



March 2025 / Vol 12

Welcome to the March Issue of Watershed Watch,

March marks an exciting time of transition in our watershed. As winter gives way to spring, the snowpack begins to melt, waterways respond to the seasonal shift, and the skies fill with the sounds of returning migratory birds. This month, we're diving into the science behind these changes and the work being done to monitor and manage our water resources.

Our first feature takes a closer look at how flood forecasting works and the 24/7 monitoring efforts that help predict and manage potential flooding across our watershed. From analyzing real-time data to issuing timely flood warnings, our team plays a crucial role in keeping communities informed and prepared.

We'll also explore snow depth and snow water equivalent (SWE), two critical measurements that help determine how much water is stored in the snowpack and what it could mean for water levels in the weeks ahead. Understanding these factors is key to anticipating spring runoff, managing flood risks, and sustaining water resources for the coming season.

Finally, spring bird migration is in full swing, bringing thousands of birds back to the Kawartha Lakes region. Conservation areas like Ken Reid serve as essential stopover sites, offering rich habitats for warblers, waterfowl, and songbirds on their journey north. Learn what species to look for and how you can get involved in birdwatching this season.

As always, we want to hear from you! If there are stories, projects, or topics you'd like to see covered in future issues of Watershed Watch, we'd love to know. Please share your ideas by emailing jchambers@kawarthaconservation.com. Thank you for being part of the Kawartha Conservation community and for your continued commitment to the health and sustainability of our watershed.

Warm regards,

The Kawartha Conservation Team

INSIDE THE FLOOD FORECASTING AND WARNING SYSTEM AT KAWARTHA CONSERVATION

When a storm rolls in, most people watch the rain from their windows or check the weather forecast to see what's coming. But at Kawartha Conservation, we see something different, a changing landscape, rising water levels, and the possibility of a community at risk.

Flooding is more than just high water. It's the anxious call from a farmer worried about their fields. It's the municipality scrambling to protect roads and bridges. It's the family wondering if their basement will stay dry. And it's why our team works tirelessly, behind the scenes, to monitor and predict flood risks before they happen.

Every day, our team is analyzing data, lots of it. From real-time monitoring stations scattered across the Kawartha watershed to measuring water-equivalent in snowpack levels, river flows, and precipitation, we piece together the story of our watershed.

“Our monitoring system is always running, 24/7, to track environmental conditions and identify potential threats,” explained Nathan Rajevski, Watershed Resources Technician. “We rely on a combination of historical data, precipitation forecasts, hydrological models, and on-the-ground observations to develop an accurate picture of what is happening across our watershed and how it may impact people.”

Flood forecasting isn't just about predicting the impact of heavy rainfall, it's also about monitoring how melting snowpack will influence water levels. As temperatures rise in the spring, the accumulated snow melts and flows into lakes, rivers, and streams, sometimes overwhelming the system. This runoff must be managed carefully, particularly in areas regulated by locks and dams, to prevent flooding in downstream communities.

“As we've seen in recent years, snowmelt can be just as much of a flood risk as a heavy rainfall event,” Rajevski adds. “What used to be a predictable spring thaw has become more variable, making our monitoring efforts even more important.”



Little Britain Road washout flooding.



Road closure due to extreme flooding.

The moment a potential flood risk is identified, Kawartha Conservation staff carefully assess the situation and take appropriate steps to communicate the risk. We issue alerts and communicate directly with municipalities, conservation authorities, and the public to ensure everyone is informed and prepared. In rapidly worsening situations, we also coordinate with emergency response teams to provide up-to-date information that helps guide decision-making.

“Every storm system is different, and every watershed reacts differently,” Rajevski noted. “Our role is to analyze multiple data sources and provide timely, accurate information so that municipal partners and residents can make informed decisions about safety and preparedness.”

The unpredictability of weather due to climate change has further complicated flood forecasting. “There is no longer a typical flood season,” Rajevski explains. “What we used to expect in the spring from snowmelt, or in the fall from heavy rains, can now happen at any time of the year. That’s why continuous monitoring and forecasting are so critical.”

These flood messages, whether a Watershed Conditions Statement or a Flood Warning, help communities prepare, protect their homes, and stay safe.

Why This Work Matters

For many, flooding is just another seasonal risk. For us, it’s a responsibility. Our team doesn’t just analyze numbers; we see the faces behind them, the people, the homes, the businesses, the history of the communities we serve.

Flood forecasting and warning is about more than data points and statistics. It’s about protecting the people who call this watershed home.

As climate change brings more unpredictable weather patterns, our work has never been more critical. “We can’t rely on historical patterns alone anymore,” Rajevski notes. “We have to adapt our models and monitoring to reflect the new reality, that flooding can happen anytime, anywhere.”

We’re here, watching, analyzing, and preparing, because every drop of water matters, and so do the people who depend on it.

Stay informed, stay prepared, and stay connected. For real-time updates, visit our website or follow us on social media.



Galen Yerex, Floodplain GIS/Mapping Technician, flood monitoring.

UNDERSTANDING SNOW DEPTH AND SNOW WATER EQUIVALENT: HOW KAWARTHA CONSERVATION USES SNOW MEASUREMENTS TO MANAGE WATER RESOURCES

Winter in the Kawartha region brings more than just picturesque landscapes and snow-covered forests, it also plays a crucial role in the hydrological cycle of local watersheds. Snowpack acts as a natural reservoir, storing water throughout the colder months and releasing it gradually as snowmelt in the spring. Measuring snow depth and Snow Water Equivalent (SWE) is essential to understanding how much water is stored in the snowpack and how it will impact the region's rivers, lakes, and groundwater.

At Kawartha Conservation, tracking snow depth and SWE is a key component of watershed management. Snow depth simply refers to the thickness of the snowpack at a given location, while SWE measures the amount of water contained within that snow. Since snow can be light and fluffy or dense and wet, SWE provides a more accurate estimate of potential runoff when the snow melts.

"Measuring snow depth and Snow Water Equivalent allows us to anticipate spring runoff and prepare for potential flooding or low water conditions," says Nathan Rajevski, Watershed Resources Technician at Kawartha Conservation. "This data helps us make informed decisions to support water management, protect communities, and sustain local ecosystems."

To collect this data, Kawartha Conservation follows a systematic approach:

- **Snow Depth Measurement:** Using a snow probe, technicians take multiple depth readings in a designated area to get an accurate representation of snow accumulation.
- **SWE Calculation:** A core sampler extracts a column of snow, which is then weighed to determine the water content. This method helps quantify the actual amount of water available for runoff once the snow melts.

Why Snow Measurements Matter

Understanding SWE and snow depth is critical for managing water resources, particularly in regions like Kawartha Lakes, Durham and Peterborough County, which experiences a variety of winter precipitation types, including snow, rain, and freezing rain. These variations can create highly unpredictable snowpack conditions.



Staff have been out in the field collecting snow depth measurements, contributing to a better understanding of water resources in the watershed.

By consistently monitoring snowpack data, Kawartha Conservation can:

- Predict Spring Runoff: Anticipating when and how much water will enter rivers and lakes allows for better flood risk management.
- Support Water Supply Planning: Ensuring an adequate water supply during drier months requires an understanding of seasonal water storage.
- Assess Climate Trends: Long-term snow data provides insight into changing climate patterns and their effects on local water resources.

Supporting Communities Through Data

Snow measurement efforts are not just about science, they have real-world applications that benefit communities, municipalities, and local industries. The data collected helps inform decisions about water use, conservation efforts, and emergency preparedness.

“Our goal is to provide the best possible information to support sustainable water management,” adds Rajeovski. “By measuring snow depth and SWE, we can help ensure that our watersheds remain healthy and resilient.”

As winter progresses, Kawartha Conservation’s ongoing snow measurement program will continue to provide valuable data to support water management efforts across the region. By understanding the water content of snowpack, experts can better prepare for seasonal changes, ensuring that both people and ecosystems have access to the water they need.



Staff conduct snow depth measurements as part of ongoing efforts to track seasonal changes and support watershed management.



Snow depth data collection provides valuable insights into water levels and helps inform planning for the spring thaw.

THE SOUNDS OF SPRING: BIRD MIGRATION BEGINS THIS MONTH

As the snow melts and the days grow longer, the skies above Kawartha Lakes come alive with the sights and sounds of spring migration. Each year, thousands of birds make their way north, stopping to rest and refuel in our conservation areas before continuing their journey. Ken Reid Conservation Area, in particular, is a vital stopover, offering wetlands, forests, and meadows that attract a remarkable diversity of bird species.

"Spring migration is an exciting time of year," says Freddie Caveen, Conservation Areas Technician. "You'll hear the first Red-winged Blackbirds calling from the marsh, see Wood Ducks gliding through the wetlands, and maybe even spot Tree Swallows darting above the boardwalk. It's a great time to get out and explore."

Birds to Watch for This Spring

From March through June, birdwatchers can expect to see an incredible variety of species returning to the region. Early migrants include Canada Geese, Tundra Swans, and Eastern Phoebes, while April and May bring the arrival of warblers, vireos, and flycatchers.

Ken Reid Conservation Area is one of the best spots to witness this seasonal spectacle.

- The Marsh Boardwalk is a prime location for spotting Red-winged Blackbirds, Common Yellowthroats, and Swamp Sparrows.
- At the Marsh Lookout, visitors can scan for wading birds like Great Blue Herons, American Bitterns, and Green Herons.
- The Woodland Trails are filled with the songs of Black-throated Green Warblers, Pine Warblers, and Ovenbirds.
- The Beach Area offers a view of migrating ducks, geese, and swans, with Hooded Mergansers and Buffleheads often spotted along the shoreline.

"One of my favorite spots is the Marsh Lookout," shared Jackson Boyes, Conservation Areas Technician. "You can hear the deep, resonant call of the American Bittern and watch Ospreys diving for fish, it's an incredible experience."



Conservation Areas Technicians, Jackson Boyes and Freddie Caveen.

Other Conservation Areas to Explore

While Ken Reid is a migration hotspot, other Kawartha Conservation areas also offer fantastic birding opportunities.

- Pigeon River Headwaters: Excellent for woodland species like Thrushes and Warblers.
- Fleetwood Creek Natural Area: A great place to see Eastern Towhees and Scarlet Tanagers in the spring.
- Windy Ridge Conservation Area: Offers a mix of meadow and forest birds, including Eastern Meadowlarks and Bobolinks.
- Durham East Cross Forest: Home to raptors like Red-tailed Hawks and Northern Harriers.

"Each conservation area has something unique to offer," Caveen adds. "Whether it's the open meadows of Windy Ridge or the deep forests of Fleetwood Creek, you'll always find something special during migration."

Get Started with a Bird Watching Kit

New to birding? Thanks to a partnership with the Kawartha Lakes Public Library, visitors can sign out Bird Watching Kits that include binoculars, a bird guide, and books to help identify species. These kits are a perfect way to introduce kids to the wonders of birding, just in time for March Break.

"Birding is an activity that anyone can enjoy," says Boyes. "All you need is a pair of binoculars and a bit of patience. You never know what you might see!"

Whether you're a seasoned birder or just getting started, spring migration is the perfect time to visit Ken Reid Conservation Area and our other conservation properties. Grab your binoculars, listen for the calls, and enjoy the return of our feathered friends!

For more information on birding in our conservation areas, visit:

www.kawarthaconservation.com/birding



Red-winged Blackbird
Agelaius phoeniceus



Pine Warbler
Setophaga pinus



Hooded Merganser
Lophodytes cucullatus

For more information on how Kawartha Conservation can help.
Conservation Lands: conservationareas@kawarthaconservation.com
General info: geninfo@kawarthaconservation.com
Permitting: permits@kawarthaconservation.com
Planning: planning@kawarthaconservation.com