

**HAND HARVESTING WATERMILFOIL IN LAKE GEORGE**

**1989 Interim Report**

**submitted to**

**Warren County Board of Supervisors**

**by**

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James W. Sutherland  
Lawrence W. Eichler**

**December, 1989**

**FWI Report #89-08**

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## SUMMARY

Thirteen sites containing populations of Eurasian Watermilfoil were hand harvested during September 1989. Based upon 1988 survey data, a total of twenty-four sites had been scheduled for hand harvesting. The eleven sites not harvested during September exhibited substantial expansion growth of Eurasian Watermilfoil populations during the 1989 growing season and hand harvesting was not considered an appropriate technique. Instead, these eleven sites were reclassified to receive alternate physical control techniques during 1990. The thirteen sites that were hand harvested will be revisited during 1990 to check for regrowth of the native species.

This report represents the rationale for hand harvesting low density scattered plant populations of Eurasian Watermilfoil, the harvesting technique utilized at each site and a summary of the data collected. Site examinations in October indicated that the hand harvesting effort was largely successful.

Preliminary recommendations based upon the course of this project to date include the following:

1. The survey of sites in the Lake George Eurasian Watermilfoil survey should not begin until July of each year. If the survey is conducted too early in the year, the results merely reflect overwintering conditions or the growth of the previous year. The status of the populations in June are only a fair indicator of the population status in September.

2. The followup reexamination of the thirteen harvest sites should be completed in September of 1990 as planned to assess regrowth of Eurasian Watermilfoil.
3. A more effective mechanism for permitting individual sites with low numbers of plants must be enacted to enable hand harvesting of sites with low numbers of plants in the same year in which they are found, rather than waiting until the following year. A generic permit application is currently being discussed with the Adirondack Park Agency. Otherwise, the plants cannot be harvested until the following year, which allows them to grow to greater densities.
4. As was previously proposed, hand harvesting is very effective in controlling sites with low plant densities. However, it is tedious and less efficient when plant densities approach moderate or high densities. We recommend hand harvesting for sites with low density populations numbering less than 100 plants total.

## INTRODUCTION

Eurasian Watermilfoil (Myriophyllum spicatum L.) was first discovered in Lake George by Rensselaer Fresh Water Institute (FWI) personnel during routine research activities in the summer of 1985. A survey in 1986 revealed a total of 23 sites at which this species was found. In 1987, additional surveys discovered a total of 45 sites with Eurasian Watermilfoil.

As of the end of 1988, a total of 55 sites had been identified as having Eurasian Watermilfoil in Lake George. At twelve of these sites, all of the Eurasian Watermilfoil had been removed for voucher specimens (approximately six plants at each site). Of the remaining sites, 35 had scattered plant communities. An evaluation of these sites determined that 24 of these sites were appropriate for hand harvesting.

The New York State Department of Environmental Conservation (NYSDEC), in conjunction with the Lake George Park Commission (LGPC) and Warren County, submitted a proposal to the United States Environmental Protection Agency (USEPA) for a Phase II Clean Lakes Implementation Project on Lake George, New York. One component of this project deals with control of Eurasian Watermilfoil at 43 sites around the lake using physical control techniques such as hand harvesting, suction harvesting and benthic barrier. Warren County agreed to fund hand harvesting at the 24 sites identified during the 1989 growing season, with follow-up in 1990. This demonstration effort was a combined project of the Rensselaer Fresh Water Institute and the NYSDEC Lake Services Section.

The sites selected for hand harvesting were optimal for the success of this technique. At these sites, generally fewer than 100 plants were found in 1988.

Why attempt to control Eurasian Watermilfoil at these sites, with such low densities? The reasons to apply this control technique at this time included:

1. The permits, costs, and planning for hand harvesting did not require the intensity of other control techniques and had a high probability of initiating control applications during the summer of 1989. We believed it was important to begin some control measures as soon as possible.
2. These sites had the potential to expand into larger colonies in a short period of time. The colony at Northwest Bay was only 10 plants in 1986, but grew into a small bed in 1987 and increased in area 1300% by 1988. If this site had been hand-harvested in 1986, there would not, in all likelihood, be a dense bed there now.
3. These sites would produce fragments, allowing the expansion of Eurasian Watermilfoil both in the adjacent area, and further away.
4. Applying control strategies at these sites as soon as possible would prove to be quicker and less costly than waiting until later, when more extensive control measures would be needed.

#### METHODS

The methods to be employed, and site-specific information, are also contained in the NYS DEC permit application to the Adirondack Park Agency. The permit application, completed by one of the authors (JWS), was a prerequisite for the hand harvesting project. Twenty-four sites were selected for hand harvesting (See Table 1 and Figure 1).

All of these sites had approximately 100 or fewer scattered plants as of the 1988 survey.

All twenty-four of these sites were visited in June and July as part of the LGAF-sponsored Eurasian Watermilfoil Survey. The number of plants and areal extent of Eurasian Watermilfoil populations were estimated in preparation for hand harvesting. Evidence from this survey did not disqualify any of the proposed sites.

Hand harvesting was initiated in September. This time was selected to provide the optimal season for spotting plants, yet after heavy boat traffic and other sources of interference had subsided. At each site, plants were harvested by hand using either snorkelers or SCUBA divers. Divers and snorkelers swam grid patterns to patrol the area known to have Eurasian Watermilfoil, collecting plants observed. Harvested plants were placed in a mesh dive bag, for later sorting. Snorkelers also swam areas outside of the previously-known Eurasian Watermilfoil populations to find additional plants that may have escaped previous notice. Snorkelers patrolled the area to collect any fragments created by SCUBA divers, and find additional plants missed. The number of plants harvested were counted for each site, and the plants dried and weighed to determine biomass removed. The number of personnel and hours were carefully recorded to evaluate work-time, travel-time and support-hours, to calculate control efficiency and cost-effectiveness. A boat tender was used during these operations to ensure the safety of personnel in the water. In later data discussions, this process will be referred to as the "harvest."

In the two weeks following the hand harvesting operations,

all sites were revisited to evaluate the effectiveness of harvest operations, and harvest any plants overlooked (later referred to as "evaluation"). The same data as above were collected and used to calculate the relative efficiency of the hand harvesting operation.

In 1990, all sites will be revisited at the same relative time of year (early September) and the sites carefully examined for the presence of Eurasian Watermilfoil. All plant specimens found will be harvested, the number counted, and plants dried and weighed to assess the relative amount of regrowth and recolonization.

In the discussions that follow, all numbers were recorded relevant to the accuracy of the measurements, and significant digits retained in the calculations of all statistics. However, all numbers are rounded to three significant digits in the presentation.

## RESULTS AND DISCUSSION

### Summary of Site Activity

This narrative presents the results of preliminary site surveys in September before harvest was initiated, our decision on the treatment for these sites, and the amount of material removed at each site from the harvest and evaluation visits. Table 1 provides information on initial site surveys, while Table 2 presents the sites harvested and the amount of material (dry weight), number of plants removed, and number of person\*hours (number of divers times the amount of time divers spent harvesting) at each harvested site. Table 3 is a tabulation of the total effort at each harvest site, with total time required and amount

of material harvested. All numbers reported were rounded to three or less significant digits after calculation, explaining the apparent discrepancy in total values.

West Green Island (M-5). The September site survey preliminary to hand harvesting found that the moderately dense area of Eurasian Watermilfoil had expanded to a dense bed, extending from the southern-most DEC Facility docks to the adjoining property. Therefore, hand harvesting was not deemed practical, and this site was reclassified for suction harvesting or benthic mat placement, as part of the Lake George Clean Lakes Phase II project.

Warner Bay (M-11, M-37, M-38). The September survey found several thousand low-to-moderate density M. spicatum plants growing among an equal number of the native M. sibiricum (ex. M. exalbescens). These populations were predominantly on the east shore from the five mile per hour marker to within 100 meters of the marsh discharge. This population was deemed too numerous for hand harvesting, so the site was reclassified for suction harvesting.

Harris Bay, SE Happy Family Islands (M-14). The September survey found a small bed of M. spicatum by the southern-most channel marker, as well as some plants in among the boat slips in the adjoining marina. A few plants (32, or 25.3 g dw) were harvested before the bed was found, at areas in which Eurasian Watermilfoil was previously found. Because of the dense bed, the site was considered unsuitable for further hand harvesting and was reclassified for suction harvesting. The area examined was more extensive than examined for the June survey, such as areas in the marina. The site was not revisited for evaluation, so this data was not included in Table 2 or utilized in further analyses.

Finkle Brook (M-15). The September survey found this site suitable for hand harvesting, although the number of plants observed were significantly greater than during the June survey. Hand harvesting activities resulted in 14 person\*hours collecting 1400 plants weighing 1300 grams (dry weight, g dw) in the harvest, and an additional 0.67 person\*hour spent to harvest 15 plants weighing 3.05 g dw during the site evaluation. A total of 14.8 person\*hours was spent collecting 1410 plants weighing 1310 g dw.

Middleworth Bay (M-16). The September survey found that the southern arm of the bay had several thousand low-to-moderate density Eurasian Watermilfoil plants. The central portion of the bay was barren of Eurasian Watermilfoil. The northern portion of the bay had 50 to 100 plants, beginning at the covered boathouse and extending northward. Although hand harvesting would be feasible for the north arm of the bay, the entire area was reclassified for suction harvesting, with hand harvesting of the north arm to coincide with physical control in the south portion of the bay.

Hague Boat Launch (M-18). The September survey found too many Eurasian Watermilfoil plants to count, at least several thousand, and the site was rejected for hand harvesting. Because of heavy sedimentation at this site, and extensive growths of both native and exotic species (M. spicatum and Potamogeton crispus), we recommend traditional dredging of this site.

Lake George Yacht Club (M-23). The September survey of this site found scattered Eurasian Watermilfoil plants along the beach, and between the third and fourth docks (counting from shore outwards). However, dense beds were found between the first two docks, with moderate growth between

the second and third docks. The large number of plants at this site dictated that the site be reclassified for an alternate physical control measure.

West Tongue Mountain, Northwest Bay (M-24). Although the September survey found substantially more Eurasian Watermilfoil plants than during the June survey, hand harvesting was performed at this site. In the harvest visit, 32.6 person\*hours were expended to harvest 1780 plants weighing a total of 3230 g dw. During the site evaluation, an additional 9.9 person\*hours were expended collecting 721 plants weighing a total of 120 g dw. Therefore, a total of 42.5 person\*hours were spent collecting 2500 plants weighing 3350 g dw.

Basin Bay (M-25). Eurasian Watermilfoil hand harvesting was initiated at this site, despite finding a small bed, an adjoining area of moderately-dense Eurasian Watermilfoil, and scattered plants in the area surrounding the mouth of the tributary. Harvest visits of 15 person\*hours resulted in 2310 plants weighing 2750 g dw being removed, while the evaluation visit expended an additional 3 person\*hours that removed 201 plants weighing 33.6 g dw. The total effort expended was 18 person\*hours to harvest 2510 plants weighing 2780 g dw.

NW Cooper Point (M-27). The initial survey found scattered plants throughout much of this small bay, while the previous survey had found less extensive distributions of fewer plants. However, hand harvesting was pursued. The harvest visit took 5.2 person\*hours, yielding 324 plants weighing 125 g dw. The evaluation discovered plants in areas not previously observed, namely in among floating-leaved and emergent vegetation along the southern end of the bay in water depths less than 2 feet. The evaluation expended

4.8 person\*hours, yielding 853 plants for a total weight of 346 g dw. A total of 9.98 person\*hours were expended to harvest 1180 plants weighing 471 g dw. Even with this effort, some plants may still be found in the northeast corner of the bay, where the shallow water as well as very high turbidity and a flocculent bottom combined to hamper thorough harvesting of Eurasian Watermilfoil.

Bay NE of Tea Island (M-29). The September survey discovered a large area of moderate-to-dense Eurasian Watermilfoil in 1 to 4 meters depth in the southern portion of this small bay, with the northern portion having low-to-moderate densities of M. spicatum containing total numbers too numerous to estimate. Because of the high number of plants involved, this site was deemed not suitable for hand harvesting, and reclassified for other control techniques.

English Brook (M-31). This site, located south of the brook's delta, was found to have significantly more plants than observed in the June survey. However, hand harvesting was pursued. The harvest visit, taking 31.3 person\*hours, resulted in 4250 plants weighing 4650 g dw being harvested, while the evaluation took an additional 4.5 person\*hours to yield 481 plants weighing 228 g dw. Therefore, a total effort of 35.8 person\*hours was spent harvesting 4720 plants weighing 4880 g dw.

Bay E of Dark Bay (M-36). The September survey revealed significantly more Eurasian Watermilfoil plants than observed in June in the area where plants were first observed. All of these plants were harvested, yielding 255 plants weighing 140 g dw from 6.5 person\*hours effort. However, the survey also discovered a previously-unknown bed within a boatslip. This bed was not hand harvested,

but was classified for benthic matting. The scattered plant zone was evaluated, with 30 plants removed weighing 6.4 g dw for an effort of 1 person\*hour. Note that this site was not completely cleared of plants, but was included in Tables 2 and 3.

S Kattskill Bay (M-39). The September survey indicated approximately no change in the Eurasian Watermilfoil population from the June survey. A harvest of 0.2 person\*hours yielded 4 plants weighing 0.5 g dw, while the evaluation required another 0.2 person\*hours and yielded 4 more plants weighing 0.94 g dw. A total of 0.3 person\*hours was expended picking 8 plants that weighed a total of 0.02 g dw.

Commission Point Bay (M-40). The harvest visit took 2.2 person\*hours to harvest 115 plants weighing 150 g dw, while the evaluation visit required 0.8 person\*hours to harvest 6 plants weighing 2.45 g dw. A total of 3 person\*hours was expended to harvest 121 plants weighing 152 g dw.

Paradise Bay (M-41). The Eurasian Watermilfoil population at this location was found in the easternmost arm of the bay, in 2 to 4 meters water depth. Harvest conditions were rather poor, with a clay sediment that rapidly diminished visibility. The harvest effort took 3.8 person\*hours to harvest 272 plants weighing 256 g dw. The evaluation effort took an additional 1.9 person\*hours to harvest 80 plants weighing 24.5 g dw. The total effort was 5.73 person\*hours to harvest 352 plants weighing 281 g dw.

Bolton Bay (Bixby Beach) (M-43). The September survey discovered significantly more plants than previously observed, with most occurring around a submersed crib in

the central portion of the small bay. The harvest effort took 22.5 person\*hours to harvest 1640 plants weighing 800 g dw, while the evaluation effort was an additional 5.75 person\*hours to harvest 861 plants weighing 65.2 g dw. Total effort expended was 28.3 person\*hours harvesting 2500 plants weighing a total of 865 g dw.

Bolton Bay - NE of Green Island Bridge (M-44). The September survey found the Eurasian Watermilfoil population had expanded to form a small dense bed in the area between the bridge, submersed crib, shore, and boat channel on the northeast side of the bridge. Therefore, the site was not hand harvested, and was reclassified for other control techniques.

Gull Bay (M-48). The September survey found significantly more Eurasian Watermilfoil at the previously-known site off of the beach and stream, and an additional area of a few scattered plants on the southern point extending into the bay. The latter area had not been previously examined. Because of this extensive area of plants, the entire bay was snorkeled to locate additional plants, whereas the June survey had only examined the area adjacent to the tributary. However, hand harvesting did proceed at this site. In the harvest visit, 36.5 person\*hours was expended to harvest 4680 plants weighing 1660 g dw. The site evaluation took an additional 4.5 person\*hours to remove 529 plants weighing 50.7 g dw. The total effort was 41 person\*hours to harvest 5210 plants weighing 1710 g dw.

Clark Hollow Bay (M-50). The September survey results indicated a similar number of plants found as the June survey. The harvest spent 0.93 person\*hours to harvest 25 plants weighing 39.5 g dw. The site evaluation took an additional 1 person\*hour to harvest 19 plants weighing

8.36 g dw, for a total of 1.93 person\*hours to harvest 44 plants with a total weight of 47.9 g dw.

Rogers Rock State Campground Beach (M-52). The survey of this site in September found the Eurasian Watermilfoil population essentially the same as in June. The harvest attempt took 4 person\*hours to collect 280 plants weighing 1050 g dw, while the site evaluation expended another 2 person\*hours to collect 30 plants weighing 8.77 g dw. The total effort was 6 person\*hours to harvest 310 plants weighing 1060 g dw.

Clay Bay, Northwest Bay (M-53). The September survey found the Eurasian Watermilfoil population essentially unchanged from the June survey. The harvest visit took 1.7 person\*hours to harvest 58 plants weighing 39 g dw, while the evaluation spent another 0.33 person\*hours to harvest 1 plant weighing 0.16 g dw. Thus, the total effort was 2.03 person\*hours to harvest 59 plants weighing 39.2 g dw.

Of the twenty-four sites initially selected for hand harvesting, all Eurasian Watermilfoil plants were harvested at 13 sites. In addition, plants were harvested from the scattered plant zone of one site (M-36) for both a harvest and evaluation trip, and plants were harvested at one other site (M-14) during a harvest visit, with no site evaluation.

Considering all sites in which both the harvest and evaluation site efforts were made, a total of 217 person\*hours were spent to harvest 21,200 plants with a total dry weight of 17,100 g dw (Table 3). If a conversion factor of 8% dry weight to wet weight is used, that represents a total harvest of 214 kg wet weight.

### Analysis of Harvest Effort To Date

Using the data presented in Table 2, some preliminary data analyses may be performed to interpret some aspects of the hand harvesting effort.

In Figure 2, the relationship between the number of plants harvested in the harvest and evaluation activities are compared to the effort expended. Two facts are immediately apparent: 1) The number of plants harvested during the evaluation phase were generally 20% that of the harvest phase, and 2) The amount of effort per plant was generally similar (identical slopes of the regression line), but the initial input of surveying (intercept) was less since the location of the plants was known.

The same relationship expressed per unit plant weight was significantly different than for number of plants (Figure 3). Site evaluations yielded less than 10% of the plant weight when compared to harvest visits. The effort expended per unit weight was greater (slope) for the evaluations than for the harvest, but again the initial input to find plant biomass (intercept) was less for the evaluations since the location was known.

The relationship of the number of plants harvested versus the weight of plants harvested (Figure 4) indicates the average weight of a plant (e.g., one basal stem) per site. Plant size was very variable for the harvest, and average plant size was more than double (slope) that of the evaluation harvests. During the harvest, plants of 1 meter or more height were harvested, and plants often occurred in clumps of several stems per clone. During the site evaluations, very few clumps were found. More often, plants of 10 cm or less were collected. These plants were generally hidden among the native vegetation, under the

layer of the native canopy, or located near the root crowns of plants previously harvested.

Figure 5 indicates the relationship between the number of plants harvested on the harvest visit to the number of plants harvested on the site evaluation. The slope of the relationship shown would indicate that the harvest was about 80% efficient. However, three points are obviously inconsistent with the relationship of the other ten. At these three sites (M-24, M-27, M-43) significantly more plants were found during the evaluation than at other sites. For two of these sites (M-24 and M-43), the sites were particularly difficult to hand harvest, having numerous bottom obstructions and fine particulate sediments. At the other site (M-27), a large number of plants were found in an area not previously searched. If these three sites are not considered, the harvest was 90% efficient in number of plants removed.

Figure 6 indicates the relationship between the dry weight of harvested material obtained during the harvest and evaluation phases. The slope of the regression relationship indicates that the harvest was 97% efficient with respect to weight of material removed. This was consistent with our observations during evaluation: the vast majority of plant weight (biomass) was removed during the first visit. The obvious outlier was Cooper Point (M-27), discussed above.

The relationship between harvest time and evaluation harvest time (Figure 7) shows a fairly consistent amount of effort between harvests and evaluations. Sites at which a large initial amount of time was spent required a proportionately large (approximately 20%) amount of "second effort."

The above discussion makes it apparent that site evaluations are required whenever hand harvesting is done. Not only will an evaluation be required soon after the first visit in a given year, but these sites should be revisited year after year. An investment of 30 minutes by two divers at each of these sites each year may be enough to ensure that Eurasian Watermilfoil will not regrow at these sites.

Since both a harvest visit and an evaluation visit are required, these two should be combined to indicate a total amount of effort for the first year. In Figure 8, the amount of time invested was compared to the total number of plants harvested. The regression relationship shows a high correlation, as opposed to that in Figure 9. This indicates that the effort expended was best related to finding individual plants, regardless of their size. In Figure 9, the time invested in harvesting each site was related to the total weight of plants removed. Since the average size of plants varies greatly between visits and sites, this relationship has a much lower correlation than that found in Figure 8.

Given the constraints of this project, relating to permit acquisition and time, it was quite successful. Not only were 13 sites completely cleared of Eurasian Watermilfoil, but initiative was regained in attempts to control the plant after a hiatus of almost three years. Several significant facts were learned about controlling Eurasian Watermilfoil in Lake George, as well as the strengths and limitations of hand harvesting.

#### PRELIMINARY RECOMMENDATIONS

##### Research and Monitoring:

1. The survey of sites in the Lake George Eurasian

Watermilfoil survey should not begin until July. If the survey is conducted too early in the year, the results merely reflect overwintering conditions or the growth of the previous year. The status of the populations in June are only a fair indicator of the population status in September.

2. This project should be completed in September 1990 as planned to assess regrowth of Eurasian Watermilfoil at the harvested sites.

Management:

3. A more effective mechanism for permitting individual sites must be enacted to enable hand harvesting of sites with low numbers of plants in the same year in which they are found, rather than waiting until the following year. A generic permit application is currently being discussed with the Adirondack Park Agency. Otherwise, the plants cannot be harvested until the following year, which allows them to grow to greater densities.
4. As was previously proposed, hand harvesting is very effective in controlling low plant densities and low numbers of plants per site. However, it is very tedious and less efficient when plant densities approach moderate or high densities. We recommend hand harvesting for low density peripheral areas, and for sites with low density plants numbering less than 100 plants total.

ACKNOWLEDGMENTS

This project was supported by the Warren County Board of Supervisors by a grant to the Rensselaer Fresh Water Institute, and through in-kind support from the New York State Department of Environmental Conservation Lake Services Section (Albany, New York). We gratefully acknowledge this support. Field assistance was provided by the following individuals: From NYS DEC; Jay Bloomfield and John Donlon; From the Rensselaer Fresh Water Institute; Robert Bombard, Tim Clear, Beth Lawrence, Kathleen Regan, Reginald Soracco, and Leslie Taggett.

Table 1. Sites selected for the hand harvesting permit.

M #	SITE NAME	JUNE 1989 MILFOIL SURVEY		HAND HARVEST OBSERVATION	
		STATUS	NUMBER	STATUS	NUMBER
5	W Green Is	scatt'd		bed	tntc
11	Warner B	scatt'd		scatt'd	3000
14	Harris B	scatt'd	50	bed	tntc
15	Finkle Bk	scatt'd	50	scatt'd	1000
16	Middleworth Bay	scatt'd		scatt'd	tntc
18	Hague Boat Lnch	scatt'd		scatt'd	tntc
23	L.G. Yacht Club	scatt'd	50	bed	tntc
24	NWB- W Tongue M	scatt'd		scatt'd	3000
25	Basin B	scatt'd	50	bed	2000
27	NW CooperPt	scatt'd	25	scatt'd	200
29	B-NE Tea Is	scatt'd	100	scatt'd	tntc
31	English Bk	scatt'd	50	scatt'd	500
36	B-E Dark B	scatt'd	10	bed	tntc
37	S Warner B	scatt'd		see site 11	
38	S Warner Bt	scatt'd		see site 11	
39	S KatskillB	scatt'd	10	scatt'd	5
40	Commission B	scatt'd	100	scatt'd	100
41	Paradise B	scatt'd	25	scatt'd	25
43	Bolton B	scatt'd	25	scatt'd	1000
44	Bolton B Brdg	scatt'd		bed	tntc
48	Gull Bay	scatt'd	50	scatt'd	1000
50	Clark Hollow	scatt'd	50	scatt'd	50
52	Rog Rk Beach	scatt'd	50	scatt'd	100
53	Clay Bay	scatt'd	50	scatt'd	50

Table 2. Summary of hand harvesting effort.

SITE NAME	HARVEST VISIT				SITE EVALUATION		
	M SITE NUM	PICKER PERSON *HOURS	TOTAL N OF PLANTS	DRY WT OF PLANTS	PICKER PERSON *HOURS	TOTAL N OF PLANTS	DRY WT OF PLANTS
Finkle Br	15	14.2	1400	1300	0.67	15	3.05
W Tongue Mtn	24	32.6	1780	3230	9.9	721	120
Basin Bay	25	15	2310	2750	3	201	33.6
Cooper Pt	27	5.2	324	125	4.78	853	346
English Br	31	31.3	4250	4650	4.5	481	228
E Dark Bay	36	6.5	255	140	1	30	6.38
Kattskill Bay	39	0.167	4	0.5	0.167	4	0.94
Commission Pt	40	2.17	115	150	0.833	6	2.45
Paradise Bay	41	3.83	272	256	1.9	80	24.5
Bolton Bay	43	22.5	1640	800	5.75	861	65.2
Gull Bay	48	36.5	4680	1660	4.5	529	50.7
Clark Hollow	50	0.93	25	39.5	1	19	8.36
Roger's Rock	52	4	280	1050	2	30	8.77
Clay Bay	53	1.7	58	39	0.33	1	0.16

Table 3. Total harvest and evaluation activity.

M SITE NUM	PICKER PERSON *HOURS	TOTAL N OF PLANTS	DRY WT OF PLANTS (g dw)	EST. WET WT OF PLANTS (kg ww)
15	14.8	1410	1310	16.4
24	42.5	2500	3350	41.9
25	18	2510	2780	34.8
27	9.98	1180	471	5.89
31	35.8	4720	4880	61
36	7.5	285	147	1.84
39	0.334	8	1.44	0.018
40	3	121	152	1.9
41	5.73	352	281	3.51
43	28.3	2500	865	10.8
48	41	5210	1710	21.4
50	1.93	44	47.9	0.599
52	6	310	1060	13.3
53	2.03	59	39.2	0.49
<b>TOTAL</b>	<b>217</b>	<b>21200</b>	<b>17100</b>	<b>214</b>

Figure 1. Map indicating the location of the proposed 24 hand harvesting sites as indicated by milfoil site number, with an inset showing the location of Lake George in New York State.

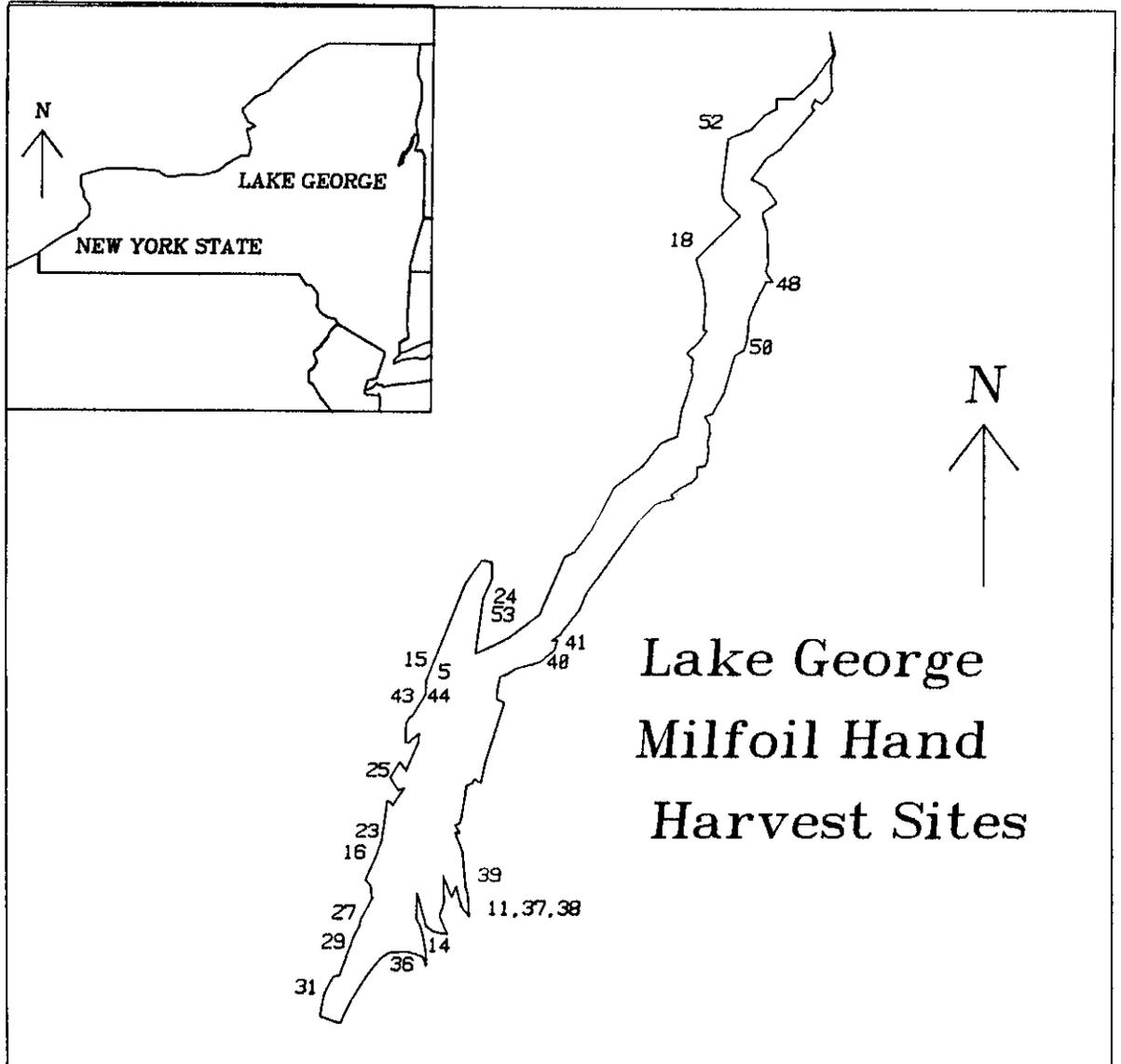


Figure 2. The number of Eurasian Watermilfoil plants harvested versus the amount of time expended for harvest (open) and site evaluations (closed).

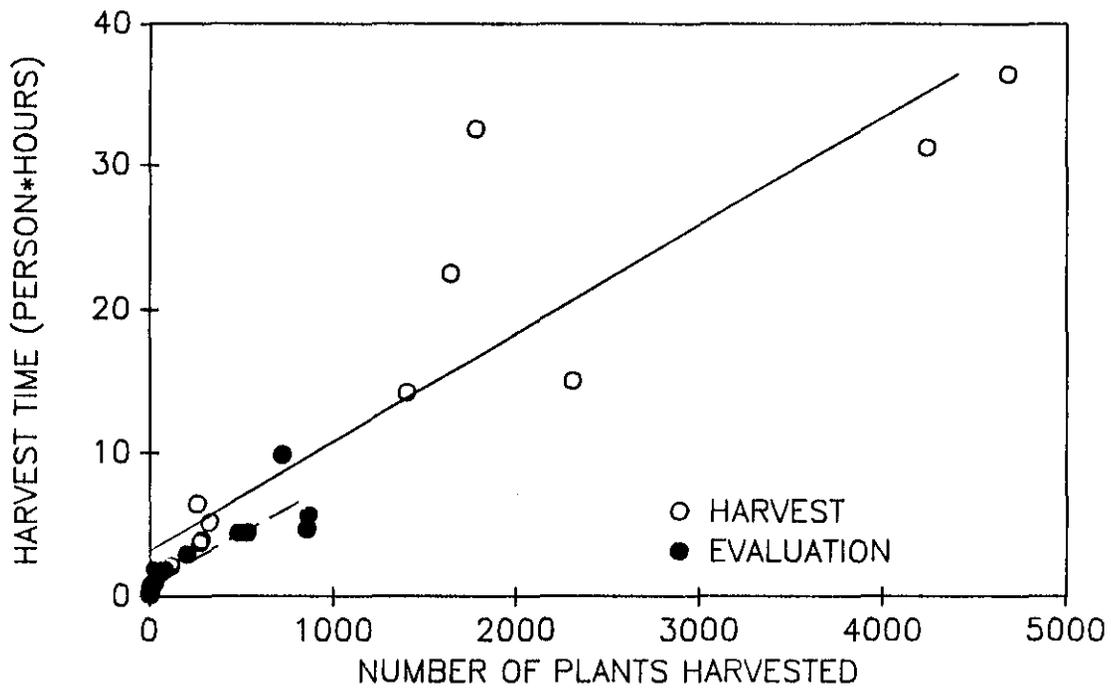


Figure 3. The dry weight (grams dry weight) of Eurasian Watermilfoil plants harvested versus the amount of time expended for harvest (open) and site evaluations (closed).

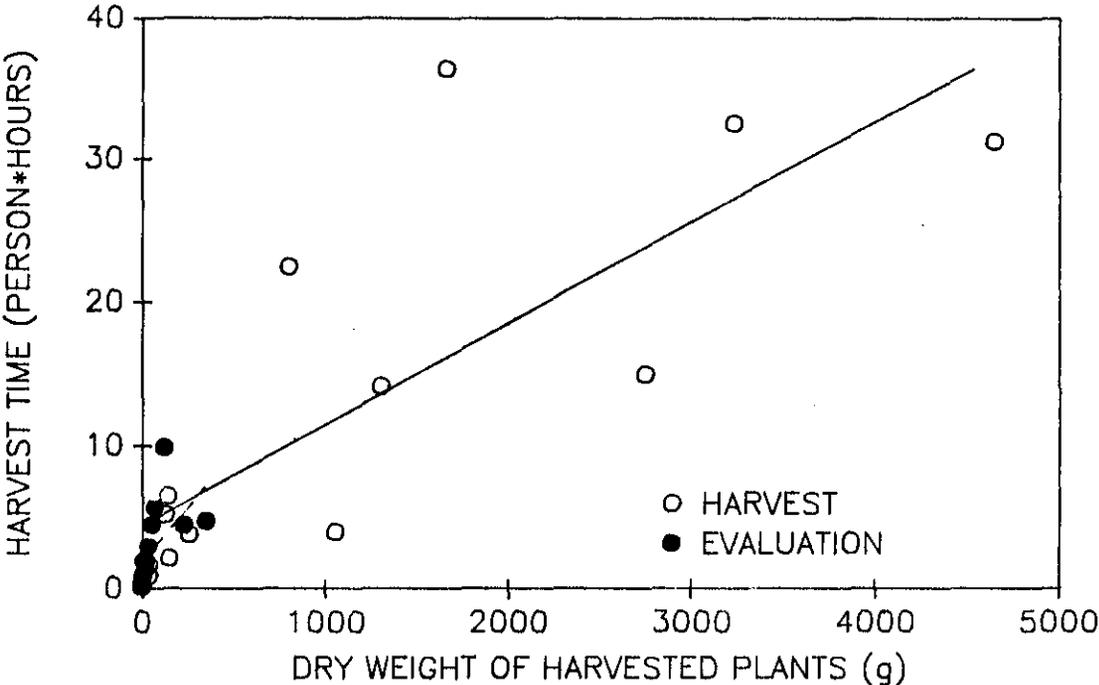


Figure 4. The number of Eurasian Watermilfoil plants harvested versus dry weight (grams dry weight) for harvest (open) and site evaluations (closed).

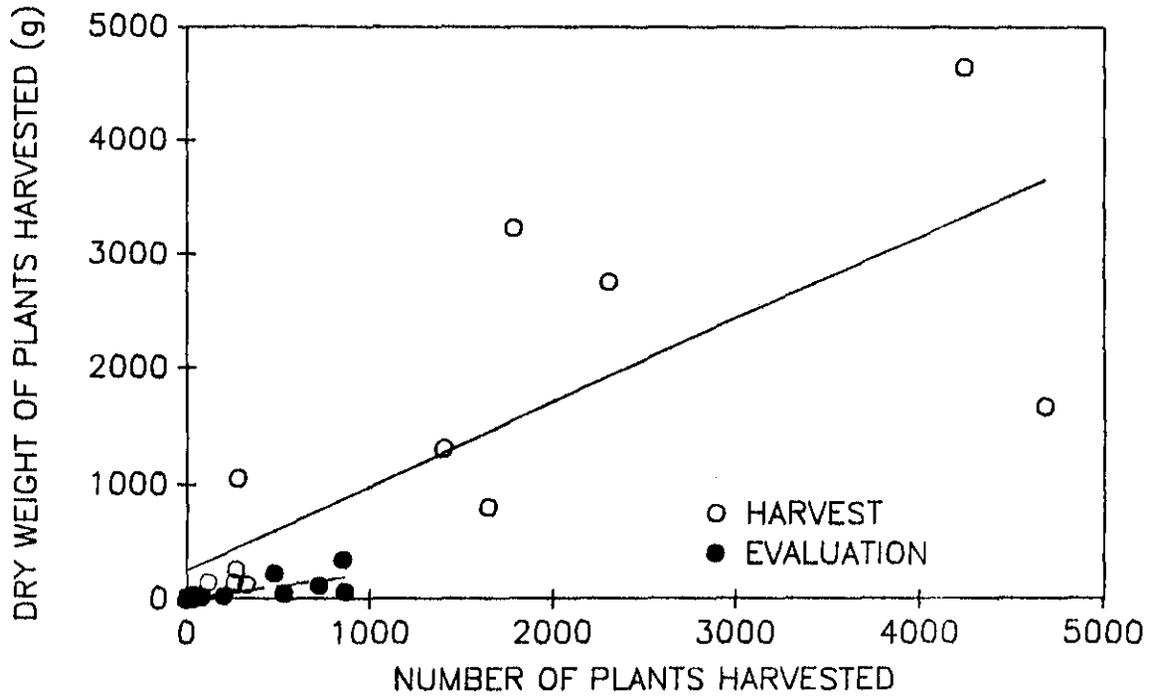


Figure 5. The harvest number of plants harvested versus the number of plants harvested during the evaluation.

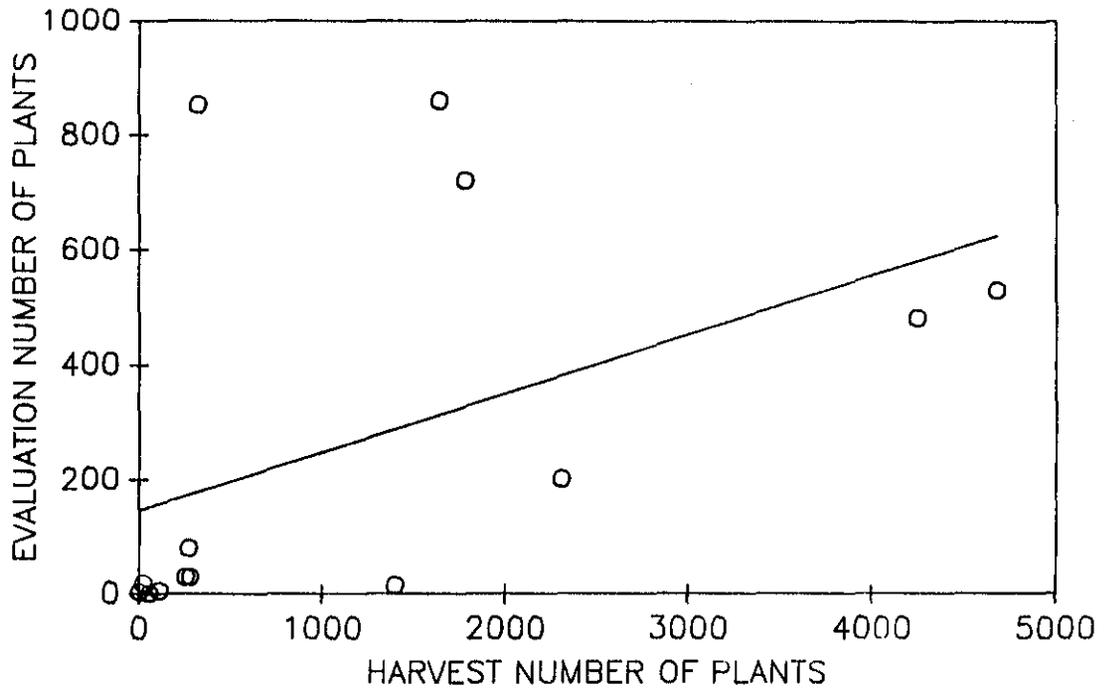


Figure 6. The harvest dry weight (grams dry weight) of plants harvested versus the dry weight of plants harvested during the evaluation.

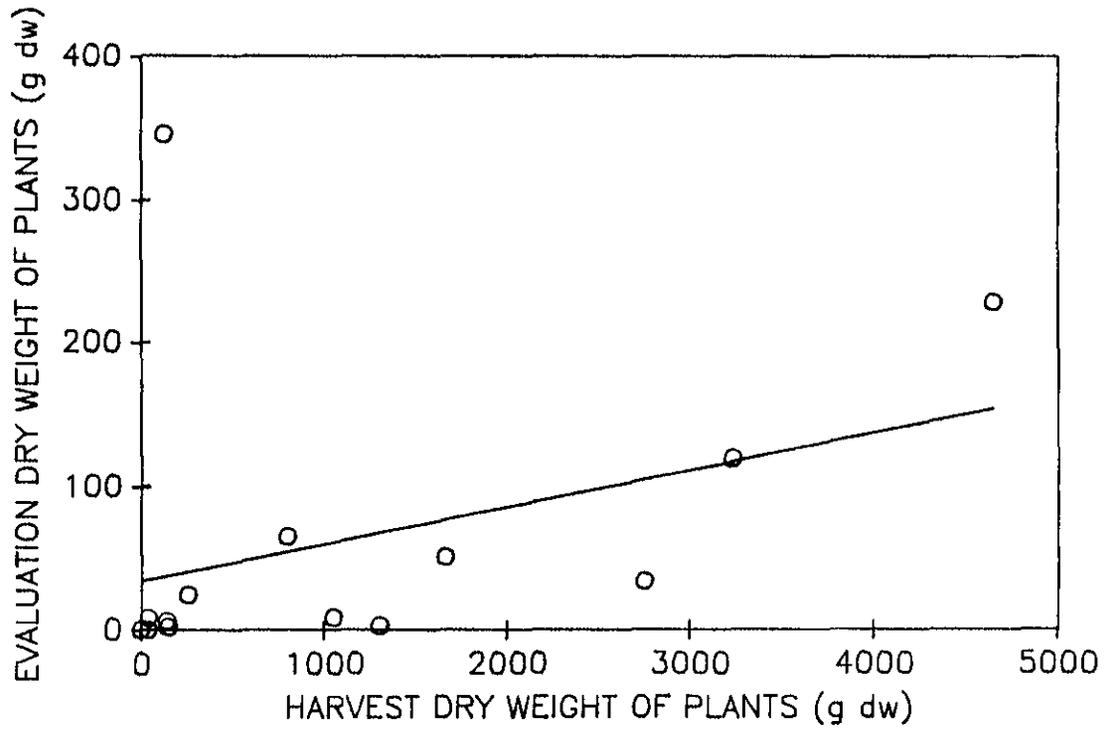


Figure 7. The harvest time effort versus the time effort during the evaluation harvest.

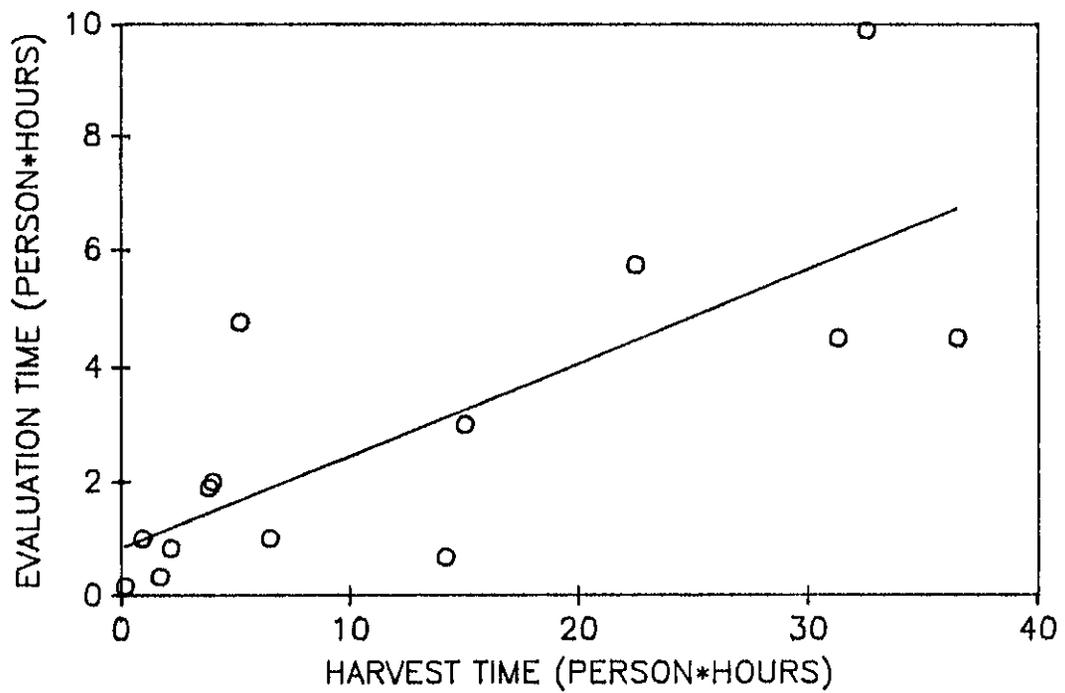


Figure 8. The total (harvest plus evaluation) amount of time expended versus the total (harvest plus evaluation) number of plants harvested.

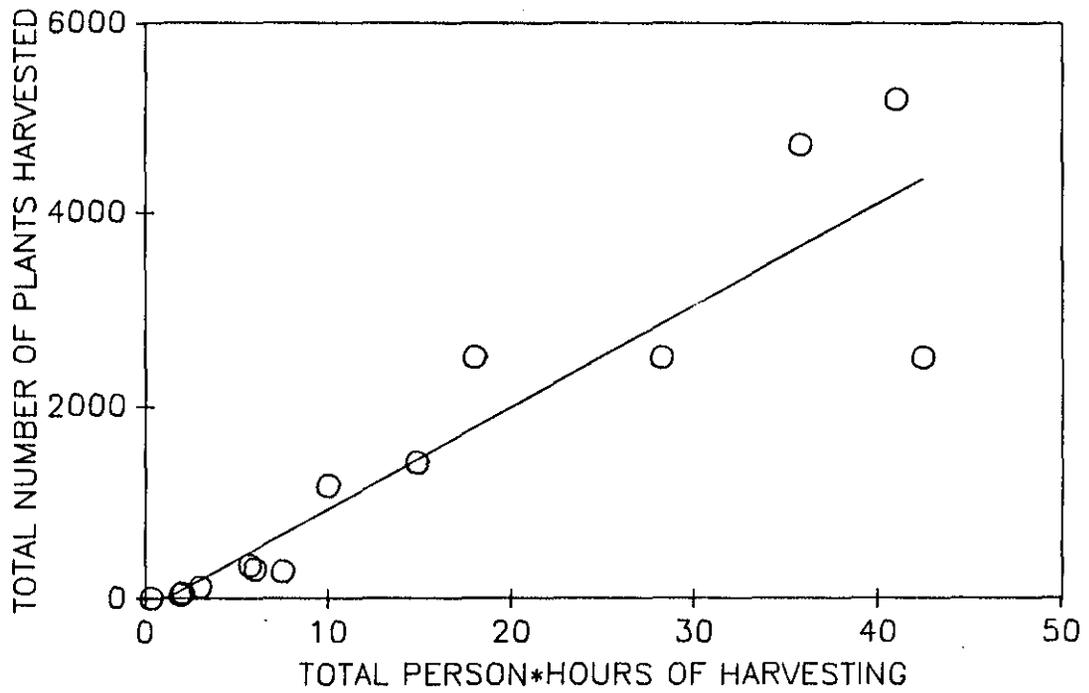


Figure 9. The total (harvest plus evaluation) amount of time expended versus the total (harvest plus evaluation) dry weight (grams dry weight) of plants harvested.

