

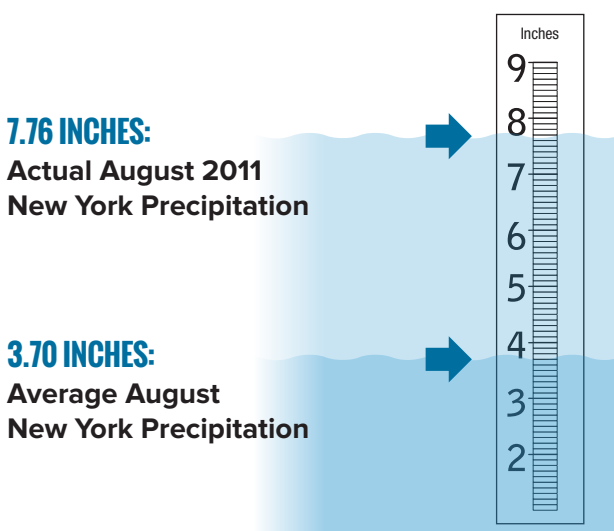
Storm Damage and Community Preparedness

Lessons from Hurricane Irene and Tropical Storm Lee

Extreme precipitation events¹ in New York State occur more frequently now than they used to — nearly twice as often as two decades ago. With the climate continuing to change, scientists expect this trend to continue.

With every event comes the possibility of damage and impacts across sectors. Look what happened in New York in 2011, when Hurricane Irene and Tropical Storm Lee hit.²

First, extremely heavy summer and fall rains set the stage.



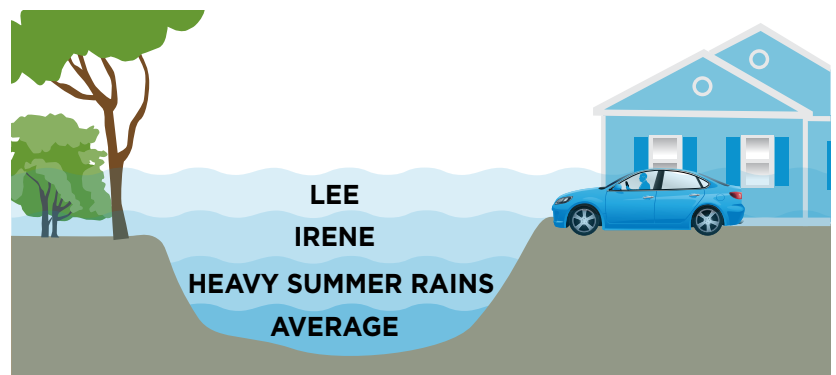
Then, the storms hit:

- Precipitation from Irene: **3-15 INCHES**
- Precipitation from Lee: **5-9 INCHES**



Finally, saturated watersheds couldn't absorb the storms' rains, which caused extreme flooding.

- Streams overflowed
- Flood waters reached new heights
- Flooding lasted longer
- Areas with no previous record of flooding experience flooding for the first time



¹ Defined as 2 inches or more of rain in 48 hours.

² Data based on NYSERDA-sponsored research on the impacts of Hurricane Irene and Tropical Storm Lee in Orange and Ulster Counties.

The storms' impact on New York's economy, environment, and communities ranged from moderate to severe. For example, in Orange and Ulster Counties, many sectors were affected.



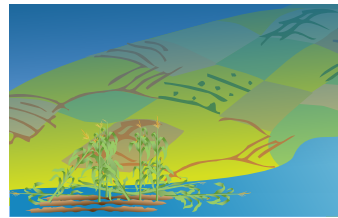
HOUSING

Many homes near rivers were destroyed, including some low-income housing.



TOURISM

Pick-your-own agriculture businesses were crippled, and hotels and other businesses serving tourists were damaged or shuttered.



AGRICULTURE

Ulster County vegetable crop losses exceeded \$5 million. Roughly 1,700 acres of crops were damaged.

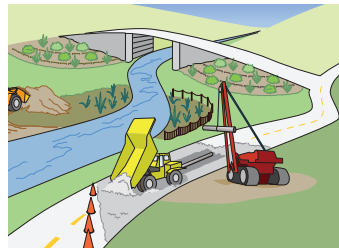


INFRASTRUCTURE

In Shandaken, 14 bridges were destroyed. Sections of the Port Jervis train line were washed out.

Help Your Community Prepare For Future Storms

- Plan for projected changes in severe weather when assessing, maintaining, and repairing bridges, roads, culverts, and storm drains.



- Collect information on water levels in streams and rivers to anticipate and plan for flooding, both in the short term (e.g., emergency response) and the long term (e.g., better understand the watershed).



- Develop social media and Web-based emergency response tools.



- Communicate with local officials in neighboring communities about lessons learned, best practices, and planning for future storms/severe weather events.



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Visit NYSERDA.NY.GOV/EMEP-REPORTS to read the full report and learn more about the impacts of Irene and Lee and how communities can prepare for future storms.



NYSERDA