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Lake George Basin Reservoir and Sediment Basin Cleanout Program: History and Status

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English Brook delta on Lake George

Background and Issue

Sedimentation of Lake George through its many tributaries is an issue both in a natural resources protection perspective and a recreational one. As sediment flows down a tributary stream and enters Lake George, this sediment settles out at the mouth of the stream creating deltas. These deltas impede fish migration, act as bedding areas for nuisance aquatic species, hinder recreational activities, and negatively affect lakefront homeowners and their docks.

The sources of this sediment are both internal (from the stream bed and banks) and external (inputs into the stream from roads, development, logging, etc). The exact contribution from either source within any given watershed varies greatly. Various field efforts to determine these sources within many of Lake George's watersheds have been undertaken over the past decade by groups such as the Warren County SWCD (the District) and the Lake George Association (LGA).

Numerous stream walks within tributaries with high sediment loads have shown relatively few large sources of sedimentation which can be cost effectively addressed. Much of what has been observed in the field shows sedimentation coming from many small sources of streambank erosion, with only occasional large bank failures. Often what is found, however, are long sections of stream channel with mildly undercut banks. This undercutting could be the result of a "flashier" hydrology and higher peak flows within the stream channel of a developed watershed, possibly caused by the construction of more impervious and connected surfaces. The undercutting observed may be the stream channel's response to increased peak flows; an over-widening of the stream over time. In addition to the problem of over-widening streams, this eroding bank material migrates downstream and appears to be a major source of the lakeside delta sediment.

Upstream sources of sediment through bank erosion and unprotected land disturbance practices are being addressed through both active remediation efforts and local land use laws. Countless hours of field work by agency and organizations working within the watershed have been conducted to study and document the watershed wide and stream specific issues. In addition, almost two million dollars of public and private grant funding within the past decade has been put to use in addressing streambank erosion and stormwater runoff issues within the Lake George Basin. These dollars have been matched by almost two million dollars at the local level by municipalities, county agencies, and local organizations who undertake this work. However, even with these considerable ongoing efforts, there is a fairly sizeable sediment load in many tributaries which continues to persist. As such, deltas continue to grow (albeit at a slower rate than prior to upland restoration work) and continue their impacts on Lake George.



In-Stream Sediment Capture Concept

Once sediment reaches Lake George, it becomes costly and difficult to remove. To dredge a delta of any significant size on Lake George requires the approval of the many regulatory bodies that have jurisdiction over the effort on top of the physical removal costs, which often become prohibitive. However, if this sediment can be caught in a basin before it reaches Lake George, the costs and regulatory burden can be greatly decreased.

To help minimize this sedimentation of Lake George, an active program of upland in-stream sediment capture began in the early 1990's with the advent of old reservoir cleanouts and new in-stream sediment basin creation. This program is based upon the simple idea of slowing the stream velocity to a point where sediment will drop out of suspension and be captured in a basin within the stream, prior to it reaching Lake George. This concept is decades old in the Lake George Basin. In the past, old water supply reservoirs had to be cleaned out on a regular basis to be kept functional. What was once a nuisance maintenance effort of having to remove sediment from a working reservoir has now become a primary means to actively prevent sediment from reaching Lake George.

The Lake George Basin contains to a number of old reservoirs that used to supply drinking water to local towns. These reservoirs are no longer utilized for water supply and stopped being maintained and cleaned out in the 1960's and 70's. They had filled in with sediment since that time and no longer had the associated benefit of capturing in-stream sediment. Realizing the sediment capture benefit of these structures, these cleanout efforts were begun once again on these structures in the 1990's, albeit in a somewhat haphazard way at first. Over the next ten years, however, the reservoir cleanout program has become more organized and structured, to a point where reservoir cleanouts occur fairly regularly.

After observing how successful the cleanouts of old water supply reservoirs were at controlling sediment load into Lake George, this concept was broadened out to include the creation of new in-stream sediment ponds on other tributaries. In these scenarios, the concept was again kept relatively simple. By excavating a portion of the stream and creating a ponding area within that stream, we could achieve the same objective as with the existing reservoirs. To capture sediment within the stream channel, the flow of that stream must be reduced to a point whereby sediment can no longer remain in suspension within the water column. To achieve these reduced velocities and increased capacity, the channel must be widened and deepened. These efforts act to slow the flow velocities and provide capacity to settle out sediment, organic debris, and other material.

Once this material has settled to the bottom of the channel, it has effectively been captured and can be removed on a regular basis with standard excavation equipment and proper dewatering techniques. These efforts are largely undertaken on private property, with the full consent and involvement of the landowner, the NYS Department of Environmental Conservation (DEC), the US Army Corps of Engineers, and the local municipality.

This report provides a brief history of each reservoir and sediment pond currently included in this program. New sites are currently being evaluated by both water quality organizations and the appropriate regulatory agencies, but are not included herein. A Geographic Information System (GIS) map showing the relative location and capacity of the existing reservoirs and sediment ponds currently included in this program is attached to this summary. Also included in this document is a summary table of the reservoirs and their various attributes.

Since the inception of this program in 1992, almost 7,200 cubic yards of sediment has been captured by these reservoirs and ponds and removed, preventing it from reaching Lake George and impacting its resources. This program is viewed as a tremendously cost-effective means to keep in-stream sediment from reaching Lake George and adding to the delta problem. These efforts go hand-in-hand with upland protection efforts, and are not meant to supplant these important upland restoration and protection initiatives.

Not all major tributaries currently have either reservoirs or sediment ponds within their watersheds. Where deltas exist and are growing, there is interest in looking into the possibility of in-stream sediment capture, in conjunction with upland protection efforts. The combination of both upland protections and in-stream sediment capture is helping to reduce the growth of deltas and associated problems in Lake George.

The First Project: Hubble Reservoir

In 1992, the first in-stream sediment basin effort was undertaken. The site of this first project was Hubble Reservoir, located on a tributary of English Brook off of Big Hollow Road in the Town of Lake George. Hubble Reservoir is a man-made reservoir with both a concrete and stone/mortar dam and concrete

sidewalls. The land that the reservoir is on is owned by New York State, but the dam structure and water rights are owned by the Village of Lake George.

Sediment had accumulated in this reservoir since its last maintenance cleanout in the 1960's or 70's, and was completely full to capacity (approximately 1,000 cubic yards). As such, there was no slowing of the stream, and no in-stream sediment was being captured.



*Hubble Reservoir, Town of Lake George
- English Brook*

To undertake the cleanout effort, the stream was first contained and redirected by sandbags towards the far side of the reservoir and over the dam. Following this, a pump was used to draw down the remaining clean water in the reservoir and pump it into the stream below the dam. Once the reservoir was dewatered, employees of the Town and Village of Lake George went in with heavy equipment (loader and excavator) and removed the sediment and organic detritus. This material was hauled offsite to the Lake George landfill, which was a site approved of by the Adirondack Park Agency (APA) and the DEC.

This was a cooperative effort between the Warren County SWCD, the NYS DEC, the Town and Village of Lake George, and the Lake George Association. By excavating as much sediment and material as possible from this basin (approximately 700 cubic yards), it once again had the capability of slowing flow and collecting in-stream sediment. The actual construction timeframe was four days, including sandbagging, excavation, and cleanup.

The success of this project was defined not only by the amount of sediment removed from the basin and the regaining of its capacity, but also by its cost effectiveness. Although there was a relatively considerable expenditure of man hours involved in administration and labor (300-500 hours), the out-of-pocket costs for the project were less than \$5,000 total. These costs included the purchase of sandbags, fuel for the pumps, and rental of an excavator for a week. Since this first project, the administrative time on these efforts has been streamlined and significantly declined, making them even more cost-effective.

When compared with the both the tremendously high administrative and construction costs of in-lake delta dredging, it becomes readily apparent that in-stream sediment capture is a very effective means to minimize sedimentation of Lake George.

Ore Bed Reservoir

With the success of the Hubble Reservoir cleanout, a broader look at the availability to carry out similar projects throughout the basin was conducted. A list of old water supply reservoirs was compiled by the District and LGA, and priorities were set to conduct additional reservoir cleanouts. With small amounts of funding provided by state and private grants, work progressed on the next two identified reservoirs, both located on West Brook in the southern basin of Lake George.

The second reservoir cleanout to be conducted through this new initiative was also within the Town of Lake George. Ore Bed Reservoir on West Brook, also a man-made structure with a hybrid concrete and stone/mortar dam, was the site of the second cleanout. Ore Bed is located within the West Brook watershed above the location of the Lake George transfer station, and is owned by the Village of Lake George. Like Hubble Reservoir, Ore Bed was another old water supply for the Village of Lake George, prior to its abandonment when the Village began taking water directly from the Lake. This reservoir was also completely full of sediment and was in need of cleanout during the mid 1990's.



Ore Bed Reservoir, Town of Lake George

This project was conducted in much the same way as Hubble Reservoir, as a joint effort between the District, the Village and Town of Lake George, and the LGA. The District undertook the permitting, planning, and project management, the Village and Town provided heavy equipment operators and trucking, and the LGA financed the rental of the excavator. The roles outlined in the Ore Bed project work well for these initiatives, and largely continue to this day in the reservoir cleanout program.

Ore Bed is dewatered with the use of an off-line ditch adjacent to the reservoir. This ditch is lined with stabilization fabric or plastic liner in order to support the stream flow, which is then blocked and diverted into this ditch; eventually outletting back into West Brook below the reservoir. Once the stream is diverted, the water in the reservoir is either pumped out or released with the sluice gate at the bottom of the dam.

Following dewatering, a long-reach excavator enters the reservoir and excavates the material directly into trucks which haul the material away. As the reservoir is adjacent to the landfill and transfer station, the excavated material is usually stored there and utilized afterwards for fill material.

Gage Brook Reservoir

The third reservoir to be addressed through this program is known as Gage Brook Reservoir. This old water supply reservoir is located off of Prospect Mountain Highway in the Town of Lake George. Like Hubble Reservoir, the land upon which Gage Brook Reservoir sits is owned by the State of New York, but the dam and water rights are owned by the Village of Lake George.

This reservoir is located on West Brook at the confluence of West Brook and a much smaller brook known as Gage Brook. It is located approximately three quarters of a mile downstream of Ore Bed Reservoir, on the same stream. Even with this large reservoir upstream,



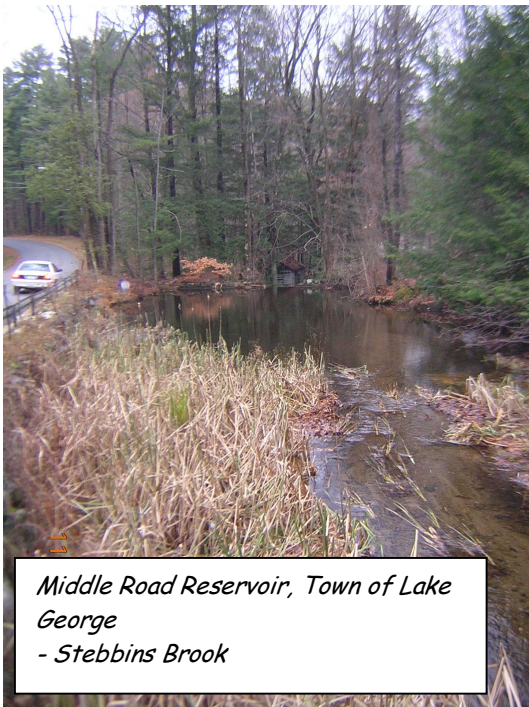
Gage Brook Reservoir, Town of Lake George

Gage Brook Reservoir still captures a significant amount of sediment and debris on an annual basis (up to 200 cubic yards per year). This reservoir has been the most consistently maintained under this sediment basin program, due to the speed at which it fills with sediment and the relative ease of cleaning it out.

The first cleanout of Gage Brook was in 1996, following permit issues with the Adirondack Park Agency. Once resolved, the groups worked together and successfully undertook this project within a two day timeframe. As with the cleanout of Ore Bed Reservoir, the methodologies employed on the first effort have remained relatively unchanged in all of the subsequent cleanout efforts. As of 2005, Gage Brook Reservoir has been cleaned out more than any other reservoir (six times in 10 years), totaling over 1,600 cubic yards of sediment and debris. When coupled with the 1,350 cubic yards removed in the three Ore Bed Reservoir cleanouts since 1996, this totals approximately 3,000 yards of sediment and debris. That is a significant volume of material which has not reached Lake George and thus has not been added to the delta.

Middle Road Reservoir

Middle Road Reservoir is a small, former in-stream reservoir on Stebbins Brook in the Town of Lake George located on Middle Road. Like the other reservoirs, until its abandonment in the late 1950's or '60's this reservoir used to be maintained and cleaned out regularly. This reservoir is completely full of sediment and could act perfectly as another in-stream sediment detention structure.



*Middle Road Reservoir, Town of Lake George
- Stebbins Brook*

In the late 1990's, an attempt was made by the District to incorporate this reservoir into the overall program. As it sits on private property, landowner permission was needed to undertake this work. Also, as with the other reservoirs, the Adirondack Park Agency was contacted to determine if they had jurisdiction over this effort.

APA staff visited the site and determined that the site, although it was a concrete reservoir, was now a regulatory wetland. As such, mitigation for the loss of wetland would be required as a part of this project. This would require the District to pay for and build a new wetland somewhere else. Arguments were made by the District and the LGA that the presence of submerged wetland plants within the reservoir was simply due to lack of maintenance, and mitigation should be waived.

In discussions with the APA on the mitigation issue, the APA began researching the property and the landowner. Apparently, the landowner and the APA had "differences of opinion" regarding a previous subdivision and other issues. When the landowner learned of the APA's involvement and research into his land dealings, he revoked permission to utilize this reservoir as a sediment pond. Essentially, he did not want the APA involved on his property in any way, and all progression on the project stopped at that point. Since the landowner decided against the project, the cleanout of Middle Road Reservoir on Stebbins Brook has not been brought forth again.

Middle Brook Reservoir

Not to be confused with Middle Road Reservoir in Lake George, Middle Brook Reservoir is a small impoundment on Middle Brook in the Town of Bolton. Another small old water supply reservoir which had

filled in with sediment, this site became another candidate for cleanout when discovered in 2005 by LGA's retained engineer, Dave Myers, P.E. This reservoir is located on private property approximately 200 feet upstream of the brook's crossing under NYS Route 9N. The site is accessed from a driveway off of Route 9N just north of the stream.



Middle Brook Reservoir, Town of Bolton
- Middle Brook

Discussions with property owners at the mouth of the brook informed us that a rapidly growing sediment delta was developing, and they supported this effort. The Lake George Association contracted with Meyers Engineering to plan and

execute the cleanout of this small reservoir and to repair the concrete dam and spillway.

Early in the Fall of 2005, permits and landowner permission were obtained and the project moved forward. A private contracting company was hired to undertake the work, which began and was completed in October of 2005. Approximately 200 cubic yards of material were removed from this reservoir, which regained much of its original capacity. In addition to the reservoir cleanout, the dam and spillway were reconstructed to provide a more stable structure for future cleanout events. This project was funded by the LGA.

Artist Falls Sediment Basin Project

Finkle Brook is one of the major tributaries to Lake George. Like most of the other major tributaries to the lake, a large delta exists as evidence of a large sedimentation problem associated with Finkle Brook. In continuation of the reservoir/sediment capture concept utilized on West Brook, a project was proposed to address sediment capture on Finkle Brook. Located approximately one-half mile upstream of Lake George on Finkle Brook is the old Sagamore Resort water supply reservoir. This reservoir was created in the early 1900's to provide water to the Sagamore and its associated properties.



Artist Falls Reservoir, Town of Bolton
- Finkle Brook

This reservoir was abandoned in the 1950's (according to verbal accounts), and it was no longer maintained and cleaned out. This was a relatively sizable reservoir at approximately 1.5 surface acres in size, and has a stone and mortar dam currently in marginal shape. This reservoir is completely filled with sediment, such that there are sizable trees, shrubs, and other vegetation growing on solid ground currently.

Realizing that it would be cost prohibitive to re-establish the original capacity of the reservoir (tens of thousands of yards), a project was proposed to excavate only a small portion of that reservoir and create a

sediment pond on the stream. With the questionable structural integrity of the dam itself, this pond was proposed to be located at least 100 feet upstream of the dam. Work began to initiate this project. The Warren County SWCD worked with Don Lake, P.E. on the design and plans for this basin beginning in 1996, and completed them within one month's time. The basin proposed constituted a 50' wide, 160' long, 8' deep basin based upon the hydraulics and retention time of the system. This sediment pond is designed to be "off-line", meaning that it was constructed adjacent to the existing stream. Following construction of the basin, the stream was re-routed into the new basin and back into the stream after it. This simplifies future maintenance, as the stream can simply be routed back into the old stream channel during maintenance cleanouts, and routed back in once complete. This minimizes impacts to the stream from turbidity and potential erosion during cleanout activities.

Following the design effort, the Town of Bolton worked to achieve a permanent easement for construction and future maintenance of this new in-stream basin from its private landowner. This agreement was reached in 1998 after two years of discussions. Along a parallel track, work began with the regulatory agencies in 1996 including the NYS DEC, the Adirondack Park Agency, and the US Army Corps of Engineers. A DEC Article 15 permit was received for this effort within four months time, but the APA wetlands permit process took over two years. The APA permit was ultimately received, although the project was scaled back in size by approximately 35 percent as a result.

The US Army Corps of Engineers also took interest in regulating this project, which became a tremendous time and administrative burden for over two years. Ultimately, Congressman Solomon had to personally contact the Colonel of the Corps to move the project forward. Although the Colonel of the Corps wrote a letter to Congressman Solomon saying that this project would have no further involvement from the Corps, the NYC office of the Corps continued to request information before they would issue a permit. It was decided by the Town of Bolton and the District that the project would move forward to construction.

In the summer of 1999, following three years of administration and permitting, the project was constructed in a total of three days. The newly constructed in-stream sediment basin has served its purpose very well, collecting more than 1,200 cubic yards of sediment and keeping it from Lake George. The original project was funded by a \$6,000 mini-grant from the NYS Soil and Water Conservation Committee to the Warren County SWCD, and was undertaken by the Town of Bolton. The SWCD provided construction oversight and administered the project until closeout.

Artist Falls has been cleaned out three times since 1999, and the project partners take an active interest in continuing to maintain this sediment basin as the most effective means of controlling the growth of the Finkle Brook delta in Lake George.

Arcady Bay Sediment Pond

In 2000, the Arcady Bay Estates Association in the Town of Hague hired a private contracting firm to dredge their large dock slip area of the sedimentation from the nearby stream. They approached Hague Town Supervisor, Dan Belden, to see what could be done to minimize the necessity of dredging the lake to keep their slips open. As a response, the Town of Hague approached the Warren County SWCD about developing a sediment pond on a small tributary to Lake George that flowed through a development called Arcady Bay Estates.

Shortly thereafter, the District walked the entire stream length to determine if there were any large areas of streambank erosion which might be addressed. As it turned out, the sediment entering the stream appeared to be generated from a broad spectrum of minor sources along the length of the stream, which

would be cost-ineffective to mitigate. As an alternative, the District developed a plan to at least capture the sediment through two small sediment ponds to be located on Arcady Bay Estates property. The District surveyed and designed these two ponds and presented the project to the Town Supervisor, Dan Belden, and Arcady Bay Estates. Based upon last minute land use issues, only the upper pond was able to be constructed. Moving forward, the Town of Hague agreed to construct this basin with their highway department under the direction of the Warren County SWCD.

This basin was constructed in two days' time, and now acts to collect sediment from upland sources within the watershed. The relatively steep sidewalls (based upon site conditions) were stabilized with rock and over 400 crownvetch plants planted by SWCD staff. The capacity of the basin is considerably smaller than it could be, as no riser was installed on the outlet pipe to raise the effective water level in the basin. This was a result of concerns of the Arcady Bay Association regarding liability and an open water source. While the actual probability of a liability event appears minimal, it nevertheless was the deciding factor in keeping a lesser volume in the basin.



Arcady Bay Sediment Pond, Town of Hague
- Arcady Bay Brook

Woodshire Sediment Pond

When working on the Artist Falls reservoir/sediment pond in the late 1990's, a stream survey showed a smaller upstream pond with an earthen dam on the northernmost tributary to Finkle Brook. This pond is located on private property known as Woodshire Estates, just upstream the outlet's confluence with Finkle Brook (approximately 1/2 mile upstream of Artist Falls). This pond was completely filled in with sediment, and was a prime site to conduct a cleanout effort. The establishment of this basin would help retain sediment from this major arm of Finkle Brook. This project would also reduce the sediment load being delivered to Artist Falls, extending the interval between required cleanouts.



Woodshire Estates Sediment Pond, Town of Bolton
- Finkle Brook

To initiate this project, the District and the LGA contacted the Woodshire Estates Corporation in 2002. Concurrent with the attainment of landowner approval for the project was approval of the project by the APA. Over the period of 12-18 months, this project was approved by all organizations and agencies, and was slated for excavation utilizing the Bolton Highway Department crew with the help of a DEC grant. A 60 foot reach excavator was rented from Contractor Sales out of Albany, and the project moved forward in October of 2003.

The site was dewatered with hundreds of sandbags (see picture), and excavation began the following day. It took two days to excavate over 600 cubic yards of material from this old pond and reclaim it to similar original dimensions, regaining its capacity and ability to retain in-stream sediment. Like other efforts of this kind, project management was conducted by the SWCD, the LGA paid the rental cost of the excavator, and the Town conducted the excavation and trucking work. Following excavation, the site was seeded and mulched by the SWCD, and reports were filed with the Corporation and the regulatory agencies involved.

Jenkins Brook Sediment Pond

In July of 2004, Hague Town Supervisor, Dan Belden, contacted the Warren County SWCD to review the sedimentation problem at the mouth of Jenkins Brook (also known as Alden Brook) on property owned by the Cape Cod Village Club, Inc. The Association was very concerned about the sedimentation of their docks and moorings, and had plans to dredge this area of the lake. However, they hoped to reduce the volume of sediment reaching their mooring area, and were looking for potential options and solutions.

The District met on-site with Supervisor Belden and the President of the Association to discuss the history of the problem and potential solutions. District staff walked approximately two miles upstream to determine sources of sedimentation to the brook, and found no such large sources. Much like other streams within the basin, the sediment largely appeared to be generated by undercut streambanks along the corridor, or perhaps prior logging jobs (although this is unconfirmed).



With no readily discernable large sources to address, it was decided that a sedimentation basin could be constructed on Cape Cod Village Club, Inc. property to contain sediment before it reached Lake George. This basin would be located right at the mouth of the stream, where access and grades made the project both workable and cost effective. Dan Belden contacted the LGA to determine if financial assistance was available, and they agreed to contribute funding to the project.

Within two weeks of the project agreement between the groups, the District surveyed and developed conceptual drawings of a proposed sediment pond for Jenkins Brook. The Town of Hague agreed that their highway department would conduct the work under the direction of the District, and the Association agreed to fund a portion of the project costs.

Once agreements were signed, construction began in September of 2004. District staff dewatered the site with 24" diameter hdpe culvert pipes and turbidity curtains, and an excavator was rented from Finke Equipment. The excavation/creation of the sediment pond took approximately three days, including stabilizing the north side of the basin with small riprap. Once the basin was completed, the highway department restored the grounds around the basin and the District hydroseeded the grounds to revegetate them.

Once completed, the basin dimensions were approximately 100' long, 40' wide and 5' deep. The volume of the basin is approximately 400 cubic yards when side slopes and other dimensions are factored in. The total

cash outlay for this project consisted of approximately \$6,000, including the rental of the excavator and materials for the project.

The Jenkins Brook sediment pond was cleaned out less than one year later (Summer 2005) following the excavation of the Jenkins Brook delta. More than 90 cubic yards of sediment and organic material was removed from the basin, which had accumulated in approximately 9 months time. This cleanout effort took less than one day's time.

This basin has been shown to be tremendously effective for its stated purpose, and will very much reduce the growth of the delta at Jenkins Brook. This, in turn, will greatly reduce the necessity of in-lake dredging and the relatively high costs associated with these efforts.

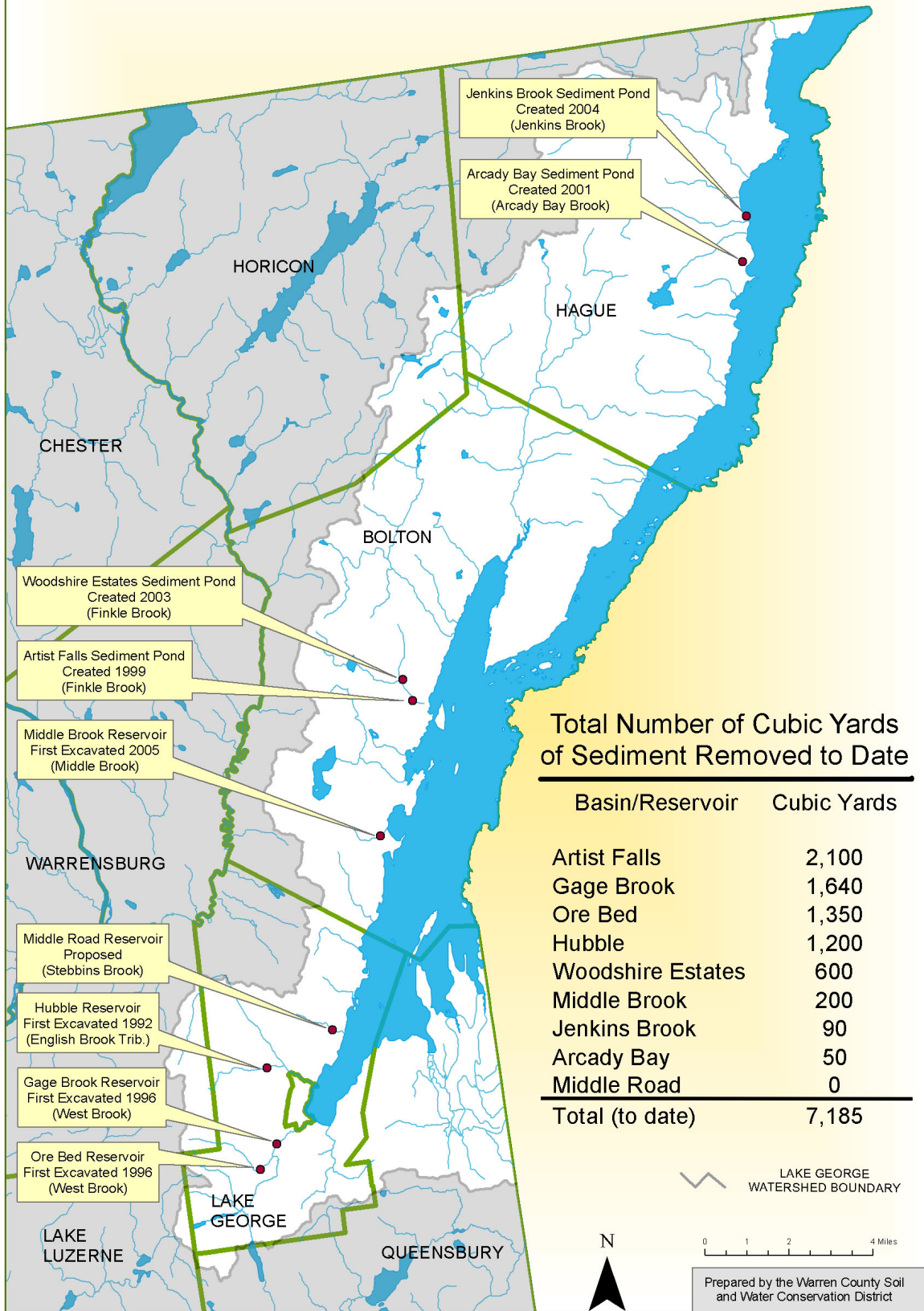
Conclusions

With the inception of a concerted effort to both cleanout old water supply reservoirs and create new in-stream sediment ponds, over 7,000 cubic yards of sediment and debris has been kept out of Lake George since 1992. These efforts have been tremendously cost-effective when compared to the cost estimates of removing the same volume of material within Lake George itself (i.e. delta dredging). The goal of this program is to slow the growth of these deltas, and to supplement upland watershed protection and remediation efforts in this regard.

These efforts have been an excellent example of municipal/organizational/agency partnerships. The protection of Lake George from sediment and associated pollutants takes a concerted effort on the part of all involved parties. The sediment basin program has been seen locally as a great success, and it is likely to expand to other tributaries in need.

There is no one single answer to the water quality and sedimentation challenges facing Lake George. Many programs, projects, and land use regulations together are currently working to address these issues. This program has a proven track record of cost-effective success and local support in reducing sedimentation of Lake George, and will hopefully grow and continue its successes into the future.

Lake George Basin Reservoir and Sediment Basin Cleanout Program Existing Impoundments and Status - November 2005



Reservoir and Sediment Pond - Summary Table - As of 1/2005

Name	Town	Ownership	Waterbody	Reservoir or Pond	Surface Area (square ft.)	Year and Volume Removed	Approx. Out of Pocket Cost	Partners	Permits
Arcady Bay Sediment Pond	Hague	Private (Arcady Bay Assoc.), but easement to Town	Arcady Bay Brook (C101-P367-84)	Pond	800	2001 - 200 yards (to create basin)	\$1,200	-SWCD	DEC Art. 15
Artist Falls Reservoir	Bolton	Private - (Baker), but permanent maintenance easement to Town	Finkle Brook	Pond within Reservoir	6,000	1999 - 900 yards 2001 - 450 yards 2004 - 350 yards 2005 - 400 yards	\$6,000	-SWCD	DEC Art. 15
Gage Brook Reservoir	Lake George	Land - DEC	West Brook	Reservoir	6,800	1996 - 400 yards 1998 - 300 yards 2000 - 240 yards 2002 - 280 yards 2004 - 220 yards 2005 - 200 yards	\$3,500 \$4,500 \$4,500 \$4,500 \$3,500 \$3,500	-SWCD -Town of LG -Village of LG -LGA	DEC TRP DEC Art. 15 APA wetlands
Hubble Reservoir	Lake George	Land - DEC Dam - Village	English Brook tributary	Reservoir	11,000	1992 - 700 yards 1999 - 500 yards	\$5,000 \$3,500	-SWCD -Town of LG -Village of LG -LGA	DEC TRP DEC Art. 15

Reservoir and Sediment Pond - Summary Table - As of 1/2005 Cont...

Name	Town	Ownership	Waterbody	Reservoir or Pond	Surface Area (square ft.)	Year and Volume Removed	Approx. Out of Pocket Cost	Partners	Permits
Jenkins Brook Sediment Pond	Hague	Private (Cape Cod Village Assoc.)	Jenkins Brook	Pond	6,000	2004 -1,230 yards (to create basin) 2005 - 90	\$6,000 \$1,000	-SWCD -Town of Hague -Cape Cod Vil. Assoc. -LGA	DEC Art. 15
Middle Brook Reservoir	Bolton	Private	Middle Brook	Reservoir	1,500	200 yards	\$	-LGA	DEC Art. 15
Middle Road Reservoir	Lake George	Private	Stebbins Brook	Reservoir		Never done - APA issues	\$	-SWCD -Town of LG	DEC Art. 15 APA wetlands
Ore Bed Reservoir	Lake George	Village	West Brook	Reservoir	12,000	1996 - 500 yards 1999 - 300 yards 2001 - 200 yards 2005 - 350 yards	\$3,500 \$3,500 private \$6,500	-SWCD -Town of LG -Village of LG -LGA	DEC Art. 15