

You Might Want to Consider a Stormwater Utility

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As of July 2021, all Connecticut municipalities are able to establish Stormwater Utilities to fund stormwater management. As climate change increases the frequency and intensity of rainfall, these utilities can **fund critical mitigation and resiliency strategies**. With support from CT Sea Grant, UConn CLEAR is providing support to communities as they consider establishing stormwater utilities.

What are Stormwater Utilities?

Stormwater utilities are entities, similar to water and sewer utilities, that oversee maintaining, managing, and improving a local stormwater system. They are funded by **user fees that are equitably based on contribution of stormwater runoff to the system** (typically based on a property's amount of impervious cover).

The greatest benefit of a utility is that they provide an equitable, stable funding source to establish a resilient stormwater management system responsive to emerging and increasing water quantity and quality challenges.

Where have they been implemented?

- Over **2,000** stormwater utilities in 41 states¹
- Not dependent on location or population
 - Largest: Los Angeles, CA (pop. 4 million)¹
 - Smallest: Indian Creek Village, FL (pop. 88)¹
- Average single-family fee: \$6.01¹
- 2 in CT**: New London & New Britain

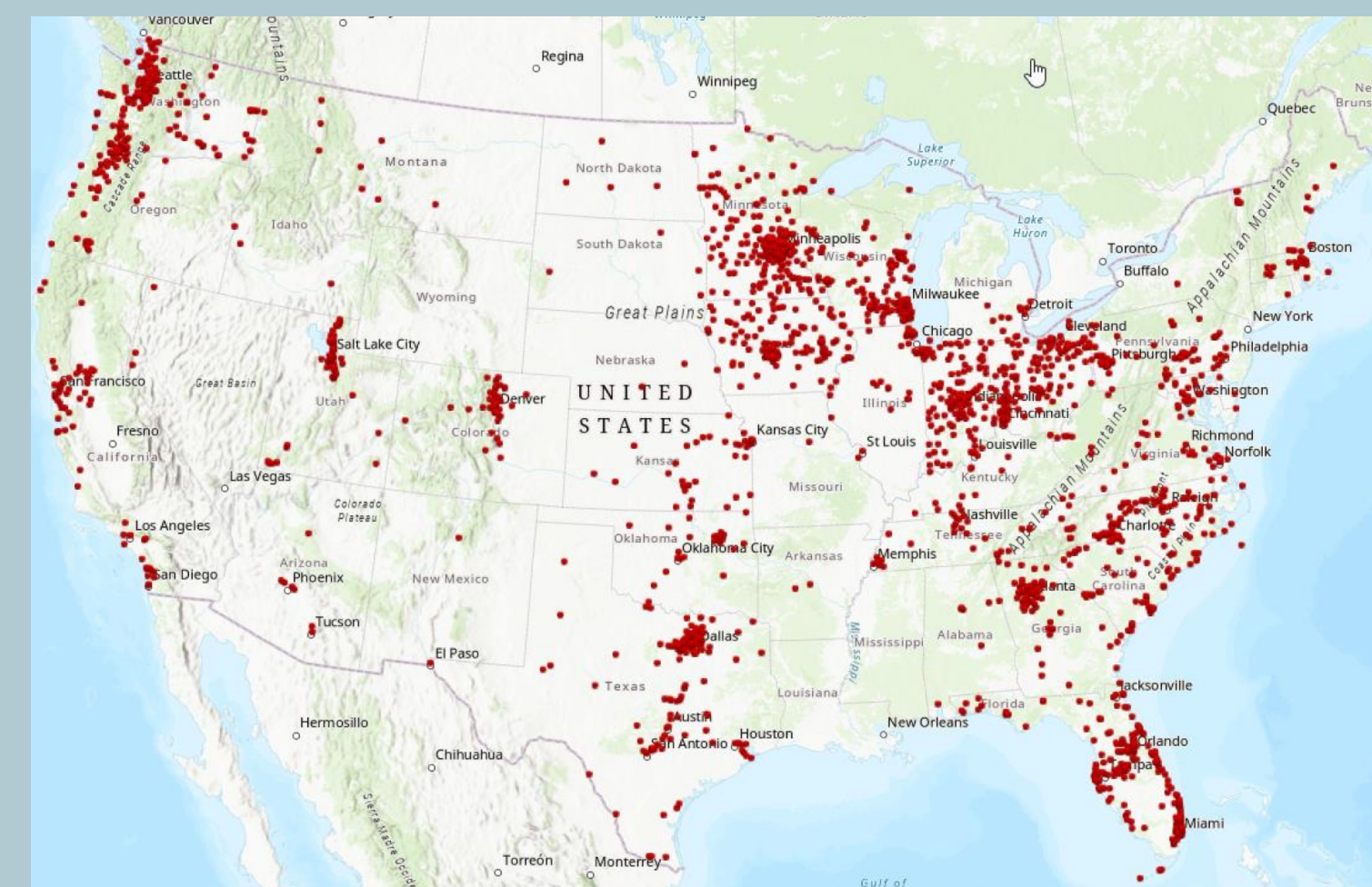


Figure 1: Stormwater Utilities across the United States.²

Stormwater Utilities and Resilience

Climate Change to Increase Precipitation: 71% increase in rainfall from 1958 to 2012⁶

Stormwater utilities can provide **direct funding to implement climate resiliency and mitigation practices** against flooding and stormwater pollution, such as green stormwater infrastructure, stormwater infrastructure repair, and riparian buffer implementation.

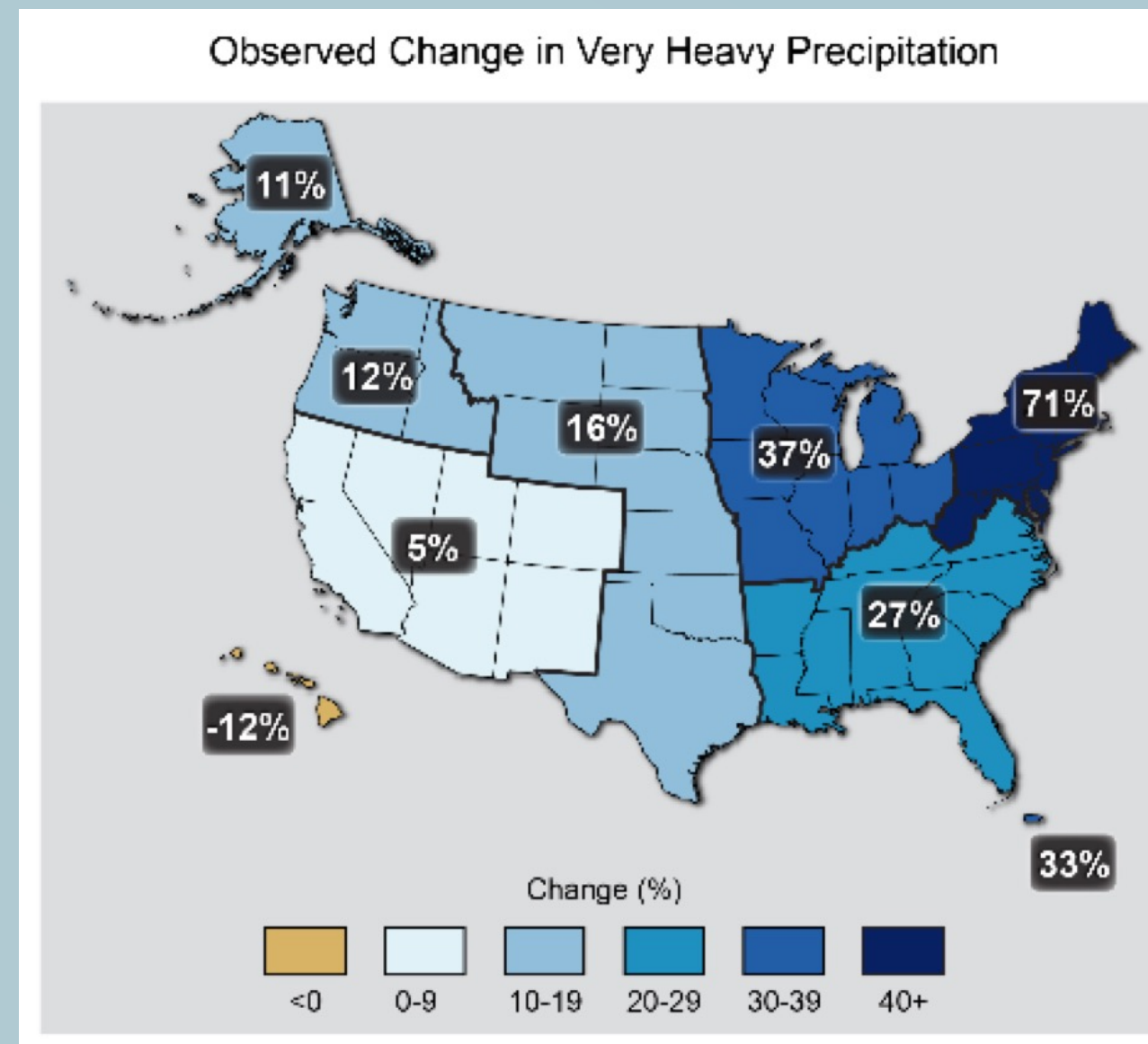


Figure 3: Change in precipitation levels in the U.S. from 1958-2012.⁶

Example: Augusta, Georgia⁷

- Estimated \$240 million backlog of stormwater infrastructure repairs
- Funding previously from general fund and Special Purpose Local Options Sales Tax
- Implementation of stormwater utility in 2016:
 - Doubled stormwater crew
 - 13 new priority projects addressing drainage improvements and flood hazard mitigation

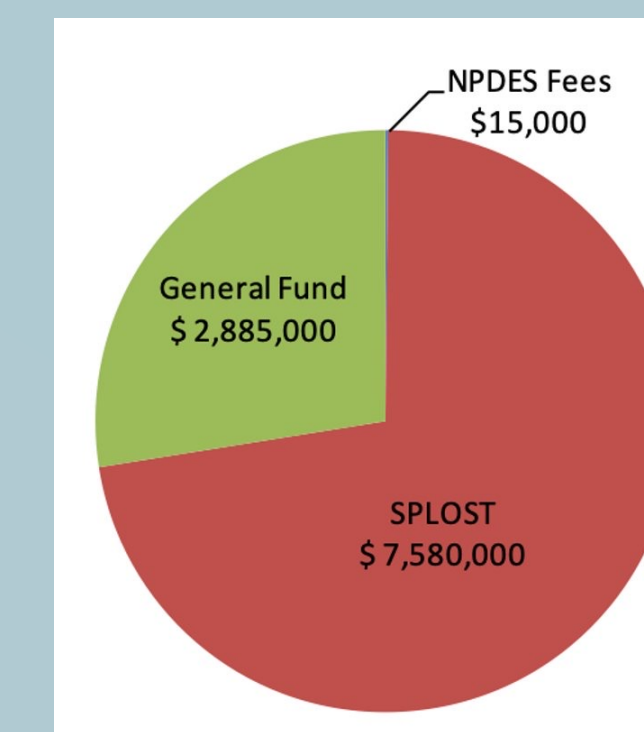


Figure 4: Funding blend prior to stormwater utility in Augusta, GA.⁷

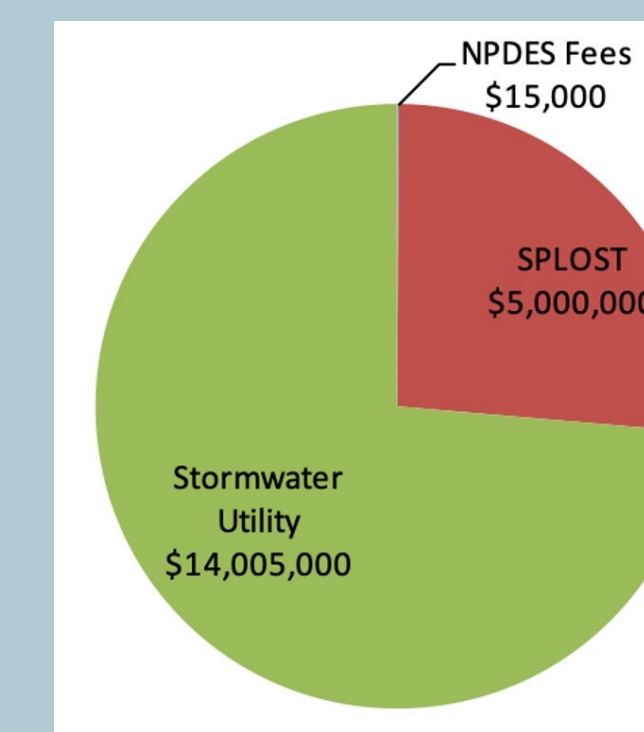


Figure 5: Funding blend with stormwater utility in Augusta, GA.⁷

Example: Fort Collins, CO⁸

- 2007 to 2012: city addressed detention basin conditions and improved local street drainage in areas with flooding
- Project completed under budget using stormwater utility funds
- Awarded the American Public Works Association Colorado Chapter annual award as the top Drainage and Flood Control Project in a Large Community



Figure 6: Rehabilitation of West Vine Basin in Fort Collins, CO.⁹

Resources

UConn CLEAR, in collaboration with CT Sea Grant, is helping communities explore what utilities are, how they are set up, and how it can be used for climate resilience. This has included an educational webinar series, fact sheets, and resource rich website (see QR code below). In the spring, a soup to nuts workshop is planned to help walk communities through how to set one up that works for their area.

Overview of stormwater utilities and a breakdown of the legislative language.

In-depth explanations of fee and credit systems and how they can be incorporated into a utility.



Fee Systems

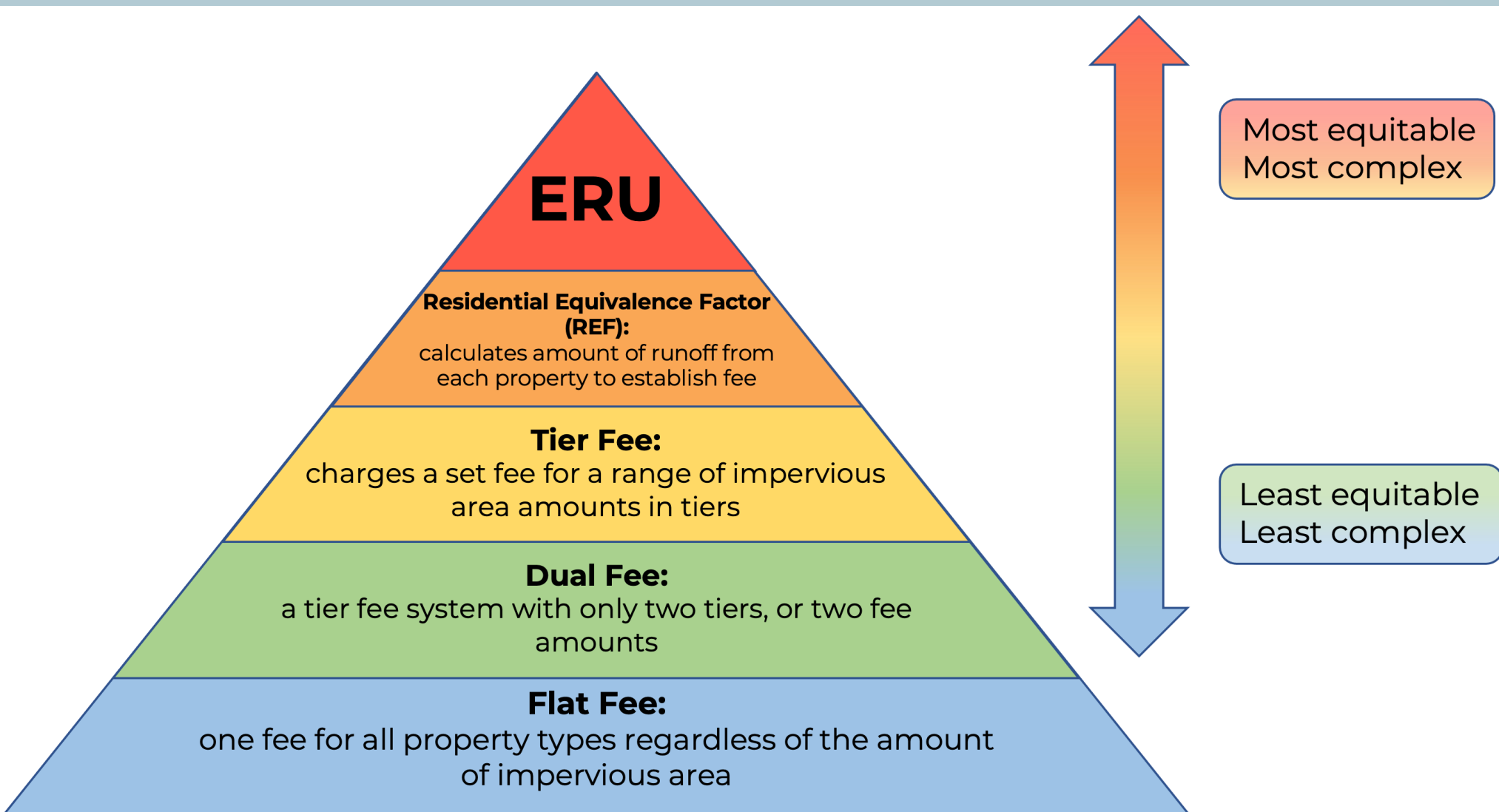


Figure 2: Hierarchy of fee systems

There are numerous types of fee systems a stormwater utility can employ. However, not all fee systems are equal in fairness/equity. Currently, the most equitable system is the ERU:

Equivalent Residential Unit (ERU):

- Most common (80%) system³
- Based on a typical single-family residential footprint
- Fee is proportional to the impervious area on a parcel, regardless of the total area

Credits

Credit Systems:

- 50% of stormwater utilities currently offer fee reductions or 'credits'
- Incentivize stormwater retention, infiltration, and/or treatment using various Best Management Practices (BMPs) such as **green stormwater infrastructure (GSI)/LID**⁴
 - Rain gardens, rain barrels, pervious pavement, etc.
- CT law requires** credits be made available but leaves it to **communities to determine eligibility**



Figure 3: Rain garden at the UConn Middlesex Extension Office

Sources

1: Campbell, Warren and Bradshaw, Jerry. "Western Kentucky University Stormwater Utility Survey 2021" (2021). SEAS Faculty Publications. Paper 4. https://digitalcommons.wku.edu/seas_faculty_pubs/4
 2: Campbell, Warren. "Western Kentucky University Stormwater Utility Survey 2022" (2022). SEAS Faculty Publications. Paper 6. https://digitalcommons.wku.edu/seas_faculty_pubs/6
 3: Funding Stormwater Programs, U.S. Environmental Protection Agency, 2005.
 4: Zhao JZ, Fonseca C, Zeerak R. Stormwater Utility Fees and Credits: A Funding Strategy for Sustainability. Sustainability. 2019; 11(7):1913. <https://doi.org/10.3390/su11071913>
 5: Examples of place rain can go after it flows off your roof. Portland, OR: Environmental Services, 2019.
 6: "Heavy Downpours Increasing." 2014 National Climate Assessment. GlobalChange.gov, 2014.
 7: "Heavy Downpours Increasing." 2014 National Climate Assessment. GlobalChange.gov, 2014.
 8: "Canal Importation Ponds & Outfall Project." City of Fort Collins. <https://www.fcgov.com/utilities/water-wq/stormwater/drainage-improvement-projects/canal-importation-ponds-and-outfall/>
 9: "West Vine Drainage Basin Stormwater Master Planning." City of Fort Collins. <https://www.fcgov.com/utilities/west-vine-master-planning/>