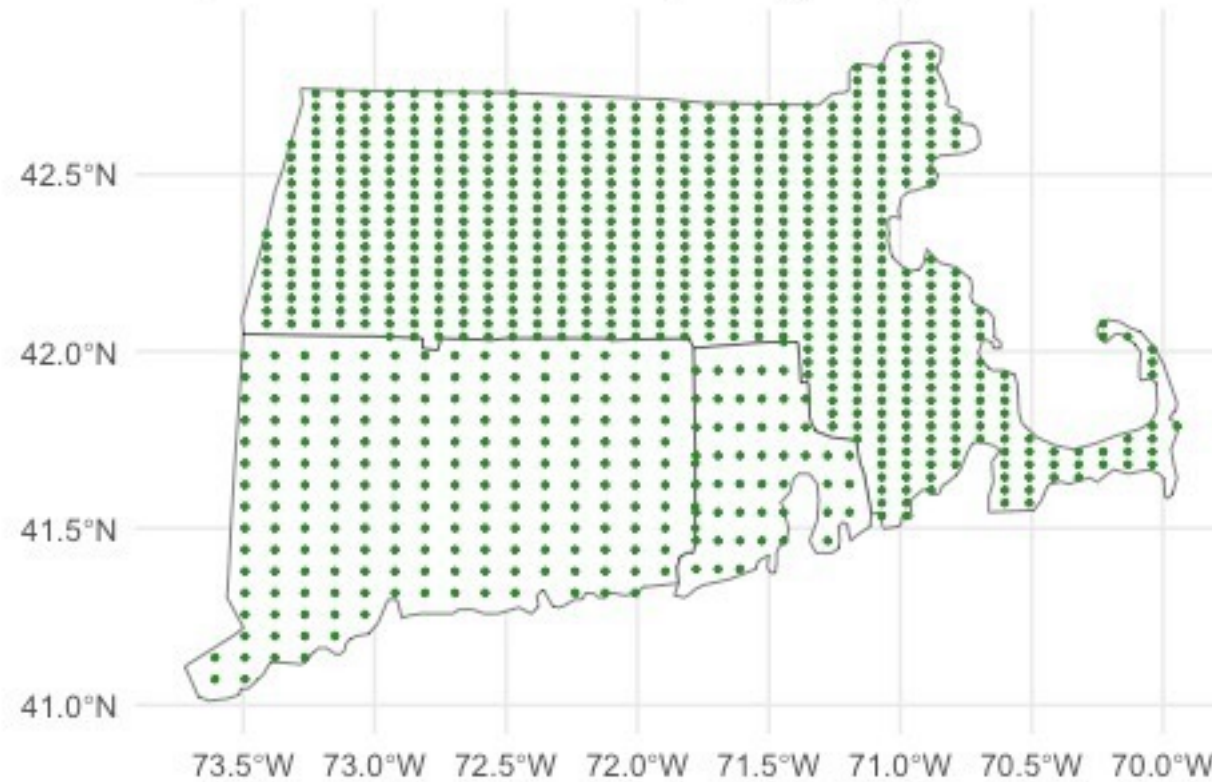


SHRI Locate

Chad Milando

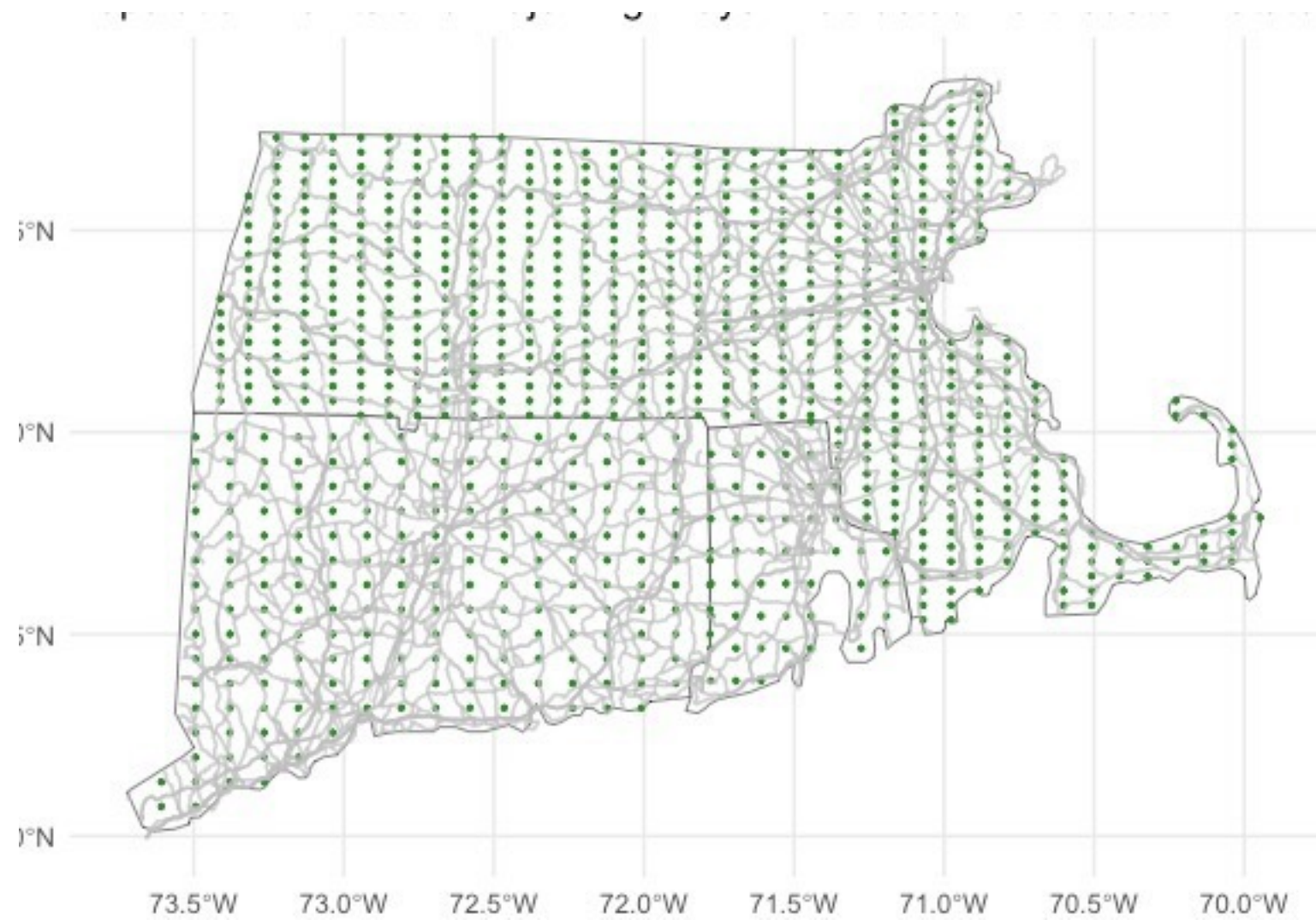
6.21.2024

Population Points and Major Highways in Selected North



Estimate population location

* But this could also be house locations, or any way to make point estimates of population and related variables

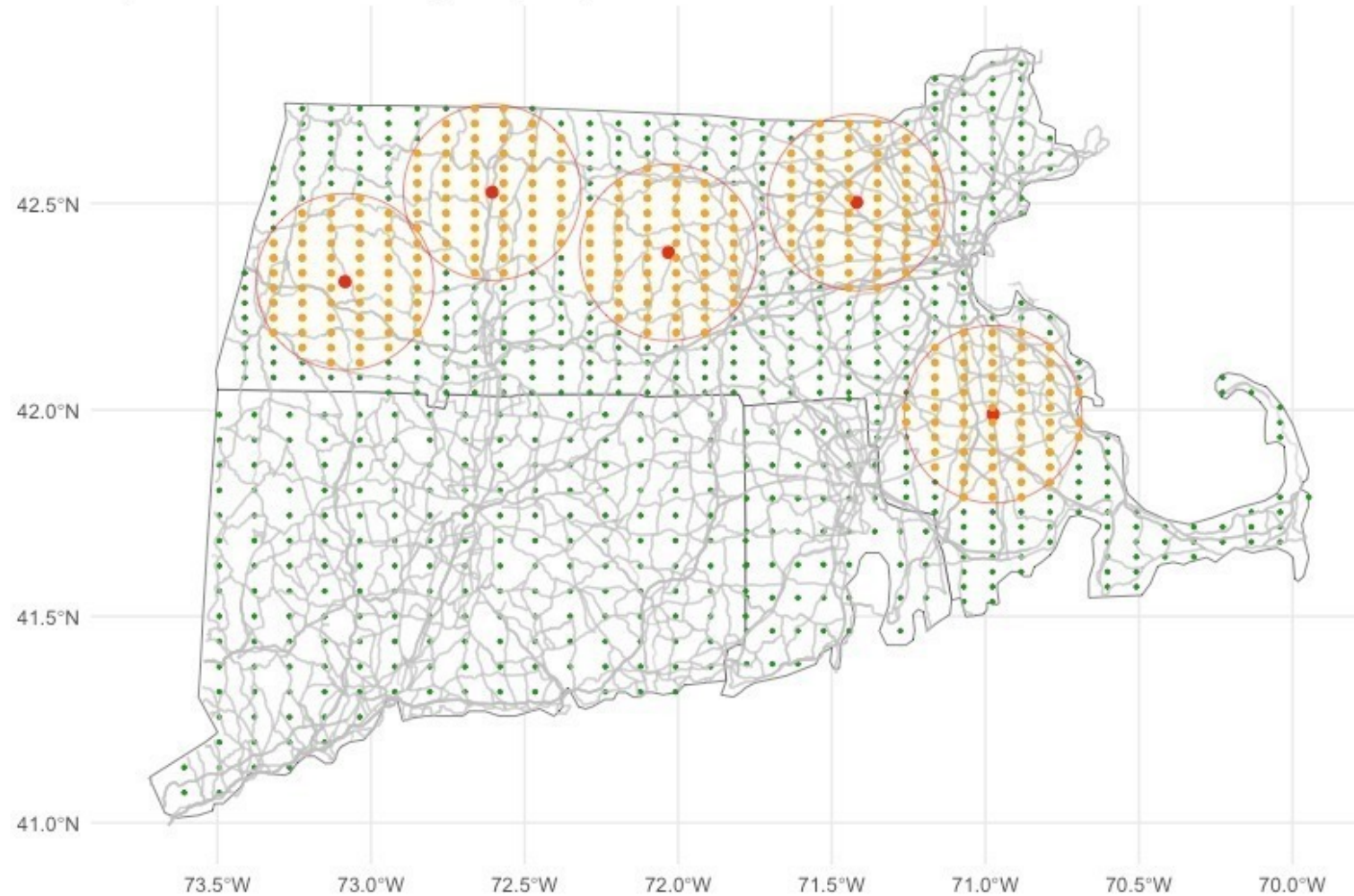


The road network determines potential locations for new or existing toilets



IF you are looking for new locations, you can space out potential locations every 20 miles or so, otherwise you can skip to this step if you are looking to prioritize existing sites.

Population Points and Major Highways in Selected Northeastern States

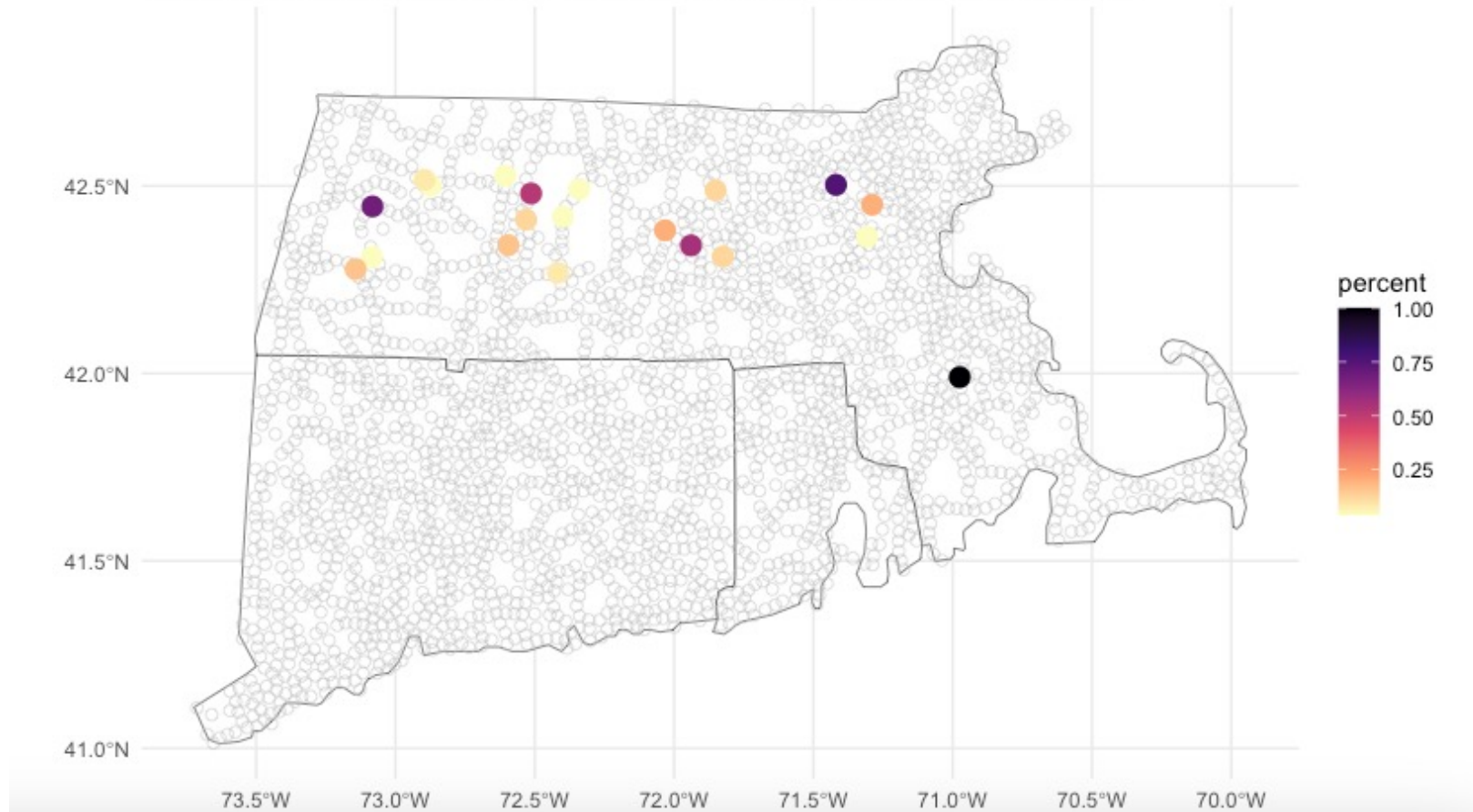


Then run a simulated annealing process to find the $N=5$ sites with the highest *SCORE, which is the sum of Weights * population data (so $b_1 * z\text{-population} + b_2 * \text{metric1} + \dots$)

Next steps

- Probably radius is not the best way to do this, likely you need the first step to be a network analysis like Keith did in his paper.
 - But for short distances this is probably fine.
- Add forcing constraints
 - Must have a site in this state etc
- Make heat-map for multiple conditions

Population Points and Major Highways in Selected Northeastern States

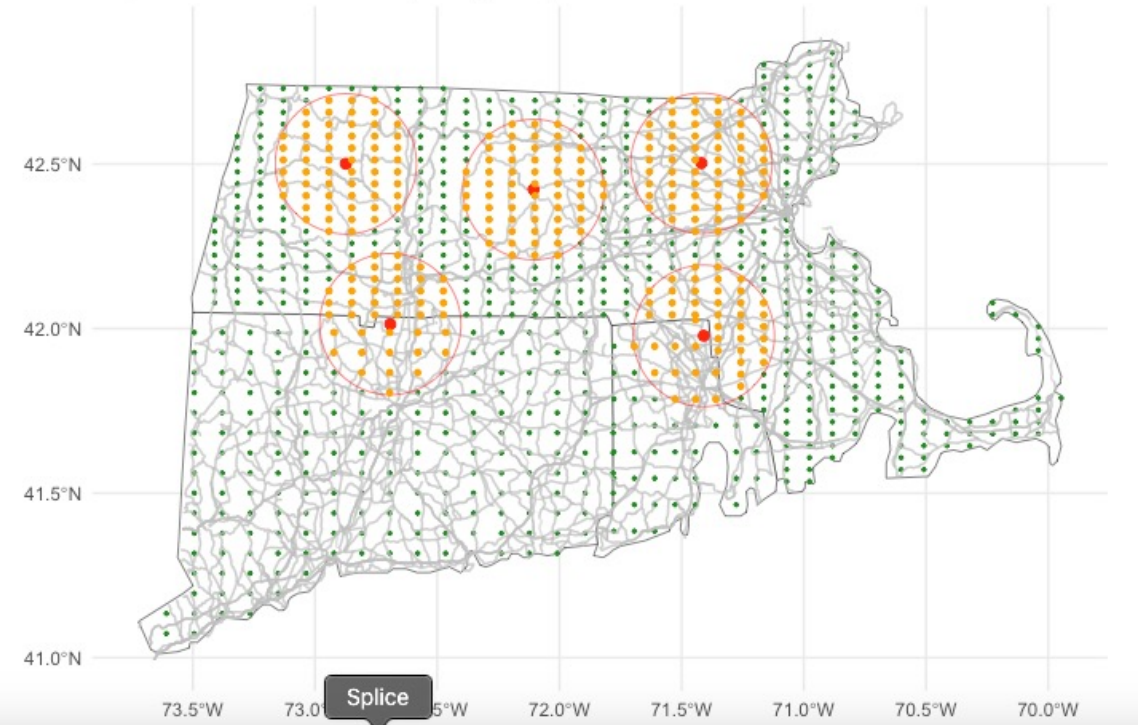


Across 25 simulations with varying scores, these are the ones that came up most frequently

Population Points and Major Highways in Selected Northeastern States



Population Points and Major Highways in Selected Northeastern States



Saying one point has to be in each state, these are the optimal points