



New Hampshire Volunteer River Assessment Program

2018 Isinglass River Watershed Data

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES



 Measurements not meeting New Hampshire surface water quality standards
 Measurements not meeting NHDES quality assurance/quality control standards

^A Specific conductance > 835 $\mu\text{S}/\text{cm}$ indicate exceedance of chronic chloride standard of 230 mg/L

^B Chronic water quality standard

^C Calculated using 1/2 of the 0.25 mg/L detection limit of Total Kjeldahl Nitrogen (0.125 mg/L) and/or 1/2 of the 0.050 mg/L detection limit of Nitrate+Nitrite (0.025 mg/L)

11-ISG, Isinglass River, Route 202A Bridge, Strafford

| Date | Time of Sample | DO (mg/L) | DO (% sat.) | pH | Turbidity (NTUs) | Specific Conductance ($\mu\text{S}/\text{cm}$) | Water Temp. ($^{\circ}\text{C}$) | Chloride (mg/L) | Total Phosphorus |
|------------|----------------|-----------|--------------------|---------|--------------------------|--|------------------------------------|------------------------|------------------|
| Standard | NA | >5.0 | >75% Daily Average | 6.5-8.0 | <10 NTU above background | 835 $\mu\text{S}/\text{cm}$ ^A | NA | <230 mg/L ^B | Narrative |
| 05/20/2018 | 10:23 | 9.32 | 95.4 | 6.41 | 0.47 | 69.9 | 16.4 | | |
| 06/24/2018 | 10:29 | | | 6.03 | 1.20 | 67.5 | 17.9 | 14 | 0.016 |
| 08/05/2018 | 10:35 | 6.71 | 83.0 | 6.18 | 0.92 | 60.4 | 26.2 | 15 | 0.008 |
| 09/17/2018 | 10:15 | 6.49 | 72.0 | 6.19 | 0.67 | 79.2 | 20.6 | 15 | 0.033 |

08-ISG, Isinglass River, Route 126 Bridge, Barrington

| Date | Time of Sample | DO (mg/L) | DO (% sat.) | pH | Turbidity (NTUs) | Specific Conductance ($\mu\text{S}/\text{cm}$) | Water Temp. ($^{\circ}\text{C}$) |
|------------|----------------|-----------|--------------------|---------|--------------------------|--|------------------------------------|
| Standard | NA | >5.0 | >75% Daily Average | 6.5-8.0 | <10 NTU above background | 835 $\mu\text{S}/\text{cm}^{\text{A}}$ | NA |
| 05/20/2018 | 09:58 | 8.79 | 87.5 | 6.15 | 1.90 | 89.7 | 15.3 |
| 06/24/2018 | 10:03 | 7.06 | 75.5 | 6.05 | 1.77 | 97.9 | 18.8 |
| 08/05/2018 | 10:18 | 6.46 | 74.3 | 5.79 | 1.39 | 68.4 | 23.4 |
| 09/17/2018 | 09:49 | 7.09 | 76.8 | 5.52 | 1.46 | 74.9 | 19.4 |

07T-ISG, Isinglass River, Route 126, Barrington - NHDES Trend Site

| Date | Time of Sample | DO (mg/L) | DO (% sat.) | pH | Turbidity (NTUs) | Specific Conductance ($\mu\text{S}/\text{cm}$) | Water Temp. ($^{\circ}\text{C}$) | Chloride (mg/L) | <i>E. coli</i> (CTS/100mL) | <i>E. coli</i> Geometric Mean |
|------------|----------------|-----------|--------------------|---------|--------------------------|--|------------------------------------|------------------------|----------------------------|-------------------------------|
| Standard | NA | >5.0 | >75% Daily Average | 6.5-8.0 | <10 NTU above background | 835 $\mu\text{S}/\text{cm}^{\text{A}}$ | NA | <230 mg/L ^B | <406 | <126 |
| 04/09/2018 | 09:50 | 12.98 | 97.6 | 6.09 | 0.43 | 87.40 | 3.5 | 17 | | |
| 06/21/2018 | 09:15 | 7.17 | 80.4 | 6.45 | 1.10 | 102.1 | 21.0 | 23 | 60 | |
| 07/19/2018 | 09:00 | 6.47 | 72.6 | 6.43 | 1.91 | 105.2 | 21.0 | 25 | 30 | |
| 08/16/2018 | 09:15 | 6.52 | 76.0 | 6.26 | 0.98 | 82.9 | 23.0 | 15 | 70 | 50 |

| Date | Time of Sample | Total Phosphorus | Total Kjeldahl Nitrogen (TKN) (mg/L) | Nitrite (NO_2) + Nitrate (NO_3) (mg/L) | Total Nitrogen (mg/L) |
|------------|----------------|------------------|--------------------------------------|--|-----------------------|
| Standard | NA | Narrative | Narrative | Narrative | Narrative |
| 04/09/2018 | 09:50 | 0.009 | ND | ND | |
| 06/21/2018 | 09:15 | 0.023 | ND | 0.06 | 0.18 ^C |
| 07/19/2018 | 09:00 | 0.026 | 0.36 | ND | 0.39 ^C |
| 08/16/2018 | 09:15 | 0.032 | 0.71 | ND | 0.74 ^C |

07-ISG, Isinglass River, Route 202 Bridge, Barrington

| Date | Time of Sample | DO (mg/L) | DO (% sat.) | pH | Turbidity (NTUs) | Specific Conductance ($\mu\text{S}/\text{cm}$) | Water Temp. ($^{\circ}\text{C}$) |
|------------|----------------|-----------|--------------------|---------|--------------------------|--|------------------------------------|
| Standard | NA | >5.0 | >75% Daily Average | 6.5-8.0 | <10 NTU above background | 835 $\mu\text{S}/\text{cm}^{\text{A}}$ | NA |
| 05/20/2018 | 09:46 | 9.40 | 95.2 | 6.40 | 1.70 | 82.5 | 16.1 |
| 06/24/2018 | 09:44 | 8.54 | 90.7 | 6.45 | 0.97 | 114.8 | 18.2 |
| 08/05/2018 | 09:50 | 7.45 | 87.7 | 5.89 | 1.43 | 72.5 | 23.6 |
| 09/17/2018 | 09:38 | 8.56 | 92.9 | 6.02 | 0.85 | 89.1 | 19.3 |

04-ISG, Isinglass River, Green Hill Road Bridge, Barrington

| Date | Time of Sample | DO (mg/L) | DO (% sat.) | pH | Turbidity (NTUs) | Specific Conductance ($\mu\text{S}/\text{cm}$) | Water Temp. ($^{\circ}\text{C}$) | Chloride (mg/L) | Total Phosphorus |
|------------|----------------|-----------|--------------------|---------|--------------------------|--|------------------------------------|------------------------|------------------|
| Standard | NA | >5.0 | >75% Daily Average | 6.5-8.0 | <10 NTU above background | 835 $\mu\text{S}/\text{cm}^{\text{A}}$ | NA | <230 mg/L ^B | Narrative |
| 05/20/2018 | 09:21 | 9.64 | 96.6 | 6.39 | 1.41 | 111.1 | 15.4 | | |
| 06/24/2018 | 09:10 | 9.18 | 98.1 | 6.55 | 1.68 | 129.2 | 18.6 | 32 | 0.020 |
| 08/05/2018 | 09:25 | 7.96 | 93.9 | 6.05 | 1.78 | 76.1 | 23.4 | 21 | 0.024 |
| 09/17/2018 | 09:15 | 8.65 | 94.3 | 6.18 | 1.21 | 95.5 | 19.6 | 22 | 0.020 |

03-ISG, Isinglass River, Route 125 Bridge, Rochester

| Date | Time of Sample | DO (mg/L) | DO (% sat.) | pH | Turbidity (NTUs) | Specific Conductance ($\mu\text{S}/\text{cm}$) | Water Temp. ($^{\circ}\text{C}$) | Chloride (mg/L) | Total Phosphorus |
|------------|----------------|-----------|--------------------|---------|--------------------------|--|------------------------------------|------------------------|------------------|
| Standard | NA | >5.0 | >75% Daily Average | 6.5-8.0 | <10 NTU above background | 835 $\mu\text{S}/\text{cm}^{\text{A}}$ | NA | <230 mg/L ^B | Narrative |
| 05/20/2018 | 09:05 | 9.00 | 88.9 | 6.31 | 1.43 | 124.4 | 15.0 | | |
| 06/24/2018 | 08:59 | 6.93 | 69.3 | 6.12 | 2.24 | 151.9 | 18.6 | 38 | 0.027 |
| 08/05/2018 | 09:10 | 7.76 | 90.3 | 5.72 | 1.88 | 74.4 | 23.6 | 23 | 0.026 |
| 09/17/2018 | 09:03 | 8.26 | 89.3 | 6.23 | 1.56 | 102.2 | 19.2 | 23 | 0.025 |

02-ISG, Isinglass River, Rochester Neck Road Bridge, Rochester - NHDES Trend Site

| Date | Time of Sample | DO (mg/L) | DO (% sat.) | pH | Turbidity (NTUs) | Specific Conductance ($\mu\text{S}/\text{cm}$) | Water Temp. ($^{\circ}\text{C}$) | Chloride (mg/L) | <i>E. coli</i> (CTS/100mL) | <i>E. coli</i> Geometric Mean |
|------------|----------------|-----------|--------------------|---------|--------------------------|--|------------------------------------|------------------------|----------------------------|-------------------------------|
| Standard | NA | >5.0 | >75% Daily Average | 6.5-8.0 | <10 NTU above background | 835 $\mu\text{S}/\text{cm}^{\text{A}}$ | NA | <230 mg/L ^B | <406 | <126 |
| 04/09/2018 | 10:30 | 13.46 | 104.0 | 6.30 | 0.60 | 112.5 | 4.5 | 23 | | |
| 05/20/2018 | 08:35 | 9.33 | 92.5 | 6.40 | 2.08 | 136.5 | 15.0 | | | |
| 06/21/2018 | 10:15 | 6.94 | 76.2 | 6.49 | 2.76 | 170.1 | 19.8 | | 170 | |
| 06/24/2018 | 08:40 | 8.49 | 88.9 | 6.24 | 2.47 | 169.7 | 17.5 | | | |
| 07/19/2018 | 10:15 | 6.73 | 74.5 | 6.45 | 2.63 | 181.6 | 20.2 | 44 | 180 | |
| 08/05/2018 | 08:35 | 8.61 | 101.5 | 5.99 | 2.32 | 81.9 | 23.6 | | | |
| 08/16/2018 | 10:10 | 8.01 | 94.2 | 6.55 | 1.52 | 104.8 | 23.5 | 22 | 60 | 122 |
| 09/17/2018 | 08:40 | 8.75 | 93.6 | 6.35 | 1.67 | 108.5 | 18.9 | | | |

| Date | Time of Sample | Total Phosphorus | Total Kjeldahl Nitrogen (TKN) (mg/L) | Nitrite (NO_2) + Nitrate (NO_3) (mg/L) | Total Nitrogen (mg/L) |
|------------|----------------|------------------|--------------------------------------|--|-----------------------|
| Standard | NA | Narrative | Narrative | Narrative | Narrative |
| 04/09/2018 | 10:30 | 0.010 | ND | ND | |
| 06/21/2018 | 10:15 | 0.027 | 0.28 | 0.14 | 0.42 |
| 07/19/2018 | 10:15 | 0.026 | 0.38 | 0.12 | 0.50 |
| 08/16/2018 | 10:10 | 0.029 | 0.43 | ND | 0.46 ^C |



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