

Stormwater Management

Cobourg Council

Victoria Hall

19 December 2022

Technical Concepts

The runoff coefficient is a dimensionless coefficient defined as the ratio between precipitation impinging on a surface to the amount not retained by said surface and is a function of watershed characteristics including land use, soil type, and slope of the watershed.

- Rain falls
- Some soaks into the ground
- Some runs into storm sewers and ditches or onto the roads
- The amount that runs off is called “runoff coefficient”
- Typical runoff coefficients:
 - 1.00 **all** water runs off a roof or asphalt parking lot
 - 0.05 almost all water soaks into a lawn on sandy soil
 - 0.00 rain barrels store water until needed for the garden
 - 0.25-0.40 typical suburban lot according to online sources
 - 0.45 **all** Cobourg single family lots, regardless of size and soil type, according to Watson

Property Type	2023 Stormwater Rate per Hectare (ha)	2023 Stormwater Rate per Acre (ac)	Runoff Coefficient
Commercial	\$1,809.44	\$732.26	0.90
Institutional	\$1,507.87	\$610.21	0.75
Industrial	\$1,608.39	\$650.89	0.80
Agricultural/ vacant	\$402.10	\$162.72	0.20
Residential (low density)	\$904.72	\$366.13	0.45
Residential (medium density)	\$1,206.29	\$488.17	0.60
Residential (high density)	\$1,507.87	\$610.21	0.75

Issues

- Stormwater management is too expensive without help from property owners
- There are questionable allocations in the Watson report
- Proposed charges are inequitable for larger properties
- Proposed charges do not properly address large retailers
- Proposed charges cannot be reduced by residents
- Many cannot afford yet another tax!

Stormwater management is expensive!

- \$1,620,726 to be collected in 2023 from proposed stormwater charge
 - This is more than 6% of the **total 2022 levy**
 - Total stormwater management expenditures in 2022 were budgeted at \$508,100 or about 2% of the levy. **The proposed scheme represents a 4% tax increase!**
 - 2022 budget total for snow ploughing, sanding and salting was \$146,500

Errors in Watson report

- Numerous errors in allocation of properties to categories
 - Cemeteries should be Agricultural rather than Commercial
 - The marina is unlikely to pay \$82,275.24 in stormwater fees
 - Brookside may balk at paying \$19,496.76 in stormwater fees
 - Our hospital is unlikely to pay \$12,455.01 in stormwater fees
 - There are dozens more questionable allocations
- A first cut at correcting such errors reduces expected revenue by about \$225K so all rates will have to increase by 13% to garner planned revenue.
- Will this shortfall result in a 26% increase for 2024?
- **Residential portion rises to about 38% of total charges and commercial portion falls to 15%**

Questionable Classifications by Watson

MPAC Code	MPAC Description	Classification	Count	Total Area
102	Conservation authority land	Agricultural/ Vacant	1	12.51
103	Municipal park (excludes provincial parks, federal parks, campgrounds)	Agricultural/ Vacant	23	19.80
486	Campground	Agricultural/ Vacant	2	1.57
492	Marina—located on waterfront; defined as a commercial facility for the maintenance, storage, service and/or sale of watercraft	Commercial	1	45.47
560	MEU transformer station	Industrial	6	1.24
590	Water treatment/filtration/water towers/pumping station	Industrial	10	14.12
597	Railway right-of-way	Industrial	1	17.08
598	Railway buildings and lands described as assessable in the Assessment Act	Industrial	2	2.81
621	Hospital, private or public	Institutional	1	8.26
631	Provincial correctional facility	Institutional	1	12.93
702	Cemetery	Commercial	4	16.63
730	Museum and/or art gallery	Institutional	1	0.06
731	Library and/or literary institutions	Institutional	1	0.75
805	Post office or depot	Institutional	1	0.32
810	Fire hall	Institutional	1	0.72
812	Ambulance station	Institutional	1	1.76
815	Police station	Institutional	2	1.14

Residential Charges Are Not Equitable

- Larger properties have larger yards but not larger driveways
- Most rainfall on larger properties is absorbed by lawn and garden areas
- A 1 acre property pays 5 times the amount of the average residential property yet contributes the same or even less to runoff. This is not reasonable!

Large Retailers Do Not Pay Their Share

- Large retailers – Walmart, Home Depot, Mall – are 99+% roof and paved parking areas
- Roof and asphalt parking areas do not absorb **ANY** water
- The approved runoff coefficient of 0.90 for commercial properties does not reflect reality. A coefficient of 1.00 would be far more accurate.

Charges Cannot be Reduced by Residents

- No reduction for rain barrels
- No reduction for ponds
- No reduction for water gardens
- No reduction for permeable pavers on driveways and walkways
- No reduction for trees
- No reduction for native plants
- No reduction for green roofs
- No reduction for improved grading

What To Do?

- Adjust runoff coefficient for large retailers such as Walmart to reflect reality
- Charge large residential properties as a combination of residential and agricultural properties
- Develop plans to encourage personal ecologically beneficial actions
- Ensure new construction follows best practices for stormwater management
- Communicate the importance of runoff management to our residents.

Actions Tonight

- Update the stormwater rate charge calculation specified in Bylaw 048-2022 Section 3-3.2 as is provided by Section 4-4.1-iii of the same bylaw. The updated Appendix A of proposed Bylaw 091-2022 to include:

“For properties classed as Residential (Low Density) apply the approved rate for Residential (Low Density) to the lessor of 0.08 ha or the actual property size. Any area exceeding 0.08 ha will be charged at the approved Agricultural/Vacant rate.”

- Request that staff explore and report to Council within six months on the benefits to Cobourg of implementing stormwater management practices that both encourage and reward resident initiatives. Consideration should be given to practices in municipalities including but not limited to Mississauga, Brampton and Philadelphia, PA.