

**MS4 General Permit**  
**Town of Glastonbury, Connecticut 2021 Annual Report**  
**Existing MS4 Permittee**  
**Permit Number GSM 000057**  
**January 1, 2021 – December 31, 2021**  
**Primary MS4 Contact:**  
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This report documents the Town of Glastonbury, Connecticut’s efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2021 to December 31, 2021.

**Part I: Summary of Minimum Control Measure Activities**

**1. Public Education and Outreach (Section 6 (a)(1) / page 19)**

**1.1 BMP Summary**

| <b>BMP</b>   | <b>Activities in current reporting period</b>   | <b>Method of Distribution</b> | <b>Audience / Number of people reached</b>              | <b>Measurable Goal</b>  | <b>Department / Person Responsible</b> | <b>Additional details</b>   |
|--|---|-------------------------------|---|---|--|---|
| <b>1-1 Implement public education and outreach</b>               | 1. Stormwater Pollution Prevention page located on the Town of Glastonbury’s Engineering Division web site has been updated as required.<br>2. “Long Island Sound Study” brochures displayed at various departments at Town Hall and Welles Turner Memorial Library.  | Website<br><br>Brochure       | Website users<br><br>No brochures distributed this year | Compliance with Section 6(a)(1) of the current General Permit         | Engineering Division                   | Library renovations and building closures due to COVID created little foot traffic and no hard copy brochure distributions this year. |
| <b>1-2 Address education/outreach for pollutants of concern*</b> | 1. Included bacteria related information on Town web site and other public ed. Materials.<br>2. Glastonbury’s Health Department has continuously provided information to residents related to septic systems/maintenance located on the web page under Subsurface Sewage/Septic System Basics for Homeowners. | Website                       | Website users   | Compliance with Section 6(a)(1)(C)(iii) of the current General Permit | Engineering Division                   |   |

|  |   |                          |                     |   |   |  |
|--|---|--------------------------|---------------------|---|---|--|
|  | 3. Distributed pet waste brochures with Dog Licenses.                                   | Brochure                 | 110 dog owners      | Compliance with Section 6(a)(1)(C)(iii) of the current General Permit | Town Clerk / Engineering Division                       | Brochures were distributed with new dog licenses.  |
| <b>Additional BMP:<br/>1-3 Public Education and Outreach</b> | 1. Town Staff and Regional Group participated in the Salmon River Watershed Partnership | Website, email, mailings | Regional Population |   | Office of Community Development / Environmental Planner | The 2021 Salmon River Watershed Partnership Outreach & Monitoring Activities Related to Stormwater & Water Quality Report is attached in Appendix A. |

**1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.**

- 1-1. Provide additional updates to the Stormwater Pollution Prevention page located on the Town of Glastonbury’s Engineering Division web site as necessary, provide tracking of the number of brochures distributed at town facilities for incorporation into annual reports.
- 1-2. Continue distribution of printed pet waste management brochures in conjunction with dog license renewals.
- 1-3. Continue staff membership and involvement in the Salmon River Watershed Partnership.
- 1-4. Continue working with communications department to post timely news items in the spring related to stormwater pollution prevention awareness using the Town website and social media accounts.

**1.3 Details of activities implemented to educate the community on stormwater**

| Program Element/Activity  | Audience (and number of people reached)   | Topic(s) covered   | Pollutant of Concern addressed (if applicable) | Responsible dept. or partner org.  |
|---|---|--|--|--|
| Stormwater Pollution Prevention page located on the Town of Glastonbury’s Engineering Division web site                   | Residents/Business Owners/Developers  | Stormwater pollution prevention awareness  | Phosphorus, Nitrogen, and Bacteria             | Engineering Division   |
| “Long Island Sound Study” brochures available at various town departments at Town Hall and Welles Turner Memorial Library | None this year. Buildings closures due to COVID, foot traffic significantly reduced upon reopening in June. | Vehicle washing, pet waste, fertilizing, and leaking oil.                        | Phosphorus, Nitrogen, and Bacteria             | Engineering Division   |
| Pet waste brochure distributed with new Dog Licenses by Town Clerks Office  | Approximately 110 brochures distributed in 2021.  | Pet Waste  | Bacteria                                       | Engineering Division / Town Clerk  |
| Continued staff membership and involvement in the Salmon Brook Watershed Partnership                                      | Students, Watershed Community   | Watershed protection, Clean-ups, Student groups/Membership collaborative studies | Watershed Protection                           | Town of Glastonbury Environmental Planner and the Salmon River Watershed Partnership |

## 2. Public Involvement/Participation (Section 6(a)(2) / page 21)

### 2.1 BMP Summary

| BMP   | Status<br>(Complete, Ongoing, In Progress, or Not Started) | Activities in current reporting period | Measurable goal  | Department / Person Responsible  | Date completed or projected completion date  | Location Posted   | Additional details  |
|---|--|--|--|--|--|---|---|
| <b>2-1 Final Stormwater Management Plan publicly available</b>                          | Ongoing  | No activity.                           | Compliance with Section 4(d)(2) and Section 6(a)(2)(A) of the General Permit | Engineering Division   | May 8, 2017  | <a href="#">Website link to SWMP</a>  | Stormwater Management Plan was issued for review on May 8, 2017 and Finalized July 1, 2017  |
| <b>2-2 Comply with public notice requirements for Annual Reports (annually by 2/15)</b> | In Progress  | Postings on Town website completed.    | Compliance with Section 4(d)(2) and Section 6(a)(2)(A) of the General Permit | Engineering Division   | January 24, 2022 (Notice on Website)<br>February 15, 2022 (draft report posted)<br>April 1, 2022 (submitted to DEEP) | <a href="#">Website Link to news item</a>   |   |
| <b>Additional BMP:<br/>2-3 Public Participation</b>                                     | Ongoing /Yearly  | See additional details.                | Allows residents to properly dispose of Household Hazardous Wastes           | Sanitation/Refuse Division   | April 3, 2021<br>May 1, 2021<br>June 5, 2021<br>August 28, 2021<br>September 25, 2021<br>October 30, 2021            | <a href="http://sanitation1.townofmanchester.org/index.cfm/household-hazardous-waste-collection/">http://sanitation1.townofmanchester.org/index.cfm/household-hazardous-waste-collection/</a> | Participated in the Capitol Region East Operating Committee (CREOC) Household Hazardous Waste Collection days.                                      |
| <b>Additional BMP:<br/>2-4 Public Participation</b>                                     | Ongoing /Yearly  | Town Staff participation               | Preserve the integrity of the 96,000 Acre Salmon River Watershed             | Office of Community Development and Environmental Department/<br>Environmental Planner | Yearly Membership and town staff representation  | <a href="#">Salmon River Watershed Partnership Website link</a>   | The 2021 Salmon River Watershed Partnership Outreach & Monitoring Activities Related to Stormwater & Water Quality Report is attached in Appendix A |

**2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.**

**2-3.** Annual participation in the Capitol Region East Operating Committee (CREOC) Household Hazardous Waste Collection days located adjacent to the Manchester Landfill on Olcott Street.

**2-7.** Continued staff membership and participation in the Salmon River Watershed Partnership.

**2.3 Public Involvement/Participation reporting metrics**

| Metrics  | Implemented       | Date   | Posted  |
|--|-------------------|--|---|
| Availability of the Stormwater Management Plan to the public   | Yes               | May 8, 2017  | <a href="#">Website link</a>  |
| Availability of this Annual Report announced to public<br>Draft Annual Report published to Town Website<br>Final Annual Report published to Town Website | Yes<br>Yes<br>Yes | January 24, 2022<br>February 15, 2022<br>April 1, 2022 |   |
| Town Staff and Regional Group participation in the Salmon River Watershed Partnership  | Yes               | Yearly membership and participation                    | <a href="http://www.salmonriverct.org/">http://www.salmonriverct.org/</a> |

### 3. Illicit Discharge Detection and Elimination (Section 6(a)(3) and Appendix B / page 22)

#### 3.1 BMP Summary

| BMP  | Status<br>(Complete,<br>Ongoing,<br>In<br>Progress,<br>or Not<br>Started) | Activities in<br>current reporting<br>period | Measurable<br>goal  | Department /<br>Person<br>Responsible | Date<br>completed or<br>projected<br>completion<br>date | Additional details   |
|--|---|--|---|---------------------------------------|---|--|
| <b>3-1 Develop written IDDE program (Due 7/1/19)</b>   | Completed   | No activity.                                 | Written plan of IDDE program                                  | Engineering Division                  | 2/1/2019  | IDDE Plan has been completed and is now available on the Town web site.  |
| <b>3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas (Due 7/1/20)</b> | Completed   | No activity.                                 | Mapped outfalls and drainage system                           | Engineering Division                  | 7/1/2019  | <a href="#">Click here for direct link to outfall mapping</a>  |
| <b>3-3 Implement citizen reporting program (Ongoing)</b>                                       | Ongoing   | No activity.                                 | Implement and track citizen reporting of stormwater pollution | Engineering Division                  | Ongoing throughout the duration of the permit           | Citizen reporting is available and can be found at: <a href="https://glastonburyct.qscend.com/311/request/add">https://glastonburyct.qscend.com/311/request/add</a><br><br>No pollution related complaints have been received via this system to date. |
| <b>3-4 Establish legal authority to prohibit illicit discharges</b>                            | Completed   | No activity.                                 | Establish legal authority to prohibit illicit discharges      | Engineering Division                  | 2010  | Illicit Discharge and Connection Stormwater Ordinance is located in <a href="#">Chapter 19, Article III, Sections 19-251 thru 19-275</a> .   |
| <b>3-5 Develop record keeping system for IDDE tracking</b>                                     | Completed   | No activity.                                 | Develop IDDE tracking tool                                    | Engineering Division                  | 7/1/2017  |  |
| <b>3-6 Address IDDE in areas with pollutants of concern</b>                                    | Ongoing   | See details.                                 | Identify and correct IDDE in areas with pollutants of concern | Engineering Division                  | Ongoing   | A suspected illicit discharge of a cross connected sewer lateral has been identified on Naubuc Avenue. Town staff are actively working to verify and eliminate the discharge.  |

**3.2 Describe any IDDE activities planned for the next year, if applicable.**

The written program has been posted to the Town of Glastonbury’s Engineering Division web site.

Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process.

**3.3 provide a record of all citizen reports of suspected illicit discharges occurring during the reporting period and SSO’s occurring July 2017 through the end of reporting period using the following table.** Illicit discharges are any unpermitted discharge to waters of the state that do not consist entirely of stormwater or uncontaminated groundwater except those discharges identified in Section 3(a)(2) of the MS4 general permit when such non-stormwater discharges are not significant contributors of pollution to a discharge from and identified MS4.

| Location<br>(Lat long/ street crossing /address and receiving water) | Date and duration of occurrence  | Discharge to MS4 or surface water                 | Estimated volume discharged | Known or suspected cause / Responsible party  | Corrective measures planned and completed (include dates)  | Sampling data (if applicable) |
|--|--|---|-----------------------------|---|--|-------------------------------|
| 2687 Main Street/Naubuc Avenue Katz Hardware                         | Originally a connection to a combined sewer system. Disconnected in 1/2015 | Illicit Discharge into MS4 storm drainage system. | Unknown                     | Old combined sewer system connection which was identified by the Public Works Dept and disconnected in 2015 | Single bathroom located at 2687 Main Street that was connected to an old combined sewer system located on Naubuc Avenue that remained connected to the storm sewer as part of a sewer separation incorporated in a reconstruction project of Naubuc Avenue in the 1970’s. Illicit discharge was identified by the Town of Glastonbury Public Works and disconnected by the property owner in 2015. | None                          |
| 104 Benton Lane  | 03/03/2013<br>12:30 P.M. to 2:15 P.M.                                      | SSO-surcharged manhole                            | 200-300 Gallons             | Blockage from rags in pump station wet well. Cleaned ASAP to relieve surcharge                              | By Pass system which had been installed during pump station upgrade construction activity removed on 3/4/2013.<br><br>Cleaned ASAP to relieve Surcharge. Hand spread Limed area around manhole.  | None                          |
| 116 Oak Street   | 08/23/2013<br>2:00 P.M. to 5:00 P.M.                                       | SSO to Hubbard Brook                              | 150-250 Gallons             | Concrete at the end of lateral connection   | Sewer line will require reconstruction.<br><br>Sewer lateral will need to be reconstructed.  | None                          |
| Tall Timbers Road  | 09/14/2014<br>No start time to 10:30 A.M.                                  | SSO-Private force main leaking below grade        | 21,500 Gallons (Est.)       | Broken 1 ¼” private force main lateral  | Broken pipe repaired by town highway staff.<br><br>Pipe repaired and suggested pressure testing of the line by homeowner (Private system).   | None                          |
| 1909 Main Street   | 08/09/2014<br>7:00 A.M. to 9:00 A.M.                                       | SSO-surcharged manhole                            | 500 Gallons                 | Grease blockage in 8” sewer line  | Blockage in sewer line relieved by jet truck, upon release completed jetting. Applied bleach to area around manhole and ground.Added location to Towns routine jetting schedule.   | None                          |

|   |  |  |                        |  |  |      |
|---|--|--|------------------------|--|--|------|
| 2333 Main Street  | 02/25/2015<br>11:40 A.M. to<br>4:30 P.M. | SSO-<br>surcharged<br>manhole in<br>parking lot-<br>Private                                | Unable to<br>determine | Grease and Root<br>blockage  | Property owner arranged with contractor to clear<br>blockage by flushing and root cutting.<br><br>Routine flushing and root cutting.   | None |
| 2756 Main Street  | 09/04/2016<br>12:45 P.M. to<br>1:40 P.M. | SSO-<br>surcharged<br>manhole-<br>Salmon Brook   | 5,000 Gallons          | Electrical failure<br>at Pump Station  | Restored Pump Station Operation quickly.   | None |
| 3025 Main Street  | 08/07/2017<br>1:00 P.M. to<br>5:00 P.M.  | SSO-<br>surcharged<br>manhole-Pump<br>Station  | Unknown                | Mechanical<br>equipment<br>failure   | Burger King regional manager notified to evaluate and<br>repair the reoccurring problem.<br><br>Repairs made to eliminate future overflows.  | None |
| 28 Talcott Road   | 05/04/2017<br>6:38 P.M. to<br>7:15 P.M.  | SSO-<br>surcharged<br>manhole/sewer<br>main<br>overflowed<br>into catch basin              | Unknown                | Grease blockage<br>in sewer main   | Jetted and flushed sewer main.<br><br>Frequent inspection of town sewer main.  | None |
| 76-78 Hollister Way<br>South<br>Meadow Hill<br>Condominiums | 12/18/2018<br>3:00 PM to<br>6:00 PM      | SSO- sewer<br>backup and<br>overflow<br>discharge in<br>basement of<br>private<br>property | 250 Gallons            | Blockage in<br>Towns sewer<br>line on Main<br>Street due to<br>pipe joint<br>separation and<br>soil infiltration | Sewer pipe joint was repaired and sewer line<br>was flushed and televised by Highway Dept. staff<br>to relieve blockage.   | None |
| 120 Hebron Avenue<br>Eric Town Square                       | 7/30/2019<br>9:44 PM                     | Restaurant<br>grease<br>disposal into<br>an on-site<br>catch basin                         | 25 Gallons             | Employees<br>dumping<br>grease into a<br>catch basin   | Patron notified CTDEEP of incident. CTDEEP Case<br>No. 2019-03568. CTDEEP personnel required<br>property owner to hire a company to clean all<br>effected on-site storm drainage pipes and<br>structures. Notice of violation letter sent to<br>property owner from the WPCA requiring<br>tenants to educate their employees on proper<br>grease disposal. | None |
| 2327-2233 Main<br>Street                                    | Ongoing,<br>unknown<br>duration.         | Illicit Discharge<br>into MS4 storm<br>drainage<br>system on<br>Naubuc<br>Avenue.          | Unknown                | Cross connected<br>sewer lateral<br>into former<br>combined<br>system.   | Disconnection will be performed as soon as a<br>contractor can be retained for this work, likely start<br>date April 2022.   | None |
|   |  |  |                        |  |  |      |

**Note: Data listed above is derived from copies of a Sewage By-Pass Notification Report as submitted to State of Connecticut DEEP Bureau of Water Management.**

**3.4 Provide a summary of actions taken to address septic failures using the table below.**

| Method used to track illicit discharge reports  | Location and nature of structure with failing septic systems           | Actions taken to respond to and address the failures   | Impacted waterbody or watershed, if known         | Dept./ Person Responsible  |
|---|--|--|---|--|
| Health Department Septic System Repair Records<br><br>Engineering Division Records<br><br>CT DEEP Sewer By-Pass Notification Report | Angus Pond Residential Septic Systems within the drainage basin        | Within the Angus Pond drainage basin Health Department records indicate that 1 septic repair or replacement was done in 2021.                  | Angus Pond<br>DEEP Basin ID: 4009-00-2-L4         | <b>Health Department:</b><br>Director of Health<br>Wendy Mis, MPH, RS<br><br><b>Engineering Division:</b><br>Assistant Town Engineer<br>Stephen M. Braun, P.E. |
| Health Department Septic System Repair Records<br><br>Engineering Division Records<br><br>CT DEEP Sewer By-Pass Notification Report | Connecticut River Residential Septic Systems within the drainage basin | Within the Connecticut River drainage basin Health Department records indicate that 0 septic system repairs or replacements were done in 2021. | Connecticut River<br>DEEP Basin ID: 4009-00-6-R16 | <b>Health Department:</b><br>Director of Health<br>Wendy Mis, MPH, RS<br><br><b>Engineering Division:</b><br>Assistant Town Engineer<br>Stephen M. Braun, P.E. |

**3.5 Briefly describe the method and effectiveness of said method used to track illicit discharge reports.**

The Engineering Division has a spreadsheet to track illicit discharges that are reported to us and to the CT DEEP via the Sewage Bypass Notification Report process. This data is then included with the MS4 Annual Report. There are not many illicit discharges reported so the spreadsheet is functional for tracking purposes.



### 3.6 IDDE reporting metrics

| Metrics  |  |
|--|--|
| Estimated or actual number of MS4 outfalls                           | Approximately <b>976±</b> total outfalls   |
| Estimated or actual number of interconnections                       | <b>28</b> interconnections have been identified with ConnDOT drainage systems.   |
| Outfall mapping complete   | <b>100%</b> -Catch Basins/Manholes/<br>Pipes/Outfalls<br>Mapping can be found on the Town GIS System using the following link: <a href="#">Outfall Mapping</a> |
| Interconnection mapping complete                                     | <b>100%</b>  |
| System-wide mapping complete (detailed MS4 infrastructure)           | <b>100%</b>  |
| Outfall assessment and priority ranking for IDDE Plan                | <b>100% - See APPENDIX C</b>   |
| Dry weather screening of all High and Low priority outfalls complete | 21 Outfalls were screened in 2021 for bacteria indicator using an ammonia test kit.  |
| Catchment investigations complete                                    | 0  |
| Estimated percentage of MS4 catchment area investigated              | 0  |

### 3.7 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often is it given (minimum once per year).

A review of dry weather screening procedures was conducted with Engineering Inspection Staff at a kick-off meeting held on December 6, 2021 in preparation for dry weather screening of town-wide outfalls.

## 4. Construction Site Runoff Control (Section 6(a)(4) / page 25)

### 4.1 BMP Summary

| BMP  | Status (Complete, Ongoing, In Progress, or Not Started) | Activities in current reporting period   | Measurable Goal   | Department / Person Responsible  | Date completed or projected completion date (Include the start date for anything that is "In Progress") | Additional details  |
|--|---|--|---|--|---|---|
| <b>4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit (Due 7/1/22)</b> | Completed/Ongoing                                       | All proposed development projects were reviewed for compliance with land use regulations.                                | Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit. | Office of Community Development and Environmental Department<br><br>Engineering Division<br><br>Building Inspection/Zoning Enforcement | Continued implementation  | Existing Land Use regulations related to the control of erosion and sediment from construction sites can be found in <a href="#">Section 19</a> of the Town Building - Zone Regulations and <a href="#">Section 15</a> of the Town Subdivision and Resubdivision Regulations. |
| <b>4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval (Ongoing)</b>                                  | Completed/Ongoing                                       | All proposed development plans were reviewed by various departments for conformance to the above referenced regulations. | Develop/Implement plan for interdepartmental coordination in site plan review and approval.                               | Engineering Division<br><br>Office of Community Development and Environmental Department<br><br>Building Inspection/Zoning Enforcement | Continued implementation  | See Stormwater Management Plan for additional details.  |
| <b>4-3 Review site plans for stormwater quality concerns (Ongoing)</b>   | Completed/Ongoing                                       | All proposed development plans were reviewed for conformance with stormwater quality best management practices.          | Review site plans for stormwater quality concerns.  | Engineering Division<br><br>Office of Community Development and Environmental Department   | Continued implementation  | See Stormwater Management Plan for additional details.  |
| <b>4-4 Conduct site inspections (Ongoing)</b>  | Completed/Ongoing                                       | E&S inspections and enforcement was conducted by Office of Office of Community Development staff.                        | Conduct site inspections  | Engineering Division<br><br>Office of Community Development and Environmental Department   | Continued implementation  |   |

|   |                   |  |   |  |                          |   |
|---|-------------------|--|---|--|--------------------------|---|
| <b>4-5 Implement procedure to allow public comment on site development (Ongoing)</b>                      | Completed/Ongoing | Public input is a regular part of all development application approvals.                                   | Implement procedure to allow public comment on site development       | Office of Community Development and Environmental Department                         | Continued implementation | See Stormwater Management Plan for additional details.  |
| <b>4-6 Implement procedure to notify developers about DEEP construction stormwater permit (Ongoing)</b>   | Completed/Ongoing | Notifications to developers were completed as part of conditions of approval for local regulatory permits. | Developers are all notified about DEEP construction stormwater permit | Engineering Division<br>Office of Community Development and Environmental Department | Continued implementation |   |
| <b>Additional BMP:<br/>4-7 Engineering Division plan review stormwater compliance checklist (Ongoing)</b> | Completed/Ongoing | Reviewed developments for compliance with our checklist.   | Standardize plan review related to stormwater compliance              | Engineering Division   | Continued implementation | Standardized internal plan review checklist for all proposed developments which includes stormwater management compliance parameters. |

**4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.**

- 4.1. Continued enforcement of land use regulations to meet requirements of MS4 general permit.
- 4.2. Continued interdepartmental coordination for the review and approval of all proposed development plans.
- 4.3. Continued review of all proposed development plans related to stormwater quality concerns.
- 4.4. Continued site inspections.
- 4.5. Continued implementation of the current procedure to allow public comment on site development.
- 4.6. Continued implementation of the current procedure to notify developers about DEEP construction stormwater permit.
- 4.7. Continued use of the internal plan review stormwater compliance checklist.

## 5. Post-construction Stormwater Management (Section 6(a)(5) / page 27)

### 5.1 BMP Summary

| BMP  | Status<br>(Complete,<br>Ongoing,<br>In<br>Progress,<br>or Not<br>Started) | Activities in current<br>reporting period  | Measurable<br>goal   | Department /<br>Person<br>Responsible  | Date completed<br>or projected<br>completion date<br>(Include the start<br>date for anything<br>that is "In<br>Progress") | Additional details   |
|--|---|--|--|--|---|--|
| <b>5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning (Due 7/1/22)</b> | In progress   | No activity.   | Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning | Office of<br>Community<br>Development<br><br>Engineering<br>Division                               | In Progress.  | The Town will review the need for additional legal authority / regulations that may be required to meet the intent of this permit. See Stormwater Management Plan Section 5.1 for additional information.                                    |
| <b>5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects (Due 7/1/22)</b>                                   | Ongoing/In progress   | LID and runoff reduction requirements have been implemented on all approved development projects over the past year. | Enforce LID/runoff reduction requirements for development and redevelopment projects.                                  | Office of<br>Community<br>Development<br><br>Engineering<br>Division                               | Ongoing.  | Current Town policy requires consideration of LID and runoff reduction measures as well as treatment of the appropriate portion of the Water Quality Volume for all development and redevelopment projects.                                  |
| <b>5-3 Identify retention and detention ponds in priority areas</b>  | Completed   | No activity.   | Identify retention and detention ponds in priority areas.  | Engineering<br>Division  | Completed<br>7/1/2019   | 121 detention ponds have been mapped and are accessible via the GIS.   |
| <b>5-4 Implement long-term maintenance plan for stormwater basins and treatment structures</b>   | In progress   | Inspection and maintenance operations were performed on 12 detention ponds in 2021.                                  | Implement long-term maintenance plan for stormwater basins and treatment structures.                                   | Physical<br>Services/Highway<br>Division<br><br>Parks<br>Department<br><br>Engineering<br>Division | Underway,<br>maintenance<br>work is ongoing<br>and is a long-term<br>project.   | <b>GIS Pond ID # - Completed 2021:</b><br>MO25-2270 – 1/11/2021<br>MO25-2622 – 1/18/2021<br>MO25-3553 – 1/20/2021<br>OL10-200 – 1/22/2021<br>HA15-1425 – 2/1/2021<br>CO80-2020 – 1/25/2021<br>OL40-1300 – 1/18/2021<br>OL40-1480 – 1/18/2021 |

|   |             |              |   |                      |   |  |
|---|-------------|--------------|---|----------------------|---|--|
|   |             |              |   |                      |   | OL70-385 – 3/4/2021<br>SU30-1600 – 2/26/2021<br>RE20-90 – 3/5/2021<br>TO10-4353 – 3/12/2021  |
| <b>5-5 DCIA mapping</b>   | Completed   | No activity. | DCIA mapping / calculation  | Engineering Division | 7/1/2020  | The baseline DCIA for the entire Town was computed to be 1,094 acres out of a total of 2,622 acres of IC (exclusive of DOT Roads). These numbers were derived from DEEP sub-regional drainage basin data with IC values reports from 2012. See Appendix B for details. |
| <b>5-6 Address post-construction issues in areas with pollutants of concern</b> | In progress | No activity. | Address post-construction issues in areas with pollutants of concern. | Engineering Division | Continuously ongoing throughout the duration of the permit. | The Town of Glastonbury will prioritize problem areas for correction under minimum control measure 6 – Pollution Prevention/Good Housekeeping.   |

**5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.**

- 5-1. Engineering will develop draft updates to the current Town regulations and policies to meet or exceed those LID and runoff reduction practices required under this permit and in accordance with the CT Stormwater Quality Manual, Glastonbury’s land use regulations, guidance or construction project requirements.
- 5-2. Continued enforcement of LID/runoff reduction/water quality treatment on all approved development and redevelopment project.
- 5-3. Continue field inspections and maintenance of all municipality owned retention and detention ponds within the priority areas and throughout the entire town.
- 5-4. Continue Implementation of a long term maintenance plan for all municipally owned stormwater basins and treatment structures.
- 5-6. Continued inspections to address construction issues in areas with pollutants of concern.

### 5.3 Post-Construction Stormwater Management reporting metrics

| Metrics   |  |
|---|--|
| Baseline (2012) Directly Connected Impervious Area (DCIA) | 1,067.40 Acres   |
| DCIA disconnected (redevelopment plus retrofits)          | DCIA disconnected (approved projects)<br>Total to Date = 29.9 acres<br>2021 - 3.71 acres<br>2020 -0.96 acres<br>2019 - 3.64 acres<br>2018 - 0.94 acres<br>2017 - 9.41 acres<br>2016 - 0.00 acres<br>2015 to 2011 - 11.24 acres |
| Retrofits completed                                       | 101 acre drainage area (4.04 acres DCIA) disconnected under Dug Road / Tryon Street Drainage Project, WQC-201206157.   |
| DCIA disconnected   | 2.8% total since 2012  |
| Estimated cost of retrofits                               | (unknown at this time)   |
| Detention or retention ponds identified                   | 121 ponds  |

### 5.4 Briefly describe the method to be used to determine baseline DCIA.

DCIA for each local drainage basin area within the Town was computed using GIS based IC data provided by CTDEEP through the UCONN CLEAR / NEMO website. Each basin was characterized for the type of land-use contained therein and DCIA was computed using the Sutherland Equations and the basin IC (exclusive of the DOT Roads). See Appendix B for the Town of Glastonbury baseline DCIA calculation spreadsheet.

## 6. Pollution Prevention/Good Housekeeping (Section 6(a)(6) / page 31)

### 6.1 BMP Summary

| BMP  | Status (Complete, Ongoing, In Progress, or Not Started) | Activities in current reporting period  | Measurable goal   | Department / Person Responsible   | Date completed or projected completion date (Include the start date for anything that is "In Progress") | Additional details   |
|--|---|---|---|---|---|--|
| <b>6-1 Develop/implement formal employee training program (Ongoing)</b>                          | Completed/Ongoing                                       | No group training held this year by Highway or Parks Departments due to COVID19.                    | Develop/implement formal employee training program                          | Physical Services/Highway Division<br><br>Parks Department                                | Continuously ongoing throughout the duration of the permit.   | Training materials consist of generalized stormwater pollution prevention video, review of facility specific Stormwater Pollution Prevention Plans, and other department specific training related to specific maintenance activities (salt application, fertilizer application, etc). |
| <b>6-2 Implement MS4 property and operations maintenance (Ongoing)</b>                           | In progress   | Parks Dept. continued to implement guidelines to reduce fertilizer applications at Town Facilities. | Implement MS4 property and operations maintenance                           | Physical Services/Highway Division<br>Parks Dept.<br>Sanitation Dept.<br>Facilities Dept. | Ongoing/In Progress   | See Stormwater Management Plan for additional details.   |
| <b>6-3 Implement coordination with interconnected MS4s (Ongoing)</b>                             | In progress   | No activity in the current reporting period.  | Implement coordination with interconnected MS4s                             | Engineering Division  | In progress   | The Town of Glastonbury will coordinate with operators of interconnected MS4s  |
| <b>6-4 Develop/implement program to control other sources of pollutants to the MS4 (Ongoing)</b> | On going  | Nitrogen loading computations received for applications in the groundwater protection zones.        | Develop/implement program to control other sources of pollutants to the MS4 | Engineering Division  | On going  | Program to control nitrogen in GW protection Zones is in place. No other problematic pollutants identified for specific control at this time.  |

|  |                     |   |   |  |   |   |
|--|---------------------|---|---|--|---|---|
| <b>6-5 Evaluate additional measures for discharges to impaired waters* (Ongoing)</b> | In progress         | No activity in the current reporting period.  | Evaluate additional measures for discharges to impaired waters* | Engineering Division                                       | In progress                                   | Signage is in place at the dog park and other public parks regarding the need to pick up pet waste. Bags are also provided for use by pet owners. Additional measures will be considered.         |
| <b>6-6 Track projects that disconnect DCIA (Ongoing)</b>                             | In progress/Ongoing | Tracking spreadsheet updated with developments approved in 2021.  | Track projects that disconnect DCIA                             | Engineering Division                                       | In progress                                   | Based on current tracking statistics approximately 30 acres of DCIA will be disconnected as part of an approved project through December 2021.  |
| <b>6-7 Implement infrastructure repair/rehab program (Ongoing)</b>                   | In progress         | No activity in the current reporting period.  | Implement infrastructure repair/rehab program                   | Engineering Division<br>Physical Services/Highway Division | In progress to meet due date of July 1, 2021. | The Town of Glastonbury will continue a program to identify MS4 structures to repair, rehabilitate, or upgrade to reduce or eliminate the discharge of pollutants into water bodies.              |
| <b>6-8 Develop/implement plan to identify/prioritize retrofit projects</b>           | On hold.            | No activity in the current reporting period.  | Develop/implement plan to identify/prioritize retrofit projects | Engineering Division<br>Physical Services/Highway Division | On hold.                                      | 2% DCIA reduction has already been achieved within the permit period mostly through redevelopment projects. The Town will monitor this moving forward and assess the need for a retrofit program. |
| <b>6-9 Implement retrofit projects to disconnect 2% of DCIA</b>                      | On hold.            | No activity in the current reporting period.  | Implement retrofit projects to disconnect 2% of DCIA            | Engineering Division<br>Physical Services/Highway Division | On hold.                                      | 2% goal has already been met. Implementation of retrofit projects is not necessary at this time.  |
| <b>6-10 Develop/implement street sweeping program (Ongoing)</b>                      | Ongoing             | 1,565 curb miles were swept in 2021 and approximately 817 CY of material was collected and disposed of. | Develop/implement street sweeping program                       | Physical Services/Highway Division                         |   |   |



|  |         |  |  |                                    |   |   |
|--|---------|--|--|------------------------------------|---|---|
|  |         |  |  |                                    |   |   |
| <b>6-11<br/>Develop/implement<br/>catch basin cleaning<br/>program (Ongoing)</b> | Ongoing | All catch basins were inspected annually for blocked grates and structural problems.   | Develop/implement catch basin cleaning program | Physical Services/Highway Division | Ongoing throughout the duration of the permit | Approximately 174 were cleaned as part of the annual paving program and based on locations where routine sediment buildup has been noted. See 6.4 for more information.   |
| <b>6-12<br/>Develop/implement<br/>snow management<br/>practices (Ongoing)</b>    | Ongoing | Approximately 8,514 lane miles were treated with the use of computer controlled spreaders with ground speed control to meter amount of material applied and automatically stops application when truck stops moving. | Develop/implement snow management practices    | Physical Services/Highway Division | Ongoing throughout the duration of the permit | Snow and ice management training implemented for every storm event, management directs employee's when to apply salt for pre-treating and during a winter event. Spreaders are set to apply 350-500 lbs./lane mile. Flat routes set at 350 lbs /lane mile while higher hilly terrain set at 500lbs/lane mile. |

**6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.**

- 6-1. Resume training program in 2022.
- 6-2. Continued implementation of MS4 property and operations maintenance.
- 6-3. Begin coordination with interconnected MS4s including ConnDOT.
- 6-4. Determine the need for control of other sources of pollutants.
- 6-6. Continued tracking of projects that disconnect DCIA.

**6.3 Pollution Prevention/ Good Housekeeping reporting metrics**

| Metrics  |   |
|--|---|
| Employee training provided for key staff   | Highway Dept. staff – No training due to COVID19.<br>Parks Dept. staff – No training due to COVID19.      |
| Street sweeping  |   |
| Curb miles swept   | 1,565 miles   |
| Volume (or mass) of material collected   | 817 C.Y.  |
| Catch basin cleaning   |   |
| Total catch basins in priority areas   | 6,373 ±   |
| Total catch basins in MS4  | 6,772 ±   |
| Catch basins inspected   | 6,772±  |
| Catch basins cleaned   | 174 (2.5% of MS4 CBs)   |
| Volume (or mass) of material removed from all catch basins   | 133 C.Y.  |
| Volume removed from catch basins to impaired waters (if known)   | Unknown   |
| Snow management  |   |
| Type(s) of deicing material used   | Treated Salt Blend  |
| Total amount of each deicing material applied  | 3,645 Tons Highway Dept.<br>Approx. 200 Tons Parks Dept. (includes 4 tons bagged ice-melt for sidewalks). |
| Type(s) of deicing equipment used  | Computerized Spreaders with ground speed control (Highway Dept. Only)                                     |
| Lane-miles treated   | 22,708 lane miles   |
| Snow disposal location (when required)   | Riverfront Park-200 Welles Street   |
| Staff training provided on application methods & equipment   | Yes-Implemented for every storm event (Parks and Highway Dept.)   |
| Municipal turf management program actions (for permittee properties in basins with N/P impairments)                      |   |
| Reduction in application of fertilizers (since start of permit)  | N/A   |
| Reduction in turf area (since start of permit)   | N/A   |
| Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems) | Glastonbury Riverfront Dog Park-Welles Street   |
| Cost of mitigation actions/retrofits   | N/A   |

#### 6.4 Catch basin cleaning program

**Provide any updated or modifications to your catch basin cleaning program.**

Catch basins are routinely inspected when debris is removed from top grates before all significant rain events. Thorough full depth inspections/vacuum cleaning conducted on all basins located in annual paving program areas, all repairs/rebuilds noted and completed before paving begins. Basins identified as needing regular maintenance/cleaning are placed on a routine annual or semi-annual cleaning.

The Town of Glastonbury is in the process of refining its existing annual catch basin cleaning program to implement better ways of tracking the number of catch basins cleaned and quantities of material removed through the use of GIS software and field tablets.

#### 6.5 Retrofit program

**Briefly describe the Retrofit Program identification and prioritization process, the projects selected for implementation, the rationale for the selection of those projects and the total DCIA to be disconnected upon completion of each project.**

At this time we believe that 2% DCIA disconnection goals will be met without the need of a separate Retrofit program due to the pace of redevelopment projects currently underway in Town. The Town will continue to monitor this and will develop a retrofit program if MS4 Permit goals are not being met through redevelopment.

**Part II: Impaired waters investigation and monitoring**

**1. Impaired waters investigation and monitoring program**

**1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution.** This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

Nitrogen/ Phosphorus       Bacteria       Mercury       Other Pollutant of Concern

**1.2 Describe program status.**

**Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.**

Glastonbury has two impaired water bodies in Town, Angus Pond and the CT River, which are both impaired due to bacteria. 25 outfalls were identified that drain directly to these water bodies which were all screened for bacteria using an ammonia test kit in February and March of 2018. Five (5) of these outfalls exceeded 0.5 mg/l of Ammonia and therefore require follow up testing. No additional testing was performed in 2019. In 2020, 23 of the above referenced outfalls to impaired waterbodies were lab tested by state certified Phoenix Environmental Laboratories, Inc. through a consultant contract with Anchor Engineering Services, Inc. Screening data is listed below in Section 2.1-Screening Data.

**2. Screening data for outfalls to impaired waterbodies (Section 6(i)(1) / page 41)**

**2.1 Screening data**

Complete the table below for any outfalls screened during the reporting period. Each Annual Report will add on to the previous year’s screening data showing a cumulative list of outfall screening data.

| Outfall ID | Sample date          | Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern) | Results            | Name of Laboratory (if used)             | Follow-up required? |
|------------|----------------------|---|--------------------|--|---------------------|
| NA25-3213  | 4/13/2020<br>9:04am  | Bacteria  | 10 MPN/100 mls     | Phoenix Environmental Laboratories, Inc. | No                  |
| NA25-200   | 4/13/2020<br>9:22am  | Bacteria  | 41 MPN/100 mls     | Phoenix Environmental Laboratories, Inc. | No                  |
| NA25-2919  | 4/13/2020<br>9:37am  | Bacteria  | 31 MPN/ 100 mls    | Phoenix Environmental Laboratories, Inc. | No                  |
| NA25-3425  | 4/13/2020<br>9:47am  | Bacteria  | 4,350 MPN/ 100 mls | Phoenix Environmental Laboratories, Inc. | Yes                 |
| TR30-10480 | 4/13/2020<br>10:46am | Bacteria  | 862 MPN/ 100 mls   | Phoenix Environmental Laboratories, Inc. | Yes                 |

|                   |                      |          |                         |  |     |
|-------------------|----------------------|----------|-------------------------|--|-----|
| TR30-11044        | 4/13/2020<br>11:04am | Bacteria | 10 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| MA15-8819         | 4/13/2020<br>12:16pm | Bacteria | 882 MPN/ 100 mls        | Phoenix<br>Environmental<br>Laboratories, Inc. | Yes |
| MA20-1382         | 4/13/2020<br>12:44pm | Bacteria | 41 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| SH50-1512         | 4/13/2020<br>13:30pm | Bacteria | 52 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| RT83-19028        | 4/13/2020<br>13:12pm | Bacteria | 107 MPN/ 100 mls        | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| WE20-3484         | 4/24/2020<br>11:18am | Bacteria | 31 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| RFBH-010          | 4/24/2020<br>11:38am | Bacteria | 10 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| ST35-1046         | 4/24/2020<br>12:04pm | Bacteria | 145 MPN/ 100 mls        | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| TR30-5308         | 4/24/2020<br>12:30pm | Bacteria | 912 MPN/ 100 mls        | Phoenix<br>Environmental<br>Laboratories, Inc. | Yes |
| TR30-4044         | 4/24/2020<br>12:49am | Bacteria | 97 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| Tryon Street<br>1 | 6/11/2020<br>17:00pm | Bacteria | >48,400 MPN/ 100<br>mls | Phoenix<br>Environmental<br>Laboratories, Inc. | Yes |
| Tryon Street<br>2 | 4/24/2020<br>13:09pm | Bacteria | 10 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| WE40-791          | 4/24/2020<br>13:31pm | Bacteria | 74 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| MA15-8193         | 4/24/2020<br>13:50pm | Bacteria | 1,520 MPN/ 100<br>mls   | Phoenix<br>Environmental<br>Laboratories, Inc. | Yes |
| NA25-4437         | 4/24/2020<br>14:37pm | Bacteria | 41 MPN/ 100 mls         | Phoenix<br>Environmental<br>Laboratories, Inc. | No  |
| NA25-4481         | 4/24/2020<br>15:12pm | Bacteria | 727 MPN/ 100 mls        | Phoenix<br>Environmental<br>Laboratories, Inc. | Yes |
| RFBH-044          | 6/11/2020<br>16:37pm | Bacteria | >48,400 MPN/ 100<br>mls | Phoenix<br>Environmental<br>Laboratories, Inc. | Yes |
| RFPK-018          | 6/11/2020<br>16:27pm | Bacteria | 9,770 MPN/ 100<br>mls   | Phoenix<br>Environmental<br>Laboratories, Inc. | Yes |

\*Follow-up investigation required (last column) if the following pollutant thresholds are exceeded:

| Pollutant of concern        | Pollutant threshold  |
|-----------------------------|--|
| Nitrogen                    | Total N > 2.5 mg/l   |
| Phosphorus                  | Total P > 0.3 mg/l   |
| Bacteria (fresh waterbody)  | <ul style="list-style-type: none"> <li>E. coli &gt; 235 col/100ml for swimming areas or 410 col/100ml for all others</li> <li>Total Coliform &gt; 500 col/100ml</li> </ul>   |
| Bacteria (salt waterbody)   | <ul style="list-style-type: none"> <li>Fecal Coliform &gt; 31 col/100ml for Class SA and &gt; 260 col/100ml for Class SB</li> <li>Enterococci &gt; 104 col/100ml for swimming areas or 500 col/100 for all others</li> </ul> |
| Other pollutants of concern | Sample turbidity is 5 NTU > in-stream sample   |

### 3. Follow-up investigations (Section 6(i)(1)(D) / page 43)

Provide the following information for outfalls exceeding the pollutant threshold.

The systems listed below that tested above the allowable levels of bacteria will be cleaned by the Highway department in 2022 and then retested by a lab. If they continue to be elevated for bacteria catchment investigations will be carried out by the Town.

| Outfall        | Status of drainage area investigation | Control measure implementation to address impairment |
|----------------|---------------------------------------|--|
| NA25-3425      | NONE COMPLETED TO DATE.               |  |
| TR30-10480     | NONE COMPLETED TO DATE.               |  |
| MA15-8819      | NONE COMPLETED TO DATE.               |  |
| TR30-5308      | NONE COMPLETED TO DATE.               |  |
| Tryon Street 1 | NONE COMPLETED TO DATE.               |  |
| MA15-8193      | NONE COMPLETED TO DATE.               |  |
| NA25-4481      | NONE COMPLETED TO DATE.               |  |
| RFBH-044       | NONE COMPLETED TO DATE.               |  |
| RFPK-018       | NONE COMPLETED TO DATE.               |  |

#### 4. Prioritized outfall monitoring (Section 6(i)(1)(D) / page 43)

Once outfall screening has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2020.

2021 Testing was not performed at these outfalls. Sampling will be performed in 2022.

| Outfall        | Sample Date | Parameter(s) | Results               | Name of Laboratory (if used)             |
|----------------|-------------|--------------|-----------------------|--|
| Tryon Street 1 | 6/11/2020   | Bacteria     | ➤ 48,400 MPN/ 100 mls | Phoenix Environmental Laboratories, Inc. |
| RFBH-044       | 6/11/2020   | Bacteria     | ➤ 48,400 MPN/ 100 mls | Phoenix Environmental Laboratories, Inc. |
| RFPK-018       | 6/11/2020   | Bacteria     | 9,770 MPN/ 100 mls    | Phoenix Environmental Laboratories, Inc. |
| NA25-3425      | 4/13/2020   | Bacteria     | 4,350 MPN/ 100 mls    | Phoenix Environmental Laboratories, Inc. |
| TR30-5308      | 4/24/2020   | Bacteria     | 912 MPN/ 100 mls      | Phoenix Environmental Laboratories, Inc. |
| MA15-8819      | 4/13/2020   | Bacteria     | 882 MPN/ 100 mls      | Phoenix Environmental Laboratories, Inc. |

**Part III: Additional IDDE Program Data**

**1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)**

Provide a list of all catchments with ranking results (DEEP basins may be used instead of manual catchment delineations).

| 1. Catchment ID<br>(DEEP Basin ID) | 2. Category       | 3. Rank    |
|------------------------------------|-------------------|------------|
| SEE ATTACHED TABLE                 | FROM IDDE PLAN IN | APPENDIX C |
|                                    |                   |            |
|                                    |                   |            |

**2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)**

**2.1 Dry weather screening and sampling data from outfalls and interconnections**

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

| Outfall /<br>Interconnection<br>ID | Screening /<br>sample<br>date | Ammonia  | Chlorine | Conductivity | Salinity | E. coli or<br>enterococcus | Surfactants | Water<br>Temp | Pollutant<br>of concern | If required, follow-up actions<br>taken |
|------------------------------------|-------------------------------|----------|----------|--------------|----------|----------------------------|-------------|---------------|-------------------------|---|
| PU153003                           | 2/25/2021                     | 1 PPM    |          |              |          |                            |             |               |                         | Yes<br>≥ 0.5 mg/l                       |
| WTLB-08                            | 12/8/2021                     | 0.25 PPM |          |              |          |                            |             |               |                         | No                                      |
| NE25-131                           | 12/8/2021                     | 0.50 PPM |          |              |          |                            |             |               |                         | Yes<br>≥ 0.5 mg/l                       |
| WI24-448                           | 12/8/2021                     | 0.50 PPM |          |              |          |                            |             |               |                         | Yes<br>≥ 0.5 mg/l                       |
| MO05-453                           | 12/17/2021                    | 0.25 PPM |          |              |          |                            |             |               |                         | No                                      |



|            |            |          |  |  |  |  |  |  |  |                   |
|------------|------------|----------|--|--|--|--|--|--|--|-------------------|
| SO10-1018  | 12/17/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |
| PA20-434   | 12/17/2021 | 0.50 PPM |  |  |  |  |  |  |  | Yes<br>≥ 0.5 mg/l |
| GR55-352   | 12/17/2021 | 0.20 PPM |  |  |  |  |  |  |  | No                |
| WR10-785   | 12/17/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |
| DU10-651   | 12/15/2021 | 0.50 PPM |  |  |  |  |  |  |  | Yes<br>≥ 0.5 mg/l |
| DU10-871   | 12/14/2021 | 0.50 PPM |  |  |  |  |  |  |  | Yes<br>≥ 0.5 mg/l |
| DU10-435   | 12/14/2021 | 0.50 PPM |  |  |  |  |  |  |  | Yes<br>≥ 0.5 mg/l |
| DU10-339   | 12/14/2021 | 0.50 PPM |  |  |  |  |  |  |  | Yes<br>≥ 0.5 mg/l |
| DI10-337   | 12/14/2021 | 0.25 PPM |  |  |  |  |  |  |  | No                |
| CO35-751   | 12/14/2021 | 0.25 PPM |  |  |  |  |  |  |  | No                |
| KN40-736   | 12/21/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |
| MO15-1717  | 12/21/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |
| WO10-1522  | 12/21/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |
| MA15-13003 | 12/21/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |
| DI15-143   | 12/21/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |
| WH10-798   | 12/21/2021 | 0 PPM    |  |  |  |  |  |  |  | No                |

## 2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

| Outfall / Interconnection ID | Sample date | Ammonia | Chlorine | Conductivity | Salinity | E. coli or Enterococcus | Surfactants | Water Temp | Pollutant of concern |
|------------------------------|-------------|---------|----------|--------------|----------|-------------------------|-------------|------------|----------------------|
| <i>NONE TO DATE</i>          |             |         |          |              |          |                         |             |            |                      |

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

### 3. Catchment Investigation data (Appendix B (A)(7)(e) / page 9)

#### 3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF's were identified. An example is provided below.

| Outfall ID | Receiving Water              | System Vulnerability Factors |
|------------|------------------------------|------------------------------|
|            | <i>SEE ATTACHED TABLE IN</i> | <i>APPENDIX C</i>            |
|            |                              |                              |
|            |                              |                              |

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).

### 3.2 Key junction manhole dry weather screening and sampling data

| Key Junction Manhole ID | Screening / Sample date | Visual/ olfactory evidence of illicit discharge | Ammonia | Chlorine | Surfactants |
|-------------------------|-------------------------|---|---------|----------|-------------|
| <i>NONE TO DATE</i>     |                         |   |         |          |             |
|                         |                         |   |         |          |             |

### 3.3 Wet weather investigation outfall sampling data

| Outfall ID          | Sample date | Ammonia | Chlorine | Surfactants |
|---------------------|-------------|---------|----------|-------------|
| <i>NONE TO DATE</i> |             |         |          |             |
|                     |             |         |          |             |

### 3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

| Discharge location  | Source location | Discharge description | Method of discovery | Date of discovery | Date of elimination | Mitigation or enforcement action | Estimated volume of flow removed |
|---------------------|-----------------|-----------------------|---------------------|-------------------|---------------------|----------------------------------|----------------------------------|
| <i>NONE TO DATE</i> |                 |                       |                     |                   |                     |                                  |                                  |
|                     |                 |                       |                     |                   |                     |                                  |                                  |

#### Part IV: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

| Chief Elected Official or Principal Executive Officer | Document Prepared by                                     |
|---|--|
| Print name:<br>Richard J. Johnson, Town Manager       | Print name:<br>Daniel A. Pennington, P.E., Town Engineer |
| Signature / Date:                                     | Signature / Date:  |

## **APPENDIX A**

2021 Salmon River Watershed Partnership  
Outreach & Monitoring Activities Related to  
Stormwater & Water Quality Annual Report



## **2021- Salmon River Watershed Partnership Outreach & Monitoring Activities Related to Stormwater & Water Quality**

(Bolton, Colchester, Columbia, East Haddam, East Hampton,  
Glastonbury, Haddam, Hebron, Lebanon & Marlborough)

During the 2021, SRWP was able to resume a number of its outreach and education activities by putting into place recommendations to address any Covid concerns.

Activities presented in this format:

**Date/Event/Description/Audience and estimated number of individuals reached and/or participated**

**March 2021: *Annual Newsletter***/Annual newsletter covers a variety of SRWP activities and news items related to protecting watershed resources and preserving water quality. The 2021 edition included an article contributed by the Town of East Hampton titled “Implementing the Watershed Protection Plan for Lake Pocotopaug”, highlighting local actions by community members /Sent for general distribution to all 10 watershed towns, shared on social media and used as handouts for in-person events/general public 100s.

**May-September 2021: *Launching and field checking HOB0 stream temperature loggers***/Field Work and Intern training: Partnering with DEEP Water Quality Monitoring and Fisheries Depts. Documenting summer stream temperatures using HOB0 loggers. Loggers take hourly readings and are launched in 10 locations throughout the watershed. Loggers were retrieved and data downloaded in October and November 2021 and will be added to watershed temperature mapping to compare with local land-use. Regional data storage site (<http://db.ecosheds.org/>) /2 college student interns, in partnership with town land-use staff and boards.

**June-August 2021: *Field Monitoring at local streams*** /Fourth year for two routes established in 2018. Upgraded monitoring equipment to YSI unit. Baseline water quality monitoring at 11 stream segments through the watershed to establish baseline data and track future changes. Previous monitoring had led to a second project of logging conductivity as a means to track chloride (salt) intrusion. Summer intern and volunteers were trained on hand-held monitoring equipment and took weekly samples for temperature, pH, dissolved oxygen, conductivity, total dissolved solids and salinity. A summary report will be generated and forwarded to all 10 watershed towns and shared with DEEP/1 summer intern and 8 community volunteers and 10 watershed towns.

**August 2021: *Hebron Day Celebration-Public Event***/ Booth Set-up with display on SRWP activities and sign-up for water quality monitoring-special focus on impacts of water quality to macroinvertebrates, new display showing all water quality monitoring sites and a take home brochure including steps landowners can take to protect water quality/General public-100s+

**September 2021: *East Haddam Day-sponsored by EH Business Association-Public Event***/ Booth Set-up with display on SRWP activities and sign-up for water quality monitoring-special focus on impacts of water quality to macroinvertebrates, new display showing all water quality monitoring sites and a take home brochure including steps landowners can take to protect water quality/General public-100s+

**September 2021: *Haddam Neck Fair-Public Event***/ Booth Set-up for three-day event with display on SRWP activities and sign-up for water quality monitoring-special focus on impacts of water quality to macroinvertebrates, new display showing all water quality monitoring sites and a take home brochure including steps landowners can take to protect water quality/General public-100s+

**September 2021: *Samplepalooza with CT River Conservancy***/Submitted a grab sample for nutrient monitoring as part of CT River Conservancy's annual Samplepalooza 4-state CT River tributary monitoring effort-results to be reported by CT River Conservancy/staff.

**September 2021: *Community and State Environmental Leaders-Watershed Visioning Sessions***/In 2021 SRWP initiated a long-term visioning process with a goal of establishing a path towards long term sustainability. Presentations and visioning sessions were held with Community and State Environmental Leaders to report on current SRWP activities, including water quality monitoring programs, and hear about other initiatives that would benefit the community/Invited municipal leaders of each watershed towns and other state organizations including DEEP, CRC, CT River Coastal Conservation District, Trout Unlimited and local education institutions.-50 participants

**September-November 2021: *Field Stream Assessment with Community Volunteers*** /Outdoor Field Training Presentation and 9 Stream Macroinvertebrate Assessments Conducted in 2021. One new site was added in 2021—A no-name tributary to Raymond Brook in Hebron, to collect baseline data ahead of potential future development at request of town. Volunteers collect and identify benthic macroinvertebrates as part of CT DEEP protocol for conducting stream assessments to establish whether segments are meeting state water quality goals for aquatic life support. 15 individuals in total participated.

**October 2021: *Eightmile RiverFes-Public Event***/ Booth Set-up with display on SRWP activities and sign-up for water quality monitoring-special focus on impacts of water quality to macroinvertebrates, new display showing all water quality monitoring sites and a take home brochure including steps landowners can take to protect water quality/General public-100s+

**November 2021: RHAM Middle School Education Program-Pond Life and Water Quality** Program involving field netting, species identification, discussion on adaptations and of impact of water quality on pondlife/80 RHAM 7<sup>th</sup> and 8<sup>th</sup> graders (Orange Team) and teachers.

**Year round: Field Monitoring: Conductivity Logger Launching and hourly sampling for conductivity and temperature/**Partnership project with GZA, Inc. Green Team (funding also received by GZA for 3 of the loggers in 2015) and SRWP. In 2020, due to rising concerns with chloride showing up in local streams, SRWP purchased 6 new HOBO conductivity loggers and refurbished 4 older loggers. After consultation with local municipalities and DEEP, 10 new sites were selected, with concentration in areas where there may be higher levels of chlorides present, ie downstream of larger transportation infrastructure. Data is shared with DEEP and USGS. /3 GZA Green Team members, DEEP Fisheries and Water Quality staff and SRWP staff.

**Year round: SRWP Outreach and Activities/**SRWP is funded primarily through 7 of the watershed towns. SRWP-Watershed Coordinator represents the Partnership on statewide issues related to water quality and non-point source pollution. Information is shared with 10 towns for their dispersal and use. Coordinator also comments as requested on town activities, regulations or planning projects specific to water quality and stormwater/10 watershed towns.

**Year round: SRWP Outreach: Facebook/** (<https://www.facebook.com/10towns/>) Salmon River Watershed Partnership Information pertaining to watershed monitoring efforts, opportunities to participate and actions local citizens can do to help protect streams./ general public-100s

**Year round: SRWP Outreach: Website –** [www.salmonriverct.org](http://www.salmonriverct.org) /Website posts reports on water quality and monitoring and also offers information and links on issues related to Best Management Practices for Homeowners, Animal Owners and Business Owners/general public-100s

**Year round: SRWP Outreach: Instagram/** Salmon River Watershed Partnership initiated a Instagram Account ([www.instagram.com/salmonriverct](http://www.instagram.com/salmonriverct)) Information pertaining to watershed resources and outreach/general public-100s



## **APPENDIX B**

BASELINE DCIA SPREADSHEET

TOWN OF GLASTONBURY  
DIRECTLY CONNECTED IMPERVIOUS COVER (DCIA)  
BY DRAINAGE BASIN

| Basin Number:  | Basin Area: (Acres) | Total Impervious Cover: (Acres) | DOT Roads IC: (Acres) | Total IC Less DOT Roads: (Acres) | Watershed Total IC: (Acres) | Watershed Total IC %: | Connectivity Level:  | Watershed Connected IC %: | Total Watershed Connected IC: (Acres) | Watershed Urban Area % | Adjusted Watershed Connected IC: (Acres) |
|----------------|---------------------|---------------------------------|-----------------------|----------------------------------|-----------------------------|-----------------------|----------------------|---------------------------|---------------------------------------|------------------------|--|
| 4000-00-6-R11  | 198.06              | 2.62                            | 2.20                  | 0.42                             | 0.42                        | 0.21%                 | Slightly Connected   | 0.00                      | 0.00                                  | 100.00%                | 0.00                                     |
| 4000-00-6-R12  | 690.50              | 7.08                            | 0.00                  | 7.08                             | 7.08                        | 1.03%                 | Slightly Connected   | 0.01                      | 0.07                                  | 100.00%                | 0.07                                     |
| 4000-00-6-R14  | 238.00              | 6.38                            | 1.02                  | 5.36                             | 5.36                        | 2.25%                 | Sorta Connected      | 0.16                      | 0.38                                  | 100.00%                | 0.38                                     |
| 4000-00-6-R13  | 59.30               | 0.15                            | 0.00                  | 0.15                             | 0.15                        | 0.25%                 | Slightly Connected   | 0.00                      | 0.00                                  | 100.00%                | 0.00                                     |
| 4000-00-6-R15  | 40.06               | 0.80                            | 0.40                  | 0.40                             | 0.40                        | 1.00%                 | Slightly Connected   | 0.01                      | 0.00                                  | 100.00%                | 0.00                                     |
| 4000-00-6-R16  | 730.25              | 51.69                           | 1.90                  | 49.79                            | 49.79                       | 6.82%                 | Sorta Connected      | 1.05                      | 7.67                                  | 100.00%                | 7.67                                     |
| 4000-00-6-R17  | 9.93                | 0.70                            | 0.00                  | 0.70                             | 0.70                        | 7.05%                 | Sorta Connected      | 1.11                      | 0.11                                  | 100.00%                | 0.11                                     |
| 4000-00-6-R18  | 257.52              | 21.46                           | 0.00                  | 21.46                            | 21.46                       | 8.33%                 | Slightly Connected   | 0.69                      | 1.78                                  | 100.00%                | 1.78                                     |
| 4000-30-1      | 725.79              | 47.88                           | 3.41                  | 44.47                            | 44.47                       | 6.13%                 | Sorta Connected      | 0.87                      | 6.31                                  | 50.00%                 | 3.16                                     |
| 4000-30-1-L1   | 49.84               | 4.66                            | 0.00                  | 4.66                             | 4.66                        | 9.35%                 | Sorta Connected      | 1.79                      | 0.89                                  | 100.00%                | 0.89                                     |
| 4000-35-1      | 81.72               | 8.91                            | 1.02                  | 7.89                             | 7.89                        | 9.65%                 | Sorta Connected      | 1.89                      | 1.54                                  | 75.00%                 | 1.16                                     |
| 4006-00-1      | 313.79              | 27.79                           | 1.30                  | 26.49                            | 26.49                       | 8.44%                 | Sorta Connected      | 1.50                      | 4.71                                  | 50.00%                 | 2.35                                     |
| 4006-00-2-L1   | 419.09              | 63.19                           | 0.23                  | 62.96                            | 62.96                       | 15.02%                | Sorta Connected      | 4.00                      | 16.76                                 | 100.00%                | 16.76                                    |
| 4006-00-2-R1   | 706.33              | 51.28                           | 0.82                  | 50.46                            | 50.46                       | 7.14%                 | Sorta Connected      | 1.13                      | 7.98                                  | 100.00%                | 7.98                                     |
| 4006-00-2-R2   | 19.63               | 2.19                            | 0.00                  | 2.19                             | 2.19                        | 11.16%                | Sorta Connected      | 2.42                      | 0.48                                  | 100.00%                | 0.48                                     |
| 4006-00-2-R3   | 43.63               | 5.67                            | 0.00                  | 5.67                             | 5.67                        | 13.00%                | Sorta Connected      | 3.13                      | 1.37                                  | 100.00%                | 1.37                                     |
| 4006-00-2-R4   | 128.46              | 19.41                           | 1.20                  | 18.21                            | 18.21                       | 14.18%                | Sorta Connected      | 3.63                      | 4.66                                  | 100.00%                | 4.66                                     |
| 4006-00-2-R5   | 476.32              | 138.84                          | 10.55                 | 128.29                           | 128.29                      | 26.93%                | Wicked Connected     | 20.81                     | 99.12                                 | 100.00%                | 99.12                                    |
| 4006-00-2-R6   | 422.37              | 143.36                          | 20.95                 | 122.41                           | 122.41                      | 28.98%                | Fully Connected      | 28.98                     | 122.41                                | 100.00%                | 122.41                                   |
| 4006-00-2-R7   | 5.85                | 0.00                            | 0.00                  | 0.00                             | 0.00                        | 0.00%                 | Slightly Connected   | 0.00                      | 0.00                                  | 100.00%                | 0.00                                     |
| 4006-01-1      | 152.19              | 14.81                           | 0.44                  | 14.37                            | 14.37                       | 9.44%                 | Sorta Connected      | 1.82                      | 2.77                                  | 75.00%                 | 2.08                                     |
| 4006-01-1-L1   | 283.19              | 34.04                           | 1.38                  | 32.66                            | 32.66                       | 11.53%                | Sorta Connected      | 2.55                      | 7.22                                  | 100.00%                | 7.22                                     |
| 4006-02-1      | 5.70                | 0.17                            | 0.00                  | 0.17                             | 0.17                        | 2.98%                 | Sorta Connected      | 0.26                      | 0.01                                  | 100.00%                | 0.01                                     |
| 4006-02-1-L1   | 650.06              | 78.50                           | 10.43                 | 68.07                            | 68.07                       | 10.47%                | Moderately Connected | 3.39                      | 22.04                                 | 100.00%                | 22.04                                    |
| 4006-03-1      | 338.35              | 31.99                           | 0.66                  | 31.33                            | 31.33                       | 9.26%                 | Moderately Connected | 2.82                      | 9.54                                  | 100.00%                | 9.54                                     |
| 4006-04-1      | 394.09              | 45.60                           | 1.15                  | 44.45                            | 44.45                       | 11.28%                | Sorta Connected      | 2.46                      | 9.69                                  | 100.00%                | 9.69                                     |
| 4006-04-1-L1   | 56.74               | 8.42                            | 1.29                  | 7.13                             | 7.13                        | 12.57%                | Sorta Connected      | 2.96                      | 1.68                                  | 100.00%                | 1.68                                     |
| 4006-05-1      | 310.43              | 23.72                           | 0.00                  | 23.72                            | 23.72                       | 7.64%                 | Sorta Connected      | 1.27                      | 3.94                                  | 100.00%                | 3.94                                     |
| 4006-06-1      | 336.09              | 57.72                           | 0.00                  | 57.72                            | 57.72                       | 17.17%                | Moderately Connected | 7.11                      | 23.90                                 | 100.00%                | 23.90                                    |
| 4006-09-2-R3   | 321.14              | 103.46                          | 14.94                 | 88.52                            | 88.52                       | 27.56%                | Wicked Connected     | 21.40                     | 68.72                                 | 100.00%                | 68.72                                    |
| 4006-11-1-L1   | 167.76              | 43.53                           | 0.00                  | 43.53                            | 43.53                       | 25.95%                | Moderately Connected | 13.22                     | 22.18                                 | 100.00%                | 22.18                                    |
| 4006-11-1-L3   | 37.12               | 7.10                            | 0.00                  | 7.10                             | 7.10                        | 19.13%                | Moderately Connected | 8.49                      | 3.15                                  | 100.00%                | 3.15                                     |
| 4006-12-1      | 145.21              | 30.39                           | 0.00                  | 30.39                            | 30.39                       | 20.93%                | Moderately Connected | 9.58                      | 13.91                                 | 100.00%                | 13.91                                    |
| 4006-13-1      | 504.34              | 92.72                           | 17.04                 | 75.68                            | 75.68                       | 15.01%                | Fully Connected      | 15.01                     | 75.68                                 | 100.00%                | 75.68                                    |
| 4007-00-1      | 673.29              | 211.48                          | 14.43                 | 197.05                           | 197.05                      | 29.27%                | Fully Connected      | 29.27                     | 197.05                                | 100.00%                | 197.05                                   |
| 4007-00-1-L1   | 93.00               | 9.60                            | 3.60                  | 6.00                             | 6.00                        | 6.45%                 | Sorta Connected      | 0.95                      | 0.88                                  | 100.00%                | 0.88                                     |
| 4007-00-1-L2   | 1,314.72            | 182.74                          | 24.54                 | 158.20                           | 158.20                      | 12.03%                | Moderately Connected | 4.17                      | 54.82                                 | 100.00%                | 54.82                                    |
| 4007-00-1-L3   | 61.42               | 24.86                           | 0.31                  | 24.55                            | 24.55                       | 39.97%                | Wicked Connected     | 33.43                     | 20.53                                 | 100.00%                | 20.53                                    |
| 4007-00-2-R1   | 252.18              | 22.50                           | 0.00                  | 22.50                            | 22.50                       | 8.92%                 | Sorta Connected      | 1.65                      | 4.16                                  | 100.00%                | 4.16                                     |
| 4007-00-3-R1   | 69.58               | 12.13                           | 0.00                  | 12.13                            | 12.13                       | 17.43%                | Moderately Connected | 7.28                      | 5.07                                  | 100.00%                | 5.07                                     |
| 4007-00-3-R2   | 8.22                | 0.00                            | 0.00                  | 0.00                             | 0.00                        | 0.00%                 | Slightly Connected   | 0.00                      | 0.00                                  | 100.00%                | 0.00                                     |
| 4007-01-1      | 556.20              | 93.74                           | 4.34                  | 89.40                            | 89.40                       | 16.07%                | Moderately Connected | 6.44                      | 35.82                                 | 100.00%                | 35.82                                    |
| 4007-02-1      | 573.00              | 69.46                           | 0.00                  | 69.46                            | 69.46                       | 12.12%                | Moderately Connected | 4.22                      | 24.18                                 | 100.00%                | 24.18                                    |
| 4007-02-2-R1   | 236.22              | 42.66                           | 2.91                  | 39.75                            | 39.75                       | 16.83%                | Moderately Connected | 6.90                      | 16.30                                 | 100.00%                | 16.30                                    |
| 4007-03-1      | 369.62              | 64.62                           | 0.00                  | 64.62                            | 64.62                       | 17.48%                | Moderately Connected | 7.31                      | 27.02                                 | 100.00%                | 27.02                                    |
| 4007-04-1      | 706.53              | 96.70                           | 5.59                  | 91.11                            | 91.11                       | 12.90%                | Sorta Connected      | 3.09                      | 21.83                                 | 100.00%                | 21.83                                    |
| 4007-04-1-L1   | 149.65              | 16.55                           | 0.00                  | 16.55                            | 16.55                       | 11.06%                | Sorta Connected      | 2.38                      | 3.56                                  | 100.00%                | 3.56                                     |
| 4008-00-2-L1   | 217.52              | 24.67                           | 4.27                  | 20.40                            | 20.40                       | 9.38%                 | Sorta Connected      | 1.80                      | 3.92                                  | 100.00%                | 3.92                                     |
| 4008-00-2-L2   | 856.20              | 47.59                           | 3.54                  | 44.05                            | 44.05                       | 5.14%                 | Sorta Connected      | 0.65                      | 5.57                                  | 50.00%                 | 2.78                                     |
| 4008-01-2-R1   | 648.94              | 28.83                           | 8.76                  | 20.07                            | 20.07                       | 3.09%                 | Sorta Connected      | 0.27                      | 1.75                                  | 25.00%                 | 0.44                                     |
| 4008-03-1      | 818.79              | 29.45                           | 0.00                  | 29.45                            | 29.45                       | 3.60%                 | Sorta Connected      | 0.35                      | 2.87                                  | 25.00%                 | 0.72                                     |
| 4009-00-2-L2   | NA                  | NA                              | NA                    | NA                               | NA                          | NA                    | NA                   | NA                        | NA                                    | NA                     | NA                                       |
| 4009-00-2-L3   | NA                  | NA                              | NA                    | NA                               | NA                          | NA                    | NA                   | NA                        | NA                                    | NA                     | NA                                       |
| 4009-00-2-L4   | 345.05              | 42.20                           | 2.32                  | 39.88                            | 39.88                       | 11.56%                | Sorta Connected      | 2.57                      | 8.87                                  | 100.00%                | 8.87                                     |
| 4009-00-2-R1   | 129.44              | 3.88                            | 1.91                  | 1.97                             | 1.97                        | 3.00%                 | Sorta Connected      | 0.26                      | 0.34                                  | 25.00%                 | 0.08                                     |
| 4009-00-2-R2   | 538.97              | 32.68                           | 1.51                  | 31.17                            | 31.17                       | 5.78%                 | Sorta Connected      | 0.79                      | 4.26                                  | 50.00%                 | 2.13                                     |
| 4009-00-2-R3   | 90.34               | 16.30                           | 1.79                  | 14.51                            | 14.51                       | 16.06%                | Sorta Connected      | 4.49                      | 4.06                                  | 100.00%                | 4.06                                     |
| 4009-00-3-L5   | 96.94               | 9.80                            | 0.63                  | 9.17                             | 9.17                        | 9.46%                 | Sorta Connected      | 1.82                      | 1.76                                  | 100.00%                | 1.76                                     |
| 4009-00-3-L6   | 182.41              | 20.37                           | 0.00                  | 20.37                            | 20.37                       | 11.17%                | Sorta Connected      | 2.42                      | 4.41                                  | 100.00%                | 4.41                                     |
| 4009-00-3-R1   | 50.00               | 6.86                            | 1.73                  | 5.13                             | 5.13                        | 10.26%                | Sorta Connected      | 2.09                      | 1.05                                  | 100.00%                | 1.05                                     |
| 4009-00-3-R2   | 491.16              | 66.19                           | 10.75                 | 55.44                            | 55.44                       | 11.29%                | Sorta Connected      | 2.46                      | 12.08                                 | 100.00%                | 12.08                                    |
| 4009-00-3-R4   | 156.81              | 2.22                            | 0.00                  | 2.22                             | 2.22                        | 1.42%                 | Slightly Connected   | 0.02                      | 0.03                                  | 50.00%                 | 0.02                                     |
| 4009-00-3-R5   | 1,471.90            | 179.77                          | 5.24                  | 174.53                           | 174.53                      | 11.86%                | Sorta Connected      | 2.68                      | 39.45                                 | 100.00%                | 39.45                                    |
| 4009-03-1      | 997.57              | 47.72                           | 3.14                  | 44.58                            | 44.58                       | 4.47%                 | Sorta Connected      | 0.51                      | 5.09                                  | 50.00%                 | 2.54                                     |
| 4009-04-1      | 399.52              | 46.96                           | 4.95                  | 42.01                            | 42.01                       | 10.52%                | Moderately Connected | 3.41                      | 13.62                                 | 100.00%                | 13.62                                    |
| 4009-05-1      | 177.94              | 15.46                           | 0.00                  | 15.46                            | 15.46                       | 8.69%                 | Sorta Connected      | 1.58                      | 2.81                                  | 75.00%                 | 2.11                                     |
| 4009-05-2-R1   | 40.08               | 4.44                            | 0.00                  | 4.44                             | 4.44                        | 11.08%                | Sorta Connected      | 2.39                      | 0.96                                  | 100.00%                | 0.96                                     |
| 4009-05-2-R2   | 38.76               | 4.30                            | 0.00                  | 4.30                             | 4.30                        | 11.09%                | Sorta Connected      | 2.39                      | 0.93                                  | 100.00%                | 0.93                                     |
| 4009-06-1      | 382.93              | 14.64                           | 0.00                  | 14.64                            | 14.64                       | 3.82%                 | Sorta Connected      | 0.39                      | 1.49                                  | 50.00%                 | 0.75                                     |
| 4009-07-1      | 359.78              | 39.53                           | 0.00                  | 39.53                            | 39.53                       | 10.99%                | Sorta Connected      | 2.35                      | 8.45                                  | 75.00%                 | 6.34                                     |
| 4009-08-1      | 370.09              | 34.72                           | 12.09                 | 22.63                            | 22.63                       | 6.11%                 | Sorta Connected      | 0.87                      | 3.22                                  | 100.00%                | 3.22                                     |
| 4009-09-1      | 479.48              | 44.01                           | 0.00                  | 44.01                            | 44.01                       | 9.18%                 | Sorta Connected      | 1.73                      | 8.30                                  | 75.00%                 | 6.22                                     |
| 4707-00-2-L3   | NA                  | NA                              | NA                    | NA                               | NA                          | NA                    | NA                   | NA                        | NA                                    | NA                     | NA                                       |
| 4707-00-2-R4   | 438.02              | 12.63                           | 1.80                  | 10.83                            | 10.83                       | 2.47%                 | Sorta Connected      | 0.19                      | 0.83                                  | 100.00%                | 0.83                                     |
| 4707-04-1      | NA                  | NA                              | NA                    | NA                               | NA                          | NA                    | NA                   | NA                        | NA                                    | NA                     | NA                                       |
| 4707-05-1      | NA                  | NA                              | NA                    | NA                               | NA                          | NA                    | NA                   | NA                        | NA                                    | NA                     | NA                                       |
| 4707-06-1      | NA                  | NA                              | NA                    | NA                               | NA                          | NA                    | NA                   | NA                        | NA                                    | NA                     | NA                                       |
| 4707-06-1-L1   | 285.96              | 27.96                           | 2.08                  | 25.88                            | 25.88                       | 9.05%                 | Sorta Connected      | 1.69                      | 4.83                                  | 50.00%                 | 2.42                                     |
| 4707-06-1-L2   | 100.51              | 8.66                            | 0.00                  | 8.66                             | 8.66                        | 8.62%                 | Sorta Connected      | 1.56                      | 1.57                                  | 25.00%                 | 0.39                                     |
| <b>TOTALS:</b> | <b>24,547.59</b>    | <b>2,837.02</b>                 | <b>214.56</b>         | <b>2,622.46</b>                  | <b>2,622.46</b>             |                       |                      |                           | <b>1,094.41</b>                       |                        | <b>1,067.40</b>                          |

Note:

1. Watershed data depicted is derived from CTDEEP 2012 Impervious Cover by Watershed Basin (clipped) datasets from <https://cteco.uconn.edu/viewers/ctms4/>
2. Basin Areas shown depict acreages and Impervious Cover clipped at the Town line residing in Glastonbury
3. Total impervious cover acreage for each watershed utilized the sum of the Total Watershed Impervious Cover less ConnDOT Roads acreage.

Watersheds with a proportional Urban Area

Watersheds with Urban Area too small

Connectivity Level Formulas:

Fully Connected: DCIA% = IC% (High density mixed use, commercial)

Wicked Connected: DCIA% = 0.4(IC)^1.2 (High density residential, commercial, industrial, institutional)

Moderately Connected: DCIA% = 0.1(IC)^1.5 (Medium density residential, commercial, industrial, institutional, open land)

Sorta Connected: DCIA% = 0.04(IC)^1.7 (Low density residential, open land)

Slightly Connected: DCIA% = 0.01(IC)^2.0 (Agricultural, forested, natural areas)

## **APPENDIX C**

IDDE PROGRAM PLAN  
CATCHMENT EVALUATION

**Table 6-1. Catchment Assessment and Priority Ranking Matrix**

| Catchment ID (CTDEEP Local Basin ID#) | Receiving Water   | Previous Screening Results Indicate Likely Sewer Input? <sup>1</sup> | Discharging to Area of Concern to Public Health? <sup>2</sup> | Frequency of Past Discharge Complaints     | Receiving Water Quality <sup>3</sup> | Density of Generating Sites <sup>4</sup> | Age of Development/ Infrastructure <sup>5</sup> | Historic Combined Sewers or Septic? <sup>6</sup> | Aging Septic? <sup>7</sup> | Culverted Streams? <sup>8</sup> | Additional Characteristics                | Score | Priority Ranking |
|---------------------------------------|-------------------|--|---|--|--------------------------------------|--|---|--|----------------------------|---------------------------------|---|-------|------------------|
| Information Source                    |                   | Catchment inspections and sample results                             | GIS Maps  | Municipal Staff                            | Impaired Waters List                 | Land Use/GIS Maps, Aerial Photography    | Land Use Information, Visual Observation        | Municipal Staff, GIS Maps                        | Land Use, Municipal Staff  | GIS and Storm System Maps       | Other                                     |       |                  |
| Scoring Criteria                      |                   | Yes = 3 (Problem Catchment)<br>No = 0                                | Yes = 3<br>No = 0   | Frequent = 3<br>Occasional = 2<br>None = 0 | Poor = 3<br>Fair = 2<br>Good = 0     | High = 3<br>Medium = 2<br>Low = 1        | High = 3<br>Medium = 2<br>Low = 1               | Yes = 3<br>No = 0                                | Yes = 3<br>No = 0          | Yes = 3<br>No = 0               | TBD                                       |       |                  |
| 4000-00-6+R11                         | Connecticut River | 0  | 0   | 0  | 3                                    | 0  | 0   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%<br>TMDL | 3     | Low Priority     |
| 4006-00-2-R7                          | Salmon Brook      | 0  | 0   | 0  | 3                                    | 0  | 0   | 0  | 0                          | 0                               | Urbanized Area                            | 3     | Low Priority     |
| 4006-13-1                             | Salmon Brook      | 0  | 0   | 0  | 0                                    | 2  | 1   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4006-09-2-R3                          | Salmon Brook      | 3  | 0   | 0  | 0                                    | 2  | 2   | 1  | 0                          | 3                               | Urbanized Area<br>IC = >11 to 84%         | 11    | Problem          |
| 4006-12-1                             | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4006-11-1-L3                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4006-11-1-L1                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4006-00-2-R6                          | Salmon Brook      | 3  | 0   | 0  | 0                                    | 2  | 2   | 3  | 0                          | 3                               | Urbanized Area<br>IC = >11 to 84%         | 13    | Problem          |
| 4006-06-1                             | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4006-00-2-L1                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4000-00-6+R12                         | Connecticut River | 3  | 0   | 0  | 3                                    | 3  | 2   | 3  | 0                          | 0                               | Urbanized Area<br>TMDL                    | 11    | Problem          |
| 4007-00-1                             | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 3  | 2   | 3  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 8     | Medium Priority  |
| 4006-00-2-R5                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 2  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 4     | Low Priority     |
| 4006-00-2-R4                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 6     | Medium Priority  |
| 4006-00-2-R3                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4006-00-2-R2                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 3     | Low Priority     |
| 4006-02-1-L1                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2   | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84%         | 6     | Medium Priority  |

| Catchment ID (CTDEEP Local Basin ID#) | Receiving Water   | Previous Screening Results Indicate Likely Sewer Input? <sup>1</sup> | Discharging to Area of Concern to Public Health? <sup>2</sup> | Frequency of Past Discharge Complaints     | Receiving Water Quality <sup>3</sup> | Density of Generating Sites <sup>4</sup> | Age of Development/Infrastructure <sup>5</sup> | Historic Combined Sewers or Septic? <sup>6</sup> | Aging Septic? <sup>7</sup> | Culverted Streams? <sup>8</sup> | Additional Characteristics        | Score | Priority Ranking |
|---------------------------------------|-------------------|--|---|--|--------------------------------------|--|--|--|----------------------------|---------------------------------|-----------------------------------|-------|------------------|
| Information Source                    |                   | Catchment inspections and sample results                             | GIS Maps  | Municipal Staff                            | Impaired Waters List                 | Land Use/GIS Maps, Aerial Photography    | Land Use Information, Visual Observation       | Municipal Staff, GIS Maps                        | Land Use, Municipal Staff  | GIS and Storm System Maps       | Other                             |       |                  |
| Scoring Criteria                      |                   | Yes = 3 (Problem Catchment)<br>No = 0                                | Yes = 3<br>No = 0   | Frequent = 3<br>Occasional = 2<br>None = 0 | Poor = 3<br>Fair = 2<br>Good = 0     | High = 3<br>Medium = 2<br>Low = 1        | High = 3<br>Medium = 2<br>Low = 1              | Yes = 3<br>No = 0                                | Yes = 3<br>No = 0          | Yes = 3<br>No = 0               | TBD                               |       |                  |
| 4006-01-1-L1                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 1  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 6     | Medium Priority  |
| 4009-04-1                             | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4007-00-1-L3                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 2  | 2  | 0  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 4     | Low Priority     |
| 4007-00-1-L2                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 2  | 2  | 3  | 1                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 8     | Medium Priority  |
| 4007-01-1                             | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 3  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4006-04-1                             | Salmon Brook      | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4006-04-1-L1                          | Salmon Brook      | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4007-00-2-R1                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 3  | 0                          | 0                               | Urbanized Area                    | 5     | Low Priority     |
| 4007-00-3-R1                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 3  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4007-00-3-R2                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area                    | 0     | Low Priority     |
| 4007-02-2-R1                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 1  | 2  | 3  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 6     | Medium Priority  |
| 4007-03-1                             | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 3  | 0                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4007-04-1                             | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4007-02-1                             | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4007-04-1-L1                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4009-00-3-R5                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 1  | 2  | 3  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 9     | Problem          |
| 4009-00-3-L6                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area<br>IC = >11 to 84% | 5     | Low Priority     |
| 4000-00-6+R12                         | Connecticut River | 0  | 3   | 0  | 3                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area<br>TMDL            | 6     | Medium Priority  |

| Catchment ID (CTDEEP Local Basin ID#) | Receiving Water   | Previous Screening Results Indicate Likely Sewer Input? <sup>1</sup> | Discharging to Area of Concern to Public Health? <sup>2</sup> | Frequency of Past Discharge Complaints     | Receiving Water Quality <sup>3</sup> | Density of Generating Sites <sup>4</sup> | Age of Development/Infrastructure <sup>5</sup> | Historic Combined Sewers or Septic? <sup>6</sup> | Aging Septic? <sup>7</sup> | Culverted Streams? <sup>8</sup> | Additional Characteristics          | Score | Priority Ranking   |
|---------------------------------------|-------------------|--|---|--|--------------------------------------|--|--|--|----------------------------|---------------------------------|-------------------------------------|-------|--------------------|
| Information Source                    |                   | Catchment inspections and sample results                             | GIS Maps  | Municipal Staff                            | Impaired Waters List                 | Land Use/GIS Maps, Aerial Photography    | Land Use Information, Visual Observation       | Municipal Staff, GIS Maps                        | Land Use, Municipal Staff  | GIS and Storm System Maps       | Other                               |       |                    |
| Scoring Criteria                      |                   | Yes = 3 (Problem Catchment)<br>No = 0                                | Yes = 3<br>No = 0   | Frequent = 3<br>Occasional = 2<br>None = 0 | Poor = 3<br>Fair = 2<br>Good = 0     | High = 3<br>Medium = 2<br>Low = 1        | High = 3<br>Medium = 2<br>Low = 1              | Yes = 3<br>No = 0                                | Yes = 3<br>No = 0          | Yes = 3<br>No = 0               | TBD                                 |       |                    |
| 4000-00-6+R13                         | Connecticut River | 0  | 3   | 0  | 3                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area TMDL                 | 6     | Medium Priority    |
| 4000-00-6+R15                         | Connecticut River | 0  | 3   | 0  | 3                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area IC = >11 to 84% TMDL | 6     | Medium Priority    |
| 4000-00-6+R16                         | Connecticut River | 0  | 3   | 0  | 3                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area TMDL                 | 5     | Low Priority       |
| 4009-00-2-L4                          | Roaring Brook     | 3  | 3   | 2  | 0                                    | 1  | 2  | 0  | 3                          | 0                               | Urbanized Area IC = >11 to 84% TMDL | 14    | Problem Angus Pond |
| 4009-00-2-R3                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 1  | 2  | 0  | 3                          | 0                               | Urbanized Area IC = >11 to 84%      | 6     | Medium Priority    |
| 4009-00-2-R2                          | Roaring Brook     | 0  | 3   | 0  | 0                                    | 1  | 2  | 0  | 0                          | 0                               | Urbanized Area                      | 6     | Medium Priority    |
| 4009-05-2-R2                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area IC = >11 to 84%      | 2     | Low Priority       |
| 4009-05-2-R1                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area IC = >11 to 84%      | 2     | Low Priority       |
| 4009-00-3-R1                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area IC = >11 to 84%      | 5     | Low Priority       |
| 4009-00-3-R2                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 2  | 2  | 0  | 3                          | 0                               | Urbanized Area IC = >11 to 84%      | 7     | Medium Priority    |
| 4008-00-2-L1                          | Cold Brook        | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area IC = >11 to 84%      | 2     | Low Priority       |
| 4000-00-6+R14                         | Connecticut River | 0  | 0   | 2  | 3                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area TMDL                 | 4     | Low Priority       |
| 4000-00-6+R16                         | Connecticut River | 3  | 0   | 2  | 3                                    | 1  | 2  | 0  | 3                          | 0                               | Urbanized Area TMDL                 | 11    | Problem            |
| 4000-00-6+R17                         | Connecticut River | 0  | 0   | 0  | 3                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area TMDL                 | 5     | Low Priority       |
| 4000-00-6+R18                         | Connecticut River | 0  | 0   | 0  | 3                                    | 1  | 2  | 0  | 0                          | 0                               | Urbanized Area TMDL                 | 6     | Medium Priority    |
| 4000-30-1                             | Connecticut River | 0  | 0   | 0  | 3                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area TMDL                 | 8     | Medium Priority    |

| Catchment ID (CTDEEP Local Basin ID#) | Receiving Water   | Previous Screening Results Indicate Likely Sewer Input? <sup>1</sup> | Discharging to Area of Concern to Public Health? <sup>2</sup> | Frequency of Past Discharge Complaints     | Receiving Water Quality <sup>3</sup> | Density of Generating Sites <sup>4</sup> | Age of Development/Infrastructure <sup>5</sup> | Historic Combined Sewers or Septic? <sup>6</sup> | Aging Septic? <sup>7</sup> | Culverted Streams? <sup>8</sup> | Additional Characteristics | Score | Priority Ranking |
|---------------------------------------|-------------------|--|---|--|--------------------------------------|--|--|--|----------------------------|---------------------------------|----------------------------|-------|------------------|
| Information Source                    |                   | Catchment inspections and sample results                             | GIS Maps  | Municipal Staff                            | Impaired Waters List                 | Land Use/GIS Maps, Aerial Photography    | Land Use Information, Visual Observation       | Municipal Staff, GIS Maps                        | Land Use, Municipal Staff  | GIS and Storm System Maps       | Other                      |       |                  |
| Scoring Criteria                      |                   | Yes = 3 (Problem Catchment)<br>No = 0                                | Yes = 3<br>No = 0   | Frequent = 3<br>Occasional = 2<br>None = 0 | Poor = 3<br>Fair = 2<br>Good = 0     | High = 3<br>Medium = 2<br>Low = 1        | High = 3<br>Medium = 2<br>Low = 1              | Yes = 3<br>No = 0                                | Yes = 3<br>No = 0          | Yes = 3<br>No = 0               | TBD                        |       |                  |
| 4000-30-1-L1                          | Connecticut River | 0  | 0   | 0  | 3                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area TMDL        | 5     | Low Priority     |
| 4000-35-1                             | Connecticut River | 0  | 0   | 0  | 3                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area TMDL        | 5     | Low Priority     |
| 4006-02-1                             | Salmon Brook      | 0  | 0   | 0  | 0                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area             | 0     | Low Priority     |
| 4006-03-1                             | Salmon Brook      | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 5     | Low Priority     |
| 4007-00-1-L1                          | Hubbard Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |
| 4009-08-1                             | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 5     | Low Priority     |
| 4009-00-2-R2                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 5     | Low Priority     |
| 4009-00-2-R1                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |
| 4009-03-1                             | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |
| 4009-09-1                             | Roaring Brook     | 0  | 0   | 0  | 0                                    | 1  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 6     | Medium Priority  |
| 4009-00-3-L5                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 5     | Low Priority     |
| 4009-07-1                             | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 5     | Low Priority     |
| 4009-05-1                             | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 5     | Low Priority     |
| 4009-06-1                             | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |
| 4009-00-3-R4                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area             | 0     | Low Priority     |
| 4009-00-2-L3                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area             | 0     | Low Priority     |
| 4009-00-2-L2                          | Roaring Brook     | 0  | 0   | 0  | 0                                    | 0  | 0  | 0  | 0                          | 0                               | Urbanized Area             | 0     | Low Priority     |
| 4008-00-2-L2                          | Cold Brook        | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 3                          | 0                               | Urbanized Area             | 5     | Low Priority     |
| 4008-03-1                             | Cold Brook        | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |
| 4008-01-2-R1                          | Cold Brook        | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |
| 4707-06-1-L1                          | Blackledge River  | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |
| 4707-04-1                             | Blackledge River  | 0  | 0   | 0  | 0                                    | 0  | 2  | 0  | 0                          | 0                               | Urbanized Area             | 2     | Low Priority     |

Table 8-1. Outfall Catchment System Vulnerability Factor (SVF) Inventory

| Catchment ID (CTDEEP Local Basin ID #) | Receiving Water   | 1 History of SSOs | 2 Common or Twin Invert Manholes | 3 Common Trench Construction | 4 Storm/Sanitary Crossings (Sanitary Above) | 5 Sanitary Lines with Underdrains | 6 Inadequate Sanitary Level of Service | 7 Areas Formerly Served by Combined Sewers | 8 Sanitary Infrastructure Defects | 9 SSO Potential In Event of System Failures | 10 Sanitary and Storm Drain Infrastructure >40 years Old | 11 Septic with Poor Soils or Water Table Separation | 12 History of BOH Actions Addressing Septic Failure |
|--|-------------------|-------------------|----------------------------------|------------------------------|---|-----------------------------------|--|--|-----------------------------------|---|--|---|---|
| 4000-00-6+R11                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4006-00-2-R7                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4006-13-1                              | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | No  |
| 4006-09-2-R3                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | No  |
| 4006-12-1                              | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4006-11-1-L3                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4006-11-1-L1                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | No  |
| 4006-00-2-R6                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | Yes   | Yes  | No  | No  |
| 4006-06-1                              | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | No  |
| 4006-00-2-L1                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | No  |
| 4000-00-6+R12                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | No  | Yes  | No  | No  |
| 4007-00-1                              | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | Yes   | Yes  | No  | No  |
| 4006-00-2-R5                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | No  |
| 4006-00-2-R4                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | Yes   |
| 4006-00-2-R3                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | Yes   |
| 4006-00-2-R2                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | No  |
| 4006-02-1-L1                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | Yes   | Yes   |
| 4006-01-1-L1                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | Yes   | Yes   |
| 4009-04-1                              | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | Yes   | Yes   |
| 4007-00-1-L3                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | No  |
| 4007-00-1-L2                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | Yes   | No   | Yes   | No  |



| Catchment ID (CTDEEP Local Basin ID #) | Receiving Water   | 1 History of SSOs | 2 Common or Twin Invert Manholes | 3 Common Trench Construction | 4 Storm/Sanitary Crossings (Sanitary Above) | 5 Sanitary Lines with Underdrains | 6 Inadequate Sanitary Level of Service | 7 Areas Formerly Served by Combined Sewers | 8 Sanitary Infrastructure Defects | 9 SSO Potential In Event of System Failures | 10 Sanitary and Storm Drain Infrastructure >40 years Old | 11 Septic with Poor Soils or Water Table Separation | 12 History of BOH Actions Addressing Septic Failure |
|--|-------------------|-------------------|----------------------------------|------------------------------|---|-----------------------------------|--|--|-----------------------------------|---|--|---|---|
| 4007-01-1                              | Hubbard Brook     | Yes               | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | Yes   | Yes  | No  | No  |
| 4006-04-1                              | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4006-04-1-L1                           | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4007-00-2-R1                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | No  |
| 4007-00-3-R1                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | No  |
| 4007-00-3-R2                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4007-02-2-R1                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | Yes   | Yes  | No  | No  |
| 4007-03-1                              | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | Yes   | No   | No  | No  |
| 4007-04-1                              | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4007-02-1                              | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | No   | No  | Yes   |
| 4007-04-1-L1                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | No   | No  | Yes   |
| 4009-00-3-R5                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | Yes  | No                                | Yes   | Yes  | No  | Yes   |
| 4009-00-3-L6                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4000-00-6+R12                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4000-00-6+R13                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4000-00-6+R15                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4000-00-6+R16                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-00-2-L4                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | Yes   | Yes   |
| 4009-00-2-R3                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | Yes  | No  | Yes   |
| 4009-00-2-R2                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | No  |
| 4009-05-2-R2                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-05-2-R1                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |

| Catchment ID (CTDEEP Local Basin ID #) | Receiving Water   | 1 History of SSOs | 2 Common or Twin Invert Manholes | 3 Common Trench Construction | 4 Storm/Sanitary Crossings (Sanitary Above) | 5 Sanitary Lines with Underdrains | 6 Inadequate Sanitary Level of Service | 7 Areas Formerly Served by Combined Sewers | 8 Sanitary Infrastructure Defects | 9 SSO Potential In Event of System Failures | 10 Sanitary and Storm Drain Infrastructure >40 years Old | 11 Septic with Poor Soils or Water Table Separation | 12 History of BOH Actions Addressing Septic Failure |
|--|-------------------|-------------------|----------------------------------|------------------------------|---|-----------------------------------|--|--|-----------------------------------|---|--|---|---|
| 4009-00-3-R1                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-00-3-R2                           | Cold Brook        | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | Yes   |
| 4008-00-2-L1                           | Cold Brook        | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | Yes  | No  | Yes   |
| 4000-00-6+R14                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4000-00-6+R16                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4000-00-6+R17                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4000-00-6+R18                          | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4000-30-1                              | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4000-30-1-L1                           | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4000-35-1                              | Connecticut River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4006-02-1                              | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4006-03-1                              | Salmon Brook      | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | Yes   | No   | No  | Yes   |
| 4007-00-1-L1                           | Hubbard Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4009-08-1                              | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-00-2-R2                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-00-2-R1                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4009-03-1                              | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4009-09-1                              | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-00-3-L5                           | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-07-1                              | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-05-1                              | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-06-1                              | Roaring Brook     | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |

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|--|------------------|-------------------|----------------------------------|------------------------------|---|-----------------------------------|--|--|-----------------------------------|---|--|---|---|
| 4009-00-3-R4                           | Roaring Brook    | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4009-00-2-L3                           | Roaring Brook    | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4009-00-2-L2                           | Roaring Brook    | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4008-00-2-L2                           | Cold Brook       | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | Yes   |
| 4008-03-1                              | Cold Brook       | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4008-01-2-R1                           | Cold Brook       | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4707-06-1-L1                           | Blackledge River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4707-04-1                              | Blackledge River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4707-00-2-L3                           | Blackledge River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4707-00-2-R4                           | Blackledge River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4707-06-1                              | Blackledge River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |
| 4707-06-1-L2                           | Blackledge River | No                | No                               | No                           | No  | No                                | No                                     | No   | No                                | No  | No   | No  | No  |

**Presence/Absence Evaluation Criteria:**

- History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages
- Common or twin-invert manholes serving storm and sanitary sewer alignments
- Common trench construction serving both storm and sanitary sewer alignments
- Crossings of storm and sanitary sewer alignments where the sanitary system is shallower than the storm drain system
- Sanitary sewer alignments known or suspected to have been constructed with an underdrain system
- Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints
- Areas formerly served by combined sewer systems
- Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations
- Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs
- Any sanitary sewer and storm drain infrastructure greater than 40 years old
- Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance)
- History of multiple health department actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance)