

A WILDLIFE STRATEGY BASED ON COEXISTENCE

BEAVERS WILL BE THE TEST

City of Ottawa staff continue to refer to beavers as a “contentious issue”, trapping and killing a shocking 150 of them every year, while a growing number of jurisdictions across North America are embracing beavers as a key ally in protecting wetlands and fighting climate change.

Critical Services Provided by Wetlands and Beavers

Wetlands provide essential flood control, lessening the impact of sudden large rain events, keeping our communities safe. During drought, wetlands maintain surface water flow, helping surrounding vegetation and recharging groundwater over a very large area, helping to protect against the growing threat of wildfires. Wetlands replenish our drinking water aquifers, trap sediments and bacteria and pollutants while storing carbon and serving to protect biodiversity.

Green Infrastructure and Stormwater Management

The Peoples Official Plan Coalition (POP) Submission (July 2023) on the City’s draft Infrastructure Master Plan points out the omission of wetlands as an important component of Green Infrastructure for stormwater management, stressing the financial benefit and an alternative to human-made pipes and costly maintenance.

Beavers, as a keystone species are the single most important influence in restoring and maintaining wetlands and, as such, are a critical part of the cost-effective nature-based solution to stormwater management.

The Science

Scientists, government policy advisors, water resource engineers, biologists and hydrologists along with flow device technology experts are increasingly coming together at conferences, workshops and on-line panel events.

- The introduction to one up-coming conference: *“Across the Northern Hemisphere beaver ecology is one of the fastest-growing fields in restoration ecology. At no time in history has the role of the beaver been so illuminated, authors, filmmakers, and the media have shone the international spotlight upon an unlikely hero, the humble hardworking champion of our aquatic ecosystems.”*
- Dr. Glynnis Hood, University of Alberta, Canada’s leading wetland scientist, warns *“removal of beaver should be considered an environmental disturbance on par with in-filling, peat-mining and industrial water extraction”*.
- Dr. Cherie Westbrook, a renown hydrology expert at the University of Saskatchewan states *“water that seeps into the soil around a beaver pond can travel up to 2 km. underground, raising the water table throughout the zone”*, reducing the impact of drought and the risk of wildfires.

Those Taking the Lead

Modern flow device technology is allowing cities to gain the essential ecological services of beavers while preventing potential damage to infrastructure due to flooding. Some examples:

- **The City of London, Ontario**, in partnership with the Upper Thames River Conservation Authority, has been successfully using flow devices in stormwater ponds since 2015. They held a public meeting in 2014 for their staff and residents to hear from Mike Callahan, a flow device expert (see biography on page 4). By creating a public forum where questions could be raised and opposing points of view examined, city councillors were able to weigh the environmental benefits and cost-savings in using flow devices.

In London, the decision to adopt a progressive approach to beaver management was due to a newly-elected city council and professional staff that had the right skill sets and a modern outlook. The project lead, for example, has a degree in Environmental (Civil) Engineering and a Masters in Public Administration, with a focus on finance and local government. Staff in London are increasingly invited to speak with other municipalities about the success of the project. They have offered to do so in Ottawa.

- **Federal Government – Carling Campus, Ottawa** – Public Services and Procurement Canada, working with the Ottawa-Carleton Wildlife Centre, the National Capital Commission, the Rideau Valley Conservation Authority and community associations, has restored a debilitated Wetland and rehabilitated three Naturalized Stormwater Ponds, all with a focus on wildlife-sensitive planning measures such as the installation of flow devices in the Stormwater Ponds and the planting of beaver food trees.

The latest flow device installed on Campus used the technical advice and design of Mike Callahan's company, Beaver Solutions. Despite the number of engineers involved from PSPC and its property management company, these engineers readily accepted the design specifications relayed by the OCWC from Mike Callahan. As one engineer said, *"there is no false pride involved in accepting the advice of a recognized expert for a design that is successful."*

- **Association of Massachusetts Wetland Scientists – 20 Year Study** – A total of 55 beaver conflict sites in Billerica, MA were studied from 2000 through 2019. The first of its kind study revealed that the 43 sites managed with nonlethal control methods cost significantly less than sites that were managed with beaver removal. In addition, nonlethal control methods provided millions of dollars of ecological services to the town annually that would have been lost with beaver removal.
- **Virginia Department of Transportation Study** – this study, carried out two decades ago, shows the hundreds of thousands of dollars saved annually after the installation of flow devices.
- **California, Washington and other Western states** – are encouraging the use of flow devices to keep beavers on the landscape, recognizing the ecological benefits this species brings in enhancing groundwater supplies that buffer against the threat of wildfires as well as providing a wide range of other climate-smart solutions, according to state officials.

Why is Ottawa Not Using Flow Devices?

Despite the science of the environmental benefits and the substantial economic savings in using flow devices, the city of Ottawa continues to trap and kill beavers. Why? They say when something makes no sense, follow the money.

The Cost to Ottawa Taxpayers

Ottawa spends \$150,000 a year on a trapper, more than any other jurisdiction in North America. Yet, this is only a very small percentage – generally 5-10% - of Ottawa's beaver management costs. The real cost is in city staff and equipment inspecting, unblocking culverts and breaking up dams. With 30-50 beaver management sites that, according to the city, receive inspection once a week or more frequently at critical times of the year, it represents a huge amount of money in stormwater, municipal drain and road department budgets.

Lack of Accountability

Much of the exceptional amount of time spent by staff doing this work remains unaccountable. When our Centre and a former councillor asked for an estimate of the time spent by staff, the city ecologist has either responded that the *"city doesn't keep track of time spent on a site-by-site basis"* or that *"staff are too busy to do a calculation of time spent."*

Other jurisdictions have no difficulty in assessing the amount of time/costs staff spend doing this repetitive work and, in fact, use the significant savings as the justification for installing flow devices.

The issue of accountability has also been raised by some local residents. One who reported observing a city vehicle parked on the side of the road for several hours after a culvert had been cleaned with the driver *"watching the corn grow"*. Another resident who asked the city crew why they always came so late in the day to regularly unblock a culvert, got a wink and response *"overtime"*.

It is the protection of this unnecessary, often overtime, work that is behind the resistance of city staff to adopt modern flow devices as a prevention alternative. In addition to the protection of staff salaries, the long-standing and self-serving relationship between trappers and city drainage staff further explains the determination to protect the status quo.

Demand for Humane Solutions

The public made it clear during the city's Information Sessions, much as they have done over the past decade, that they want a humane response to wildlife concerns and a modern Wildlife Strategy based on coexistence.

People will continue to strongly oppose the killing of beavers, particularly in stormwater pond areas where families are appalled at the thought of an animal struggling and dying in a conibear trap next to their recreational path.

Public Safety

There is also a serious public safety issue in using kill traps where children and pets play. Such risks are simply unacceptable when concerns about flooding can and are being addressed elsewhere by non-lethal means using flow devices.

Recommendations For What is Required in Ottawa:

As happened in London, Ontario, the only way that Ottawa's outdated, cruel and costly practices with respect to beavers will be reversed is with the leadership of councillors:

- 1) Produce a summary of the amount of time per week that staff inspect, clean culverts and break up dams at the 30-50 beaver management sites in Ottawa. The summary should also include where equipment is required along with staff time/salary costs.
- 2) Hold a meeting, in person or on-line, for a flow device expert – either Mike Callahan of Beaver Solutions (biography below) or Brandon Williamson at London's Upper Thames River Conservation Authority to give a presentation and respond to the questions of city staff and the public on the use of flow devices.

An open dialogue is essential to move beyond the decade-long stalemate of drainage staff hiding behind the city's Planning Department in opposing the use of flow devices in stormwater ponds.

Flow Device Expertise

Mike Callahan, President of Beaver Solutions, and founder of the Beaver Institute has designed and installed more successful flow devices than anyone in North America. He has done this work for municipalities, government agencies, utility companies, railroads, businesses and others. In Canada, he has assisted the cities of Cornwall and London, Ontario.

In August 2012, he wrote to Ottawa's Planning Department (Nick Stow), offering the city's stormwater engineers his professional advice at no charge. His offer was ignored.

Prepared by Ottawa-Carleton Wildlife Centre
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