

EFFECT OF REFORESTATION ON PRECIPITATION EVENTS

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Project Overview



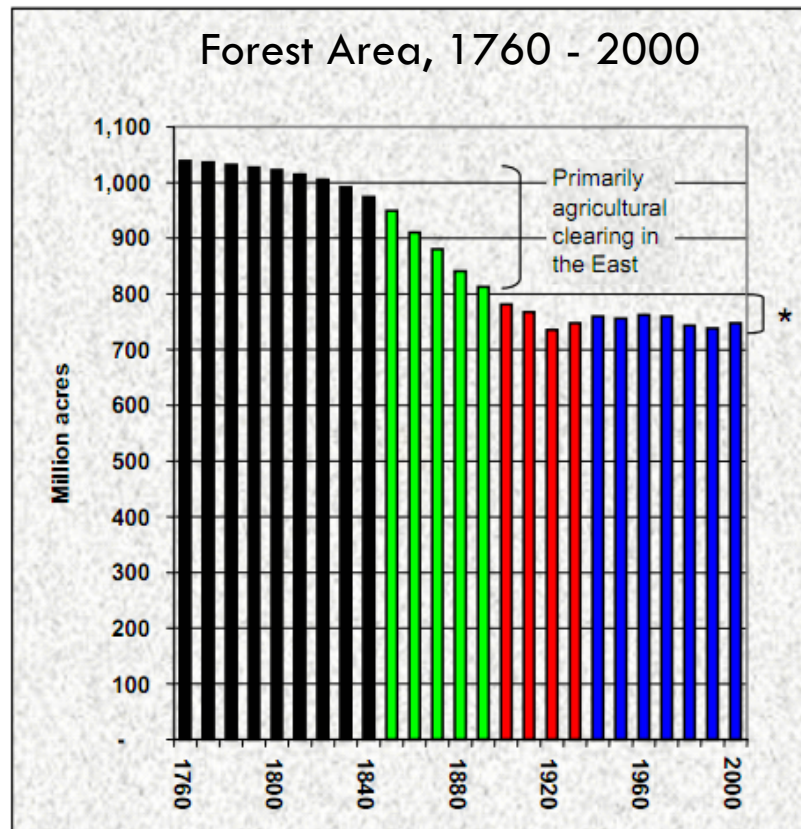
- Land cover in the Northeastern United States has changed in time
- Decrease in agricultural land, changes in the timber industry, growth of cities
- How does this affect precipitation events?

Effects of Land Use on Precipitation



- Land cover can change precipitation by altering ground fluxes and air properties.
- Native Plants versus Agriculture
- Urban heat island
 - ▣ Increases summer precipitation downwind and over major cities

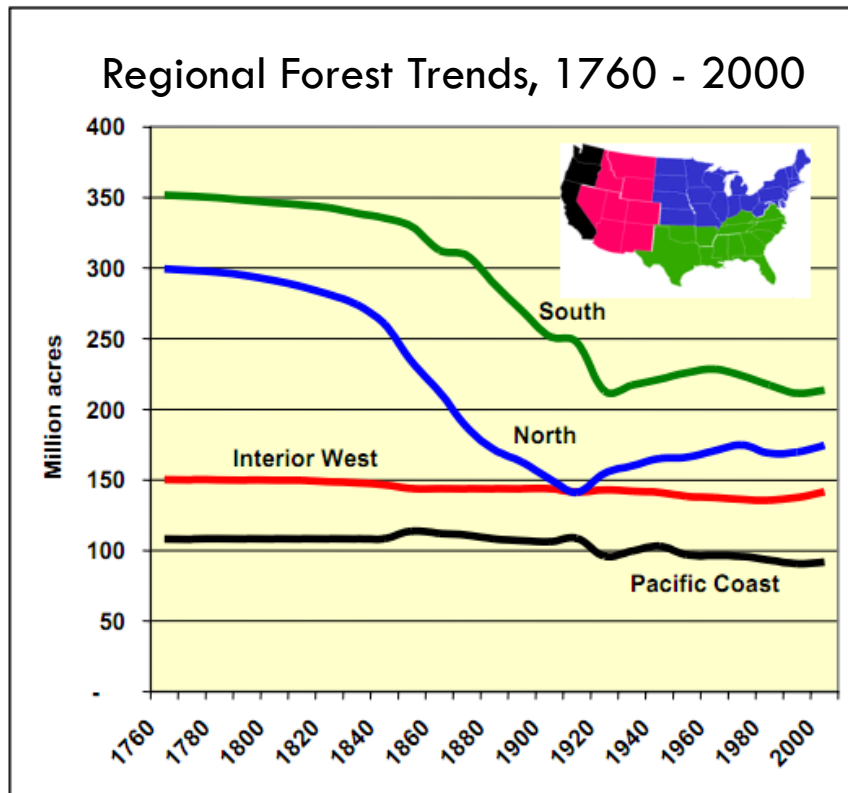
Reforestation in the United States



- Overall, forest land has been increasing since the 1920s

Source: <http://www.fia.fs.fed.us/>

Reforestation in the Northeast



- Poor timberland management and insect infestations decimated forest populations pre-1920s
- 1928 – McSweeney-McNary Law

Source: <http://www.fia.fs.fed.us/>

Data



- Focusing on Northeastern states
- Rain gauge data from 1970s-present
 - ▣ Collected from the NCDC
 - ▣ Pre-1970s data is unreliable and has inconsistent coverage
- Forest coverage from historical National Forest Service Reports
 - ▣ Statistical surveys

Future Plans



- Complete database
- Scope of study includes both amount and frequency of precipitation events
- Compare how location effects changes in precipitation
 - ▣ Next to highly forested county versus cities
- Focus on warm month precipitation events
 - ▣ Months in which trees are in leaf