

2010 Water Chestnut Control Program Summary

10/19/10

2010 Program Dates and Duration:

Lake Champlain contracted management: July 1 through September 6, 2010 (68 days)

Champlain sites managed: **70** of **73** possible sites

Other waterbodies managed: **21**

2010 Weather Conditions and Lake Levels

Dry summer again with lake levels for most of the harvesting season below 97 feet:

Four New Lake Champlain Management Sites: South of Red Rock Bay as a result of moving further down the lake toward Whitehall, NY. These sites are a breakdown of existing areas of water chestnut mat on the way south to Whitehall.

NO New Other Waterbody Management Sites 2010

Lake Champlain Site Totals (see Table 1):

Total # of sites: 73 (69 in 2009, 68 in 2008, 67 in 2007, 64 in 2006.)

Total # sites managed in 2010: **70**-(**11** without water chestnut) (**11** without in 2009)

MH and HP = **2** (site # 39, 49)

MH only sites = **4** (sites # 40, 41, 45, 46)

HP only sites = **61** sites (some sites include multiple parts)

Other Waterbody Site Totals (see Table 2): (21 in 2009, 20 in 2008, and 18 in 2007)

HP sites = **21**

MH = **0**

Project Contract Amounts

Harvesting = **\$297,000** (**\$147,000** in 2009) (**\$250,000** in 2008, **\$276,204** in 2007)

Handpulling = **\$150,000** (**\$100,000** in 2009) (**\$127,637** in 2008, **\$125,000** in 2007)

Composting = **\$3,480** (**\$3,640** in 2009, **\$4,500** in 2008, **\$3,400** in 2007)

TNC = **\$20,000** (**\$15,000** in 2009, **\$15,000** in 2008, **\$13,000** in 2007)

Project Contract Budget = **\$450,480** (**\$250,640** in 2009, **\$382,137** in 2008, **\$405,546** in 2007)
(TNC excluded)

Handpulling:

Total # of handpulling sites = **63** Champlain sites including tributaries (81 miles VT shoreline (including Peters Bay, Benson, VT) and 47.5 miles NY shoreline), **8** Dead Creek sites, and **21** other waterbody sites.

Lakeside Contract dates: Upon signature until 7/31/2011

Total contracted hours and weights = **3,799.5** hrs, **47,423.6** lbs wet **23.7** tons (**2,487** hrs, **29,146.7** lbs wet **14.57** tons in 2009)
(**2,973.45** hrs - **61,457.92** lbs wet, **32.72** tons in 2008) (**3,245.5** hrs in 2007 **40,497** lbs wet weight **20.24** tons, **287,669** rosettes in 2007)

VTDEC hours = **59.5** hrs **612.5** lbs wet weight

TNC hours and weights (Staff & Volunteers) = **482** hrs, **4,546** lbs wet weight **2.27** tons (**611.56** hours; **5,964** lbs wet weight **2.98** tons in 2009)
(**734.75** hours, **5,930** lbs wet weight, **2.96** tons in 2008) (**1,249** hours, **9,792** lbs wet weight **4.9** tons in 2007)

US ARMY Corps Interns (N. Springfield) = **30** hrs

USF&W = **79** hrs **89** lbs wet (**46** hrs-.**06** tons in 2009)

Private Citizen, small pond, Bennington = **1.5** hrs

Total handpulling hours all groups = 4,391.5(**3,251** in 2009)(**4,117.2** in 2008)

Total number of handpulling sites all groups = 90+

Equipment used: canoes, kayaks, boats, and a pontoon boat

Mechanical Harvesting (VTDEC Program): 7/12/10 - 8/20/10 Access sites Benson Landing and Red Rock Bay.

Total hours = **770 hrs.** – 190 hrs 25% on NY side and 580 hrs 75% on VT side (**376 hrs** - 168 hrs 45% on NY side and 208 hrs 55% on VT side 2009) (**655 hrs total** in 2008(172.5 hrs 27% on NY side and 482.5 hrs 73% VT side) (**816.5 hrs total** - 259 hrs 32% on NY side and 557 hrs 68% on VT side in 2007) (**881** in 2006 (321 hrs 37% on NY side and 560 hrs 63% on VT side) (**831.5 hrs** in 2005 and **1095 hrs** in 2004)

Load Capacity **H-800** load =14 cu. yds, average load weight 3,800 lbs derived from calculations of three harvester loads weighed in 2005.

Total sites harvested = **6**; (1 cut @ site #'s: 40, 41, 45, 46, 49, and 2 cuts in site 39

Equipment used in 2010: two H800 model harvesters, a high-speed transporter, a conveyor and three 4x4 one ton dump trucks

Harvester Load Totals = **588** H800 loads **8,232** cu yds **2,234,400** lbs wet weight (**537** H800 loads **7,518**cu yds **2,040,600** lbs wet weight) (**525** H800 loads **7,350** cu yds. **1,995,000** lbs wet weight in 2008) (**422** H800 loads **5,908** cu. yds, **1,603,600** lbs wet weight in 2007) (**465** H800 loads **6,510** cu. yds, **1,767,000** lbs wet weight in 2006) (**554** H800 loads **7,756** cu. yds, **2,105,200** lbs wet weight in 2005)

Acres harvested = **165** approximately including all of Peters Bay for the first time and all of the Red Rock Bay as well as Cold Springs south to the Narrows of Dresden, and New York areas past Dresden Station south to the Narrows of Dresden and beyond.

Total Weight Water Chestnut removed in 2010 mechanical harvesting = **2,234,400** lbs wet weight **1,117.2** tons(**2,040,600** lbs wet weight **1,020.3** tons in **2009**)(**1,995,000** lbs wet weight **997.5** tons in **2008**) (**1,603,600** lbs wet weight **801.8** tons in **2007**)(**1,818,917** lbs wet weight **909.4** tons in **2006**) (**2,154,380** lbs wet weight **1077** tons in **2005**)

Total Weight Water Chestnut removed from Lake Champlain and associated tributaries = **2,286,641.6** lbs wet weight **1143.3** tons(**2,075,790** lbs wet weight **1037.9** tons in 2009) (**2,062,727** lbs wet weight **1031.3** tons in 2008) (**1,632,191.6** lbs wet weight **816** tons in 2007) (**2,152,913** lbs wet weight **678** lbs **Phosphorus** removed approx in **2005**.)

TOTAL water chestnut removed from all sources 2010 = **2,287,071.1** lbs wet weight **1143.5** tons (**2,075,830.7** lbs wet weight **1037.91** tons in 2009)

Chestnut Searches & Surveys: 18 days

6/21/10	Lake Champlain / Fields, Porter, Kimball
6/29/10	Lake Champlain / South Lake, Benson, Peters, Red Rock
7/13/10	Lake Champlain / Crown Pt south NY/VT
7/16/10	Lake Champlain / Leonard Bay to Larabees Pt.
7/23/10	Bullis Pond
7/27/10	Lake Paran
7/27/10	Singing Wetland
7/30/10	Phillips and Horton Pond (Benson)
8/4/10	Lake Bomoseen
8/4/10	Lily Pond St Catherine
8/11/10	Lake Champlain, south lake, Crown Pt Bridge area
8/18/10	Missisquoi Bay (airboat)
8/25/10	Laplatte River
8/27/10	Missisquoi Bay (airboat)
8/30/10	Lake Champlain, McNeil, Cove to White Bay
8/31/10	North Springfield Reservoir
9/09/10	Otter Creek
9/20/10	Mud Creek Wetland

VT Composting Sites in Benson: 3 – 100 plus percent spoils composted

1. Jack Barrett Property, Benson: **89** loads – 1,246 cu yds.
2. Daryl Duval Property, Benson **333** loads - 4,662 cu yds.
3. Paul Horton Farm, Benson: **166** loads – 2,324 cu yds.

Total composted loads:

2010 – 588 H800 loads (8,232 cu yds) Jack Barrett, Daryl Duval, Paul Horton
2009 – 537 H800 loads (7,518 cu yds) Jack Barrett
2008 - 525 H800 loads (7,350 cu yds) Jack Barrett
2007 - 418 H800 loads (5,852 cu yds) Horton & Shaw
2006 - 459 H800 loads (6,426 cu yds) Horton & Shaw
2005 - 450 H800 loads (6,300 cu yds) McDermott & Shaw
2004 - 159 H800 loads (2,226 cu yds) McDermott Farm
2003 - 252 H800 loads (3,528 cu yds) McDermott Farm
2002 - 166 H650 loads (1,992 cubic yds) McDermott Farm
2001 - 137 H650 loads (1,644 cubic yds) McDermott Farm
2000 - 215 H650 loads (2,580 cubic yds) McDermott Farm

2010 LAKE CHAMPLAIN Water Chestnut Sites

Site Number and Name	Town	Control Implemented	Date Targeted	Number of HP or MH Hours	Estimated # of pounds removed	Estimated # of Harvester Loads or # of Rosettes Pulled
Vermont Sites						
<i>MISSISQUOI BAY</i>						
1. Missisquoi Bay 45°00'33 N / 73°07'54 W	Highgate Springs	USF&W HP-DEC	8/18, 8/27	10 10	0	0
2. Missisquoi Refuge Long Marsh Channel 44°59'34.38"N 73°09'20.88"W	Highgate Springs	USF&W HP-DEC	8/27	1 1	0	0
3. Outside entrance to Big Marsh Slough 44°58'32 N / 73°08'03 W	Highgate Springs	USF&W HP-DEC	8/18	1 1	0	0
<i>MAIN LAKE</i>						
McNeil Cove 44°18'03N / 73°17'47W	Charlotte	HP-DEC	8/30	1	0	0
4. Converse Bay F&W Access & Bay South 44°17'19N / 73°16'01W	Charlotte	HP-DEC	8/30	2	0	0
<i>OTTER CREEK</i>						
5. Town Farm Bay/Kimball Brook 44°16'60N / 73°16'01W	Charlotte	HP-DEC	6/21	2	0	0
6. Little Otter Creek (West Branch) 44°13'28N / 73°01'38W	Ferrisburg	HP	7/1, 8/10	80.5	18.8	190
7. Porter Bay 44°13'37N / 73°18'58N	Ferrisburgh	HP	7/1, 8/10	11	12.1	89
8. Mouth of Otter Creek to Fort Cassin Access 44°13'31N / 73°19'27W	Ferrisburgh	HP	7/1, 8/10	12	0	0
9. Fields Bay 44°13'15N / 73°19'09W	Ferrisburgh	HP	7/1,8/10 9/06	73	220.6	1,692
10. Otter Creek Fort Cassin Access South to Dead Creek 44°12'23N / 73°19'16W	Ferrisburgh	HP DEC	9/9	8	400	1,000+
		HP	7/2, 9/6	4	72.4	720
<i>PORT HENRY</i>						

* Key: HP = Handpulling
 MH = Mechanical harvesting
 DEC = VT Department of Environmental Conservation
 USF&W = US Fish & Wildlife Service
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 1 MH load = 14 cubic yards
 (L) = Lakeside

Site Number and Name		Town	Control Implemented	Date Targeted	Number of HP or MH Hours	Estimated # of pounds removed	Estimated # of Harvester Loads or # of Rosettes Pulled
11.	Basin Harbor 44°11'46N / 73°21'52W	Panton	HP	Not surveyed			
<i>SOUTH LAKE</i>							
12.	Hospital Creek a. 44°02'32N/73°25'06W (L)	Addison	HP	7/3, 8/9	26	175	1,965
	b. 44°02'20N/73°24'40W		HP	7/3, 8/9	26	71.8	746
13.	Whitney Creek 44°01'40N / 73°24'05W (L)	Addison	HP	7/5, 8/9	10	28.4	252
	b. 44°02'50N / 73°24'40W		HP	7/5, 8/9	31.5	541.8	5,467
			HP-TNC	7/23	52	378	1,260
14.	McCuen Slang VT 44°01'28N / 73°23'67W	Addison	HP	7/5	29.5	64	708
15.	Bridport Town Beach 43°59'55N / 73°24'04W	Bridport	HP	7/5, 8/13	21	0	0
16.	Giards Bay 43°58'44N / 73°24'01W	Bridport	HP	8/13	3	3	15
17.	North of W. Bridport 43°57'34N / 73°24'21W	Bridport	HP	8/13	3	0	0
18.	Leonard Bay 43°56'16N / 73°24'00W	Bridport	HP	7/20	12	19.8	221
19.	Lapham Bay 43°55'33N / 73°23'37W	Shoreham	HP	7/20	7.5	11.8	128
20.	South of Lapham Bay 43°54'52N / 73°23'40W	Shoreham	HP	7/20	10	1.5	18
21.	North of Fivemile Point 43°54'32N / 73°23'40W	Shoreham	HP	7/20	10	12	132
22.	Bays on Lake Street South of Five-Mile Point 43°54'06N / 73°22'35W	Shoreham	HP	7/16, 8/13	21	74.5	657
	Stony Cove 43°54'15N / 73°22'56W	Shoreham	No water chestnut found 2010				

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23.	Access by C. Farr Ranch 43°53'54"N / 73°22'30"W	Shoreham	HP	7/16, 8/13	15	56.7	493
	Watch Point 43°53'7"N / 73°22'31"W	Shoreham	No water chestnut found 2010				
24.	N of Larrabees Point 43°51'56"N / 73°22'11"W	Shoreham	HP	7/20, 7/21	37	200	1,998
25.	Beadles Cove and South 43°51'11"N / 73°22'15"W	Shoreham	HP	7/06, 7/26	71.5	36.2	388
26.	East Creek a.43°51'50"N / 73°22'37"W (mouth)	Orwell	HP	7/04, 7/26 7/27	150.5	704.8	6,731
	b.43°49'38"N / 73°21'59"W		HP-TNC	6/23, 7/9, 7/12, 7/16, 7/17, 7/19, 7/30	127.25	646	2,704
27.	Shoreline between East Creek & Catfish Bay 43°49'52"N / 73°23'06"W	Orwell	HP	7/23	6.5	0	0
28.	Catfish Bay 43°49'40"N / 73°23'09"W	Orwell	HP	7/23	13	20.2	182
29.	Buoy 39 Marina 43°49'21"N / 73°23'25"W	Orwell	HP	7/23	6.5	0	0
30.	Dock at Curly Audette Farm 43°48'38"N / 73°22'41"W	Orwell	HP	7/19	22.5	1	29
31.	North shore Chipmans Point 43°48'7"N / 73°22'32"W	Orwell	HP	7/19	15	24.8	308
32.	Shoreline between Chipmans Point and Benson Bay 43°47'07"N / 73°21'10"W	Orwell, Benson	HP	7/19, 7/21	67.5	327	3,105
33.	Benson Bay 43°45'50"N / 73°20'41"W	Benson	HP	7/19	52.5	1,551	17,061
34.	Shoreline between Benson Bay & Stony Point 43°45'24"N / 73°21'16"W	Benson	HP	7/27	15	19.6	176
35.	Stony Point 43°44'37"N / 73°21'57"W	Benson	HP	7/27	10	108	984

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36.	Shoreline between Stony Point & Benson Landing 43°44'16N / 73°22'05W	Benson	HP	7/27	17.5	198	1,780
37.	Benson Landing 43°43'45N / 73°22'03W	Benson	HP	8/17	6	155	605
38.	Dutchers and South 43°43'01N / 73°22'33W	Benson	HP	7/7, 7/8 7/28	136.5	666.2	7,228
39.	Peters Bay 43°38'12N / 73°25'37W	Benson/ West Haven	HP	7/28, 8/3 8/4, 8/5 8/6	300	8,620.4	48,929
			MH	7/13-7/15, 7/21, 7/26-7/28, 8/18, 8/19	143.25	239,400	63
40.	Red Rock Bay and North 43°40'57 N / 73°25'37 W	West Haven	MH	7/15, 7/16, 7/19-7/23, 7/29, 7/30, 8/2- 8/5	252.25	570,000	150
41.	Cold Spring Landing and south 43°40'4.7 N/ 73°24' 28 W	West Haven	MH	8/11-8/13, 8/16-8/20	184.5	691,600	182
42.	Horton Marsh 43°39' 34N/ 73°24'41 W	West Haven	MH	Not harvested in 2010			
43.	Poultney River and associated sites a. Mouth of the Poultney and region 43°34'08N/ 73°24'06W	West Haven	HP-TNC	7/6, 7/13, 7/24, 8/5, 8/24	61.5	1,035	6,109
	b. Rogers Marsh 43°34'06N/73°23'52W			7/7	2	1	8
	d. Reed Marsh 43°41'02N/73°21'23W			7/11, 7/27	8.5	61	404
	e. Schoolhouse Marsh 43°35'33N/73°23'12W			7/27, 8/16, 8/19	11.25	150	837

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	f. Billings Marsh 43°36'17N/73°22'39W	West Haven	HP-TNC	7/28	15.75	118	425
	h. Finch Marsh 43°34'36N/73°22'49W			6/28, 8/26	38.25	137	1,557
	i. Nichols Wetland 43°37'03N/73°22'30W			7/14, 7/15, 8/13	9.5	113	927
New York Sites							
	j. Saslow Marsh 43°36'50N/73°22'26W	Whitehall	HP-TNC	7/21	8	206	883
<i>SOUTH LAKE</i>							
44.	Barrel Bay and South 43°39'28 N / 73°24'60W	Dresden	MH	Not harvested in 2010			
45.	Dresden Landing and South 43°40'16 N / 73°24'37 W	Dresden	MH	8/2-8/6, 8/9, 8/10, 8/19	161	695,400	183
46.	New York Light 14 and south 43°40'45 N / 73°24'43W	Dresden	MH	7/23	2	3,800	1
47.	Pulpit Point 43°42'45N / 73°23'43W	Putnam	HP	7/29, 7/30 8/2	284.5	11,400.4	54,390
48.	Bed Back by Railroad NY 43°42'45N / 73°23'26W	Putnam	HP	7/7, 7/8 7/9, 7/10 7/12, 7/15	529.5	8,202.2	99,542
49.	NY Light 4 43°42'48N / 73°23'09W	Putnam	MH	7/12	27	34,200	9
			HP	7/13, 7/14 7/15	338	4,967.8	49,640
50.	60 Acre Patch 43°43'21N / 73°22'26W	Putnam	HP	7/12	32	213.4	2,552
51.	Sixmile Point and South 43°45'26N / 73°22'00W	Putnam	HP	7/07, 7/22 7/27, 7/29	157.5	2190.6	14,541
52.	South of Gourlie Point 43°46'45N / 73°21'50W	Ticonderoga	HP	7/22	15	558.6	4,921
53.	Gourlie Point Bay 43°47'38N / 73°22'25W	Ticonderoga	HP	7/22	15	49.2	458

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54.	North of Gourlie Point 43°47'47N / 73°22'42W	Ticonderoga	HP	7/22	15	21.8	193
55.	Charter Marsh 43°48'16N / 73°23'5W	Ticonderoga	HP	7/7	24	155.4	1,694
56.	North of Charter Marsh 43°48'33N / 73°23'11W	Ticonderoga	HP	7/23	19.5	44.4	406
57.	Fort Ticonderoga Bay & South 43°50'17N / 73°23'52W	Ticonderoga	HP	7/6/, 7/23	88.5	1,331	11,672
58.	LaChute River 43°50'42.18N/73°24'08.82W	Ticonderoga	HP	7/6	21	27.2	303
			HP-TNC	7/22, 8/3, 8/4	91.25	1,821	11,396
59.	North of Fort Ticonderoga 43°51'29N / 73°23'20W	Ticonderoga	HP	7/6	51	23.2	252
60.	North of Kirby Point 43°52'42N / 73°23'22W	Ticonderoga	HP	7/21	24	105	944
61.	South of IPCO 43°53'21N / 73°23'24W	Ticonderoga	HP	7/16, 7/21	51.5	54.4	488
62.	IPCO Bay 43°53'42N / 73°23'50W	Ticonderoga	HP	7/21, 8/13	27	356.6	3,089
63.	Bay North of Five Mile Point Light 43°54'17N / 73°24'45W	Ticonderoga	HP	7/16, 7/20 8/13	64.5	113.4	884
64.	North of Crown Point 43°57'15N / 73°24'49W	Crown Point	HP	7/20, 8/13	14	1.5	14
65.	Putnam Creek 43°57'22.2N / 73°24'55.5W	Crown Point	HP	7/5, 7/20 8/13	86.5	285.2	2,012
66.	Porters Marsh 43°58'13N / 73°24'58W	Crown Point	HP	7/5, 8/13	44	39.1	407
67.	Bay south of Burdick Crossing 43°59'4N / 73°25'14W	Crown Point	HP	8/13	6	2	8
68.	Bay at Burdick Crossing 43°59'10N / 73°25'13W	Crown Point	HP	8/13	3	0	0
69.	South of Lapstone Point 44°00'10N / 73°25'02W	Crown Point	HP	7/4, 8/12	25	19	111

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70.	Shoreline between Lapstone Pt & Bay South of Crown Point Bridge 44°00'55N / 73°25'03W	Crown Point	HP	7/5	9	9.2	98
71.	Bay south of Crown Point Bridge 44°01'30N / 73°25'06W	Crown Point	HP	7/4	37.5	35.4	389
PORT HENRY							
72.	Bulwagga Bay 44°00'17N / 73°26'51W	Crown Point, Moriah	HP	7/3, 8/11 8/12	131.5	1,584.6	6,864
73.	Bulwagga Bay Campground 44°02'02.76N / 73°27'36.76W	Crown Point, Moriah	HP	7/4, 8/11	93	914	9,886

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2010 OTHER WATERBODY SITES

	Site	Control Implemented*	Date Targeted	Hours	Estimated # of Pounds Removed	Rosettes Removed
Lakes and Ponds						
1.	Lake Bomoseen, VT 43°41'18N / 73°11'57W	HP-DEC	8/4	4	0	0
		HP-TNC	7/5	9	0	0
2.	Cogman Pond, VT 43°37'14N / 73°22'30W	HP-TNC	7/1, 7/15	14.75	35	197
3.	Brookside Pond, VT 43°46'58N / 73°18'34W	HP-TNC	7/29	2.5	13	52
		HP	7/8	4	24.4	276
4.	Parsons Mill Pond, VT 43°42'20 N / 73°17'04W	HP-TNC	8/9	22.75	137	391
5.	Lake Paran, VT 42°55'58N / 73°13'13W	HP-DEC	7/27	4	0	0
6.	Small pond, Benson, VT (Horton) 42°42'46N/73°15'20W	HP HP-DEC	7/30	5.5 5.5	148	704
7.	Small pond, Benson (Phillips) 43°42'54 N / 73°21' 22 W	HP HP-DEC	7/30	1 1	36	180
8.	Small pond, North Bennington,VT (Allen) 42°53'46N / 73°15'20 W	HP-DEC	7/27	2	0	0
9.	Small pond, Bennington, VT (Glanzenberg) 42°53'28N / 73°15'9W	HP-owner				
10.	Small pond at Benson Landing, VT 43°43'39N/ 73°21'57W	HP-DEC	No water chestnut found 2010			
11.	Root Pond, VT includes Shaw Mtn Wetlands 43°40'46N / 73°20'59W	HP-TNC	7/2, 8/26	13	17	185
12.	North Springfield Reservoir, VT 44°20'55 N / 72°30'20W	HP-CORPS	July October	30	0	0
		HP-DEC	8/31	8	0	0
13.	Pelkeys Swamp, VT 43°42'33N/ 73°19'18W	HP-TNC	6/25, 6/30, 8/6	16.75	56	464
14.	Lily Pond, Lake St Catherine VT 43°29'32N / 73°12'23W	HP-DEC	8/4	2	.5	2

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	Site	Control Implemented*	Date Targeted	Hours	Estimated # of Pounds Removed	Rosettes Removed
15.	Porter Lake, VT 44°12'38N / 73°19'09W	HP	7/1, 8/10	28.5	20.2	189
16.	Bullis Pond, VT 44°57'58N / 72°57'58W	HP-DEC	7/23	12	120	821
Rivers, Marshes, Wetlands VT and New York						
17.	Dead Creek, VT a. 44°11'01N / 73°18'53W b. 44°10'55N / 73°18'44W c. 44°09'11N / 73°19'14W d. Holcomb Slang 44°08'53N / 73°19'01W e. 44°07'53N / 73°19'42W f. 44°07'35N / 73°19'50W g. 44°05'12N / 73°20'50W	HP	7/2	151	358.6	3,938
			9/6	2	7	48
	h. Route 17 north and south	HP	7/3, 8/9	58	.5	14
18.	Lemon Fair River, VT 43°59'27N / 73°15'00 W	HP	7/24	2.5	1.4	12
19.	Richville Pond/Lemon Fair River 43°51'33N / 73°15'26W	HP	7/24	2	0	0
Missisquoi Refuge Sites, Highgate VT						
20.	Missisquoi Refuge Cranberry Pool 44°57'16.59N 73°08'56.91"W	USF&W	7/17, 8/3, 8/4,8/10, 8/12.	26	25	278
21.	Missisquoi Refuge Big Marsh Slough 44°58'23"N 73°08'24"W	USF&W	6/9, 7/14, 7/22, 7/23, 7/28	41	63	709

* Key: HP = Handpulling
 MH = Mechanical harvesting
 DEC = VT Department of Environmental Conservation
 USF&W = US Fish & Wildlife Service
 TNC = The Nature Conservancy
 1 MH load = 14 cubic yards
 (L) = Lakeside