Lake George Conservancy
Water Quality Testing

Contents:

- Introduction
- Raw data 2018 to 2022
  - E-coli
  - Phosphorous
  - Suspended Sediment
- Trend Charts
- Notations
- Test Site Location Map

Lake George Water Quality Testing

- One of the annual task for the Lake George Conservancy is to monitor and report out on the water quality and ecological health of Lake George. The LGC partners with the Steuben County Lakes Council (www.lakescouncil.org) for our water testing at several water inlet sites around the lake. The first testing cycle is in the early spring when the inflows could be tainted with farm field and other run off pollutants. The second testing cycle is generally in the mid summer when the water temps are high and population has peaked and final testing in late summer.
- The testing measures e-coli, phosphorus and suspended sediment levels. The results are tabulated and compared to the threshold levels deemed to be unsafe by various governmental and environmental bodies.
- It is important to understand that any singular test result above the threshold is not necessarily cause for concern, the more important indicator is a sites continued testing above the threshold level. Spot test reports are highly susceptible to temporary special cause issues, like a dead animal or run off from exceptionally high rainfall.
- In recent years the LGC has taken the extra step to have the e-coli water samples DNA tested to determine the source of the high reading. Typical sources are poultry, animals or humans. Each potential root cause of the e-coli would present a different response, for instance a prolonged trend of high human e-coli would point to a septic system failure upstream from the lake.

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Water Quality Trend Analysis

2018 Testing

Recommended Max	E. Coli 235 (colonies/100ml)	Phosphorous .076 (ml/l)	Sediment 25 (ml/l)

Sample Site	Sample Date	E. coli	Total Phosphorous	Suspended Sediment
#38 Kope Kon Rd	05/30/18	86.0	0.033	2.5
	07/26/18	119.9	0.025	0.0
	08/24/18	308.5	0.031	2.2
#25 Below LG Dam	05/30/18	75.0	0.022	<1.0
	07/26/18	40.8	0.015	2.0
	08/24/18	311.0	0.022	<1.0
#67 Silver Lake Outlet	05/30/18	249.0	0.021	<1.0
	07/26/18	119.8	0.016	8.2
	08/24/18	150.5	0.025	2.1
#72 Flint Rd – Boat Ramp	05/30/18	63.0	0.076	8.4
	07/26/18	488.4	0.075	2.4
	08/24/18	147.0	0.042	3.5

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Water Quality Trend Analysis

2019 Testing

Recommended Max	E. Coli 235 (colonies/100ml)	Phosphorous .076 (ml/l)	Sediment 25 (ml/l)

Sample Site	Sample Date	E. coli	Total Phosphorous	Suspended Sediment
#38 Kope Kon Rd	05/09/19	195.6	0.027	1.4
	07/31/19	261.3	0.029	1.1
	08/26/19	1046.2	0.046	1.2
#39 Below LG Dam	05/09/19	23.1	0.007	3.0
	07/31/19	13.5	0.015	1.4
	08/26/19	17.7	0.029	1.4
#67 Silver Lake Outlet	05/09/19	38.3	0.042	2.1
	07/31/19	42.0	0.025	1.6
	08/26/19	129.1	0.039	1.6
#72 Flint Rd – Boat Ramp	05/09/19	816.0	0.360	**92.0**
	07/31/19	686.7	0.056	6.8
	08/26/19	32.7	0.074	7.4

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Water Quality Trend Analysis

2020 Testing

Recommended Max	E. Coli 235 (colonies/100ml)	Phosphorous .076 (ml/l)	Sediment 25 (ml/l)

Sample Site	Sample Date	E. coli	Total Phosphorous	Suspended Sediment
#38 Kope Kon Rd	05/28/20	275.5	0.025	<1.0
	07/01/20	218.7	0.062	<1.0
	08/26/20	613.1	0.039	1.5
#39 Below LG Dam	05/28/20	13.5	0.027	1.7
	07/01/20	39.9	0.036	2.1
	08/26/20	48.7	0.061	1.4
#67 Silver Lake Outlet	05/28/20	66.3	0.023	2.4
	07/01/20	56.5	0.027	1.1
	08/26/20	307.6	0.033	1.0
#72 Flint Rd – Boat Ramp	05/28/20	1,119.9	0.056	**2.1**
	07/01/20	1,203.3	0.055	6.3
	08/26/20	1,373.4	1.99	190

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Water Quality Trend Analysis

2021 Testing

Recommended Max	E. Coli 235 (colonies/100ml)	Phosphorous .076 (ml/l)	Sediment 25 (ml/l)

Sample Site	Sample Date	E. coli	Total Phosphorous	Suspended Sediment
#38 Kope Kon Rd	05/25/21	488.4	0.019	1.0
	07/20/21	920.8	Not detected	1.7
	08/02/21	207.3	0.011	1.2
#72 Flint Rd – Boat Ramp	05/25/21	365.4	0.210	14.8
	07/20/21	54.8	0.032	2.1
	08/02/21	25.1	0.049	9.2
#39 Below Dam	05/25/21	12.1	0.010	1.3
	07/20/21	6.3	Not detected	1.5
	08/02/21	2.0	0.017	1.9

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Water Quality Trend Analysis

2022 Testing

2022: July and August E-coli results deemed to be high due to suspect test data.

Recommended Max	**E. Coli 235 (colonies/100ml)**	**Phosphorous .076 (ml/l)**	**Sediment 25 (ml/l)**

Sample Site	Sample Date	E. coli	Total Phosphorous	Suspended Sediment
#38 Kope Kon Rd	05/19/22	41.0	0.017	1.2
	07/22/22	1046.2	0.014	2.4
	08/02/22	547.5	0.023	2.6
#72 Flint Rd – Boat Ramp	05/19/22	88.4	0.072	3.6
	07/22/22	8664.5*	0.121	31.0
	08/02/22	2432.2*	0.050	8.8
#39 Below Dam	05/19/22	8.5	0.016	1.2
	07/22/22	45.7	0.012	0.02
	08/02/22	9.7	0.014	1.2

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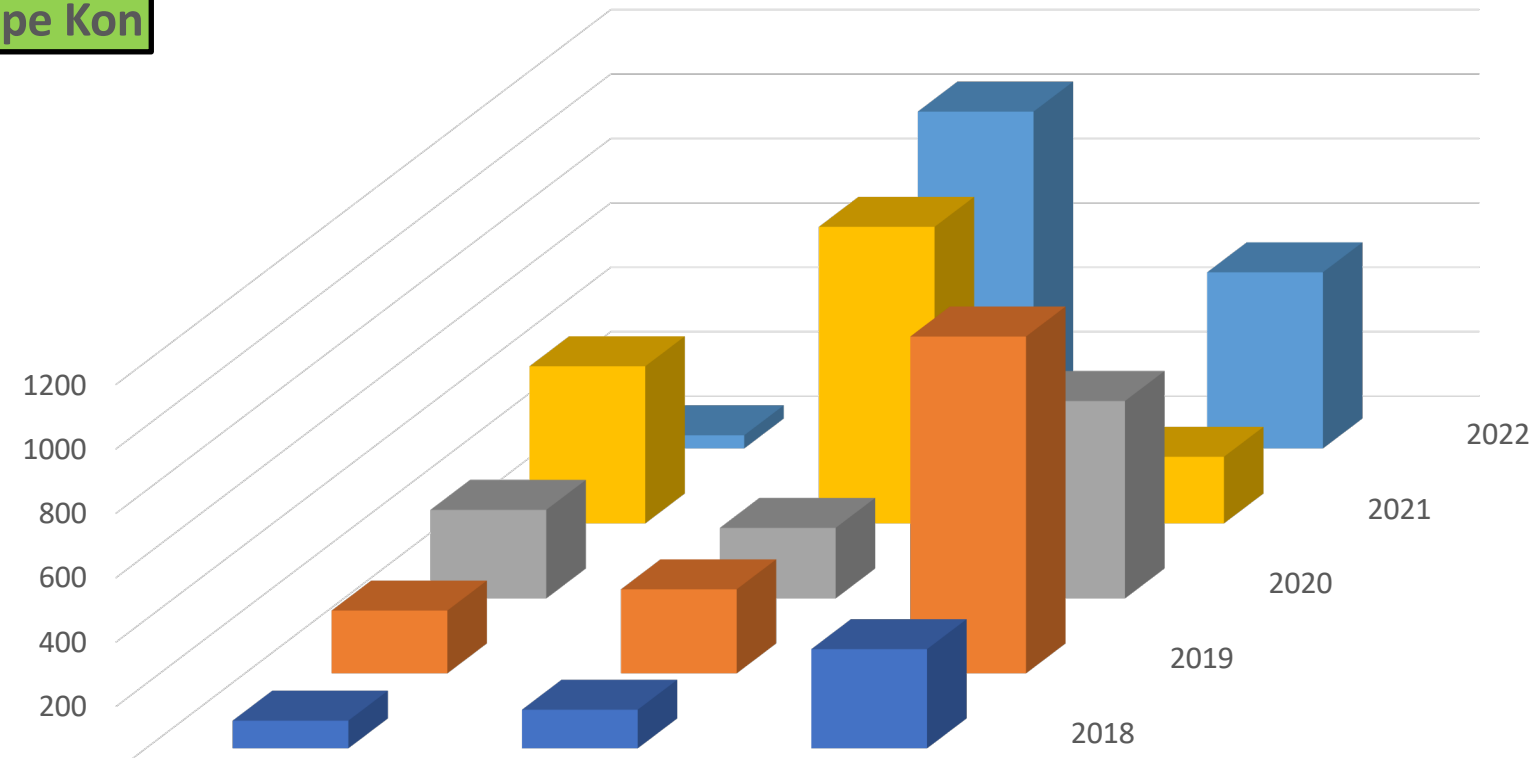
Water Quality Trend Analysis

E – Coli Trend Data – Kope Kon



	May	July	August
2018	86	120	308
2019	195	261	1046
2020	275	219	613
2021	488	921	207
2022	41	1046	547

E-Coli 235 (colonies /100ml) upper limit

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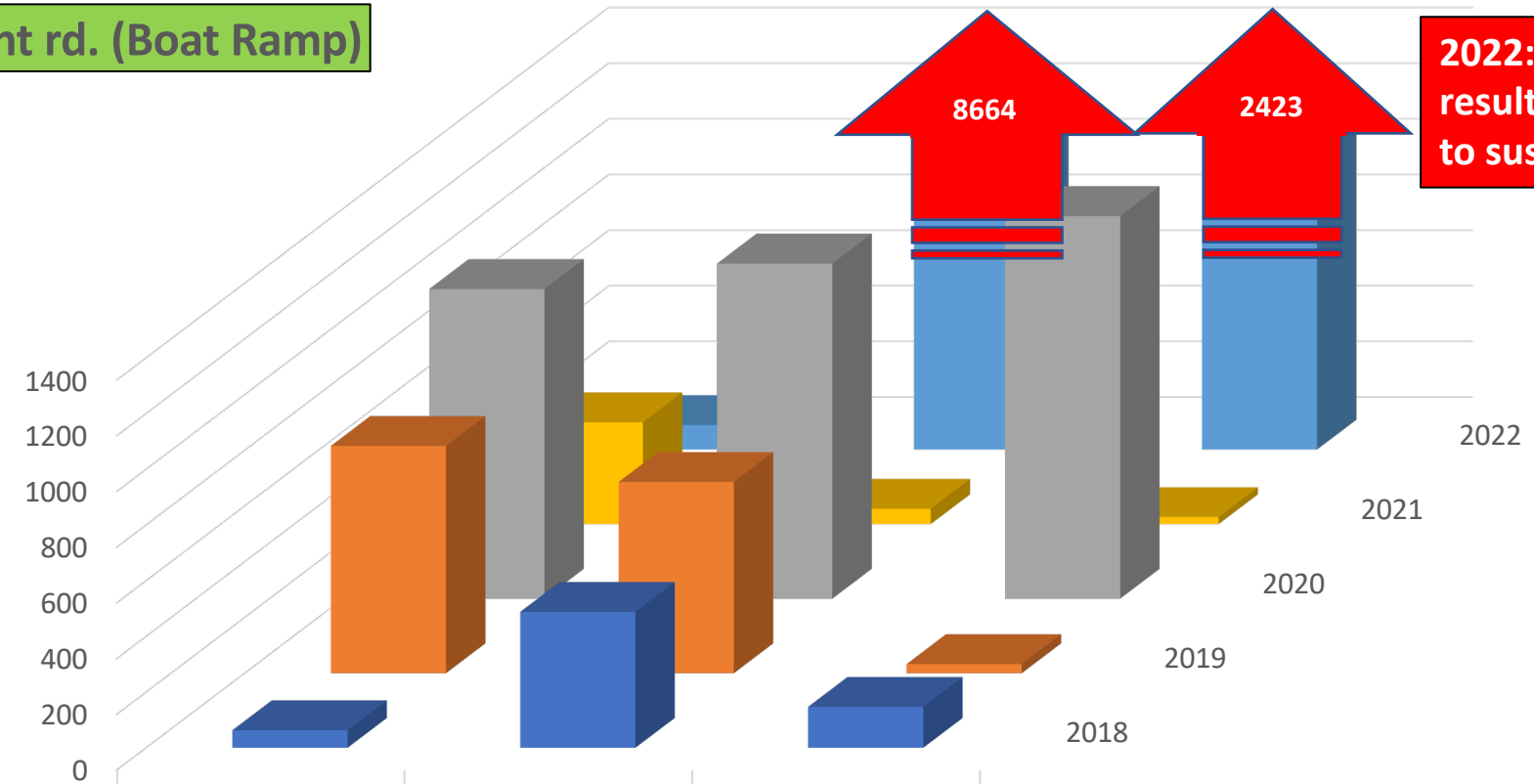
Water Quality Trend Analysis

E – Coli Trend Data – Flint rd. (Boat Ramp)



2022: July and August E-coli results deemed to be high due to suspect test data.

E-Coli 235 (colonies /100ml) upper limit

	May	July	August
2018	63	488	147
2019	816	686.7	32.7
2020	1111.9	1203.3	1373.4
2021	365.4	54.8	25.1
2022	88	8664	2423

2018 2019 2020 2021 2022

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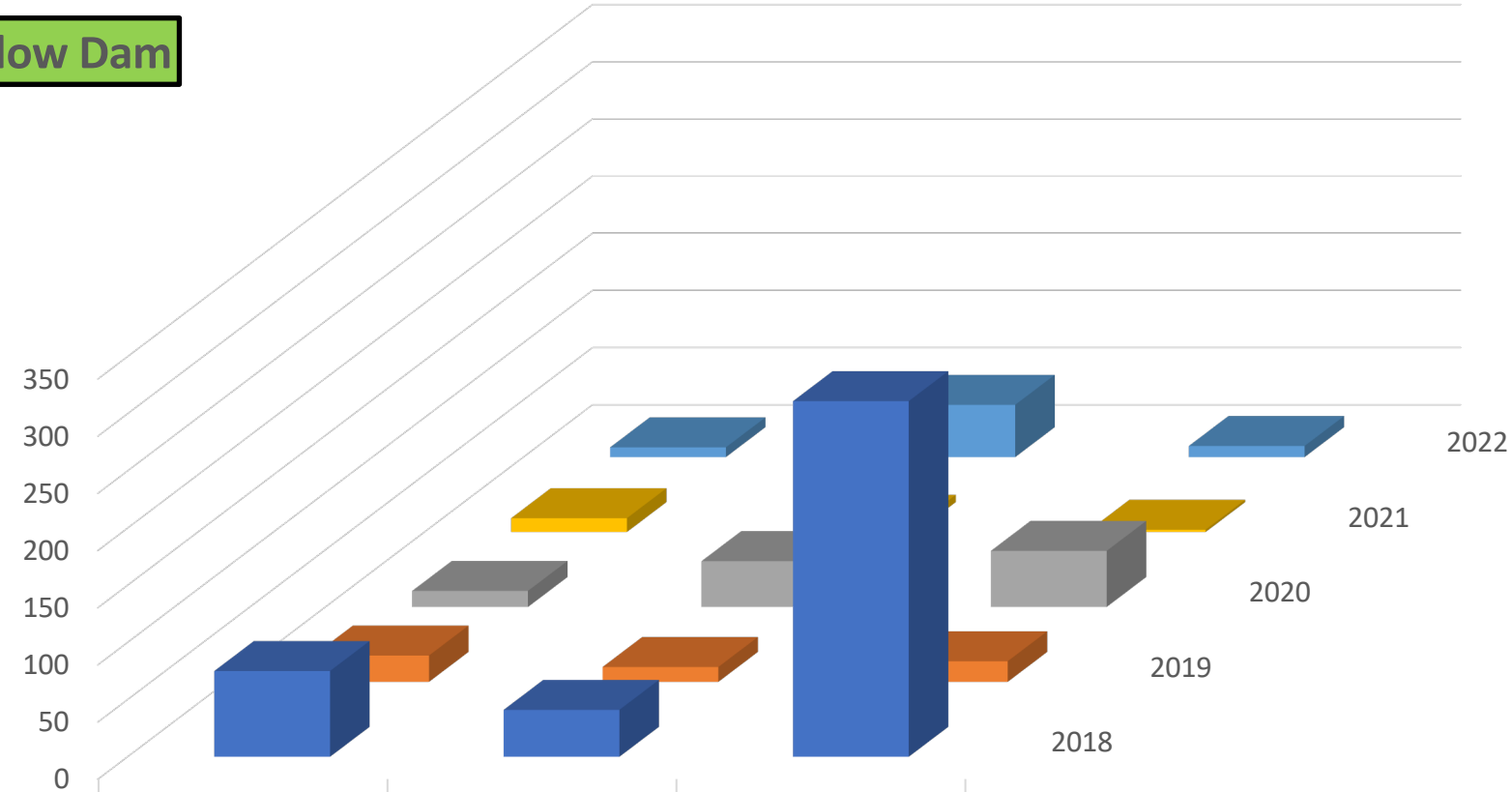
Water Quality Trend Analysis

E – Coli Trend Data – Below Dam



E-Coli 235 (colonies /100ml) upper limit

	May	July	August
2018	75	41	311
2019	23	13	18
2020	14	40	49
2021	12.1	6.3	2
2022	8.5	45.7	9.7

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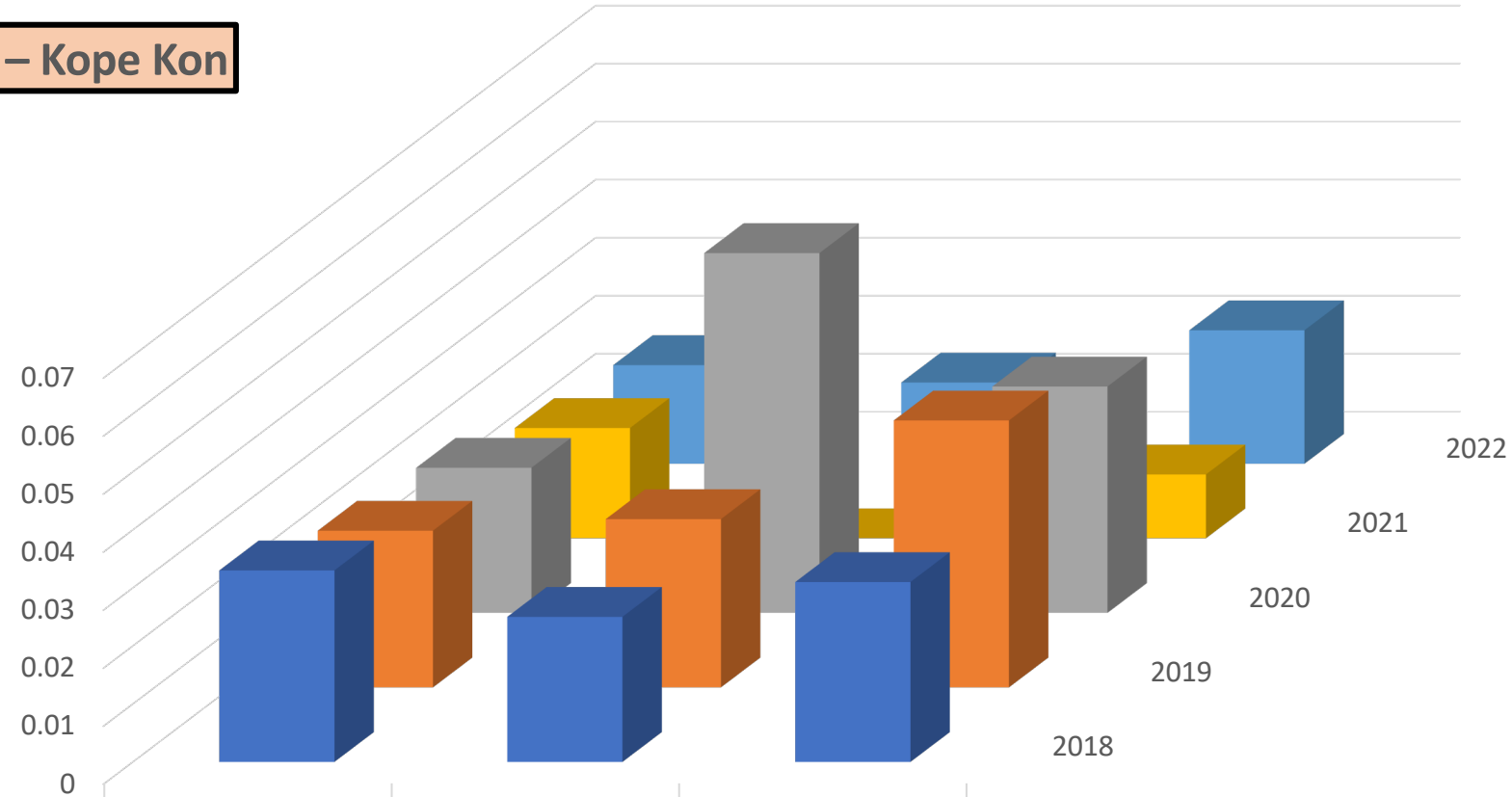
Water Quality Trend Analysis

Phosphorus Trend Data – Kope Kon

Phosphorus 0.76 ml/L
upper limit



	May	July	August
2018	0.033	0.025	0.031
2019	0.027	0.029	0.046
2020	0.025	0.062	0.039
2021	0.019	0	0.011
2022	0.017	0.014	0.023

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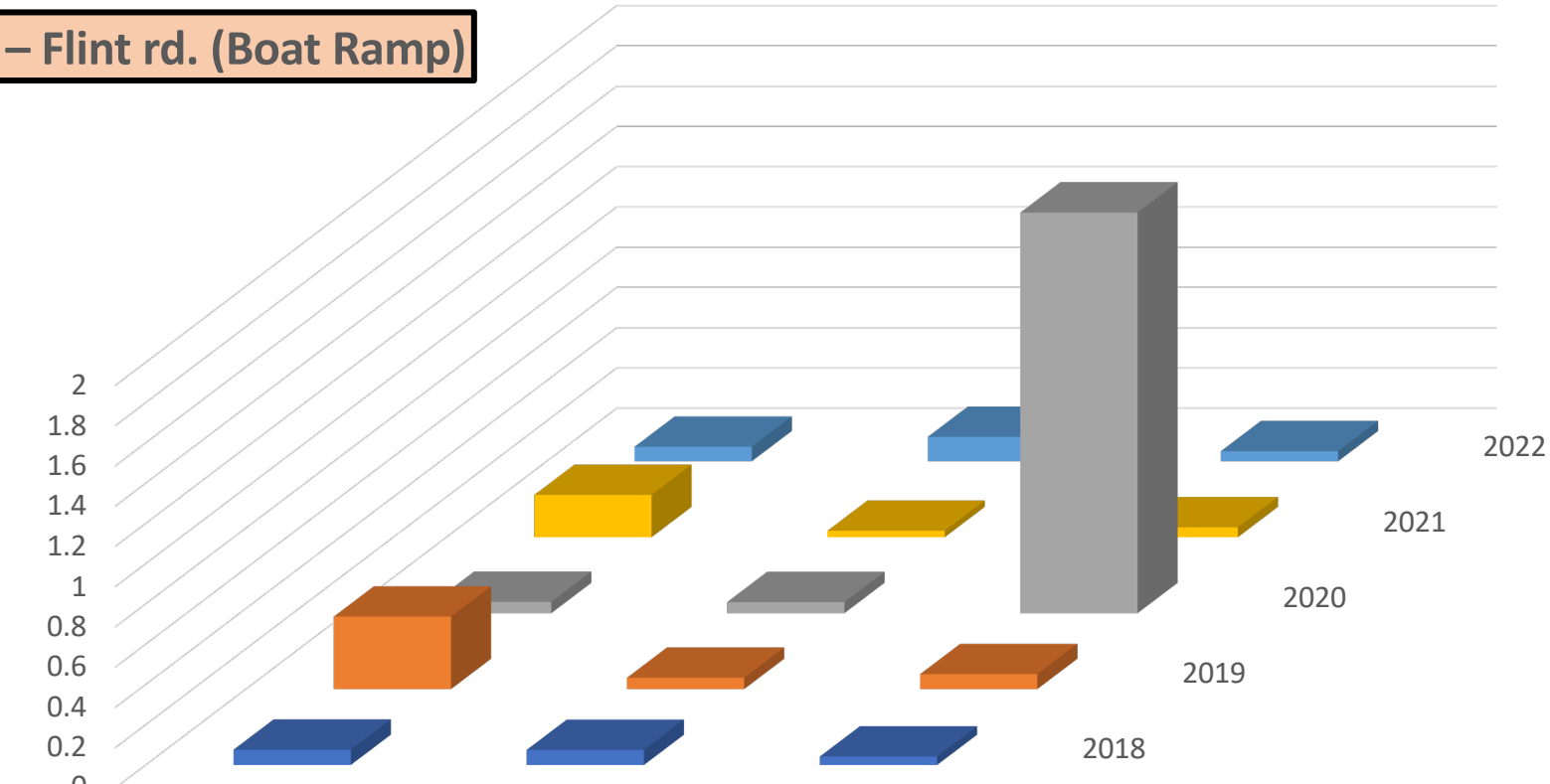
Water Quality Trend Analysis

Phosphorus Trend Data – Flint rd. (Boat Ramp)

Phosphorus 0.76 ml/L upper limit



	May	July	August
2018	0.076	0.075	0.042
2019	0.36	0.056	0.074
2020	0.056	0.055	1.99
2021	0.21	0.032	0.049
2022	0.072	0.121	0.05

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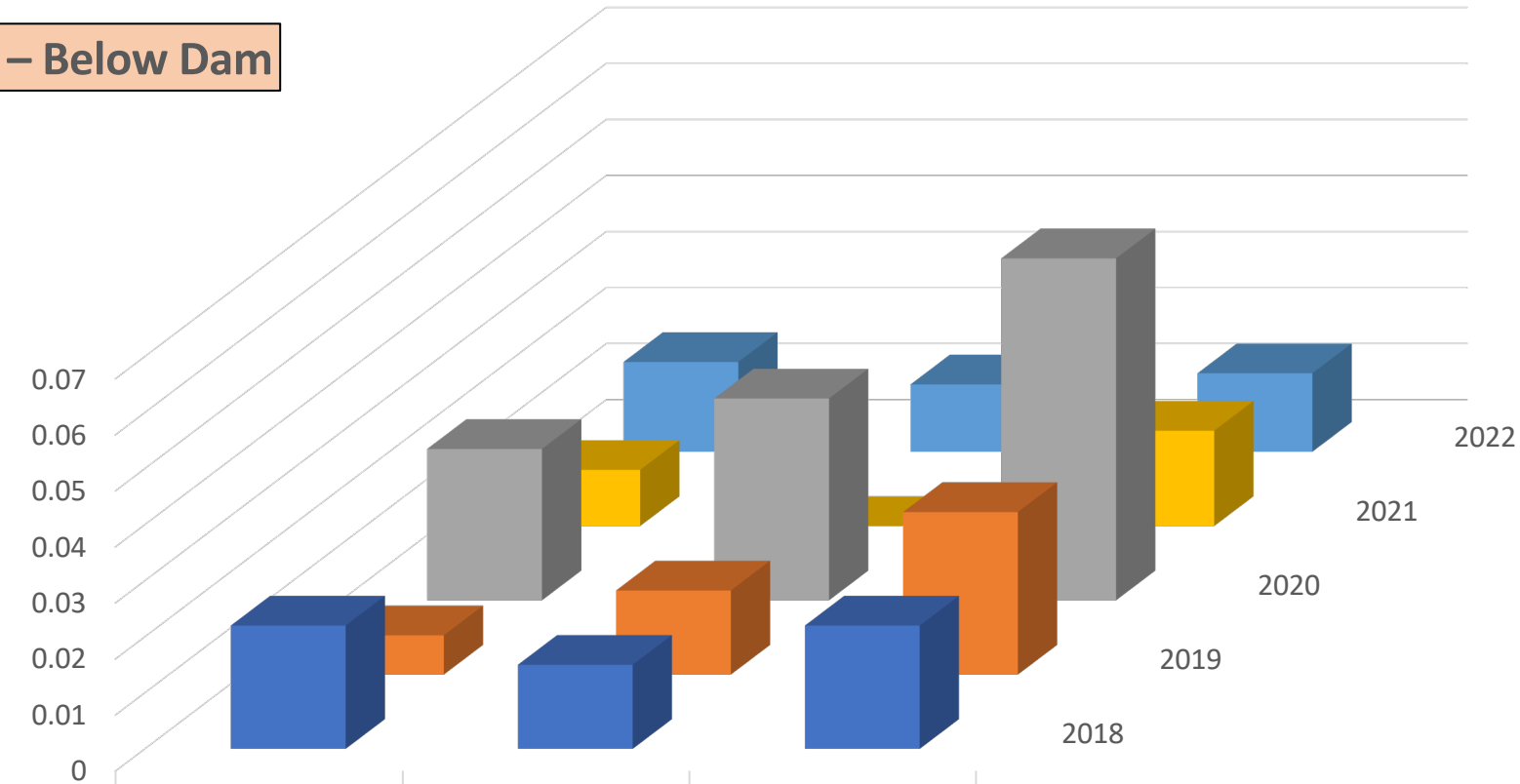
Water Quality Trend Analysis

Phosphorus Trend Data – Below Dam

Phosphorus 0.76 ml/L
upper limit



	May	July	August
2018	0.022	0.015	0.022
2019	0.007	0.015	0.029
2020	0.027	0.036	0.061
2021	0.01	0	0.017
2022	0.016	0.012	0.014

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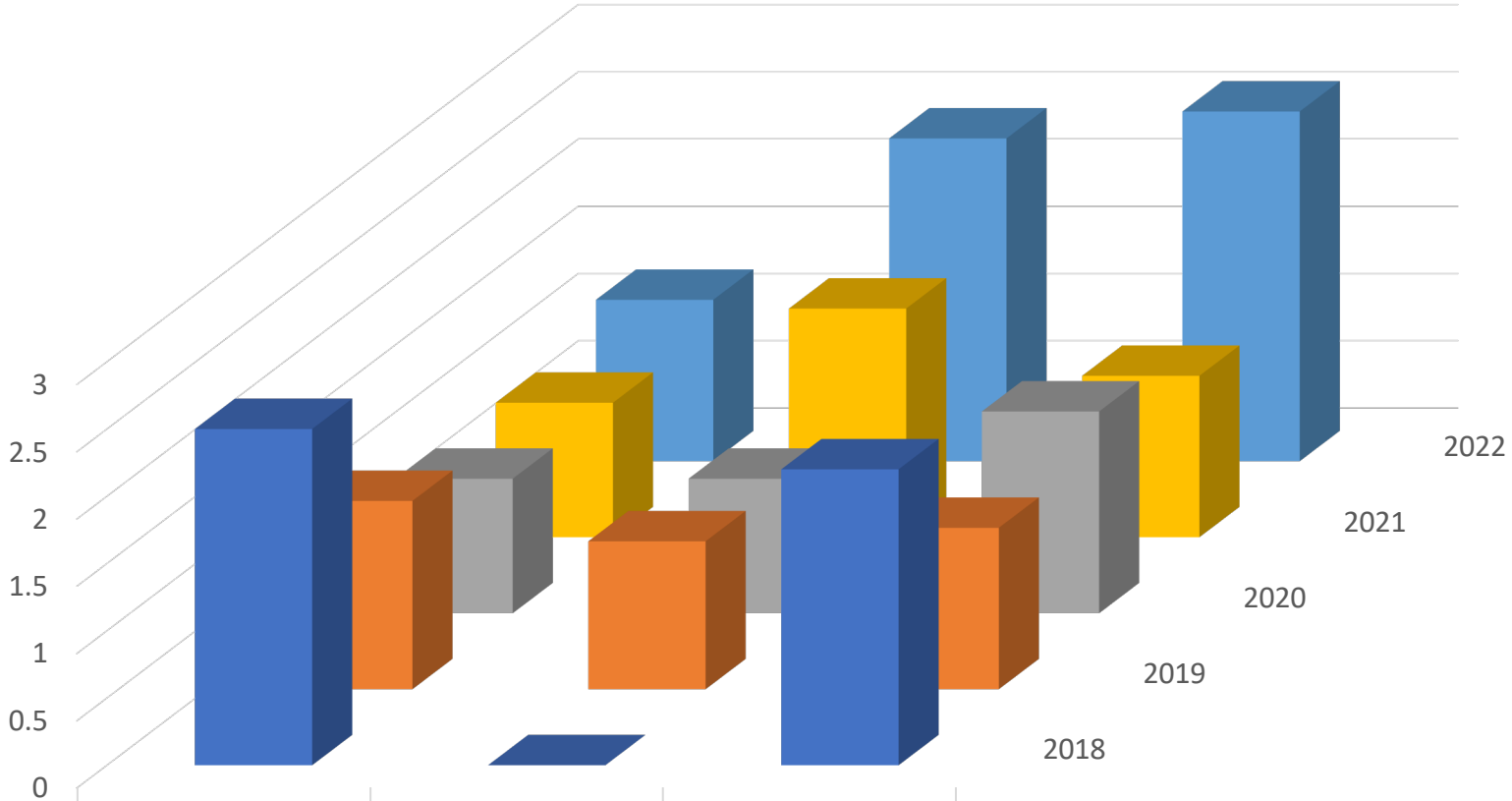
Water Quality Trend Analysis

Sediment Trend Data – Kope Kon

Sediment (25 ml/l)
Upper limit



	May	July	August
2018	2.5	0	2.2
2019	1.4	1.1	1.2
2020	1	1	1.5
2021	1	1.7	1.2
2022	1.2	2.4	2.6

2018 2019 2020 2021 2022

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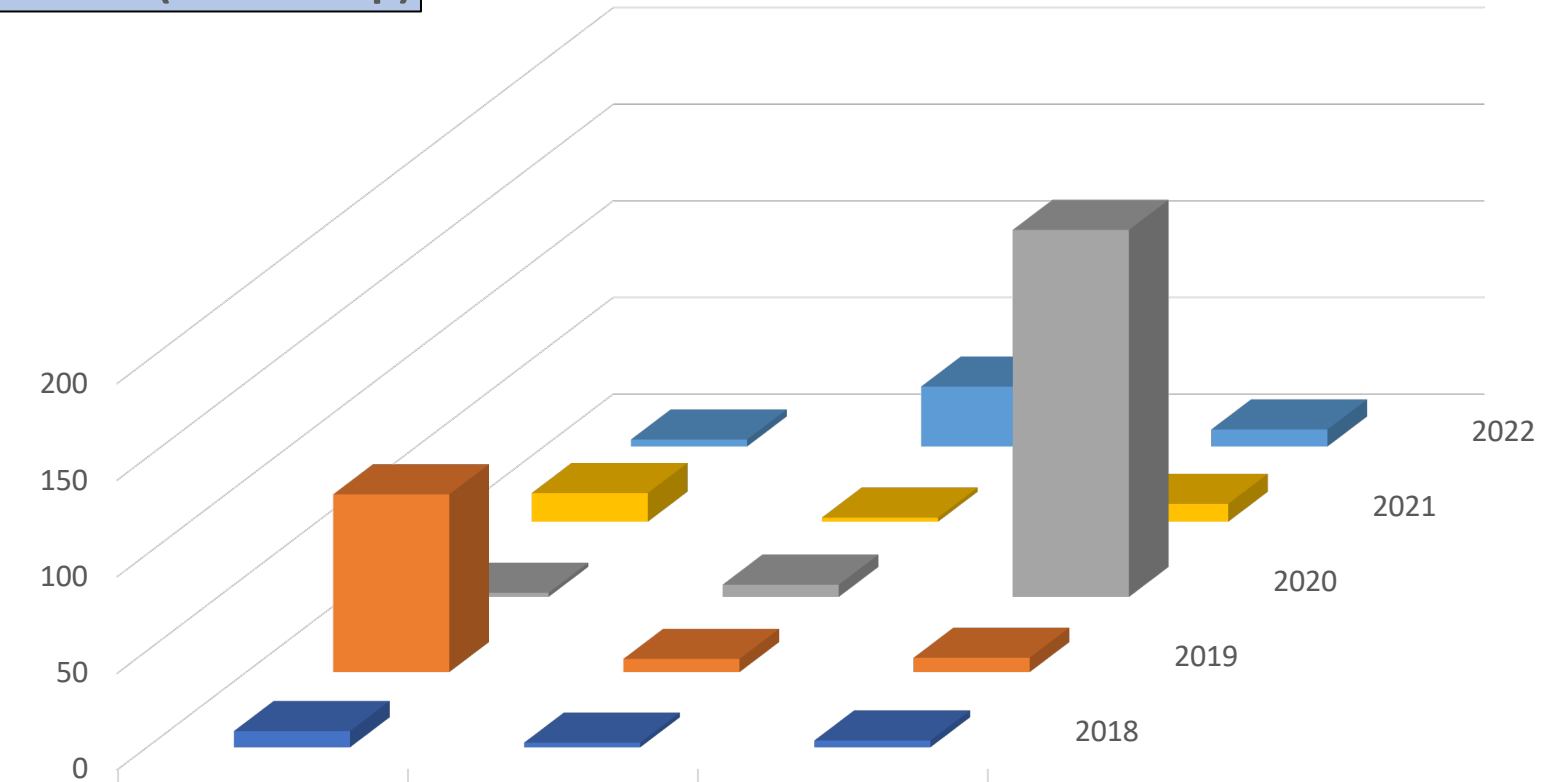
Water Quality Trend Analysis

Sediment Trend Data – Flint rd. (Boat Ramp)

Sediment (25 ml/l)
Upper limit



	May	July	August
2018	8.4	2.4	3.5
2019	92	6.8	7.4
2020	2.1	6.3	190
2021	14.8	2.1	9.2
2022	3.6	31	8.8

2018 2019 2020 2021 2022

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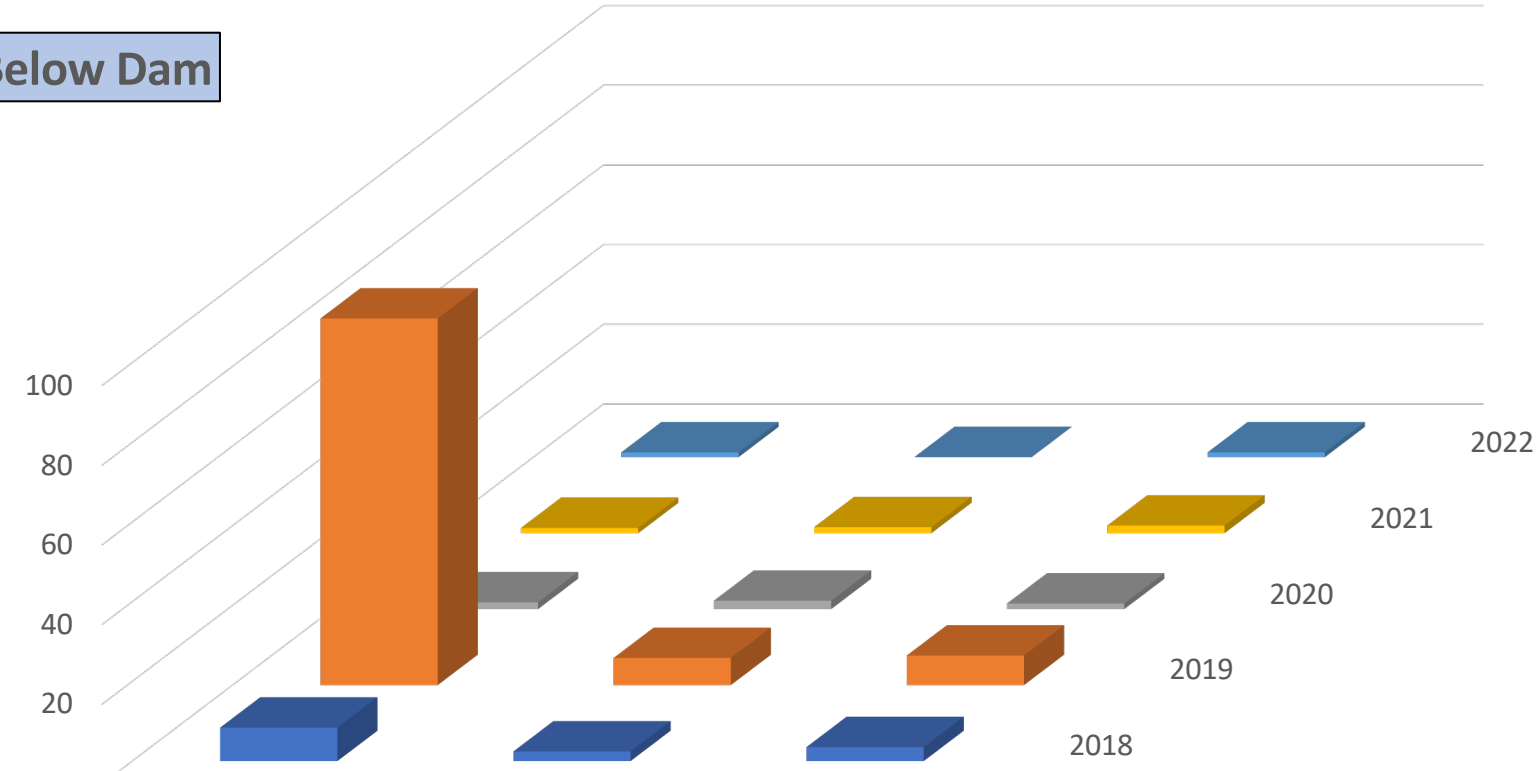
Water Quality Trend Analysis

Sediment Trend Data – Below Dam

Sediment (25 ml/l)
Upper limit



	May	July	August
2018	8.4	2.4	3.5
2019	92	6.8	7.4
2020	1.7	2.1	1.4
2021	1.3	1.5	1.9
2022	1.2	0.02	1.2

2018 2019 2020 2021 2022

Lake George Conservancy

Water Quality Trend Analysis

Notations:

Individual test results are *not* **a reason for concern as specific short-term causes can spike an individual test result. The trend for water quality issues in a location are more indicative of true problems affecting our lake.**

Test locations are in the tributaries to the lake and exiting the lake after the dam. *Test are not conducted in the the main lake body.*

2021 Water Quality Testing Overview:

- Majority of test results well with in test upper limits for concern
  - Three E-coli results exceeded IDEM max levels, and only two of those greatly exceeded
  - Human waste and poultry was indicated as e coli source
  - Poultry reading probably geese related

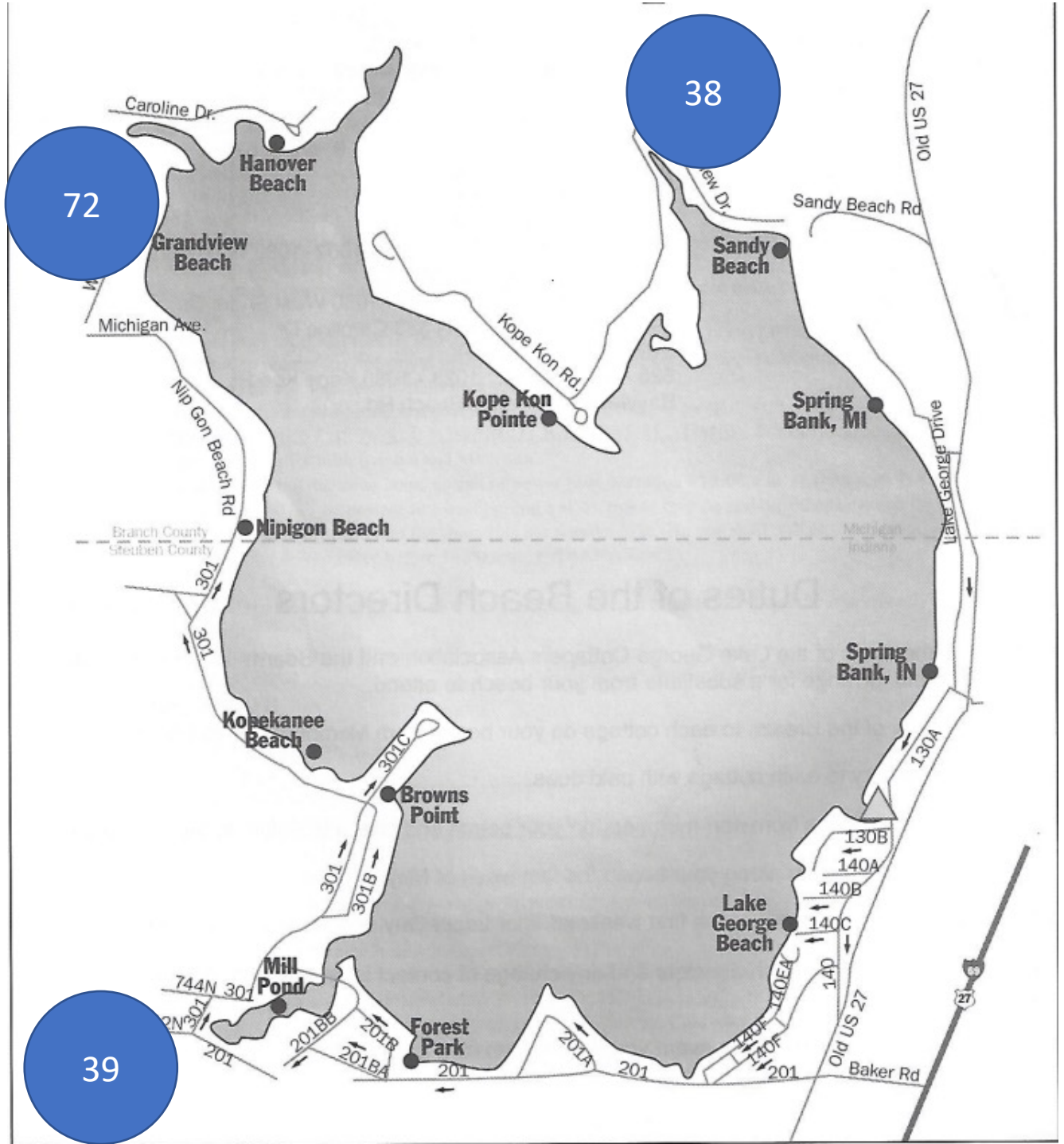
2022 Water Quality Testing Overview:

- Majority of test results well with in test upper limits for concern
  - Four E-coli results exceeded IDEM max levels
  - Kope Kon site had two that greatly exceeded, but were considered as testing anomalies and not truly representative of water quality

To view all Steuben County's 76 water quality testing site data please go to:

Steuben County Lake Council: websitewww.lakecouncil.org

Steuben County Lakes Council Test Sites:

Lake George

- #38 – Off Kope Kon rd., in the creek feeding from Silver Lake to Lake George
- #72 – Off Flint rd. on the east side, feeding into the channel north of the Michigan boat ramp
- #39 – In Crooked Creek, at the bottom of the Lake George dam south of Lane 201.