#### Bare Hill Pond Watershed Management Committee Town of Harvard Harvard, MA 01451

August 13, 2007

Conservation Commission Town of Harvard Town Hall Harvard, MA 01451

Re: Proposed Fall 2007 Drawdown and 2007 Report

Dear Commissioners:

On behalf of the Bare Hill Pond Watershed Management Committee, we are submitting our annual data collected since August 2006 and requesting authorization to proceed with the Fall 2007 drawdown. Last year we conducted what we believe was a very successful pump assisted drawdown and our goal is proceed incrementally and prudently to assure the protection of the watershed. Last year we drew 5 feet from the Pond. As discussed below, our proposed plan is to increase the drawdown depth by up to 1 foot to 6 feet after examining the shoreline conditions when the five foot level is reached. We believe it would be prudent to ensure that before proceeding past 5 feet, that we confirm the health of the mussel population we observed last fall and that the population is adapting to the drawdowns. It is not feasible to get a good look at the mussel population until the water level is lowered, and we can do this in early November. As in prior years, attached as Exhibit A, is a record of the drawdown and refill data.

The results of the drawdown this summer have exceeded our expectations. Monthly observations show a significant decline in the fanwort and milfoil prevalence in areas that were very heavily infested in prior years. Attached as Exhibit B are emails we received from Pond users on their observations. In our monthly observations we found the following. The area between the beach and the dam as late as early August has growth but far less density than in prior years. The swimmers at the beach report a significant reduction in the swim area as compared to the last few years. The area between Ministers Island and Clapps Brook (which was the location of the milfoil photo on the Committee webpage) that was had to transit by boat in prior years at this time is now relatively clear of milfoil and fanwort. Our goal is not to remove plants entirely but to control the invasion. In addition to a reduction in plants, it also appears that the growth started later this year than in the past, and resulting in less plants reaching the surface zone. ENSR will be conducting the 3 year transect measurements in early September and we will have actual point to point comparisons to compare to 3 and 6 years ago.

In late January we had a hard freeze that lasted until the end of February. This worked in our favor. In addition, when the refill occurred, the exposed bottom was still

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frozen in many places and floated to the surface causing further disruption to the invasive species.

This year's monitoring results are consistent with our observations over the past 6 years. We have not observed any significant impacts and continue to support the efficacy of utilizing drawdowns. We are pleased to report that we have also enhanced our amphibian monitoring capability this year as well as performed the downstream wetland monitoring contemplated by our order of conditions. Jeff Ritter organized a team of six volunteers who were trained by Jack Whalen. We had a number of frog counts and were pleased with the efforts. Michele Girard continued to lead our efforts on the down stream wetlands.

The ability to control the drawdown and the refill has been assisted by the pump which makes it easier to regulate the downstream flow. Our observations of the downstream wetlands indicate that the plant diversity is consistent with prior years and quite healthy. The photos attached in Exhibit C show two of the monitored areas below the dam, and the growth of grasses just below the outflow indicates that the area with highest flow has become a seedbed for the wetlands. The areas not directly impacted by the flow have grown substantially and the species diversity is comparable to that in prior years. Michele is compiling the data and we will submit her report once it is completed.

We also continued to take secci disk readings to evaluate turbidity. The results were consistent with last year ranging from 5.5 feet on windy days or days with high boating activity to 6.0 feet early in the morning when there is light wind and traffic on the pond. On April 22, we counted reptiles. Fifty-five (55) turtles (as compared to thirty (30) turtles in 2006) were counted during the survey over 45 minutes. The turtle count was in the Clapps Brook area, like prior years. This area was fully drained by the drawdown and its appears the turtle population was not significantly impacted.

Frog counts were conducted in April and May during breeding season. Counting sites were near the Town Well on Pond Road, Barba's point, at the Dam, on the Scorgie Land, and Bowers Road. These areas were used in prior years and were also identified as good sites because they were locations that were drained during the drawdown. If the drawdown had a significant adverse impact on amphibians, then we would expect to notice a population change. Frogs breed in sequence. First peepers, then pickerel frogs and then green frogs and bull frogs. During the scheduled counts, the species present were in large numbers and the sounds were frequently at the chorus level and could not even be counted. Attached as Exhibit D are the data sheets from the counts. We are pleased to have re-invigorated these efforts and expect to improve our knowledge each year.

Beaver activity was high this winter during the drawdown frequently blocking the flow in the RT110 culvert and the stream in the downstream wetlands. I have observed mink during November and early March on Sheep Island as well on the shore near Sheep Island this summer. Once again, we observed a fox family (on our shoreline property)

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during June that reared 7 kits. They all appeared very healthy and fish, wild turkeys, geese, ground hogs and other small mammals were a regular part of their diet.

Attached as Exhibit E are summaries of fish counts from fishing derbies that were held this year. As noted on some of the reports, fishermen continue to find Bare Hill Pond to have a thriving fish population Susan Hardy continues to conduct and lead bird counts and reports that she is finding similar species and diversity from year to year.

Copies of the 100' segments of shoreline (Exhibit F) are also submitted for your review at the sites established in 2003. The photos were taken the week the drawdown was achieved. When one compares the photos to last year, one does not see much change. As in prior years, we continued to observe a greater exposure of glacial till which would result from the washing of the silt into deeper areas during the drawdown. Significant restoration of rocky shoreline and glacial till habitat appears to be a result of the drawdown; restoring habitat for crayfish that can now be found under rocks along the shore.

We have continued to comment on ZBA permit approvals in the watershed and the ZBA has been very responsive in prohibiting the use of phosphorous fertilizers and requiring shoreline restoration.

We received no reports of impacts on wells. We were requested by the crew team to limit the drawdown to 4 feet until after the Head of the Charles Regatta to allow for crew practice to continue until the end of crew season. We believe this should not be an issue based on the pumping capability observed last year.

Taking this into account, we propose the following plan for the Fall 2007 pump assisted drawdown:

- 1. <u>Initiate the gravity drawdown September 20 and limit the drawdown to 2" per day per the Order of Conditions.</u> Initiate pump assistance when the rate of drawdown drops below 2" per day to maintain the 2" per day rate. This would be expected to begin about October 1 like last year. The gravity driven flow rate through the dam is high for about 10 days based on historic data and once the "head" at the dam is reduced the rate drops off to about 1" per day or less.
- 2. Allow for the drawdown to increase by an increment of up to 12 "from the 60" gravity drawdown to up to 72". We have chosen this increment for several reasons. First, it offers us the opportunity to extend the drawdown to a critical area of invasive species growth without assuming inappropriate risk. There are critical areas of the Pond that are still being adversely impacted by invasive species and this increment could help make another step in achieving this goal. We recognize the importance of incremental progress, and believe this increment affords important protection against proceeding too aggressively.

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In the event that the drawdown reaches 4 feet prior to October 21, we will hold at 4 feet until after October 21. We would then continue until we reached the same level as last year of 5 feet. At that point we would survey the mussel population to confirm that it was migrating beyond the drawdown zone, and proceed only to the extent that it was consistent with protecting the mussel population up to 6 feet.

As in prior years, we would halt pumping in the event of a freeze to ensure that the winter habitat for amphibians and other animals is preserved.

3. Initiate the Refill on February 1, 2008. Our objective is to bring the Pond to the level of the gravity drawdown on or before the date we have historically initiated the gravity drawdown refill. This was the course of action last year. The refill started slowly but we were able to capture the snowmelt during that time and fill the Pond as planned. In 2006, the prior year, the refill missed the snowmelt contribution to the refill, which occurred in early February, and then was delayed by the delay in spring rains. By starting the refill by February 1, we would have met this goal and perhaps exceeded it. The ENSR 2002 Report that was submitted in connection with our 2002 NOI submission provided data supporting this approach. As noted in the report, historic climatological data shows that a 4 foot drawdown should refill on average within 27 days and could be as long as 54 days in low flow uears and with extreme drought 81 days. Our monitoring data shows just that. In our normal years we refilled in about 27 days. This year with no snowmelt during the refill and no rain we filled about halfway without rain and completed the refill in about 80 days. In prior years it generally refilled in the 27 day timeframe. The report estimates that a six foot draw down the average refill would take 40 days (another 2 weeks), and in low flow years would take 81 days and extreme drought 121 days. Our proposal is to continue to start on February 1 to catch the snowmelt and to limit the increase to 5 feet. This means the average time to refill should be about 35 days.

The other benefit is that we want to fill the Pond before amphibian breeding begins, and our frog counts suggest we were successful this year in doing so.

On balance, we believe it is important to move incrementally and based on the mussel survey, increase the depth up to 1 foot to 6 feet.

The efforts we have undertaken on this project offer the opportunity to protect and maintain Bare Hill Pond and its watershed. We are very pleased with the level of improvement and stabilization of the invasive species we have observed this year. Still, much more needs to be accomplished in future years in the watershed, and this project is key to future funding of the watershed protection follow on activities.

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We appreciate the time the Commission has take, and the effort made to understand, and help manage the project. We look forward to the meeting on September 6 and will do our best to answer and address your questions.

Bruce A. Leicher

Chair, Bare Hill Pond Watershed Management Committee

Cc:

Conservation Commission Members

Pond Committee Members

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Exhibits (1 filed paper copy) plus CD ROM -to be posted on Pond Committee page of Town of Harvard Website

Exhibit A – Drawdown and Refill Data

Exhibit B- Email observations of Invasive Species

Exhibit C - Photos of Downstream Wetlands

Exhibit D- Frog Count Data Sheets

Exhibit E – Fish Count Data Sheets

Exhibit F - 100 Foot Segment Photos

2006-07 Drawdown and Refill Data

Pond Normal Heigh = 18"-20" below top surface of Dam.

Comments	High for September -	Remove Boards	High Flow	A11gh A10vi	FIRST FIGURE	High Flow	Fast Flow – Start Pump	Slower flow	Slow flow at dam	K(0) a well and cide	OU OII Wellalius stuc	50" on Wellands Side pitol gravity LD ICVCI	54" on wetlands side of dam	56" on wetlands side	65" on wetlands side		5' level reached	- ANTHORIS - ANTORIS - ANTO	Warmer than normal	Heavy Freeze	(-1,	Refill started – pump slowed to 3 firs per filgnt (1270 01 capacity)	Very cold limited precipitation	8-28 degrees limited melting	2)	28 degrees	40 degrees	40 degrees 1-2" rain	TOTAL PROPERTY OF THE PROPERTY	TOTAL PROPERTY OF THE PROPERTY	l foot snow	Light snow and rain	Clear	THE PROPERTY OF THE PROPERTY O	Snow on 4/5	AND THE THEORY THE THE THEORY THE THE THEORY THE THE THEORY THE THE THEORY THE THE THEORY THE THEOR	2" rain and overfull	full	Approaching normal
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2003-2006 Bare Hill Pond Drawdown Refill Data

Pond Normal Height: 18-20" below the top of dam

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#### **Bruce Leicher**

From:

James Lee [jfl5@research.dfci.harvard.edu]

**Sent:** Tuesday, July 17, 2007 2:19 PM

To: Bruce Leicher

Subject: Re: Weed Pull, Saturday July 21 - 1-5pm

Bruce,

I asked Margaret Grogan who is the mother of Sean Ducey a lifeguard at the beach and she said that Sean has noticed that the beach area is significantly better than years past. I don't know what the measuring stick was but it should be reliable info. -Jim-

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On Tue, 17 Jul 2007 13:49:10 -0400
  "Bruce Leicher" <BLeicher@altus.com> wrote:
>This Saturday, Rick is running the next Weed Pull.
>are making great
>progress due to Rick's hard work. Canoes are available
>at the beach.
>Please join Rick and encourage others to do so this
>Saturday.
>Thanks
>Bruce
>PS. Also, if you have a minute please send me emails
>with your
>observations of the impact of the drawdown on the milfoil
>and fanwort
>this year as compared to last year, particularly at the
>beach, in great
>south bay, in the area between the beach and the dam,
>etc. Your emails
>would be helpful to include in our annual Conservation
>Committee report.
>STATEMENT OF CONFIDENTIALITY:
>This email and any attachments thereto may contain
>confidential material for the sole use of the intended
>recipient. If you are not the intended recipient, please
>notify Altus Pharmaceuticals Inc. immediately at either
>(617) 299-2900 or at info@altus.com, and permanently
>delete the original and any copies of this email and any
>attachments thereto.
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Molecular Biology Core Facilities									
Dana-Farber Cancer Institute									
http://mbcf.dfci.harvard.edu									
21 Burlington Ave 617-632-3082									
Boston, MA 02215 fax 632-4814									

#### **Bruce Leicher**

Mark Hastings [mdhastings@yahoo.com] From: Friday, July 20, 2007 8:03 PM Sent: Bruce Leicher To: RE: FYI a few observations Subject: Bruce, I am fairly sure that they are native. At the very least they are not nearly so aggressively invasive. They are also easy to control with drawdowns and harvesting. My comments on these plants was motivated by the almost non-existent presence a few weeks ago, and the sudden appearance in the last couple of weeks. In any event, these plants are still very limited. They are only evident in the extreme southern end of the pond. BTW what is happening with the harvester this year? Regards, Mark --- Bruce Leicher <BLeicher@altus.com> wrote: > Mark. > Do you consider Water Lilly, Curly Leaf Pond Weed > and Water Sheild > invasive or native? > ----Original Message----> From: Mark Hastings [mailto:mdhastings@yahoo.com] > Sent: Friday, July 20, 2007 2:06 PM > To: Bruce Leicher > Subject: FYI a few observations > Bruce, > > I took a brief tour of the Great South bay today. I > noticed that the typical pond weeds were much more > evident that even a few weeks ago. Water Lilly, > Curly > Leaf Pond Weed and Water Shield were the most > prevalent. > Interesting phenomenon - Off the southern shore of > Clinton Shore the water is bubbling like a glass of > soda pop. I figure it is the usual decomposition of > plant matter on the bottom, I would expect the > emergence of a mat in the next few days. > Using my power boat as a high vantage point, I was > able to scan a fairly wide area. I found about 6 > Water > Chestnut plants about 50 yards from Bowers Brook. > (BTW > the power boat, used in this manner, has potential > weed control. With one or two spotters on the bow,

> each pass can scan a swath about 60 feet wide. This > technique has limitations though, it cannot be used

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> optimal as a pulling platform. Still it does have
> advantages for covering a large area quickly. This
> might be very useful in keeping watch on large areas
> that are mostly under control.)
> Regards,
> Mark
> Shape Yahoo! in your own image. Join our Network
> Research Panel today!
http://surveylink.yahoo.com/gmrs/yahoo_panel_invite.asp?a=7
> STATEMENT OF CONFIDENTIALITY:
> This email and any attachments thereto may contain
> confidential material for the sole use of the
> intended recipient. If you are not the intended
> recipient, please notify Altus Pharmaceuticals Inc.
> immediately at either (617) 299-2900 or at
> info@altus.com, and permanently delete the original
> and any copies of this email and any attachments
> thereto.
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> too close to shore due to shallow water, and it is

Sick sense of humor? Visit Yahoo! TV's Comedy with an Edge to see what's on, when. http://tv.yahoo.com/collections/222

#### **Bruce Leicher**

From:

Dan Justicz [djusticz@bostonpostpartners.com]

Sent:

Thursday, August 02, 2007 4:21 PM

To:

Bruce Leicher

Subject:

Successful Pond Draw-down

Bruce,

Just a note from a family of pond-goers that last winter's draw-down seems to have tangibly reduced / stunted the growth of the weeds in the pond.

I remember noting very early in the season last year just how thick and close to the surface the weed was in the swimming area and in the south end of the pond. This year I have only very recently noticed the weeds, and not even close to the surface yet. What a difference!

Clearly this is a multi-year task, but very well done so far. Our young kids are enjoying the pond like never before.

Best Regards,

Dan

Dan Justicz 20 Woodside Road Harvard, MA 01451

Tel: (978) 456-9150 Cell: (978) 807-8991 Email: dan@justicz.com

#### **Bruce Leicher**

From:

Mark Hastings [mdhastings@yahoo.com]

Sent:

Friday, August 03, 2007 9:39 AM

To:

Rick Dickson

Cc:

Bruce Leicher

Subject:

Re: Last Water Chestnut Weed Pull this Saturday 1-5pm

Rick,

It is great to see the effort you are putting in to keep the weed pulls going. Thank you!

FYI I have been trying a new technique for finding weeds. Using my power boat I have moved at headway speed, back and forth across the pond. Because I can stand up in the boat, I can see much farther and can cover a 60 foot swath with each pass.

I did this in the Great South bay this past week and found about 1/2 of a 5 gallon bucket full of weeds. The area i covered ran from the southern tip of Clinton shore across the pond due east. I made multiple passes moving south until the water level was too shallow for my boat.

Assuming you will be doing some pulling in Great South bay, please let me know how many weeds you find, and where you find them. If i did a good job, you should only find them in the mouth of Bowers brook and along the shore boundaries where the water is shallow.

This technique has pros and cons:

Pros: can cover large areas, and scour the pond of outlying individual weeds.

Cons: not effective on weeds in shallow, or rocky areas. Not efficient at pulling large amounts of weeds due to difficulties in maneuvering. (This might be countered by combining power boat with canoes.)

Regards, Mark

- --- Rick Dickson <rick@PowderHouseRealtyGroup.com> wrote:
- > Good day,
- > This is a reminder that the last water chestnut weed
- > pull will occur this
- > Saturday Aug 4th from 1-5 pm.
- > There is a sign-in table at the town beach.
- > We will be working in Clapps Brook area of the pond,
- > behind Minister's

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> Island along the shoreline on both sides of the
> We have made significant progress with the first two
> events coupled with the
> mechanical harvester action in the center section of
> the cove.
> Your assistance is truly appreciated and needed to
> continue to eliminate
> this invasive water plant.
> I look forward to seeing you on Saturday.
> Rick
> PS If you can't make Saturday, give me a call or
> email me to see how you can
> still support this effort through the month of
> August. The harvester will
> continue to run through the third week of August and
> assistance is
> desperately needed to maintain a clear unloading
> area (read this as manual
> labor and good for your soul).
> Rick Dickson
> Broker-Owner
> Notary Public
> Powder House Realty Group
 > (978) 400-1100
 > rick@PowderHouseRealtyGroup.com
 > www.PowderHouseRealtyGroup.com
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### Exhibit C Page 2









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# Exhibit c Page 3









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Frog and To	ad Observati	ons:	•	Sire of the State				
Call Index:  A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuous and overlapping								
	If the call index is A or B, count the number of calls for each species in a 3 minute period. Record the species followed by the number of calls.							
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Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
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The temperature in the past 48 hours has primarily been: (circle one) Above freezing Below freezing

Has there been precipitation in the past 48 hours? (circle one)

No precipitation

Some precipitation

Much precipitation

Precipitation during visit: (circle one)

None Fog/Mist Light rain/drizzle Medium rain Hard rain Hail Snow

#### Frog and Toad Observations:

Call Index:

A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuous and overlapping

If the call index is A or B, count the number of calls for each species in a 3 minute period. Record the species followed by the number of calls.

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Frog and To	oad Observati	ions:			
Call Index:	•				

A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuoùs and overlapping

If the call index is A or B, count the number of calls for each species in a 3 minute period. Don't guess at the time. Make sure it is exactly 3 minutes. Record the species followed by the number of calls.

Species	Call Index	Number of Calls
	A	13
Pickerol Repors	C	Chorus

species where the calls are coming from. B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog K= Pickerel Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).

If the observer is facing north in the point in the middle of this circle, mark by frog

Observer:	Judy, Ph	yllis Jak	Route:	Town I	well
Survey Date:	4/24/	07 Run Numb	oer:/	Point Number:	4_
Before starting	ig survey, stay	in place in silence for	or five minut	es.	
Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
9:28	590	I/SW	0	N	9:31
Has there bee	freezing	48 hours has primari Below freezing  in the past 48 hours Some precipitation	? (circle one,	, . )	
	during visit: (dist Light ra		i i garan ing	ering de de les er En les este en les este este este este este este este	ow .

#### Frog and Toad Observations:

Call Index:

A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuous and overlapping

If the call index is A or B, count the number of calls for each species in a 3 minute period. Record the species followed by the number of calls.

Species	Call Index	Number of Calls
Pieloral	Balmont C	86
Pagaga	(	Fiel Chorus
	.34}-	

Species where the calls are coming from.  B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Bastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  Februar Scheduler for the species of the sp	species where the call	IS are coming from	
G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  PDote: Spashum & sight of the point fact of the point	R=Rullfrog	and domining from:	
W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  Flowlest Splashum in Sightlest Frog Charus Lergest Sharus of Pickers Frog Charus Lergest Sharus of Pickers Frog Charus		W	{
P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  PLOUGE Spisshum in different for facts of forms or leave to factors for factors	W=Wood from		1
T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  PDD-L Spashum A dictions Cor leaving Parking for American frog Charus Largest Sharus Spiker for		W	·> 1
A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  Flower Spashum of Austral the fickers frog charus Largest Shorus at pickers frog thereof.			
F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  Flowler Spanish factors for the factor of			r' .
E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  Ploder Spashim in dictress Cor leaving parking but quieted the Picketel Frog Charus Largest Subrus of Picketel Frog Charus Largest Subrus of Picketel Frogs Tire heard.		The state of the s	,
Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  Flower Spashure in actions for the first the fickers from the factor of the first first from the factor of the first from the factor of the first first from the factor of the first from the factor of the first first from the factor of the the factor o		toad	-
Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).  POWAT Spashum in actives  Car pay in Parking his quieted the Pickers Frog Charles  Largest Shorus of Pickers Rogs Live heard.	M=Mink frog		
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.			
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.			
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.	•		
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.			
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.	•		
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.		and the second of the second o	
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.			•
Reder Spashing in distress Cor leaven forthe fit quieted the fickets Frog Charus Largest Subrus of process frogs Live heard.	Additional Notes and C	Observations: (Use this space to record sightings of other animal	
Reaver Spashing in dictress Cor leaving parking littless the fickers Frog charus Largest Subrus of pickers frogs I've heard.	species, or other facts of	about your visit to this point that you think are notable)	
Carpest Subrus of pickers frog Live hourd.			
Largest Kubrus of pickers frogs I've hand, o	Bowar Splash	an in distress	
	Cor leavinh par	oble lot Awated the Pickeral Frog chance	
	Lorgest Elbru	is at pickers from I've hand	
	<u> </u>		

Observer:	Angles, Jus	he Joek	Route: _	BEWEISR	
Survey Date:	-Harlo	7 Run Numb	per:	Point Number:	7
Before starting	ng survey, stay	in place in silence for	or five minute	s. (17 A)	en eggsta til
Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
10763	58	$\sim$	0		10'00
Has there bee No pro	n precipitation ecipitation during visit: (a	48 hours has primari Below freezing  in the past 48 hours Some precipitation circle one) in/drizzle Medium r	? (circle one) n Much pre	cipitation	ow they are the second of the
Frog and To:	ad Observatio	ons:		· · · · · · · · · · · · · · · · · · ·	
Call Index: A=Calls can l overlapping	be counted, no C=Full chort	overlapping B=0 us, continuous and o	Calls can be a verlapping	listinguished, s	оте
If the call indeperiod. Recor	ex is A or B, cord the species f	ount the number of ca followed by the number	alls for each s per of calls.	pecies in a 3 m	inute

Species	Call Index	Number of Calls
Plakara	C	170 8
Pel+ Ov		7
	(1)	

species where the calls are B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog	K-P) (R)	↑ → E
K=Pickerel frog		
species, or other facts abou	ervations: (Use this space to record sightings of other animal out your visit to this point that you think are notable).	
		,

	Phylis			Bowers	s Rd
Survey Date:	4-24-0	7 Run Num	ber:	Point Number:	7
Before startir	ng survey, stay	in place in silence f	or five minut	es. 47 h	
Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
10:03	59	O	0	1 1 - 登み	10:02
Has there bee	e freezing		s? (circle one n Much pr	,	, taga deletera. La esa esta esca <b>oni</b> La deletera. La taga esa esa esa esa esa esa esa esa esa es
Frog and To	ad Observatio	<b>ns:</b> 4., 22.02022, 32.70	yezhendañ a es		
overlapping  If the call inde	$C=Full\ choru$ ex is A or B, co	overlapping B= us, continuous and o  ount the number of o  followed by the num	verlapping calls for each		
Spe	cies	Call Ind	ex	Number o	f Calls
peeber	<u> </u>				
pickère	<u>Q</u>	<u> </u>			

=Spring Peeper =Gray tree frog =American toad =Fowler's toad =Eastern spadefo I=Mink frog				Sightings of other	5
train	cis about your i	visit to this poi	int that you thir	nk are notable).	animal
				:	
	<del></del>				
	·				

				erek ny limen	om Wenthin h	din kalmisti
Observer:	Phyllis	Clo	سه عصر	Route:	townu	<u>sell</u>
Survey Date:	4-24-	07	_ Run Numb	per:	Point Number:	4
Before starting	ng survey, stay	in plac	e in silence fo	or five minu	tes.	od sakorili s riski Arric
Start Time	Air Temp (F)	ĺ	Wind e/Direction)	Sky (Code)	Noise (Y/N% Index)	End Time
9:28	59	1	SW		N-0	9:31
Has there been No property Precipitation None Fog/M		Belo in the Some circle of in/drizz	w freezing past 48 hours precipitation ne) le Medium i	? (circle one n Much pi	ŕ	Hanchall The Wisses The Part (Will The San (Mill) The Tall (Mill)
Frog and To	ad Observation	ns:			at Kake Affilia a saak aan aan a	utana ang kalangan sa
	be counted, no C=Full chor				distinguished, se	<b>)me</b>
If the call indeperiod. Reco	ex is A or B, cord the species f	ount the	e number of c d by the num	alls for each ber of calls.	species in a 3 m	inute

Species	Call Index	Number of Calls
Dickerel	Balmostc	8 6
peepers		
		A SOURCE OF THE
<u> </u>		
and the second of the second o		

and the second of the second o

species where the calls are B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog	rth in the point in the middle of this circle, mark by frog coming from.	The second secon
species, or oiner jacis about	vations: (Use this space to record sightings of other animal your visit to this point that you think are notable).	u./
some headligh some distress 12 moon beauer splass	calls  Wafter count	
some distress	calls  vafter count	
some distress	calls  Wafter count	~
some distress	calls  Wafter ount	
some distress /2 moon beauer splass	vafter count	
some distress Some distress Va moon Deaver splasv	Mafter count	
some distress Ya moon beauer splass	vafter ount	
some headish some distress Va moon beauer splasv	vafter cont	
some distress Ya moon beauer splass	valter count	
some distress Ya moon beauer splass	wafter ount	
some distress Some distress Some distress Splasv	calls  Wafter count	
Some distress Ya moon beauer splass	calls  Wafter count	
some distress Ya moon Deauer splass	Calls  Wafter wont	

		g In and Around			
gradiente de	agra Talen end	Post problem is			mail.
Observer: 1	hyllis	Clawson	Route:	1	
Survey Date:	4-24-0	Run Numl	per: 1	Point Number:	200 S. 200
Before startir	ng survey, stay	in place in silence for	or five minute		Shows Care
Start Time	Air Temp	Wind	Sky	Noise	End Time
0.20	(F) o	(Scale/Direction)	(Code)	(Y/N &	
8:30	<u>62</u>	1 N	O	Index)	8:45
Above  Has there bee  No pre  Precipitation  None  Frog and To:  Call Index:	e freezing) In precipitation ecipitation during visit: (class Light rai	in the past 48 hours Some precipitation circle one) in/drizzle Medium i	? (circle one) n Much pre rain Hard ra	cipitation in Hail Sno	erina Kandana a erina kanalah dari erina dari dari
		overlapping B= us, continuous and o			)me
If the call indeperiod. Record	ex is A or B, cord the species t	ount the number of collowed by the num	alls for each s ber of calls.	pecies in a 3 m	inute
· Spe	cięs	Call Inde	ex ·····	Number o	f Calls
picker	ما	A		13	
Spring	peopers	<u> </u>		full clu	Aure
	1				×
				·	

and the second	gang sampaan kembangan kembanan sampa Kalang			
f the observer is facing north	h in the point in the mid	dle of this circle	mark by frog	
pecies where the calls are co B=Bullfrog	oming from.	ac*		
G=Green frog	(atariy, r			M
V=Wood frog		and a second of the second of		1
=Spring Peeper	A many framework		( WK	
=Gray tree frog	Carlo Adams Carlo	ude ku Vija i jir.		1
=American toad				Š
=Fowler's toad	1	P	or Vienis i Hear	
=Eastern spadefoot toad	of the second section			
I=Mink frog		at Land		
= pideul		e de la companya del companya de la companya del companya de la co	/	
ende to a fac	a and the property of the same			
			Service Control of the Control of th	
	e ka e e e e e e e e e e e e e e e e e e		. San	
94.5 -			· · · · · · · · · · · · · · · · · · ·	
Iditional Notes and Observe	TANA CANADA		orina de Maria	
dditional Notes and Observa	mons: (Ose ints space i	o record sighting	s of other animal	
ecies, or other facts about ye	our visit to this point th	at vou think are s	iotable).	
, , <u>, , , , , , , , , , , , , , , , , </u>		)		
train in distar	<u>nce otro configuration</u>	the wheelth in	AND LAND A STATE	
walking down I	reard corpte	the wheelth in	<b>5</b>	
train in distar	reard corpte	to 40 mag	5	
walking down I	reard corpte	to 40 mag		
walking down I	reard corpte	to 40 mag		
walking down I	reard cocrote.	one to med		
main in distar	reard corpte	one to med		
walking down I	reard cocrote.	one to med		
man in distar walking down l eccasusual good	real coypte	one to med		
walking down I	reall in a	ine to med		
man in distar walking down l eccasusual good	reall in a	ine to med		
man in distar walking down l eccasudad goor	reall in a	ine to med		
man in distar walking down l eccasushas good	vaid coypte	ine to med		
man in distar walking down b xcasushal goos	void coypte	ine to med		
man in distar walking down to eccasion good	void coypte	ine to med		
man in distar walking down b xcasushal goos	void coypte	To ned		
man in distar walking down I ccasudral good	void coypte	To 40 neg		
man in distar volking down l xcasudad goos	void coypte	To ned		
man in distar walking down l xcasudia) goos	void coypte	To to made		
man in distar walking down I ccasudral good	void coypte	To 40 nead		
man in distar policing down in eccasional good	void coypte	To to made		
man in distar policino donn i ccasualad goos	void coypte	To to made		
man in distar walking down I xcasushad goos	void coypte	To to made		

Observer:	hyllis	. Caussar	· ·		
	*	Run Numl			
Before starting	ng survey, stay	in place in silence f	or five minute	es. 10 % 10 % 10 % 10 % 10 % 10 % 10 % 10	
Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
8:29	(06°	#1 //			8:32
Has there bee No pr	ecipitation during visit: (c	Below freezing in the past 48 hours Some precipitation fircle one) in/drizzle Medium	m Much pre	ecipitation 	
Frog and To	ad Observatio	ons:		a daga da katalan da katalan Katalangan da katalan da katalan Katalangan	and the Marian Carlos
overlapping	C=Full chor	overlapping B= us, continuous and o	verlapping	The second	A CONTRACTOR OF THE STATE OF TH
period. Reco	ex is A or B, cord the species i	ount the number of collowed by the num	alls for each s ber of calls.	species in a 3 m	inute

Species	Call Index	Number of Calls		
topard pickerel		31	(16 clos	
perpers	B not countable			
	and the second s			
	A CONTRACTOR OF THE STATE OF TH			
The second secon		W 4		
The second secon	and the second second second second		•	
The second secon	and the second of the second o		A STATE OF S	

T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  Additional Notes and Observations: (Use this space to record sightings of other animal pecies, or other facts about your visit to this point that you think are notable).  QUAL YOUR ADDITION OF THE PROPERTY OF THE PR	species where the calls and B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper	(155 m)	And the second s		W <del>*******</del>
ditional Notes and Observations: (Use this space to record sightings of other animal ecies, or other facts about your visit to this point that you think are notable).  Gers noting public Count  dogs baking softy arom we	=American toad =Fowler's toad =Eastern spadefoot toad	. !	and the second	, <b>)</b>	Fig.
Iditional Notes and Observations: (Use this space to record sightings of other animal recies, or other facts about your visit to this point that you think are notable).  Geers noting public of the count with the count of the c				an familia Sentences Sentences	
ditional Notes and Observations: (Use this space to record sightings of other animal ecies, or other facts about your visit to this point that you think are notable).  Quest voily pronto count  dogt varing softy arous cove		The second of the second	The state of the state of	er Karajono de la 1886, al 1886	t site to
	Ocean a see see	as your visit to this po	ini inai you inink	are notable).	1909
	dogt barking		×13 60 ve	2000	
	dogt barking		×13 60 ve	2000	
	dogt barking	arre fulfor	213 60 Ve		
	dogt barking	softhy acre	213 60 Ve		
	dogt barking	ans fiffer	PIS GOVE		
	dogt barking	softh are	PIN COVE		
	dogt barking	ans phos	PIN COVE		
	dogt barking	softy are	on cove		
	dogt barking	ans phos	PIS COVE		
	dogs baking	Apply acre	on cove		
	dogt barking	Apply acre	PIN COVE		April 2

Observer:	ruce Jud,	Phyllis Jack	Route:		
Survey Date:	May	Run Numb	er: <u>2</u>	Point Number:	7
Before startin	g survey, stay	in place in silence fo		tes. Wast was met	Bowers
Start Time	Air Temp / (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
	a .1			N. I	9.07
9'.04	<u> </u>		<b>12</b> 9 0	12	7.01

(Some precipitation) Much precipitation

#### Frog and Toad Observations:

No precipitation

Precipitation during visit: (circle one)

Call Index:

A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuous and overlapping

(None Fog/Mist Light rain/drizzle Medium rain Hard rain Hail Snow

If the call index is A or B, count the number of calls for each species in a 3 minute period. Record the species followed by the number of calls.

Species	Call Index	Number of Calls
Pagpers		Not courtable
Pickerels	<u> </u>	Not Countable
M-1-1-1		

If the observer is facing north in the point in the middle of this circle, mark by frog species where the calls are coming from. B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog K-Pickerels Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).

Observer:	Jack Pr	willis Jud Bruce	Route:	· · · · · · · · · · · · · · · · · · ·	geria Karangan
Survey Date:		Run Numb		*6.	
Before starting	ng survey, stay	in place in silence fo	or five minute	es.	Sprague
Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
9:29	lb°	1 N 1	2	1/1	<i>8'3</i> ఎ
Above	e freezing	48 hours has primari Below freezing in the past 48 hours'		. ,	V.
Norge	ecipitation	Some precipitation	,		se división
	during visit: (a list Light rat	circle one) in/drizzle Medium r	ain Hard r	ain Hail Sno	<b>)W</b>

#### Frog and Toad Observations:

Call Index:

A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuous and overlapping

If the call index is A or B, count the number of calls for each species in a 3 minute period. Record the species followed by the number of calls.

Species	Call Index	Number of Calls		
Peeners	B.	Not Countable		
Pickerel	A :	3/		
	351}-			

If the observer is facing no species where the calls are B=Bullfrog G=Green frog	orth in the point in the coming from.	e middle of thi	s circle, mark l	by frog
V=Wood frog =Spring Peeper =Gray tree frog =American toad		·		W
=Fowler's toad =Eastern spadefoot toad =Mink frog	A	ø		·
	A			
dditional Notes and Obser	rvations: (Use this sp	pace to record	sightings of ot	her animal
ecies, or other facts abou	i your visit to this pol	int that you thi	nk are notable	<b>).</b> Z
Losso Honking	i your visit to this pol	int that you thi		).
Some floorling	your visit to this pol	int that you thi	nk are notable	)
Sous Honking	your visit to this poi	int that you thi		
Losase Honking				
Some Honking				
Lassofonking				
Lacase Honking				
Lassettonking				

Observer: B	Nuce Jud	) Phylis Tack	- Route:		
Survey Date:	May	Run Numb	er: <u>2</u> 1	Point Number:	2
		in place in silence for			Well hea
Start Time	Air Temp	Wind	Sky	Noise	End Time
	<b>(F)</b>	(Scale/Direction)	(Code)	(Y/N & Index)	
9-32	(a <b>6</b> )		2	NA	9:35
Above Has there bee	e freezing	48 hours has primar Below freezing  n in the past 48 hours  Some precipitation	? (circle one)		
Precipitation	during visit: (	and the state of t			ow

#### Frog and Toad Observations:

Call Index:

A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuous and overlapping

If the call index is A or B, count the number of calls for each species in a 3 minute period. Don't guess at the time. Make sure it is exactly 3 minutes. Record the species followed by the number of calls.

Species	Call Index	Number of Calls
Poeners	C	
Pickerel	<u>C</u>	
-		

If the observer is facing north in the point in the middle of this circle, mark by frog species where the calls are coming from. B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog Additional Notes and Observations: (Use this space to record sightings of other animal species, or other facts about your visit to this point that you think are notable).

	<b>1</b> 11.	00	١	and the second	a digg all the	ering in group toggraphic
Observer:	Phyllic	y cawl	70V	Route:		
Survey Date:	5-1-0	Ri	ın Numb	per: <u>2</u> 1	Point Number:	1 1980 <b>7</b> 0 1
Before startin	ng survey, stay	in place in s	ilence fo	or five minute	S. (1941)	grandes (m. 1946) Line de la company
Start Time	Air Temp (F)	Wind (Scale/Dire	,	Sky (Code)	Noise (Y/N & Index)	End Time
9:04	640	l	N	2	N	9:07
Has there bee No property Precipitation	e freezing en precipitation ecipitation during visit: (a fist Light rai	Some prec circle one)	18 hours	Much pre	cipitation sin Hail Sno	
Frog and To	ad Observatio	ons:				
overlapping	C=Full chort	us, continuoi	is and or	erlapping	istinguished, se	• • • • • • •
if the call indeperiod. Recor	ex is A or B, cond the species f	ount the num followed by t	ber of ca he numb	alls for each sper of calls.	pecies in a 3 m	inute

Species	Call Index	Number of Calls
DO DENA	C	 
Dickerel	<u> </u>	
a en en en		

M=Mink frog  K= pulkere  Additional Notes and Observations: (Use this space to record sightings of opecies, or other facts about your visit to this point that you think are notable	ther animal
ectes, or other facts about your visit to this point that you think are notable	mer unumu
	<b>2).</b>
	1 / C 2007 F 1
	AMMENIA

			graphic to the steep t		7. 2. 2. 3.
Observer:	P. Claw	SON	Route: _		
Survey Date:	5-1-07	Run Num	ber: <u></u>	Point Number:	4
Before starting	ng survey, stay	in place in silence f	or five minute	es.	et seelle e. Jacobski
Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
9;30	40	1 F	2.		4:33
Above No pr  Frecipitation None Fog/M	e freezing En precipitation ecipitation during visit: (c	in/drizzle Medium	s? (circle one) n ) Much pr	ecipitation eain Hail Sno	
Frog and To	ad Observatio	ns:		and the second s	
overlapping  If the call independent	$C=Full\ chorn$ ex is A or B, co	overlapping $B=$ us, continuous and of ount the number of $C$	verlapping calls for each	e de la companya de l	
period. Recor	rd the species f	followed by the num	ber of calls.	part of the second	

Species	Call Index	Number of Calls
Deerous		
bicleul		

If the observer is facing a	a amounture Comme			
species where the calls as B=Bullfrog	e coming from.	1		
G=Green frog		74		N.
W=Wood frog	form.	( <del></del>		T
P=Spring Peeper	1		**************************************	With
T=Gray tree frog A=American toad				
F=Fowler's toad			<b>\dagger</b>	<i>)</i>
E=Eastern spadefoot toad	11			
M=Mink frog			<i></i>	
and the second s		· West	/	
		A.		
			, il Asimoni	e e e
•		una (Norwick) al Vallerior (III). Transport		
	ing the second s		e saledo lederos	1
Additional Notes and Obs	ervations: (Use this )	space to record si	ohtings of other	animal
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Additional Notes and Obs species, or other facts abo	ervations: (Use this ut your visit to this p	space to record si point that you thin	ghtings of other k are notable).	and the second
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train  Our	ervations: (Use this put your visit to this p	space to record si	ghtings of other k are notable).	
	ervations: (Use this put your visit to this p	space to record si	ghtings of other k are notable).	

Observer: _	my list	-Rob Claus	OV Route: _		
Survey Date:	May 11	Run Numb	er: <u>A</u>	Point Number:	1
Before starting	ng survey, stay	in place in silence fo	r five minute	<b>s.</b> 1200 - 1	
Start Time	Air Temp (F)	Wind (Scale/Direction), NW	Sky (Code)	Noise (Y/N & Index)	End Time
4:27	690	# 1	2		9:30
Has there bee No pr	ecipitation during visit: (c	Below freezing in the past 48 hours Some precipitation circle one in/drizzle Medium re	) Much pre	cipitation un Hail Sno	
The second by the second	101		•		
Frog and 10	ad Observatio	ons:			
Call Index: A=Calls can invertapping	be counted, no C=Full chort	overlapping B=C us, continuous and ov	Calls can be a verlapping	listinguished, so	ome
		ount the number of ca	lls for each s	pecies in a 3 m	inute

If the call index is A or B, count the number of calls for each spe	ecies in a 3 minute
period. Record the species followed by the number of calls.	and the second second

Species	Call Index	Number of Calls
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Dickerel	B/C	65-140
and the second s		
e de la fili	And the second second second second	
		and the second s
e e		·

If the observer is facing na species where the calls ar B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper T=Gray tree frog A=American toad F=Fowler's toad E=Eastern spadefoot toad M=Mink frog  L = p clean	orth in the poin	t in the middle	of this circle, man		7 American 1975
Additional Notes and Obsesspecies, or other facts about 1 trained spotlight on w	ut your visit to t	his point that ye	ou think are notai	ble).	
aplash to left	, Rah?	frog?			
some distress	calls	*			
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				*	
		***************************************	<del></del>	P	

#### Amphibian Monitoring In and Around Bare Hill Pond Control of the contro

Observer: $\underline{\widehat{f}}$	hy1115+6	Rob Clawson	Route:	2	
Survey Date:	MayII	07 Run Numb	er: <u>2</u>	Point Number:	4_
Before starting	ng survey, stay	in place in silence fo	r five minute	es.	en wegin Walen
Start Time	Air Temp (F)	Wind (Scale/Direction)	Sky (Code)	Noise (Y/N & Index)	End Time
9:57				1.	10:00
Has there bee	e freezing	n in the past 48 hours Some precipitation	circle one) Much pro	) ecipitation	i kara distan
· / • • • • • • • • • • • • • • • • • •	during visit: (a Aist Light ra	circle one) in/drizzle Medium ra		ain Hail Sne	•
				nama Nasanan sahi Kanalah Kanalah	
Frog and To	ad Observation	ons:	e transfer Table		ili i siliqada Stoletar
Call Index				f.	and the second second

A=Calls can be counted, no overlapping B=Calls can be distinguished, some overlapping C=Full chorus, continuous and overlapping

If the call index is A or B, count the number of calls for each species in a 3 minute period. Record the species followed by the number of calls.

Species	Call Index	Number of Calls		
Doe Ders	C.			
Dickeral				
over	A. Company	5		

If the observer is facing species where the calls B=Bullfrog G=Green frog W=Wood frog P=Spring Peeper	g north in the p	ooint in the mi	ddle of this circ	cle, mark by fro	og Were	· >E
T=Gray tree frog	and the first			$\mathcal{A}$	Ŋ	
A=American toad F=Fowler's toad					5	
E=Eastern spadefoot toa	.a /	47.7	r ar eg	<b>,</b>		
M=Mink frog	iu			<u> </u>		
*** 1,111m 1108	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		t **	/		
	N.					
	ng ngayan n Ngayan ngayan ngaya	1	en de la companya de	- / an an	91 <sup>1</sup>	
W. W.	11.7 (1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	X	en de la companya de La companya de la co		•	
			•			
			n may ja saatuu e	ji di ki kulun Bawa	· 3 ·	
A Additional No. 1 (1988)	garan ing jalah k	gara garas in in	and the	MARK AND AND		
Additional Notes and Ob	servations: (	Ise this space	to record sight	ings of other a	nimal	
species, or other facts ab	oui your visii .	to this point th	iat you think ai	e notable).		
-tvaire in a	· hosn				***************************************	
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# RI State Bassmasters

April 30, 2007

Menu

2007 Standings

Nex

Tournar

May 20,:

John's Mashpe

> 7am -Direct

June 3, 2

Singletar Mashpe

> 6am -Direct

Home

Schedule

Standings

Rules

Hall Of Fame

Anglers

Live Well

Mail

Message Board



	BARE	HILL P	NC	<b>13</b> 7	129	101
	Angler	Tournaments	# Fish	Penalties	ids/tish	Weight
1.	Doro, Mike	, second	5	0.00	3.31	16.55
2.	Horne, Greg Jr.	ļ	5	0.00	2.92	14.62°
3.	Hinkley, John	Ĩ.	5	0.00	2.20	11.00
4.	Worden. Steve	1	5	00.0	2.19	10.95
5.	Donato, Jimmy	Powerds	5	0.00	1.87	9.33
6.	Frazier, Dave	20002	4	0.00	1.94	7.75
7.	Gabortault, Tom	Çasasığ	5	0.00	1.4	7.00
8.	Donato, Tony	1	5	0.00	1.21	6.03
9.	Bettencourt. Mike	. Grandel	3	0.00	1.88	5,66
10	Alves, Roger	Quant A	5	0.00	1.05	5.26
yww.	Horne, Greg Sr.	jernek	5	0.00	1.02	5.09
12	. Picard, Paul	1	4	0.00	1.08	4.34
13	Curry, Mike	) Joseph	3	0.00	1.41	4.23
14	Carter, Niles	jamej	)conserie	0.00	2.91	2.91
5	Waddell, Bryon	1.	2	0.00	0.86	1.73
F	Totals	: ()	ess()-0	0.00	0.00	<del>-0:00</del> -

Average fish: 0.00 hs

1.811bs

112.45

Rules • Anglers • 2007 Schedule • 2007 Standings • 2006 Schedule • 2006 Standings

For additional information, contact RIStateBassClub@aol.com



Commonwealth of Massachusetts

## Division of Fisheries & Whalie

Wayne F. MacCallum, Director

### Massachusetts Bass Tournament Creel

Club: X-STREAM Date 04/132/07
Tournament Location: BARENILL Town: HARVARD
Public Access Permit # (if applicable): N/A
Start Time: 700 AM @/PM End Time: 3:06 AM O/PM @
Number of Anglers:
Number of Anglers Weighing Bass:
Number of Anglers with Bass Limit (5):
Total Number of Bass Weighed In: LMB 26 SMB
Number Over 5 Pounds: LMB / SMB
Number of Bass Returned Alive: LMB_26 SMB_1
Total Weight: $6/-1302$
Winning Weight: 11-902 Number of Fish for Winning Weight: 3
Big Bass: LMB_5_lb_10_oz SMB_1_lb_3_oz
Comments: BRUCE, IT'S THE ONLY FORM I HAD, ANY
ELDINED THEN NEEDEN PLEASE CALL.
RON MATTHEWS 978-349-5894  Questions please contact Richard Hartley @ (508) 792-7270 ext. 132
Please Mail To: Richard Hartley Mass Wildlife
Route 153 Westborough, MA 01581 www.masswildlife.org
WWW.TICOS PRICEITOCOTA

Division of Fisheries and Wildlife
Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275

An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement



Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Wayne F. MacCallum, Director

#### Massachusetts Bass Tournament Creel

Club: BLACK STONE VALLEY CASS ANGLERIDATE 5/19/07
Tournament Location: BARTHIU POND Town: HARVARD
Public Access Permit # (if applicable):
Start Time: 700 AMO/PMO End Time: 3:00 AMO/PMO
Number of Anglers:
Number of Anglers Weighing Bass:
Number of Anglers with Bass Limit (5):
Total Number of Bass Weighed In: LMB 50 SMB 0
Number Over 5 Pounds: LMB SMB SMB
Number of Bass Returned Alive: LMB_SO_SMB_O_
Total Weight: 116.47 165.
Winning Weight: 16, 47 168. Number of Fish for Winning Weight: 5
Big Bass: LMB 4 lb 8 oz SMB 1b oz
Comments: I THANK YOU FOR THE USE OF YOUR LAKE
45 ALWAYS, I'LL TAKE PRIDE IN REEPING IT CLEAN FOR
FUTURE GENERATIONS TO ENJOY AS I'R DO. PAN MEN
Questions please contact Richard Hartley @ (508) 792-7270 ext 132
Please Mail To: Richard Hartley MassWildlife
Route 153 Westborough, MA 01581
www.masswildlife.org



#### N.H. Fish and Game Department Fisheries Division 11 Hazen Drive, Concord, NH 03301

#### **BASS TOURNAMENT RECORD FORM**

Complete and mail to above address
Within 30 days of tournament date.

CLUB NAME:	Forge	Pond	Boss mas	Ters
CONTACT NAME AND ADDRESS:	Robert	. 19		
TOURNAMENT LOCATION:	Bare	#:11		
TOURNAMENT DATE:	May 20-2007 ←Please fill in one sheet for of your contest			:
TOURNAMENT HOURS:	START:	7:00	END: 3:0	0
TOTAL NUMBER OF PARTICIPANTS:	16	TOTAL TOUR HOURS:	RNAMENT	8
TOTAL ANGLER HOURS:	128.	MINIMUM BA	ASS LENGTH:	12
TOTAL NUMBER OF LARGEMOUTH ENTERED IN TOURNAMENT:	52	TOTAL NUMI SMALLMOUT IN TOURNAM	TH ENTERED	<i>O</i>
TOTAL NUMBER OF LARGEMOUTH RELEASED ALIVE:	51	TOTAL NUM SMALLMOU RELEASED A	T <b>H</b>	0
TOTAL WEIGHT OF ALL LARGEMOUTH:	140.63	TOTAL WEIG SMALLMOUT	national first that a fact of the contract of	O
AVERAGE WEIGHT OF LARGEMOUTH:	2.70	AVERAGE W SMALLMOU		0
WEIGHT OF LARGEST LARGEMOUTH:	4.52	WEIGHT OF SMALLMOUT	(A) 在1676年,在1686年,2015年,1975年,1976年	0
TOTAL TOURNAMENT WEIGHT:	140.63	MAXIMUM N BASS ALLOW	ÆD TO BE	5
WINNING WEIGHT	15.25	WEIGHED IN ANGLER:	PER	

#### MR. & MRS. ROBERT B. LOVELACE BOB & MARY 23 LAWTON ROAD SHIRLEY, MA 01464 (978) 4254376

June 3, 2007

Mr. Bruce Leicher 58 Warren Avenue Harvard, MA 01451

Dear Mr. Leicher:

Bare Hill Anglers held their tournament Saturday June 2<sup>nd</sup> and we wanted you to know that most of us have fished Bare Hill for many years, myself for at least 40. We wanted to compliment the Harvard Parks and Recreation Commission on their conservation of this fine pond.

As you can see by our tournament report, the fishery at Bare Hill is excellent! We as individuals and as a club look forward to many more years of fine fishing. Please keep up the good work.

Regards,

Robert Lovelace Tournament Director Bare Hill Anglers

Robert Lovelas

**Enclosure (Tournament Report)** 

#### BARE HILL ANGLERS TOURNAMENT TALLY SHEET

TOURNAMENT LOCATION: BARE 4:11 POND

DATE: 6-2-07

	-Weight			Minus			
ANGLER	Large Mouth	Small Mouth	TOTAL WEIGHT	Penalty Weight	FINAL WEIGHT	LUNKER WEIGHT	Tournament Standing
Boisseau, Curt	5		8,80	and the second s	8,80	4,13	7
Garey, Dave	5		18,80		18,80	4,79	
Hurley, chris	5		15,81		15.81	4.11	4
Lovelace, Bob	5	. Andrews	18.58	·	18,58	4,71	Q
Lovelace, Mary	5		8.22		8,32	2.67	8
Mead, John	5		15.44		15,44	4,66	5
Prescott, Fred	5		14,98		14,98	5,01	6
Rockwell, Sheldon	5		18,15		18.15	6,23	3
Watts, Jim							
		_					
						endet production of the particular construction of the constructio	
TOTALS	40	-			118,78	-	

#### PENALTIES:

SHORT FISH: Weight of fish does NOT count. In addition subtract 16 ounces (one pound) for each short fish weighed in.

**DEAD FISH:** Weight of fish COUNTS for part of total weight. Then subtract .125 pounds (2 ounces) per pound of DEAD FISH weight from total weight.



#### Commonwealth of Massachusetts

# Division of Fisheries & Wildlife

Wayne F. MACCallum, Director

#### **Massachusetts Bass Tournament Creel**

Club: Chelms foral Bass Tacklers Date:	526107
Tournament Location: Burchill pond Town: Haru	vard
Public Access Permit # (if applicable):	
Start Time: 7:00 AMPM End Time: 3:00 AMPM	
Number of Anglers: 24 - (2 Teams)	
Number of Anglers Weighing Bass: 24 (12 Teams)	
Number of Anglers with Bass Limit (5): 24 (12 Teams) & Fish Lin	rits
Total Number of Bass Weighed In: LMB 96 SMB X	-
Number Over 5 Pounds: LMB_2 SMB_	
Number of Bass Returned Alive: LMB 94 SMB ×	
Total Weight: 288.9	
Winning Weight: 28.96 Number of Fish for Winning Wei	ght: <u> \$</u>
Big Bass: LMB 6 1b 05 oz SMB 1b oz oz	
Comments: Mostly Survey Low 80's - Water temp Low-Mid	70's
Water Level High	
Questions please contact Richard Hartley @ (508) 792-7270 ext. 132	
Please Mail To: Richard Hartley	
MassWildlife Route 153	
Westborough, MA 01581	www.masswildlife.org

# Teri voo! Segment Stes

November 16, 2003

WILDUFE, HABITAT AND VEGETATIVE ASSESSMENT OF BARE HILL POND, HARVARD (MA)



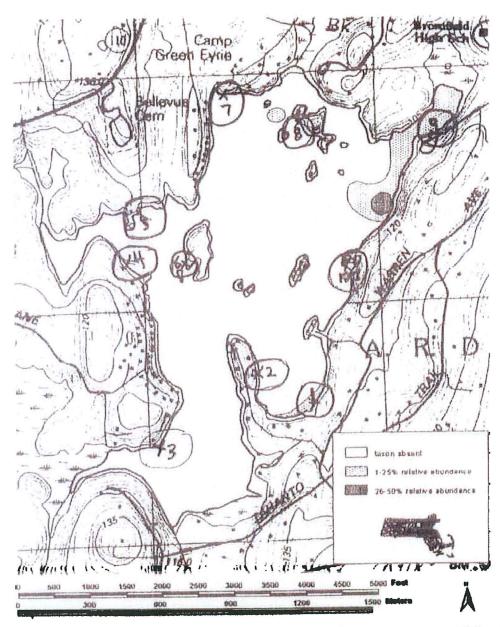
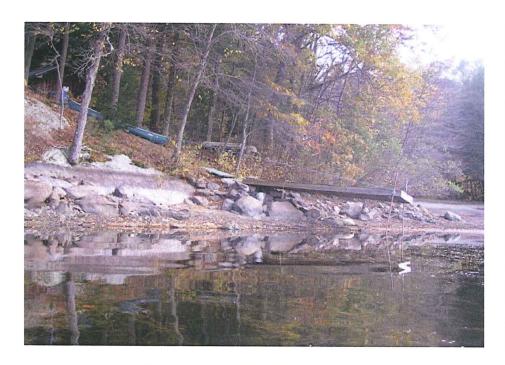
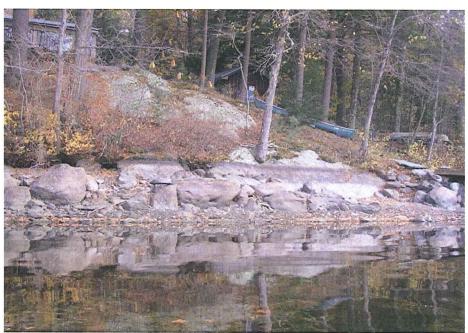


Figure 5. Distribution and relative abundance of farmort (Cabomba carolinians) in Bare Hill Pond in October 2001, from data in Appendix A.



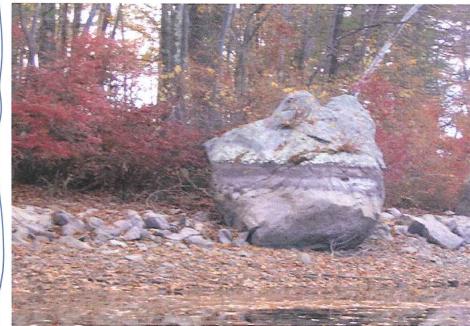


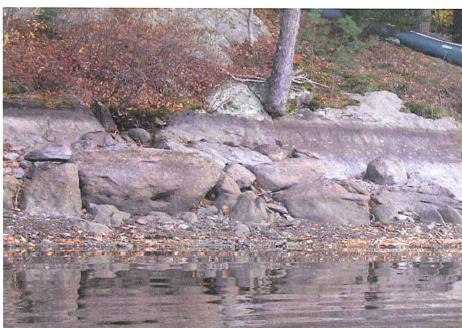




Site 2





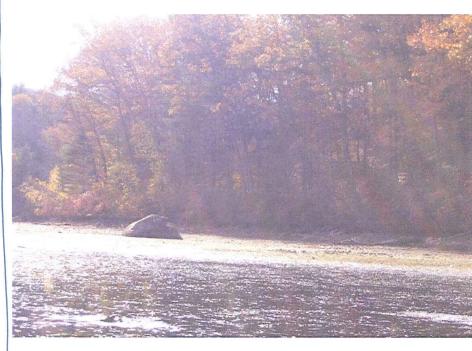






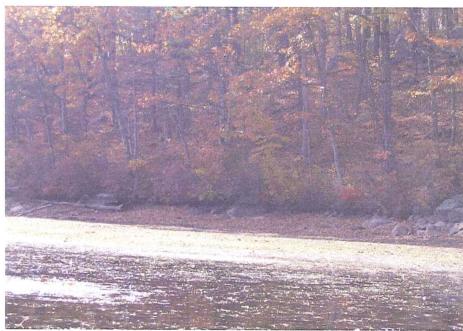














# DATA Star Store Outer Chaps Brook







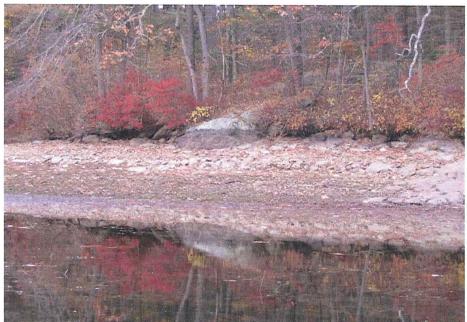


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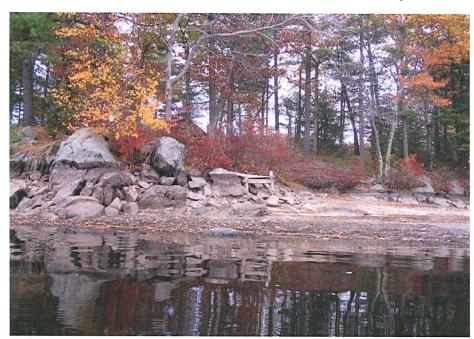




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Site 8 ]

Site 8









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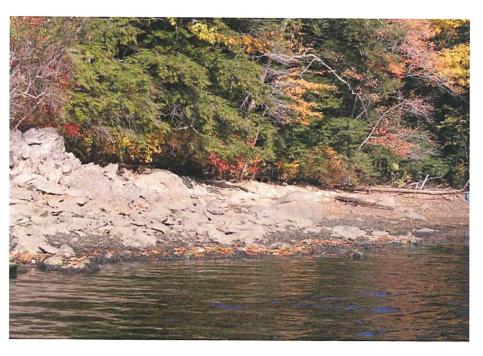


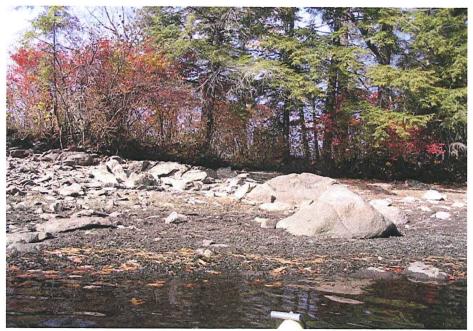


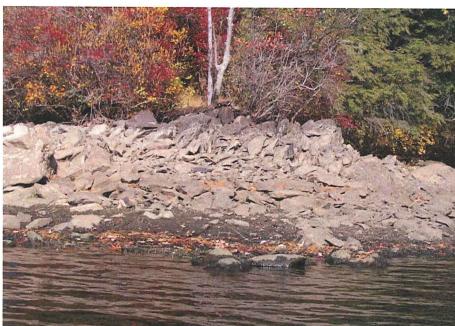


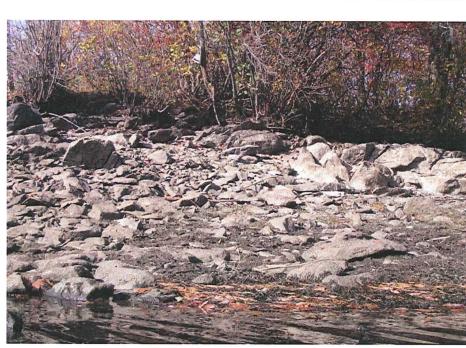


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