



1286  
The Commonwealth of Massachusetts  
Division of Fisheries and Wildlife  
Field Headquarters, Westboro 01581

March 27, 1985

Ms. Dodie Brownlee  
Department of Environmental  
Quality Engineering  
Division of Solid and  
Hazardous Wastes  
One Winter Street  
Boston, MA 02108

Re: Hocomonco Pond

Dear Ms. Brownlee:

Enclosed is an evaluation of the Hocomonco Pond (Westboro) fish population as per your request. The present day status or quality of the fishery is compared to that which was found during earlier Division of Fisheries and Wildlife fish population studies.

Sincerely,

*Robert P. Madore*

Robert P. Madore  
Aquatic Biologist

enclosure

RPM/ml

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HOCOMONCO POND  
ADMINISTRATIVE RECORD

HOC 001

1625

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Hocomonco Pond  
(Westboro)

Introduction

Hocomonco Pond is a 27 acre shallow warmwater pond located just south of Route 9 about 1.5 miles west of the center of town. Depth averages about 5.0 feet with a maximum of 11.0 feet. Except for the recently developed Smith Valve Company along the southwest border, the shoreline remains wooded.

Fisheries Management History

The earliest attempts at managing this fishery was in 1915 with the stocking of approximately 1,700 adult white perch (Table 1). Successive stockings of white perch and other warmwater fish species followed up until 1948. A four year lull in active management ensued through 1952, when in July the Division conducted a standard fish population survey to evaluate the status of the fishery. Eight species were collected from sampling with gill nets and chemical poisoning (Table 2).

This 1952 survey produced a fish sample characteristically typical of most shallow warmwater ponds in the state. Largemouth bass and chain pickerel were the dominant gamefishes. Yellow perch, bluegills, pumpkinseeds and brown bullheads comprised the panfish community, while forage fish present included the white sucker and golden shiner.

This survey demonstrated that with the exception of the white perch, the earlier stockings were successful in establishing a reproducing fish population. The small size of Hocomonco Pond and lack of deep water area would not favor the white perch. From 1952 to 1971 the fish population was not studied. In 1971, the Division conducted an intensive fish sampling (Table 3) using multiple sampling gear.

Except for the addition of the yellow bullhead, redbfin pickerel and eel, the fish population appeared unchanged, and overall the fishery (the resource available for fishing) was excellent. Successive year classes were abundant for all species demonstrating no reproductive failure. Many large bass and pickerel, two highly desired sport fish were observed or collected during this study. The chain pickerel fishery was particularly impressive.

In response to reports of creosote contamination at Hocomonco Pond the Division again surveyed the fish population in 1982. On August 7 and 8 Division biologists collected fishes with experimental gill nets and an electrofishing boat. In contrast to the 1971 results, the fish population is presently in poor condition. While the population species composition has not changed, there is apparently a real problem with reproduction. For species such as bluegills, pumpkinseeds, largemouth bass, pumpkinseeds and golden shiners, sampling by electrofishing is quite effective in establishing the presence of young-of-the-year fish. With the exception of one 75 mm chain pickerel, no "baby" fish were

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HOCOMONCO POND  
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1926

observed or collected. While sampling bias could conceivably account for missing the young fish of some species, it is unlikely evidence of reproduction for all the above species would be similarly missed.

This most recent fish data strongly indicates that the population is suffering some reproductive failure. Acknowledging that the 1982 sampling effort was not as extensive as the 1971 survey, the evidence revealed in the August 1982 sample supports this conclusion. A more intensive study of the Hocomonco Pond fish population should be considered to fully document ongoing responses of the population to the creosote problem.

Future investigations should also document any effects of the creosote on other aquatic biota and water quality. The present fishery (potential recreational fishery) is markedly less than that which existed in the 1970's. The existing habitat should be supporting balanced viable sport fishing communities, particularly for the largemouth bass and chain pickerel.

Future Resource Management

1. Fisheries management goal is to raise the sport fishing potential of Hocomonco Pond to its former level, particularly for important game-fish such as largemouth bass and chain pickerel.
2. Maintain a healthy and viable fish and wildlife fauna in and around Hocomonco Pond for public recreational use, both consumptive and non-consumptive.

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1977

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Table 1. Fishes Stocked in Hocomonco Pond by the Massachusetts  
Division of Fisheries and Wildlife, 1915-1948.

Black crappie	<u>Pomoxis niromaculatus</u>
Bluegills	<u>Lepomis macrochirus</u>
Brown bullhead	<u>Ictalurus nebulosus</u>
Chain pickerel	<u>Esox niger</u>
Pumpkinseeds	<u>Lepomis gibbosus</u>
Shiners	(probably <u>Notemigonus crysoleucas</u> )
White perch	<u>Morone americana</u>
Yellow perch	<u>Perca flavescens</u>

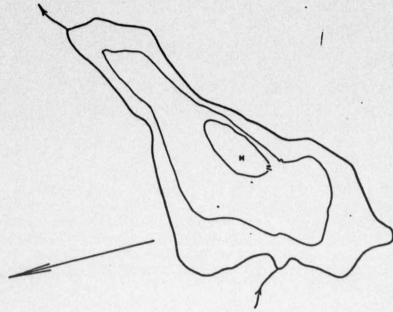
Total number stocked 52,000 (includes fingerling and adult size fish).

HOCOMONCO POND  
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1928

Table 2. Massachusetts Division of Fisheries and Wildlife Fish Population Survey, Hocomonco Pond, Westboro, Massachusetts, 1952.



X - Maximum Depth = 33'

**HOCOMONCO POND**  
WESTBOROUGH  
WORCESTER COUNTY

AREA - 57 ACRES

$\frac{1}{8}$  MILES

**HOCOMONCO POND**  
Westboro, Worcester County

This is a relatively small (27 acres), shallow (about 5 feet average, 11 feet

maximum depth), and turbid (4 feet visibility), warmwater pond draining into the Assabet River. The shoreline is over three-fourths wooded and readily accessible to anglers. The pond is situated on the east side of the road which runs from the North 133 to Fisher to Otis Street. The bottom is largely overlain with silt muck deposits, with small areas of rubble, and supports an abundance of submerged vegetation.

**Stocking History**

Predators (chain pickerel) made up 2 percent, pan fish (bluegill, crappie, white perch, yellow perch, pumpkinseed, and others) 4 percent, and others (shiners and minnows) 4 percent of nearly 22,000 "fish" officially released here.

**Status of Fish Life**

These fish were taken in samples by July 14, 1952: 7 small largemouth bass (0.7 lbs.), 30 chain pickerel 2 to 14 inches long (3.7 lbs.), 86 bluegills (1.9 lbs.), 7 brown bullheads (0.2 lbs.), 23 yellow perch (2.2 lbs.), 20 pumpkinseed (2.2 lbs.), 103 shiners (2.1 lbs.), 25 young sun fish 3 to 4 inches long (0.2 lbs.), 10 minnows (0.3 lbs.), 25 pan fish (2.2 lbs.), 22 white perch (2.2 lbs.), 12 crappie (1.7 lbs.), 10 yellow perch (2.2 lbs.), 25 percent of the fish were usable. Predators made up 27 percent, pan fish 23 percent, and weed fish 40 percent. Pan and weed fish were overrepresented, and the fish population appeared out of balance.

**Discussion**

Shiners and minnows are not of those bass and white perch do not seem to be present. The abundance of vegetation and other characteristics indicate that chain pickerel and yellow perch or golden shiners are best suited here. Largemouth bass can be introduced here, but they will probably be overrepresented. The pond is well stocked and of providing good fishing under prevailing conditions. There is too much competition for maximum survival of young pickerel and best growth of perch.

**Recommendations**

Manage primarily for chain pickerel, reclaiming when practicable.

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**1929**

Table 3. Massachusetts Division of Fisheries and Wildlife Fish Population Survey of Hocomonco Pond, Westboro, Massachusetts, July 1971.

F-35-R-4;I-10

Hocomock Pond  
(Westboro)

Effort -

Date sampled: 7/26-28,29,30/71 and 9/9/71. Method: Fyke nets, emulsified 5% rotenone, experimental gill nets, and the shockboat. Time: Two fyke nets were set for 48 hours each. One quart of rotenone was applied to 0.40 ha. (1 surface a.). Two experimental gill nets were set for 20 hours each. The shockboat was used for 3 hours during the day.

Results:

<u>Species</u>	<u>Number of Fish</u>	<u>Range of Lengths mm./ (in.)</u>	<u>Total Weights/Species kg./ (lbs.)</u>	<u>Percent by Weight</u>
Largemouth bass	19	38-320 (1.5-20.4)	2,724 (6.0)	4
Chain pickerel	97	51-345 (2.0-21.0)	6,966 (15.3)	11
Bluegill	350	64-202 (2.5-7.9)	3,087 (6.8)	5
Pumpkinseed	135	38-189 (1.5-7.4)	4,086 (9.0)	7
Yellow perch	18	165-228 (6.5-8.9)	1,544 (3.4)	2
Yellow bullhead	45	38-228 (1.5-8.9)	2,406 (5.3)	4
Brown bullhead	18	38-304 (1.5-11.9)	2,679 (5.9)	4
Redfin pickerel	16	140-256 (5.5-10.4)	1,135 (2.5)	2
White sucker	53	178-469 (7.0-18.4)	33,414 (73.6)	54
Eel	7	254-787 (10.0-31.0)	4,131 (9.1)	7
Golden shiner	1	64 (2.5)	trace	-

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HOCOMONCO POND  
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1970



The Commonwealth of Massachusetts  
Division of Fisheries and Wildlife  
Field Headquarters, Westboro 01581

11 May 1982

*see read & file*

Mr. William Cass, Director  
Hazardous Waste Division  
Department of Environmental  
Quality Engineering  
1 Winter Street  
Boston, Massachusetts 02108

Dear Bill:

On 21 November 1979, the Division of Fisheries and Wildlife investigated a fish kill report at Hocomonco Pond, a great pond of 27 acres in Westboro. The problem was a hazardous dump of creosote which historically originated through careless disposal in the early 1900s by a local company who used creosote as a wood preservative. In the late 1970s, the Town of Westboro built an access road for Smith Valve Corporation, about 300 yards from the pond's south shore and laid several drainage pipes which terminate 100 feet or so from the pond's edge. One of these pipes inadvertently tapped an underground pool of creosote which contaminated the ground water along the pond's south shore. During periods of high water table, creosote flows from this pipe down the slope into the pond. The lighter fractions float on the surface contaminating the windward shores and pass through the outlet to the Assabet River, while the heavier fractions sink and contaminate the pond bottom.

As creosote is toxic to fish and benthic organisms (24 hour TLM 4.0 - 20 mg/L dependent on isomers of cresol and phenols), this pollution has a direct impact on the fisheries. Contaminations of the near-shore areas is detrimental to bass-spawning habitat and egg survival and the lighter fractions are a concern with waterfowl, muskrat and mink. This Division contacted Paul Anderson of the Division of Water Pollution Control in 1979, expressed its concerns and was informed the matter would be taken care of. On 16 April 1982, we again investigated a fish kill report at this pond after being notified of a complaint by a natural resource officer. An investigation found that the problem had not been addressed and creosote was flowing out the drainpipe, down the slope, and contaminating the windward shores, pond bottom and going through the outlet to the Assabet River.

In order to insure the integrity of the fish and wildlife resources of this pond and downstream wetlands, our agency requests assistance from your office to investigate this hazardous dump and initiate action to prevent further degradation of wildlife resources. As this is a historic dump, it is our understanding that funding is available through the Federal Super Fund Program, but the state must initiate this action to qualify.

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HOCOMONCO POND  
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1981

Mr. William Cass  
11 May 1982  
Page 2

This area presents additional problems which while outside the jurisdiction of this Division should be brought to your attention.

1. A two-acre kettle pond at the east edge of the pond was found to contain creosote overlain with water and poses a serious exposure hazard to any child or pet and should be fenced and posted, or pumped out.
2. The creosote flowing from the drainpipe is a potential exposure hazard to children or pets and should be corrected or the pipe plugged.
3. Creosote contamination of ground water may pose a potential health problem with a recently-installed municipal well located one quarter of a mile away across the pond should heavy pumping allow creosote or its derivatives to enter the well's aquifer.
4. There are several wells located right on the pond margin behind Smith Valve Corporation, their function unknown.

If any further information is desired, please feel free to contact me.

Sincerely yours,

Carl S. Prescott  
Superintendent  
Bureau of Wildlife Research and Management

CSP:mb

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HOCOMONCO POND  
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1982



## Length-Frequency Sheet

Total Fish Sample

Date: August 56, 1982 Location: Hocomonco Pond Remarks: Gill Nets - Shockboat

Length (mm)	B	P	LMB	CP	GS	YB	BB	WS	EEL	Length (mm)
50-59										50-59
60-69										60-69
70-79				1						70-79
80-89										80-89
90-99										90-99
100-109	1	1								100-109
110-119	1	111								110-119
120-129		1111	1	1						120-129
130-139	1	11	1							130-139
140-149	1111	11	1	1						140-149
150-159	1					11				150-159
160-169		1								160-169
170-179			11		11	111				170-179
180-189			1							180-189
190-199					1	11				190-199
200-209					1	1	111	1		200-209
210-219										210-219
220-229				1		11				220-229
230-239						1				230-239
240-249										240-249
250-259										250-259
260-269										260-269
270-279				1						270-279
280-289										280-289
290-299										290-299
300-309										300-309
310-319										310-319
320-329										320-329
330-339										330-339
340-349								11		340-349
350-359										350-359
360-369										360-369
370-379										370-379
380-389				1						380-389
390-399										390-399
400-409										400-409
410-419										410-419
420-429										420-429
430-439										430-439
440-449										440-449
450-459										450-459
460-469										460-469
470-479										470-479
480-489										480-489
490-499									1	490-499
500-509										500-509
510-519										510-519
520-529										520-529
530-539										530-539
Total No.	11	13	5	7	4	13	1	2		
Weight: Kg.										
Lbs.	1.00	1.34	0.62	1.25	0.62	2.91	0.12	1.62	0.75	

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1633

Length-Frequency Sheet

Date: August 6, 1987 Location: Hocomonco Pond Remarks: Partly cloudy; breezy; 75°

Length (cm)	Net #1			Net #2			Net #3		Net #4		Length (mm)
	B	P	YB	GS	CP	YB	GS	YB	WS	BB	
50-59											50-59
60-69											60-69
70-79											70-79
80-89											80-89
90-99											90-99
100-109											100-109
110-119											110-119
120-129		1									120-129
130-139	1										130-139
140-149											140-149
150-159								11			150-159
160-169											160-169
170-179				11		111					170-179
180-189											180-189
190-199							1	11			190-199
200-209				1			111			1	200-209
210-219											210-219
220-229			1					1			220-229
230-239								1			230-239
240-249								1			240-249
250-259											250-259
260-269											260-269
270-279											270-279
280-289											280-289
290-299											290-299
300-309											300-309
310-319											310-319
320-329											320-329
330-339											330-339
340-349									1		340-349
350-359											350-359
360-369											360-369
370-379											370-379
380-389						1					380-389
390-399											390-399
400-409											400-409
410-419											410-419
420-429											420-429
430-439											430-439
440-449											440-449
450-459											450-459
460-469											460-469
470-479											470-479
480-489											480-489
490-499											490-499
500-509											500-509
510-519											510-519
520-529											520-529
530-539	1	1	1	3	1	3	1	9	1	1	530-539

Total No. 1 oz. 1 oz. 5.5 oz. 8 oz. 12 oz. 9 oz. 2 oz. 2 lb. 12 oz. 2 oz.  
 Weight: Kg. \_\_\_\_\_  
 Lbs. 0.06 0.34 0.50 0.75 0.56 0.12 2.00 lb. 0.75 lb. 0.12 lb.

24 hour gill net set

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HOCOMONCO POND  
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HOC 001

1634

## Length-Frequency Sheet

Electrofishing

Date: August 5, 1982 Location: Hocomonco Pond Remarks: Overcast

Length (m)	R	P	LMR	CP	WS	FEL	Length (m)
50-59							50-59
60-69							60-69
70-79				1			70-79
80-89							80-89
90-99							90-99
100-109	1						100-109
110-119		1111					110-119
120-129		11111	1	1			120-129
130-139		11	1				130-139
140-149	1111 11	1		1			140-149
150-159	1						150-159
160-169		1					160-169
170-179			11				170-179
180-189			1				180-189
190-199							190-199
200-209				1			200-209
210-219							210-219
220-229				1			220-229
230-239							230-239
240-249							240-249
250-259							250-259
260-269							260-269
270-279				1			270-279
280-289							280-289
290-299							290-299
300-309							300-309
310-319							310-319
320-329							320-329
330-339							330-339
340-349					1		340-349
350-359							350-359
360-369							360-369
370-379							370-379
380-389							380-389
390-399							390-399
400-409							400-409
410-419							410-419
420-429							420-429
430-439							430-439
440-449							440-449
450-459							450-459
460-469							460-469
470-479							470-479
480-489							480-489
490-499						1	490-499
500-509							500-509
510-519							510-519
520-529							520-529
530-539							530-539
Total No.	10	12	5	6	1		
Weight: Kg.							
Lbs.	0.94	1.28	0.62	0.5	0.87		

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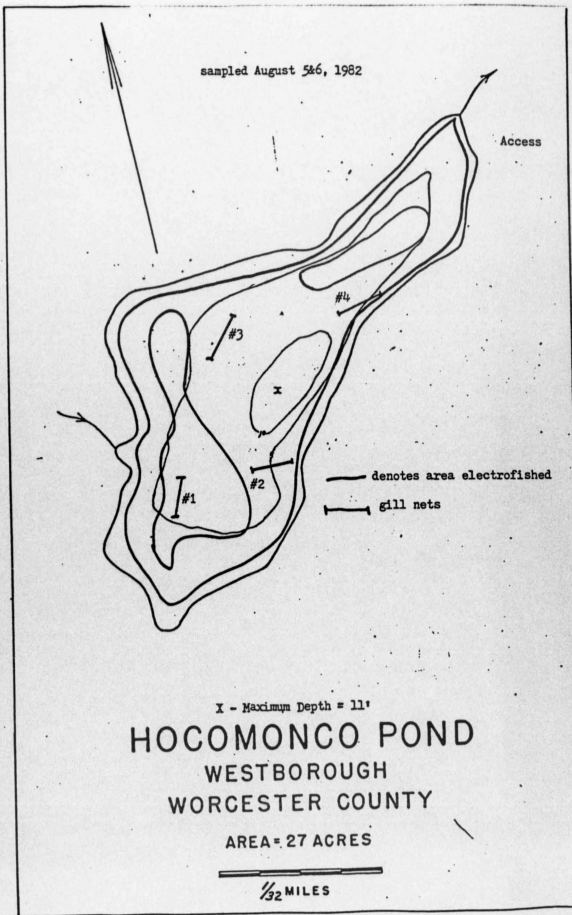
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HOCOMONCO POND  
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1976



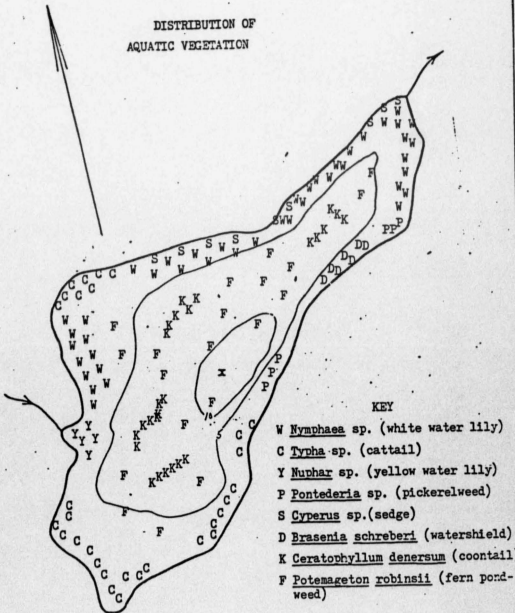
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HOCOMONCO POND  
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HOC 001

1937 L

DISTRIBUTION OF  
AQUATIC VEGETATION



X - Maximum Depth = 11'

HOCOMONCO POND  
WESTBOROUGH  
WORCESTER COUNTY

AREA = 27 ACRES

$\frac{1}{2}$  MILES