



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
MONTHLY OPERATION REPORT - CLASS D WATER TREATMENT PLANT

Issued under authority of 1976 PA 399 and the Administrative Rules, as amended. Administrative Rule R 325.11512 says in part, "A supplier of water where treatment is employed shall prepare an operation report on a form provided by the department for each month of operation." Failure to submit this form is a violation of the Act and may subject the water supply to enforcement penalties.

| Water Supply Information | | |
|---------------------------------|-----------------------|--------|
| City of Morenci | | 004490 |
| Supply Name | | WSSN |
| Kipp Scott | D-3, S-3 | Sep |
| Operator In Charge (OIC) | System Classification | Month |
| F-2, S-3 | Lenawee | 2020 |
| Certification Level of OIC | County | Year |

| Distribution Chlorine Residual Monitoring (Sampling Conducted per DBPR Monitoring Plan) | |
|---|---------------------------------|
| Number of chlorine residual measurements taken during the month: | 32 - Various Distribution Sites |
| Number of chlorine residual measurements that exceeded 4 mg/L: | 0 |
| Monthly average "free" chlorine residual: | 0.82 |

| Comments |
|---|
| Plant tap (which is N/A) residuals are take at the first hydrant downstream from the iron removal water treatment plant (approximately 300' downstream of the IRP filters). |

| Certification | |
|------------------------------------|----------------|
| Kipp Scott - OIC | |
| Name and Title of Authorized Agent | |
| Signature | Date Submitted |

| Send Completed Report To: | Staff and Contact Information | |
|--|--------------------------------------|----------------|
| Department of Environmental Quality (DEQ) | Taryn Simon, EQA | 517-257-7465 |
| Office of Drinking Water and Municipal Assistance | Caitlin Bates, District Engineer; | 517-262-6795 |
| 301 East Louis Glick Highway | Pat Brennan, District Sup'r; | 517-581-2769 |
| Jackson, Michigan, 49201 | Fax; | 517-780-7855 |
| Or submit via email to | PEAS Hotline; | 1-800-292-4706 |
| EGLE-DWEH-Jackson@michigan.gov | | |

Name of Supply

WSSN

| Day of the month | Raw Pumpage in Million of Gallons per Day | | Raw Pumpage Daily Total MGD | Raw Water To Iron Removal Plant MG | Raw Water To Iron Removal Plant MLbs | Comments |
|------------------|---|--------|-----------------------------|------------------------------------|--------------------------------------|----------|
| | Well 1 | Well 2 | | | | |
| 1 | 0.093 | 0.061 | 0.154 | 0.154 | 1.284 | |
| 2 | 0.098 | 0.080 | 0.178 | 0.178 | 1.485 | |
| 3 | 0.045 | 0.103 | 0.148 | 0.148 | 1.234 | |
| 4 | 0.158 | 0.074 | 0.232 | 0.232 | 1.935 | |
| 5 | 0.084 | 0.062 | 0.146 | 0.146 | 1.218 | |
| 6 | 0.085 | 0.057 | 0.142 | 0.142 | 1.184 | |
| 7 | 0.084 | 0.063 | 0.147 | 0.147 | 1.226 | |
| 8 | 0.082 | 0.062 | 0.144 | 0.144 | 1.201 | |
| 9 | 0.096 | 0.070 | 0.166 | 0.166 | 1.384 | |
| 10 | 0.094 | 0.063 | 0.157 | 0.157 | 1.309 | |
| 11 | 0.092 | 0.061 | 0.153 | 0.153 | 1.276 | |
| 12 | 0.089 | 0.061 | 0.150 | 0.150 | 1.251 | |
| 13 | 0.094 | 0.062 | 0.156 | 0.156 | 1.301 | |
| 14 | 0.041 | 0.100 | 0.141 | 0.141 | 1.176 | |
| 15 | 0.092 | 0.059 | 0.151 | 0.151 | 1.259 | |
| 16 | 0.090 | 0.062 | 0.152 | 0.152 | 1.268 | |
| 17 | 0.081 | 0.067 | 0.148 | 0.148 | 1.234 | |
| 18 | 0.090 | 0.069 | 0.159 | 0.159 | 1.326 | |
| 19 | 0.090 | 0.064 | 0.154 | 0.154 | 1.284 | |
| 20 | 0.096 | 0.065 | 0.161 | 0.161 | 1.343 | |
| 21 | 0.096 | 0.068 | 0.164 | 0.164 | 1.368 | |
| 22 | 0.093 | 0.067 | 0.160 | 0.160 | 1.334 | |
| 23 | 0.119 | 0.066 | 0.185 | 0.185 | 1.543 | |
| 24 | 0.091 | 0.065 | 0.156 | 0.156 | 1.301 | |
| 25 | 0.101 | 0.068 | 0.169 | 0.169 | 1.409 | |
| 26 | 0.155 | 0.082 | 0.237 | 0.237 | 1.977 | |
| 27 | 0.078 | 0.069 | 0.147 | 0.147 | 1.226 | |
| 28 | 0.087 | 0.070 | 0.157 | 0.157 | 1.309 | |
| 29 | 0.091 | 0.067 | 0.158 | 0.158 | 1.318 | |
| 30 | 0.088 | 0.093 | 0.181 | 0.181 | 1.510 | |
| | | | | | | |
| Total | 2.773 | 2.080 | 4.853 | 4.853 | 40.474 | |
| Avg | 0.092 | 0.069 | 0.162 | 0.162 | 1.349 | |
| Max | 0.158 | 0.103 | 0.261 | 0.261 | 2.177 | |
| Min | 0.041 | 0.057 | 0.098 | 0.098 | 0.817 | |

Pumpage

Name of Supply

WSSN

Iron Removal Plant

| Day of the month | Water in Millions of Gallons | | | | Head Loss Thru Filter ft/psi | Oxidant/Chlorine | | Plant Tap/Hydrant Chlorine Residual | | IRP Filter Chlorine Residual | | Plant Tap Analysis | |
|------------------|------------------------------|-------------------------|-----------------------|----------------------|------------------------------|--------------------------------|------------------------------|-------------------------------------|-------|------------------------------|-------|--------------------|----------------------|
| | Raw Water To Plant | Filter Backwash To WWTP | Total Water To System | Total Million Pounds | | Cl ₂ Applied Pounds | Cl ₂ Applied mg/L | Free | Total | Free | Total | Iron as Fe mg/L | Manganese as Mn mg/L |
| | | | | | | | | | | | | | |
| 1 | 0.154 | | 0.154 | 1.284 | | 6.2 | 4.83 | | | | | | |
| 2 | 0.178 | 0.020 | 0.158 | 1.485 | | 7.2 | 4.85 | | | | | | |
| 3 | 0.148 | | 0.148 | 1.234 | | 6.4 | 5.19 | | | | | | |
| 4 | 0.232 | | 0.232 | 1.935 | | 9.3 | 4.81 | | | | | | |
| 5 | 0.146 | | 0.146 | 1.218 | | 5.6 | 4.60 | | | | | | |
| 6 | 0.142 | | 0.142 | 1.184 | | 5.0 | 4.22 | | | | | | |
| 7 | 0.147 | | 0.147 | 1.226 | | 5.7 | 4.65 | | | | | | |
| 8 | 0.144 | | 0.144 | 1.201 | | 5.5 | 4.58 | | | | | | |
| 9 | 0.166 | 0.020 | 0.146 | 1.384 | | 5.7 | 4.12 | | | | | | |
| 10 | 0.157 | | 0.157 | 1.309 | | 6.0 | 4.58 | | | | | | |
| 11 | 0.153 | | 0.153 | 1.276 | | 6.0 | 4.70 | | | | | | |
| 12 | 0.150 | | 0.150 | 1.251 | | 6.0 | 4.80 | | | | | | |
| 13 | 0.156 | | 0.156 | 1.301 | | 6.1 | 4.69 | | | | | | |
| 14 | 0.141 | | 0.141 | 1.176 | | 6.1 | 5.19 | | | | | | |
| 15 | 0.151 | | 0.151 | 1.259 | | 6.2 | 4.92 | | | | | | |
| 16 | 0.152 | 0.020 | 0.132 | 1.268 | | 6.4 | 5.05 | | | | | | |
| 17 | 0.148 | | 0.148 | 1.234 | | 5.2 | 4.21 | | | | | | |
| 18 | 0.159 | | 0.159 | 1.326 | | 5.9 | 4.45 | | | | | | |
| 19 | 0.154 | | 0.154 | 1.284 | | 6.2 | 4.83 | | | | | | |
| 20 | 0.161 | | 0.161 | 1.343 | | 6.3 | 4.69 | | | | | | |
| 21 | 0.164 | | 0.164 | 1.368 | | 6.3 | 4.61 | | | | | | |
| 22 | 0.160 | | 0.160 | 1.334 | | 6.1 | 4.57 | | | | | | |
| 23 | 0.185 | 0.020 | 0.165 | 1.543 | | 6.8 | 4.41 | | | | | | |
| 24 | 0.156 | | 0.156 | 1.301 | | 5.8 | 4.46 | | | | | | |
| 25 | 0.169 | | 0.169 | 1.409 | | 6.8 | 4.82 | | | | | | |
| 26 | 0.237 | | 0.237 | 1.977 | | 8.0 | 4.05 | | | | | | |
| 27 | 0.147 | | 0.147 | 1.226 | | 5.7 | 4.65 | | | | | | |
| 28 | 0.157 | | 0.157 | 1.309 | | 5.9 | 4.51 | | | | | | |
| 29 | 0.158 | | 0.158 | 1.318 | | 6.2 | 4.71 | | | | | | |
| 30 | 0.181 | 0.020 | 0.161 | 1.510 | | 7.0 | 4.64 | | | | | | |
| | | | | | | | | | | | | | |
| Total | 4.853 | 0.100 | 4.753 | 40.474 | | 187.6 | 139.36 | | | | | | |
| Avg | 0.162 | 0.020 | 0.158 | 1.349 | | 6.3 | 4.65 | | | | | | |
| Max | 0.237 | 0.020 | 0.237 | 1.977 | | 9.3 | 5.19 | | | | | | |
| Min | 0.141 | 0.020 | 0.132 | 1.176 | | 5.0 | 4.05 | | | | | | |

Iron Removal

| Day of the month | Treated Water | | Oxidant / Chlorine | | Chlorine Residual mg/L | | | | | | Comments | |
|------------------|-----------------|-------------|--|------------------------------------|------------------------|-------|---------------------|-------|------------------------------|---------------------|----------|-------|
| | Metered | | Avail 99.8% Cl ₂ Gas in lbs | Cl ₂ Applied mg/L | Distribution (DPW) | | Distribution System | | Distribution System Location | Applied IRP Filters | | |
| | Million Gallons | Million lbs | | | Free | Total | Free | Total | | Free | | Total |
| 1 | 0.154 | 1.284 | 6.2 | 4.83 | 0.89 | 1.05 | | | 597 W. Chestnut | 0.14 | 0.19 | |
| 2 | 0.178 | 1.485 | 7.2 | 4.85 | 0.89 | 1.03 | | | 597 W. Chestnut | 0.15 | 0.16 | |
| 3 | 0.148 | 1.234 | 6.4 | 5.19 | 0.87 | 0.94 | | | 597 W. Chestnut | 0.16 | 0.19 | |
| 4 | 0.232 | 1.935 | 9.3 | 4.81 | 0.68 | 0.75 | | | 597 W. Chestnut | 0.25 | 0.54 | |
| 5 | 0.146 | 1.218 | 5.6 | 4.60 | 1.06 | 1.14 | | | 597 W. Chestnut | 0.54 | 0.57 | |
| 6 | 0.142 | 1.184 | 5.0 | 4.22 | 1.20 | 1.27 | | | 597 W. Chestnut | 0.27 | 0.33 | |
| 7 | 0.147 | 1.226 | 5.7 | 4.65 | 1.16 | 1.20 | | | 597 W. Chestnut | 0.27 | 0.30 | |
| 8 | 0.144 | 1.201 | 5.5 | 4.58 | 1.09 | 1.09 | | | 597 W. Chestnut | 0.08 | 0.33 | |
| 9 | 0.166 | 1.384 | 5.7 | 4.12 | 0.91 | 1.10 | | | 597 W. Chestnut | 0.20 | 0.24 | |
| 10 | 0.157 | 1.309 | 6.0 | 4.58 | 0.67 | 0.81 | | | 597 W. Chestnut | 0.02 | 0.18 | |
| 11 | 0.153 | 1.276 | 6.0 | 4.70 | 0.92 | 0.94 | | | 597 W. Chestnut | 0.16 | 0.21 | |
| 12 | 0.150 | 1.251 | 6.0 | 4.80 | 0.75 | 0.89 | | | 597 W. Chestnut | 0.12 | 0.20 | |
| 13 | 0.156 | 1.301 | 6.1 | 4.69 | 0.76 | 1.00 | | | 597 W. Chestnut | 0.11 | 0.29 | |
| 14 | 0.141 | 1.176 | 6.1 | 5.19 | 0.73 | 0.86 | | | 597 W. Chestnut | 0.23 | 0.25 | |
| 15 | 0.151 | 1.259 | 6.2 | 4.92 | 0.85 | 1.04 | | | 597 W. Chestnut | 0.20 | 0.24 | |
| 16 | 0.152 | 1.268 | 6.4 | 5.05 | 0.92 | 1.06 | | | 597 W. Chestnut | 0.07 | 0.27 | |
| 17 | 0.148 | 1.234 | 5.2 | 4.21 | 0.58 | 0.76 | | | 597 W. Chestnut | 0.17 | 0.33 | |
| 18 | 0.159 | 1.326 | 5.9 | 4.45 | 0.70 | 0.74 | | | 597 W. Chestnut | 0.17 | 0.53 | |
| 19 | 0.154 | 1.284 | 6.2 | 4.83 | 0.89 | 0.97 | | | 597 W. Chestnut | 0.18 | 0.22 | |
| 20 | 0.161 | 1.343 | 6.3 | 4.69 | 0.91 | 1.00 | | | 597 W. Chestnut | 0.18 | 0.33 | |
| 21 | 0.164 | 1.368 | 6.3 | 4.61 | 0.81 | 0.91 | | | 597 W. Chestnut | 0.19 | 0.22 | |
| 22 | 0.160 | 1.334 | 6.1 | 4.57 | 0.67 | 0.80 | | | 597 W. Chestnut | 0.08 | 0.22 | |
| 23 | 0.185 | 1.543 | 6.8 | 4.41 | 0.81 | 0.86 | | | 597 W. Chestnut | 0.04 | 0.31 | |
| 24 | 0.156 | 1.301 | 6.0 | 4.61 | 0.60 | 0.81 | | | 597 W. Chestnut | 0.11 | 0.35 | |
| 25 | 0.169 | 1.409 | 9.0 | 6.39 | 0.59 | 0.89 | | | 597 W. Chestnut | 0.14 | 0.32 | |
| 26 | 0.237 | 1.977 | 6.0 | 3.04 | 0.63 | 0.92 | | | 597 W. Chestnut | 0.40 | 0.71 | |
| 27 | 0.147 | 1.226 | 6.0 | 4.89 | 0.62 | 0.71 | | | 597 W. Chestnut | 0.15 | 0.31 | |
| 28 | 0.157 | 1.309 | 10.0 | 7.64 | 0.63 | 0.82 | | | 597 W. Chestnut | 0.16 | 0.27 | |
| 29 | 0.158 | 1.318 | 6.0 | 4.55 | 0.82 | 1.17 | | | 597 W. Chestnut | 0.15 | 0.35 | |
| 30 | 0.181 | 1.510 | 10.0 | 6.62 | 0.89 | 1.12 | | | 597 W. Chestnut | No | Test | |
| | | | | | | | | | | | | |
| Total | 4.853 | 40.474 | 187.6 | | | 28.7 | | | | 5.1 | 9.0 | |
| Avg | 0.162 | 1.349 | 6.3 | 4.64 | 0.82 | 0.96 | | | | 0.18 | 0.31 | |
| Max | 0.261 | 1.977 | 9.3 | 7.64 | 1.20 | 1.27 | | | | 0.54 | 0.71 | |
| Min | 0.098 | 1.176 | 5.0 | 3.04 | 0.58 | 0.71 | | | | 0.02 | 0.16 | |

City of Morenci

004490

Sep 2020

Name of Supply

WSSN

Month

Year

| | | | | | | | |
|---|--------------------------|-----|------------------------------|----------|---|------|------|
| 2 | Routine samples required | 0 | Repeat samples taken | 43963.00 | Cl ₂ residuals from routine & repeat | | |
| 4 | Routine samples taken | 0 | Repeat samples total colifor | | Average | 0.82 | 0.90 |
| 0 | Routine samples positive | P/A | Analytical Method | | Maximum | 0.90 | 0.96 |
| | | | | Mininum | 0.74 | 0.83 | |

| Distribution System - Routine Samples | | | Chlorine Residual (mg/L) | |
|---------------------------------------|-------------------------------|----------------|--------------------------|-------|
| Count | Sample Location | Date Collected | Free | Total |
| 1 | 597 West Chestnut Street | 09/09/20 | 0.90 | 0.96 |
| 2 | 118 Orchard Street | 09/09/20 | 0.74 | 0.83 |
| 3 | 485 West Main - Well #1 - Raw | 09/09/20 | N/A | N/A |
| 4 | 485 West Main - Well #2 - Raw | 09/09/20 | N/A | N/A |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |
| 17 | | | | |
| 19 | | | | |

| Distribution System - Repeat Samples-Contact District if > one Positive | | | Chlorine Residual (mg/L) | |
|---|-----------------|----------------|--------------------------|-------|
| Count | Sample Location | Date Collected | Free | Total |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |

| Other: Triggered Source Water Samples, entry point (plant tap) ... | | | Chlorine Residual (mg/L) | |
|--|-----------------|----------------|--------------------------|-------|
| Count | Sample Location | Date Collected | Free | Total |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |