



FALL 2020

SEBAGO IN DEPTH

Water, Land, Community

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PORTLAND WATER DISTRICT

A NEW LOOK!



A LAKE WE CAN ALL RELY ON

Features that make Sebago ideal for drinking water also make it resistant to change



By Paul Hunt & Carina Brown

A lot has happened in the world since our last newsletter. It feels like the whole world has changed and in some ways it has. Having some parts of your life that remain the same and safe provide a sense of normalcy and normal seems almost like a quaint, old-fashioned concept these days. Fortunately, we can rely on Sebago Lake to be there for us in whatever way we depend on it. As you know, many use Sebago Lake for things other than drinking water. Luckily, the things that make Sebago Lake such a safe water supply also make it resistant to world events and unwanted change, for which we can all be grateful.

Plenty of Water

Sebago Lake, Maine's second largest and New England's deepest lake, holds an enormous amount of water. It was formed by the action of glacial ice about 14,000 years ago. Before that time a smaller, shallower lake existed in the basin. Lucky for us, glacial ice scoured a deep depression as it retreated and glacial deposits created a natural dam at the prehistoric outlet of the lake, located near the Otter Ponds in Standish, raising the level of the lake by about 100 feet. Today the lake holds almost 1 trillion gallons of water and covers nearly 30,000 acres. With all that water to explore, boaters have access to countless coves, dozens of sandy beaches, myriad islands, and big open bays that can almost give you a sense that you made it to the sea. This huge volume of water also means that the amount used for drinking water doesn't significantly impact lake users. In a typical year it takes eight billion gallons to meet all the drinking water needs of Greater Portland. That sounds like a lot but that amounts to just about the top foot of water. By contrast, 180 billion gallons flows out of the lake via the Presumpscot River each year. More surprisingly, 18 billion gallons evaporates off the lake in a typical year.

A NEW LOOK!

You may notice a new look to this newsletter! We hope the title, content, and feel reflect the shared nature of the lake and its protection. A lake used by so many for so much means that Sebago Lake connects lots of people for different reasons. Whether you plant trees and shrubs on your shoreline, care for woodlands in the watershed, participate in the annual Loon Count, or test water quality, you are an important part of what makes Sebago so clean, so beautiful, and cherished by so many. We've highlighted a member of the Sebago Lake community through an interview in Profile of a Sebago Protector.



Exceptionally Clean

Everyone appreciates clean, clear water. It means you can swim fearlessly through sparkling water and have fewer slimy rocks near the shore. It also means you get to enjoy a serenade of loons and that the lake can support fish like salmon and trout. As a water utility, clean water at the source allows us to avoid filtration as part of the treatment process, which saves our customers considerable money.

We use a measure of transparency to describe the clarity of water. To measure Sebago Lake's transparency, we lower a device known as a Secchi disc and record the depth, in meters, to which we can see the disk. We have been measuring the transparency of Sebago Lake for more than 40 years and the transparency has ranged from 8 to 15 meters, averaging 10.4 meters over that time. For comparison, most Maine lakes have an average transparency of 5 to 6 meters. Clear water reflects the low algae growth in Sebago, which in turn means there is not a lot of eroding soil (which feeds algae) washing into the lake. Sebago Lake's remarkable transparency makes it safer and more affordable as drinking water, provides a more enjoyable recreation experience, and superior habitat for cold-water fisheries.

A Resilient Lake

Taking a dip in Sebago's cold, clear water and looking to the sandy shore at towering pines and thick oaks is a quintessential Maine

experience. It's part of why so many Mainers and our guests make Sebago Lake a tradition. When it comes to treating drinking water, the best water starts out cold, clear, and clean. It's in all of our interests to see this gem change as little as possible, even if the climate continues to.

We've all felt and seen the impacts of a changing climate. Compared with, say, 40 years ago, we experience more frequent and "flashy" rainstorms, milder winters, and, often now, the lake doesn't even freeze fully over. It appears these trends in climate and weather will continue and could get more unfamiliar and extreme. Time will tell. Scientists bring us good news, though, because they agree that lakes with more forested land surrounding them are more resilient to changes in weather and climate. Thick, healthy forests provide a natural filter to produce colder, cleaner, and clearer water, ultimately protecting lakes. Today, the land that drains its rain and runoff to Sebago Lake is about 84% forested. If we keep these forests healthy and intact, the lake is more likely to remain largely unchanged.

By almost any water quality measure, Sebago Lake remains one of the cleanest, healthiest lakes in the country. That's good news for everyone. The better news is that it has several important characteristics that make it resistant to change – including its size, low levels of algae, and forested watershed. If anything is clear during this unprecedented time, we should all be good

stewards of things we cherish and not get complacent about keeping them safe. For this enormous body of water we call Sebago Lake, this means guarding against erosion and careless development; keeping the working forests around it healthy, productive, and sustainable; enjoying all it offers responsibly; and supporting forest conservation efforts throughout the watershed.

If we keep these forests healthy and intact, the lake is more likely to remain largely unchanged.

Paul Hunt is the environmental services manager at the Portland Water District. Carina Brown is the District's environmental educator. They can be reached at phunt@pwd.org and cbrown@pwd.org



PROFILE OF A SEBAGO PROTECTOR

Jon Evans,
Stewardship Manager,
Loon Echo Land Trust

Loon Echo Land Trust (LELT) works to protect land in the northern Sebago Lake region to conserve both its natural resources and character for future generations. The District works closely with LELT to conserve forests on lands that drain to Sebago Lake. These conserved lands will forever filter the water flowing towards Sebago Lake and protect its water quality.

Q: HOW DID YOU BECOME INVOLVED WITH LELT?

A: I was born in Bridgton and, except when I left for a few years right after high school, have lived here my whole life. In 2008, I began working just 10 hours per week managing the LELT trails, and now work full time as the Stewardship Manager. I was hired because of my connection to our local landscape and community. I'm true to our mission, and proud of how I've adapted and advocate for what's solid and real – and how I bring people back to that. I'm an advocate. I feel blessed to go to work each day and don't take my work for granted.

Q: WHAT DOES YOUR JOB INVOLVE AS THE STEWARDSHIP MANAGER?

A: I do many land management tasks. About 30 miles of our trails are adopted and managed by volunteers, and I coordinate this program and provide training. I coordinate the inspection and care of over 50 miles of our property boundaries. I work with

consulting foresters to ensure prescribed forestry practices are implemented and on the development and implementation of forestry management plans.

I also coordinate monthly programs and innovative events for the public on our properties. I am certified in mental health first aid and want to provide tools and knowledge so people feel comfortable being in forests on their own. I feel that forests are an important place for healing and recovery and want to empower people to use the land to improve their own mental health.

Q. WHAT CHANGES HAVE YOU NOTICED IN YOUR 13 YEARS AT LELT?

A. Our trails are being used a lot more now, especially during the pandemic. We are charged with protecting this land as an important resource and we cannot let it wear out. It has become a more delicate balancing act of protecting the forests and water and helping people get immersed in nature in a manageable way. Now that people know about these lands, the higher level of use will likely continue.

Q. WHY IS THE PARTNERSHIP BETWEEN PWD & LELT VALUABLE?

A. Our partnership has become symbiotic. The District's financial support of land conservation has grown over the years as customers and the Board of Trustees have

come to understand the value of the forested land upstream. They recognize the forests as a much more affordable and sustainable alternative to a water filtration facility.

The increased financial support from the District has helped LELT realize conservation goals that may not have happened otherwise. District support helps LELT in the long, challenging process of acquiring a piece of land. Sometimes people who want to conserve their land do not want to wait a long time and these opportunities can be lost, so financial support is critical.

Q. WHAT MAKES SEBAGO LAKE NOTABLE TO YOU?

A. I have always had a fascination and love of Sebago. With it comes a sense of pride, mystery, and amazement. Its vast size holds the same allure as the ocean; in fact, when I used to drive down its western shore with my kids on the way to Portland, they thought it was the ocean! I'm taken with its geology, folklore, monstrous Sebago salmon, and rich history involving Native Americans and early settlers. I have an immense respect and appreciation for Sebago Lake. I just love it.

SUPPORT LOON ECHO LAND TRUST TREK FOR THE TRAILS

Run, walk, hike, bike, or drive- all on your own time and to support the trails you love!

Trek for the Trails is Loon Echo Land Trust's largest annual fundraising event. Funds raised from the Trek help Loon Echo steward over 8,000 acres of land and 30+ miles of trail in the Lake Region. Participants can complete their "Trek" by visiting any LELT preserve from September 19 to September 26. That means even a drive up to Hacker's Hill makes you a Trekker! Run participants will have the option to be timed via a Strava segment on Pleasant Mountain.

To register and for more information, visit <https://www.loonecholandtrust.org/trek/>





WHAT'S MAKING WAVES: AROUND SEBAGO LAKE

PORTLAND WATER DISTRICT LAKE PROTECTION ADAPTING TO COVID-19

Due to the ongoing pandemic, the District has implemented a number of changes to ensure lake protection programs are both effective and safe.

Sebago Lake Protection Office:

The Sebago Lake Protection office is closed to the public

Standish Boat Launch:

At the Standish boat launch in Sebago Lake's Lower Bay, the security building used as a point of contact to greet the public has been fenced off allowing occupancy only by on-duty District security and Town of Standish employees. All others are asked to respect the CDC six-foot social distancing guidelines. Boat launch attendants wear face coverings when inspecting boats and trailers for invasive plants.

Lake Security Patrols:

Patrols of Lower Bay by boat have continued uninterrupted.

Sebago Lake Land Reserve:

On the Sebago Lake Land Reserve, we have suspended the requirement that a permit be filled out at a kiosk before entering. The access rules, however, still apply and visitors have been adhering to the CDC social distancing guidelines and our requirement that dogs be leashed at all times. Signs have been posted at all kiosks advising visitors of these rules.



Water Quality Monitoring:

Lastly, water quality monitoring has continued on the lake and in rivers and streams flowing into Sebago. Masks are worn by all District staff when in public settings and social distancing is not possible. The Sebago Lake Monitoring Buoy that provides real-time water quality data was not deployed into Lower Bay this spring.



CITIZEN SCIENCE OPPORTUNITY WATER QUALITY TESTING

If you like exploring our local rivers and streams, please consider this new volunteer opportunity which will contribute to science! Maine Audubon is teaming up with the District and other partners to recruit community scientists that will survey large aquatic insects (macroinvertebrates) in streams and rivers in the Sebago Lake area to help evaluate water quality. Watch two Zoom online trainings to learn more about finding and identifying approximately 20 "Most Wanted" macroinvertebrates and you're in. After the training, you'll visit 1 – 3 streams before October in hopes of finding the "Most Wanted" macroinvertebrates. Maine Audubon, with help from Maine Department of Environmental Protection, will provide all training, equipment, maps of the survey sites, and data forms and instructions.

Please call or email Hannah Young at conserve@maineaudubon or 207-781-2330 x219 to express your interest and request more information.





Jerry Monkmon, ecophotography.com

IN A FUNK? FIND A FOREST!

Conserved Forests Benefit Our Health in More Ways Than One



By Laurel Jackson

We are lucky as Mainers to have abundant forests all around us serving many functions. Forests surrounding Sebago Lake, for example, act as a natural water filter, creating crystal clear water that flows into the chain of rivers, streams, ponds and lakes that flow into Sebago Lake. In addition to providing clean water, the forested land contributes to the emotional and physical health of people who live, work and play on it.

Outdoor recreation has been proven to have a positive health benefit. According to the Centers for Disease Control, people who are physically active live longer and have lower risks for heart disease, stroke, type 2 diabetes, depression, and some cancers. One study reported by the Journal of Environmental Psychology showed that people who walked in a nature preserve experienced lower blood pressure, while blood pressure increased for those walking in an urban environment. In addition, people walking in nature reported an increase in positive emotions. Anyone who interacts

A walk in the woods comes with unique sounds and feelings.



Jerry Monkmon, ecophotography.com



regularly with nature likely already feels these effects in their everyday lives. A walk in the woods comes with unique sounds and feelings - the soft squish of stepping on mossy earth, the gentle patter of raindrops hitting the forest canopy, birds singing in the distance, the cool spray of a rushing river. These intangible things bring calming feelings which relieve stress and lead to better health. We are lucky, in the Lakes Region, to find these experiences in our own backyards, or not much farther away than that.

In the Sebago Lake watershed, Loon Echo Land Trust (LELT), Western Foothills Land Trust (WFLT) and Lakes Environmental Association (LEA) own and maintain over 8,500 acres of land with nearly 80 miles of trails for public use. In the town of Harrison, LELT manages the Crooked River Forests Preserve which has approximately two miles of trails for hiking and other low-impact recreation, and over a mile of frontage on the Crooked River, a pristine river with a world-class fishery. Just upstream, you can visit WFLT's Twin Bridges Preserve and enjoy five miles of trails winding through woods to access the river for fishing or for dipping your toes. These preserves protect the water quality of the river, provide great recreational opportunities, and preserve wildlife habitat. The two land trusts worked together to protect these properties on the Crooked River, Sebago Lake's largest tributary.

The Portland Water District has been working with conservation partners to help protect watershed forests for over 15 years, and it all started with Holt Pond in Bridgton. LEA established the Holt Pond Preserve in 1970 and when the opportunity arose to expand the preserve in the early 2000's, they reached out to the District requesting a financial contribution. Recognizing that the health and protection of lakes and ponds in the watershed benefits the water quality of Sebago Lake, the District made its first contribution to forest conservation. Since then, the District has helped area land trusts and others to conserve over 5,000 acres of land for the purpose of water quality protection.

Healthy forests and waterways, healthy bodies and minds, and clean drinking water - conserved forested land supports all of it! You can support the organizations working hard to make forests accessible by visiting their trails, experiencing conservation and nature's health benefits, and by joining their effort. Find out more about each organization at their websites: www.loonecholandtrust.org, www.westernfoothillslandtrust.org, www.mainelakes.org.

Laurel Jackson is a water resources specialist at the Portland Water District. She can be reached at ljackson@pwd.org



DISTRICT STAFF PROFILE

Kirsten Ness,
Water Resources Specialist,
Portland Water District

Kirsten is one of the District's four Water Resources Specialists who carry out the water quality monitoring work around the lake and are involved in shoreline projects which could pose a risk to water quality. Kirsten Ness has been a Water Resources Specialist with the District for 13 years. Learn what unique skill she brings to lake protection by reading on!

"I love plants and gardening! This is perfect because plants are the best way to stabilize shorelines and protect water quality. I really enjoy talking to folks who live around the lake about how they can help protect it and make their shorefront more beautiful by planting native trees, shrubs, and perennials."

**Over 8,500 acres of land with nearly
80 miles of trails for public use**





WAT-ER YOU LOOKING AT IN OUR WATERSHED?!

For the curious of mind: kids, families, adults with a young soul

Each edition, we'll share a photo of something in the Sebago Lake Watershed that helps protect the water in Sebago Lake and all of the connecting streams, rivers, and ponds.



WHAT'S A WATERSHED? *A watershed is an area of land over which all water flows into a common body of water. The Sebago Lake Watershed includes parts or all of 20 towns and many other bodies of water! When it rains within this area of land, the water flows downhill either soaking into the ground or collecting in a nearby stream or river. Eventually, the water will flow and collect in Sebago Lake.*

WHAT COULD THIS BE?!!

Submit your guesses by emailing sebagolake@pwd.org. You'll learn what is in this photograph and how it helps protect Sebago Lake.



THAT'S SEBAGO LAKE!



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WITH THE DISTRICT'S
SEBAGO PROTECTORS

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sebagolake@pwd.org

Learn about events we and our partners host around the lake and throughout the watershed by joining our email list. Send an email to sebagolake@pwd.org

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