Mayor Joshua A. Garcia

City of Holyoke

Carl Rossi, Director

Department of Public Works

June 5, 2023

Lealdon Langley, Director
Division of Watershed Management, MassDEP
100 Cambridge Street, Suite 900
Boston, MA 02114

Subject: Draft NPDES Permit No, MA0101630, Holyoke Water Pollution Control Facility

Dear Mr. Langley:

The City of Holyoke is in receipt of the above referenced draft permit and appreciates the opportunity to provide EPA and MassDEP with comments based on our review of the draft permit.

We note that MassDEP incorporates by reference the terms and conditions proposed by EPA in the federal NPDES permit. You will also receive a copy of our comments made to EPA.

The City of Holyoke appreciates the opportunity to provide comments on the draft permit which are provided in the attached letter to EPA. Should you have any questions, please feel free to reach out to me by telephone at 413-322-5645 or by email at rossic@holyoke.org.

Thank you,

Carl Rossi, Director

cc: Ken Moraff, Director, Water Division USEPA, Region 1

enclosure

CITY HALL ANNEX, RM 300 • 20 KOREAN VETERANS PLAZA • HOLYOKE, MASSACHUSETTS 01040
PHONE: (413) 322-5645 • EMAIL: rossic@holyoke.org
*Birthplace of Volleyball*

Mayor Joshua A. Garcia
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Michele Duspiva
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-4)
Boston, MA 02109-3912

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1. **Page 3 of 35, Effluent Limitations and Monitoring Requirements:**

    a. **Total Aluminum, Copper, and Lead**. It is unclear as to why copper and lead are limited since the discharge does not have reasonable potential to violate the applicable water quality standards. (see Attachment A). The Aluminum Water Quality limit is set at 87 ug/l which the EPA used as the WQ maximum exposure receiving water concentration. The Aluminum Calculator (Version 2.0) is the appropriate criteria to use in this calculation. Appendix B of the Draft Permit includes both the 87 ug/l limitation and the Aluminum Calculator Chronic Concentration of 290 ug/l. EPA adopted the Aluminum Calculator in 2018 and the State of Massachusetts also approved this application on November 11, 2021[3]. As outlined in Appendix A, the Aluminum Criteria value would be 27.22% of the WQ criteria and therefore there would be 'No Reasonable Potential' to violate WQ."

    It should also be noted that there are no technology-based effluent standards for these metals that are applicable to POTWs. Instead, they are responsible for regulating their industrial users to prevent metals and toxics from causing treatment inhibition, problems with biosolids disposal, and protecting receiving stream water quality. As Holyoke's data suggest, they are adequately limiting these industries. By setting the effluent discharge limit at the 95$^{th}$ percentile of effluent discharge concentrations, EPA seems to be applying technology-based limits for these parameters. EPA does not comply with the reasonable potential calculation as outlined in Appendix B of the draft.

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[4]This estimated cost was developed as part of a regional study completed in 2008. The Holyoke WPCF upgrade cost, adjusted to a current day value using the October 2022 ENR CCI is approximately $159 million

Conditions of 40 CFR Part 122.41(d) and (e). The "Duty to Mitigate" specifically refers to all reasonable steps to minimize discharges that would adversely affect human health or the environment.

*1. Wastewater Treatment Facility*

a. *WWTF Major Storm and Flood Events Plan*. The permit requires that this plan be submitted within 12 months of the effective date of the permit. However, Holyoke has an existing High Flow Management Plan (HFMP) which for the WPCF worked well during the last permit cycle and should be sufficient for the current permit cycle concerning climate challenges. Holyoke proposes to update the HFMP by incorporating the items listed in the draft permit below:

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It should also be noted that a Vulnerability Evaluation was included in the WPCF's Asset Management Plan. Holyoke believes that the work referenced in this response addresses the majority of the requirements set out in Item 1.a. *WWTF Major Storm and Flood Events Plan* and respectfully requests that the permit language be revised to acknowledge the planning work that has already been done by Holyoke.

*2. Sewer System*

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It is noted that item e(2) is similar to the Storm and Flood Events Plan for the WPCF. For the sewer system, Tighe & Bond's Report 7, Climate Vulnerability Assessment, meets the requirements of item e(2) as well item 1) under footnote 18.

Holyoke believes that the work referenced in this response addresses the majority of the requirements set out in Item 2. *Sewer System* and respectfully requests that the permit language be revised to acknowledge the planning work that has already been done by Holyoke.

In addition, Holyoke has specific concerns regarding 2.i(c)(iii), which requires a plan for alternative power supply. The City understands that diesel fuel that is used to run back-up generators may be phased out as early as 2030. Further complicating this issue, is that there is no known large battery, solar, or wind-powered generators that can provide the power necessary to operate pumping stations of the size operated by the City of Holyoke. The City requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

4. **Part D Alternative Power Source**, page 20 of 35. As previously mentioned, Holyoke requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

5. **Section E, Industrial Users**, Item 6 requires testing for PFAS for known contaminated sites, firefighting training facilities, airports, and other expected sources. The implication is these may be enforceable limits. Holyoke requests the following change to the last sentence of this section, "All monitoring results may be used by EPA in the next permit reissuance to ensure the discharge continues to protect designated uses." Change to; All

monitoring results are for informational purposes and data collection only. Once there is an approved PFAS test method that is finalized through the 'Rule Making Process' then monitoring results after the approval date will be used by the EPA in the next permit reissuance to ensure the discharge continues to protect designated uses.

6. **Page 31 of 35, Outfall 009 and Berkshire Street CSO Treatment Facility**, Total Residual Chlorine (TRC) Effluent Limitation

   In addition to a daily maximum TRC limit of 0 24 mg/l required for CSO discharge based on the acute criteria of 0.019 mg/l, EPA is also applying an average monthly TRC limit of 0.14 mg/l, based on the chronic criteria of 0.11 mg/l. According to EPA's Technical Support Document for Water Quality-Based Toxics Control (EPA, March 1991), while acute effects are limited based upon one-hour exposures at critical low flow conditions, chronic effects are limited based on four-day exposures at critical low flow conditions. While it is possible for a sudden intense rainfall event to result in CSO discharges during low flow conditions, it is unlikely that an event that persists for at least four (4) days would not increase flows well above critical conditions.

   Holyoke disagrees that disinfected CSO discharge has the reasonable potential to cause an exceedance of the chronic instream criteria for total residual chlorine and requests that this effluent limit be removed from the permit. Holyoke notes that the previous permit contained a monthly average limit to TRC, however that limit was incorrectly applied and as such, antibacksliding does not apply.

The City of Holyoke appreciates the opportunity to provide comments on the draft permit. Should you have any questions, please feel free to reach out to me by telephone at 413-322-5645 or by email at rossic@holyoke.org.

Thank you,

Carl Rossi, Director

cc.

Lealdon Langley, Division of Watershed Management MassDEP

**ALUMINUM**

## Calculator for ALUMINUM Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  101,976.20 = 100,595.00

| Data | |
|---|---|
| 66.2 | Ce = Effluent Concentration 95th Percentile |
| 17.5 | Qe = Avg Design Q for Chronic ; Peak Q Acute |
| 79.1 | Cs = Median Metal Concentration in CT River upstream |
| 1274.56 | Qs = 7Q10 Stream flow CT River |
| 78.9253 | Cd = downstream concentration |
| 1292 | Qd = Downstream flow (Qs + Qe) |

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

| Cs*Qs | + Ce*Qe | | Downstream | AlCriteria | |
|---|---|---|---|---|---|
| | | | | | % of |
| 100817.7 | 1158.5 | 101976.196 | Al Conc. | Avg limit | Limit |
| 1292.06 | | 1292.06 | **Cd= 78.9253** | **87** | **90.72%** |
| | | | Al Calculator | **290** | **27.22%** |

**COPPER**

## Calculator for COPPER Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  371.875 = 366.83823

| Data | |
|---|---|
| 21.25 | Ce = Effluent Concentration 95th Percentile |
| 17.5 | Qe = Avg Design Q for Chronic ; Peak Q Acute |
| 0 | Cs = Median Metal Concentration in CT River upstream |
| 1274.56 | Qs = 7Q10 Stream flow CT River |
| **0.2878** | Cd = downstream concentration |
| 1292 | Qd = Downstream flow (Qs + Qe) |

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

| Cs*Qs | + Ce*Qe | | Downstream | Cu Criteria | |
|---|---|---|---|---|---|
| | | | | | % of |
| 0 | 371.875 | 371.875 | Cu Conc. | Avg limit | Limit |
| 1292.06 | | 1292.06 | **Cd= 0.2878** | **3.8** | **7.57%** |

## Calculator for LEAD Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

$Cs*Qs + Ce*Qe = Cd*Qs$ 26.25 = 25.89446

| Data | |
|---|---|
| 1.5 | Ce = Effluent Concentration 95th Percentile |
| | Qe = Avg Design Q for Chronic ; Peak Q |
| 17.5 | Acute |
| 0 | Cs = Median Metal Concentration in CT River upstream |
| 1274.56 | Qs = 7Q10 Stream flow river |
| 0.0203 | Cd = downstream conc |
| 1292 | Qd = Downstream Q (Qs+Qe) |

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

| Cs*Qs | + Ce*Qe | | Downstream | Pb Criteria | |
|---|---|---|---|---|---|
| 0 | 26.25 | 26.25 | Pb Conc. | Avg limit | % of Limit |
| 1292.06 | | 1292.06 | Cd 0.0203 | 0.8 | 2.54% |

## Attachment B - METALS MONITORING DATA SUMMARY

| Date | Al avg | Al Max | Cu Avg | Cu Max | Pb Avg | Pb Max |
|---|---|---|---|---|---|---|
| 10/31/2017 | 47.5 | 50 | 11 | 11 | 0.985 | <1 |
| 11/30/2017 | 44 | 44 | 14 | 14 | 1.1 | 1.1 |
| 12/31/2017 | 40 | 40 | 14 | 14 | <1 | <1 |
| 1/31/2018 | 46 | 46 | 27 | 27 | <1 | <1 |
| 2/28/2018 | 63 | 63 | 11 | 11 | 1.9 | 2.8 |
| 3/31/2018 | 36 | 36 | 26 | 26 | 1.1 | 1.1 |
| 4/30/2018 | 73 | 73 | 26 | 26 | 1.2 | 1.2 |
| 5/31/2018 | 41 | 41 | 6 | 6 | 1.2 | 1.2 |
| 6/30/2018 | 26 | 26 | 7.9 | 7.9 | 0.66 | 0.66 |
| 7/31/2018 | 52 | 52 | 16 | 16 | 1.4 | 1.4 |
| 8/31/2018 | 28 | 28 | 7.9 | 7.9 | <1 | <1 |
| 9/30/2018 | 13 | 13 | 6.2 | 6.2 | <1 | <1 |
| 10/31/2018 | 32 | 32 | 21 | 21 | 1 | 1 |
| 11/30/2018 | 19 | 19 | 6.2 | 6.2 | <1 | <1 |
| 12/31/2018 | 34 | 34 | 7.8 | 7.8 | <1 | <1 |
| 1/31/2019 | 32 | 32 | 9.4 | 11 | 1.3 | 1.6 |
| 2/28/2019 | 70 | 70 | 19 | 19 | 1 | 1 |
| 3/31/2019 | 42.4 | 42.4 | 10.5 | 10.5 | <1 | <1 |
| 4/30/2019 | 39 | 39 | 17 | 17 | <1 | <1 |
| 5/31/2019 | 37 | 37 | 11 | 11 | <1 | <1 |
| 6/30/2019 | 38 | 38 | 7.7 | 7.7 | 2.1 | 2.1 |
| 7/31/2019 | 36 | 36 | 10 | 10 | 1 | 1 |
| 8/31/2019 | 37 | 37 | 8.2 | 8.2 | 1 | 1 |
| 9/30/2019 | 39 | 39 | 12 | 12 | <1 | <1 |
| 10/31/2019 | 66 | 66 | 19 | 19 | 1.2 | 1.2 |
| 11/30/2019 | 45 | 45 | 18 | 18 | 1 | 1 |
| 12/31/2019 | 44.9 | 44.9 | 15.3 | 15.3 | 1.14 | 1.14 |
| 1/31/2020 | 30 | 30 | 8.3 | 8.3 | <1 | <1 |
| 2/29/2020 | 28 | 28 | 10 | 10 | 1.5 | 1.5 |
| 3/31/2020 | 34 | 34 | 8.7 | 8.7 | 0.9 | 0.9 |
| 4/30/2020 | 29 | 29 | 7.7 | 7.7 | 0.76 | 0.76 |
| 5/31/2020 | 28.5 | 39 | 19.95 | 32 | <0.83 | <1 |
| 6/30/2020 | 29 | 34 | 7.25 | 7.8 | <1.45 | 1.9 |
| 7/31/2020 | 48 | 57 | 16 | 20 | 1.4 | 1.8 |
| 8/31/2020 | 29.5 | 31 | 16 | 20 | 1.4 | 1.8 |
| 9/30/2020 | 48 | 48 | 8.6 | 8.6 | 1.1 | 1.1 |
| 10/31/2020 | 30 | 30 | 8 | 8 | <1 | <1 |
| 11/30/2020 | 40 | 40 | 12 | 12 | 1.1 | 1.1 |
| 12/31/2020 | 31 | 32 | 6.35 | 6.5 | 0.765 | 0.83 |
| 1/31/2021 | 24 | 24 | 6.4 | 6.4 | <.5 | <.5 |
| 2/28/2021 | 24 | 24 | 9.6 | 9.6 | 0.5 | 0.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3/31/2021 | 36 | 44 | 10.5 | 11 | 0.575 | 0.58 |
| 4/30/2021 | 37 | 37 | 9 | 9 | 0.8 | 0.8 |
| 5/31/2021 | 33 | 33 | 6.8 | 6.8 | 0.83 | 0.83 |
| 6/30/2021 | 40.6 | 61 | 11.58 | 16 | 1.298 | 2.4 |
| 7/31/2021 | 64 | 64 | 12 | 12 | 1.1 | 1.1 |
| 8/31/2021 | 40 | 40 | 11 | 11 | 0.84 | 0.84 |
| 9/30/2021 | 36.5 | 37 | 9.85 | 10 | 1 | 1 |
| 10/31/2021 | 34 | 34 | 7.6 | 7.6 | 0.79 | 0.79 |
| 11/30/2021 | 38 | 38 | 12 | 12 | 0.79 | 0.79 |
| 12/31/2021 | 43 | 43 | 16 | 16 | 0.84 | 0.84 |
| 1/31/2022 | 35 | 35 | 14 | 14 | 0.95 | 0.95 |
| 2/28/2022 | 43.5 | 45 | 18.5 | 23 | 0.99 | 1 |
| 3/31/2022 | 38 | 38 | 15 | 15 | 1 | 1 |
| 4/30/2022 | 96 | 96 | 18 | 18 | 1.1 | 1.1 |
| 5/31/2022 | 26 | 26 | 12 | 12 | 0.61 | 0.61 |
| 6/30/2022 | 38 | 38 | 14 | 14 | 1 | 1 |
| 7/31/2022 | 38 | 38 | 9.4 | 9.4 | 1.5 | 1.5 |
| 8/31/2022 | 40 | 40 | 11 | 11 | 1.1 | 1.1 |
| 9/30/2022 | 26 | 29 | 6.67 | 8 | 0.867 | 1 |
| 95th% All | 66.2 | 66.2 | 21.25 | 26.00 | 1.50 | 2.06 |
| **Non-Clean 95th** | 67.8 | 67.8 | 26 | 26.45 | 1.91 | 2.17 |
| **Clean 95th%** | 58.4 | 62.95 | 17.3 | 20 | 1.4 | 1.875 |
| **% Improvement** | **13.86%** | **7.15%** | **33.46%** | **24.39%** | **26.70%** | **13.59%** |

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Holyoke believes that the work referenced in this response addresses the majority of the requirements set out in Item 2. *Sewer System* and respectfully requests that the permit language be revised to acknowledge the planning work that has already been done by Holyoke.

In addition, Holyoke has specific concerns regarding 2.i(c)(iii), which requires a plan for alternative power supply. The City understands that diesel fuel that is used to run back-up generators may be phased out as early as 2030. Further complicating this issue, is that there is no known large battery, solar, or wind-powered generators that can provide the power necessary to operate pumping stations of the size operated by the City of Holyoke. The City requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

4. **Part D Alternative Power Source**, page 20 of 35. As previously mentioned, Holyoke requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

5. **Section E, Industrial Users**, Item 6 requires testing for PFAS for known contaminated sites, firefighting training facilities, airports, and other expected sources. The implication is these may be enforceable limits. Holyoke requests the following change to the last sentence of this section, "All monitoring results may be used by EPA in the next permit reissuance to ensure the discharge continues to protect designated uses." Change to; All

monitoring results are for informational purposes and data collection only. Once there is an approved PFAS test method that is finalized through the 'Rule Making Process' then monitoring results after the approval date will be used by the EPA in the next permit reissuance to ensure the discharge continues to protect designated uses.

6. **Page 31 of 35, Outfall 009 and Berkshire Street CSO Treatment Facility**, Total Residual Chlorine (TRC) Effluent Limitation

   In addition to a daily maximum TRC limit of 0 24 mg/l required for CSO discharge based on the acute criteria of 0.019 mg/l, EPA is also applying an average monthly TRC limit of 0.14 mg/l, based on the chronic criteria of 0.11 mg/l. According to EPA's Technical Support Document for Water Quality-Based Toxics Control (EPA. March 1991), while acute effects are limited based upon one-hour exposures at critical low flow conditions. chronic effects are limited based on four-day exposures at critical low flow conditions. While it is possible for a sudden intense rainfall event to result in CSO discharges during low flow conditions, it is unlikely that an event that persists for at least four (4) days would not increase flows well above critical conditions.

   Holyoke disagrees that disinfected CSO discharge has the reasonable potential to cause an exceedance of the chronic instream criteria for total residual chlorine and requests that this effluent limit be removed from the permit. Holyoke notes that the previous permit contained a monthly average limit to TRC, however that limit was incorrectly applied and as such, antibacksliding does not apply.

The City of Holyoke appreciates the opportunity to provide comments on the draft permit. Should you have any questions, please feel free to reach out to me by telephone at 413-322-5645 or by email at rossic@holyoke.org.

Thank you,

Carl Rossi, Director

cc.

Lealdon Langley, Division of Watershed Management MassDEP

**ALUMINUM**

## Calculator for ALUMINUM Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  101,976.20 = 100,595.00

| Data | |
|---|---|
| 66.2 | Ce = Effluent Concentration 95th Percentile |
| 17.5 | Qe = Avg Design Q for Chronic ; Peak Q Acute |
| 79.1 | Cs = Median Metal Concentration in CT River upstream |
| 1274.56 | Qs = 7Q10 Stream flow CT River |
| **78.9253** | Cd = downstream concentration |
| 1292 | Qd = Downstream flow (Qs + Qe) |

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

| Cs*Qs | + Ce*Qe | | Downstream | AlCriteria | |
|---|---|---|---|---|---|
| | | | | | **% of** |
| 100817.7 | 1158.5 | 101976.196 | Al Conc. | Avg limit | **Limit** |
| 1292.06 | | 1292.06 | **Cd= 78.9253** | **87** | **90.72%** |
| | | | Al Calculator | **290** | **27.22%** |

**COPPER**

## Calculator for COPPER Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  371.875 = 366.83823

| Data | |
|---|---|
| 21.25 | Ce = Effluent Concentration 95th Percentile |
| 17.5 | Qe = Avg Design Q for Chronic ; Peak Q Acute |
| 0 | Cs = Median Metal Concentration in CT River upstream |
| 1274.56 | Qs = 7Q10 Stream flow CT River |
| **0.2878** | Cd = downstream concentration |
| 1292 | Qd = Downstream flow (Qs + Qe) |

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

| Cs*Qs | + Ce*Qe | | Downstream | Cu Criteria | |
|---|---|---|---|---|---|
| | | | | | **% of** |
| 0 | 371.875 | 371.875 | Cu Conc. | Avg limit | **Limit** |
| 1292.06 | | 1292.06 | **Cd= 0.2878** | **3.8** | **7.57%** |

## Calculator for LEAD Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  26.25 = 25.89446

| Data | |
|---|---|
| 1.5 | Ce = Effluent Concentration 95th Percentile |
| | Qe = Avg Design Q for Chronic ; Peak Q |
| 17.5 | Acute |
| 0 | Cs = Median Metal Concentration in CT River upstream |
| 1274.56 | Qs = 7Q10 Stream flow river |
| 0.0203 | Cd = downstream conc |
| 1292 | Qd = Downstream Q (Qs+Qe) |

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

| Cs*Qs | + Ce*Qe | | Downstream | | Pb Criteria | |
|---|---|---|---|---|---|---|
| | | | | | | % of |
| 0 | 26.25 | 26.25 | | Pb Conc. | Avg limit | Limit |
| 1292.06 | | 1292.06 | Cd | 0.0203 | 0.8 | 2.54% |

## Attachment B - METALS MONITORING DATA SUMMARY

| Date | Al avg | Al Max | Cu Avg | Cu Max | Pb Avg | Pb Max |
|---|---|---|---|---|---|---|
| 10/31/2017 | 47.5 | 50 | 11 | 11 | 0.985 | <1 |
| 11/30/2017 | 44 | 44 | 14 | 14 | 1.1 | 1.1 |
| 12/31/2017 | 40 | 40 | 14 | 14 | <1 | <1 |
| 1/31/2018 | 46 | 46 | 27 | 27 | <1 | <1 |
| 2/28/2018 | 63 | 63 | 11 | 11 | 1.9 | 2.8 |
| 3/31/2018 | 36 | 36 | 26 | 26 | 1.1 | 1.1 |
| 4/30/2018 | 73 | 73 | 26 | 26 | 1.2 | 1.2 |
| 5/31/2018 | 41 | 41 | 6 | 6 | 1.2 | 1.2 |
| 6/30/2018 | 26 | 26 | 7.9 | 7.9 | 0.66 | 0.66 |
| 7/31/2018 | 52 | 52 | 16 | 16 | 1.4 | 1.4 |
| 8/31/2018 | 28 | 28 | 7.9 | 7.9 | <1 | <1 |
| 9/30/2018 | 13 | 13 | 6.2 | 6.2 | <1 | <1 |
| 10/31/2018 | 32 | 32 | 21 | 21 | 1 | 1 |
| 11/30/2018 | 19 | 19 | 6.2 | 6.2 | <1 | <1 |
| 12/31/2018 | 34 | 34 | 7.8 | 7.8 | <1 | <1 |
| 1/31/2019 | 32 | 32 | 9.4 | 11 | 1.3 | 1.6 |
| 2/28/2019 | 70 | 70 | 19 | 19 | 1 | 1 |
| 3/31/2019 | 42.4 | 42.4 | 10.5 | 10.5 | <1 | <1 |
| 4/30/2019 | 39 | 39 | 17 | 17 | <1 | <1 |
| 5/31/2019 | 37 | 37 | 11 | 11 | <1 | <1 |
| 6/30/2019 | 38 | 38 | 7.7 | 7.7 | 2.1 | 2.1 |
| 7/31/2019 | 36 | 36 | 10 | 10 | 1 | 1 |
| 8/31/2019 | 37 | 37 | 8.2 | 8.2 | 1 | 1 |
| 9/30/2019 | 39 | 39 | 12 | 12 | <1 | <1 |
| 10/31/2019 | 66 | 66 | 19 | 19 | 1.2 | 1.2 |
| 11/30/2019 | 45 | 45 | 18 | 18 | 1 | 1 |
| 12/31/2019 | 44.9 | 44.9 | 15.3 | 15.3 | 1.14 | 1.14 |
| 1/31/2020 | 30 | 30 | 8.3 | 8.3 | <1 | <1 |
| 2/29/2020 | 28 | 28 | 10 | 10 | 1.5 | 1.5 |
| 3/31/2020 | 34 | 34 | 8.7 | 8.7 | 0.9 | 0.9 |
| 4/30/2020 | 29 | 29 | 7.7 | 7.7 | 0.76 | 0.76 |
| 5/31/2020 | 28.5 | 39 | 19.95 | 32 | <0.83 | <1 |
| 6/30/2020 | 29 | 34 | 7.25 | 7.8 | <1.45 | 1.9 |
| 7/31/2020 | 48 | 57 | 16 | 20 | 1.4 | 1.8 |
| 8/31/2020 | 29.5 | 31 | 16 | 20 | 1.4 | 1.8 |
| 9/30/2020 | 48 | 48 | 8.6 | 8.6 | 1.1 | 1.1 |
| 10/31/2020 | 30 | 30 | 8 | 8 | <1 | <1 |
| 11/30/2020 | 40 | 40 | 12 | 12 | 1.1 | 1.1 |
| 12/31/2020 | 31 | 32 | 6.35 | 6.5 | 0.765 | 0.83 |
| 1/31/2021 | 24 | 24 | 6.4 | 6.4 | <.5 | <.5 |
| 2/28/2021 | 24 | 24 | 9.6 | 9.6 | 0.5 | 0.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3/31/2021 | 36 | 44 | 10.5 | 11 | 0.575 | 0.58 |
| 4/30/2021 | 37 | 37 | 9 | 9 | 0.8 | 0.8 |
| 5/31/2021 | 33 | 33 | 6.8 | 6.8 | 0.83 | 0.83 |
| 6/30/2021 | 40.6 | 61 | 11.58 | 16 | 1.298 | 2.4 |
| 7/31/2021 | 64 | 64 | 12 | 12 | 1.1 | 1.1 |
| 8/31/2021 | 40 | 40 | 11 | 11 | 0.84 | 0.84 |
| 9/30/2021 | 36.5 | 37 | 9.85 | 10 | 1 | 1 |
| 10/31/2021 | 34 | 34 | 7.6 | 7.6 | 0.79 | 0.79 |
| 11/30/2021 | 38 | 38 | 12 | 12 | 0.79 | 0.79 |
| 12/31/2021 | 43 | 43 | 16 | 16 | 0.84 | 0.84 |
| 1/31/2022 | 35 | 35 | 14 | 14 | 0.95 | 0.95 |
| 2/28/2022 | 43.5 | 45 | 18.5 | 23 | 0.99 | 1 |
| 3/31/2022 | 38 | 38 | 15 | 15 | 1 | 1 |
| 4/30/2022 | 96 | 96 | 18 | 18 | 1.1 | 1.1 |
| 5/31/2022 | 26 | 26 | 12 | 12 | 0.61 | 0.61 |
| 6/30/2022 | 38 | 38 | 14 | 14 | 1 | 1 |
| 7/31/2022 | 38 | 38 | 9.4 | 9.4 | 1.5 | 1.5 |
| 8/31/2022 | 40 | 40 | 11 | 11 | 1.1 | 1.1 |
| 9/30/2022 | 26 | 29 | 6.67 | 8 | 0.867 | 1 |
| 95th% All | 66.2 | 66.2 | 21.25 | 26.00 | 1.50 | 2.06 |
| **Non-Clean 95th** | 67.8 | 67.8 | 26 | 26.45 | 1.91 | 2.17 |
| **Clean 95th%** | 58.4 | 62.95 | 17.3 | 20 | 1.4 | 1.875 |
| **% Improvement** | **13.86%** | **7.15%** | **33.46%** | **24.39%** | **26.70%** | **13.59%** |

Mayor Joshua A. Garcia

City of Holyoke

Carl Rossi, Director

Department of Public Works

June 5, 2023

Lealdon Langley, Director
Division of Watershed Management, MassDEP
100 Cambridge Street, Suite 900
Boston, MA 02114

Subject: Draft NPDES Permit No, MA0101630, Holyoke Water Pollution Control Facility

Dear Mr. Langley:

The City of Holyoke is in receipt of the above referenced draft permit and appreciates the opportunity to provide EPA and MassDEP with comments based on our review of the draft permit.

We note that MassDEP incorporates by reference the terms and conditions proposed by EPA in the federal NPDES permit. You will also receive a copy of our comments made to EPA.

The City of Holyoke appreciates the opportunity to provide comments on the draft permit which are provided in the attached letter to EPA. Should you have any questions, please feel free to reach out to me by telephone at 413-322-5645 or by email at rossic@holyoke.org.

Thank you,

Carl Rossi, Director

cc: Ken Moraff, Director, Water Division USEPA, Region 1

enclosure

Mayor Joshua A. Garcia
City of Holyoke

Carl Rossi, Director
Department of Public Works

June 5, 2023

Michele Duspiva
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-4)
Boston, MA 02109-3912

Subject Draft NPDES Permit No, MA0101630, Holyoke Water Pollution Control Facility

Dear Ms. Duspiva:

The City of Holyoke is in receipt of the above referenced draft permit and appreciates the opportunity to provide the following comments based on our review of the draft permit.

The City of Holyoke recently entered into a Final Consent Decree[1] on March 23, 2023, with the USEPA and Commonwealth of Massachusetts. This Decree requires the expenditure of $27 million over a 10 and ½ year period. Appendix A of the Consent Decree (Section 8 and 9). outlines the extent of Holyoke's 'Disadvantaged Community' status and the ratepayer's duress in completing the requirements of the Consent Decree.

A review of the EPA's 'Environmental Justice' Screening Tool[2] for Holyoke outlines how disadvantaged the community scores. Within the Environmental Justice Index, Holyoke scores in the 80th percentile and is often higher in almost all key indices. The ability for ratepayers to take on more costs is currently at the maximum affordability as outlined in Section 8, Affordability Analysis, of Appendix A of the Consent Decree.

1. **Page 3 of 35, Effluent Limitations and Monitoring Requirements:**

    a. **Total Aluminum, Copper, and Lead**. It is unclear as to why copper and lead are limited since the discharge does not have reasonable potential to violate the applicable water quality standards. (see Attachment A). The Aluminum Water Quality limit is set at 87 ug/l which the EPA used as the WQ maximum exposure receiving water concentration. The Aluminum Calculator (Version 2.0) is the appropriate criteria to use in this calculation. Appendix B of the Draft Permit includes both the 87 ug/l limitation and the Aluminum Calculator Chronic Concentration of 290 ug/l. EPA adopted the Aluminum Calculator in 2018 and the State of Massachusetts also approved this application on November 11, 2021[3]. As outlined in Appendix A, the Aluminum Criteria value would be 27.22% of the WQ criteria and therefore there would be 'No Reasonable Potential' to violate WQ."

    It should also be noted that there are no technology-based effluent standards for these metals that are applicable to POTWs. Instead, they are responsible for regulating their industrial users to prevent metals and toxics from causing treatment inhibition, problems with biosolids disposal, and protecting receiving stream water quality. As Holyoke's data suggest, they are adequately limiting these industries. By setting the effluent discharge limit at the 95th percentile of effluent discharge concentrations, EPA seems to be applying technology-based limits for these parameters. EPA does not comply with the reasonable potential calculation as outlined in Appendix B of the draft.

[1] Final Consent Decree of U.S., et al. v. City of Holyoke, Massachusetts (justice.gov)
[2] EJScreen (epa.gov)
[3] download (mass.gov)

EPA notes in the fact sheet, "As shown, the 95th percentile of the effluent data (Ce) for each metal results in a downstream concentration (Cd) significantly below the relevant criterion." This is the very definition of "no reasonable potential to cause or contribute to violations of water quality standards.

With no regulatory basis for technology-based effluent limits and no reasonable potential for the discharge to cause or contribute to violations of the instream standards for aluminum copper and lead, Holyoke respectfully requests that effluent limitations for these parameters be removed from the permit.

b. **Total Nitrogen (TN)** The permit includes a rolling average loading limit for TN of 730 ppd based on a design flow of 17.5 mgd and an effluent concentration 5 mg/l (allocation from Long Island Sound TMDL).

As noted in the Consent Decree referenced earlier, Appendix A indicates the cost for Nitrogen treatment would be $137 million[4] as outlined in a MassDEP study. EPA indicates that future Nitrogen trading credits are a goal for basin-wide compliance with nitrogen loading to LIS.

Environmental Justice calls for fair and equitable treatment for disadvantaged communities. Allocating loading to treatment plants based on size, rather than ability to pay, is contrary to these very principles. The fair and equitable approach would be a daily loading limit based on a single concentration. The application of a limit based on a 5 mg/l effluent concentration will result in a great financial burden on the City of Holyoke.

In the Fact Sheet EPA notes that Holyoke's average TN loading is below the proposed limit of 730 ppd in four out of the five year rolling averages. In 2017 the annual rolling average was 748 ppd.

Within this permit, EPA does not propose a compliance schedule for meeting the effluent limit. However, Holyoke operates at a level approximately 40% lower than the design flow of 17.5 mgd. To estimate the total nitrogen discharge from the Water Pollution Control Facility ("WPCF") operating at the design flow, Holyoke's Consultant, Hazen and Sawyer ("Hazen"), conducted a very preliminary BioWin modeling run at the design flow as shown in the table below:

| Parameter | 2021 Ave Flow (7.2 mgd) Measured | Design Flow (17.5 mgd) Modeled |
|---|---|---|
| Effluent TN, mg/l | 7.1 | 14.4 |
| Effluent TN, ppd | 427 | 2,099 |

The City of Holyoke is concerned that conditions could change in the future making the proposed TN limit difficult to meet. Such changes could include the gain or loss of industrial dischargers, or demographic shifts. Because of the uncertainty of meeting the limit in the future and the great financial burden that would be placed on the City by application of the limit, the City of Holyoke respectfully requests that EPA defer implementation of the total nitrogen limit until the next permit cycle. In the interim the City of Holyoke will continue to optimize the WPCF for nutrient removal.

2. **Page 9 of 35, Part 1:A** does not list a first (1.) condition. Page 8 of 35 mentions Part 1.A.1 in item 14 and again in item 15. The 1st condition in the draft permit should reference these two previously numbered bullets for continuity.

3. **Page 10 of 35, Part C. Operation and Maintenance of the Treatment and Control Facilities**. The basis for these requirements is the "Duty to Mitigate" and "Proper Operation and Maintenance" Standard

[4]This estimated cost was developed as part of a regional study completed in 2008. The Holyoke WPCF upgrade cost, adjusted to a current day value using the October 2022 ENR CCI is approximately $159 million

Conditions of 40 CFR Part 122.41(d) and (e). The "Duty to Mitigate" specifically refers to all reasonable steps to minimize discharges that would adversely affect human health or the environment.

*1. Wastewater Treatment Facility*

a. *WWTF Major Storm and Flood Events Plan*. The permit requires that this plan be submitted within 12 months of the effective date of the permit. However, Holyoke has an existing High Flow Management Plan (HFMP) which for the WPCF worked well during the last permit cycle and should be sufficient for the current permit cycle concerning climate challenges. Holyoke proposes to update the HFMP by incorporating the items listed in the draft permit below:

(e) Catalog emergency resources used during a major storm or flood event.
(f) Develop emergency response plans.
(g) Establish contracts for backup supplies of critical chemicals.
(h) Establish mutual aid agreements with neighboring utilities.
(i) Integrate long-term risks into capital improvement plans
(j) Participate in community planning and regional collaborations.
(k) Conduct staff training for implementing your emergency procedures at regular Intervals

It should also be noted that a Vulnerability Evaluation was included in the WPCF's Asset Management Plan. Holyoke believes that the work referenced in this response addresses the majority of the requirements set out in Item 1.a. *WWTF Major Storm and Flood Events Plan* and respectfully requests that the permit language be revised to acknowledge the planning work that has already been done by Holyoke.

*2. Sewer System*

Items a-e(1) are similar to CMOM requirements and Collection System Operation and Maintenance Plans found in NPDES permits issued by EPA Region 1 as well as those issued by delegated state NPDES authorities. Holyoke has had a CMOM program since 2012. Pursuant to the currently effective permit, Holyoke submitted the Full Collection System Operation and Maintenance Plan to EPA in 2019.

It is noted that item e(2) is similar to the Storm and Flood Events Plan for the WPCF. For the sewer system, Tighe & Bond's Report 7, Climate Vulnerability Assessment, meets the requirements of item e(2) as well item 1) under footnote 18.

Holyoke believes that the work referenced in this response addresses the majority of the requirements set out in Item 2. *Sewer System* and respectfully requests that the permit language be revised to acknowledge the planning work that has already been done by Holyoke.

In addition, Holyoke has specific concerns regarding 2.i(c)(iii), which requires a plan for alternative power supply. The City understands that diesel fuel that is used to run back-up generators may be phased out as early as 2030. Further complicating this issue, is that there is no known large battery, solar, or wind-powered generators that can provide the power necessary to operate pumping stations of the size operated by the City of Holyoke. The City requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

4. **Part D Alternative Power Source**, page 20 of 35. As previously mentioned, Holyoke requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

5. **Section E, Industrial Users**, Item 6 requires testing for PFAS for known contaminated sites, firefighting training facilities, airports, and other expected sources. The implication is these may be enforceable limits. Holyoke requests the following change to the last sentence of this section, "All monitoring results may be used by EPA in the next permit reissuance to ensure the discharge continues to protect designated uses." Change to; All

monitoring results are for informational purposes and data collection only. Once there is an approved PFAS test method that is finalized through the 'Rule Making Process' then monitoring results after the approval date will be used by the EPA in the next permit reissuance to ensure the discharge continues to protect designated uses.

6. **Page 31 of 35, Outfall 009 and Berkshire Street CSO Treatment Facility**, Total Residual Chlorine (TRC) Effluent Limitation

   In addition to a daily maximum TRC limit of 0 24 mg/l required for CSO discharge based on the acute criteria of 0.019 mg/l, EPA is also applying an average monthly TRC limit of 0.14 mg/l, based on the chronic criteria of 0.11 mg/l. According to EPA's Technical Support Document for Water Quality-Based Toxics Control (EPA, March 1991), while acute effects are limited based upon one-hour exposures at critical low flow conditions, chronic effects are limited based on four-day exposures at critical low flow conditions. While it is possible for a sudden intense rainfall event to result in CSO discharges during low flow conditions, it is unlikely that an event that persists for at least four (4) days would not increase flows well above critical conditions.

   Holyoke disagrees that disinfected CSO discharge has the reasonable potential to cause an exceedance of the chronic instream criteria for total residual chlorine and requests that this effluent limit be removed from the permit. Holyoke notes that the previous permit contained a monthly average limit to TRC, however that limit was incorrectly applied and as such, antibacksliding does not apply.

The City of Holyoke appreciates the opportunity to provide comments on the draft permit. Should you have any questions, please feel free to reach out to me by telephone at 413-322-5645 or by email at rossic@holyoke.org.

Thank you,

Carl Rossi, Director

cc.

Lealdon Langley, Division of Watershed Management MassDEP

**ALUMINUM**

## Calculator for ALUMINUM Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  101,976.20 = 100,595.00

Data

66.2 Ce = Effluent Concentration 95th Percentile

17.5 Qe = Avg Design Q for Chronic ; Peak Q Acute

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

79.1 Cs = Median Metal Concentration in CT River upstream

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**78.9253** Cd = downstream concentration

1292 Qd = Downstream flow (Qs + Qe)

| Cs*Qs | + Ce*Qe | | Downstream | AlCriteria | |
|---|---|---|---|---|---|
| | | | | | % of |
| 100817.7 | 1158.5 | 101976.196 | Al Conc. | Avg limit | Limit |
| 1292.06 | | 1292.06 | **Cd= 78.9253** | **87** | **90.72%** |
| | | | Al Calculator | **290** | **27.22%** |

**COPPER**

## Calculator for COPPER Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  371.875 = 366.83823

Data

21.25 Ce = Effluent Concentration 95th Percentile

17.5 Qe = Avg Design Q for Chronic ; Peak Q Acute

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

0 Cs = Median Metal Concentration in CT River upstream

1274.56 Qs = 7Q10 Stream flow CT River

**0.2878** Cd = downstream concentration

1292 Qd = Downstream flow (Qs + Qe)

| Cs*Qs | + Ce*Qe | | Downstream | Cu Criteria | |
|---|---|---|---|---|---|
| | | | | | % of |
| 0 | 371.875 | 371.875 | Cu Conc. | Avg limit | Limit |
| 1292.06 | | 1292.06 | **Cd= 0.2878** | **3.8** | **7.57%** |

## Calculator for LEAD Metals Reasonable Potential Daily Avg

Data from Fact Sheet pg 39 of 56 and Page B-3

Cs*Qs + Ce*Qe = Cd*Qs  26.25 = 25.89446

| Data | |
|---|---|
| 1.5 | Ce = Effluent Concentration 95th Percentile |
| | Qe = Avg Design Q for Chronic ; Peak Q |
| 17.5 | Acute |
| 0 | Cs = Median Metal Concentration in CT River upstream |
| 1274.56 | Qs = 7Q10 Stream flow river |
| **0.0203** | Cd = downstream conc |
| 1292 | Qd = Downstream Q (Qs+Qe) |

$$Cd = \frac{(Cs*Qs) + (Ce*Qe)}{Qd}$$

| Cs*Qs | + Ce*Qe | | Downstream | Pb Criteria | |
|---|---|---|---|---|---|
| | | | | | **% of** |
| 0 | 26.25 | 26.25 | Pb Conc. | Avg limit | **Limit** |
| 1292.06 | | 1292.06 | **Cd 0.0203** | **0.8** | **2.54%** |

## Attachment B - METALS MONITORING DATA SUMMARY

| Date | Al avg | Al Max | Cu Avg | Cu Max | Pb Avg | Pb Max |
|---|---|---|---|---|---|---|
| 10/31/2017 | 47.5 | 50 | 11 | 11 | 0.985 | <1 |
| 11/30/2017 | 44 | 44 | 14 | 14 | 1.1 | 1.1 |
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| 2/28/2018 | 63 | 63 | 11 | 11 | 1.9 | 2.8 |
| 3/31/2018 | 36 | 36 | 26 | 26 | 1.1 | 1.1 |
| 4/30/2018 | 73 | 73 | 26 | 26 | 1.2 | 1.2 |
| 5/31/2018 | 41 | 41 | 6 | 6 | 1.2 | 1.2 |
| 6/30/2018 | 26 | 26 | 7.9 | 7.9 | 0.66 | 0.66 |
| 7/31/2018 | 52 | 52 | 16 | 16 | 1.4 | 1.4 |
| 8/31/2018 | 28 | 28 | 7.9 | 7.9 | <1 | <1 |
| 9/30/2018 | 13 | 13 | 6.2 | 6.2 | <1 | <1 |
| 10/31/2018 | 32 | 32 | 21 | 21 | 1 | 1 |
| 11/30/2018 | 19 | 19 | 6.2 | 6.2 | <1 | <1 |
| 12/31/2018 | 34 | 34 | 7.8 | 7.8 | <1 | <1 |
| 1/31/2019 | 32 | 32 | 9.4 | 11 | 1.3 | 1.6 |
| 2/28/2019 | 70 | 70 | 19 | 19 | 1 | 1 |
| 3/31/2019 | 42.4 | 42.4 | 10.5 | 10.5 | <1 | <1 |
| 4/30/2019 | 39 | 39 | 17 | 17 | <1 | <1 |
| 5/31/2019 | 37 | 37 | 11 | 11 | <1 | <1 |
| 6/30/2019 | 38 | 38 | 7.7 | 7.7 | 2.1 | 2.1 |
| 7/31/2019 | 36 | 36 | 10 | 10 | 1 | 1 |
| 8/31/2019 | 37 | 37 | 8.2 | 8.2 | 1 | 1 |
| 9/30/2019 | 39 | 39 | 12 | 12 | <1 | <1 |
| 10/31/2019 | 66 | 66 | 19 | 19 | 1.2 | 1.2 |
| 11/30/2019 | 45 | 45 | 18 | 18 | 1 | 1 |
| 12/31/2019 | 44.9 | 44.9 | 15.3 | 15.3 | 1.14 | 1.14 |
| 1/31/2020 | 30 | 30 | 8.3 | 8.3 | <1 | <1 |
| 2/29/2020 | 28 | 28 | 10 | 10 | 1.5 | 1.5 |
| 3/31/2020 | 34 | 34 | 8.7 | 8.7 | 0.9 | 0.9 |
| 4/30/2020 | 29 | 29 | 7.7 | 7.7 | 0.76 | 0.76 |
| 5/31/2020 | 28.5 | 39 | 19.95 | 32 | <0.83 | <1 |
| 6/30/2020 | 29 | 34 | 7.25 | 7.8 | <1.45 | 1.9 |
| 7/31/2020 | 48 | 57 | 16 | 20 | 1.4 | 1.8 |
| 8/31/2020 | 29.5 | 31 | 16 | 20 | 1.4 | 1.8 |
| 9/30/2020 | 48 | 48 | 8.6 | 8.6 | 1.1 | 1.1 |
| 10/31/2020 | 30 | 30 | 8 | 8 | <1 | <1 |
| 11/30/2020 | 40 | 40 | 12 | 12 | 1.1 | 1.1 |
| 12/31/2020 | 31 | 32 | 6.35 | 6.5 | 0.765 | 0.83 |
| 1/31/2021 | 24 | 24 | 6.4 | 6.4 | <.5 | <.5 |
| 2/28/2021 | 24 | 24 | 9.6 | 9.6 | 0.5 | 0.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3/31/2021 | 36 | 44 | 10.5 | 11 | 0.575 | 0.58 |
| 4/30/2021 | 37 | 37 | 9 | 9 | 0.8 | 0.8 |
| 5/31/2021 | 33 | 33 | 6.8 | 6.8 | 0.83 | 0.83 |
| 6/30/2021 | 40.6 | 61 | 11.58 | 16 | 1.298 | 2.4 |
| 7/31/2021 | 64 | 64 | 12 | 12 | 1.1 | 1.1 |
| 8/31/2021 | 40 | 40 | 11 | 11 | 0.84 | 0.84 |
| 9/30/2021 | 36.5 | 37 | 9.85 | 10 | 1 | 1 |
| 10/31/2021 | 34 | 34 | 7.6 | 7.6 | 0.79 | 0.79 |
| 11/30/2021 | 38 | 38 | 12 | 12 | 0.79 | 0.79 |
| 12/31/2021 | 43 | 43 | 16 | 16 | 0.84 | 0.84 |
| 1/31/2022 | 35 | 35 | 14 | 14 | 0.95 | 0.95 |
| 2/28/2022 | 43.5 | 45 | 18.5 | 23 | 0.99 | 1 |
| 3/31/2022 | 38 | 38 | 15 | 15 | 1 | 1 |
| 4/30/2022 | 96 | 96 | 18 | 18 | 1.1 | 1.1 |
| 5/31/2022 | 26 | 26 | 12 | 12 | 0.61 | 0.61 |
| 6/30/2022 | 38 | 38 | 14 | 14 | 1 | 1 |
| 7/31/2022 | 38 | 38 | 9.4 | 9.4 | 1.5 | 1.5 |
| 8/31/2022 | 40 | 40 | 11 | 11 | 1.1 | 1.1 |
| 9/30/2022 | 26 | 29 | 6.67 | 8 | 0.867 | 1 |
| 95th% All | 66.2 | 66.2 | 21.25 | 26.00 | 1.50 | 2.06 |
| **Non-Clean 95th** | 67.8 | 67.8 | 26 | 26.45 | 1.91 | 2.17 |
| **Clean 95th%** | 58.4 | 62.95 | 17.3 | 20 | 1.4 | 1.875 |
| **% Improvement** | **13.86%** | **7.15%** | **33.46%** | **24.39%** | **26.70%** | **13.59%** |