

Management Actions and BMPs Adaptive To Climate Change

Water Quality Goal Implementation Team

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Chesapeake Bay Program
Science, Restoration, Partnership



PSC Direction, December 2017

"Continue efforts to improve understanding of the science and refine estimates of pollutant load changes due to 2035 climate change conditions [including developing] a better understanding of the BMP responses, including new or other emerging BMPs, to climate change conditions."





PSC Direction on Climate Change: Implications

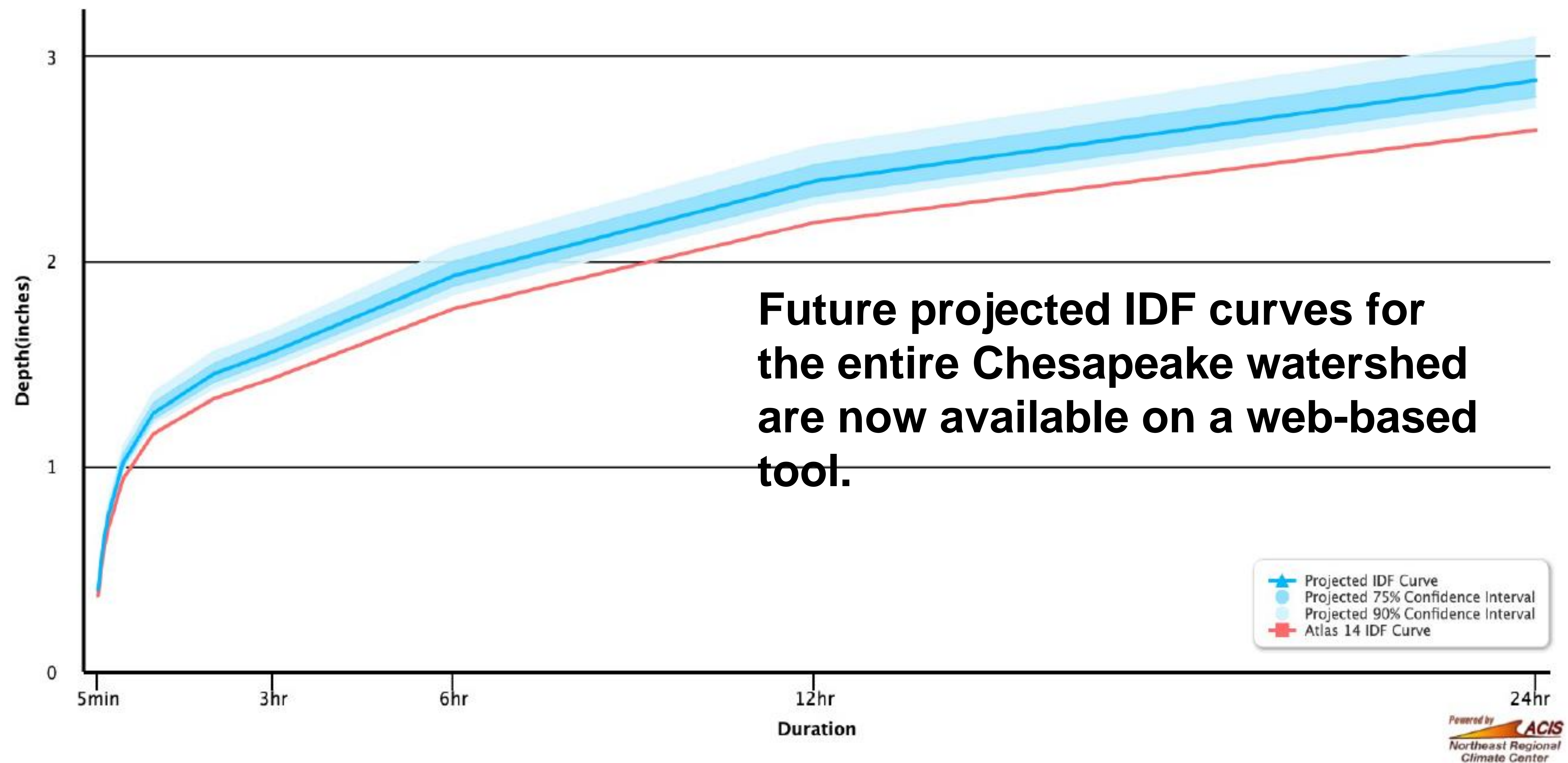
- No matter what changes are made in green house gas emissions, the next half century of climate changes in precipitation and temperature are already “baked in”.
- Therefore, the CBP will need to “lean into” developing climate change adaptive management and BMPs as a multi-decade process.
- For now, a good start has been made. The progress and next steps will be presented.





Example: Updated and Future Projected Intensity, Duration, and Frequency (IDF) Curves Available for All CBP Counties

Figure 5.5. 2-Year Recurrence Interval IDF Curve for State College, Pennsylvania, Under RCP 4.5 from 2020 Through 2070



Source: Developing Future Projected Intensity-Duration-Frequency (IDF) Curves: A Technical Report on Data, Methods, and IDF Curves for the Chesapeake Bay Watershed and Virginia



Example: Updated and Future Projected Intensity, Duration, and Frequency (IDF) Curves Available for All CBP Counties

Projected IDF Curve Tool

More resilient infrastructure

Incorporating climate change into IDF curves means that infrastructure designed using these curves should be more resilient to future precipitation events.

User-friendly tool

Based on the best available science, the tool is conceptually simple and uses transparent data, so it is easy to use and easy to understand.

Supports diverse policy considerations

Because there is no single best estimate, the tool provides an uncertainty range, which the user can explore to make the best plans possible for their agency.

Source: *Incorporating Climate Change into Stormwater Design Standards*. Michelle Miro, RAND Corporation. Presentation to the CRWG and SWW October 18-19, 2021.