# Memorandum

**TO:** **Porcupine Watershed Public Liaison Committee**

**FROM:** **Dave Landers**

**CC:**

**DATE:** **April 25, 2022**

**RE:** **Whitney Tisdale Pump Station By-pass Flows**

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The Ministry Order #1760-8TPNU6 required the City to significantly reduce Bypasses. Based on the data available (see Appendix), we have met that requirement. As well, the City has fully complied with all 11 ministry orders indicated in Order # DO 4703-933KH3.

Over the Easter weekend, in the Porcupine lake area we experienced flows that were six times greater than normal, with the heavy melt lasting from April 12 to April 16. The stations were faced with a heavy melt with frozen ground thus not allowing absorption into the ground as relief.

The storm tanks at station 4 were used to full 8000m3 capacity and once filled can only be emptied when the high flows subsided. During that period, those storage tanks were filled to capacity twice.

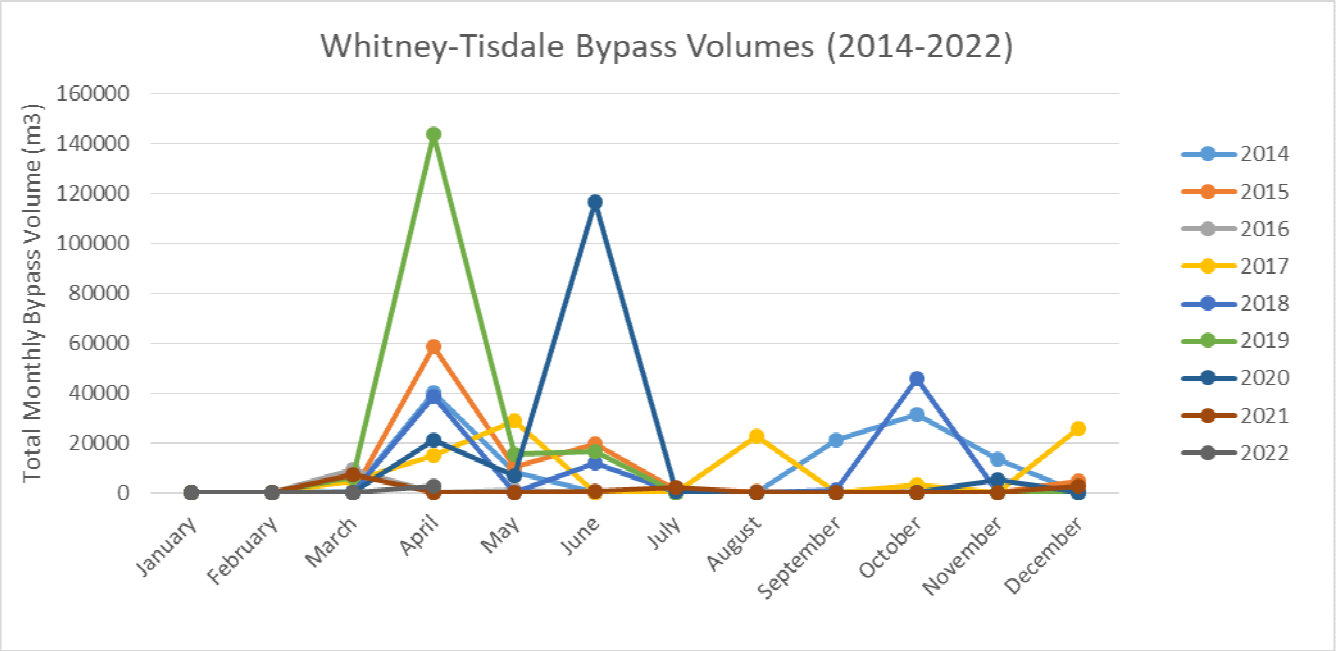
The system is fully operational and functioning as per its design. The City will be requesting a written report from our design consultant JLR on the performance of the new system to confirm that is the case.

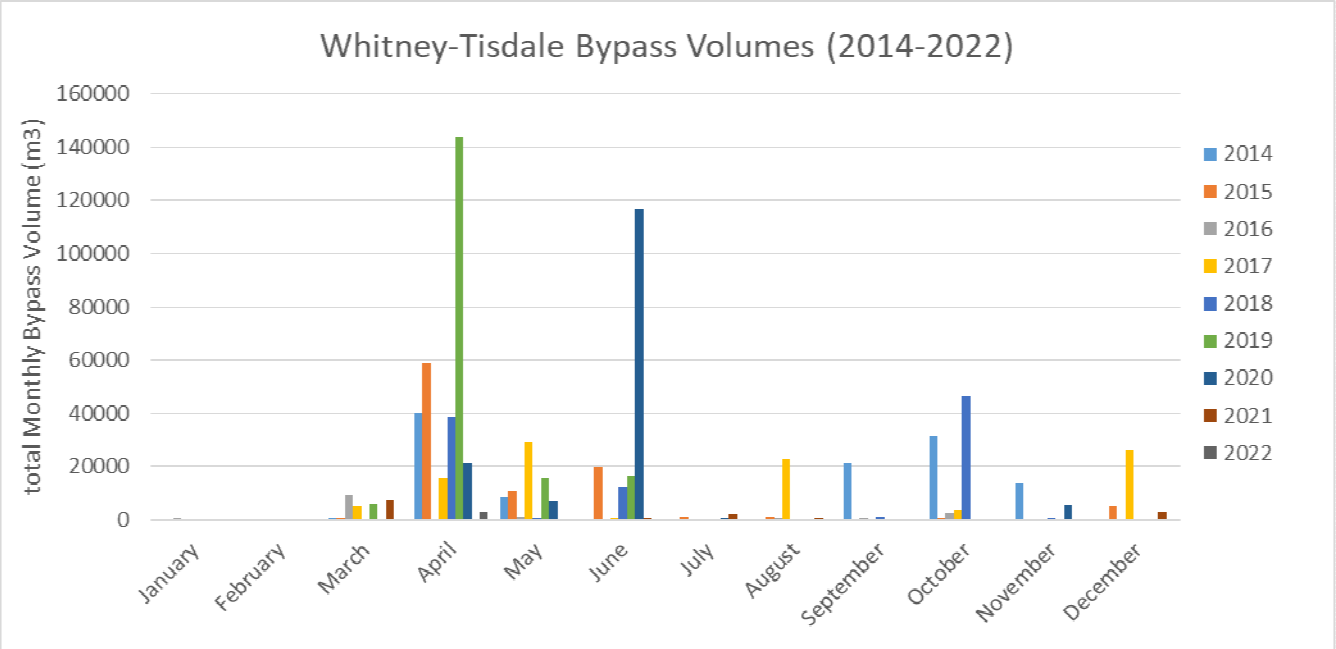
Our next steps with see the City continuing its lining program in the east end around the PS2 and 3 sewer sheds. As well, staff will be bringing a report to council to adopt a by-law for a residential Inflow and infiltration subsidy program.

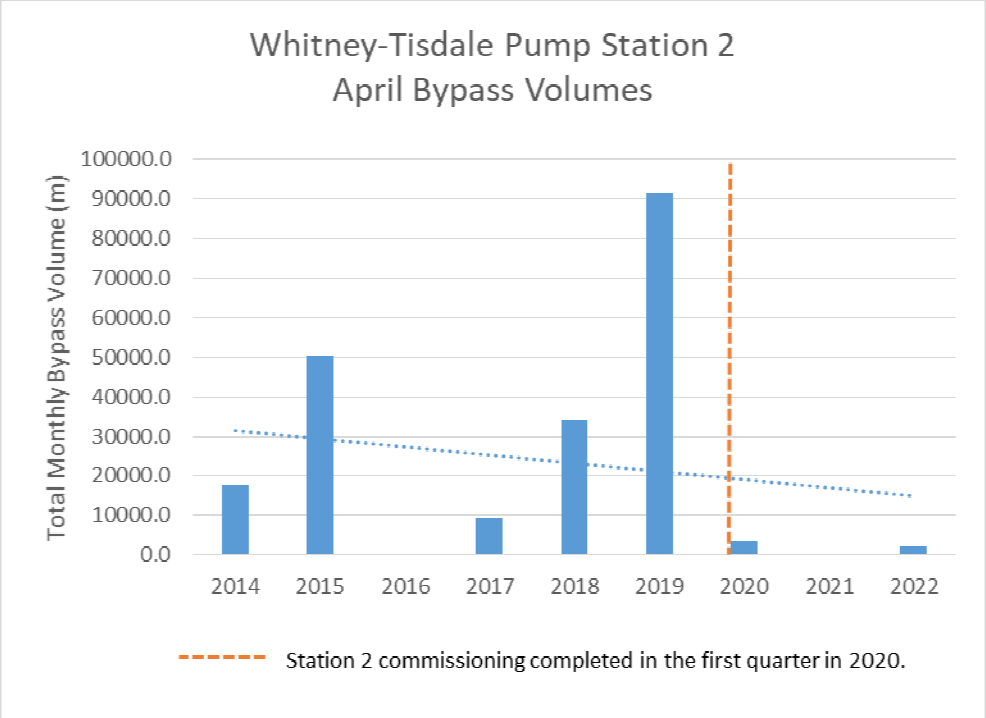
Thank you,

Dave Landers, CAO

## APPENDIX

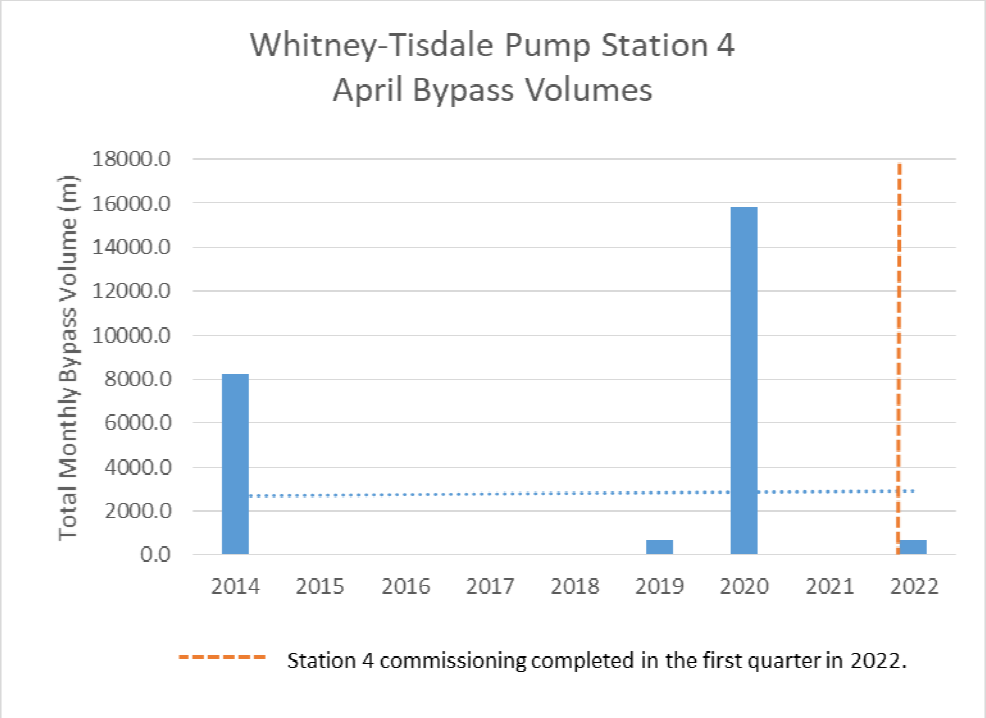

Whitney-Tisdale Bypass Volumes (2014-2022)
Total Monthly Bypass Volume (m3)
160000
140000
120000
100000
80000
60000
40000
20000
0
January
February
March
April
May
June
July
August
September
October
November
December
2014
2015
2016
2017
2018
2019
2020
2021
2022


Whitney-Tisdale Bypass Volumes (2014-2022)
total Monthly Bypass Volume (m3)
160000
140000
120000
100000
80000
60000
40000
20000
0
January
February
March
April
May
June
July
August
September
October
November
December
2014
2015
2016
2017
2018
2019
2020
2021
2022

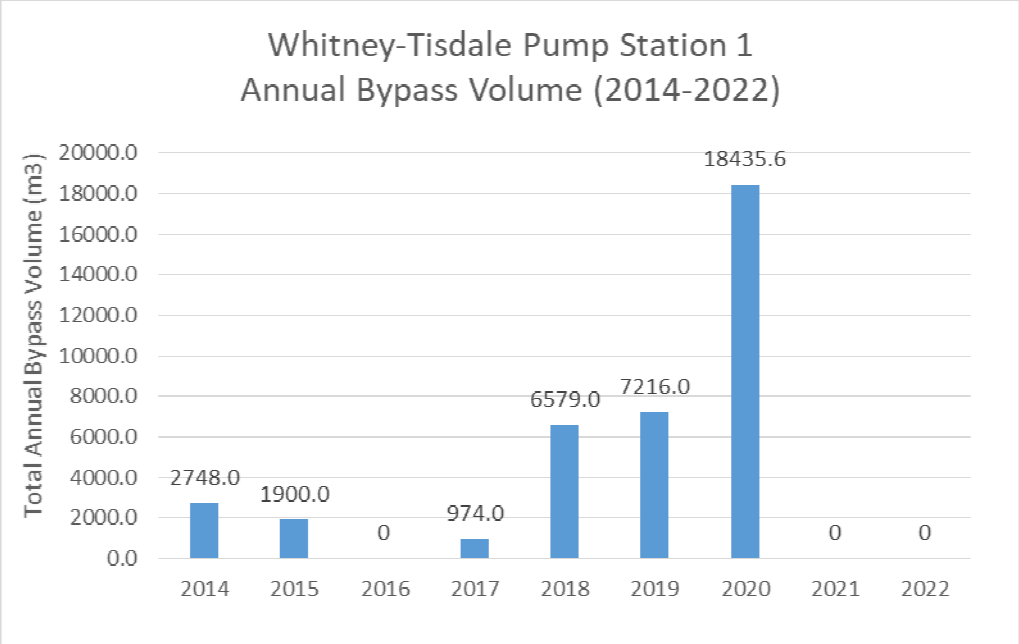


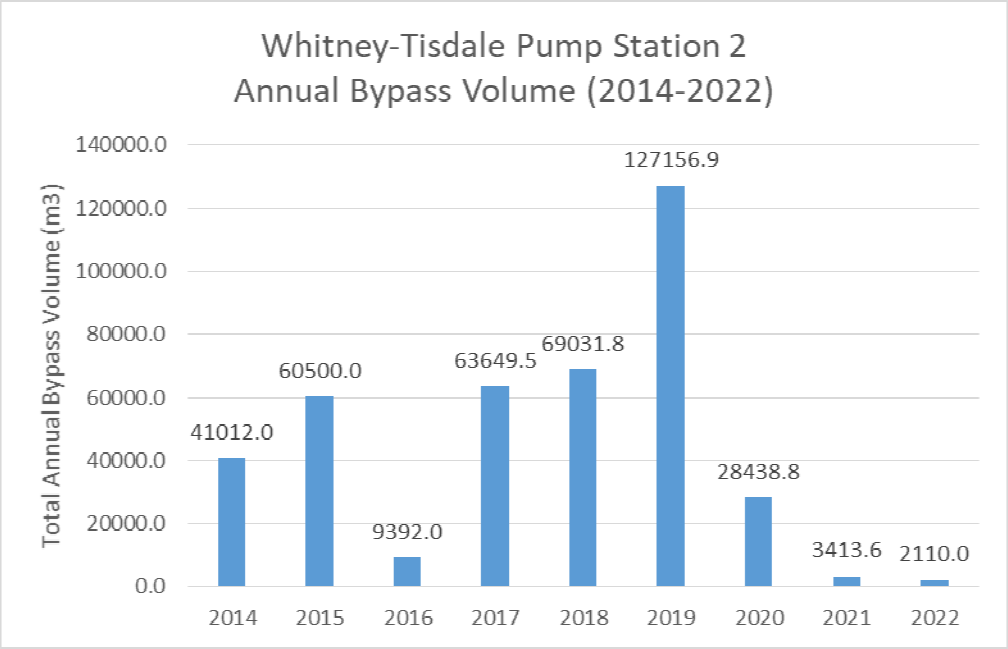

| | Whitney-Tisdale Station 2 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| April | 17598.0 | 50371.0 | 0 | 9197.0 | 34080.0 | 91485.6 | 3575.7 | 0 | 2110.0 |

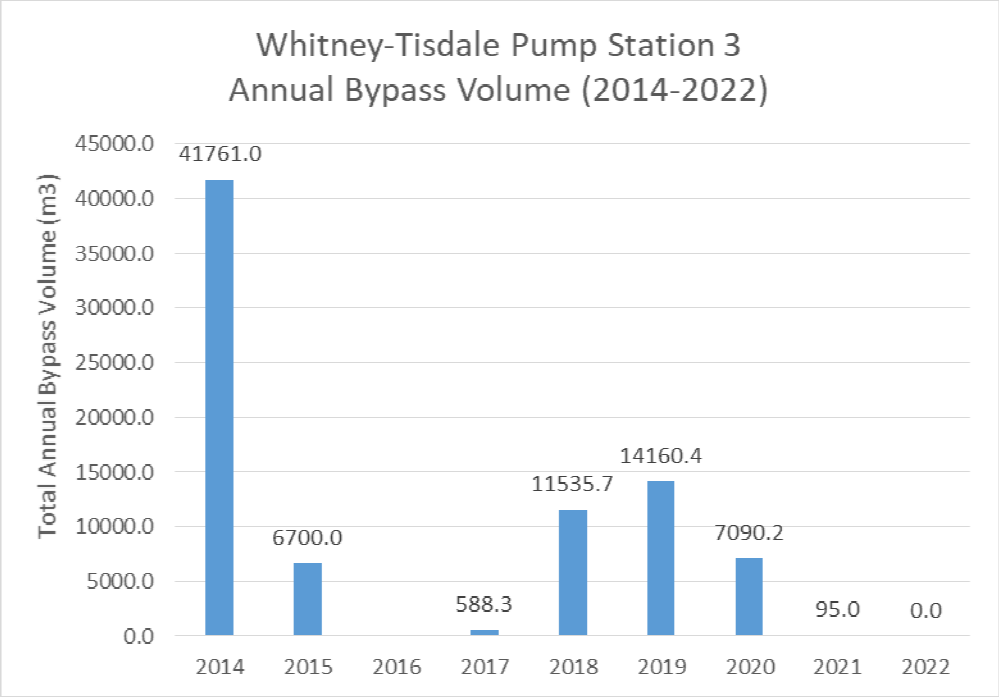
| | Average April Bypass Volume Pre-commissioning (m3) | Average April Bypass Volume Post-commissioning (m3) |
|---|---|---|
| April | 33788.6 | 1895.2 |
| % Reduction | **94.39%** | |

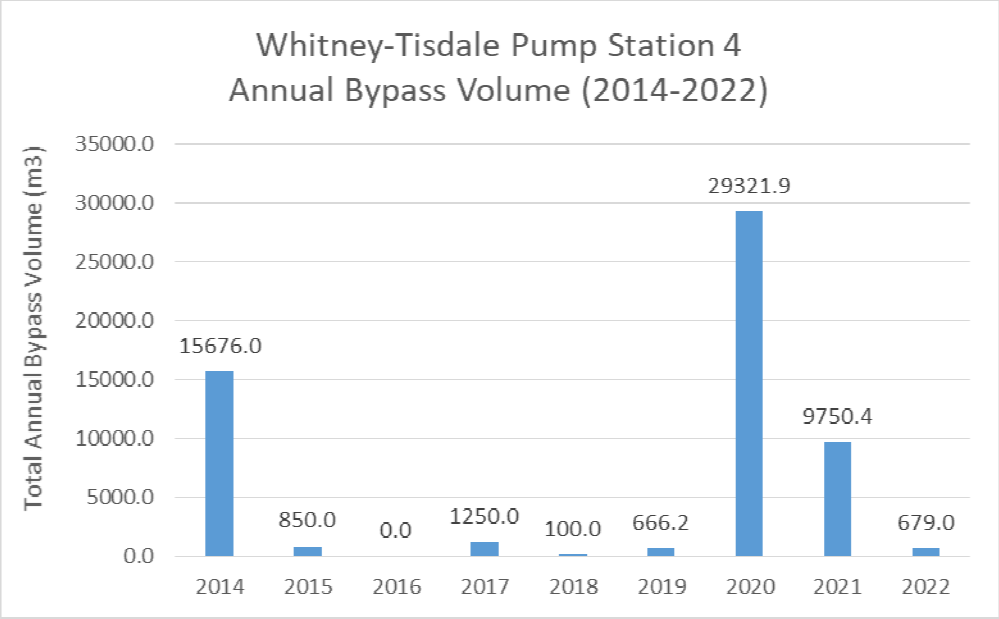


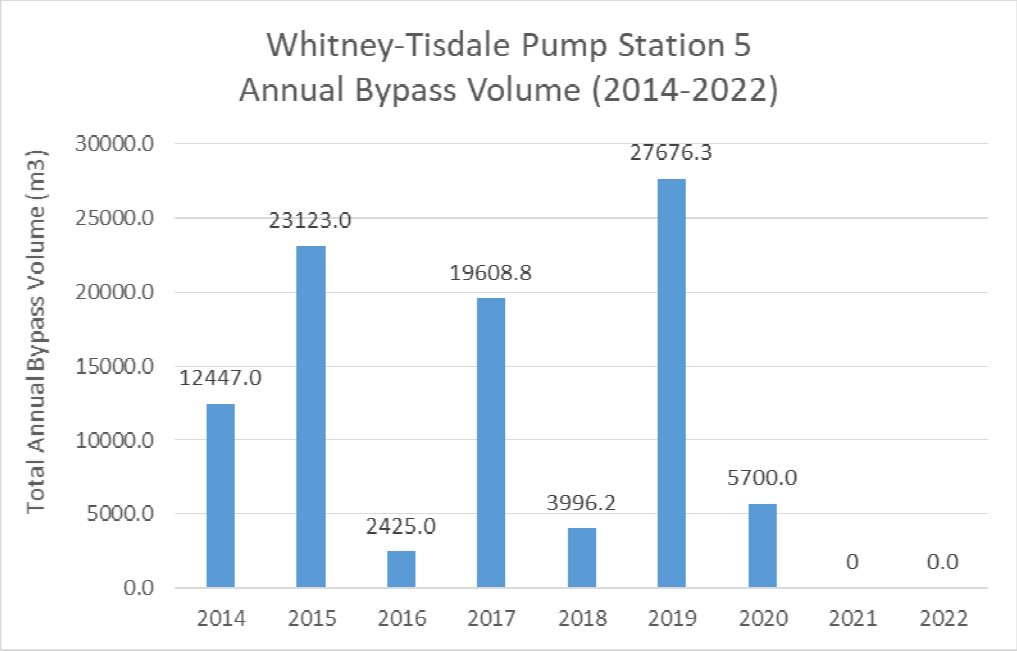

| | Whitney-Tisdale Station 4 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| April | 8276.0 | 0.0 | 0 | 0.0 | 0.0 | 666.2 | 15821.5 | 0 | 679.0 |
| | Average April Bypass Volume Pre-commissioning (m3) | | | | | | Average April Bypass Volume Post-commissioning (m3) | | |
| April | 3095.5 | | | | | | 679.0 | | |
| % Reduction | **78.06%** | | | | | | | | |

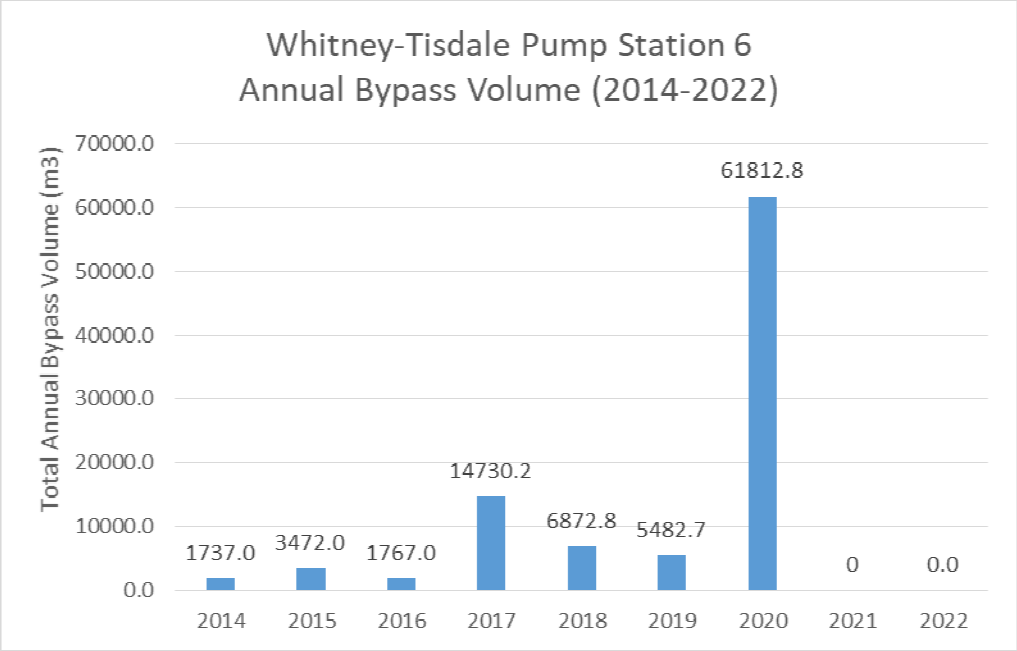

Whitney-Tisdale Pump Station 1
Annual Bypass Volume (2014-2022)
Total Annual Bypass Volume (m3)
20000.0
18000.0
16000.0
14000.0
12000.0
10000.0
8000.0
6000.0
4000.0
2000.0
0.0
2748.0
1900.0
0
974.0
6579.0
7216.0
18435.6
0
0
2014
2015
2016
2017
2018
2019
2020
2021
2022


Whitney-Tisdale Pump Station 2
Annual Bypass Volume (2014-2022)
Total Annual Bypass Volume (m3)
140000.0
120000.0
100000.0
80000.0
60000.0
40000.0
20000.0
0.0
41012.0
60500.0
9392.0
63649.5
69031.8
127156.9
28438.8
3413.6
2110.0
2014
2015
2016
2017
2018
2019
2020
2021
2022


Whitney-Tisdale Pump Station 3
Annual Bypass Volume (2014-2022)
Total Annual Bypass Volume (m3)
45000.0
40000.0
35000.0
30000.0
25000.0
20000.0
15000.0
10000.0
5000.0
0.0
41761.0
6700.0
588.3
11535.7
14160.4
7090.2
95.0
0.0
2014
2015
2016
2017
2018
2019
2020
2021
2022


Whitney-Tisdale Pump Station 4
Annual Bypass Volume (2014-2022)
Total Annual Bypass Volume (m3)
35000.0
30000.0
25000.0
20000.0
15000.0
10000.0
5000.0
0.0
15676.0
850.0
0.0
1250.0
100.0
666.2
29321.9
9750.4
679.0
2014
2015
2016
2017
2018
2019
2020
2021
2022


Whitney-Tisdale Pump Station 5
Annual Bypass Volume (2014-2022)
Total Annual Bypass Volume (m3)
30000.0
25000.0
20000.0
15000.0
10000.0
5000.0
0.0
12447.0
23123.0
2425.0
19608.8
3996.2
27676.3
5700.0
0
0.0
2014
2015
2016
2017
2018
2019
2020
2021
2022


Whitney-Tisdale Pump Station 6
Annual Bypass Volume (2014-2022)
Total Annual Bypass Volume (m3)
70000.0
60000.0
50000.0
40000.0
30000.0
20000.0
10000.0
0.0
1737.0
3472.0
1767.0
14730.2
6872.8
5482.7
61812.8
0
0.0
2014
2015
2016
2017
2018
2019
2020
2021
2022