



March 29, 2023

Chip Sawyer  
Director of Planning and Development  
City of St. Albans  
PO Box 867, 100 No. Main St  
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**RE:** *City of St. Albans IDDE 2022 Summary and 2023 Proposed Work*

**Attachments:**

- Appendix A: Map of Visited Outfalls*
- Appendix B: 2021 Advanced Investigations Maps*
- Appendix C: 2022 Advanced Investigations Maps*

Dear Chip,

This memorandum is being prepared to summarize the Illicit Discharge Detection and Elimination (IDDE) work Watershed Consulting completed during the 2022 field season and is proposing for work during the 2023 season.

Watershed Consulting completed a dry weather survey in Summer 2022. We sampled a total of 39 outfalls, including 2 newly found outfalls. A map of these outfalls can be seen in Appendix A. A summary of the work completed during the 2022 season is presented in Table 1 below.

**Table 1. Summary of dry weather survey completed in the Summer of 2022.**

Total Outfalls Surveyed	39
Outfalls with Flow	14
Suburban Residential Land Use	30
Industrial Land Use	9
<b>Suspected Illicit Discharges</b>	<b>6</b>

**2022 Advanced Investigation Summary**

At the end of the 2021 season, certain unresolved locations identified during past IDDE investigations were identified to be revisited to attempt to resolve any potential issues. These included:

- Outfall 14
  - Site Location: Lincoln Avenue
  - Previous Notes: Not Resolved - Water Quality Sampling at Outfall Conducted - Indicates Possible Illicit Discharge from a 2007 study.
  - 2022 Resampling: The location was not found in 2021 after sampling the neighboring Outfall 13.1. The issue was not resolved in 2022.
  - 2023 Action: The outfall should be located and sampled if flowing.

- Outfall 15
  - Location: Upper Welden Street / Main Street
  - Previous Notes: Not Resolved - Canine results indicate possible illicit discharge. Other WQ results were not conclusive.
  - 2022 Resampling: The outfall was located on August 10<sup>th</sup> but was dry upon inspection. Illicit discharge from 2012 was either resolved or more intermittent than in previous investigation.
- Outfall 16:
  - Location: Upper Welden Street / Main Street
  - Previous Notes: This site was flagged in the 2010 investigations but was not reinvestigated in 2018 or 2019 and will need to be studied again.
  - 2022 Resampling: This is a large (~30") pipe which outlets to the box culvert under the intersection of Upper Weldon Street and South Main Street. Due to its location in a confined space, field crew did not enter the structure to sample.
  - 2023 work: Assistance from the DPW crew with confined space OSHA training may be necessary to take a water sample for conductivity, ammonia, fluoride, anionic surfactants, and *E. coli* which were elevated in 2012.

### **Advanced Investigations**

Following the outfall survey, Watershed Consulting initiated advanced investigation during the 2022 season for outfalls that exhibited threshold exceedances. There were six outfalls at five locations that were flagged for follow up based on exceedances of water quality indicators. These can be seen in Appendix A. The sites that were revisited are summarized below. Photos and data for each of these sites can be seen below, and in the maps attached in Appendix C.

## 1. Outfall 11

Site Location: 29 Barlow Street

Indicators: Anionic surfactants, Conductivity

Possible Sources: Drinking water leak and/or washwater contamination.

Action Steps: Complete additional sampling to bracket the discharge and evaluate if additional parameter exceedances exist.

Priority Level: Low



Figure 1. Outfall 11 located on Barlow Street, discharging to Stevens Brook.

## 2. Outfall 38

Site Location: Under Aldis Street, where DPW yard and Stevens Brook meet.

Indicators: Anionic surfactants, Chlorine

Possible Sources: Possible drinking water leak or wastewater contamination.

Action Steps: Complete additional sampling to bracket the discharge and evaluate if additional parameter exceedances exist. The catch basins on the opposite side of the road along the baseball field should be sampled.

Priority Level: Medium



Figure 2. Outfall 38 collecting a portion of stormwater runoff from Aldis Street and discharging to Stevens Brook.

### 3. Outfall 39.2

Site Location: Outlets from the DPW yard into Stevens Brook

Indicators: Conductivity, Chlorine, Ammonia, Anionic surfactants, *E. coli*

Possible Sources: Possible drinking water leak or washwater contamination and possible wastewater leak or cross contamination.

Action Steps: The outfall should be resampled. Complete additional sampling of catch basins in the DPW yard to bracket the discharge and evaluate if additional parameter exceedances exist.

Priority Level: High



Figure 3. Outfall 39.2 from the DPW yard, discharging into Stevens Brook.

#### 4. Outfall 40

Site Location: Four Winds Apartments off North Elm Street

Indicators: Chlorine, Anionic surfactants, Fluoride, *E. coli*

Possible Sources: Possible drinking water leak or washwater contamination and possible wastewater leak or cross contamination.

Action Steps: The outfall should be resampled. Complete additional sampling of catch basins along the driveway for the apartment buildings to bracket the discharge to evaluate if additional parameter exceedances exist. Complete further testing up the stormline for the catch basins if no definitive results surface from the apartment complex. The stormline crosses the sewer line prior to the outfall. It is possible that there is a leak or cross contamination that should be investigated with smoke testing or televising of the stormline.

Priority Level: High



Figure 4. Outfall 40, discharging stormwater runoff from North Elm Street and the Four Winds Apartment, discharging to Stevens Brook.

## 5. Outfall 50

Site Location: behind 85 Pearl Street, abutting the railroad.

Indicators: Anionic surfactants, Ammonia, *E. coli*

Possible Sources: Possible wastewater leak or cross contamination.

Action Steps: Complete additional sampling to bracket the discharge and evaluate if additional parameter exceedances exist.

Priority Level: Medium



Figure 5. Outfall 50.



Figure 6. Outfall 50 discharges to an open drainage channel, noted as Outfall 51 which enters Stevens Brook.

## 6. Outfall 54

Site Location: St. Albans City Elementary School. This outfall is located at the end of the stormwater system discharges outflow from a rain garden in the loop of Calvary Street (Figure 7).



Figure 7. Outfall 54 can be seen at the end of the stormline. The blue polygon indicates an existing rain garden on the map.

Indicators: Chlorine, Anionic surfactants, Fluoride

Possible Sources: Possible drinking water leak or washwater contamination.

Action Steps: The outfall should be resampled. Complete additional sampling of catch basins in the bus parking area to bracket the discharge and evaluate if additional parameter exceedances exist.

Priority Level: Medium



Figure 8. Outfall 54 in the back of the St. Albans City Elementary School.

## Outstanding Advanced Investigations Work

In the 2021 field season, there were nine suspected illicit discharges found from six locations. Watershed Consulting categorized four of them as ‘High Priority’. It was proposed to conduct follow-up investigations on the four outfalls in the 2022 season. One of the outfalls is located at the Clarence Brown/ S.B Collins facility (Outfall #26.1). The other three outfalls are located along Lower Welden Street, near the old Immigration Building. All four outfalls are ideal candidates for Advanced Investigations. The follow-up work was not completed in 2022 as the dry weather survey needed to be completed first, therefore it is proposed that the outstanding Advanced Investigations be completed in the Spring of 2023. These outfalls can be seen in the maps in Appendix B: 2021 Advanced Investigations Maps.

The two “High Priority” sites investigated in 2022 should be reinvestigated in 2023. These include the outfalls around the DPW garage and the outfall at the Four Winds Apartment complex. These outfalls can be seen in Appendix C. Time pending, the outfalls deemed “Medium Priority” in both years should be investigated after following the resolution of the “High Priority” outfalls. There are two outfalls on the SATEC campus. The other outfalls are on Pearl Street abutting the railroad, and at the St. Albans City school. Outfall 14, in which suspected discharge was determined in previous studies but not yet investigated within this scope, should be investigated to rule out any suspected illicit discharges. The outfalls flagged for follow-up advanced investigations can be seen in Appendix A.

Table 2. Proposed Investigations for the 2023 field season.

2021 Suspected Illicit Discharges	9
Low Priority	3
Medium Priority	2
High Priority	4
2022 Suspected Illicit Discharges	6
Low Priority	1
Medium Priority	3
High Priority	2

Sincerely,



Andres Torizzo  
Principal



Maddie Yandow  
Water Resources Scientist