LITTORALLY SPEAKING: A COFFEE TABLE BOOK

Exploring the Ottawa River shoreline in search of urban water system infrastructure (2020-2021)

By Beth Shepherd

Artist | Environmentalist | Animal Advocate

Introduction

Littorally Speaking – A Coffee Table Book may one day be a real coffee table book in format but for the time being it is a but parody of the beautifully bound oversize books I remember from my childhood that literally occupied our living room coffee table. In the first place, this coffee table book is in a digital format designed to simulate the magical experience of turning pages; secondly, the photographs were taken by me, an amateur photographer, with my iPhone 6 camera. While many coffee table books do capture remote and rarely seen places, *Littorally Speaking* certainly does that.

For me, coffee table books have long been associated with the natural world and environmentalism. I still have my favourite coffee table book—*The World We Live In*, a Time-Life book published in 1955—filled with colourful photographs and three-page artist renditions of the Earth's geology and natural history. Scanning the introduction written sixty-six years ago by Vannevar Bush, an American engineer, inventor, entrepreneur, science administrator and presidential advisor, I found this passage:

> We find a placid relief in contemplating the beauties of nature…and such relief is indeed salutary in these troubled times. All of us ought, at least, to be interested in curbing our prodigal depletion of the power and material resources of our world and enlarging the niggard legacy we are likely otherwise to leave for future generations. (1)

Unfortunately, it would appear that society has not taken heed of the writer's warning. Indeed, the post-war era give rise to exponential growth of consumer capitalism, which continues today as we feel the effects of climate change, environmental degradation, species loss brought about by unmitigated growth of industrialization, resource exploitation and urbanization.

Another popular series of coffee table books published in the 1960s was the Sierra Club's *Exhibit Format* books. Featuring the work of Ansel Adams and other artists, the Sierra Club used the books to publicize its conservation agenda, resulting in the passing of the U.S. Wilderness Act of 1964. Although initially promoting an empty, sacred and sublime wilderness, the series opened debate on environmental reform—moving beyond the idealization of nature to more ecological conceptions of the landscape. (2) It is in the latter mode I undertook my two-year photographic exploration of the Ottawa River shoreline.

Toying with tropes of unspoiled nature and the sublime wilderness, each image is confounded by what appears to be feces in the foreground. The obvious staging plays with the notions of constructedness and artifice in landscape art and environmental photography. At first glance the use of the soap-poop—modelled out of French-milled soap, acrylic paint and beeswax—adds a sense of humorous irony but also serves as a metaphor for the era of neocapitalism, with its unrelenting transformation of resources into consumer goods, carbon dioxide and other greenhouse gases that are altering our climate and toxins, emissions, effluents, and waste that are despoiling the planet. (3)

Despite all the controversies, landscape is a term that has cultural and material currency. Landscape, especially in light of our new COVID-inspired focus on nature, has become a tableau reflecting our relationships and interrelationships with material world and all living things that share it. We become aware of the precarity of the environment when we see ruined or threatened landscapes.

The Ottawa River

I am fortunate to live beside the Ottawa River in Britannia Village, a neighbourhood in the west of Ottawa. While seemingly unchanged over the last thirty or so years, I sense that the river ecosystems have undergone ecological changes under the pressures of urban development. The shoreline has become more hardened to stave off the effects of floods and erosion. There are fewer animals and insects; there are more boats and paddleboards, people on bike paths, at public parks and beeches; and there is more plastic waste along the shores.

From source to mouth, the Ottawa River is 1,271 km long from its source to the Lake of Two Mountains and the St. Lawrence River at Montreal. The river lies in the Ottawa-Bonnechere Graben, a rift valley that formed 175 million years ago. Along its course it flows through the Canadian Shield, limestone plains and glacial deposits. (4) With climate change affecting precipitation and temperatures throughout the watershed, the waterflows seem to be more irregular--with flooding one year and drought-diminished flows the next!

The Ottawa River Watershed
(from the Ottawa Riverkeeper website)

From its source in Lac des Outaouais in Quebec, the Ottawa River flows 250 km to Ottawa, widening and narrowing depending on the landscape. In the west of Ottawa the river forms Lac Deschênes and then narrows at the Deschênes Rapids just above the Britannia Water Filtration Plant. Flowing past the Remic Rapids and the Lemieux Island Water Filtration Plant, the river drops by almost 15 m. at the Chaudière Falls, as the water passes through a rocky escarpment. (5) Below the falls the river flows past Parliament Buildings high on the limestone cliffs to the locks of the Rideau Canal. Further east the Rideau River and the Gatineau River, converge. The river flows through past the Robert O. Pickard Environmental Centre where treated wastewater is returned to the Ottawa River.

The Ottawa River has a rich and diverse history extending back longer than 6000 years with Indigenous habitation, through European contact and the subsequent colonial settlement in the early nineteenth century, to the present. (6) For hundreds of years the development in the Ottawa River watershed has increased, notably through resource extraction, agriculture, urbanization, industrialization and power generation. Often economic development has been prioritized over environmental protection. Industrial and urban development are key drivers of environmental change in the region and put extra demands on the river for clean water, disposal of wastewater, sewage and runoff, agricultural and industrial effluent, and increased power demand.

Since approving the Ottawa River Action Plan (ORAP) in 2010, the City of Ottawa has been implementing a number of projects to foster a healthier water environment that provides “safe, abundant drinking water; supports agriculture, recreation and tourism; lessens the impact of flood events; and helps sustains fish and wildlife.” (7)

About the Project

Littorally Speaking: A Coffee Table Book documents a two-year project carried out in 2020 and 2021 during which time I photographed thirty-five locations where the Ottawa urban water system infrastructure directly interfaces with the Ottawa River. The photos of phase 1 were taken at the city's two filtration plants and one wastewater management facility down river. Phase 2 entailed photographing a number of the City of Ottawa's stormwater management facilities, specifically "outfalls," which are outlets that discharge untreated stormwater, meltwater and other runoff directly into the river.

To guide phase 2, I drew on the City's Ottawa River Outfalls Rehabilitation Project, ongoing since 2013 (referred to as the Plan). As part of its responsibilities to maintain storm and combined sewer outfalls, the City is in the process of replacing or rehabilitating a number of outfalls constructed in the 1930s to 1960s, which are reaching end of life and require rehabilitation. (7) The plan served as a useful tool in identifying outfalls along the river.

My intent was never to be exhaustive in picturing the urban water system infrastructure—after all, this is an eco art project, not an environmental or engineering study. Physical accessibility, my ability to find particular outfalls, and chance have been important factors in determining what got photographed.

The "scenic" photographs taken in the course of my exploration are arranged in four sections, organized geographically from west to east, as the river flows. Starting with a map of the respective shoreline, each section presents photos of the site. Each site entry has a title, the date(s) the site was visited, a reference to the rehabilitation plan, if applicable, its GPS location, and a few descriptive and contextual notes.

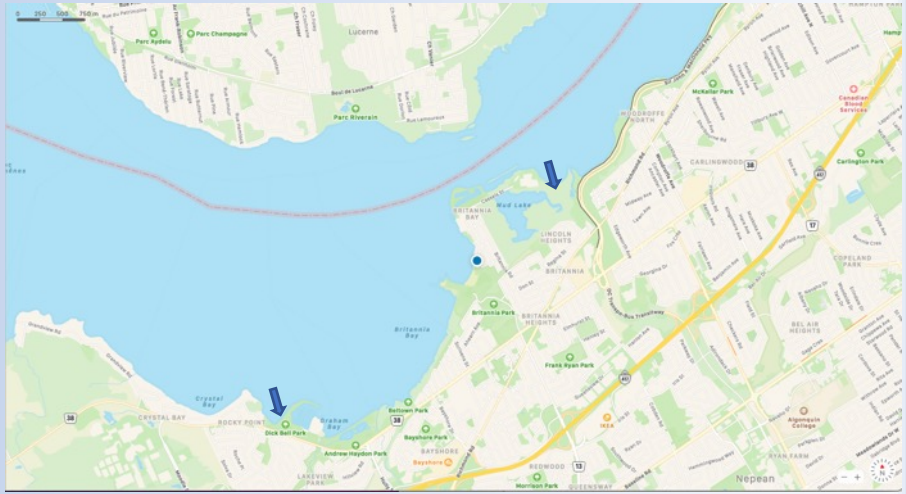
A note on the name "Littorally Speaking"

My project started out under the name "Soap-Poop Meets the Ottawa Water System" as fully explained in a post on my website (bethshepherd.ca). As the project matured, I wanted to shift the focus away from the "feces thesis" and emphasize the ecological nature of the project.

I thought a long time about a catchy but meaningful name for my coffee table book. Because of drought conditions starting in the spring of 2021, I was able to explore the littoral zone of the river—the shoreline areas between high and low water levels. I thought about how much plastic litter I found along the shoreline, which would make its way to the oceans. Then I thought about the word "literal" and how it has become its own idiom when it takes the opposite meaning of its own definition (e.g., "I literally died laughing"). In the end, I felt that the phrase "littorally speaking" embodies the literal and ironic sentiments I want to convey through this work.

Beth Shepherd
Britannia Village, Ottawa
September 24, 2021

Ottawa West – From Crystal Beach to Pinecrest Creek



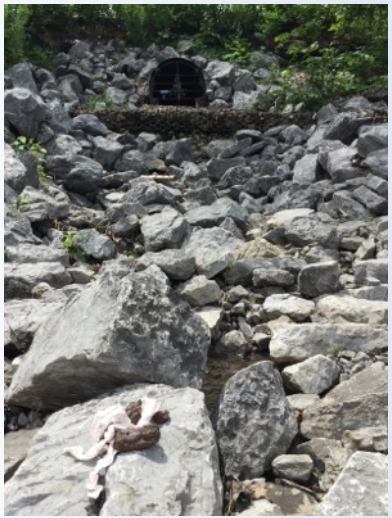
Skirting Lac Deschênes, a wide, slow and relatively shallow portion of the river above the Deschênes Rapids, Crystal Beach, Belltown and Britannia areas of the city were heavily affected by spring flooding in 2017 and 2019. As part of its Climate Change Master Plan, the City has been undertaking a variety of flood mitigation actions including building berms and gabions, reinforcing river pathways, and hardening shorelines with stone. (1)

Conducting phase 2 in 2021 gave a very different picture than other years because the spring drought and hot dry summer resulted in lower than normal water levels that revealed a much wider littoral zone in shallower parts of the river.

01-Harbour Landing Private (just east of Nepean Sailing Club)

2021-06-27

Plan Ref: OUT09042
Q4 2019-Q2 2020
75° 49’ 52.59” W
45° 21’ 8.37” N
56.7 m.



The only western outfall on the Plan is located just west of the Nepean Sailing Club. (Left) The outfall is grated and hardened with tons of large crushed limestone rock. (left)

The soap-poop sits on a large rock (above)—possibly a glacial erratic left behind as glaciers receded after the last ice age. Behind is stretches a muddy, silty, sandy riverbed.

Observing the outflow area, I saw that the muck was littered with mainly plastic debris that had been washed out through the stormwater—a big aha for me. There was also an unpleasant odour.

02-Belltown Bike Path

2021-08-08

Plan Ref: none
(Under bike path along Maplehurst Ave.)
75° 48’ 34.428” W
45° 21’ 17.97” N
62.58

No outfalls along the bike path by Belltown were marked for rehabilitation but the path itself has been renovated, contributing to floodproofing in the area. The first picture is of a water control devise of unknown function (possibly for flood flow control).

My original plan was to conduct phase 2 by water but this was thwarted by the low water levels. Nevertheless, I did paddle along the shores of Britannia Bay on my paddle board (right) where I found one outlet worth mentioning.

Plan Ref: none
(North of Scrivens St.)
75° 48’ 20.64” W
45° 21’ 34.932” N
62.9 m.

The outfall north of Scrivens St. was discharging a noxious effluent into the river that was evidently killing the water plants. I also observed masses of deep green algae growing along the outflow path. To the right is a photo of healthy aquatic growth at the receiving end of similar outfalls along this portion of the river.

03-Britannia Water Purification Plant

2020-08-28

Britannia Water Purification Plant was constructed in 1961. It has a capacity of 360 million litres of potable water per day. (2)

Water is drawn into the plant through large intake pipes that extend into the the river. In a multistep treatment process, undesirable substances such as colour, suspended particles, algae, bacteria, and viruses are removed from the water. Next it is fluorinated, disinfected with chloramine, and the pH is adjusted before distribution. (2) Flushing filters and the release of processing effluents can have detrimental effects on the river ecosystems if released into the river.

Plan Ref: N/A
75° 47’ 32.958” W
45° 22’ 24.618” N
57.07 m.

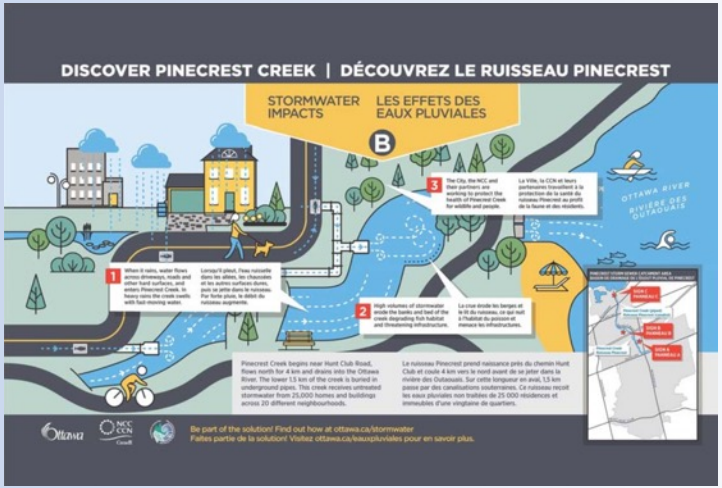
04-Cassels St. 2020-08-28

Plan Ref: None
75° 47’ 28.008” W
45° 22’ 28.68” N
54.8 m.

These photos were taken around the Britannia Water Filtration Plant, located at the end of Cassels St. in Britannia Village. The photo to the left is a grated outfall east of the plant; the photo directly above is Mud Lake, and the top photo shows the rugged shoreline with gnarled roots and limestone rock fragments.

05-Pinecrest Creek & Wet Pond

2021-07-05 & 2021-09-09



The City of Ottawa graphic helps explain the importance of Pinecrest Creek in the Ottawa water system. Much of its course from its origins near Uplands is underground. Along this course it serves as a stormwater channel and until recently, was contaminated with *E. coli* and other pollutants. Pinecrest Creek has been the subject of extensive study in hopes of rehabilitating it as both a recreational and ecologically-sensitive area. Various communities have been engaged to improve the quality of the runoff into the creek. (3)

05a-The Wet Pond

Plan Ref: None
75° 47’ 13.26” W
45° 22’ 21.57” N
53.32 m.

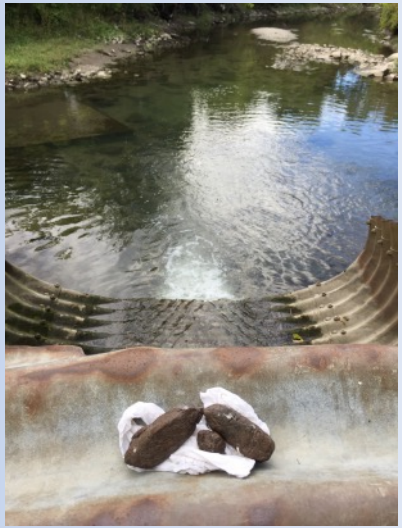
The pictured wet pond and a dry pond further south were implemented in the late 1990s as a result of a neighbourhood planning process that championed the protection of Mud Lake from stormwater runoff. (4)

The purpose of a wet pond is to filter and slow the flow of run-off.

05b-Pinecrest Creek surfacing just before converging with the Ottawa River

Plan Ref: None
75° 47’ 10.488” W
45° 22’ 27.342” N
54.48 m.

The images on this page show the creek surfacing beside the eastern parkway north of Carling Ave. .



The photos above show two perspectives on the creek converging with the Ottawa River.

Along the Ottawa River Pathway to Westboro Beach

Pathways skirt a good portion of the Ottawa shoreline from Andrew Haydon Park in the west to the Rideau Canal, then from Rockcliffe Park to Petrie Island in the east. (1) These pathways are well used by pedestrians and bikers.

The Ottawa River Pathway from Pinecrest Creek to Westboro Beach runs along side the Western Parkway. The river is narrower below the Deschênes Rapids and the shoreline is a mix of sand, gravel and silt, with many stones likely left when glaciers receded more than twelve thousand years ago. (2)

This area of the city is currently undergoing extensive construction on the light rail transit system expansion.

06-Elder Ave.
2021-07-05

Plan Ref: None
75° 46’ 40.632” W
45° 22’ 48.09” N
55.9 m.

The shoreline below the pathway is accessible, more or less walkable, and very deserted. Accordingly, I took the opportunity to walk the shoreline along the parkway and photograph all the outfalls I could find, not just the ones on the study plan.

(Above) I found this outfall in the woods below down from the bike path.

07-Rice Ave.
2021-07-05

Plan Ref: OUT15904
Q3-Q4 2020
75° 46’ 38.988” W
45° 22’ 53.208” N
53.4 m.

The Rice and Woodroffe outfalls are collocated between the pathway and a natural beach area.

Large armour stones, boulders have been added to reinforce the elevated pathway. At the base I found one outfall cemented in with the outflow area heavily reinforced with boulders and stones.

08-Woodroffe Ave.
2021-07-05

Plan Ref: OUT13870
Q3-Q4 2020
75° 46’ 38.46” W
45° 22’ 53.142” N
56.95 m.

On the east side of the reinforcing stone I discovered a second barred outfall in the sand.

Despite their colocation, the Rice and Woodroffe outfalls are different in appearance and possibly in function.

09-Cleary Ave. 2021-07-05 & 2021-09-09

Plan Ref: 3-OUT04300
Q3-Q4 2020
75° 46’ 20.28” W
45° 23’ 1.158” N
57.1 m.

I visited this site on two different dates. The top picture is an unobstructed view of the new cement outfall and the lower left shows it two months later.

The pictures on the opposite page show the rich vegetation growing along the shore.

10-Redwood-Parkway-Large

2021-09-09

Plan Ref: None
75° 46’ 16.08” W
45° 23’ 2.04” N
50.37 m.

This structure (top) has been recently constructed as indicated by the construction tape. The flow area has been heavily reinforced with large stone. The hardening extends quite a distance

11-Redwood-Parkway-Small

2021-09-09

Plan Ref: None
75° 46’ 14.082” W
45° 23’ 2.67” N
53.26 m.

Nearby is an outfall similar in design to O9-Cleary Ave, but the opening is being encroached upon by sand and gravel.

12-Rowanwood Ave.
21-09-09

Plan Ref: None
75° 46’ 11.25” W
45° 23’ 4.5” N
54.33 m.

This outfall is similar in structure to 09-Cleary and 11-Redword (as well 14, 16, 19 and 21 to follow). I wonder if these are new outfalls built as part of the LRT construction project.

The outfall area seems to be a combination of natural gravel, sand and boulders.

13-Wavell Ave.
21-09-09

Plan Ref: None
75° 46’ 7.038” W
45° 23’ 8.778” N
52.98 m.

This is an older large concrete gated outfall. The discharge area also deems to be naturally occurring gravel and rock.

14-Mansfield Ave. 1
2021-09-09

Plan Ref: 4-OUT04301?
Q3-Q4 2020
75° 45’ 59.022” W
45° 23’ 15.648” N
57.49 m.

Outfalls 09, 11, 12, 14, 16, 19 and 21 are similar and may be related to LRT construction.

15-Mansfield Ave. 2
2021-09-09

Plan Ref: 4-OUT04301?
Q3-Q4 2020
75° 45’ 55.338” W
45° 23’ 20.592” N
55.67 m.

Similar to 10-Redwood.
Note the gravelly nature of the beach.

16-Broadview Ave. 1 2021-09-09

Plan Ref: OUT04312
Q3-Q4 2020
75° 45’ 49.362” W
45° 23’ 25.38” N
56.79 m.

Outfalls 09, 11, 12, 14, 16, 19 and 21 are similar and may be related to LRT construction.

This photos on the opposite page show what is possibly an older outfall that is about to be replaced, given the presence of the construction equipment above.

17-Broadview Ave. 2 2021-09-09

Plan Ref: OUT04313
2021-Q3-Q4
75° 45’ 46.8” W
45° 23’ 27.42” N
59.75 m.

18-Highland Ave-Parkway 2021-09-09

This double outfall, one of which may be a conduit for an underground stream, was a pleasant surprise along this rather isolated stretch of shoreline.

The waterfall from the larger outlet splashes into a pond constructed of naturalized armour stone and boulders. (Above and far right)

The second outlet is most likely stormwater runoff.

Plan Ref: None
75° 45’ 46.83” W 45° 23’ 27.552” N
56.9 m.

The idyllic nature of the scene was offset by a lot of small bits of debris around the pond. (Above)

19-Golden Ave-Transit Way 2021-09-09

Plan Ref: None
75° 45’ 43.92” W
45° 23’ 29.628” N
59.21 m.

Similar to 09, 11, 12, 14, 16, and 21, the effluent from this outfall shows an oil slick in the photo above left. This might confirm my suspicions that these outfalls are related to the LRT. Currently the area just south of the pathway is filled with large construction equipment.

20-Dominion Ave-Transit Way 2021-09-09

Plan Ref: None
75° 45’ 42.822” W
45° 23’ 31.92” N
58.77 m.

The effluent from this older barred outlet makes its way across the littoral zone in the form of a delta.

21-Workman Ave. 2021-09-09

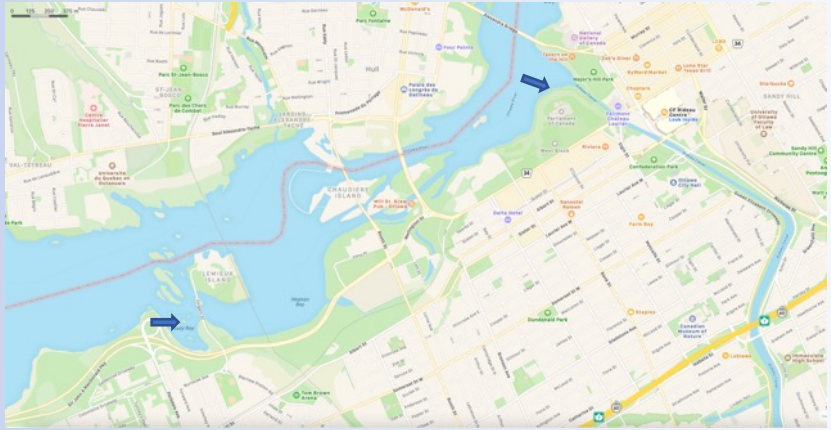
Beside the heavily reinforced cement outfall, a turquoise drain pipe of unknown purpose emerges on the left.

Like sister outfalls 09, 11, 12, 14, 16, 19, these concrete structures have been decorated by graffiti artists.

Plan Ref: OUT04490
Q3-Q4 2020
75° 45’ 40.788” W
45° 23’ 34.932” N
61.73 m.

This outfall is surrounded by a mountain of large crushed stone, stopping abruptly in the wooded area between the pathway and the distant river.

From Lemieux Island to the Rideau Canal



Bordering the oldest part of Ottawa with a number of historically significant sites, this section of the river offers the most diverse and challenging shoreline due to the varied landscape, islands, the Chaudière Falls, the progressively higher cliffs, and the built environment.

Excluding the Lemieux Island sites, on this leg of my exploration, I walked from Pimisi Station, across LeBreton Flats, behind the Parliament Buildings to the Rideau Canal.

22- Slidell St. (Across from Lemieux Island)

2021-09-10

Plan Ref: OUT04415*
2021
75° 43’ 40.602” W
45° 24’ 40.752” N
57.6 m.

This newly constructed outfall is across from Lemieux Island WPP. It is at water level and I was unable to get a front on shot since the river is deep here. Unlike the outfalls to the west, the slope is faced in stone set in cement rather than a heap,

*This may in fact be the Merton CSO Outfall. (1)

23-Lemieux Island Water Purification Plant

2020-09-04

Plan Ref: N/A
75° 43’ 53.232” W
45° 24’ 56.172” N
65.95 m.

The Lemieux Island Water Purification Plant was constructed in 1931 to provide potable water to residents. Today it has a capacity to produce 400 million litres of purified water per day. It employs the same purification process as the Britannia WPP. (2)

24-LeBreton Flats and Combined Sewage Overflow
2021-07-15

Until the recent implementation of the Combined Sewage Storage Tunnel in November 2020, combined sewer overflows have been a serious problem in Ottawa.

Since 1961 all new development requires fully separated stormwater and wastewater sewers. The older areas of the City may still have older combined systems that may cause a mixing of sewage and stormwater. Under normal conditions, the combined flow would be treated but in times of heavy runoff due to precipitation, melting snow or floods, the combined mix may be carried directly to the river. (3)

Plan Ref: N/A
75° 42’ 48.522” W 45°
25’ 6.948” N
54.6 m.

I found this interesting structure (left) sitting in a field near the War Museum. The algae and bad smell made me think this was some kind of wastewater management outlet. Hopefully this would not be discharged into the river.

Plan Ref: N/A
75° 42’ 42.258” W
45° 24’ 54.48” N
53.13 m.

The structure (top right) is called the CSST Site 1 Odour Control Facility - LeBreton Flats. (4)

The City of Ottawa diagram to the left shows the twin combined sewage overflow storage tunnels. They have a capacity to hold up to 43,000 m^3 per potential overflow event. The contents are held awaiting processing at ROPEC. In addition to reducing CSOs, the system will reduce sewer backups and allow for easier maintenance in serviced areas. (5)

25-Fleet St. Pumping Station 2021-07-15

Plan Ref: OUT10242
Q3-Q4 2021
75° 42’ 39.702” W
45° 24’ 59.388” N
51.3 m.

Although I did not see the outfall scheduled for rehabilitation in the fall of 2021, I did enjoy my first visit to this historic site. The Fleet Street Pumping Station, formally called the Ottawa Waterworks, was constructed in 1874 to pump unfiltered water from the Ottawa River into the city's new water distribution system. Designed by Thomas Keefer, it uses hydraulic power derived from the altitude differentials to pump water. (6)

Water arrives at the pumping station via an aqueduct which takes in water from the Ottawa River above the Chaudière Falls.

26-Fleet St.– Tailrace 2021-07-15

Plan Ref: OUT1051
2022
75° 42’ 36” W
45° 25’ 13.74” N
34.5 m.

I did not find the outfall to be rehabilitated next year but I enjoyed following the tailrace.

As a direct result of the Fleet pumping technology, a large volume of swift water is discharged, which flows through the tailrace channel back to the Ottawa River. This discharge of water into the channel creates the conditions necessary for a class 2 white water kayaking site. Since the early eighties the Ottawa River Runners White Water Club (ORR) have maintained the course. (6)

27-Library & Archives & Cliff Plant Outlet

2021-07-15

Plan Ref: N/A
75° 42’ 35.892” W
45° 25’ 13.968” N
40.57 m.

Making my way back to the Ottawa River shoreline from Fleet St., I walked along the pathway from the Chaudière Bridge towards Parliament Hill.

I caught sight of a bedraggled rusty discharge pipe sticking out of the riprap (stone to reduce erosion) located down from the Library and Archives building.

Close by, I was fortunate to see and to photograph this Northern Leopard Frog (*Rana pipiens*)--the one and only amphibian I encountered on my riparian travels in 2021.

Plan Ref: N/A
75° 42’ 25.59” W 45° 25’ 19.158” N
40.71 m.

The walkway along behind the federal buildings is beside a very steeply banked and heavily reinforced with riprap. The channel carries water which flows underground from LeBreton Flats to the Ottawa River.

A bit farther done the path, I noticed turbulence. Most likely this is an outflow from the Government of Canada’s Cliff Heating and Cooling plant, directly above.

28-Kent Combined Sewage Overflow ?

2021-07-15

Plan Ref: None
75° 42’ 20.7” W
45° 25’ 23.022” N
40.29 m.

This is a substantial outfall not on the plan. On further investigation, it is most likely the CSST-Kent Combined Sewage Overflow. (1)

29-Rideau Canal (Interceptor Overflow)

2021-07-15

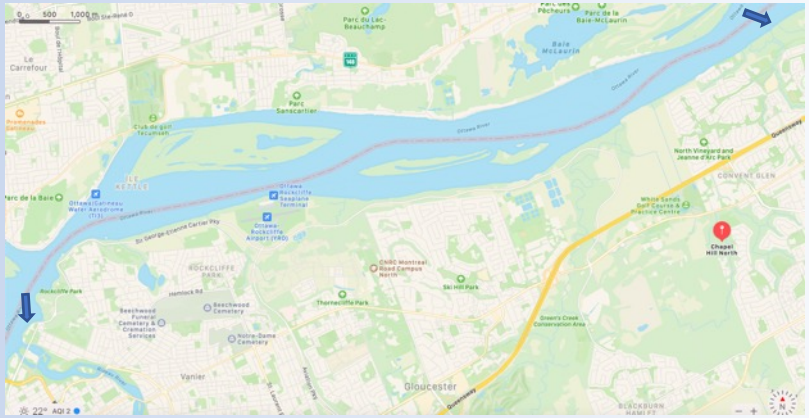
Plan Ref: OUT04423
Q4 2019-Q2 2020
75° 41’ 52.878” W
45° 25’ 34.668” N
58.2 m.

Built by Royal Engineers, led by Lieut. Col. John By, and supported by countless labourers, the Rideau Waterway was first opened in 1832

It is now a UNESCO site used primarily for recreational and touristic purposes. Descending between Parliament Hill and Major’s Hill Park, the locks mitigate a drop of 25 metres to the Ottawa River. (9)

I am not sure where the interceptor overflow is actually located-–perhaps it is under the manhole cover to the right.

Ottawa East - From Rideau Falls to Bilberry Creek



The final leg of my exploration of the Ottawa River shoreline extends from the prestigious Sussex neighbourhoods that includes 24 Sussex Drive and the Governor General's residence at Rideau Hall, through Rockcliffe Park, all the way to the suburbs of Orleans.

Steep terrain and restricted access made the inner city portion largely inaccessible. Going east past Rockcliffe Park the terrain became flatter with an abundance of pathways along the eastern parkway system. Unlike the easily accessible shorelines in the west, however, the river banks are steeper and hardened, all of which made the search for outfalls more challenging.

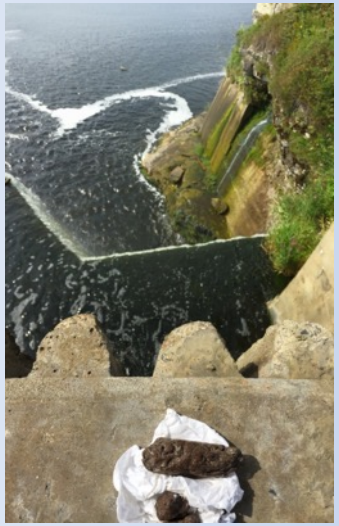
30-John Street/ Rideau Falls

2021-08-27

Plan Ref: OUT04455
2022-23
75° 41' 45.792" W
45° 26' 31.068" N
48 m.

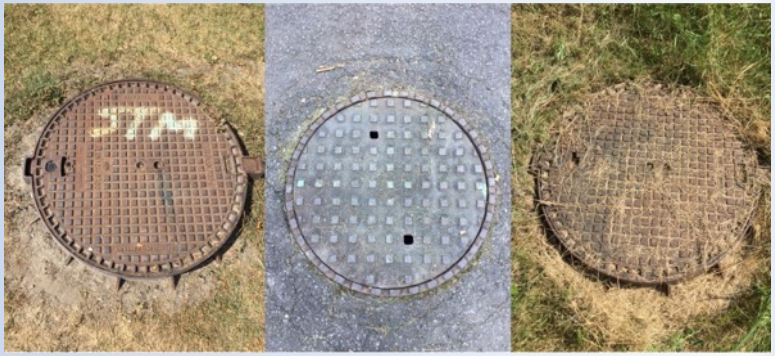
The twin Rideau Falls mark the confluence of the Rideau and Ottawa rivers. The Gatineau River converges nearby on the Quebec side.

I did not find an outfall likely to be rehabilitated, but the lower picture shows a spring cascading down the cliff below the Tavern on the Falls.



31-Birch St. 2021-08-27

Plan Ref: OUT04504 Q3-Q4 2021
75° 39’ 44.97” W
45° 27’ 34.878” N
53.37 m.



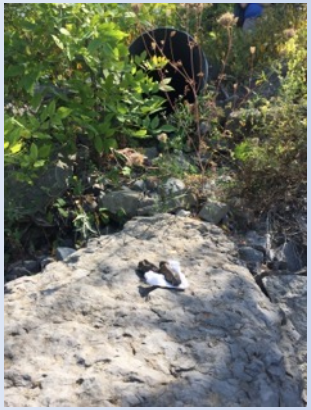
Leaving downtown, I followed the eastern parkway in search of outfalls on the rehabilitation list but I could not find a number of them. Nor could I locate the outfall scheduled for rehabilitation at Birch St. What I did find was three manhole covers in close proximity. Good enough!

The City has more than 92,000 manholes to access almost 6,000 km of wastewater, stormwater and combined sewers. (1) Manholes are vertical shafts used by utility personnel to access the sewer system for the purpose of inspection, cleaning or repairs.

32- St-Laurent Blvd 2021-08-27

Plan Ref: OUT11723
75° 39’ 29.31” W
45° 27’ 38.028”
45.6 m.

The outfall at St-Laurent Boulevard had been removed from City of Ottawa’s outfall rehabilitation project--perhaps it should not have been!



33- Robert O. Pickard Environmental Centre (ROPEC)

2020-09-03

Plan Ref: N/A
75° 35’ 6.882” W
45° 27’ 35.64” N
54.5 m.

First installed in the 1800s, Ottawa’s sewers used to empty wastewater directly into the creeks, rivers and even the Rideau Canal. Gradually sewage was treated before discharge, although much of the stormwater still goes directly into waterways.

First built in 1962 and called the Green’s Creek Pollution Control Centre, the renamed Robert O. Pickard Environmental Centre has been subsequently upgraded and expanded over the years to meet the City’s growing requirements. (1) Situated on 67 hectares of land near the Ottawa River, ROPEC provides secondary level (physical and biological) treatment of domestic, commercial and industrial wastewater, as well as some combined sewage and stormwater overflows.

ROPEC has a capacity to treat 545 million litres of wastewater per day and can sustain peak flows up to 1,362 million litres per day. (1) It produces 39 dry tonnes of biosolids daily, which are used as agricultural fertilizer. The plant also meets much of its own energy requirements from gases like methane released in processing. (1)

Unlike the water purification plants, the ROPEC grounds are not accessible without an appointment. Note the gated entry. The pictures on this page provide views of the facility from its periphery.

34-ROPEC Outfalls 2020-09-03

Plan Ref: None
75° 35’ 18.378” W
45° 27’ 57.06” N
46.7 m.

75° 35’ 17.148” W
45° 27’ 57.972” N
44.68 m.

ROPEC processes on average 545 million litres of wastewater every day, returning the cleaned water to the river. (1)

Where the effluent actually enters the river is unknown. Nevertheless, I found a few outfalls near the facility.

To the right is a view of the beautiful Ottawa River looking towards Lower Duck Island

35-OCC Overflow-Bilberry Creek Wet Pond

2021-07-31

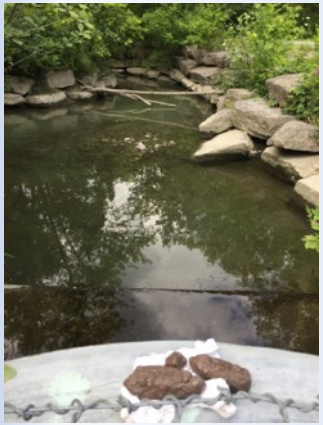
Plan Ref: OUT12746
Q4 2019-Q2 2020
75° 32’ 14.388” W
45° 29’ 16.89” N
44.87 m.

Bilberry Creek has its headwaters just north of Innes Road. In the event of rain or snow melt, the water levels rise quickly causing erosion and sedimentation. Contaminants from roadways and sewers enter the creek and are carried out into the Ottawa River. (2)

The stormwater management facilities at this site include a wet pond and storm sewers near Bilberry Creek. The newly constructed OCC outfall is west of Bilberry Creek. These are joined by a walking/ bike path that loops down from the eastern parkway.

Wet pond
75° 32’ 7.962” W
45° 29’ 14.67” N
47.16 m.

Creek mouth
75° 32’ 12.108” W
45° 29’ 17.91” N
41.58 m.



The overflow channel is hardened with concrete and riprap to reduce erosion, as seen in the photos on the opposite page. Views of the creek and the wet pond bordered with armour stone and boulders may be found on this page. Notice the silty run-off entering the river after just a very light rain in the photo on the lower right.

About the Artist-Author

Beth Shepherd is an Ottawa-based visual artist working in various media, including photography, video, sculpture, printmaking and painting. Holding an MA in Art History, a BA (Hons) in Psychology and a BSc in Biology, she works at the intersection of ecology, animal advocacy, and ecocritical art history. The "coffee table book" is part of a multi-year project related to the health of the Ottawa River in the midst of the global climate emergency.

See her work on eco art, art and art history at bethshepherd.ca.

See her animal advocacy work at artthatmankesadifference.ca.

End Note

This version of *Littorally Speaking* has been prepared for Culture Days 2021.

Culture Days is an annual Canada-wide arts and culture festival. Previously only a long weekend, it is now a themed 4-week Canada-wide virtual arts and culture festival held each year in late September-October. For more information, see https://culturedays.ca/en.

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Ottawa West – From Crystal Beach to Pinecrest Creek

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Along the Ottawa River Pathway to Westboro Beach

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Ottawa East - From Rideau Falls to Bilberry Creek

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