

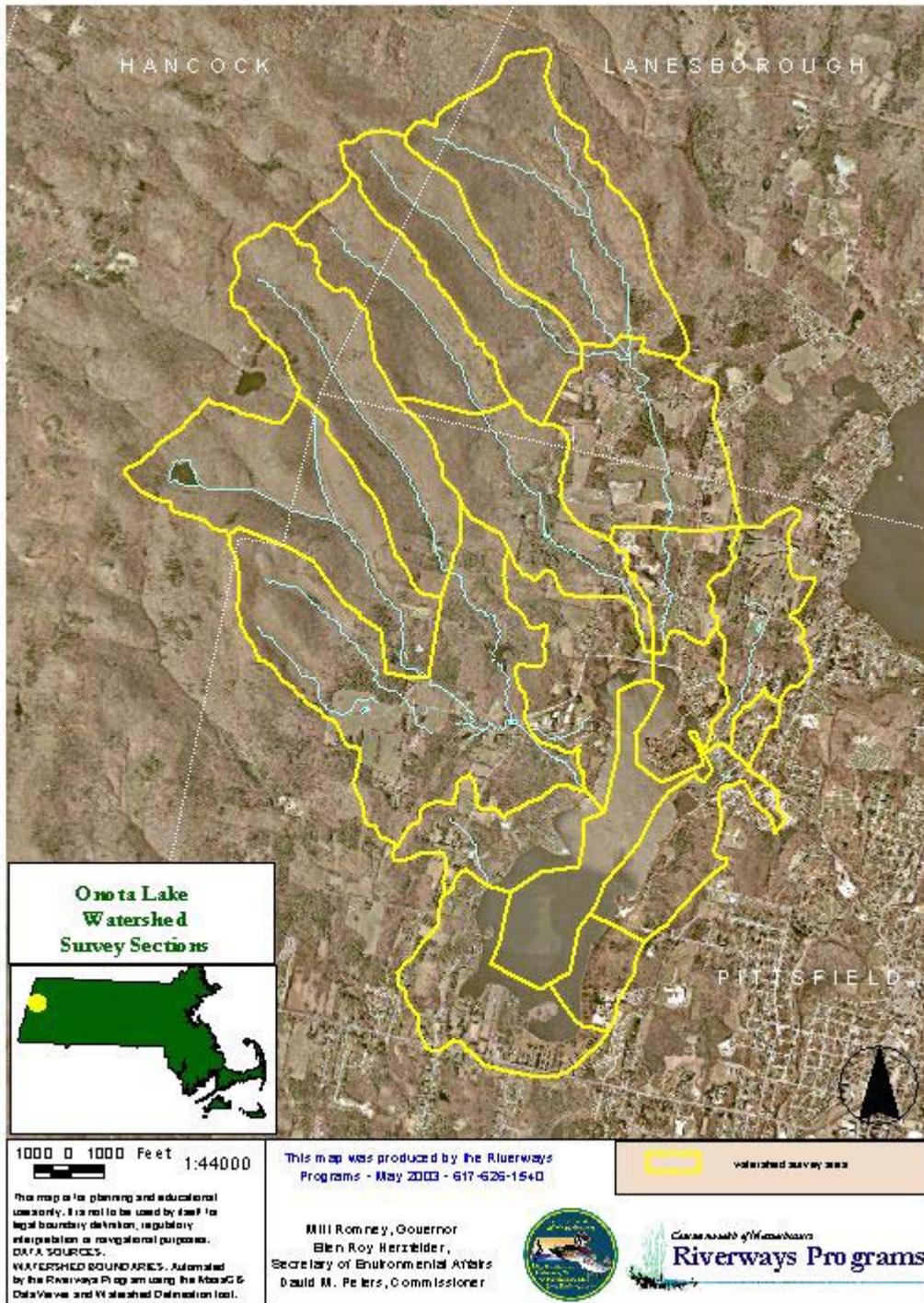
WATERSHED SURVEY FINAL REPORT & ACTION PLAN



ONOTA LAKE WATERSHED
PITTSFIELD, LANESBOROUGH, AND HANCOCK, MASSACHUSETTS
SPRING 2003



*IN COOPERATION WITH THE MASSACHUSETTS RIVERWAYS PROGRAMS
DEPARTMENT OF FISHERIES, WILDLIFE & ENVIRONMENTAL LAW ENFORCEMENT
LAKE/WATERSHED STEWARDSHIP PROGRAM*



Onota Lake Watershed Survey Final Report

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Many people contributed greatly to the success of this very beneficial survey: Tom O'Brien whose leadership got the project up and running while Housatonic River Basin EOE Team Leader; Chris Carney of the Riverways Program whose knowledge, enthusiasm and leadership were critical to making it all happen; Jim McGrath, Pittsfield's Director of Community Services, who took over Chairmanship of the Steering Committee and will provide the carry-over so



necessary to follow-on implementation; Melissa Jette of BRPC, Jane Winn of LOPA and AmeriCorps volunteer Meagan Kane at BCC who enabled the assembly of the volunteer force that participated; and finally the volunteers themselves – Tom Armstrong, Steve Asen, Maria Loina Buesa, Gene Chague, Norman Cruz, Efrain Diego, Tim Flanagan, Veronica Garcia, Jon Garson, Yadira Guifada, Don Harris, Melissa Jette, Dick Johnson, Meagan Kane, Regina Mahony, Marianela Marin, Raquel McBean, James McGrath, Tracey Miller, Carla Miranda, Anne Monnelly, Karla Navarro, Fransua Nieto, Richard Quinn, Bob Race, Bob Ramsey, Carol Ramsey, Anthony Robie, Jeff Rose, Amulfo Sanchez, Carolyn Sibner, Racheal Stevens, Sandi Stowe, Tom Stowe, Jim Straub, Fernando Vasconcelos and Jane Winn.

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ONOTA LAKEWATERSHED SURVEY SPRING 2003

I. EXECUTIVE SUMMARY

Background

This report documents the results of a comprehensive survey of the watershed of Onota Lake conducted in the Spring of 2003. The survey originated under the auspices of the Massachusetts Watershed Initiative (MWI) Housatonic River Basin Team Leader Tom O'Brien as part of his FY 2003 Annual Work Plan. It was organized under the leadership of Chris Carney, Coordinator, Lake/Watershed Stewardship Program, Massachusetts Riverways Programs of the Department of Fisheries, Wildlife and



Environmental Law Enforcement (DFWELE) working in conjunction with the City of Pittsfield, the Berkshire Regional Planning Commission (BRPC), the Lake Onota Preservation Association (LOPA) and Berkshire Community College (BCC). Onota Lake was fortunate to be selected as one of the last of 10 lake/watersheds to participate in this pilot project conducted by the Riverways Program under a federally funded s.319 grant from the Environmental Protection Agency (EPA).

Process

The survey process started with an informational meeting, coordinated and led by Tom O'Brien in December 2002 which included representatives of the major "stakeholders" in the lake, the City of Pittsfield, MWI, Mass DEP, LOPA and BRPC, and Chris Carney of the Riverways Program. This was followed by an organizational meeting in January 2003 during which a Steering Committee was formed to be chaired by Tom O'Brien (later replaced by Jim McGrath of the City of Pittsfield). Under Chris's guidance, BRPC (Melissa Jette) and LOPA (Jane Winn) wrote and distributed letters to abutters and other interested parties, organized the team of volunteers and arranged the volunteer training session leading up to the actual surveys conducted in early May 2003 resulting in the survey findings documented in this report. An action planning meeting involving the Steering Committee and the volunteers was held on 14 May 2003 and its results are also documented in this report.

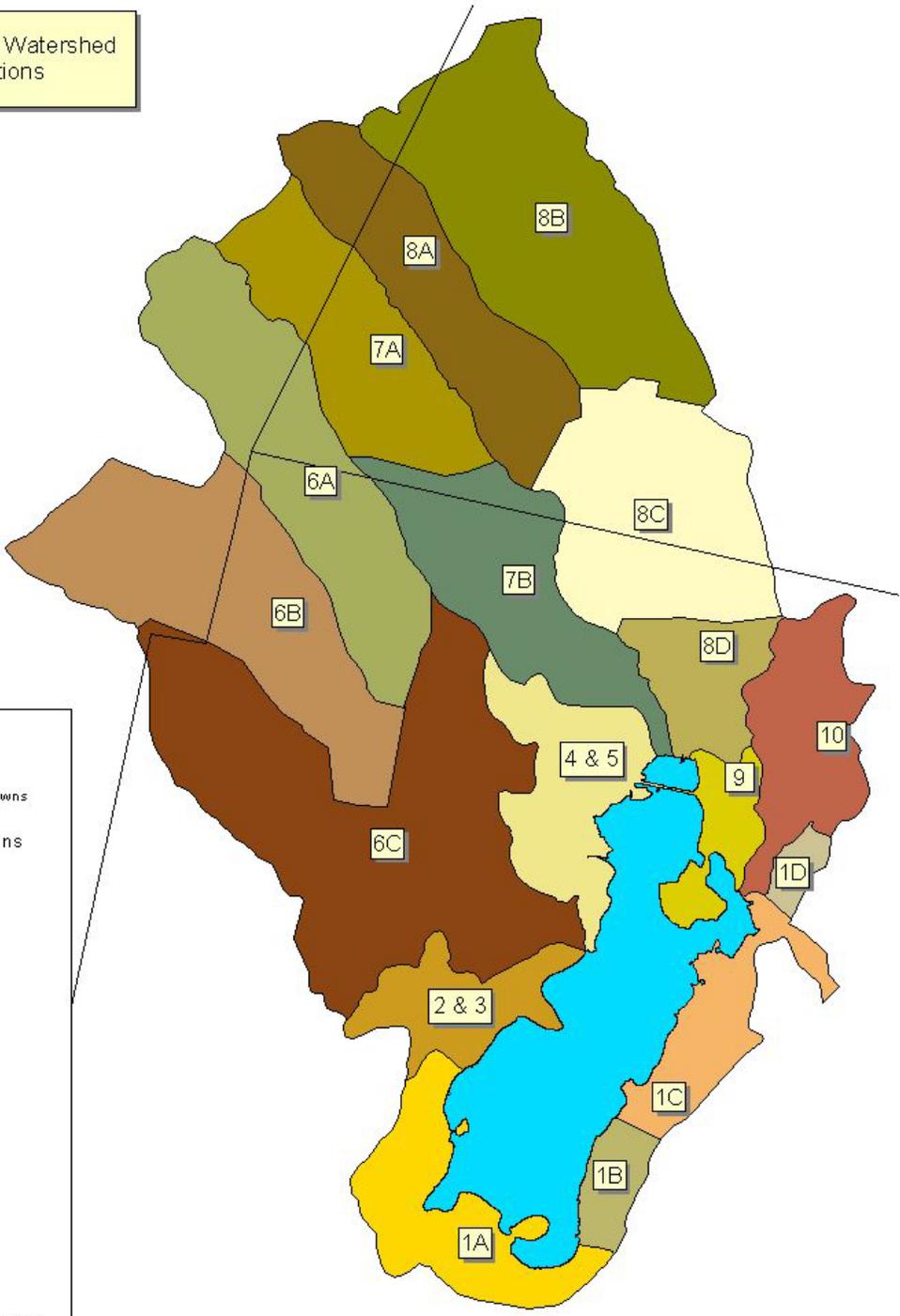
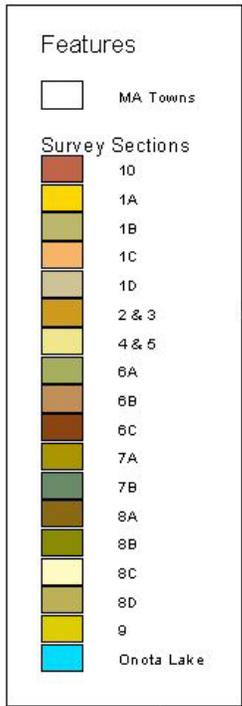
Results

Onota Lake is approximately 3.4 km (2.1 miles) long and 1.0 km (0.6 miles) wide with a total surface area of approximately 250 hectares (617 acres) covering two discrete basins. The watershed surrounding and draining into the lake is comprised of 10 sub-watersheds encompassing a total of 25.7 square km (6,350 acres) or roughly 10 times the area of the lake. The vast majority of the watershed is forested land with residential and commercial useage mostly concentrated near the lake shoreline.

For purposes of this survey several of the sub-watersheds were further subdivided creating a total of 17 survey sections as shown on the map in this report. Approximately 13 of these sections were thoroughly surveyed and reported on in accordance with the training prior to or during the first week of May. These reports were reviewed and condensed by Chris Carney into the **Priority Sheets** in this report which summarized the volunteers' views of problems identified, assets found and priorities for action. These **Priority Sheets** were the basis for the action planning meeting of the Steering Committee and volunteers during which each survey section was discussed and the priority action items were categorized into either **Reporting Issues & Immediate Actions**, **Short Term Actions** or **Long Term Actions** and placed into one of seven goal-oriented divisions for purposes of follow-up action. This RECOMMENDATIONS FOR ACTION document is contained in this report.

Overall the group was pleased to discover many positive facts about the watershed, many not-too-significant problems or issues which we believe should prove amenable to follow-up education and encouragement concerning correction and only one or two potentially significant problems requiring further investigation. The knowledge base and energized volunteer group created by this survey will provide the "stewards" of Onota Lake with the capability to meaningfully reduce many of the small but important negative impacts of the watershed which are currently being experienced. One or more follow-up implementation meetings will be conducted this summer/fall to ensure appropriate actions are being undertaken.

Onota Lake Watershed
Survey Sections



III. Narrative Sections

Section 1B, *Fernando Vasconcelos*

May 2, 2003

We surveyed the south – north of Onota Lake. There is mostly forest, mixed with evergreen and deciduous forest. There is a pipe that comes from the parking lot that drains to the lake. The pipe is broken, and is causing erosion from the forested area. This erosion is carrying sediments to the lake. There are also five barrels that are used as trash cans. This garbage should be removed.

Section 1C, *Sandi & Tom Stowe*

May 5, 2003

Area just above dam: brushy vegetation on both sides. One side vegetated and treed, with a sloping area below the trailer park. Below the dam

Below dam: south side has brushy vegetation. The north side has large amounts of pavement, large buildings, and parking lots with many cars. At one point, the river runs under the building.

East side of Valentine Rd: Three storm drainpipes just above river. No outflow today. No recent rain. Need to check during a rain event.

Behind and on side of large hill building: Small gullies with water flow directly to river.

Further down river on north shore: looks like a container truck storage or graveyard. Close to river larger than two football fields. Trucks are not leaking. Hardpack dirt lots. No erosion.

Eastward: river opens into marshy area with beaver dam at most eastward point. A few lots with homes have evidence of possible leaf debris or grass clipping on north side of the river.

Section 1D, *Bob Race & Tom Armstrong*

May 5, 2003

Section 1D is a small residential area contiguous to Section 10. We surveyed it by car and found no particular problems, other than road sand left over from the winter. The four side streets off of Pecks Road (Stevens, Bromback, Toronoitya, and Kearney) all have catch basins at or near Pecks Road. It is not obvious where those storm drains discharge. I suspect it might be into a small stream coming out from under Pecks Road just downstream of the Onota Lake dam in which case it would not be in the Onota Lake watershed.

Section 2-3, *Jon Garson, Rachel Stevens, and Anthony Robie*

May 3, 2003

We surveyed portions of Churchill St. for our upland research (A) and properties on and along Blythwood Drive on Onota Lake (B) for our near shore research.

- (A) There was quite a bit of trash along the side of the road, much of which is in the wetland area off the road. It is a residential area on the west side of the street and a wetland area along the west side of the street. The water was pooled in some spots about 1-foot deep and had algae growing toward the pipe, a bridge

Passover. The water seemed to be flowing, however in an east/northeast direction towards the lake. Vegetation, insects, and frogs frequent the area.

- (B) At the beginning of Blythwood Drive, there is a construction site with a few high powered machines emitting dangerous chemicals and fluids. These chemicals could run from the site, along the road, and to the lake during a heavy rainfall. Further down the shore, there are many houses with lush lawns along the waterfront. There are not many places for animals or vegetation to grow due to the number of houses.

Section 4-5, Carol A. Ramsey and Robert C. Ramsey

May 2, 2003

Survey commenced at location A at a catch basin on the NE corner of Pecks Road and Dan Casey Memorial Drive (the Causeway). The catch basin outfall is reported by a local resident to be to a lawn on the SW corner, covered with rocks by owner. No flow was observed.

Catch basin B reportedly discharges into two detention ponds at D which discharge into Daniels Brook. Sand reportedly collected in D area.

Catch basins C & C-1 at the SE and NE corners of Pecks and Hancock Road receive a large sand and debris load from uphill gutters on Hancock. C & C-1 discharge at a pipe outfall G to a short ditch and onto Daniels Brook. Sand is apparent, settled in the ditch and downstream bottom of Daniels Brook.

A culvert pipe delivers Daniels Brook flow under Hancock Road at E. The brook is clear with gravel bottom north of Hancock. The brook is clear with gravel bottom south of Hancock but with sand sediment visible. There is sand accumulating on the asphalt surface of the road with direct drainage to the brook at E. Outfall G also deposits sand into Daniels Brook in the vicinity of E.

Historical reports from locals indicate the existence of a pig farm along the stream bank of Daniels, north of E at F in the 1940's. No visible evidence remains except rusted pig fence is still in place. Neither stream bank disturbance nor organic discharge is currently apparent.



Churchill Brook crosses Hancock Road at H. The brook is clear with gravel bottom upstream but has sand sediment downstream. Portions of asphalt pavement are washed out at the culvert pipe and sand from the road surface washes directly into the brook.

Churchill Brook crosses Churchill Street at I. An asphalt swale built into the asphalt road surface discharges water, sand, and debris directly into the brook at the top of the current pipe under Churchill St. (at J). Erosion washout from two ATV trails at K discharge into another roadside asphalt swale directly into the brook at L.

An asphalt roadside ditch M/N collects drainage from the road surface as well as upland and residential along the west side of Churchill St. and delivers to the culvert pipe O, described in the Pipe page.

Additional southerly drainage P/Q, Q/R is described in the Pipe page.

Wadham Brook begins as diverted waterflow from Parker Brook at S. A concrete flow restrictor is located within the first 50 feet of Wadham Brook. The Parker Brook water is clear. The portion of Wadham visible from Churchill St. appears to have leaves layered on the bottom and a 10 to 50 foot tree buffer on both sides. The brook continues in an easterly direction inside a private gated camp before discharging into Onota Lake.

The two Causeway sides V/W and X/Y were observed indicating several conditions of

concern. The water level is very high reaching the asphalt pavement. Floating trash was observed on both shores of the causeway. Overflowing trash barrels were present near the waters edge. Pet defecation was observed along A/T and A/U as well as human defecation and toilet paper reported by locals at X and V. Road drainage and sand flows directly from the pavement edge into the water. A street cleaner was observed on 5/1/03 removing sand from pavement between A and T/U.

Ramsey Pond was observed clear and calm with waterfowl present. Several people were fishing along V/W and X/Y. High water shoreline erosion and shoreline tree destruction was present at Z-4 and Z-3. Evidence of a large, thriving beaver population was observed all around the shoreline and into the forest and wetlands buffer of Ramsey Pond.

The discharge of both Churchill and Daniels Brooks into Ramsey Pond was observed at Z-1 and Z-2. Churchill Brook is reported as seasonal flow. The flow into the pond was clear with some sand and silt observable into the pond. Daniels Brook was also flowing clear but much more buildup of sand and delta formation was present in wetlands at the mouth and out into the pond.

Section 6A – Upper Lulu, Abigail Westwood, Sara Hunt, Kristen Tool, Meagan Kane
Duration: September 2002-December 2002 (Excerpts from their report)

Lulu Stream flows into Lake Onota, through the Pittsfield State Forest and then through residential areas. Lake Onota is a popular recreation area in Pittsfield for boaters and swimmers alike, the lake's health is extremely important to Pittsfield residents and the surrounding ecosystem. Doing stream monitoring along tributaries such as Lulu is a way to protect and restore the lake's water source.

As our monitoring progressed downstream we witnessed a change in the ecology, topography, and wildlife habitat in the area surrounding the stream. One thing became glaringly evident as we assessed our information; the health of the river drastically decreases as its encounters with invasive human uses and activities increase. Upper Lulu is aesthetically beautiful the river's health is un-impaired by human negligence. The wetland areas from which Lulu originate are hosts to a biodiverse population of plants and animals. Middle Lulu begins where the stream encounter's its first threats: runoff from Berry Mountain Road, erosion, and streambed destruction from ATV use. ATV's ignore the wooden bridge built for their passage across the river. Instead they plow through the river, destroying the stream corridor and eroding large areas of the surrounding bed and path nearby. The river recovers in Middle Lulu, a long stretch of cascades and dense conifer forests that support a small hiking trail. Storm drains popping up from under Berry Mountain Road were found on the steep right hand slope of the riverbank; their use and origins need to be investigated. Lower Lulu begins when the river is crossed by Berry Mountain Rd and enters a recreation area. The sides of the bridge are eroded, road run-off and non-point source pollution are clearly affecting the river's health. This impingement only increases in the parking lot and swimming area. Cars park right on the river's banks and ATV's plow through the stream and the banks, destroying the streambed and vegetative buffer zone. The area that is called a 'swimming lake' consistently smells like sewage, contains trash, and has an orange-red bottom. The concrete dam in this section causes more harm than good, the water is stagnant in sections and human use has drastically altered the stream in this section. The surrounding campgrounds have resulted in the clear cutting of a majority of the trees. Charcoal and chemicals from fire pits, human waste, and parking lot gravel run right into the river when it rains. There are gravel mounds for ATV recreation is streamlined across Berry Mountain Road, when it rains large amounts of gravel run off across the road and into the river.

Lulu is not healthy due to the deteriorating condition of Pittsfield State Park, the area is not being properly maintained and monitored by the Parks and Forest department. The budget for the Mass. State Forest and Parks department is constantly being cut. Every year the number of visitors to Mass. parks increases while the number of employees maintaining the parks decreases. ATV drivers are destroying Lulu by plowing through the stream and restricted areas on ATV's without due cause. One way to ensure that Lulu is restored is to create a buffer zone of rich vegetation around her to help stop runoff. The recreational areas in the state park also need garbage cans, for trash in the stream is evident. Mass. residents need to be activated and educated to insure that our Forests are maintained and protected.

Section 6C North – Lower Lulu, Meagan Kane

April 29, 2003

I surveyed section 6C North which consisted of the southern portion of Lulu Brook and Parker Brook through mainly wooded, protected land in the state forest until the streams reached within 300 feet of the two streets, Cascade and where residences are located.

After Lulu crosses Berry Pond Circuit Road it enters into woods which are relatively dense and well vegetated. Throughout its course there was garbage everywhere. The brook stemmed off into branches at points of high water flow. There were three places where ATV's drive directly over the brook (A).

At the wetland area there was still lots of garbage and one large metal heater (?) (B) Parker Brook was vegetated on both sides and had a 300-foot buffer or greater after it exited the park. When Parker Brook crosses _____ Rd., there is bad direct drainage from the street into the brook (C). One residence was built on an eroding foundation (D).

Section 6C South, Gene Chague

May 6, 2003

Site #

1. Although not along a stream, I noted a small horse farm with 3 or 4 horses on it. The grass was chewed to the ground and right in the middle of the horse yard was a 4 foot pile of manure. There was no adjoining stream, but perhaps the run off could reach Hawthorne Brook via the nearby swamp in back of the property. (Photo taken)
2. There is a little feeder brook which crosses the road. Either the culvert is placed too high or there is some debris clogging the pipe. There is a small pond of backed up water on the upstream side of the culvert and it smells somewhat of manure. This is visible from the road and is on the posted property of \$1011 Cascade St. (Photo taken)
3. Near the corner of Cascade Street and Pond Circuit Road, Hawthorne Brook emerges from the woods and crosses a fenced in pasture. There were no animals in the field at the time of inspection; however, animals do have unrestricted access to the brook everywhere and appear to have chewed up all vegetation up to the stream bank. (Photo taken).
4. Across the road from the aforementioned pasture, there is a dilapidated barn which may house machinery and hay. Near the barn is a man made farm pond which may e fed by Hawthorne Brook. There is no vegetation around the pond and some of its banks are eroding. I believe this area is the second posted parcel (#1025 Cascade).

- Below the barn is an unfenced meadow which is bordered by a swamp and Hawthorne Brook flows into it. Geese were sighted in this field, which I believe is part of the above mentioned posted property.
5. Parker Brook streambed joins Hawthorne Brook (Parker Brook flows in the State Forest and disappears in the vicinity of site #10) It resurfaces ¼ mile downstream where it crosses Cascade Street. It pops out of the ground right at the culvert, flows a little way and joins Hawthorne Brook. There are some new homes there with lawns approaching right up to Parker Brook stream bed. (Photo taken)
 6. Very close by, along Parker/Hawthorne Brook is Camp St. Michael. Within 5 feet of the brook is a paved basketball court. Run off appears to go directly into the brook and there are no vegetative buffers.
 7. The brook then crosses Cascade St. again and flows North. Near the intersection with Churchill St., there is a fenced in pasture, horse farm and several houses on the South side of the road. At #613 Churchill St. there is a horse farm with bare ground and open manure piles. It is some distance from the brook and I am unclear where this property drains.
 8. Near the intersection with Cascade and Churchill Streets, Lulu Brook and Hawthorne Brooks merge and a manmade pond and dam is located there. Below the spillway of the dam, the brook crosses Churchill Street and flows another ½ mile or so on Camp Witawentin property before entering Onota Lake. The brook flows through a wooded area, crossing a dirt road twice. The brook is well shaded and appears relatively undisturbed until it reaches the summer camp.
 9. Although the brook appears undisturbed with only one footbridge, I noted that at the camp there was a new paved basketball court which is about 40 feet from the brook. Much of the vegetation between the court and the brook had been cut down. It is obvious that run off from the court disturbs the land and flows into the brook. If that area is left alone, I feel confident that the vegetation will sufficiently return. (Photo taken)
 10. There is a paved path and footbridge which also create a run off. Also, from the main building to the brook, there appears to be some run off and a little erosion which could easily be corrected. The building has gutters and down sprouts which directs water directly onto the grass onto a swale; however, the vegetation in the swale appears to have been cut down.

Section 7A – Upper Churchill Brook, Anne Monnelly, Jim Straub, Steve Asen
May 1, 2003

We surveyed from the headwaters of Churchill Brook south along the brook until the southern edge of Section 7A (approx. where the trail crosses Churchill Brook the second time). Churchill Brook lies in a steep ravine between two mountain ridges with Pittsfield State Forest. The area is 100% forested and protected. The primary forest type is Beech/red Oak with some cherry, birch, and some hemlock on the southern portion. Native shrubs and wildflowers are abundant. The only problems we noted were associated with the ATV trail. Two main problems were erosion and trash throughout the woods. Erosion was not extensive, but was noted at several of the water bars and at several other locations where water had pooled up and overflowed off the trail and downslope toward the stream. Although evidence of runoff was observed, it did not appear to have reached the stream. Sediment trails died off quickly in the woods.

Several flat areas on the trail were substantially gouged out and rutted and still held water. Water in the stream was clear and cold, appeared pristine. We did observe some natural foam at one location.

Section 7B – Lower Churchill Brook, *Racquel McBean, Norman Cruz, Karla Navarro, Lorena Maria Bueso, Marianela Marin*
May 3, 2003

We surveyed the north side of Church Hill Brook from Church Hill Street to the Pittsfield State Forest boundary (Area 1) on the map there were no signs of disturbance. There was a good buffer. (Area 2-3) A and B – Erosion was evident. This I suppose was happening from the land not having enough vegetative cover. There were trampled areas near shoreline cause by the cows. In these trampled areas water settles. And there was algae growth occurring. In Area 2, there was also a vernal pool with lots of salamander egg masses. However, Church Hill Brook is in good condition. The major problem appears to be the cattle which feed/drink from this brook.

Section 8A - Daniels Brook, *James McGrath*
May 14, 2003

This section of the watershed is entirely within the Pittsfield State Forest. Daniels Brook flows south/south east through the section. I surveyed this section from the Daniels Trail, which is entirely on the west side of the brook and running parallel to the brook.

This sub-watershed is entirely forested, and is very steep in sections. Dominant tree species include Red Oak and Birch on the uplands with an understory of beech and hobblebush. Along the corridor of the brook are Hemlocks and Yellow Birch species, with a variety of shrubs and herbaceous plants. No large wildlife were observed, though many song birds were heard. Many varieties of spring ephemeral wildflowers were noted such as ginger and bloodroot. No evidence of the Woolly Adelgid was noted on the Hemlock trees.

The section is well maintained by the MA DEM. There has been a concerted effort to control erosion from the trails using rubber waterbars every 1000 feet or so. The waterbars are working as designed, and are in good shape. No major areas of erosion were noted.

Where trails cross Daniels Brook, wooden bridges have been installed. Though ATV's are allowed on the Daniels Trail, no evidence of erosion was noted from these vehicles. Though an illegal campsite was discovered on the shore of the brook under a grove of Hemlock, there was no debris left behind, though there was evidence of a small campfire.

An area of concern is at the parking area for the trailhead. This parking lot, off of Potter Mountain Road, has been the site of dumping for some time according to DEM staff. As it is accessible and convenient and not patrolled, people regularly dump large items at this location, including tires, carpeting, and large appliances, all of which were noted on the day of the survey.

A second area of concern is along Potter Mountain Road where the Daniels Brook crosses under the road. It appears that gravel from the unpaved road has washed into the brook at the culvert location. Though not a severe problem, efforts should be undertaken to prevent road gravel from washing off of the road into the brook.

Section 8B, Don Harris

May 4, 2003

Potter Mountain Road – Culverts 1 to 14 are mostly in good condition and any storm water flow will be discharges into vegetated buffer before entering stream. Inlets and outlets should be kept clean so water does not wash out road and end up in Daniels Brook.

- a. Culvert #15 is a 36" CMP that should and appears to manage any Stormwater plus the regular flow of the stream. There is a small eroded area on top of the culvert that during rain storms allows road material (gravel) to be washed into the stream below it. Stream depth iun culvert is 5" deep.
- b. Culvert #16 is a 24" CMP that appears to be handling stream and storm flow but the inlet needs to be cleaned so water does not back up and flow over the road.
- c. It is a wooden bridge at the stream crossing. The bridge is in good shape but the approaches are unstable, loose mineral soil which is constantly being moved by ATV's and dirt bikes. Use of ATV's in this area should be banned and the approaches should be stabilized by seeding. The excessive speeds of the ATV's and dirt bikes makes the situation worse. As we were driving out of the area two dirt bikers nearly killed themselves trying to avoid our vehicle. They were going way too fast. Also at this point we pulled over and let 20-30 ATV's pass by. They were traveling very fast. Ticketing the speeders and enforcing the regulations may help.
- d. , e., and f. are stream crossings and still need to be looked at.

The illegal dumping near stream area A is a big problem. This pile of building demolition material, assorted shingles, needs to be cleaned up. The entire area of Potter Mountain Road needs to be cleaned up. As you know trash begets trash.

As a forestry consultant I worked for DEM cruising this area about 15 years ago. The two negative things I noticed since that time is that Potter Mountain Road has gotten worse, via rutting and washouts and the trash problem is much worse. I can say that the woodlots look very good and the general health of the regeneration is good.

On the day of the survey, over the course of five hours, we saw 30-50 ATV's, 5-10 dirt bikes, 2 mountain bikes, 4-5 horses, and no hikers.

Survey Section 10, Bob Race & Tom Armstrong

May 4, 2003

We visually inspected most of the Section 10 area either by car or on foot. The northern half (north of Hancock Rd) is basically the Pontoosuc Golf Course. It appears that the whole area drains to the unnamed stream passing under Hancock Road (10-357, 10-358) and then flows through a beautiful, natural wetland (10-361, 10-362) almost to Pecks Road (10-364, 10-368). There are steep banks on both sides of the wetlands and one area behind a house at the north end of Bromback Street showed signs of erosion (10-363). The



water flowing in the stream thru the wetlands was clear and beautiful. There were a few discarded, rusting metal items on the banks but none appeared to be more than eyesores. No pollution was observed. The stream dissipates into the ground about ¼ mile northeast of Pecks Road (10-367) over a wetland approximately 15 meters wide and 100 meters long. This is the normal condition. However, during spring runoff and/or heavy rain, the water flows all the way to the triple pipe culvert going under Pecks Road (10-371) and on into the lake (10-372).



One finding of some concern was the sighting of an old discarded household oil tank (250 gal???) on the eastern edge of the wetlands about ¼ mile northeast of Pecks Road. It is located behind a house on either Stevens or Bromback Street. Since it is on private property to which we had not obtained access permission, we can only assume it is empty and not causing an immediate problem. However it probably should be removed.

In summary, the whole Section 10 area drains thru a natural, filtering wetland and on into Onota Lake via groundwater (normal conditions) and/or culvert pipes (high flow conditions) and poses no risk or problems that we can see.

Onota Lake Watershed Survey Report

IV. Priority Sheets

Problems Found	Natural Resources and Assets Found	Priorities for Action
<p>Section 1A – South lake shore, <i>Jeff Rose & Fransua Nieto</i></p> <ol style="list-style-type: none"> Hospital parking lot drainage at southwest corner. Residential dump area Many lawns draining to the lake – fertilizer, infiltration issues. 	<ol style="list-style-type: none"> Good habitat, landowners using the river, conservation land, scenic views. 	<ol style="list-style-type: none"> Detention basin for the parking lot.
<p>Section 1A – South lakeshore, <i>Efrain Diego, Dick Johnson</i></p> <ol style="list-style-type: none"> Horse farm runoff 	<ol style="list-style-type: none"> Well-kept properties along lakefront. Scenic views 	<ol style="list-style-type: none"> Test water near horse farm Monitor weed growth
<p>Section 1B – Southeast lakeshore, <i>Fernando Vasconcelos</i></p> <ol style="list-style-type: none"> Broken pipe that causes runoff and carries sediments to the lake. Runoff from the parking lots Road near the lake causing erosion. 	<ol style="list-style-type: none"> Recreational area - camping and hiking 	<ol style="list-style-type: none"> Collect trash barrels Check the broken pipe, test water quality from the pipe. Runoff caused by the pipe and also from the parking lots of the Hillcrest Hospital
<p>Section 1C – East lake shore, Burbank Park, outlet stream, <i>Sandi & Tom Stowe</i></p> <ol style="list-style-type: none"> Onota effluent – storm runoff from streets. Loosestrife along river. Phragmites in marshy points in North Burbank Park. All culverts were dry. 	<ol style="list-style-type: none"> Boating, fishing and swimming in lake. Picnicking Overall Burbank Park and shore front are in good shape. 	<ol style="list-style-type: none"> Repair shoreline curbing stones at Controy – work to protect shore. Educate homeowners on use of low phosphorus fertilizers. Knowledgeable person to walk river below dam behind industrial site & Gillette's parking area.
<p>Section 1D – Northeast lakeshore area, <i>Bob Race & Tom Armstrong</i></p> <ol style="list-style-type: none"> Road sand left from winter which is washing into storm drains. 		<ol style="list-style-type: none"> Encourage city to sweep streets draining into lake at earliest possible time.
<p>Section 2 & 3 – West lakeshore, <i>Rachael Stevens & Anthony Robie</i></p> <ol style="list-style-type: none"> Trash along side of Churchill Street along and in tributary. Possible hazardous chemicals on Blythewood running into watershed. 	<ol style="list-style-type: none"> Great habitat along Churchill leading straight toward Lake Onota. 	<ol style="list-style-type: none"> Check construction permits Cleanup needed along Churchill Street

<p>Section 4 & 5 – North lakeshore area, Carol and Bob Ramsey</p> <p>1. Significant shoreline erosion exists on many parts of Onota Lake. One of the most severe impacts has developed along the shore AA in Survey Section 1C. Destructive shoreline erosion was observed in sections 4, 5, and 1C with silting of near shore environs. Resulting loss of recreational access assets and non silted lake bottom assets appear to be progressing in a continuous seasonal pattern. Erosion appears to be correlated to maintenance of lake level by dam operation. Information is available in full report citing precedents for appropriate legal dam operation.</p> <p>2. Salt and sedimentation pollution is a problem from portions of Pecks Road, Hancock Road, Churchill Street and Dan Casey Memorial Drive (Causeway). Grass buffers seem feasible where enough land exists, otherwise retention basins. The causeway is problematic because high flood water laps right up to the pavement edge making no buffer possible without lowering water levels.</p> <p>3. Nutrient pollution and trash is a problem along the Causeway. Better law enforcement or more intense clean up work or additional signage might improve the situation</p>	<p>1. Delta formation and wetland expansion is occurring at the mouth of Daniels Brook. The problem is the delta is being formed from salt-containing sand pollution. It is not obvious whether the overall environmental impact is positive or negative. More analysis work is needed.</p> <p>2. A vigorous beaver population is present in Ramsey Pond, providing aesthetic, recreational and educational benefits. However, dwindling amounts of live, beaver-preferred birch, alder and willows are present. Collateral damage is occurring to more valuable tree species including oak, fruit trees, hemlock, and eastern white pine conifers at greater and greater distances from the waters edge. Natural uncontrolled beaver population may soon approach or possibly already has exceeded reasonable carrying capacity of available beaver habitat of the Pond. Expansion of suitable beaver habitat to the south is problematic because of the Causeway barrier and maintenance of the public drainage culvert pipe draining Ramsey Pond into Onota Lake. Additional flooding along the east or west shores approach existing residential uses and risk health and safety impacts of flooded septic systems. Additional flooding to the north would cause loss of agricultural resources and threaten additional residential septic systems. Priority action is needed to preserve existing habitat and economic uses. Additional work and trapping is needed to stabilize beaver population to a level consistent with the carrying capacity of Ramsey Pond.</p>	<p>1. Community wide coordination of an improved dam operations plan is needed to more fairly represent all stakeholders' interests.</p> <p>2. Drainage structure improvements are needed in only a portion of Section 4/5 roads. Locations W/T/U/N/O/P/Q/R and B/D appear not to need improvements.</p> <p>3. Work is needed to assist friendly uses of the Causeway. Work is needed to reduce pet waste and human defecation, discourage littering and discourage inappropriate use of waste receptacles.</p> <p>4. Environmental analysis is needed to understand the delta formation and potential impact at the mouth of Daniels Brook.</p> <p>5. Work is needed to help Ramsey Pond area homeowners economically stabilize the beaver population, mitigate flooding of land and cellars, reduce unreasonable loss of valuable plant and tree material as well as loss of upland wildlife habitat.</p> <p>1.</p>
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Problems Found	Natural Resources and Assets Found	Priorities for Action
<p>Section 6A - Upper Parker Brook, Tammy Chapman, Julie Field (Surveyed in Fall, 2002)</p> <ol style="list-style-type: none"> 1. Erosion along streets that cross over stream. Bridges funnel water through pipe – buildup of debris/trash block flow (southern part). 2. ATV's cross over path up in northern part. 3. Sediment runoff from jumps built along ATV trails near stream. Gasoline in stream. 	<ol style="list-style-type: none"> 1. Biodiverse habitat, fish, salamander, birds, frogs. 1. Trails along stream, protected areas. 2. Beautiful, protected area, large #'s of riffles, pools. 3. Needs roads to be maintained but overall in good conditions. Trash only near roads / campsites. 	<ol style="list-style-type: none"> 1. Plant vegetated buffer & improve direct runoff from roads / bridges in southern part. 2. Investigate use of ATV's in park. Limit access and educated users.
<p>Section 6B – Upper Lulu Brook, Abigail Westwood, Sara Hunt, Kristen Tool, Meagan Kane (Surveyed in Fall 2002)</p>		
<p>Section 6B - Upper Lulu One: None</p>	<ul style="list-style-type: none"> • Tributaries and wetland area with rich biological diversity. • Undisturbed wildlife habitat • Hydrologic Floodplain extends beyond the main stream and includes wetland areas. Water level is high causing riparian area to be back swamps. • Relatively low density of trees providing less than 40% shade cover. 	<ul style="list-style-type: none"> • Protect land-surrounding stream to insure no trails or other threats to the stream's health are installed. • Do biological survey of plant species and publish documentation of biodiversity present. *Tree species identified: yellow birch, white hatch, sugar maple, white ash, red maple *Two bird nests discovered within 100 feet.
<p>Section 6B - Lulu Upper Two None</p>	<ul style="list-style-type: none"> • Rich biological diversity, variety of wildlife • No access points • Patches of wetland segments 30 meters wide scattered around river channel in a matrix of forested land of mid-density. • Varieties of small tributaries meld into mainstream flow that is steady, of medium speed, and is less than ½ meter across and 6" deep. • Flow steady but numerous tidal pools identified due to natural blockages in stream. 	<ul style="list-style-type: none"> • Protect land surrounding stream to insure no trails or other threats are installed.

<p>Section 6B - Upper Lulu Three</p> <ul style="list-style-type: none"> • Segment ends with 100-yard stretch where river is 3 feet wide and stagnant. River color changes from tea to green due to algae growth. • Fallen tree limbs and debris have altered the river's flow and blocked sections. 	<ul style="list-style-type: none"> • Rapid flow with numerous rips, depth and width less than a foot. • Dense low vegetative growth on both banks with a mid-density forest matrix surrounding • Small stones and cobbles first appear in riverbed that had mainly consisted of mud hosting vegetative growth. • Segment ends with 100-yard stretch where river is 3 feet wide and stagnant. River color changes from tea to green due to algae growth. 	<ul style="list-style-type: none"> • Determine cause of algae and stagnation • Insure blockages in stream do not impinge the stream's flow and disturb hosted habitat and wildlife.
<p>Section 6B - Upper Lulu Four</p> <ul style="list-style-type: none"> • Berry mountain road gets closer and is only ½ mile away from the right hand bank by the end of the segment. Loss of wildlife habitat. 	<ul style="list-style-type: none"> • Wetlands and biodiversity density similar to Section Upper Two with stronger flow, and a depth and width of a foot or more. • Wetland area is only about 15 meters wide. Steady flow without an abundance of riffles or tidal pools in back swamp areas. • Clay plugs have caused the formation of several oxbows and meanders creating habitat niches. 	<ul style="list-style-type: none"> • Increase undergrowth vegetation on the right hand bank to act as a vegetative buffer zone from storm drain runoff.
<p>Section 6B - Upper Lulu Five</p> <ul style="list-style-type: none"> • Sand begins to appear as the riparian area and buffer zone decreases. Distance from Berry Mountain road decreases from ½ mile to 1/8th mile at the end. 	<ul style="list-style-type: none"> • Longest segment, high water table areas begin to become more scattered and the majority are found on the left hand side of the stream resulting in merging streams more defined in depth and width. • Areas of dense growth and fallen limbs in the rapid flowing stream result in numerous tidal pools. • River stays in a relatively straight course • Right bank is a host to a dense growth of oak trees and is eroded and steep due to high river flow at other times of year. 	<ul style="list-style-type: none"> • Increase vegetation on the right hand bank.

<p>Section 6B - Middle Lulu One</p> <ul style="list-style-type: none"> • No animal or plant life in the section. • ATV's rip through the stream instead of crossing on a wooden bridge widening the path from 4 yards to over 10 yards. • ATV trail crosses Berry Mountain road and slopes down into LULU, runoff from road and ATV engines flows right into Lulu. 	<ul style="list-style-type: none"> • Stream is one and a half feet wide and less than 1/4th of a foot deep. • Intersection with ATV trail that is over 4 yards wide and made of gravel and mud. 	<ul style="list-style-type: none"> • Plant habitat surrounding the path to limit access and force ATV's to use bridge. • Change path's course or eliminate so runoff does not directly flow into stream. • Build wooden path on top of ground 1/4th mile surrounding stream to prevent ATV's from damaging habitat or eliminate ATV path.
<p>Section 6B - Middle Lulu Two</p> <ul style="list-style-type: none"> • Berry Mountain Rd. circa 200 meters away from right hand bank. • Water is muddy and bottom contains sand and road runoff due to ATV disruption of the river in section M1, continues to be muddy for over 900 yards. 	<ul style="list-style-type: none"> • Berry Mountain Rd. circa 200 meters away from right hand bank. • Cobbles and small boulders begin to dominate the stream bottom. • Dramatic increase in topographic steepness causes water flow to be rapid with numerous rips. • Sections of dense coniferous tree growth scattered along Section M2 and M3 	<ul style="list-style-type: none"> • Eliminate ATV disruption of stream to prevent downstream pollution that harms fish and wildlife habitat. • Due to increase in bank steepness build vegetative buffers along Berry Mountain Rd. to act as a buffer and to prevent erosion along the left hand bank.
<p>Section 6B - Middle Lulu Three</p> <ul style="list-style-type: none"> • Two sections along the trail, which lies close to the stream, had caused erosion along the left hand bank. • Section ends when Berry mountain Rd. Crosses over Lulu, the runoff and land erosion from the road had destroyed growth. 	<ul style="list-style-type: none"> • Long segment running along hiking trail, steep channel causing a variety of rips and cascades due to large boulders and fallen tree limbs. • River bottom alternates from being muddy with vegetative growth and a little gravel where the floodplain is relatively flat to being predominately made up of cobbles and boulders when steepness increases. • Numerous tidal pools • Several large vegetated plugs in the stream cause sections to meander off increasing biological diversity. • Sections of dense coniferous tree growth scattered along Section M2 and M3 	<ul style="list-style-type: none"> • Plant buffer zones along road to prevent further erosion.

<p>Section 6B – Lower Lulu 1: <u>Road to footbridge.</u> 1.) Woody debris blockage 2.) Run off and erosion from Parking lot and from overpass of berry mountain road. 3.) Park without trash disposal cans in a camping area where an abundance of trash is produced. 4) ATV's tear through banks of river and destroy natural habitat</p>	<p>1.) Wildlife-Birds 2.) Open space for recreation</p>	<p>1.) Slow erosion from parking lot by installing vegetative buffers 2.) Put garbage cans in park. 3.) Take measures to insure ATV's do not abuse area.</p>
<p>Section 6B – Lower Lulu 2: <u>Footbridge to swimming area.</u> 1.) Leaf build up (woody debris blockage) 2.) Fallen trees blocking river 3.) Erosion from parking lot 4.) Park without garbage cans 5.) Clear cut area with camping grounds that produce charcoal fire pits near the river</p>	<p>1.) Foot bridge at beginning of segment 2.) Overhanging trees create scattered amounts of shade 3.) Abundance of ripples and pools.</p>	<p>Same as section 1</p>
<p>Section 6B – Lower Lulu 3: <u>Swimming Area to Dam.</u> 1.) ATV tracks on river bank and through river 2.) Trash in river 3.) Unhealthy dam 4.) Fill 5.) Fallen tree limbs and trunks blocking river 6.) Large amounts of woody debris (fallen leaves)</p>	<p>1.) Large amounts of pools and riffles 2.) Swimming access in summer 3.) Open space for recreation</p>	<p>1.) Control ATV use in this area 2.) Slow erosion from parking lot 3.) Clean up trash/create easy access to garbage cans.</p>
<p>Section 6B – Lower Lulu 4: <u>Dam to Road.</u> 1.) Campsite right next to river with no buffer zone 2.) Large amounts of run off from erosion and campfires, roads and recreational gravel mounds 3.) No garbage cans in area 4.) Blockage from woody debris (fallen trees and leaves) 5.) Fishy smell 6.) Exposed roots 7.) Right next to road</p>	<p>1.) Many pools and riffles 2.) Forest right on river creates lots of shade to help cool the river 3.) Aquatic insects</p>	<p>1.) Create a buffer zone between campfires, road, and gravel mounds and river 2.) Garbage cans</p>

<p>Section 6C (North) – Lower portion of Lulu and Parker Brooks, Meagan Kane</p> <ol style="list-style-type: none"> 1. Trash in Lulu Brook scattered throughout due to residences and runoff from streets/campsites. 2. ATV trails cross directly over Lulu Brook, erosion around crossing. 3. Direct discharge of street runoff into brooks through paved culverts and eroded gullies. 	<ol style="list-style-type: none"> 1. Protected brooks in park support biodiverse ecosystem. 2. Wetlands protected with extensive buffer of trees. 3. Beautiful pond where brooks meet. 	<ol style="list-style-type: none"> 1. Buffer runoff from street. 2. Reduce amounts of trash from runoff / campers. 3. Pond's buffer area low where residence is, undeveloped area around pond should be / remain protected from further development.
<p>Section 6C (South) – Hawthorne Brook / Cascade Street area, Gene Chague</p> <ol style="list-style-type: none"> 2. 3 or 4 horse farms which may ultimately run off into streams. Manure does not appear to be contained in some areas. 3. Lack of farm vegetative buffers; also, no fencing near streams to prevent animals from reaching streams and causing erosion. 4. Witnessed 2 paved basketball courts near brooks w/o vegetated buffers. 5. Likely target for development as the farms sell out or subdivide. 	<ol style="list-style-type: none"> 1. Because so much of this area is state forest, campground, agricultural and wetlands, very little has been disturbed. There is very good scenery and few houses. Lots of wildlife. 2. Brooks appear to run cold and clear and several fishermen were noted. 	<ol style="list-style-type: none"> 1. Work with farmers to fence livestock away from streams. 2. Educate those owning horses on how to handle waste and bare ground. 3. Work with campgrounds on ways to reduce runoff from basketball courts, main office building, and parking lots. 4. Work with residences on keeping vegetated buffers near streams.
<p>Section 7A – Upper Churchill Brook, Jim Straub, Anne Monnelly, Steve Asen</p> <ol style="list-style-type: none"> 1. Sedimentation / runoff from ATV trails. 2. Trash associated w/ ATVS (motor oil bottles, windshields & engine parts). 	<ol style="list-style-type: none"> 1. Excellent forest habitat. 2. Excellent mountain stream. Slope on either side of the ravine is extremely steep, yet we saw no erosion at all (except at trails as noted). Slopes were stabilized by vegetation (trees, shrubs, herbaceous cover.) 	<ol style="list-style-type: none"> 1. Consider establishing trail riding restrictions to limit / prevent riding when ground is very wet (usually spring). 2. Possibly need better enforcement. 3. Evaluate water bars to see if there is a friendlier option.
<p>Section 7B – Lower Churchill Brook Sub Basin, Karla Navarro, Norman Cruz, Marianela Marin, Raquel McBean, Lorena Maria Bueso</p> <ol style="list-style-type: none"> 1. Evidence of eutrophication 2. Cow manure on stream bank. 	<ol style="list-style-type: none"> 1. Good habitat, wildlife (salamander, wood frog) 2. Recreational access – trails conservation land / forest. 	<ol style="list-style-type: none"> 1. Erosion - cause: less vegetative cover. 2. Potential impacts from farm area, cattle manure.

<p>Section 8A - Daniel's Brook Sub Basin – State Forest land, James McGrath</p> <p>1. Dumping at parking area for trailhead.</p>	<p>1. Forested, well maintained and accessible.</p> <p>2. Very few non-native species observed.</p>	<p>1. Control dumping at trailhead parking.</p>
<p>Section 8B – Daniel's Brook Sub Basin – State Forest land, Don Harris</p> <p>1. Some culverts on Potter Mtn Rd need cleaning to prevent erosion of road, possibly to Daniel's Brook.</p> <p>2. Areas on top of culverts, the roadway, are eroding into stream at (A).</p> <p>3. All trails have a lot of use by dirt bikes and ATVs. There are wooden bridges at most stream crossings but the approaches are loose, unstable soils which can and do erode into streams.</p>	<p>1. This area is a well managed forest (DEM). Buffer strips of 50' to 100' around most if not all streams. Very good hardwood stands.</p> <p>2. The harvests have created several different aged stands for good wildlife.</p> <p>3. Trails need some work to stabilize but are good for hiking, biking, horseback riding.</p>	<p>1. Stabilize areas above culverts where streams are involved.</p> <p>2. Stabilize approaches to bridges at stream crossings.</p> <p>3. Remove and recycle illegally dumped trash and building materials near streams and on all of Potter Mountain Road.</p> <p>4. Limit or ban ATV or dirt bikes on trails that cross streams.</p>
<p>Section 8C – Lower Daniel's Brook Sub Basin, Jane Winn, Lauren Gaherty & Melissa Jette</p> <p>1. Private roadway that intersects with Pecks Rd & crosses Daniels Brook.</p> <p>2. Reports of cows in the brook, but it is unknown if this is an ongoing problem, which farm may have allowed cows direct access to the stream.</p> <p>3. Potter Mountain Rd crosses Daniels Brook near intersection with Churchill Rd - appears there is an intermittent stream that is not on the map. The intermittent stream appears north of Potter Mountain Rd and then through property owned by Ponderosa Camp Ground and Sayers Towing.</p>		<p>1. Request permission from property owner to conduct survey on private roadway.</p> <p>2. Contact NRCS - ask if there is a relationship with the farms in this area and whether the farmers have been provided with educational materials, etc. NRCS may be able to facilitate communications with farmers.</p> <p>3. Further investigate hydrology in the area if property owners will permit.</p>

<p>Section 8C continued</p> <p>5. Ponderosa Camp Ground property - garbage and junk. Junk lies in an area that appears as if it was once quite wet, but it is unclear if the area is a wetland or if it's connected to Daniels Brook. Significant amount of junk on Sayers Towing property, including large pile of tires.</p> <p>6. Potter Mountain Road in Pittsfield State Forest (MA DEM). Observed several areas along road where trash, junk and garbage. Pull-off / parking lot on west side of Potter Mountain Rd, in State Forest, immediately south of the road crossing with Daniels Brook - appears to be used to access trails, including ATV trails. At road crossing - significant runoff into stream and streambank erosion.</p>		<p>5. Report dumping to Lanesborough Conservation Commission. Provide educational materials to property owners.</p> <p>6. Report dumping to MA DEM. Work to organize park clean up. Parking lot consists of two entry points. The entry point closest to river is rutted w/ potholes accumulating stormwater and slowly discharging the water into the river - could be blocked off. Parking lot could be re-graded with a stone-lined swale along the road. Eroding bank should be stabilized and revegetated.</p>
<p>Section 8D – Lower Daniel’s Brook Sub Basin</p>	<p>4.</p>	<p>1.</p>
<p>Section 9 – Lakeshore area: Thomas Island, Pecks Rd, Yadira L Guifada, Veronica Garcia</p>	<p>5.</p>	<p>2.</p>
<p>Section 10 – Pontoosuc Golf Course & unnamed tributary, Bob Race & Tom Armstrong</p> <p>1. Discarded home oil tank on bank at edge of wetlands. 2. A few discarded rusting metal items on side banks.</p>	<p>1. Largest natural wetland acts as filtering basin for runoff of whole section 10. What could be better?</p>	<p>1. Track down homeowner of discarded oil tank to get it removed.</p>

Onota Lake Watershed Survey Report

V. ACTION PLAN

Based on the May 2003 Watershed Survey of the Lake Onota Watershed and Action Planning Meeting

I. ROADS & TOWN LANDS

Goal: To reduce nonpoint source pollution in stormwater pollution from roads and town lands.

Reporting Issues & Immediate Actions:

1. To Pittsfield Department of Public Works (DPW)
 - Street Sweeping: Discuss changes to street sweeping policy, including setting priorities that streets draining directly to Onota Lake and tributaries be swept earliest in the spring sweeping schedule. *-LOPA and James McGrath will contact DPW*
 - Improve Stormwater Management: Recommend construction of structural stormwater BMPs at identified hotspots, either with grant funding where available, or at the time of next upgrades for those locations. Includes recommended replacement of paved swales with vegetated buffer to allow infiltration and removal of nonpoint source pollutants. See sections 4 & 5, 6C
2. To Pittsfield Parks Department
 - Lake level: During study of annual withdrawal procedures, consider impact of lake level management on lakeshore erosion. Work to improve water level management to reduce erosion.
 - Dan Casey Causeway: Work is needed to assist friendly uses of the Causeway - need to reduce pet waste and human defecation, discourage littering and discourage inappropriate use of waste receptacles.

Short Term Action:

Construct vegetated buffer along lakeshore at the Controy Pavilion. Work with the Parks Department to consider planting options for bank stabilization and pollution attenuation, and explore grant funding opportunities. Funding may be available through grants from the Natural Resource Conservation Service (NRCS) from their EQIP and WHIP programs.

II. PITTSFIELD STATE FOREST – NONPOINT SOURCE POLLUTION

Goal: To reduce nonpoint source pollution in stormwater pollution from residential lands.

Reporting Issues & Immediate Actions:

To the Department of Environmental Management (DEM)

- Road runoff: Request attention to stormwater runoff from park roads, especially at stream crossings. A report of locations deserving particular attention will be generated and forwarded to DEM.

- Trail Conditions: Report instances of sediment loading to streams within the park at trail crossings. Trails near these stream crossings display substantial erosion problems because of heavy use by ATVs and dirt bikes. This issue should be sent to the attention of Rebecca Barnes, DEM Trail Coordinator for Pittsfield State Forest.
- Trash found along stream corridors near and downstream of camping areas.
- Dumping site found along park road at trail access.
For the above items, a report of locations for deserving particular attention will be generated and forwarded to DEM.

Ongoing:

Each year, students from Berkshire Community College (BCC) participate in local cleanups. Work with BCC to connect with students on cleanups at problem spots identified in the survey. See section 8A & 8C – dump removal, section 8B – trash.

Long Term Action:

Reduce the ATV use by some individuals in the park is leading to substantial erosion problems, littering, dumping, and trespassing on adjacent private property. Local ATV clubs work hard at educating their members and acting to provide some stewardship for their trails. This does not solve the problem of irresponsible use of the park by riders who aren't members of the clubs, and who often are from out of town and sometimes out of state. Resolution will require cooperative planning with the park staff, concerned residents, and the ATV clubs to explore better rider education programs and better trail use management options. See sections 6A, 6B, 7A, 8B

III. RESIDENTIAL – NONPOINT SOURCE POLLUTION
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Goal: To reduce nonpoint source pollution in stormwater pollution from residential lands.

Reporting Issues & Immediate Actions:

1. Follow up on item of concern from Section 1A: Reported residential dump – what is the location, is it a problem that needs to be addressed?
2. Discarded home oil tank found on the bank at edge of wetlands. Make friendly contact with the homeowner to get more information and to provide educational material on hazardous materials. Inquire with Pittsfield Fire Department about city policy and education materials on home hazardous materials.

IV. COMMERCIAL ISSUES

Goal: To reduce nonpoint source pollution in stormwater pollution from commercial areas.

Reporting Issues & Immediate Actions:

1. Hospital Parking Area: Follow up on item of concern from Section 1B: Is the hospital a Phase II entity (required to develop a stormwater management plan) – J. M.
2. Potter Mountain Road: Large area of trash and junk found along Potter Mountain Road; there is potential for contamination of the brook. Contact landowners to investigate the situation further, consult Lanesborough Board of Health to see if there are problems of leakage or staining, and if the situation has already been reported.

3. Trash Barrels: Follow up on item of concern from Section 1B. Trash barrels – what is the location, is it a problem that needs to be addressed? *If they are in Burbank Park, they are city barrels that have been addressed by now.*

Short Term Action:

1. Hospital Parking Area; Conduct follow-up site visit during wet weather to the parking lot to observe stormwater runoff and conditions of reported broken pipe. See sections 1a & 1b. Work with hospital to improve stormwater management, including possible construction of structural BMPs.
2. Potter Mountain Road: Following contact with landowners or Board of Health, or both, arrange for site visit to the area to determine extent of the problem. Work with Lanesborough Board of Health, and potentially the Department of Environmental Protection. If the BoH determines that there is a threat to private wells in the area they should call DEP to report a release; DEP would then conduct its own site visit. Tracey Miller is research DEP files to see if this has been reported in the past.
3. Gravel pit owners: Provide educational materials on good practices for overall stormwater management and maintenance of gravel roads. Possible plan site visits to walk the grounds.
4. Campground - riparian vegetated buffers: Encourage campground in Section 6C to re-grow vegetated cover between basketball courts and stream corridors.
5. Farms: Work with farmer to improve runoff and bank stabilization through constructed BMPs. Potential sources include grants from the Natural Resource Conservation Service (NRCS), such as the WHIP and EQIP programs.
 - Work to find grant money for farmers to construct alternate livestock watering options so that cattle and other stock can be separated from streams. *See survey sections 6C, 8C*
 - Work to find grant funding and resources to aid farmers to establish vegetated buffers where possible along stream. *See survey section 7B*

V. EDUCATION & OUTREACH

Goal: Expand awareness of lake watershed ecology and educate watershed residents, businesses and municipalities about watershed-friendly management.

Short Term Actions:

Homeowner Education Efforts: Plan and develop education and outreach programs to inform residents of the common household and landscaping sources of nutrients and other nonpoint pollutants to Onota Lake. Introduce residents to simple and inexpensive steps they can take to reduce impacts from their home and lawn.

- General information on lake-friendly landscaping, the use of low and no-phosphorus fertilizers.
- Information about storage and disposal of household hazardous materials.
- Riparian vegetated buffers as pollution buffers and geese barriers. (DEM is working to install a demo buffer at Pequot Pond in Hampton Park in Westfield). Available resources will soon include DEP's Buffer Manual.

- Information for horse owners and horse farms regarding manure storage and good maintenance practices to reduce nonpoint source pollution. Available resources include DEP' website <http://www.state.ma.us/dep/consumer/animal.htm>. See sections 1A, 6C

Dan Casey Causeway: Educational signs needed at the causeway

- On the impacts of goose, pet and human waste on water quality,
- Discouraging bird feeding, and
- Prohibiting dumping, littering, and leaving household trash in receptacles.

VI. HABITAT AND WILDLIFE

Reporting Issues and Immediate Actions:

Contact the Housatonic Valley Association to report findings from survey section that included Onota Brook downstream from the dam. Reported problems included eroding stream banks carrying runoff, invasive emergent plants (Phragmites and Purple Loosestrife), and potential dumping site with landscape debris.

Short Term Actions:

Stands of invasive Phragmites and Purple Loosestrife have infested sections of Onota Lake's shoreline and the stream banks of Onota Brook below the dam. Combine site visits to assess the growth and early management to remove both invasive plants before they spread further. Potential assistance is available through DEM Lakes and Ponds' Weed Watcher Program and Pittsfield's Adopt-a-Park.

VII. LAND USE PLANNING

Long Term Action:

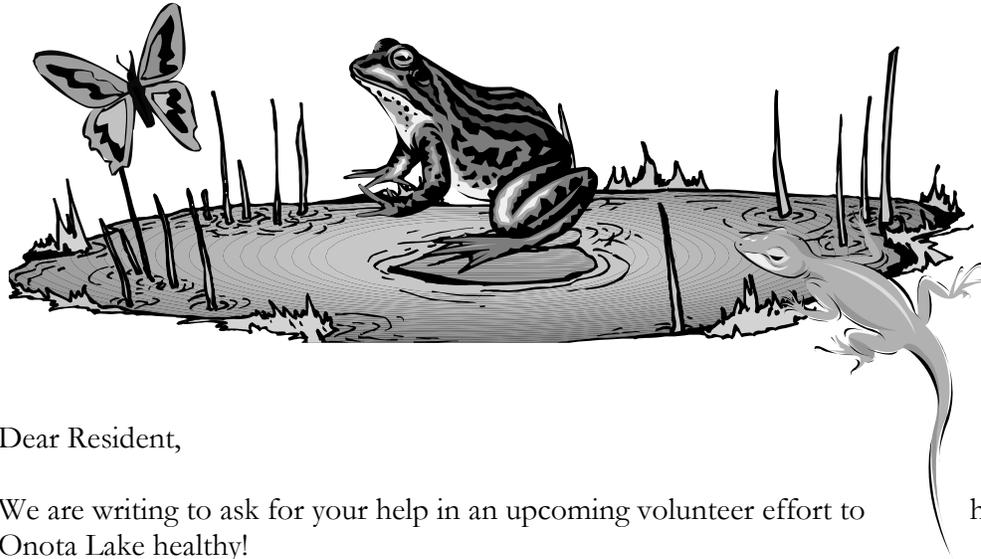
Land Protection Plan: Work with land protection groups, state agencies, and city officials to develop watershed land use plan to protect open space and farm lands. Keep goals consistent with existing land use plans.

Protect Farms: Work with the Berkshire Natural Resource Council and NRCS to provide technical assistance and funding to farmers to aid in land protection.



Onota Lake Watershed Survey Report

VI. OUTREACH MATERIALS



Dear Resident,

We are writing to ask for your help in an upcoming volunteer effort to
Onota Lake healthy!

help keep

Starting on May 3rd watershed residents will be canoeing along the lake shores and walking neighborhood roadways in order to assess the overall environmental well-being of the watershed. They'll be looking for good wildlife habitat, spots where wildlife habitat could be improved, and spots where erosion or storm run-off could be hurting the lake and the streams that help feed it.

The Lake Onota Preservation Association, the City of Pittsfield and the Berkshire Regional Planning Commission are coordinating this effort, with assistance from the State's Lake/Watershed Stewardship Program (Riverways Programs; Department of Fisheries, Wildlife, and Environmental Law Enforcement). We will be holding a training session for volunteers on what to look for in the watershed on Wednesday, April 30th at the Controy Pavilion from 5p.m. to 7p.m., before we start the survey on May 3rd. You are very welcome to join us. The Controy Pavilion is located in Pittsfield at the end of Lakeway Drive, off of Pecks Road.

As a property owner along Onota Lake's shoreline or main tributary stream, you know the waterways best and we invite your participation. Additionally, we would like to inform you that to accomplish this survey, the volunteers will access the waterways via road crossings and then either walk or canoe their sections. Care will be taken not to traverse any private property, but it may be necessary to walk along the river's banks and pond shores in certain areas.

If you have any questions, or would like to volunteer to help, please call Melissa Jette of the Berkshire Regional Planning Commission at 413/442-1521.

Thanks in advance!



April 22, 2003

Dear LOPA Member,

The City of Pittsfield, the Berkshire Regional Planning Commission and LOPA are with assistance from the State's Lake/Watershed Stewardship Program to conduct a Volunteer Lake Watershed Survey. As a LOPA member, we invite you to join us in our efforts!

In a cooperative effort the City of Pittsfield, the Berkshire Regional Planning Commission and LOPA, are seeking volunteers to take part in visual Shoreline and Watershed Surveys of Onota Lake and its watershed. To accomplish this, the volunteers access the waterways via road crossings and then either walk or canoe discreet sections of the shoreline or the watershed. Care will be taken not to traverse any private property, but it may be necessary to walk along the river's banks and lake shores in certain areas.

Our efforts will work best with your participation! If you would like to join please contact us. Volunteers will be attending a Training Workshop led by staff from the Massachusetts Riverways Programs from 5PM-7PM on Wednesday April 30th at the Controy Pavilion and will conduct their surveys on Saturday May 3rd. The Controy Pavilion is located in Pittsfield at the end of Lakeway Drive, off of Pecks Road. If you are not able to participate in the survey but would like to help you can donate baked goods or appetizers for the volunteers.

For more information about these surveys and how you can participate, please contact Melissa Jette of the Berkshire Regional Planning Commission at 413/442-1521.

Thank You!

For immediate release

**Contact: Melissa Jette
Berkshire Regional Planning Commission
413/442-1521**

April 2, 2003

PITTSFIELD – Are you interested in learning more about your local environment? Would like to get involved in a hands-on effort to improve Onota Lake? The Lake Onota Preservation Association, the City of Pittsfield, and the Berkshire Regional Planning Commission are looking for volunteers to help conduct a survey of Onota Lake and its watershed. The survey will be conducted during the weekend of May 3rd.

For more information or to get involved, come to a Watershed Survey Training Workshop from 5 PM - 7 PM on Wednesday, April 30th at the Controy Pavilion in Pittsfield. The Controy Pavilion is located at the end of Lakeway Drive, off of Pecks Road. Everyone is welcome - no experience is necessary to participate in the survey and your participation would be greatly appreciated.

These surveys are designed to find the pathways that pollutants take in the watershed to reach streams that feed into the lake. By identifying pathways, runoff, erosion and other problems, residents can begin to plan to solve the problems. By involving residents, the people who know the area best, the program will be a true grassroots effort with technical support from municipal officials, watershed associations and state agency staff.

For more information on the Lake Onota Watershed Survey, contact Melissa Jette of the Berkshire Regional Planning Commission at (413) 442-1521 or by email at mjette@berkshireplanning.org. This project is part of the Massachusetts Lake/Watershed Stewardship Program, and is a collaborative venture between the Riverways Programs, Department of the Fisheries, Wildlife and Environmental Law Enforcement, the Lake Onota Preservation Association, the City of Pittsfield, and the Berkshire Regional Planning Commission. This project has been financed with federal funds from the Environmental Protection Agency (EPA) to the Massachusetts Department of Environmental Protection (DEP) under an s. 319 competitive grant.

Questions You Might Have About the Watershed Survey:

Q: What are you looking for?

A: Mostly what we're looking for are places on the shoreline or along roads or streams where there's evidence of erosion—places where heavy rainstorms could be washing soil or road runoff into the water. Some run-off problems can be fixed by installing storm drains, so that storm water goes back into groundwater and not into the lake. Other problems can be corrected by replanting eroded stream or lake banks.

Q: Will you have to walk across my yard to do the inspection?

A: Probably not. We anticipate that 90% of the observations we'll make will be from boats along the shoreline, or from walking the roads. We will notify owners in advance if we think we'll need to cross their property.

Q: Why are we doing another study?

A: Because we're looking at some problems we haven't looked at before. Our 1991 study focused on measuring the nutrients in the lake and on large-scale, high-cost projects to control weeds and protect water quality. This survey is going to look for the smaller, specific problems a large, general study often misses.

After volunteers complete their surveys, they can help review the results and develop an action plan for fixing the problems we find. Many of these action plan items will be small-scale enough to be accomplished over the next few years, even if there's not much state money to help with funding. Even small problems will not go away on their own. And fixing many small problems in the watershed will add up to a measurable improvement in the health of the lake.

More questions? Want to volunteer?

call Melissa Jette at 413/442-1521

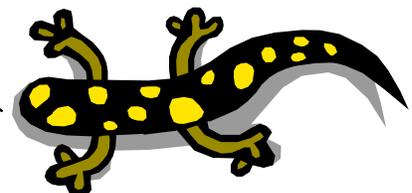
Thanks! and don't forget the dates:

Watershed Survey Training,
Wednesday, April 30, 2003 5:00 p.m. - 7:00 p.m.
Controy Pavilion, Pittsfield

The Controy Pavilion is located at the end of Lakeway Drive, off of Pecks Road

Survey begins Saturday, May 3rd!

Thank you!



*Spend a few hours of your time
protecting Onota Lake!*



by participating in
the Onota Lake Watershed Survey

What is a watershed survey?

- It's a visual inspection of a lake or stream, and the land around it, geared to look for pollution.
- It's the first step in developing a "to-do" list of achievable projects to limit erosion and run-off and protect water quality and habitat.
- It's a chance for you to work with your neighbors to protect Onota Lake!

Survey volunteers should plan on attending an evening training session, which will last approximately 2 hours. The survey will take about two hours of your time and can be completed at your convenience during the weekend of May 3rd.

No prior experience is necessary! Training will be provided!

Training Workshop:

Wednesday, April 30, 5:00 p.m. - 7:00 p.m., Controy Pavilion

The Controy Pavilion is located in Pittsfield at the end of Lakeway Drive, off of Pecks Road

To sign up or for more information please call Melissa Jette at 413/442-1521.

The Onota Lake Survey is a cooperative project of the Lake Onota Preservation Association, the City of Pittsfield, and the Berkshire Regional Planning Commission. Assistance is provided by the Massachusetts Lake/Watershed Stewardship Program (Riverways Programs/Department of Fisheries, Wildlife, and Environmental Law Enforcement). Plus a bunch of dedicated local people—you should join us! This project has been financed with federal funds from the Environmental Protection Agency (EPA) to the Massachusetts Department of Environmental Protection (DEP) under an s.319 competitive grant.

Sample copy of a completed set of data collection forms.