

TOWN OF INDIAN LAKE HIGHWAY DEPARTMENT

SEPTEMBER 2014

Nice weather is helping in letting the highway department get work done.

Approximately 700 yards of Item#4 was added to the Cedar River Road. It always seems like that road needs more material but it's slowly improving.

Material was added to Cleaveland Road to continue to improve that road. Right of way was also cut on that road.

Some bad culverts were replaced on the Starbuck Road and some ditching was also done on it.

Right of way was cut on the Maple Lodge Road, Cedar Lane and Upper Edison Road in Blue Mountain.

Mowing continues and Blue Mountain will be mowed when time allows.

Work will be starting again on Stanton and White Birch Lane. It will soon be readied for new blacktop.

Work has started on the consolidated fuel station. Cement was poured for footings.

We have assisted Hamilton County with moving some equipment while their trailer is broken. We are also assisting them with paving by sending 2 trucks to haul blacktop. They will assist us in the same way when needed.

American flags were taken down and moose flags were put up after Labor Day.

Thank you

Jamie Roblee

Town Highway Superintendent

Events/Activities Report
Indian Lake Town Board
September 3, 2014
Reported by Vonnie Liddle

- Aug. 7** Met Earth Club and helped them prepare for Rafting Trip. Typed mechanics report. Wrote town board report. Cleaned desk.
- Aug. 8** Decorated the pavilion for Music in Byron Park. Cleaned shed. Attended Music in Byron Park, The Washington County Line Bluegrass Band.
- Aug. 11** Updated town webpage. Created and printed Music in Byron Park and Horseshoe Tournament posters. Updated chamber webpage. Attended town board meeting.
- Aug. 13** Prepared for Earth Club Trip. Updated chamber webpage. Worked on Earth Club final report.
- Aug. 14** Earth Club trip to Adirondack Extreme Ropes Course.
- Aug. 15** Called horseshoe participants to remind them of Saturday's tournament. Decorated the pavilion for Music in Byron Park. Finished Earth Club yearly report. Attended Music in Byron Park, Bob Stump and the Roadside Attraction.
- Aug. 16** Horseshoe Toss Tournament.
- Aug. 19** Worked on Adk. Challenge Appreciation Picnic. Worked on September community calendar.
- Aug. 20** Worked on 2015 budget. Worked on September community calendar.
- Aug. 25** Sent invitations out to Adk. Challenge Appreciation Picnic. Finished September community calendar, printed and folded. Closed out horseshoe file.
- Aug. 26** Created and submitted an ad for 10th Mountain Division Band. Met with Brian MacDonnall regarding 90-Miler. Attended AMAS meeting.
- Aug. 28** Printed posters for 10th Mountain Division Band Concert. Delivered posters. Worked on 90-Miler.
- Aug. 29** Updated chamber webpage.
- Sept. 2** Took care of supplies from summer events. Worked on 90-Miler.

Daily – Checked and responded to emails and phone messages. Checked and posted on Facebook.

UPCOMING EVENTS: SEPTEMBER 14 ADK. CHALLENGE APPRECIATION PICNIC. SEPTEMBER 17 – 21 ADIRONDACK MOUNTAINS ANTIQUES SHOW. SEPTEMBER 20 – 21 ADIRONDACK MUSEUM ANTIQUES SHOW AND SALE. SEPTEMBER 27 – 28 GREAT ADIRONDACK MOOSE FESTIVAL.

Month of August 2014
Mechanic's Report
Reported by Bill Wells

Serviced #185 Tandem dump truck

Serviced #180 pick-up truck

Put distributor cap rotor and plugs on 1010 mowing tractor

Fixed tail lights on #188 one ton

Fixed hydraulic leak on #184 loader 544G

Serviced #186 dump truck

Working on fuel pump

Replaced broken outrigger ram on #189 backhoe

Replaced tires on York rake #1

Repaired exhaust leak on #182 and also replaced rear brake chamber

Tightened belts and greased bearings on leaf blower

Town of Indian Lake water and wastewater

Report for August 2014

Testing was completed at all plants daily.

Samples required by DEC and DOH were submitted to the lab.

The hydrants in Blue Mt and Indian Lake were flushed.

A leak in the sewer force main was fixed behind the Frontier building.

The water line on the end of John Rust road was extended about 50 feet and a hydrant was installed.

Our Ford was taken to Nemer Ford to get a lower steering shaft, tire pressure sensors, and an air bag sensor.

A water service was put in for Ed Graves on top of Johnson Hill.

A 2 inch valve was replaced near Jeremy Monthony's house.

A new curb stop was put in for the Baptist church on Johnson Hill.

A 350 gallon chlorine tank was removed from the water plant in Indian Lake, and replaced with a 165 gallon tank. We are waiting for a second 165 gallon tank to be delivered.

Two curb stops were replaced for camps on Cedar River Rd.

Thank-you

A handwritten signature in black ink, appearing to be 'Kevin King', written in a cursive style.

Kevin King /water and wastewater superintendent

PARKS AND RECREATION MONTHLY REPORT

1. Blue Mountain Rest Room: Picked up garbage every Monday-Friday and started cleaning again when beach closed for the season.
2. Transfer Station: Filled in for Josh on days off, mowed and weedeated Blue Mountain transfer station.
3. Byron Park: Repaired light at pavilion, raked and leveled horseshoe pits every Wednesday. Fixed light in log building and moved tables in and out for events at the pavilion. Set timers and lights and set out electric power boxes for events and also garbage cans.
4. Health Center: Nailed down floor strips in front of 3 doors and replaced bulbs in emergency lights. Re-supplied paper towels and toilet paper.
5. Beaches: Picked up garbage every Monday-Friday, re-supplied toilet paper, paper towels, and soap. Picked up both beaches and pulled in docks, buoy lines and took signs down for season.
6. Ski Hut Building: Replaced 5 batteries in smoke detectors, started cleaning building once a week and took garbage to dump.
7. Town Hall: Started taking garbage to dump 2 days a week.
8. Museum: Met with alarm company and went through detectors with him.
9. Bus Garage: Set up scaffolding and put pearlings on ceiling, then put 5/8 sheetrock fire proof on ceiling. Pumped out and replaced broken sewer pump and light fixture.
10. Skating Rink: Started pressure washing to get ready to paint inside and out.
11. Indian Lake Mowing: Mowed, weedeated Town Hall, Library, Health Center, Museum, Legion, 3 town signs, Reuben Rist, Chain Lakes, old water plant, old sewer plant, Byron Park, Shooting Range, Catholic Cemetery, Cedar River Cemetery, Benton Cemetery, Little League field, Ski Hut, Chamber of Commerce, mini park, and Fire Hall 2 times this month.
12. Blue Mtn. Mowing: Blue Mtn. Cemetery, Recreation Lot, Beach, old garage, bench, 3 town signs, water plant, water tank, transfer station and Fire Hall 2 times so far this month.
13. Events: Put up signs, big banners, moved tables and tents, barricades, garbage cans, pylons and picked up when events were over.
14. Snowmobile Trails: Tore out rotten planks and resurfaced bridge on power line trail, cut blown down tree out of old beach road. Started mowing ski hill on Fridays when tractor wasn't being used by highway department.

News Release

Adirondack 102 Club: Your Passport and Guide to the North Country

The *Adirondack 102 Club: Your Passport and Guide to the North Country* by Martin Podskoch will be available at stores in mid-August. The 102 Club is a new idea meant to encourage travelers to visit all of the towns and villages of this unique, vacation destination.

The idea for the 102 Club began after Podskoch read about Dr. Arthur Peach in the Dec. 11, 2005 issue of *American Profile Magazine*. Dr. Peach, in a story in *Vermont Life* magazine, suggested the idea of an informal group, the 251 Club, to veer off the beaten path ‘to discover the secret and lovely places that main roads do not reveal.’ He felt that every part of Vermont had its beauty, history, attractions, traditions, and interesting people.

Podskoch stated in the book’s introduction, “Since 2001, I traveled to all of the 102 towns and villages in the Adirondacks gathering stories for my five books on the Adirondack fire towers, the Civilian Conservation Corps camps, and Adirondack lore. In my travels people have taken me in for the night and shared their home, food, and stories. I have met so many wonderful people and seen so many interesting places that I want to share my experience.

“Most people who visit the Adirondacks visit one particular area. For eight years I wondered if I might be able to duplicate for the Adirondacks what Dr. Peach did for Vermont.

“Then, in December 2013 I spoke at an Adirondack Association of Towns and Villages (AATV) and proposed the idea of starting the 102 Club for the Adirondacks. The AATV liked the idea and encouraged me to contact the supervisors and mayors for their help.

“I asked each town and village for someone to write a short description highlighting the town or village’s location, history and interesting places to visit. By June 2014 108 representatives including, historians, supervisors, assessors, chambers of commerce, and residents replied with descriptions.”

The result is this comprehensive guide to travelers in a quest to visit all 102 towns and villages. Club members also learn about the history and fascinating places in the Adirondacks. By getting their book signed or stamped by a resident or business, they also get to know the friendly locals and be able to ask such questions as where is a good place to eat or an interesting local attraction? In this way they will get to know the real Adirondacks.

There are no rules or requirements to be a member. No documents to turn in. One may keep a journal in addition to this book on the quest. There is no membership fee, just a desire to experience the whole Adirondack region. Adults and children of all ages can be members. What a great adventure for families, grandparents and their grandchildren, or by oneself. Most members will travel by car while others might use a bike, motorcycle, walk, or maybe a canoe!

Once a member has reached their goal of visiting all 102 towns & villages they will then become a “Vagabond” member.

“Vagabonds” is how Thomas Edison, Henry Ford, Harvey Firestone & John Burroughs described themselves when they took automobile camping trips in the Adirondacks & other sojourns throughout America to get away from their busy lives. Each man contributed his skill: Edison “navigator,” Ford “mechanic,” Firestone “organizer” and Burroughs the “naturalist.” A caravan of cars & trucks carried the “Vagabonds,” workers, a cook, camping equipment & a chuck wagon. Ford organized contests, such as sprints, tree climbing, and tree chopping. After dinner they relaxed by the campfire discussing issues of the day. Each Vagabond had his own tent with electric lights. They traveled through the Adirondacks twice. In 1916 they camped near Saratoga Springs, Indian Lake, Elizabethtown, Ausable Forks, Paul Smiths, and Plattsburgh. In 1919 they picked their spots as the day allowed: Loon Lake, Long Lake, Lake Placid and Plattsburgh. The Vagabonds were the source of many news stories and their trips led NYS to build campsites to encourage auto camping.

NYS Senator Betty Little wrote the preface for the book and stated: “The “Adirondack 102 Club” is inspired in part by the early 20th Century Adirondack travels of Thomas Edison, Henry Ford, Harvey Firestone and John Burroughs – innovators whose shared pursuit of lifelong learning brought them together to the Adirondacks.

"I hope you, too, are inspired to explore the Adirondacks and to learn something new and unexpected about our history, our traditions, our way of life and our future.

"It is one thing to say: 'I visited the Adirondacks,' quite another to say 'I experienced the Adirondacks.' I promise an enriching journey and encourage you to do so with friends and loved ones with this unique passport in hand. A great adventure awaits!"

So now begin your quest and become a member of the Adirondack 102 Club to not only visit all the towns and villages but get to know the real Adirondacks. Let's all take the road less traveled!

Marty Podskoch has authored six other books: *Fire Towers of the Catskills: Their History and Lore*, 2 volumes of the *Adirondack Fire Towers: Their History and Lore*, the *Southern Districts* and the *Northern Districts* and also *Adirondack Stories: Historical Sketches* and *Adirondack Stories II: 101 More Historical Sketches*. He was awarded the Arthur E. Newkirk ADK Mountain Club Education Award in 2013 for achievement in

chronicling the social history and lore of the Catskills and Adirondack fire towers and of the Adirondack Civilian Conservation Corps camps.

The 216-page, large-format hardcover book is available in local stores for \$20.00. It can also be purchased by contacting the author at podskoch@comcast.net or (860-267-2442) or at 43 O'Neill Lane, East Hampton, CT 06424

Help eradicate Japanese knotweed from the Adirondacks

Our collective effort to eradicate the invasive plant Japanese knotweed from the Adirondacks is making great progress.

The RIIPP (Regional Inlet Invasive Plant Program) has expanded each year from 2008 to 2014 with the help of many dedicated volunteers, generous donations, and support from the town of Inlet, Hamilton County Soil and Water Conservation District, and APIPP.

In 2013 we treated hundreds of sites*, and in 2014 are retreating sites and many new sites in those towns, as well as new sites in Forestport along the Moose River, Otter Lake, and Thurman. Knotweed has been eradicated at some sites, and on its way to being eradicated at many more. Check out our website www.noknotweed.org.

As you may know, property owners do not have to pay for the treatments. Instead, we rely upon donations and grants to pay the pesticide applicators. Many property owners, concerned individuals, and associations have contributed, and in 2014 the Adirondack Watershed Institute is providing support.

Please consider giving a tax-deductible donation, and asking others to help as well (e.g. forward this to family/friends). Encourage your lake association and town to help.

Send donations to:

Town of Inlet, Invasive Plant Control Fund; Town of Inlet PO Box 179, Inlet, NY 13360

Thanks!

Douglas Johnson

Contact clerk@inletny.com (315) 357-5771 with questions.

* in Arieta, Big Moose, Blue Mountain Lake, Bolton Landing, Chestertown, Cranberry Lake, Eagle Bay, Garnet Lake, Indian Lake, Inlet, Johnsburg, Lake Garnet, Lake Placid, Long Lake, Morehouse, North Creek, North River, Piseco Lake, Saranac Lake, Speculator, Star Lake, Old Forge, Tupper Lake, Wanakena, Warrensburg, and Wells

Town of Inlet, Invasive Plant Control Fund; Town of Inlet PO Box 179, Inlet, NY 13360

Name:

Adirondack Address:

Mailing Address:

Phone:

Email:

Donation amount:

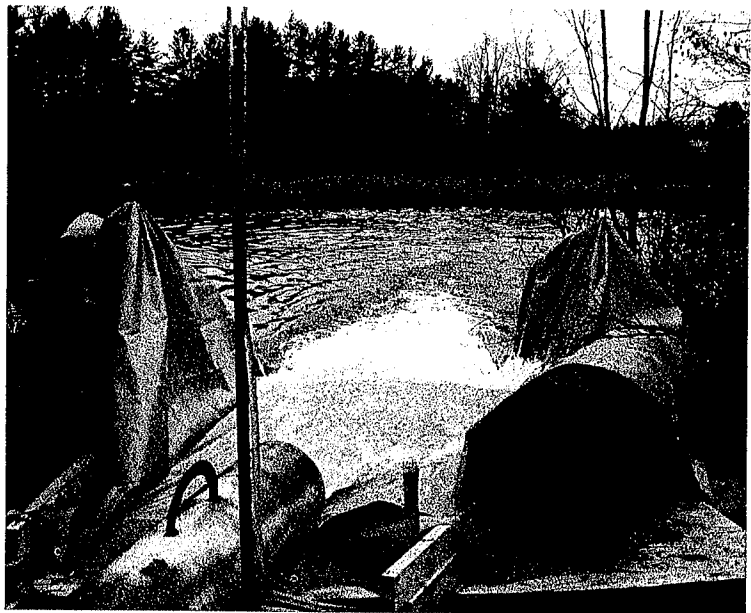
**HYDROGEOLOGIC SCOPE OF SERVICES
FOR
BLUE MOUNTAIN LAKE GROUNDWATER
SOURCE INVESTIGATIONS**

**TOWN OF INDIAN LAKE, NEW YORK
WATER DISTRICT #1**

August 9, 2013

INTRODUCTION

At the request of Cedarwood Engineering Services (CES), HydroSource Associates, Inc. (HSA) is pleased to present the following proposal to provide professional hydrogeologic and groundwater source investigations in the Blue Mountain Lake area of the Town of Indian Lake Water District #1 (the Town). It is our understanding that the Town wishes to develop a new groundwater source that can sustainably provide up to 100,000 gallons per day (gpd) of potable water, and that the area within which we are to consider possibly siting well sources for the Town will be confined to one or more properties the Town has identified near the intersection of



Discharge of 3,000 gpm During Pumping Test of a New Well HSA Recently
Sited and Developed for the Village of Saranac Lake

Routes 28 and 30 in the Town of Indian Lake. Per CES's request, our proposal includes the effort needed to identify precise locations for installing new wells, i.e., locations that possess promising hydrogeologic and other physical characteristics for developing a sustainable, high-yield groundwater source, as well as the necessary criteria that meet the New York State Department of Environmental Conservation's (NYSDEC) and the New York State Department of Health's (NYSDOH) well siting requirements.

The scope of work we propose essentially involves two steps. The first step is a hydrogeologic evaluation that considers a range of factors that assess potential aquifer productivity and have direct bearing on groundwater source siting, development, sustainability, source protection and regulatory acceptability. The first step includes research and/or review of: bedrock and surficial

geology; structural geology; and the required regulatory setbacks. The goal of the evaluation is to determine whether and where on the property are geologic conditions in the subsurface likely to be the most favorable for developing a high-yield well source, and what type of aquifer (i.e., sand and gravel, or bedrock) should be targeted for development.

The next step would include well-siting geophysical surveys designed to evaluate subsurface conditions prior to well drilling and to precisely locate promising well drilling locations. The geophysical surveys are used to confirm if geologic structures/environments signified by results of the first phase are likely to be present beneath the surveyed area, and to identify precisely where a well should be drilled to intersect them. This is especially important when targeting fractured bedrock aquifers, since fractures that comprise an aquifer system may be as little as a few inches wide and can easily be missed while drilling a vertical test well if the fractures are steeply oriented, as they typically are in this part of the State.

These methods are routinely used by HSA to evaluate and identify promising geologic environments before test wells are drilled, thereby reducing the number of test wells needed to locate a successful new site for a production well. They are similar to those employed to site and develop numerous wells currently being operated by surrounding communities for whom we've worked.

HYDROGEOLOGIC SETTING & AQUIFER DEVELOPMENT PROSPECTS



**HSA Project Manager Supervises Pumping Test of
1,100 gpm Well**

Part of our normal procedure in preparing work scopes for potential new projects is to review readily available sources of hydrogeological information for the study area. This preliminary review is based upon state-scale published geologic maps and other regional-scale information sources, and forms the conceptual framework for the work scope descriptions that follow.

Aquifer types that may be available in the Blue Mountain Lake area can be divided into two categories: surficial and fractured bedrock. When we speak of "surficial aquifers" in this region, we generally mean well-sorted and permeable sand and gravel (as opposed to clay, silt, or hardpan, which are not permeable and therefore do not

typically form productive aquifer systems). Bedrock aquifers occur where there are abundant open fissures and/or fracture networks within the otherwise impermeable surrounding rock mass. The fissures and fractures receive infiltration, store and transmit water, hence forming an aquifer. We propose an evaluation that considers both types of environments and that narrows its focus as

information is gathered and analyzed to direct the Town to that which provides the greatest value while achieving the Town's water supply goals.

Surficial Aquifers

Regional geologic maps show that most of the Blue Mountain Lake area is covered by a thin but variable layer of glacial till. The till is a dense, poorly sorted sediment that contains rock fragments up to boulder size embedded in a matrix of clay and silt. The till consists of locally derived bedrock that was ground up by the action of glacial ice into a chaotic mixture of rock flour and larger fragments, and in many places the material was deposited under the weight of a great thickness of glacial ice. The dense sediment that is often described as "hardpan" typically is till. Although till can include isolated lenses of well-sorted sand and gravel that can produce water, it generally is not significantly water-bearing, and is not capable of hosting high-yield wells.

Conversely, the area near the intersection of Routes 28 and 30 is shown to be underlain by well-sorted and permeable sand. While the sand may constitute a productive aquifer, it will be critical to identify where it is sufficiently thick and below the water table in order to develop a sufficiently high-yielding and sustainable well source that can meet the 100,000 gpd demands of the Water District.

Bedrock Aquifers

In terms of the local bedrock, Blue Mountain Lake is in the central part of the regional structural feature known as the Adirondacks Uplift. The area is underlain by igneous and high-grade metamorphic rocks that are more than one billion years old, and which are part of the Grenville metamorphic province that includes a broad swath of eastern Canada from the eastern Great Lakes through eastern Quebec. Local rock types include anorthosite, charnockite, mangerite, and undifferentiated metasediments.

The area is structurally complicated, based upon the pattern of rock type distributions and foliation (foliation referring to the layered "grain" of the rock). There are no mapped faults that occur in the local area, although there are multiple strong linear features in the local topography that suggest a heightened potential for associated fracture networks in the earth's



**HSA developed well showing 450 gpm of sustained
artesian flow**

subsurface. There are also contacts between differing rock types that have been mapped in the vicinity. Contacts are often areas of structural weakness, and hence possible fracturing in the bedrock along their extensions.

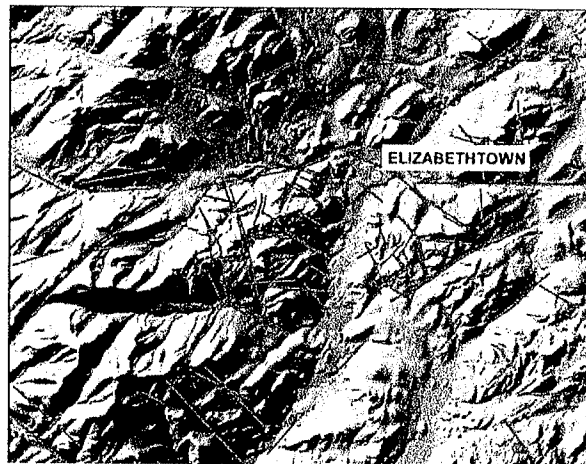
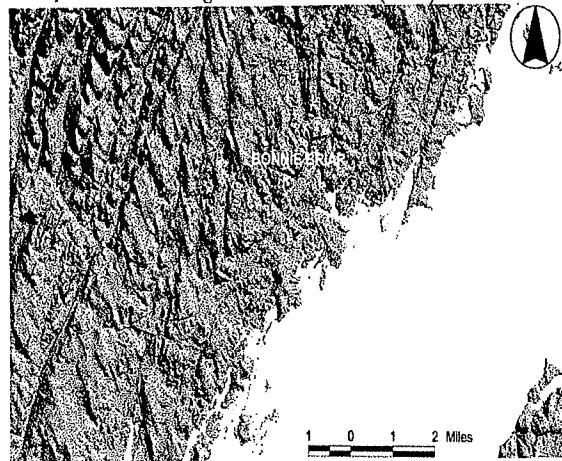
PROPOSED SCOPE OF WORK

Task #1 - Hydrogeologic Evaluation

Obtain and Analyze Background Hydrogeologic Data: HSA will obtain readily available hydrogeological data and information, including published geologic maps (both surficial and bedrock geology), and published geological reports covering the area around Blue Mountain Lake. Pertinent information, including bedrock and surficial geologic boundaries, topography, hydrography, etc., will be combined and analyzed, along with natural and cultural features of the area. HSA will review the various mapped and hydrogeological information from the standpoint of high-yield groundwater source siting and development.

Lineament Mapping/Fracture Trace Analysis: We will acquire and analyze high-altitude, color infrared, stereographic aerial photography that covers the subject area. Lineaments will be mapped on the aerial photographs while viewing the photographs stereographically (in three dimensions). Mapping of lineaments, also known as 'fracture trace analysis', is a task that is used to identify fractured bedrock aquifers. Lineaments are linear or curvilinear features that can be observed on aerial photographs, topographic maps, radar images, Digital Elevation Models (DEMs), and other map-like depictions of the earth's surface. Some lineaments are the surface expression of steeply dipping faults, zones of concentrated jointing, or other planar geologic features that may be associated with productive bedrock aquifers.

Example Hill-Shaded Digital Elevation Model (DEM)



A DEM model (left) and Radar Image (right) showing major structural lineaments indicating likely areas of enhanced bedrock fracturing and thick valley fill deposits - i.e., indicators of areas with high-yield aquifer development potential

A set of lineaments will also be mapped on DEM data for the area. When viewed with appropriate GIS software, DEM data provide multiple three-dimensional perspectives on topography, geomorphology, hydrology, and structure that cannot be obtained from study of conventional topographic maps or air photos. The DEM allows simulation of the way the land surface would appear if it were illuminated by an artificial light source shining from a designated compass direction and angle above the horizon. Varying the light angle accentuates linear features at different orientations, and allows recognition of linear features that might be missed on air photos, in which the ground surface is necessarily illuminated only by "natural" sun



**Installation of an HSA-sited bedrock test well in
Forestport, New York**

angles. DEMs make it possible to study areas from many different perspectives. Combining the three-dimensional perspectives with two-dimensional layers, such as geologic maps, will allow us to refine the previously mapped information.

Site Inspection: HSA will conduct a brief site inspection during which the geology indicated by published sources will be field-checked, and more-specific information on the bedrock and surficial geology of the site not available from regional-scale geologic maps is sought. Bedrock outcrops and exposures of surficial sediments will be examined. If bedrock exposures are adequate, observations of jointing and fracture frequency may be made, along with measurements of joint and fracture orientation. The fracture orientations may then be compared with lineament trends, to help determine which lineaments appear to have a structural basis and are therefore most promising for development of productive aquifer systems. An assessment

of the depth and thickness of the local sand deposits will be made as to their potential saturated thickness, recharge characteristics and ability to support the intended rate of groundwater extraction sought by the Town. Generally, HSA will search for locations at which a range of hydrogeologic qualities pertinent to locating a sustainable, 100,000 gpd well source are optimized.

Task #2 - Well-Siting Geophysical Surveys

The efforts described under Task 1 above have proven to be an effective means of "zeroing-in" on specific areas that are likely to be underlain by productive aquifers. However, these activities

are commonly not able to provide the level of precision necessary to optimize precisely where in that area a well should be located to maximize yield. For example, even a highly trained observer is often not able to detect underlying fractures in the bedrock from published map data and aerial imagery alone. When it comes to locating bedrock aquifers using fracture trace analysis, perhaps even more important is the fact that the line representing a presumed bedrock fracture as drawn on an air photo or topographic map may be hundreds of feet wide on the ground. Where the lineament actually marks the surface trace of a fracture zone on the ground, the fracture zone is usually less than a few feet wide. If, as is commonly the case, the zone is steeply dipping, it can be very difficult to locate it with sufficient precision to intersect it with a vertical well. In this case, mislocation by as little as a few feet can be the difference between drilling a dry well through solid rock or intersecting a water-bearing fracture. We therefore propose to use geophysical surveys to precisely identify promising well locations.

Methods that would be practical in this geological setting given the aquifer and site conditions include very low frequency electromagnetic (VLF/EM) and magnetic surveys, and/or electrical resistivity. Which method is most effective will depend upon the type of aquifer targeted and the as yet to be determined hydrogeological conditions at the specific sites to be surveyed.

Although these methods come at a cost, they allow for pre-qualifying and comparison of the hydrogeologic potential of test well sites before an investment in well drilling is made, and can considerably reduce the risk that a well is drilled in an unfavorable environment and/or will miss its intended structural target. Experience has shown that geophysical methods significantly reduce the number of wells needed to be drilled to locate a sufficiently productive well site.

The VLF/EM and magnetic surveys each involve collecting measurements at regular intervals (usually every 10 feet) along marked survey lines. The surveys provide information on bedrock discontinuities (e.g., water-bearing fault and fracture zones in the bedrock) that constitute promising drill targets. These surveys would be designed to cross the targeted geologic structures, with the type and length of the survey dependent upon terrain, specific hydrogeologic conditions present, and cultural features of the property in question.

The surveys are run using a backpack-mounted data collection unit that combines the electronics and computer processing components needed to measure two kinds of geophysical information. The VLF/EM portion of the unit is a radio receiver that is tuned to a very low frequency radio wave emitted by a distant transmitter. Low frequency electromagnetic waves can penetrate rock.

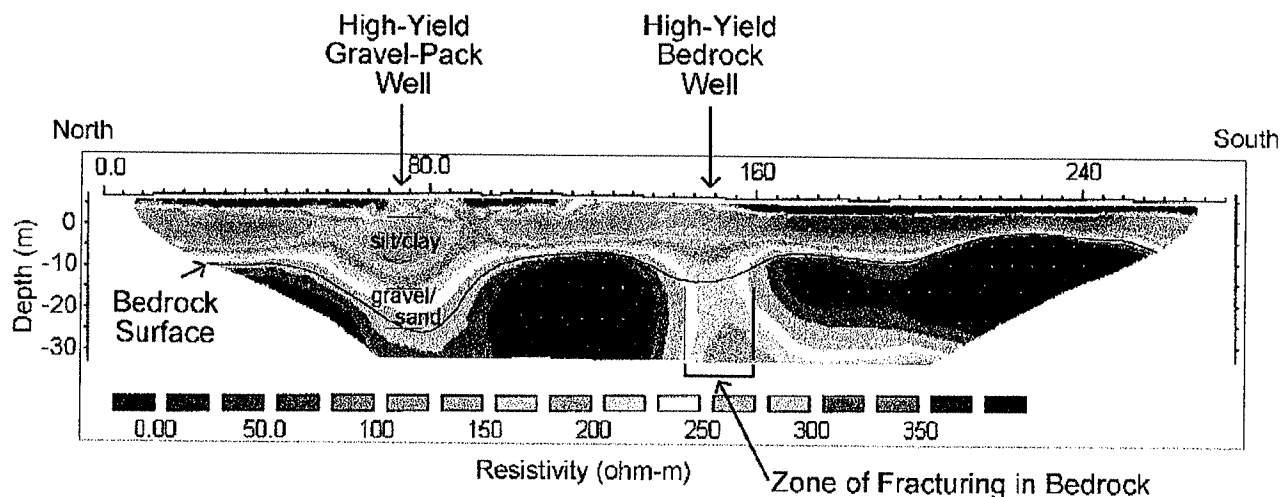


VLF/EM and Magnetometer
Surveying

Small contrasts in the electrical conductivity of different kinds of rock and sediment (which can be associated with fractured-bedrock aquifers) produce distortions in the electromagnetic field that can be detected by the unit.

The magnetometer measures variations in the earth's magnetic field. The local strength of the magnetic field is influenced by the magnetic mineral content of the underlying bedrock. Therefore, zones where concentrated fracturing has encouraged deeper weathering of the bedrock often appear as anomalies, often signifying the loci of enhanced fracturing, thus acting as groundwater conduits, i.e., high-yield aquifers. When surveys are conducted along a series of parallel lines, it is possible to detect patterns in the magnetometer data that can indicate buried geologic features, such as faults, dikes, or weathered zones in the bedrock.

Electrical resistivity surveys rely on numerical processing of raw resistivity data that is analogous to that used to produce a CAT scan or MRI. A typical survey might involve setting a series of 50 electrodes at regular intervals along a survey line. The method produces a cross section of the subsurface like that shown below depicting the variation of electrical conductivity of the earth with depth along the data collection profile line. Electrical resistivity ranges can typically be correlated with different sediment layers within the overburden depth, to the overburden/bedrock interface, water-bearing fractures zones, or other variables of interest. Hence, they typically allow delineation of areas where the thickness of water-bearing strata is greatest, as well as differentiation between sand and gravel (which are promising areas for groundwater development) versus glacial till, silt and/or clay (which are not good aquifer hosts). They can also show areas of possible fracturing in the underlying bedrock.



Example of Electrical Resistivity Survey Profile

The example resistivity profile shown above was a result of exploration activities during a groundwater development project we completed for a community in New York. The two test well locations shown (one sand-and-gravel and one bedrock) were selected as two of the highest ranked test well locations amongst the several that were identified. These two were subsequently

developed into production wells that yield a combined rate of over 600,000 gpd. We have had similar results when using these methods to site wells in many other areas of New York.

For the surveys themselves, HSA would lay out survey lines over the selected area. The survey lines are typically located an appropriate setback distance from buildings, roads and property boundaries. The surveys can require minor brush cutting and setting of markers, such as surveyors' flags. The brush cutting is simply enough to allow passage by a person on foot and is performed with a hand-held brush-axe. The surveys require no land altering, excavation, noise, heavy machinery, etc., and are otherwise completely non-invasive. Next, detailed, subsurface geophysical data is collected along the survey lines.

If necessary, we will provide a letter that the Town can modify as they wish and send to private landowners. The letter requests access to their property for surveying purposes, explains why the surveying is being done and what it involves. The letter describes the surveys and how they are non-invasive, simply that a person(s) needs to walk the property in question with a portable device and collect measurements, and that conducting a survey typically takes no more than one to two days on a given property. The letter can include a phone number for a Town-designated contact person and a HydroSource representative, so that the questions that normally arise can be answered.

The results of the geophysical surveys would be analyzed by HSA using computer methods, and integrated with the other geologic, hydrogeologic, contaminant threats and practical considerations, as determined by previous tasks. Well drilling targets would then be selected and, if more than one is identified, prioritized (ranked) based upon technical and logistical favorability. Again, HSA will search for a well location at which a range of qualities are optimized.

HSA would submit a map showing the recommended well locations along with a brief letter report documenting what was done, explaining the basis for choosing each recommended well location and ranking. The report will also include recommendations concerning the anticipated drilling conditions at the various sites (e.g., depth, geologic materials, thicknesses, etc.). This letter report and map can also be forwarded to the NYSDOH, NYSDEC (and APA, if warranted), for their review and concurrence before further work (i.e., well drilling) is begun.

PROBABLE COSTS

Task 1 - Hydrogeologic Evaluation	\$2,800
Task 2 - Geophysical Surveys*	
Single area surveyed with VLF/EM & magnetometer	\$4,100
Second area surveyed with VLF/EM & Magnetometer during same field trip	\$ 900
Single area surveyed with electrical resistivity	\$5,400
Field trip to Stake and Review Well Sites	\$1,800

**Costs for geophysical surveys will depend upon survey method used, length of survey lines, and impact that site conditions will have on time required to complete surveys in each area. We expect that VLF/EM and magnetometer surveys will be used to identify promising bedrock well target sites, and that electrical resistivity will be the preferred method for assessing and identifying sand/gravel well sites. Costs shown include a field trip to Indian Lake after the geophysical data is processed to physically stake recommended well sites in the field and review them with Town and CES officials.*

Our costs assume that we will be provided the necessary property access so that we may complete the site inspection and geophysical surveying during a single field trip.



TOWN OF INDIAN LAKE

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Phone: (518) 648-5885
Fax: (518) 648-6227

Legal Notice Budget Workshop's

The Indian Lake Town Board will be holding the **2015 Budget Workshops** on the following dates:

The public is welcomed and encouraged to attend.

The location is the Indian Lake Town Hall, Pelon Road, Town of Indian Lake

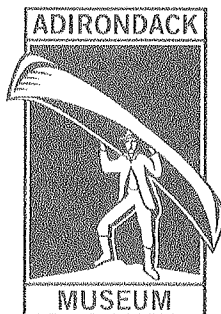
**OCTOBER 14TH (Tuesday) 7:00 p.m. REGULAR BOARD MEETING &
BUDGET SUMMARY**

**OCTOBER 16TH (Thursday) 7:00 p.m. BUDGET: General Fund, Landfill, Weed District,
Water 1 & 2 Districts, Sewer District, Library, Ambulance, Fire
Districts, Debt Services, Cash Reserves.
A PUBLIC HEARING FOR THE WEED AND SEWER DISTRICTS**

OCTOBER 23RD (Thursday) 7:00 p.m. HIGHWAY

OCTOBER 30TH (Thursday) 7:00 p.m. FINAL REVIEW

**NOVEMBER 6TH (Thursday) 7:00 p.m. PUBLIC HEARING
PRELIMINARY BUDGET**



THE ADIRONDACK HISTORICAL ASSOCIATION

ADIRONDACK MUSEUM

MAILING ADDRESS: P.O. BOX 99
STREET ADDRESS: 9097 STATE ROUTE 30
BLUE MOUNTAIN LAKE, NY 12812-0099
(518) 352-7311 • Fax (518) 352-7653
www.adirondackmuseum.org

August 29, 2014

Mr. Brian Wells
Supervisor
Town of Indian Lake
P.O. Box 730
Indian Lake, NY 12842

Dear Mr. Wells:

The Adirondack Museum's 27th annual Rustic Furniture Fair will be held on Saturday and Sunday, September 13 and 14, and the next week the museum will have its Antiques Show and Sale on Saturday and Sunday, September 20 and 21, in conjunction with the Indian Lake Adirondack Mountains Antiques Show.

Again this year, the museum would like to request:

- the use of the tennis-court area on Durant Road in Blue Mountain Lake for overflow parking during both of these events and
- the use of the Town of Indian Lake van for both of these events, to provide transportation between the overflow parking and the museum.

We look forward to continuing to work with Town residents, committee, staff, and elected officials on producing high-quality events that bring more visitors to the area and celebrate the unique heritage of the Adirondacks.

If you have any questions about this request, please let me know.

Sincerely,

Todd Happer
Director of Marketing
(518) 352-7311, ext. 109
thapper@adkmuseum.org

You are invited to

Indian Lake's

Appreciation Picnic

Sunday, September 14

Noon - 3PM at Byron Park

This is an open invitation to thank
everyone involved with the

Annual Adirondack Challenge

Food, Fun, Family & Friends!

Please RSVP by Sept. 9 (so we have an idea of
numbers) to 648-5828 or

indianlakeea@frontiernet.net

Food will be provided bring your own drink