Stormwater Management and Climate Change Impacts

Water resources in Connecticut are affected by climate stressors, including increasing temperatures, changing precipitation patterns, extreme events (storms, floods, and drought), and rising sea levels. These changing conditions have implications for stormwater management as local and state decision makers look to implement appropriate maintenance plans, improve existing infrastructure, and build new stormwater systems that are more resilient to changes in

the quantity and quality of stormwater runoff.[41] See Appendix G for additional details regarding climate change and stormwater impacts in Connecticut, including the basis for the approach selected to incorporate climate change considerations into this Manual.

This Manual incorporates climate change and resilience considerations for stormwater management design and implementation, including:

- Preserving pre-development site hydrology using LID site planning and design strategies (Chapter 5 – Low Impact Development Site Planning and Design Strategies) and structural stormwater BMPs (Chapters 7-13)
- Discussion of updated design storm precipitation for stormwater quantity and quality control (Chapter 4)
- Sea level rise and other considerations for stormwater BMP siting and design in coastal areas (Chapter 4, Chapter 8, and Chapter 10)
- Design considerations for mitigating the potential negative impacts of climate change on stream temperatures and nutrient loads (Chapter 4 and Chapter 8).

It is important to consider future conditions when designing and implementing stormwater BMPs (including long-term maintenance) to ensure the longevity of the investment. Appendix G contains additional resources that may be of use when evaluating climate change considerations for resilient stormwater management design and implementation, including long-term maintenance.

[41] EPA, 2021, https://www.epa.gov/arc-x/climate-adaptation-and-stormwater-runoff