape accuracy (best)
The pool perimeter is delineated by multiple GPS points. (excellent) - include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (good)
The center of the pool is approximately m / ft in the compass direction of degrees from the above GPS point. (acceptable)

5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

5 NVP

Choose the best descriptor for the landscape setting:

- Isolated depression
- Floodplain depression
- Pool associated with larger wetland complex
- Other: _____

Check all wetland types that best apply to this pool:

- Forested swamp
- Shrub swamp
- Peatland (fen or bog)
- Emergent marsh
- Wet meadow
- Lake/Pond
- Abandoned beaver flowage
- Active beaver flowage
- Slow stream
- Floodplain overflow / oxbow
- Headwater seepage
- Other: _____

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):

Possible historic impact removed from site with surrounding land

ii. Pool Hydrology

Select the pool's estimated hydroperiod AND provide rationale for opinion.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years)
- Ephemeral (drying out completely in most years)
- Unknown

Explain:

Very shallow depth

Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

Approximate size of pool (at spring highwater): Width: 15 m ft Length: 200 m ft

Predominate substrate in order of increasing hydroperiod:

- 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 hydroperiod (check all that apply):

- Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern)
- Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern)
- Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle)
- Sphagnum moss (anchored or suspended)
- Wet site ferns (e.g. royal fern, marsh fern)
- Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly)
- Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes)
- Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)
- No vegetation in pool

Faunal indicators (check all that apply): None recorded

- Fish
- Bullfrog or Green Frog tadpoles
- Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- No Inlet or outlet
- Intermittent inlet or outlet
- Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Other or Unknown (explain): _____

CA-35NP-BAS23

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5-4-2011, 5/23/2011

5 NVP

b. Indicator abundance criteria

- Was the entire pool surveyed for egg masses? Yes No; what % of 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 SPECIES | Egg Masses (or adult Fairy Shrimp) | | Tadpoles/Larvae | |
|---------------------------|------------------------------------|--------------------------------|-----------------|-------------------------------|
| | Confidence Level ¹ | Egg Mass Maturity ² | Observed | Confidence Level ¹ |
| Wood Frog | 0 | - | 0 | - |
| Spotted Salamander | 0 | - | 0 | - |
| Blue-spotted Salamander | 0 | - | 0 | - |
| Fairy Shrimp ³ | 0 | - | | |

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%
 2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching
 3-Fairy Shrimp: X = present

c. Rarely criteria None observed

- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations should be accompanied by photographs (labeled with observer name, pool location, and date).

| SPECIES | Method of Verification* | | | CL** | SPECIES | Method of Verification* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

*Method of verification: P = Photographed, H = Handled, S = Seen
 **CL - Confidence level in species determination: 1 = <60%, 2 = 60-95%, 3 = >95%

d. Optional observer recommendation:

- SVP Potential SVP Non Significant VP Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

See no signs of pool - ground is rocky in summer so water is not visible. No signs of wildlife in pool.

Send completed form and supporting documentation to: **Maine Dept. of Inland Fisheries and Wildlife**
 Attn: Vernal Pools
 650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ Initials: _____

This pool is: Significant Potentially Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.

Comments: _____

6 NVP

Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

CA-3NVP-BA506
CA-3NVP-BA415

Project Name#: CANTON MTN WIND Organization Name: TETRA TECH Pool ID: [REDACTED]

Observer Contact Information

Primary Observer (include secondary, if applicable): DAVID BRENNEMAN Phone or Email: DBRENNEMAN@BOYLEASSOC.COM

Primary Observer has Submitted the MAWS VP Credential Form: [X] Previously Submitted [] Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: [X] Yes [] No Notes: KATHLEEN MILLER - TETRA TECH

Landowner contact information (REQUIRED): Name: Thomdike + Sons, Inc. Phone: (207) 684-3299

Street Address: 26 South Main St. City: Strong State: ME Zip: 04983

1. OBSERVER RECOMMENDATION

Table with 4 columns: This pool is: Significant, Potentially Significant, Not significant due to:; and 2 rows: does not meet MDEP SVP biological criteria, does not meet MDEP vernal pool definition criteria, Notes:

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: CANTON

Brief site directions to the pool (using mapped landmarks): APPROX 1800' ALONG WOODS ROAD FROM DUNN CEMETARY

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)

Brand and Model of GPS unit**: TRIMBLE GEO 6X Mapping grade GPS with post processed corrections: [X] Yes [] No

Check / submit one: [] GPS-location of center point of the pool included in shapefile named*

[X] GPS-location of pool perimeter included as polygon shapefile named* C0415BA

[] Pool Center Point Easting***: Pool Center Point Northing***:

* Observers must check the information on an aerial photo to ensure data quality.

** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.

*** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:

[] Isolated Upland Depression [X] Pool associated with larger wetland complex

[] Floodplain Depression [] Other:

ii. Check all palustrine types that best apply to this pool or wetland:

- [X] Forested wetland 50% [] Wet meadow [] Slow stream
[X] Shrub wetland 50% [] Shallow pond [] Floodplain overflow / Oxbow
[] Peatland (acidic fen or bog) [] Abandoned beaver flowage [] Headwater seepage
[] Emergent marsh [] Active beaver flowage [] Other:

iii. Predominate substrate in order of increasing hydroperiod:

- [] Mineral soil (bare, leaf-litter bottom, or upland mosses present)
[X] Mineral soil (sphagnum moss present)
[] Organic matter (peat/muck) shallow or restricted to deepest portion
[] Organic matter (peat/muck) deep and widespread

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- [] Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) [X] Sphagnum moss (anchored or suspended)
[] Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) [] Wet site ferns (e.g. royal fern, marsh fern)
[] Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) [X] Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)
[] Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) [] Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
[] Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts

i. Pool's Origin: [] Natural [X] Natural-Modified [] Non-Natural [] Unknown

* Describe any modern or historic modifications to the pool and associated wetland (REQUIRED):

WOODS ROAD w/ IN 75' OF POOL, EVIDENCE OF RENATURALIZED SKID TRAIL FROM HISTORIC LOGGING THRU w/ POOL

3. VERNAL POOL SURVEY INFORMATION (continued)

Pool ID: _____

ii. Hydrology

Approximate size of pool (at max. capacity): Width 50 m [] ft (check one) Length 40 m [] ft (check one)
Maximum depth at time of survey: 8 in [] ft [] cm [] m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent
Semi-permanent (drying partially in all years and completely in drought years)
Ephemeral (drying out completely in most years)
Recommend dry out period observation

iii. Inlet/Outlet Permanency

- No inlet / outlet
Ephemeral inlet / outlet
Permanent inlet or outlet (channel with well-defined banks and permanent flow)
Other

iv. Faunal Indicators:

- Fish (species):
Bullfrog or Green frog tadpoles
Other:

c. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 4/15/10 5/06/2010

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

Table with columns: Indicator Species, Observation: Information: #, VM*, CL**, EMI***, Tadpoles/Larvae VM*, CL**

*Verification Method: S= Seen, H= Handled, P= Photographed
**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%
*** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
If yes, indicate which species were targeted:
Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (observer name, pool location, and date).

Table for rare species with columns: Species, Verification Method* (P, H, S), CL**, Species, Verification Method* (P, H, S), CL**

*Verification Method: P= Photographed, H= Handled, S= Seen
**CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

NEEDS 2nd VISIT

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:
Signature: [Signature] Date: 4/15/10

For MDIF&W Use Only: Reviewed by MDIF&W Date: Initials:
This pool is:
Significant Potentially significant but lacking critical data Not significant due to: does not meet biological criteria and/or does not meet definition criteria

see sketch

Project Name#: Canton Mt Wind Organization Name: Tetra Tech (Bayle) Pool ID: _____

Observer Contact Information

Primary Observer (include secondary, if applicable): Helen Stierlazzi Team A Phone or Email 707 317-4630

Primary Observer has Submitted the MAWS VP Credential Form: Previously Submitted Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: Yes No Notes: Tetra Tech (Kathleen Miller)

Landowner contact information (REQUIRED): Name: Helen Industries Phone: (617) 388-6633
150 Appleton St. #4D City: Boston State: MA Zip: 02116

1. OBSERVER RECOMMENDATION

| | | | | |
|---------------|--------------------------------------|---|--|--|
| This pool is: | <input type="checkbox"/> Significant | <input type="checkbox"/> Potentially Significant <small>(include notes in section 3e. on Page 2)</small> | <input type="checkbox"/> Not significant due to: | <input checked="" type="checkbox"/> does not meet MDEP SVP biological criteria |
| | | | | <input type="checkbox"/> does not meet MDEP vernal pool definition criteria |
| | | | | Notes: |

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Canton
Brief site directions to the pool (using mapped landmarks): _____

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)
Brand and Model of GPS unit**: Trimble Geo XH Mapping grade GPS with post processed corrections: Yes No
Check / submit one: GPS-location of center point of the pool included in shapefile named* _____
 GPS-location of pool perimeter included as polygon shapefile named* CO418BA
 Pool Center Point Easting***: _____ Pool Center Point Northing***: _____

* Check the information on an aerial photo to ensure data quality.
** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.
*** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:
 Isolated Upland Depression Pool associated with larger wetland complex
 Floodplain Depression Other: _____

ii. Check all palustrine types that best apply to this pool or wetland:
 Forested wetland Wet meadow Slow stream
 Shrub wetland Shallow pond Floodplain overflow / Oxbow
 Peatland (acidic fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other:

iii. Predominate substrate in order of increasing hydroperiod:
 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

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):
 Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) Wet site ferns (e.g. royal fern, marsh fern)
 Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)
 Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts

i. Pool's Origin: Natural Natural-Modified Non-Natural Unknown
• Describe any modern or historic modifications to the pool and associated wetland (REQUIRED): _____

3. VERNAL POOL SURVEY INFORMATION (continued)

ii. Hydrology

- Approximate size of pool (at max. capacity): Width 150 m ft (check one) Length 300 m ft (check one)
- Maximum depth at time of survey: 30 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent _____
- Semi-permanent (drying partially in all years and completely in drought years) _____
- Ephemeral (drying out completely in most years) _____
- Recommend dry out period observation _____

iii. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Ephemeral inlet / outlet Other _____

iv. Faunal Indicators:

- Fish (species): N/A Bullfrog or Green frog tadpoles Other: N/A

c. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 4.18.10

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | | | Tadpoles/Larvae | |
|-------------------------|----------------|------------------------------------|--------------|----------|----------|----------|------------|-----------------|--|
| | Information: | # | VM* | CL** | EMI*** | | VM* | CL** | |
| | Date: | | | | | | | | |
| Wood frog | <u>4/18.10</u> | <u>5/0</u> | <u>S,H,P</u> | <u>3</u> | <u>3</u> | <u>M</u> | | | |
| Spotted Salamander | <u>4/18.10</u> | <u>17</u> | <u>S,H,P</u> | <u>5</u> | <u>3</u> | <u>3</u> | <u>M-A</u> | <u>-</u> | |
| Blue-spotted Salamander | | <u>-</u> | | | | | | | |
| Fairy Shrimp | | <u>-</u> | | | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed

**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%

***Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted: _____
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen

**CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

old woods road adj to VP in the SW corner, pool located in area of old kettle hole? surrounding area forested (coniferous)

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools, 650 State Street, Bangor, ME 04401
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: [Signature] Date 5/17/2010

For MDIF&W Use Only: Reviewed by MDIF&W Date: _____ Initials: _____

This pool is:

- Significant
- Potentially significant but lacking critical data
- Not significant due to: does not meet biological criteria and/or does not meet definition criteria

Vernal Pool Data Collection Form

Project Name#: Canton Mt. Wind Organization Name: Tetra Tech (Bourke) Pool ID: _____

Observer Contact Information

Primary Observer (include secondary, if applicable): Heather Steuker Wood Phone or Email: 207 517 6630

Primary Observer has Submitted the MAWS VP Credential Form: Previously Submitted Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: Yes No Notes: Tetra Tech (Kathleen Miller)

Landowner contact information (REQUIRED): Name: Thorndike + Sons, Inc. Phone: (207) 684-3299

Street Address: 26 South Main St. City: Strong State: ME Zip: 04983

1. OBSERVER RECOMMENDATION

| | | | | |
|---------------|--------------------------------------|---|---|---|
| This pool is: | <input type="checkbox"/> Significant | <input type="checkbox"/> Potentially Significant <small>(include notes in section 3e. on Page 2)</small> | <input checked="" type="checkbox"/> Not significant due to: | <input type="checkbox"/> does not meet MDEP SVP biological criteria |
| | | | | <input type="checkbox"/> does not meet MDEP vernal pool definition criteria |
| | | | | Notes: |

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Canton

Brief site directions to the pool (using mapped landmarks): _____

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)

Brand and Model of GPS unit**: Trimble Geo XT1 Mapping grade GPS with post processed corrections: Yes No

Check / submit one: GPS-location of center point of the pool included in shapefile named* _____

GPS-location of pool perimeter included as polygon shapefile named* C0418BA

Pool Center Point Easting***: _____ Pool Center Point Northing***: _____

* Observers must check the information on an aerial photo to ensure data quality.

** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.

*** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:

Isolated Upland Depression Pool associated with larger wetland complex

Floodplain Depression Other: _____

ii. Check all palustrine types that best apply to this pool or wetland:

Forested wetland Wet meadow Slow stream

Shrub wetland Shallow pond Floodplain overflow / Oxbow

Peatland (acidic fen or bog) Abandoned beaver flowage Headwater seepage

Emergent marsh Active beaver flowage Other: _____

iii. Predominate substrate in order of increasing hydroperiod:

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

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Sphagnum moss (anchored or suspended)

Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) Wet site ferns (e.g. royal fern, marsh fern)

Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)

Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)

Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts

i. Pool's Origin: Natural Natural-Modified Non-Natural Unknown

- Describe any modern or historic modifications to the pool and associated wetland (REQUIRED): _____

3. VERNAL POOL SURVEY INFORMATION (continued)

Pool ID: _____

ii. Hydrology

• Approximate size of pool (at max. capacity): Width 56' m ft (check one) Length 200 m ft (check one)

• Maximum depth at time of survey: 20 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent _____
- Semi-permanent (drying partially in all years and completely in drought years) _____
- Ephemeral (drying out completely in most years) _____
- Recommend dry out period observation _____

iii. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Ephemeral inlet / outlet Other _____

iv. Faunal Indicators:

Fish (species): N/A Bullfrog or Green frog tadpoles Other: N/A

c. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 4-18-10 5/6/2010

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | | | Tadpoles/Larvae | |
|-------------------------|--------------|------------------------------------|----------|------------|----------|------------|----------|-----------------|--|
| | Information: | # | VM* | CL** | EMI*** | | VM* | CL** | |
| | Date: | | | | | | | | |
| Wood frog | <u>0</u> | <u>5/6</u> | | <u>5/6</u> | | <u>5/6</u> | | | |
| Spotted Salamander | <u>17</u> | <u>SH, P</u> | <u>S</u> | <u>3</u> | <u>3</u> | <u>M</u> | <u>A</u> | <u>-</u> | |
| Blue-spotted Salamander | <u>0</u> | <u>-</u> | | | | | | | |
| Fairy Shrimp | <u>0</u> | <u>-</u> | | | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed
 **Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%
 *** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted: _____
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen
 **CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

much woody debris located in rt. of pool. pool located between two saddle's, cigar tube + log cabin
caudally larvae, some predating on SSEM's.

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: [Signature] Date 5/7/2010

For MDIF&W Use Only: Reviewed by MDIF&W: Date: _____ Initials: _____

This pool is:

- Significant
- Potentially significant but lacking critical data
- Not significant due to: does not meet biological criteria and/or does not meet definition criteria

at the Church Hill road + sk etc

9P SVP Maine Association of Wetland Scientists (MAWS)
 Vernal Pool Data Collection Form

CR-11SVP
 CR-11VP-BA421
 BASOB

Project Name#: Canton Meadows Organization Name: Tetra Tech EC

Observer Contact Information

Primary Observer (include secondary, if applicable): Rod Kelshaw & Rob Jordan Phone or Email: (207) 944-6776
 Primary Observer has Submitted the MAWS VP Credential Form: Previously Submitted Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: Yes No Notes: Subcontractor - see Kathleen Miller
 Landowner contact information (REQUIRED): Name: Thorndike + Sons, Inc. Phone: (207) 684-3299
 Street Address: 26 South Main St. City: Strong State: ME Zip: 04983

1. OBSERVER RECOMMENDATION

| | | | | |
|---------------|---|--|--|---|
| This pool is: | <input checked="" type="checkbox"/> Significant | <input type="checkbox"/> Potentially Significant | <input type="checkbox"/> Not significant due to: | <input type="checkbox"/> does not meet MDEP SVP biological criteria |
| | (Include notes in section 3e on Page 2) | | | <input type="checkbox"/> does not meet MDEP vernal pool definition criteria |
| | Notes: | | | |

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Canton
 Brief site directions to the pool (using mapped landmarks): located on the northeast ridge in the northeastern portion

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)
 Brand and Model of GPS unit**: Trimble GeoXM Mapping grade GPS with post processed corrections: Yes No
 Check / submit one: GPS-location of center point of the pool included in shapefile named* _____
 GPS-location of pool perimeter included as polygon shapefile named* C0421RA
 Pool Center Point Easting***: _____ Pool Center Point Northing***: _____

* Observers must check the information on an aerial photo to ensure data quality.
 ** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.
 *** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:

Isolated Upland Depression Pool associated with larger wetland complex
 Floodplain Depression Other: _____

ii. Check all palustrine types that best apply to this pool or wetland:

Forested wetland Wet meadow Slow stream
 Shrub wetland Shallow pond Floodplain overflow / Oxbow
 Peatland (acidic fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: open water

iii. Predominate substrate in order of increasing hydroperiod:

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

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Sphagnum moss (anchored or suspended)
 Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) Wet site ferns (e.g. royal fern, marsh fern)
 Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)
 Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts

i. Pool's Origin: Natural Natural-Modified Non-Natural Unknown
 Describe any modern or historic modifications to the pool and associated wetland (REQUIRED):
Appears to be a natural depression in the landscape that has been enhanced. There was historic granite removal in this area and this appears that some bedrock was removed & a potential old road leading to it.

April 14, 2010

- sketch attached on separate sheet -

9P SVP

Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

CR-115VP-BA421

CR-115VP-BASCC

3. VERNAL POOL SURVEY INFORMATION (continued)

ii. Hydrology

- Approximate size of pool (at max. capacity): Width 60 m ft (check one) Length 80 m ft (check one)
- Maximum depth at time of survey: 3 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years) deep @ center yet small watershed to feed pool
- Ephemeral (drying out completely in most years)
- Recommend dry out period observation

iii. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Ephemeral inlet / outlet Other

iv. Faunal Indicators:

- Fish (species): Bullfrog or Green frog tadpoles Other: Caddis fly larvae water striders whirling g mosquito larva

c. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 2010-4-21

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No Suggest 2nd visit
- For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Egg Masses (or Adult Fairy Shrimp) | | | | | | | | Tadpoles/Larvae | |
|-------------------------|------------------------------------|----|-----|-------|------|---|--------|---|-----------------|------|
| | Observation: | | VM* | | CL** | | EMI*** | | VM* | CL** |
| | Date: | # | | | | | | | | |
| Wood frog | 2010-4-21 | 57 | H | S/H/P | 3 | 3 | M/F | A | | |
| Spotted Salamander | | 7 | 145 | S | 3 | 3 | M | M | | |
| Blue-spotted Salamander | | | | | | | | | | |
| Fairy Shrimp | | | | | | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed

**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%

*** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted:
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen

**CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

Deep pool possibly embanked. There is an ephemeral overflow channel that connects to CR-10VP-BA421
-See attached sketch

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: [Signature] Date 2010-4-21

For MDIF&W Use Only:

Reviewed by MDIF&W Date

Initials

This pool is:

- Significant
- Potentially significant but lacking critical data
- Not significant due to: does not meet biological criteria does not meet definition of vernal pool

-Sketch attached as separate sheet-

5/14 - Pat

Kod Kelshaw 2010-4-21
BA
CR.13 BVP.506

10 BVP Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

Project Name#: Carbon Mountain Organization Name: Tetra Tech EC Pool ID: _____

Observer Contact Information

Primary Observer (include secondary, if applicable): Rod Kelshaw + Dan Bowman Phone or Email (207) 940-6776
 Primary Observer has Submitted the MAWS VP Credential Form: Previously Submitted Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: Yes No Notes: Per: Kathleen Miller
 Landowner contact information (REQUIRED): Name: Thorndike + Sons, Inc. Phone: (207) 684-3299
 Street Address: 26 South Main St. City: Strong State: ME Zip: 04983

1. OBSERVER RECOMMENDATION

| | | | | |
|---------------|--------------------------------------|---|---|--|
| This pool is: | <input type="checkbox"/> Significant | <input type="checkbox"/> Potentially Significant <small>(Include notes in section 3e. on Page 2)</small> | <input checked="" type="checkbox"/> Not significant due to: | <input checked="" type="checkbox"/> does not meet MDEP SVP biological criteria |
| | | | | <input type="checkbox"/> does not meet MDEP vernal pool definition criteria |
| | | | | Notes: |

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Carbon
 Brief site directions to the pool (using mapped landmarks): Northwest edge south of old trail on West facing slope

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)
 Brand and Model of GPS unit**: Trimble Geo XT Mapping grade GPS with post processed corrections: Yes No
 Check / submit one: GPS-location of center point of the pool included in shapefile named* 042130
 GPS-location of pool perimeter included as polygon shapefile named* _____
 Pool Center Point Easting***: _____ Pool Center Point Northing***: _____

* Observers must check the information on an aerial photo to ensure data quality.
 ** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.
 *** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization
 i. Choose the best descriptor for the physical setting:
 Isolated Upland Depression Pool associated with larger wetland complex - small wetland area
 Floodplain Depression Other: _____

ii. Check all palustrine types that best apply to this pool or wetland:
 Forested wetland Wet meadow Slow stream
 Shrub wetland Shallow pond Floodplain overflow / Oxbow
 Peatland (acidic fen or bog) Abandoned beaver flowage Headwater seepage
 Emergent marsh Active beaver flowage Other: _____

iii. Predominate substrate in order of increasing hydroperiod:
 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

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):
 Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Sphagnum moss (anchored or suspended) N/A
 Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) Wet site ferns (e.g. royal fern, marsh fern)
 Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)
 Moist site vasculares (skunk cabbage, jewelweed, blue flag irfs, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
 Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts
 i. Pool's Origin: Natural Natural-Modified Non-Natural Unknown
 Describe any modern or historic modifications to the pool and associated wetland (REQUIRED):
- skid trail upslope / may have been enhanced for drainage

Vernal Pool Data Collection Form

3. VERNAL POOL SURVEY INFORMATION (continued)

II. Hydrology

• Approximate size of pool (at max. capacity): Width 5 m ft (check one) Length 6 m ft (check one)
 • Maximum depth at time of survey: 10 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent
 Semi-permanent (drying partially in all years and completely in drought years)
 Ephemeral (drying out completely in most years)
 Recommend dry out period observation

III. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet / outlet Other non permanent outlet

IV. Faunal Indicators:

- Fish (species): Bullfrog or Green frog tadpoles Other: None Noted

c. Significant Vernal Pool Status under NRPA

I. Survey Date(s): 2010-4-21, 5/6/2010

II. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 ■ For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | Tadpoles/Larvae | |
|-------------------------|--------------|------------------------------------|-----|------|--------|-----------------|------|
| | Information: | # | VM* | CL** | EMI*** | VM* | CL** |
| | Date: | | | | | | |
| Wood frog | 4-21 | 5/6 | | | | | |
| Spotted Salamander | | | | | | | |
| Blue-spotted Salamander | | | | | | | |
| Fairy Shrimp | | | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed

**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%

*** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

III. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 ■ If yes, indicate which species were targeted:
 ■ Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen

**CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

No egg masses or other faunal evidence noted

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
 Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
 Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
 Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: [Signature] Date 2010-4-21

For MDIF&W Use Only:

Reviewed by MDIF&W Date _____ Initials: _____

- This pool is:
 Significant Potentially significant but lacking critical data Not significant due to: does not meet biological criteria and/or does not meet definition criteria

12 BVP

Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

CR-BVP-BA507

CR-BVP-BA721

Project Name#: Canton M.L. Organization Name: Tfe-h EC Pool ID:

Observer Contact Information

Primary Observer (include secondary, if applicable): Rick Jordan Phone or Email 207 671 2760

Primary Observer has Submitted the MAWS VP Credential Form: [X] Previously Submitted [] Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: [X] Yes [] No Notes: see K Miller @ Tfe-h EC

Landowner contact information (REQUIRED): Name: Mark + Donna Brann Phone: (207) 532-8059

Street Address: 833 Canton Pt. Rd City: Dixfield State: ME Zip: 04224

1. OBSERVER RECOMMENDATION

Table with columns for 'This pool is:' (Significant, Potentially Significant, Not significant due to) and rows for 'does not meet MDEP SVP biological criteria' and 'does not meet MDEP vernal pool definition criteria'. Includes a 'Notes:' field.

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Canton

Brief site directions to the pool (using mapped landmarks): in saddle on hardwood hill on east side of steep slope in Canton M.L.

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)

Brand and Model of GPS unit**: GeoXH Mapping grade GPS with post processed corrections: [X] Yes [] No

Check / submit one: [] GPS-location of center point of the pool included in shapefile named*

[X] GPS-location of pool perimeter included as polygon shapefile named* 6041 PA

[] Pool Center Point Easting***: Pool Center Point Northing***:

* Observers must check the information on an aerial photo to ensure data quality. ** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form. *** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:

- [] Isolated Upland Depression [X] Pool associated with larger wetland complex [] Floodplain Depression [] Other:

ii. Check all palustrine types that best apply to this pool or wetland:

- [X] Forested wetland [] Wet meadow [] Slow stream [] Shrub wetland [] Shallow pond [] Floodplain overflow / Oxbow [] Peatland (acidic fen or bog) [] Abandoned beaver flowage [] Headwater seepage [] Emergent marsh [] Active beaver flowage [] Other:

iii. Predominate substrate in order of increasing hydroperiod:

- [] Mineral soil (bare, leaf-litter bottom, or upland mosses present) [] Mineral soil (sphagnum moss present) [X] Organic matter (peat/muck) shallow or restricted to deepest portion [] Organic matter (peat/muck) deep and widespread

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- [] Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) [X] Sphagnum moss (anchored or suspended) [] Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) [] Wet site ferns (e.g. royal fern, marsh fern) [] Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) [] Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail) [] Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) [] Aquatic vascular spp. (e.g. pickerelweed, arrowhead) [] Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts

i. Pool's Origin: [X] Natural [] Natural-Modified [] Non-Natural [] Unknown

* Describe any modern or historic modifications to the pool and associated wetland (REQUIRED): Some quarrying evidence south of pool, some logging impacts in area - but nothing noted @ pool

12 BVP Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

CR-SVP-BAV21

3. VERNAL POOL SURVEY INFORMATION (continued)

Pool ID: _____

II. Hydrology

• Approximate size of pool (at max. capacity): Width 15 m ft (check one) Length 30 m ft (check one)
 • Maximum depth at time of survey: 18 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent _____
 Semi-permanent (drying partially in all years and completely in drought years) _____
 Ephemeral (drying out completely in most years) already appears abandoned pool; phytoplankton pool
 Recommend dry out period observation _____

III. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
 Ephemeral inlet / outlet Other _____

IV. Faunal Indicators:

- Fish (species): _____ Bullfrog or Green frog tadpoles Other: _____

c. Significant Vernal Pool Status under NRPA

I. Survey Date(s): 4/21/2010; 5/7/2010

II. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
 ■ For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | Tadpoles/Larvae | |
|-------------------------|--------------|------------------------------------|-----|------|--------|-----------------|------|
| | Information: | # | VM* | CL** | EMI*** | VM* | CL** |
| | Date: | 4/21 | 5/7 | | | | |
| Wood frog | | 0 | - | | | | |
| Spotted Salamander | | | - | | | | |
| Blue-spotted Salamander | | | - | | | | |
| Fairy Shrimp | | | - | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed **Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%
 *** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

III. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
 ■ If yes, indicate which species were targeted: NA
 ■ Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen **CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

Small depression in skunk hole in hardwood forest. No insects or EMI. Southern 1/2 of forest probably dries prior to map, entire min. feature may dry by July

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
 Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
 Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
 Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:
 Signature: [Signature] Date: 4-21-2010

For MDIF&W Use Only. Reviewed by MDIF&W Date _____ Initials _____
 This pool is Significant Potentially significant but lacking critical data Not significant due to: does not meet biological criteria does not meet definition criteria

Project Name/#: Canton Mt Organization Name: Tahuboc Pool ID: _____

Observer Contact Information

Primary Observer (include secondary, if applicable): Rebecca Feltre Phone or Email: 207 5212700

Primary Observer has Submitted the MAWS VP Credential Form: Previously Submitted Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: Yes No Notes: sub to TTEL - see Kathleen Miller

Contact information (REQUIRED): Name: Mark + Donna Brann Phone: (207) 532-8059

Street Address: 833 Canton Pt. Rd City: Dixfield State: ME Zip: 04224

1. OBSERVER RECOMMENDATION

| | | | | |
|---------------|--------------------------------------|---|---|--|
| This pool is: | <input type="checkbox"/> Significant | <input type="checkbox"/> Potentially Significant <small>(Include notes in section 3e. on Page 2)</small> | <input checked="" type="checkbox"/> Not significant due to: | <input checked="" type="checkbox"/> does not meet MDEP SVP biological criteria |
| | | | | <input type="checkbox"/> does not meet MDEP vernal pool definition criteria |
| | | | | Notes: |

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Canton

Brief site directions to the pool (using mapped landmarks): NE corner of timber area @ outlet of road bog on hill above street entrance

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)

Brand and Model of GPS unit**: Garmin Mapping grade GPS with post processed corrections: Yes No

Check / submit one: GPS-location of center point of the pool included in shapefile named* _____

GPS-location of pool perimeter included as polygon shapefile named* COY21RA

Pool Center Point Easting***: _____ Pool Center Point Northing***: _____

Observers must check the information on an aerial photo to ensure data quality.
** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.
*** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:

- Isolated Upland Depression
- Pool associated with larger wetland complex
- Floodplain Depression
- Other: _____

ii. Check all palustrine types that best apply to this pool or wetland:

- Forested wetland
- Shrub wetland
- Peatland (acidic fen or bog) COY21RA
- Emergent marsh
- Wet meadow
- Shallow pond
- Abandoned beaver flowage
- Active beaver flowage
- Slow stream
- Floodplain overflow / Oxbow
- Headwater seepage
- Other: _____

iii. Predominate substrate in order of increasing hydroperiod:

- 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

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.)
- Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern)
- Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York)
- Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle)
- Sphagnum moss (anchored or suspended)
- Wet site ferns (e.g. royal fern, marsh fern)
- Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)
- Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
- Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

No VEGE - all leaves

b. Vernal Pool Origin or Impacts

i. Pool's Origin: Natural Natural-Modified Non-Natural Unknown

Describe any modern or historic modifications to the pool and associated wetland (REQUIRED):
Area has been logged in past (>15yrs) but pool is undisturbed

CR-6BVP-BA507

3. VERNAL POOL SURVEY INFORMATION (continued)

Pool ID: _____

II. Hydrology

- Approximate size of pool (at max. capacity): Width 20 m ft (check one) Length 30 m ft (check one)
- Maximum depth at time of survey: 6 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent _____
- Semi-permanent (drying partially in all years and completely in drought years) _____
- Ephemeral (drying out completely in most years) Shallow pool bed of variable flow
- Recommend dry out period observation _____

III. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Ephemeral inlet / outlet Other _____

IV. Faunal Indicators:

- Fish (species): NA Bullfrog or Green frog tadpoles Other: NA

C. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 4-21-2010 ; 5/7/2010

II. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | Tadpoles/Larvae | |
|-------------------------|--------------|------------------------------------|-----|------|--------|-----------------|------|
| | Information: | # | VM* | CL** | EMI*** | VM* | CL** |
| | Date: | | | | | | |
| Wood frog | <u>4/21</u> | <u>5/7</u> | | | | | |
| Spotted Salamander | <u>4/21</u> | <u>5/7</u> | | | | | |
| Blue-spotted Salamander | <u>4/21</u> | <u>5/7</u> | | | | | |
| Fairy Shrimp | <u>4/21</u> | <u>5/7</u> | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed

**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%

*** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

III. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted: _____
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen

**CL-Confidence level in verification: 1= <60%, 2= 60-95%. 3= >95%

d. General Comments:

shallow, no EMs, probably dries prior to June

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: [Signature] Date 4-21-2010

For MDIF&W Use Only:

Reviewed by MDIF&W Date: _____ Initials: _____

- This pool is Significant Potentially significant but lacking critical data Not significant due to: does not meet biological criteria and/or does not meet definition criteria

File - see sketches + photos

Project Name/#: Canton Mountain Organization Name: Triha Twp. EC

Observer Contact Information

Primary Observer (include secondary, if applicable): L. Foster, R. Seaton Phone or Email: 207-756-9322

Primary Observer has Submitted the MAWS VP Credential Form: Previously Submitted Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: Yes No Notes: PH: Kathleen Miller

Landowner contact information (REQUIRED): Name: Mark + Donna Brann Phone: (207) 532-8059

Street Address: 833 Canton Pt. Rd City: Dixfield State: ME Zip: 04224

1. OBSERVER RECOMMENDATION

| | | | | |
|---------------|--------------------------------------|---|---|--|
| This pool is: | <input type="checkbox"/> Significant | <input type="checkbox"/> Potentially Significant <small>(Include notes in section 3a. on Page 2)</small> | <input checked="" type="checkbox"/> Not significant due to: | <input checked="" type="checkbox"/> does not meet MDEP SVP biological criteria |
| | | | | <input type="checkbox"/> does not meet MDEP vernal pool definition criteria |
| | | | | Notes: |

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Canton

Brief site directions to the pool (using mapped landmarks): NE turbine location

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)

Brand and Model of GPS unit**: Trimble GeoXH Mapping grade GPS with post processed corrections: Yes No

Check / submit one: GPS-location of center point of the pool included in shapefile named* C0421 BA

GPS-location of pool perimeter included as polygon shapefile named*

Pool Center Point Easting***: _____ Pool Center Point Northing***: _____

* Observers must check the information on an aerial photo to ensure data quality.

** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.

*** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:

Isolated Upland Depression Pool associated with larger wetland complex kettle hole bog

Floodplain Depression Other: _____

ii. Check all palustrine types that best apply to this pool or wetland:

Forested wetland ridge Wet meadow Slow stream

Shrub wetland ridge Shallow pond Floodplain overflow / Oxbow

Peatland (acidic fen or bog) predominantly Abandoned beaver flowage Headwater seepage

Emergent marsh Active beaver flowage Other:

iii. Predominate substrate in order of increasing hydroperiod:

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

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):

Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) Sphagnum moss (anchored or suspended)

Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) Wet site ferns (e.g. royal fern, marsh fern)

Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)

Moist site vasculars (skunk cabbage, jewelweed, blue flag ins, swamp candle) Aquatic vascular spp. (e.g. pickerelweed, arrowhead)

Floating or submerged aquatic (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts

i. Pool's Origin: Natural Natural-Modified Non-Natural Unknown

• Describe any modern or historic modifications to the pool and associated wetland (REQUIRED):

Surrounding land has been logged in past 45 yrs but pool are undisturbed

3. VERNAL POOL SURVEY INFORMATION (continued)

Global ID: _____

II. Hydrology

Overall ∇ Spature 100 x 300

• Approximate size of pool (at max. capacity): Width 20' m ft (check one) Length 30' m ft (check one)

• Maximum depth at time of survey: 8 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years)
- Ephemeral (drying out completely in most years) ground seepage in bottom of pool, shallow depth
- Recommend dry out period observation

Small pools within larger ∇ none larger than approx. 20x30' @ edges of ∇

III. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Ephemeral inlet / outlet Other _____

iv. Faunal Indicators:

- Fish (species): None observed Bullfrog or Green frog tadpoles Other: None observed

c. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 4/21/2010; 5/7/2010

II. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | | Egg Masses (or Adult Fairy Shrimp) | | | | Tadpoles/Larvae | |
|-------------------------|--------------|---|------------------------------------|------|--------|-----|-----------------|--|
| | Information: | # | VM* | CL** | EMI*** | VM* | CL** | |
| | Date: | | | | | | | |
| Wood frog | | 0 | 4 | SP | 3 | M | | |
| Spotted Salamander | | 0 | 2 | SP | 3 | M | | |
| Blue-spotted Salamander | | 0 | - | | | | | |
| Fairy Shrimp | | 0 | - | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed

**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%

*** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted:
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date). None observed

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen

**CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

kettle hole bog with several small basins along edge none of which contained EMT

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: Jawan H. Jelinec Date: 4-21-2010

For MDIF&W Use Only:

Reviewed by MDIF&W Date: _____ Initials: _____

This pool is:

- Significant Potentially significant but lacking critical data Not significant due to: does not meet biological criteria and/or does not meet definition criteria

Canton 11 visits Boyle 11/1/2009

15 BVP Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

CR 4BVP-BAS07
CR 4BVP-BAS07

Project Name#: Canton 11 Wetland Organization Name: Terrace E.C. Pool ID: XXXXXXXXXX

Observer Contact Information

Primary Observer (include secondary, if applicable): Ruth Jordan Phone or Email 207 671-2760

Primary Observer has Submitted the MAWS VP Credential Form: Previously Submitted Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: Yes No Notes: sub for TTEC

Landowner contact information (REQUIRED): Name: Mark + Donna Bram Phone: (207) 532-8059

Street Address: 833 Canton Pt. Rd City: Dixfield State: ME Zip: 04224

1. OBSERVER RECOMMENDATION

| | | | | |
|---------------|--------------------------------------|--|---|--|
| This pool is: | <input type="checkbox"/> Significant | <input checked="" type="checkbox"/> Potentially Significant <small>(include notes in section 3e. on Page 2)</small> | <input checked="" type="checkbox"/> Not significant due to: | <input checked="" type="checkbox"/> does not meet MDEP SVP biological criteria |
| | | | | <input type="checkbox"/> does not meet MDEP vernal pool definition criteria |
| | | | | Notes: |

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: CANTON

Brief site directions to the pool (using mapped landmarks): NE Top of Ridge line of Canton wetland east of ATU
2000 ft

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)

Brand and Model of GPS unit**: Trimble GPS Mapping grade GPS with post processed corrections: Yes No

Check / submit one: GPS-location of center point of the pool included in shapefile named* CO4BVP

GPS-location of pool perimeter included as polygon shapefile named* CO4BPA

Pool Center Point Easting***: _____ Pool Center Point Northing***: _____

* Observers must check the information on an aerial photo to ensure data quality.

** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.

*** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization

i. Choose the best descriptor for the physical setting:

- Isolated Upland Depression Pool associated with larger wetland complex
- Floodplain Depression Other: _____

ii. Check all palustrine types that best apply to this pool or wetland:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Forested wetland | <input type="checkbox"/> Wet meadow | <input type="checkbox"/> Slow stream |
| <input type="checkbox"/> Shrub wetland | <input type="checkbox"/> Shallow pond | <input type="checkbox"/> Floodplain overflow / Oxbow |
| <input type="checkbox"/> Peatland (acidic fen or bog) | <input type="checkbox"/> Abandoned beaver flowage | <input checked="" type="checkbox"/> Headwater seepage |
| <input type="checkbox"/> Emergent marsh | <input type="checkbox"/> Active beaver flowage | <input type="checkbox"/> Other: _____ |

iii. Predominate substrate in order of increasing hydroperiod:

- Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- Mineral soil (sphagnum moss present) (1)
- Organic matter (peat/muck) shallow or restricted to deepest portion (2)
- Organic matter (peat/muck) deep and widespread

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- | | |
|--|---|
| <input type="checkbox"/> Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) | <input checked="" type="checkbox"/> Sphagnum moss (anchored or suspended) |
| <input type="checkbox"/> Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) | <input checked="" type="checkbox"/> Wet site ferns (e.g. royal fern, marsh fern) |
| <input checked="" type="checkbox"/> Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) | <input type="checkbox"/> Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail) |
| <input type="checkbox"/> Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) | <input type="checkbox"/> Aquatic vascular spp. (e.g. pickersweed, arrowhead) |
| | <input type="checkbox"/> Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) |

b. Vernal Pool Origin or Impacts

i. Pool's Origin: Natural Natural-Modified Non-Natural Unknown

* Describe any modern or historic modifications to the pool and associated wetland (REQUIRED):

Pit and mound forested drainage complex with a series of interconnected pools

3. VERNAL POOL SURVEY INFORMATION (continued)

Pool ID: _____

ii. Hydrology

- Approximate size of pool (at max. capacity): Width 100 m ft (check one) Length 220 m ft (check one)
- Maximum depth at time of survey: 16 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent _____
- Semi-permanent (drying partially in all years and completely in drought years) _____
- Ephemeral (drying out completely in most years) _____
- Recommend dry out period observation _____

iii. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Ephemeral inlet / outlet Other _____

iv. Faunal Indicators:

- Fish (species): NO Bullfrog or Green frog tadpoles Other: none

c. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 7-19-2010, 5/6/2010

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | Tadpoles/Larvae | |
|-------------------------|--------------|------------------------------------|-----|------|-------|-----------------|------|
| | Information: | # | VM* | CL** | EI*** | VM* | CL** |
| | Date: | | | | | | |
| Wood frog | 7-19 | 5/6 | | | | | |
| Spotted Salamander | 7-19 | — | | | | | |
| Blue-spotted Salamander | 7-19 | — | | | | | |
| Fairy Shrimp | 7-19 | — | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed **Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%
*** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted: NA
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (attached with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen **CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

Located perennials of complex of pools w/in p.m drainage watershed MAY DRY SOON. SUGGEST 2nd VISIT to see if 1) any breeding activity occurs or 2) if it dries and is a non-feature

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: REJ Date 4/19/2010

For MDIF&W Use Only: Reviewed by MDIF&W Date _____ Initials _____

This pool is:

- Significant
- Potentially significant but lacking critical data
- Not significant due to: does not meet biological criteria and/or does not meet definition criteria



INSTRUCTIONS: Complete all 3 pages of form as thoroughly as possible. Most fields are required for pool registration.

Observer's Pool ID: CR-14VP-BA504 MDIFW Pool ID: _____

CR-148VP-BA523

1. PRIMARY OBSERVER INFORMATION

- a. Observer name: Lauren Leclerc, David Brenneman
b. Contact and credentials previously provided? No (submit Addendum 1) Yes

2. PROJECT CONTACT INFORMATION

- a. Contact name: same as observer other Kathleen Miller
b. Contact and credentials previously provided? No (submit Addendum 1) Yes
c. Project Name: Canton Mountain Wind

NOTE: Clear photographs or digital images of a) the pool and b) the indicators (one example of each species egg mass) are required for nonprofessional observers and encouraged for all observers.

3. LANDOWNER CONTACT INFORMATION

- a. Are you the landowner? Yes No If no, was landowner permission obtained for survey? Yes No
b. Landowner's contact information (required)
Name: Mark + Donna Brann Phone: (207) 364-4956
Street Address: 833 Canton Point Rd City: Dixfield State: ME Zip: 04224
c. Large Projects: check if separate project landowner data file submitted

4. VERNAL POOL LOCATION INFORMATION

- a. Location Township: Canton
Brief site directions to the pool (using mapped landmarks):

Near top of Canton Mountain, ON WEST SIDE OF MOUNTAIN.

b. Mapping Requirements: At least 2 of the 3 must be submitted (check those submitted):

- USGS topographic map with pool clearly marked.
Large scale aerial photograph with pool clearly marked.
X GPS data (complete section below).

GPS location of vernal pool

Longitude/Easting: 396706.32 Latitude/Northing: 4930430.10
Check Datum: NAD27 NAD83 / WGS84 Coordinate system: UTM

- Check one: X GIS shapefile
- send to Jason.Czapiga@maine.gov, observer has reviewed shape accuracy (best)
The pool perimeter is delineated by multiple GPS points. (excellent)
- Include map or spreadsheet with coordinates.
The above GPS point is at the center of the pool. (good)
The center of the pool is approximately m / ft in the compass direction of degrees from the above GPS point. (acceptable)

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5. VERNAL POOL HABITAT INFORMATION

a. Habitat survey date (only if different from indicator survey dates on page 3): _____

b. Wetland habitat characterization

Choose the best descriptor for the landscape setting:

- Isolated depression
- Floodplain depression

- Pool associated with larger wetland complex
- Other: _____

Check all wetland types that best apply to this pool:

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Forested swamp | <input type="checkbox"/> Wet meadow | <input type="checkbox"/> Slow stream |
| <input type="checkbox"/> Shrub swamp | <input type="checkbox"/> Lake/Pond | <input type="checkbox"/> Floodplain overflow / oxbow |
| <input type="checkbox"/> Peatland (fen or bog) | <input type="checkbox"/> Abandoned beaver flowage | <input type="checkbox"/> Headwater seepage |
| <input type="checkbox"/> Emergent marsh | <input type="checkbox"/> Active beaver flowage | <input type="checkbox"/> Other: _____ |

c. Vernal pool status under the Natural Resources Protection Act (NRPA)

i. Pool Origin: Natural Natural-Modified Unnatural Unknown

If modified, unnatural or unknown, describe any modern or historic human impacts to the pool (required):

@ base of upslope drainage

ii. Pool Hydrology

Select the pool's estimated hydroperiod AND provide rationale for opinion.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years)
- Ephemeral (drying out completely in most years)
- Unknown

Explain:

Shallow depth

Maximum depth at survey: 0-12" (0-1 ft.) 12-36" (1-3 ft.) 36-60" (3-5 ft.) >60" (>5 ft.)

Approximate size of pool (at spring highwater): Width: 5 m ft Length: 20 m ft

Predominate substrate in order of increasing hydroperiod:

- Mineral soil (bare, leaf-litter bottom, or upland mosses present)
- Organic matter (peat/muck) shallow or restricted to deepest portion
- Mineral soil (sphagnum moss present)
- Organic matter (peat/muck) deep and widespread

Pool vegetation indicators in order of increasing hydroperiod (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) | <input type="checkbox"/> Wet site ferns (e.g. royal fern, marsh fern) |
| <input type="checkbox"/> Dry site ferns (e.g. spinulose wood fern, lady fern, bracken fern) | <input type="checkbox"/> Wet site shrubs (e.g. highbush blueberry, maleberry, winterberry, mountain holly) |
| <input type="checkbox"/> Moist site ferns (e.g. sensitive fern, cinnamon fern, interrupted fern, New York fern) | <input type="checkbox"/> Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail, bulrushes) |
| <input type="checkbox"/> Moist site vasculars (e.g. skunk cabbage, jewelweed, blue flag iris, swamp candle) | <input type="checkbox"/> Aquatic vascular spp. (e.g. pickerelweed, arrowhead) |
| <input checked="" type="checkbox"/> Sphagnum moss (anchored or suspended) | <input type="checkbox"/> Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort) |
| | <input type="checkbox"/> No vegetation in pool |

Faunal indicators (check all that apply): NONE OBSERVED

- Fish
- Bullfrog or Green Frog tadpoles
- Other: _____

iii. Inlet/Outlet Flow Permanency

Type of inlet or outlet (a seasonal or permanent channel providing water flowing into or out of the pool):

- No inlet or outlet
- Permanent Inlet or outlet (channel with well-defined banks and permanent flow)
- Intermittent inlet or outlet
- Other or Unknown (explain): _____

Upslope drainage not Downslope Overland flow

6. VERNAL POOL INDICATOR INFORMATION

a. Indicator survey dates: 5-4-2011, 5-23-2011

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b. Indicator abundance criteria

- Was the entire pool surveyed for egg masses? Yes No; what % of 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 SPECIES | 5-4 | | 5-23 | | Egg Masses (or adult Fairy Shrimp) | | Tadpoles/Larvae | | | |
|---------------------------|-------|----|-------|----|------------------------------------|--------------------------------|-----------------|---|-------------------------------|---|
| | Count | CL | Count | CL | Confidence Level ¹ | Egg Mass Maturity ² | Observed | | Confidence Level ¹ | |
| Wood Frog | 0 | 0 | 0 | 0 | - | - | 0 | 0 | - | - |
| Spotted Salamander | 0 | 0 | 0 | 0 | - | - | 0 | 0 | - | - |
| Blue-spotted Salamander | 0 | 0 | 0 | 0 | - | - | 0 | 0 | - | - |
| Fairy Shrimp ³ | 0 | 0 | 0 | 0 | - | - | | | | |

1-Confidence level: 1 = <60%, 2 = 60-95%, 3 = >95%

2-Egg mass maturity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

3-Fairy Shrimp: X = present

c. Rarity criteria

- Note any rare species associated with vernal pools. Check the method(s) of verification and fill in the confidence level (CL) for each species observation. Observations should be accompanied by photographs (labeled with observer name, pool location, and date).

| SPECIES | Method of Verification* | | | CL** | SPECIES | Method of Verification* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

*Method of verification: P = Photographed, H = Handled, S = Seen

**CL - Confidence level in species determination: 1= <60%, 2= 60-95%, 3= >95%

d. Optional observer recommendation:

SVP Potential SVP Non Significant VP Indicator Breeding Area

e. General vernal pool comments and/or observations of other wildlife:

Very small & small pool in Saco bed

Send completed form and supporting documentation to: **Maine Dept. of Inland Fisheries and Wildlife**
Attn: Vernal Pools
650 State Street, Bangor, ME 04401

NOTE: Digital submission (to Jason.Czapiga@maine.gov) of vernal pool field forms and photographs is only acceptable for projects with 3 or fewer assessed pools; larger projects must be mailed as hard copies.

For MDIFW use only Reviewed by MDIFW Date: _____ In/By: _____

This pool is: Significant Potentially Significant but lacking critical data Not Significant due to: does not meet biological criteria. does not meet MDEP vernal pool criteria.

Comments: _____

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Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

CR-5BVP-BA507 CR-5VP-BA42

Project Name#: Canton Mountain Organization Name: Tetra Tech EC

Observer Contact Information

Primary Observer (include secondary, if applicable): L. Heeler, R. Kelshaw Phone or Email Heeler@bayleasur.com
Primary Observer has Submitted the MAWS VP Credential Form: [] Previously Submitted [X] Included with this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: [X] Yes [] No Notes: PM: Kathleen Miller
Landowner contact information (REQUIRED): Name: Mark + Donna Brann Phone: (207) 532-8059
Street Address: 833 Canton Pt. Rd City: Dixfield State: ME Zip: 04224

1. OBSERVER RECOMMENDATION

Table with columns for 'This pool is:' (Significant, Potentially Significant, Not significant due to) and rows for 'does not meet MDEP SVP biological criteria', 'does not meet MDEP vernal pool definition criteria', and 'Notes:'.

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: Canton
Brief site directions to the pool (using mapped landmarks): NE corner of ridge in NE turbine location

Location of Vernal Pool* (Required Coordinate System, Datum and Units: UTM, NAD83, Zone 19 North, meters)
Brand and Model of GPS unit**: Trimble GeoXH Mapping grade GPS with post processed corrections: [X] Yes [] No
Check / submit one: [] GPS-location of center point of the pool included in shapefile named*
[X] GPS-location of pool perimeter included as polygon shapefile named* C04215A
[] Pool Center Point Easting***: Pool Center Point Northing***:

* Observers must check the information on an aerial photo to ensure data quality.
** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form.
*** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization
i. Choose the best descriptor for the physical setting:
[] Isolated Upland Depression [X] Pool associated with larger wetland complex
[] Floodplain Depression [] Other:

ii. Check all palustrine types that best apply to this pool or wetland:
[] Forested wetland [] Wet meadow [] Slow stream
[] Shrub wetland [] Shallow pond [] Floodplain overflow / Oxbow
[] Peatland (acidic fen or bog) [] Abandoned beaver flowage [] Headwater seepage
[X] Emergent marsh [] Active beaver flowage [] Other:

iii. Predominate substrate in order of increasing hydroperiod:
[X] 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

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply):
[X] Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) [X] Sphagnum moss (anchored or suspended)
[] Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) [] Wet site ferns (e.g. royal fern, marsh fern)
[X] Moist site ferns (e.g. sensitive cinnamon, interrupted, New York) [X] Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail)
[] Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) [] Aquatic vascular spp. (e.g. pickerelweed, arrowhead)
[] Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts
i. Pool's Origin: [X] Natural [] Natural-Modified [] Non-Natural [] Unknown
Describe any modern or historic modifications to the pool and associated wetland (REQUIRED):
area has been logged in past (>15 yrs) but pool is undisturbed

3. VERNAL POOL SURVEY INFORMATION (continued)

Pool ID: _____

ii. Hydrology

- Approximate size of pool (at max. capacity): Width 15 m ft (check one) Length 35 m ft (check one)
- Maximum depth at time of survey: 14 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent
- Semi-permanent (drying partially in all years and completely in drought years)
- Ephemeral (drying out completely in most years) shallow depth, granular bottom of pool
- Recommend dry out period observation

iii. Inlet/Outlet Permanency

- No inlet / outlet
- Ephemeral inlet / outlet
- Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Other

iv. Faunal Indicators:

- Fish (species): None observed
- Bullfrog or Green frog tadpoles
- Other: None observed

c. Significant Vernal Pool Status under NRPA

i. Survey Date(s): 4-21-2010 ; 5/7/2010

ii. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | Tadpoles/Larvae | |
|-------------------------|--------------|------------------------------------|-----|------|--------|-----------------|------|
| | Information: | # | VM* | CL** | EMI*** | VM* | CL** |
| | Date: | | | | | | |
| Wood frog | | 0 | — | | | | |
| Spotted Salamander | | 0 | — | | | | |
| Blue-spotted Salamander | | 0 | — | | | | |
| Fairy Shrimp | | 0 | — | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed

**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%

***Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

iii. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted:
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date). None observed

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen

**CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

shallow, no EMI, likely dries prior to June

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:
Signature: [Signature] Date 4-21-2010 5/17/2010

For MDIF&W Use Only: Reviewed by MDIF&W Date: _____ Initials: _____
This pool is
 Significant Potentially significant but lacking critical data Not significant due to: does not meet biological criteria and/or does not meet definition criteria

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Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

CR-3BVP-BAS07

CR-3VP-8417

Project Name#: Canton MA Wetland Organization Name: Tenthredin LLC Pool ID:

Observer Contact Information

Primary Observer (include secondary, if applicable): Rick Jordan Phone or Email 207 671 2760

Primary Observer has Submitted the MAWS VP Credential Form: [X] Previously Submitted [] Included w/this Submission

Landowner Contact Information

Landowner permission obtained for this survey & submission: [X] Yes [] No Notes: Surveying as volunteer this is

Landowner contact information (REQUIRED): Name: Mark & Donna Brann Phone: (207) 532-8059

Street Address: 833 Canton Pt Rd City: Dixfield State: ME Zip: 04224

1. OBSERVER RECOMMENDATION

Form with checkboxes for Significant, Potentially Significant, Not significant, does not meet MDEP SVP biological criteria, does not meet MDEP vernal pool definition criteria. Includes a field for Notes.

2. VERNAL POOL LOCATION INFORMATION

Municipality or Township: CANTON Brief site directions to the pool (using mapped landmarks): Northeastern corner of survey area on Canton MA ridge and to ATV access road in bedrock saddle of valley

Brand and Model of GPS unit: Trimble 660 2.5 Mapping grade GPS with post processed corrections: [X] Yes [] No Check / submit one: [X] GPS-location of center point of the pool included in shapefile named: CANTON [X] GPS-location of pool perimeter included as polygon shapefile named: [] Pool Center Point Easting: Pool Center Point Northing:

* Observers must check the information on an aerial photo to ensure data quality. ** If mapping grade GPS or Professional Survey is not available, observers must use the most current MDIF&W Vernal Pool Data Collection Form. *** Center points entered on this form must be submitted with a paper map showing the pool location on USGS Topo Quad or large scale aerial photo.

3. VERNAL POOL SURVEY INFORMATION

a. Pool or Wetland Habitat Characterization i. Choose the best descriptor for the physical setting: [] Isolated Upland Depression [X] Pool associated with larger wetland complex [] Floodplain Depression [] Other:

ii. Check all palustrine types that best apply to this pool or wetland: [X] Forested wetland [] Wet meadow [] Slow stream [X] Shrub wetland [] Shallow pond [] Floodplain overflow / Oxbow [] Wetland (acidic fen or bog) [] Abandoned beaver flowage [] Headwater seepage [] Active beaver flowage [] Other:

iii. Substrate in order of increasing hydroperiod: [] Mineral soil (bare, leaf-litter bottom, or upland mosses present) [] Mineral soil (sphagnum moss present) [X] Organic matter (peat/muck) shallow or restricted to deepest portion [] Organic matter (peat/muck) deep and widespread

iv. Nonwoody pool vegetation indicators in order of increasing hydroperiod (check all that apply): [] Terrestrial nonvascular spp. (e.g. haircap moss, lycopodium spp.) [] Sphagnum moss (anchored or suspended) [] Wet site ferns (e.g. royal fern, marsh fern) [] Dry site ferns (e.g. spinulose wood fern, lady fern, polypody fern) [] Wet site graminoids (e.g. blue-joint grass, tussock sedge, cattail) [] Moist site ferns (e.g. sensitive, cinnamon, interrupted, New York) [] Aquatic vascular spp. (e.g. pickerelweed, arrowhead) [] Moist site vasculars (skunk cabbage, jewelweed, blue flag iris, swamp candle) [] Floating or submerged aquatics (e.g. water lily, water shield, pond weed, bladderwort)

b. Vernal Pool Origin or Impacts i. Pool's Origin: [X] Natural [] Natural-Modified [] Non-Natural [] Unknown Describe any modern or historic modifications to the pool and associated wetland (REQUIRED): Adj. to ATV trail

18 BVP Maine Association of Wetland Scientists (MAWS) Vernal Pool Data Collection Form

(8)
CR-3 BVP-BAS07
~~CR-3VP-BAS07~~

3. VERNAL POOL SURVEY INFORMATION (continued)

Pool ID: _____

II. Hydrology

- Approximate size of pool (at max. capacity): Width 10 m ft (check one) Length 100 m ft (check one)
- Maximum depth at time of survey: 13 in ft cm m (check one)

Select the pool's likely hydroperiod and give evidence in the space to the right.

- Permanent _____
- Semi-permanent (drying partially in all years and completely in drought years) limited seepage into pool, recharged by rain
- Ephemeral (drying out completely in most years) _____
- Recommend dry out period observation _____

III. Inlet/Outlet Permanency

- No inlet / outlet Permanent inlet or outlet (channel with well-defined banks and permanent flow)
- Ephemeral inlet / outlet Other _____

IV. Faunal Indicators:

- Fish (species): NA Bullfrog or Green frog tadpoles Other: mosq larvae

c. Significant Vernal Pool Status under NRP

I. Survey Date(s): 4-19-2010 ; 5/6/2010

II. Abundance Criteria

- Was the entire pool comprehensively surveyed for egg masses? Yes No
- For each Indicator species, indicate the exact number of egg masses, verification method (VM), confidence level (CL), and egg mass integrity (EI) for each life stage (separate cells are provided for separate survey dates).

| Indicator Species | Observation: | Egg Masses (or Adult Fairy Shrimp) | | | | | Tadpoles/Larvae | |
|-------------------------|--------------|------------------------------------|----------|------|--------|-----|-----------------|--|
| | Information: | # | VM* | CL** | EMI*** | VM* | CL** | |
| | Date: | | | | | | | |
| Wood frog | | <u>—</u> | <u>—</u> | | | | | |
| Spotted Salamander | | <u>—</u> | <u>—</u> | | | | | |
| Blue-spotted Salamander | | <u>—</u> | <u>—</u> | | | | | |
| Fairy Shrimp | | <u>—</u> | <u>—</u> | | | | | |

*Verification Method: S= Seen, H= Handled, P= Photographed

**Confidence Level (species ID): 1= <60%, 2= 60-95%, 3= >95%

*** Egg Mass Integrity: F= Fresh (<24 hrs), M= Mature (round embryos), A= Advanced (looser matrix, curved embryos), H= Hatched or hatching

III. Rarity Criteria

- Was a specific effort made to survey for rare species? Yes No
- If yes, indicate which species were targeted: _____
- Note any rare species associated with vernal pools using the box below. Observations should be accompanied photographs (labeled with observer name, pool location, and date).

| Species | Verification Method* | | | CL** | Species | Verification Method* | | | CL** |
|-------------------|--------------------------|--------------------------|--------------------------|------|--------------|--------------------------|--------------------------|--------------------------|------|
| | P | H | S | | | P | H | S | |
| Blanding's Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Wood Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Spotted Turtle | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Ribbon Snake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Ringed Boghaunter | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Other: | | | | |

*Verification Method: P= Photographed, H= Handled, S= Seen

**CL-Confidence level in verification: 1= <60%, 2= 60-95%, 3= >95%

d. General Comments:

More looking pool nearby. Bad luck

- Completed Vernal Pool Survey per guidelines outlined in the MAWS 2010 Interim Vernal Pool Survey Protocol
- Sent hard copy of MAWS Vernal Pool Data Collection Form to: MDIF&W, Attn: Vernal Pools; 650 State Street; Bangor, ME 04401
- Sent hard copy map of pool center point with coordinates on MAWS Vernal Pool Data Collection Form to MDIF&W (address above)
- Sent shapefile of pool perimeter / center point on CD to MDIF&W (address above) or emailed to: vernalpools.mdifw@maine.gov

OBSERVER SIGNATURE

I hereby certify that the information contained in this report is true and complete to the best of my knowledge:

Signature: Roy Date 7/1/10

For MDIF&W Use Only: Reviewed by MDIF&W Date: _____ Initials: _____

This pool is:

- Significant
- Potentially significant but lacking critical data
- Not significant due to: does not meet biological criteria and/or does not meet definition criteria

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 1CP
Vernal Pool: CA_1CP_BA415
Date: April 15, 2010
Photographer
: David Brenneman
Comments: Pool in hillside excavation area looking east. Contained a single egg mass.



Photo No.: 2
Plan ID: 1CP
Vernal Pool: CA_1CP_BA415
Date: April 15, 2010
Photographer
: David Brenneman
Comments: Pool looking north.



Photo No.: 3
Plan ID: 1CP
Vernal Pool: CA_1CP_BA415
Date: April 15, 2010
Photographer
: David Brenneman
Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 2CP
Vernal Pool: CA_17CP_BA421
Date: April 21, 2010
Photographer : Rodney Kelshaw
Comments: Facing west at old skidder ruts in wetland.



Photo No.: 2
Plan ID: 2CP
Vernal Pool: CA_17CP_BA421
Date: April 21, 2010
Photographer : Rodney Kelshaw
Comments: Facing east.



Photo No.: 3
Plan ID: 2CP
Vernal Pool: CA_17CP_BA421
Date: April 21, 2010
Photographer : Rodney Kelshaw
Comments: Facing north.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 3CP
Vernal Pool: CA_18CP_BA421
Date: April 21, 2010
Photographer
: Rodney Kelshaw
Comments: “Borrow pit” along Ludden Road, facing east.



Photo No.: 2
Plan ID: 3CP
Vernal Pool: CA_18CP_BA421
Photographer
: Rodney Kelshaw
Comments: Facing south.



Photo No.: 3
Plan ID: 3CP
Vernal Pool: CA_18CP_BA421
Photographer
: Rodney Kelshaw
Comments: Spotted salamander egg mass in pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 4
Plan ID: 3CP
Vernal Pool: CA_18CP_BA421
Photographer : Rodney Kelshaw
Comments: Skidder ruts in wetland at access road boundary. No egg masses found. Photo facing east.



Photo No.: 5
Plan ID: 3CP
Vernal Pool: CA_18CP_BA421
Photographer : Rodney Kelshaw
Comments: Adult green frog in pool.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 4CP
Vernal Pool: CA_29CP_BA503
Date: May 3, 2011
Photographer
: Lauren Leclerc
Comments: Ruts from logging activity in forested swale. No egg masses were present at time of survey. Looking north.



Photo No.: 2
Plan ID: 4CP
Vernal Pool: CA_29CP_BA503
Photographer
: Lauren Leclerc
Comments: Looking east.



Photo No.: 3
Plan ID: 4CP
Vernal Pool: CA_29CP_BA503
Photographer
: Lauren Leclerc
Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 5ABA
Vernal Pool: CA_1ABA_BA416
Date: April 16, 2010
Photographer: Heather Storlazzi-Ward
Comments: Looking east at beaver flowage. Area completely floods access road. Most egg masses were found to the east of the access road.



Photo No.: 2
Plan ID: 5ABA
Vernal Pool: CA_1ABA_BA416
Photographer: Heather Storlazzi-Ward
Comments: Looking north at beaver flowage.



Photo No.: 3
Plan ID: 5ABA
Vernal Pool: CA_1ABA_BA416
Photographer: Heather Storlazzi-Ward
Comments: Looking south at beaver flowage.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 4
Plan ID: 5ABA
Vernal Pool: CA_1ABA_BA416
Photographer: Heather Storlazzi-Ward
Comments: Looking southeast at beaver dam.



Photo No.: 5
Plan ID: 5ABA
Vernal Pool: CA_1ABA_BA416
Photographer: Heather Storlazzi-Ward
Comments: Looking east at beaver flowage.



Photo No.: 6
Plan ID: 5ABA
Vernal Pool: CA_1ABA_BA416
Photographer: Heather Storlazzi-Ward
Comments: Spotted salamander egg mass.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 6CP
Vernal Pool: CA_16CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Pool complex in wetland feature that was used as a log landing. No egg masses found at time of survey. Photo facing west.



Photo No.: 2
Plan ID: 6CP
Vernal Pool: CA_16CP_BA421
Photographer: Rodney Kelshaw
Comments: Facing east.



Photo No.: 3
Plan ID: 6CP
Vernal Pool: CA_16CP_BA421
Photographer: Rodney Kelshaw
Comments: Facing north.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 7CP
Vernal Pool: CA_4CP_BA415
Date: April 15, 2010
Photographer: David Brenneman
Comments: Looking northeast at ditch along access road with four spotted salamander egg masses.



Photo No.: 2
Plan ID: 7CP
Vernal Pool: CA_4CP_BA415
Date: April 15, 2010
Photographer: David Brenneman
Comments: Looking northwest.



Photo No.: 3
Plan ID: 7CP
Vernal Pool: CA_4CP_BA415
Date: April 15, 2010
Photographer: David Brenneman
Comments: Looking southeast.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 8CP
Vernal Pool: CA_15CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Skidder ruts in wetland at access road boundary. No egg masses found. Photo facing east.



Photo No.: 2
Plan ID: 8CP
Vernal Pool: CA_15CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing south.



Photo No.: 3
Plan ID: 8CP
Vernal Pool: CA_15CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing west.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 9CP
Vernal Pool: CA_19CP_BA430
Date: April 30, 2011
Photographer: Lauren Leclerc
Comments: Naturalized historic borrow area along road containing eight spotted salamander egg masses. Part of pool was outside of survey area. Looking north.



Photo No.: 2
Plan ID: 9CP
Vernal Pool: CA_19CP_BA430
Date: April 30, 2011
Photographer: Lauren Leclerc
Comments: Looking east.



Photo No.: 3
Plan ID: 9CP
Vernal Pool: CA_19CP_BA430
Date: April 30, 2011
Photographer: Lauren Leclerc

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 10CP
Vernal Pool: CA_5CP_BA415
Date: April 15, 2010
Photographer: David Brenneman
Comments: Looking east at road ditch in wetland. Water in ditch is dammed by road.



Photo No.: 2
Plan ID: 10CP
Vernal Pool: CA_5CP_BA415
Date: April 15, 2010
Photographer: David Brenneman
Comments: Looking north.



Photo No.: 3
Plan ID: 10CP
Vernal Pool: CA_5CP_BA415
Date: April 15, 2010
Photographer: David Brenneman
Comments: Looking south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 11CP
Vernal Pool: CA_14CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Pool in wetland adjacent to berm and road ditch. Photo facing east.



Photo No.: 2
Plan ID: 11CP
Vernal Pool: CA_14CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing north.



Photo No.: 3
Plan ID: 11CP
Vernal Pool: CA_14CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation

| | |
|---|---|
|  | <p>Photo No.: 1</p> <p>Plan ID: 12CP</p> <p>Vernal Pool: CR_1CP_BA418</p> <p>Date: April 18, 2010</p> <p>Photographer: Heather Storlazzi-Ward</p> <p>Comments: Looking east at pool 1 in skidder rut complex.</p> |
|  | <p>Photo No.: 2</p> <p>Plan ID: 12CP</p> <p>Vernal Pool: CR_1CP_BA418</p> <p>Date: April 18, 2010</p> <p>Photographer: Heather Storlazzi-Ward</p> <p>Comments: Looking north at pool 1.</p> |
|  | <p>Photo No.: 3</p> <p>Plan ID: 12CP</p> <p>Vernal Pool: CR_1CP_BA418</p> <p>Date: April 18, 2010</p> <p>Photographer: Heather Storlazzi-Ward</p> <p>Comments: Looking south at pool 1.</p> |

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 13CP
Vernal Pool: CR_9CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Re-naturalizing skid trail with a complex of pools in approximately 15 year old harvest area. No egg masses found.



Photo No.: 2
Plan ID: 13CP
Vernal Pool: CR_9CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing north.



Photo No.: 3
Plan ID: 13CP
Vernal Pool: CR_9CP_BA421
Date: April 21, 2010
Photographer: Rodney Kelshaw
Comments: Facing south.

PHOTOGRAPHIC RECORD

Company: Patriot Renewables
Project: Canton Mountain Wind Project – ABA and Corps Pool Photo Documentation



Photo No.: 1
Plan ID: 14CP
Vernal Pool: CA_28CP_BA503
Date: May 3, 2011
Photographer: Lauren Leclerc
Comments: Small excavation adjacent to gravel road. No egg masses were present at time of survey. Looking north.



Photo No.: 2
Plan ID: 14CP
Vernal Pool: CA_28CP_BA503
Date: May 3, 2011
Photographer: Lauren Leclerc
Comments: Looking east.



Photo No.: 3
Plan ID: 14CP
Vernal Pool: CA_28CP_BA503
Date: May 3, 2011
Photographer: Lauren Leclerc
Comments: Looking west.