

2009 Water Chestnut Control Program Summary

10/30/09

2009 Program Dates and Duration:

Lake Champlain contracted management: July 7 through September 1, 2009 (57 days)

Champlain sites managed: **69** of **69** possible sites

Other waterbodies managed: **21**

2009 Weather Conditions and Lake Levels

Very wet summer again with higher lake levels for most of the harvesting season: Lake level range 96.2. to 98.8 feet.

ONE New Lake Champlain Management Sites: In Putnam Creek and wetland in Crown Point New York

ONE New Other Waterbody Management Sites 2009

“Phillips (Lower) Pond” below Horton Pond in Benson.-

Lake Champlain Site Totals (see Table 1):

Total # of sites: 69 (68 in 2008, 67 in 2007, 64 in 2006, 62 in 2005, and 61 in 2004)

Total # sites managed in 2009: **67** (**16** without water chestnut)

MH and HP = **2** (site # 44, 45)

MH only sites = **4** (sites # 39, 40, 42, 43)

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

Other Waterbody Site Totals (see Table 2): (20 in 2008, 18 in 2007, 18 in 2006, 19 in 2005)

HP sites = **21**

MH = **0**

Project Contract Amounts

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

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

Composting = **\$3,640**, (**\$4,500** in 2008, **\$3400** in 2007)

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

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

Handpulling:

Total # of handpulling sites = **63** Champlain sites including tributaries (80 miles VT shoreline (including one new site in Putnam Creek and wetland, Crown Point, NY) and 45 miles NY shoreline), **8** Dead Creek sites, and **21** other waterbody sites.

Lakeside Contract dates: Upon signature until 7/31/2010

Total contracted hours and weights = **2,487 hrs, 29,146.7 lbs wet 14.57 tons**
(**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**)
(**2,920 hrs, 45,917 lbs wet weight 23 tons, 274,947 rosettes in 2006**)

VTDEC hours = **45**

TNC hours and weights (Staff & Volunteers) = **611.56 hours; 5,964 lbs wet weight 2.98 tons**(**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**)(**1,160 hours, 12,864 lbs wet weight 6.4 tons in 2006**)

US ARMY Corps Interns (N. Springfield) = **56**

USF&W = **46 hrs - .06 tons (106.5hrs - .17 tons in 08)**

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

Private Citizens, small pond (Horton), Benson = **4**

Total handpulling hours all groups = 3251 (4,117.2 in 2008) (5,008.5 in 2007)

Total number of handpulling sites all groups = 90+

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

Mechanical Harvesting (VTDEC Program): 7/9/09 - 8/5/09

Total hours = **376 hrs** - 168 hrs 45% on NY side and 208 hrs 55% on VT side (**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: 39, 40, 42, 43, 44, 45,

Equipment used in 2009: two H800 model harvesters, a high-speed transporter, a conveyor and two 4X4 dump trucks

Harvester Load Totals = 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 = **143** approximately including all of Peters Bay for the first time and some of the northern end of Red Rock Bay as well as area around NY Light 14 on both sides down to Dresden Station

Total Weight Water Chestnut removed in 2009 mechanical harvesting = **2,040,600** lbs wet weight **1,020.3** tons(**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 = **2,075,790** lbs wet weight **1037.9** tons (**2,062,727** lbs wet weight **1031.3** tons in 2008) (**1,632,191.6** lbs wet weight **816** tons in 2007) (**1,827,781** lbs wet weight in 2006) (**2,152,913** lbs wet weight **678** lbs **Phosphorus** removed approx in **2005.**)

TOTAL all water chestnut removed from all sources 2009 = **2,075830.7** lbs wet weight **1037.91** tons

Chestnut Searches & Surveys: 12 days

7/14/09	Singing Wetland
7/14/09	Lake Paran
7/15/09	Lily Pond
7/27/09	Bomoseen Wetland
7/29/09	Champlain-LaChute River south to Chubbs Point
8/04/09	Bullis Pond
8/10/09	LaPlatte River
8/12/09	Missisquoi Bay (airboat)
8/19/09	Missisquoi Bay (airboat)
8/31/09	Horton Pond Benson
9/01/09	Lower Pond (Phillips) Benson
9/09/09	Crown Point Bridge North VT & NY

VT Composting Sites in Benson: 1 – 100 plus percent spoils composted

1. Jack Barrett Property, West Haven: 537 loads – 7,518 cu yds. .

Total composted loads: 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

**Water Chestnut Management Program:
2009 Lake Champlain and Associated Tributary 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						
MISSISQUOI BAY						
1.	Missisquoi Bay 45°00'33 N / 73°07'54 W	Highgate Springs	HP-DEC USF&W	8/12, 8/19	8	0
2.	Missisquoi Refuge Long Marsh Channel 44°59'34.38"N 73°09'20.88"W	Highgate Springs	USF&W	7/30	2	0
3.	Outside entrance to Big Marsh Slough 44°58'32 N / 73°08'03 W	Highgate Springs	HP-DEC USF&W	8/12, 8/19	2	.5
MAIN LAKE						
	McNeil Cove 44°18'03N / 73°17'47W	Charlotte	HP-DEC	Not surveyed in 2009/ alternate year checks		
4.	Converse Bay F&W Access & Bay South 44°17'19N / 73°16'01W	Charlotte	HP-DEC	Not surveyed in 2009/ alternate year checks		
OTTER CREEK						
5.	Town Farm Bay/Kimball Brook 44°16'60N / 73°16'01W	Charlotte	HP-DEC	Not surveyed in 2009/ alternate year checks		
6.	Little Otter Creek (West Branch) 44°13'28N / 73°01'38W	Ferrisburg	HP	7/07,8/18	55	21.6
7.	Porter Bay 44°13'37N / 73°18'58N	Ferrisburgh	HP	7/7	13	1
8.	Mouth of Otter Creek to Fort Cassin Access 44°13'31N / 73°19'27W	Ferrisburgh	HP	7/7	6.5	0
9.	Fields Bay 44°13'15N / 73°19'09W	Ferrisburgh	HP	7/7,8/18	36	31.2
10.	Otter Creek Fort Cassin Access South to Dead Creek 44°12'23N / 73°19'16W	Ferrisburgh	HP	7/8	1	0

* Key: HP = hand-pulling contracted
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 (L) = Lakeside

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<i>PORT HENRY</i>							
11.	Basin Harbor 44°11'46N / 73°21'52W	Panton	HP	Not surveyed in 2009/ alternate year checks			
<i>SOUTH LAKE</i>							
12.	Hospital Creek a. 44°02'32N/73°25'06W (L)	Addison	HP	7/9, 8/20	21	36.8	350
	b. 44°02'20N/73°24'40W			7/9, 8/20	21.5	0	0
13.	Whitney Creek 44°01'40N / 73°24'05W (L)	Addison	HP	7/9, 8/20	16	15.5	76
	b. 44°02'50N / 73°24'40W		HP	8/20, 8/21	21.5	240.1	663
			HP-TNC	7/25, 8/8	45	908	2,173
14.	McCuen Slang VT 44°01'28N / 73°23'67W	Addison	HP	7/9, 8/21	25.5	22.7	192
15.	Bridport Town Beach 43°59'55N / 73°24'04W	Bridport	HP	7/13	1	0	0
16.	Giards Bay 43°58'44N / 73°24'01W	Bridport	HP	7/13, 7/21	22.5	9.8	41
17.	North of W. Bridport 43°57'34N / 73°24'21W	Bridport	HP	7/14	1	0	0
18.	Leonard Bay 43°56'16N / 73°24'00W	Bridport	HP	7/14, 8/17	22.5	17.5	145
19.	Lapham Bay 43°55'33N / 73°23'37W	Shoreham	HP	7/14, 8/17	11	1	15
20.	South of Lapham Bay 43°54'52N / 73°23'40W	Shoreham	HP	7/14, 8/17	10	0	0
21.	North of Fivemile Point 43°54'32N / 73°23'40W	Shoreham	HP	7/15, 8/17	5	0	0
22.	Bays on Lake Street South of Five-Mile Point 43°54'06N / 73°22'35W	Shoreham	HP	7/15, 8/18	7.5	23.6	298
	Stony Cove 43°54'15N / 73°22'56W	Shoreham					
23.	Access by C. Farr Ranch 43°53'54N/73°22'30W	Shoreham	HP	7/15, 8/19	11	24	242

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	Watch Point 43°53'7N / 73°22'31W	Shoreham					
24.	N of Larrabees Point 43°51'56N / 73°22'11W	Shoreham	HP	7/15, 7/16, 8/19	12	91.8	825
25.	Beadles Cove and South 43°51'1N / 73°22'15W	Shoreham	HP	7/16, 8/19	23	122.2	797
26.	East Creek a.43°51'50N / 73°22'37W (mouth) b.43°49'38N/73°21'59W	Orwell	HP	7/16, 8/20	39.5	413	924
				8/28	32	1,020.6	4,293
			HP-TNC	6/22-8/20	312	1475	6,336
27.	Shoreline between East Creek & Catfish Bay 43°49'52N / 73°23'06W	Orwell	HP	7/25	1	0	0
28.	Catfish Bay 43°49'40N / 73°23'09W	Orwell	HP	7/25, 8/26	5	74.6	248
29.	Buoy 39 Marina 43°49'21N / 73°23'25W	Orwell	HP	7/25	1	0	0
30.	Dock at Curly Audette Farm 43°48'38N / 73°22'41W	Orwell	HP	7/21, 8/26	4.6	13.6	113
31.	North shore Chipmans Point 43°48'7N / 73°22'32W	Orwell	HP	7/21, 8/26	4.6	9.3	82
32.	Shoreline between Chipmans Point and Benson Bay 43°47'07N / 73°21'10W	Orwell, Benson	HP	7/21, 8/26	31.5	200	1,640
33.	Benson Bay 43°45'50N / 73°20'41W	Benson	HP	7/21, 8/26	40	525.6	4,700
34.	Shoreline between Benson Bay & Stony Point 43°45'24N / 73°21'16W	Benson	HP	7/24, 8/26	9.5	44.8	310
35.	Stony Point 43°44'37N / 73°21'57W	Benson	HP	7/24	1	6	96
36.	Shoreline between Stony Point & Benson Landing 43°44'16N / 73°22'05W	Benson	HP	7/24	1	6	96
37.	Benson Landing 43°43'45N / 73°22'03W	Benson	HP	7/13	39	561	8,954

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38.	Dutchers and South 43°43'01N / 73°22'33W	Benson	HP	7/13-7/15 7/24, 8/27	177	1,880.8	26,956
39.	Peters Bay 43°38'12N / 73°25'37W	Benson/ West Haven	MH	7/13-7/16		235,600	62
40.	Red Rock Bay and North 43°40'57 N / 73°25'37 W	West Haven	MH	7/9 - 8/5		1,155,200	304
41.	Poultney River and associated sites	West Haven	HP-TNC				
	a. Mouth of the Poultney and region 43°34'08N/ 73°24'06W			7/1, 7/2, 8/13	98	191	944
	b. Rogers Marsh 43°34'06N/73°23'52W			7/22	4	2	16
	c. Shaw Mtn Wetlands 43°41'02N/73°21'23W						
	d. Reed Marsh 43°36'52N/73°22'42W			7/28	20	64	192
	e. Schoolhouse Marsh North & South 43°35'33N/73°23'12W			7/7, 8/7	7	27	263
	f. Billings Marsh 43°36'17N/73°22'39W			7/27	24	149	575
	g. Galick Road Wetlands 43°34'36N/73°24'48W						
	h. Finch Marsh 43°34'36N/73°22'49W			West Haven	HP-TNC	6/23, 7/16, 8/4	25.5
i. Nichols Wetland 43°37'03N/73°22'30W			7/14	2.5	5	10	
New York Sites							
	j. Saslow Marsh 43°36'50N/73°22'26W	Whitehall	HP-TNC	7/17	6	88	840
SOUTH LAKE							
42.	New York Light 14 and south 43°40'45 N / 73°24'43W	Dresden	MH	7/17 – 8/5		528,200	139

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43.	Pulpit Point 43°42'45N / 73°23'43W	Putnam	MH	7/20		26,600	7
44.	Bed Back by Railroad NY 43°42'45N / 73°23'26W	Putnam	MH	7/10 – 7/13		49,400	13
			HP	7/23, 7/28, 7/29, 7/30	340	5,190.8	53,127
45.	NY Light 4 43°42'48N / 73°23'09W	Putnam	MH	7/9, 7/10		45,600	12
			HP	7/16, 7/22 7/23, 7/27	224.5	4,285	37,965
46.	60 Acre Patch 43°43'21N / 73°22'26W	Putnam	HP	7/16, 7/17 7/24	64.5	3,511.2	42,176
47.	Sixmile Point and South 43°45'26N / 73°22'00W	Putnam	HP	7/20, 7/21 8/16, 8/27	97.5	2,078.7	25,479
48.	South of Gourlie Point 43°46'45N / 73°21'50W	Ticonderoga	HP	7/21	2.6	16.2	270
49.	Gourlie Point Bay 43°47'38N / 73°22'25W	Ticonderoga	HP	7/21	2.6	7.8	123
50.	North of Gourlie Point 43°47'47N / 73°22'42W	Ticonderoga	HP	7/21	2.6	5.8	89
51.	Charter Marsh 43°48'16N / 73°23'5W	Ticonderoga	HP	7/21, 8/25	49	588.8	3,848
52.	North of Charter Marsh 43°48'33N / 73°23'11W	Ticonderoga	HP	7/21, 8/25	13	24.2	104
53.	Fort Ticonderoga Bay & South 43°50'17N / 73°23'52W	Ticonderoga	HP	7/20, 8/21 8/25, 8/26	85	697	5,870
54.	LaChute River 43°50'42.18N/73°24'08.82W	Ticonderoga	HP	8/21, 8/259 8/26	30	949.2	4,965
55.	North of Fort Ticonderoga 43°51'29N / 73°23'20W	Ticonderoga	HP	7/15, 7/16 8/19	48	358.8	2,878
56.	North of Kirby Point 43°52'42N / 73°23'22W	Ticonderoga	HP	7/15, 8/19	19.5	32.6	163
57.	South of IPCO 43°53'21N / 73°23'24W	Ticonderoga	HP	7/15, 8/18	17.5	4.5	75

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58.	IPCO Bay 43°53'42N / 73°23'50W	Ticonderoga	HP	7/15, 8/18	30.5	237	2,003
59.	Bay North of Five Mile Point Light 43°54'17N / 73°24'45W	Ticonderoga	HP	7/10, 7/14 8/17	50	304.8	2,934
60.	North of Crown Point 43°57'15N / 73°24'49W	Crown Point	HP	7/10, 8/24 7/10, 8/24	51.3	266.2	2,247
61.	Putnam Creek NEW 43°57'22.2N / 73°24'55.5W	Crown Point	HP	7/10, 8/24	25	265.2	2,235
62.	Porters Marsh 43°58'13N / 73°24'58W	Crown Point	HP	7/10, 8/24	12.8	11.3	41
63.	Bay south of Burdick Crossing 43°59'4N / 73°25'14W	Crown Point	HP	7/10	2.3	0	0
64.	Bay at Burdick Crossing 43°59'10N / 73°25'13W	Crown Point	HP	7/10	2.3	0	0
65.	South of Lapstone Point 44°00'10N / 73°25'02W	Crown Point	HP	7/10, 8/24	40.3	189.6	1,773
66.	Shoreline between Lapstone Pt & Bay South of Crown Point Bridge 44°00'55N / 73°25'03W	Crown Point	HP	7/10	13.3	51.8	514
				8/24	12	31.4	231
67.	Bay south of Crown Point Bridge 44°01'30N / 73°25'06W	Crown Point	HP	7/10	18.8	29.8	308
				8/24	4	1	7
PORT HENRY							
68.	Bulwagga Bay 44°00'17N / 73°26'51W	Crown Point, Moriah	HP	07/13, 8/17	58.5	133.8	3,918
69.	Bulwagga Bay Campground 44°02'02.76N / 73°27'36.76W	Crown Point, Moriah	HP	7/06, 8/17	132	3,810.2	45,288

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**Water Chestnut Management Program
2009 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	7/27	4	0	0
2.	Coggman Pond, VT 43°37'14N / 73°22'30W	HP-TNC	7/29	24	74	222
3.	Brookside Pond, VT 43°46'58N / 73°18'34W	HP-TNC	7/8	5	51	428
		HP	08/29	3.5	41.4	248
4.	Parsons Mill Pond, VT 43°42'20 N / 73°17'04W	HP-TNC	8/5, 8/6	22.5	198	1,362
5.	Lake Paran, VT 42°55'58N / 73°13'13W	HP-DEC	7/14	4	0	0
6.	Small pond, Benson, VT (Horton) 42°42'46N/73°15'20W	HP-owner	June	2	3	15
		HP-DEC	8/31, 9/1	10	47	337
7.	Small pond, Benson, VT NEW (Phillips)	HP-DEC HP	9/1	8	45	336
8.	Small pond, North Bennington, VT (Allen) 42°53'46N / 73°15'20 W	HP-DEC	7/14	4	1	2
8.	Small pond, Bennington, VT (Glanzenberg) 42°53'28N / 73°15'9W	HP-owner	6/7, 6/20, 7/12	1.5	0	0
10.	Small pond at Benson Landing, VT 43°43'39N/ 73°21'57W	HP	No water chestnut observed by HP Crew or DEC			
11.	Root Pond, VT 43°40'46N / 73°20'59W	HP-TNC	7/15	6	2	16
12.	North Springfield Reservoir, VT 44°20'55 N / 72°30'20W	HP-CORPS	6/11-10/13	56	4	26
13.	Pelkeys Swamp, VT 43°42'33N/ 73°19'18W	HP-TNC	6/30	10	36	104
14.	Lily Pond, Lake St Catherine VT 43°29'32N / 73°12'23W	HP-DEC	7/15	3	.5	1

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15.	Porter Lake, VT 44°12'38N / 73°19'09W	HP	7/07, 8/18	25.5	19.2	188
16.	Bullis Pond, VT 44°57'58N / 72°57'58W	HP	7/17	48	120	1,692
		HP-DEC	8/4	6	24	230
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	7/08	111.5	217	3,836
			8/19	48	164.4	870
	h. Route 17 north and south	HP	7/09, 8/20	64.5	56.6	387
18.	Lemon Fair River, VT 43°59'27N / 73°15'00 W	HP	7/18, 8/29	7	17.5	273
19.	Richville Pond/Lemon Fair River 43°51'33N / 73°15'26W	HP	7/18, 8/29	5.5	3	35
Missisquoi Refuge Sites, Highgate VT						
20.	Missisquoi Refuge Cranberry Pool 44°57'16.59N 73°08'56.91"W	USF&W	7/9-8/19	46	62	582
21.	Missisquoi Refuge Big Marsh Slough 44°58'23"N 73°08'24"W	USF&W	6/10-9/3-	46	125	1,222

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