



Water Quality Characterization Report (WQCR)

Prepared For:

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Prepared By:



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Introduction

In compliance with the provisions of the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, the Indiana Department of Environmental Management (IDEM) regulates the quality of the water that is released from point source discharges and enter the waters of the State of Indiana. One of the ways they do this is by issuing a National Pollutant Discharge Elimination System (NPDES) General Permit to public entities that discharge directly to the waterways. Included are small municipalities within urban areas serving populations of less than 100,000 and operating a Municipal Separate Storm Sewer System (MS4). St. John, Indiana, is one of these small MS4 communities that operates under general permit INR040047. The MS4 general permit (MS4GP) process streamlines permitting by grouping all point source discharges within a municipality rather than requiring individual permits for each location.

The MS4GP requires MS4 communities to submit a variety of reports documenting the current quality of its waterways and related community ordinances, procedures, and programs being used within their jurisdictions. These reports are intended to identify unique challenges within each municipality to help set future operational goals in alignment with the objectives of the NPDES.

This Water Quality Characterization Report (WQCR), pertaining to Section 3 of the MS4GP, identifies the current condition of waterways in St. John and discusses known areas of concern or areas with a higher potential for pollutants.

Baseline Characterization

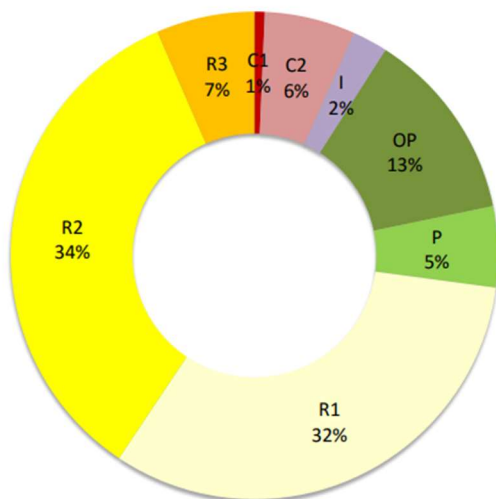
Land Usage

The Town of St. John is located in northwest Indiana, within Lake County. As determined by IDEM, the Town has been designated an MS4 community. The total size of St. John MS4 is 12.8 square miles. The Town has experienced a nearly 40% growth since 2010 and currently has a population of nearly 21,500.

St. John has a very low industrial and relatively low commercial base with the bulk of the growth in residential zones. Town codes include zoning for residential (R), commercial (C), Industrial (I), open space (OP), and public (P) properties. According to the Town's 2017 Comprehensive Plan, only 2% of the land mass is shown as light industrial and 7% as commercial, with no heavy industrial properties. Furthermore, the report suggests the possibility of reducing the amount of area zoned as light industrial due to lack of demand.

Zoning codes for St. John limit the use of light industrial to activities that have a low-risk for water pollution. Allowed uses include assembly, material sales, light manufacturing, storage units, and wholesale businesses. Special Exceptions may be made for businesses such as automobile related painting and repair, grain milling or processing, laboratories, used cars, and truck terminals. Based on these defined uses, the higher risk categories for this MS4 would likely be from light manufacturing and automobile work, depending on the specific nature of the business.

The following excerpt from the 2017 Comprehensive Plan shows the percentages of various land uses and recommendations for Light Industrial Land Uses:



Land Use Issues & Recommendations

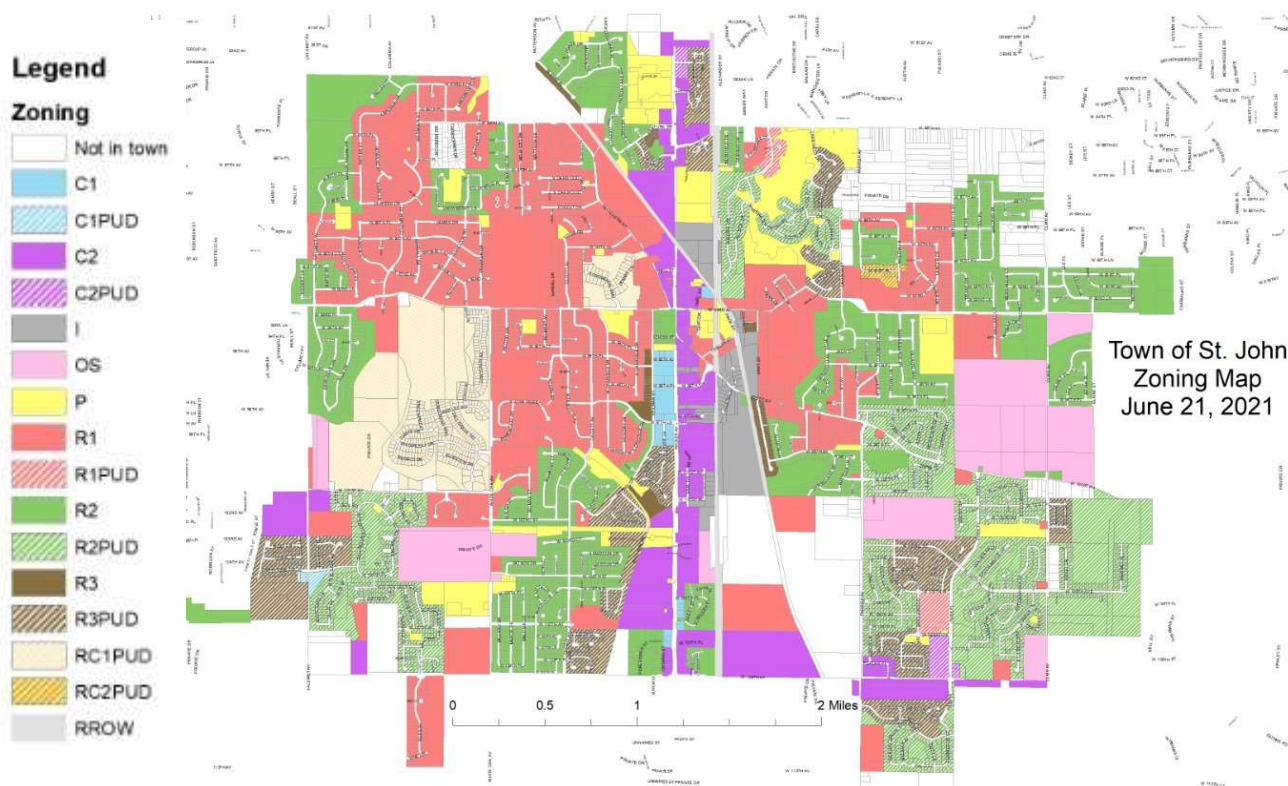
Light Industrial Recommendations

A majority of the Industrial land is located adjacent to or in between the railroad embankments. This land is difficult to access and is not easily expanded. The rail embankments provide a natural separation that buffers residential from these industrial uses.

The following are recommendations for future light industrial development:

- The demand for light industrial space in St. John is currently very low. Existing industrial businesses should remain, however extensive expansion of industrial uses is not recommended.
- Light industrial land that is undeveloped in the center of the Town should be considered for other uses.
- There is currently Light Industrial zoned land adjacent to the municipal complex which is better suited for retail, professional office or other municipal facilities, in the future.

The following shows the 2021 Town of St. John Zoning Map:



Structural and non-Structural Best Management Practices

Until now the Town has supported a variety of non-structural Best Management Practices (BMPs). The Town has been receptive to the use of structural BMPs and incorporated such through their codes but has not been strongly enforcing structural BMPs beyond the use of stormwater detention/retention. Current Town codes are in compliance with the previous “Rule 13” NPDES requirements and are currently being revised to implement additional structural water quality BMP requirements for new developments, in accordance with the updated MS4GP Post-Construction Stormwater Run-off Minimum Control Measure (MCM).

There are 211 stormwater facilities currently identified in the Town Geographic Information System (GIS) within the corporate limits, 4 of which are owned and maintained by the Town. Further investigation, as well as GPS location, is planned in the near future to identify additional facilities and to build a more complete Post-Construction BMP inventory.

Identification, Mapping, and Monitoring of Known Sensitive Water Areas

The town of St. John is located within the Great Lakes Watershed and the Kankakee River Watershed. There are four receiving waters within the town, as listed below. All four receiving waters are mapped and included in the Lake County GIS and St. John GIS.

Turkey Creek Headwaters	HUC (040400010503)
Dyer Ditch	HUC (071200030304)
Main Beaver Dam Ditch - Headwaters	HUC (040400010501)
Bull Run/West Creek	HUC (071200011308)

Three of these waterways are included on the 2022 Indiana Integrated Water Quality Monitoring and Assessment Report's 303(d) list. The following impairments were listed within that report. All fall within EPA integrated reporting category 5A, indicating the waterbody is impaired or threatened and a Total Maximum Daily Load (TMDL) plan is required.

HYDROLOGIC UNIT CODE	ASSESSMENT UNIT ID	ASSESSMENT UNIT NAME	PARAMETER
071200011308	INK01D8_T1011	BULL RUN	NUTRIENTS
071200030304	INK0334_T1002A	DYER DITCH - UNNAMED TRIBUTARY	ESCHERICHIA COLI (E. COLI)
071200030304	INK0334_T1002A	DYER DITCH - UNNAMED TRIBUTARY	BIOLOGICAL INTEGRITY
071200030304	INK0334_T1002A	DYER DITCH - UNNAMED TRIBUTARY	NUTRIENTS
071200011308	INK01D8_T1008	WEST CREEK - UNNAMED TRIBUTARY	BIOLOGICAL INTEGRITY

Using the IDEM e-303(d) tool, additional information was collected. There were concerns of E. coli and TMDLs at all three locations. Two of the three (West Creek and Bull Run) have a TMDL plan in place through Northwest Indiana Regional Planning Commission's (NIRPC) Deep River-Portage Burns Waterway Watershed Management Plan, last published October 2016. All three waterways were found to be non-supporting of aquatic life or recreation. Fish consumption was not evaluated for any of the three locations. For more information, the TMDL study may be found at <http://www.in.gov/idem/nps/3893.htm>.

This MS4 will continue to work with NIRPC to monitor conditions within the watershed.

Characterization Report

Conclusions

As a predominantly residential town, managing residential pollutants is essential. Pollutants in residential and commercial areas are typically caused by pesticide and fertilizer runoff from landscaping, pet waste, soil erosion, and other miscellaneous sources such as construction debris and auto fluids.

These pollutants are being managed by the Town through a variety of methods including:

- ordinances that regulate pet waste;
- services for collection of trash and debris;
- construction permits which specify handling of construction debris and implementation of best management practices to manage soil erosion and sediment control;
- educational flyers that promote such things as responsible application of lawn chemicals and responsible disposal of chemicals,
- ordinance requiring “no dumping down storm drains” stamp on storm structures; and
- sponsoring events or otherwise promoting collection and recycling activities.

While contaminants from septic systems in unsewered areas could also be of concern, the Town is not aware of any septic systems within its borders. Septic systems are under the jurisdiction of Lake County and are not managed by the Town.

Another potential pollutant source related to subdivisions is erosion from stormwater facilities. The vast majority of facilities in St. John are dry, turf-bottomed basins or retention ponds that carry a normal water level. As the primary post-construction BMP in town, the Town understands the importance of inspecting basins and online detention, in accordance with the corresponding Minimum Control Measure. The Town does not regularly perform any comprehensive inspections at this time, although Town Staff inspects stormwater facilities as needed based on complaints, concerns, or questions from residents. However, due to the relatively young age of the Town and basins, there have been few concerns brought to the attention of the Town’s Public Works department to date.

Another focus for the Town is the inspection and monitoring of outfalls. There are currently 62 outfalls identified in the Town’s GIS. Additional outfall locations are included with the GPS data collection work anticipated to start in 2024. As more locations are identified, priority outfall locations chosen will be identified, prioritizing those that convey runoff from to industrial areas, directly enter waterways, or enter into sensitive areas, such as wetlands. As specified in the MS4GP, priority outfalls will be inspected yearly, and all others will be inspected once within the five-year reporting cycle.



While the Town's GIS is not currently very robust, this MS4 recognizes the need for collecting GIS inventories to support better asset management and oversight. Strategies are being developed to build on existing stormwater-related layers, including outfalls, stormwater facilities, and the conveyance system, to help fulfill requirements of the newest MS4GP. Non-GPS related data collection has begun, and GPS data collection is anticipated to start in 2024. Inspections on detention/retention basins are anticipated to begin in the latter half of 2023.

This MS4 is not aware of any sensitive areas, including public swimming areas, drinking water intakes, national resource waters, or threatened or endangered species, within the municipal boundaries. There is one high hazard flood control dam (Dam ID # 45-14) maintained by the Town, located off of 85th St. and Lake Hills Dr. It is regularly monitored and receives maintenance as required. There are no known industries with a history of pollution or other particular locations that require a higher level of monitoring. As new priority outfalls are identified and tested, any suspect locations that come to light will be monitored appropriately.


Compliance Statement

This report has been prepared with the intent of meeting the requirements of IDEM's 2021 MS4GP. The Town of St. John has committed resources to comply with the permit, including annual review and as-needed updates of this WQCR.

Certification

I certify the above Water Quality Characterization Report accurately depicts the current conditions within the Town of St. John.

23rd day of May, 2023



Bob Valois, MS4 Coordinator