

# Climate Change Data in Tributary Summaries

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## Objective:

Incorporate climate change data into Tributary Summaries to help explain tidal trends.

## Data Available:

Modeling Team has county scale rainfall (volume and intensity) trends data based on 2017 – 2014 data (PRISM dataset)

# Questions for ITAT:

Modeling Team can spatially aggregate the county data for tributaries

- ◆ Is this the scale we would like to use?
- ◆ Can we spatially aggregate to segments to correlate with WQ criteria?

Annual data available

- ◆ Do we consider changes at monthly or seasonal time scales?
- OR
- ◆ Do we only show annual trends?



# Questions for ITAT:

How should we display the information?

- ◇ Would a line chart or a bar graph be more effective than a scatterplot?
- ◇ Show regression analysis?
- ◇ Model report example is shown by counties – Would this be too much for the body of the report? Would it be useful in an appendix?
- ◇ Should we include a p-value to explain if the change is statistically significant?

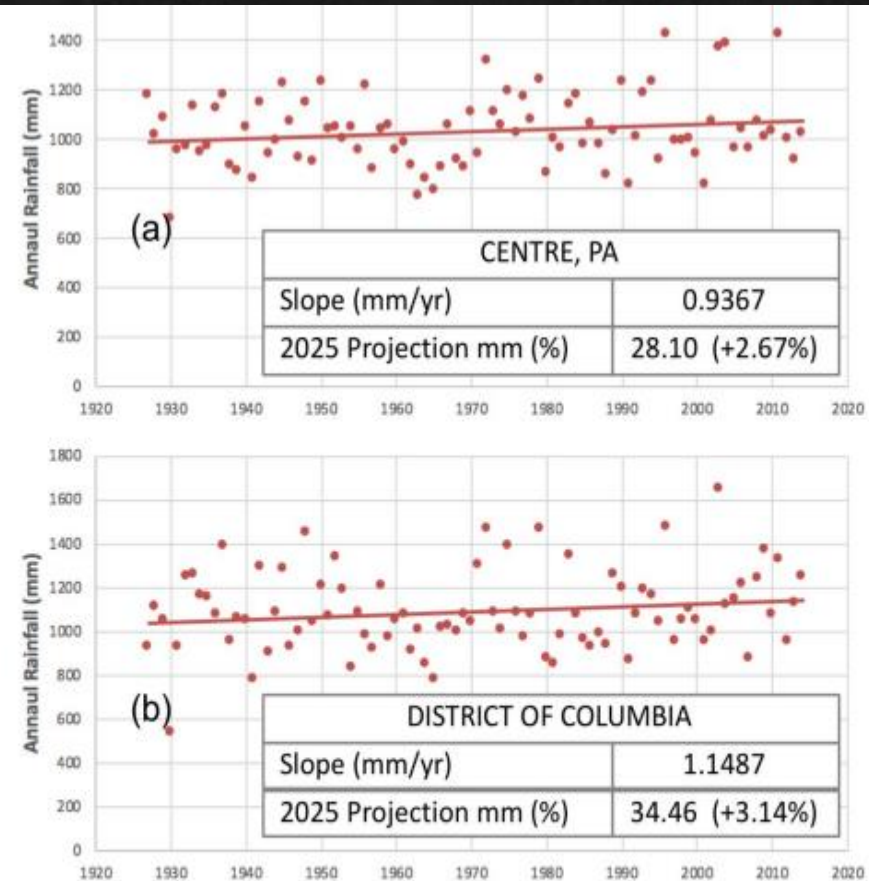
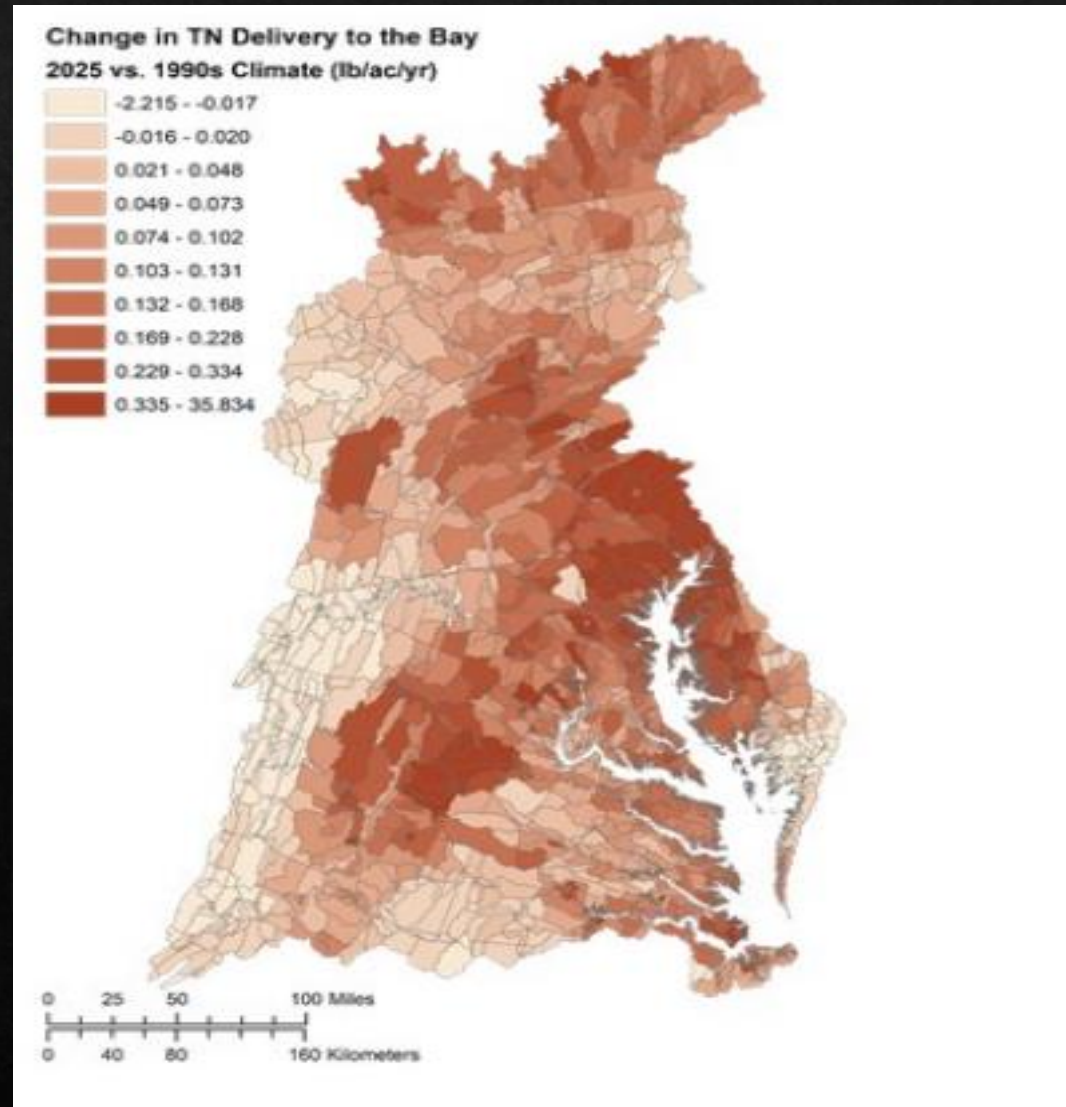


Figure 2-1: Annual rainfall volumes for the 88-year period linear regression lines are shown in red for the two land segments (counties) – (a) Centre County in Pennsylvania and (b) District of Columbia. The values for the slope of the regression lines, and the corresponding 30-year projections in the rainfall volume (1995 to 2025) are also shown.

# Questions for ITAT:

How can we also incorporate this data?

- ◇ Should we directly compare rainfall intensity in a graph with a water quality criteria factor like CHLA or DO, to add context for how increasing rainfall impacts WQS?
- ◇ Should we show the increasing rainfall intensity using the geography of the tributary like the watershed map?





# Questions for ITAT:

What information should we include in the climate change section?

- ◆ Should the climate change section have a visual representation on rainfall intensity impacts on point sources, like CSOs and WWTPs?
- ◆ Should the climate change section have a WQ attainment portion showing how large weather events are suspected to have impacted attainment?

