

# Lakewatch

A Publication of Seneca Lake Pure Waters Association, Inc. Serving the Seneca Lake Watershed Region

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## President's Message by Phil Cianciotto

As I drove around the lake this past week, there were many signs of Spring. Snowbirds returning from warm climates, vineyards trimmed and residents cleaning up winter damage or leaves left-over from last Fall. Seneca Lake Pure Waters Association continued its mission through the winter months on several fronts. Attendance at monthly membership meetings during the period Feb through April is low. We'll pick up with monthly meetings with our next meeting on **May 19<sup>th</sup>** at the Finger Lakes Institute. Look for meeting information on our website calendar and by email if you have given us your email address.



Our various committees have continued their work:

- The Marcellus Shale Committee** has continued to stay on top of developments in that arena. Many are waiting for the Department of Environmental Conservation review of input received from the dSGEIS and perhaps a final document for public review and comment. I think it is noteworthy that the DEC is taking the time necessary to review the experiences in other states, the technical data and the new information that seems to surface daily regarding the extraction of natural gas from shale using the Horizontal Drilling - Hydraulic Fracturing process (HDHF). Hopefully, the Department will decide that the results of the EPA's study on the effects of the HDHF process on drinking water sources are important enough to hold off any permitting in New York State until we understand how to better control this process. Two recent developments include an early April meeting with state officials in Albany by our Marcellus Shale Chair Ed Przybylowicz and other watershed members and the recent issuance of a study by Robert W. Howarth, Renee Santoro and Anthony Ingraffea of Cornell University looking at the claim that natural gas is a clean fuel. While the TV and radio commercials would lead you to believe that natural gas is a clean fuel (it is when you just consider the burning of it) the paper looks at the complete greenhouse-gas foot print of natural gas from extraction through delivery and use and compares that to coal. The bottom line: "The large GHG (Green House Gas) footprint of shale gas undercuts the logic of its use as a bridging fuel over coming decades, if the goal is to reduce global warming." The complete report can be found at <http://www.senecalake.org/Marcellus.php>.
- The US Salt-Inergy LPG Storage Committee** provided input to the DEC regarding the scoping document for the environmental impact statement (EIS) that Inergy must file for the proposed project. The scoping document was modified based on input that the DEC received and Inergy has submitted its draft Environmental Impact Statement (EIS) to the DEC. You can link to the Inergy draft EIS on the Project Page for Salt Cavern Gas Storage ([http://www.senecalake.org/Salt\\_Cavern\\_Gas\\_Storage.php](http://www.senecalake.org/Salt_Cavern_Gas_Storage.php)). The DEC response to this EIS is expected by the end of April which if accepted by the DEC will open a 30 day public comment period. If the EIS is found lacking by the DEC, Inergy will need to resubmit a modified EIS if they are still interested in pursuing the project. It is expected that SLPWA will provide comments to the DEC on behalf of Seneca Lake and its watershed. Our primary concern is the long term stability of the salt caverns to safely store LPG and natural gas.

(Continued)

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## **PRESIDENT'S MESSAGE... (continued from front)**

- The present high salinity of Seneca Lake compared to all the other Finger Lakes suggests that there could be a connection between these salt caverns and the lake bottom. Under pressure, these salt caverns could become unstable and the stored gas could break through to the lake waters.

As we mentioned in our January newsletter we have received grants from FreshWater Future and the Ontario County Water Resources Council to support the work of Dr. John Halfman of Hobart and William Smith Colleges and Finger Lakes Institute to continue his water quality research on Seneca Lake and its tributaries. This funding for 2011 will allow Dr. Halfman to expand testing to the Southern reaches of the lake. We continue to look for additional funding for 2012 to further expand this program so that the entire lake can be tested. Our goal is to develop a baseline of water quality measurements for the entire lake. This will facilitate investigation of potential "trouble areas" and monitoring impacts of changed practices. Additional funding by the Ontario County Water Resources Council is being used to expand the Seneca Lake Watershed Educational efforts by the Finger Lakes Institute.

Finally, our **Membership Committee** has been hard at work reaching watershed residents seeking memberships in SLPWA. Our membership has grown from 200 members at our August 2010 annual meeting to a current total membership of 400+ as of April 1, 2011. If you are a new member to SLPWA – thank you for your support and if you are a current member of SLPWA, please remember to renew your membership when you get your renewal notice.

We welcome your feedback and suggestions for speakers and issues at [slpwa@senecalake.org](mailto:slpwa@senecalake.org).

Sincerely,

**Phil Cianciotto,**

President, Seneca Lake Pure Waters Association

## **NYSDEC Endorsed 4-Hour Erosion and Sediment Control (E&SC) Training**

Under the SPDES General Permit for Stormwater Discharges from Construction Activity, certain contractors (Trained Contractor) and certain Qualified Inspectors are required to complete 4 hours of Department endorsed training in the principles and practices of erosion and sediment control (E&SC) every 3 years. To satisfy this training requirement, the Department has partnered with County Soil and Water Conservation Districts across the State to deliver a 4 hour E&SC training course.



See: <http://www.dec.ny.gov/chemical/8699.html> for more information and a list of dates for the training sessions.

## **DID YOU KNOW... that New York is divided into 17 watershed areas?**

New York State is richly endowed with more than 7,600 freshwater lakes, ponds and reservoirs, as well as portions of two of the five Great Lakes. These inland waterbodies serve as the drinking water supplies for large cities and small towns throughout the State, provide flood control to protect life and property, and support significant sectors of our economy including recreation, tourism, agriculture, fishing, power generation, and manufacturing.

Lakes, ponds and reservoirs also provide habitat for aquatic plant and animal life, and offer recreational opportunities such as swimming, fishing, and boating. The most significant lake resources in the state include the Great Lakes of Lake Ontario and Lake Erie, Lake Champlain and the numerous Finger Lakes of central New York State.

Submerged Heritage Preserves are historic shipwrecks and other submerged archaeological resources marked by a round mooring buoy, which provides access to the site, and a barrel-shaped navigation buoy. New York State and federal laws make these resources the shared cultural and historic legacy and property of the people of New York.



# Lake Level Report

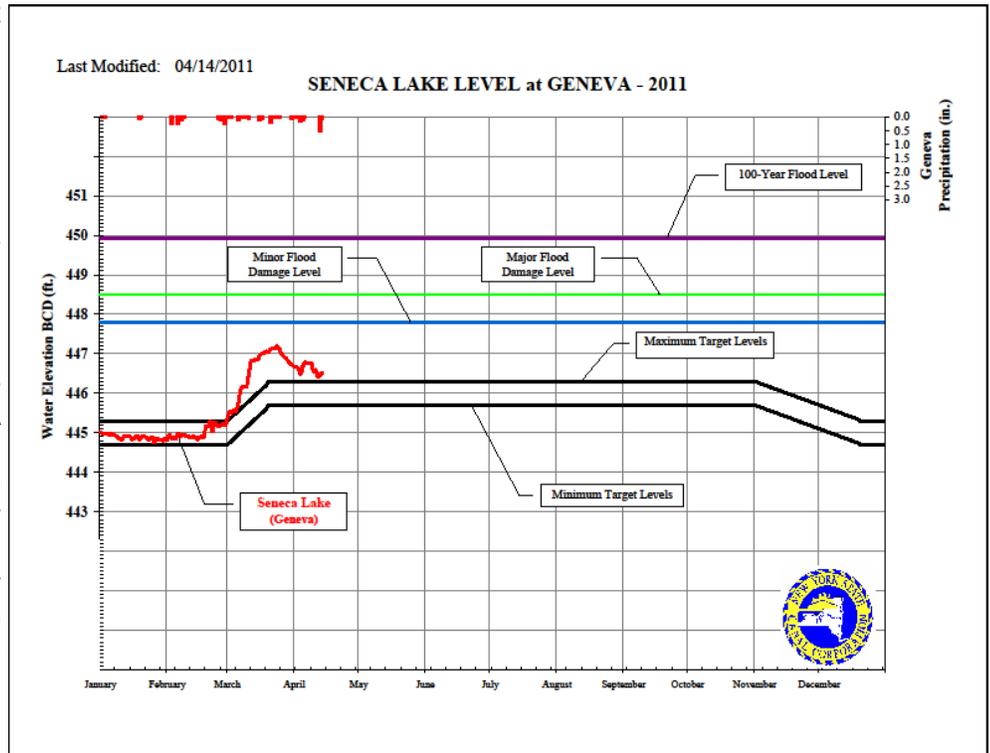
By Bob Kayser

**Got Water???** You bet we have, and more than in a number of years! Beginning the third week of February, water levels in Seneca Lake began to rise, and by the first week of March it exceeded the target level for that time of year set by the agreement between the Federal Energy Regulatory Commission (FERC) and the Seneca Falls Power Company (SFPC). By the second week of March the lake level exceeded the maximum target level for the summer months, and by the third week it was nearly 1 foot above the summer target level for the lake. Shore damage, dock damage, seawall damage and hoist damage ensued. Flotsam including trees, full sections of docks, and more than just a few boats were adrift on the lake, and lakeshore residents, among others, were unhappy.

By the end of March the level began to decline, but as of April 14<sup>th</sup>, Seneca Lake is still well above the maximum target level for this time of year. So what happened? Certainly heavy winter snow pack coupled with spring rains contributed to the problem, but according to Canal Corporation Officials, Seneca Falls Power Company failed to adequately monitor lake levels and weather reports during February, allowing levels to increase dramatically before taking action. It has also been suggested by others that SFPC may have deliberately maintained high Lake level in order to optimize profits gained through hydropower generation. Water in the lake represents a stored resource with considerable economic value to the hydropower generator. We will probably never know the truth, but these circumstances are certainly thought provoking.

What we do know is that SFPC has the legal obligation to maintain the Lake level at prescribed levels during various times of the year. We also know that SFPC is in sole control of the level Seneca Lake, and that it has the capacity to release water both through its generating facilities, and through bypass gates. Records show that they have allowed up to a billion Gallons per day to pass through their facilities. We also know that in the past, SFPC has optimized its profits at the expense of Seneca Lake (remember the Summer of 2009?) and its users. Finally, we know that SFPC has been cited by FERC for its failure to meet its contractual obligation to maintain Seneca Lake water levels, as well as several other matters.

What we do not know is why FERC has not yet taken action against SFPC for their continuing abrogation of responsibility to the communities and businesses surrounding Seneca lake. SLPWA will continue to encourage Senators Schuman and Gillibrandt to intercede with FERC to remedy the problem. We encourage SLPWA members to write to our Senators expressing their concern. We are 400 members strong with more being added each day.

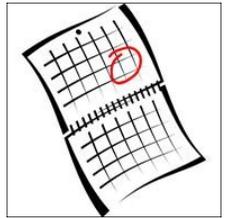


Make your voice heard!

## New Look For Our Website: [www.senecalake.org](http://www.senecalake.org)

Our website at [www.senecalake.org](http://www.senecalake.org) has recently undergone significant redesign with the purpose of making the site more useful for our members and other users. While the major framework of the new website is in place, detailed changes will continue to be made to individual pages to provide new information. In the interest of keeping the website current, our individual committees are now able to edit specific pages to provide current information on their projects. This will lead to a website that you should find more useful.

Some new features have been added to the website: for example a **Calendar of Events** and a **Search** function. Both of these features use the Google templates and in the case of the calendar, allow quick updates and linked information. We are trying to put on the calendar those events that might be of interest to our membership. If you are aware of events that should be posted here, please send an email to our Webmaster, Ed Przybylowicz at [eprzy@htva.net](mailto:eprzy@htva.net) and he will post the item on the calendar for the benefit of all of our members.



The Search function facilitates searching the website for specific information which may be contained in meeting reports, press releases and letters that we reference on the site and other information packs that we have posted. Please avail yourselves of this information base which is growing daily.



Finally, the **Project Pages** call out some of the major projects that we are working on as an association. Each of those pages has a summary of the project and the most current information. In the lower left corner of each of those pages is a place where we provide links to For Additional Information, which are usually reports, videos, audio etc. of important reports that are relevant to the specific project.

As always, we are looking for ways to continue to improve the website and make it more useful to our users. Only your input can assure that this happens, so please send comments, suggestions and information that you think should be part of our website to webmaster Ed Przybylowicz at [eprzy@htva.net](mailto:eprzy@htva.net).

**Looking for Up-To-Date Info?**

Check out the Breaking News Box in the Project Link on our website.





## NYS Electronic Recycling Law Began April 1, 2011

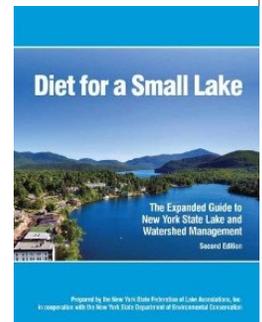
While I have not purchased any new electronics (TV's, stereos, computers etc.) in the

past few weeks, I did check with several local electronic outlets from big box stores, office supply stores and found that while all the sales staff might not yet know what the procedures are at each store for the return of electronics for recycling in their store; when pressed, they could find a manager who knew what the policy was. The policies appear to vary from store to store with some requiring a recent sales slip for a purchase in order to return an old unit for recycling – others offered the collection of up to 3 items per household per day without any evidence of a recent sale. The good news is that recycling of electronics in New York State is underway. If you have electronics to dispose of and you are making a purchase – it is probably a good idea to ask at the time of sale on how you can recycle your old unit with the retailer. If you are just discarding a worn out or unused unit, it is probably best to call ahead to see what the store's policy is regarding recycling if you did not make a recent purchase. From all indications, there is no reason for any electronics to be put out for curbside collection to a landfill. Help protect the Seneca Lake watershed and recycle your electronics and keep them out of the landfills. If you have had any recent experiences (good and bad) with electronics recycling in the Seneca Lake watershed let us know at [slpwa@senecalake.org](mailto:slpwa@senecalake.org). According to the new law, landfilling of electronics after Jan 1, 2015 will not be allowed.

## DIET FOR A SMALL LAKE— EXPANDED GUIDE

Lake associations and citizens play a vital role in protecting and restoring our lakes and waterways. This book is an introduction to understanding and managing lakes. Lakes and their watersheds are natural treasures for us to use and protect. Together these rich resources supply abundant water to support thriving communities, provide recreational opportunities, and spur economic growth in an area. For many communities, the tax base and economy are dependent on having clean water. Even when a lake is healthy, its users cannot afford to wait for a disaster before acting to keep it healthy and its water clean for current and future generations. This publication offers guidance for lakeshore residents, local officials, and agencies interested in water resources by providing:

- An introduction to lake ecology
- Descriptions of lake restoration and watershed management techniques
- A special section about relevant New York State laws and regulations
- Guidance for preparing a watershed management plan



Diet for a Small Lake was prepared by the New York State Federation of Lake Associations, Inc (NYSFOLA) in collaboration with the New York State Department of Environmental Conservation (DEC) and is the culmination of several years of collaboration on lake management issues. It replaces and expands the information presented in the first edition.

**AVAILABLE AT AMAZON.COM**

Are you getting email notices for our member meetings and events?



If not, email us at [SLPWA@senecalake.org](mailto:SLPWA@senecalake.org) to get on our email list!

## Marcellus Shale Drilling

By Ed Przybylowicz, Chair  
SLPWA Marcellus Shale Committee

On December 11, 2010, former-Governor Pateron's issued an executive order prohibiting the use of the horizontal drilling-hydraulic fracturing process for natural gas exploitation in New York State until at least July 1, 2011. Such drilling continues to expand in Pennsylvania under Governor Tom Corbett who was supported financially for his gubernatorial run by the oil and gas industry. Under Corbett's leadership Pennsylvania is creating conditions that are favorable for that industry to expand. He has refused to consider a severance tax on this industry to partially pay for repairing the damage to the infrastructure and the environment despite efforts in the Pennsylvania legislature to pass such legislation. In addition, Pennsylvania's Department of Environmental Protection is easing citations for violations of regulations by the drillers by requiring that each alleged violation be pre-approved by DEP Secretary Michael Krancer, a political appointee.

Over forty environmental groups across the state are petitioning the Governor to rescind this DEP directive. In short, the Marcellus Shale situation in Pennsylvania is very active and indicates a pro-drilling posture by the state but a lack of planning and readiness to properly regulate this industry. By delaying such drilling in New York State, it is hoped that the New York State Department of Environmental Conservation (NYSDEC) will be better prepared to control this industry if and when it expands into our state.

In this context, I joined four other people from the Keuka Lake Association in a discussion with Deputy DEC Commissioner Eugene J. Leff and Director of Mineral Resources Bradley J. Field on Friday, April 15, 2011 in Albany. We discussed specific environmental concerns that we had with drilling in the Finger Lakes Region due to the geology of our region as well as the threat that such drilling activities would pose to the growing businesses in this region based on agriculture, viticulture, recreation and tourism. We emphasized the uniqueness of the Finger Lakes geology which is full of natural cracks and fissures that might provide channels for horizontal fracking fluids from the shale layers to contaminate aquifers in other strata.

***Our purpose was to provide information to support the fact that the Finger Lakes should be treated like New York City and Syracuse watersheds and require a full Environmental Impact Study before the issuance of drilling permits by NYSDEC for horizontal drilling-hydraulic fracturing in shale deposits in New York State.***

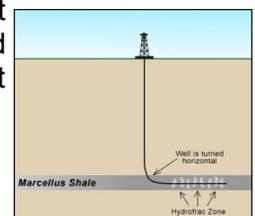
The Environmental Protection Agency (EPA) study of the impact of hydraulic fracturing on drinking water is proceeding. Reviews of the plan for this study were carried out by the Scientific Advisory Board's Engineering Committee on Hydraulic Fracturing in meetings during March, 2011. The progress of this study can be monitored on an EPA website whose link is on the Seneca Lake Pure Waters Association website at: <http://www.senecalake.org/Marcellus.php>

In November 2009 our association commented (in 25 pages of detail), on the draft Supplemental Generic Environmental Impact Statement (dSGEIS) issued by the NYSDEC, who received some 15,000 inputs on this draft. Our association comments were detailed supporting the statement,

*"SLPWA supports environmentally and fiscally responsible drilling for natural gas. SLPWA opposes drilling for natural gas under the vague guidelines and monitoring described in NYS DEC's dSGEIS."*

The department has been revising the document since that time and it is expected that another dSGEIS will be released for public comment this summer. We were told during our visit to Albany last week, that "... New York State will do things very differently than Pennsylvania...". Our association is poised to review that document against our stated position and the Minimum Requirements for Environmentally and Fiscally Responsible Drilling in the Seneca Lake watershed which you can find on our website at: <http://www.senecalake.org/Marcellus.php>

We urge our members to become engaged on this issue by checking our website for news of this new draft and also sending in your comments to us and the NYSDEC on the new draft when it is available. Please send us your comments at [slpwa@senecalake.org](mailto:slpwa@senecalake.org).



## **Are the Salt Caverns near Watkins Glen Safe for the Storage of LPG?**

You are most likely aware of the plans by Inergy to use several of the salt caverns created as a result of solution salt mining by US Salt as storage 'vessels' for LPG – Liquefied Petroleum Gas. You may want to consider some of the following issues before making up your mind regarding the wisdom of using these particular caverns so close to Seneca Lake.

Seneca Lake is approximately 3-4 times saltier than the other Finger Lakes averaging about 125 ppm chloride ion. The other Finger Lakes average 30-40 ppm and that level is a good benchmark to use for typical runoff of salt (sodium chloride) in our area due to natural occurring salt and the use of road salt to deice our roads in the winter. Historical data suggests that the higher salt content of Seneca Lake coincides with the mining for salt in the Watkins Glen area over a hundred years ago.

But how is the salt getting into the lake? There is no reason to believe that the salt processors are violating their discharge permits for discharges into the lake. So what are the other possibilities? The one proposed to me by the Inergy geologists that I spoke with during the recent Inergy presentation in Watkins Glen on April 13<sup>th</sup> suggested that it was due to runoff on the Northern end of the lake where the salt formation is much closer to the surface than at the Watkins Glen area where it is approximately 2600 feet below the surface. If this were the case, the streams in the northern end of the lake would have much higher salt concentrations than at the southern end of the lake and this has not been confirmed by investigations done by Dr. John Halfman of Hobart and William Smith Colleges and Finger Lakes Institute. The only creek that showed higher concentrations was Plum Point Creek which drains the land around the old abandoned salt mine in Himrod, NY. The concentration and flow rate of this creek is not high enough to sustain a 125 ppm average chloride level in the entire lake.

Another possibility and one that is more consistent with the known geology of Seneca Lake is that the original glaciated lake bottom of Seneca Lake is much deeper than the current bottom of the lake. As the glacier receded at the end of the ice age, the bottom of the lake was filled with silt and fill runoff to its present depth. Research suggests that the original lake bottom could be as much as 3 times deeper than the current depth or approximately 1800 feet deep at the current deepest part of the lake that is reported to be 635 feet deep. Most survey maps show the deepest part of Seneca Lake to be about midway up the Lake directly across from Starkey Point. Geologists claim (including those from Inergy) that on average the salt layer under Seneca Lake slopes upward at a rate of approximately 50' per mile from south to north. Using this as an average slope we could predict that the salt layer 16 miles north of Watkins Glen would be 800 feet higher than at Watkins Glen or about 1800 feet below the surface of the lake. If the original glaciated lake bed where the lake is now 635 feet deep was three times the current depth one could surmise that the original lake bed intersected the salt layer. One could further speculate that it is this intersection of the pervious lake fill with the salt layer that is allowing salt brine to percolate up into the lake giving Seneca Lake its higher salt concentration.

So how much salt could be entering Seneca Lake by this mechanism? With an estimated annual outflow of Seneca Lake of 7.6 million cubic meters and a 27 ppm average watershed salt concentration contribution and accounting for the daily permitted discharges from the salt operations at Watkins Glen one get roughly 7.7 million kgs of salt per year entering Seneca Lake via this route. In other terms, as a salt cavern this would represent a cavern the size of a football field from goal post to goal post and 22 feet high, or as a ten foot diameter tunnel, it would represent a tunnel over 3 miles long. Given that the lake has seen these high salt concentrations for the last 100 years since the beginning of salt solution mining operations in Watkins Glen is a disturbing possibility. Is there a connection? Even if there is not a connection the data would suggest that over the past 100 years a very large cavern in the salt formation, or a vast network of tunnels have been created under the lake bed. In either case, no one knows for certain what has occurred and where. With this lack of information can one really conclude that the salt caverns near Watkins Glen are safe for LPG storage today and in the future? I would suggest that before the NYS DEC issues a permit to use these caverns for LPG storage a scientific determination be conducted to determine the source of salt in Seneca Lake and the morphology of the salt layer under the lake where the apparent intersection of the glacial lake bottom and the salt layer intersects. Only then will we know the extent of the erosion of the salt layer under the lake and the proximity of that erosion to the proposed storage caverns.

You can find references to the papers that provided much of the data in this article on SLPWA's website ([www.senecalake.org](http://www.senecalake.org)) Salt Cavern Gas Storage Project Page and our link to our comments to the NYS DEC on the DSEIS Scoping Outline or at the following URL:

[http://www.senecalake.org/uploads/Phil\\_Letter\\_to\\_DEC\\_012711\\_Salt\\_Storage.pdf](http://www.senecalake.org/uploads/Phil_Letter_to_DEC_012711_Salt_Storage.pdf)

**Phil Cianciotto, SLPWA President**



**SLPWA MISSION:**

...is to promote the understanding, preservation and improvement of the water quality, natural habitat and general environmental conditions of Seneca Lake and its watershed by sponsoring or undertaking scientific research, by collecting, preserving, publishing and disseminating information concerning Seneca lake and its watershed and by encouraging and supporting the enforcement of laws and regulations and patterns of development and technology aimed at preserving and enhancing the water quality of the lake.

**Seneca Lake Pure Waters Association**  
**P.O. Box 247**  
**Geneva, NY 14456**

ADDRESS SERVICE REQUESTED

## Ten Things You Can Do to Help The Environment Right Now

Make a Difference With **Green Living.**

Tips and resources for making environmentally responsible choices in your daily life. Check out DEC's ideas at:

<http://www.dec.ny.gov/public/337.html>

Also, it's that time of year to get our lawn's back into shape after a long winter.

Check out DEC's website for safe environmental practices to get your lawn looking good: [www.dec.ny.gov](http://www.dec.ny.gov)

