

January 14, 2020

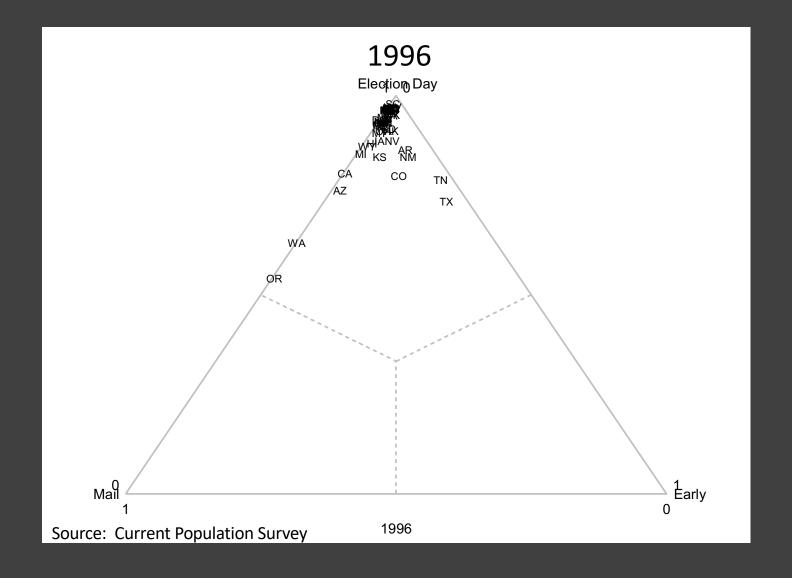
# Preparing for Now (2020): Data & Tools

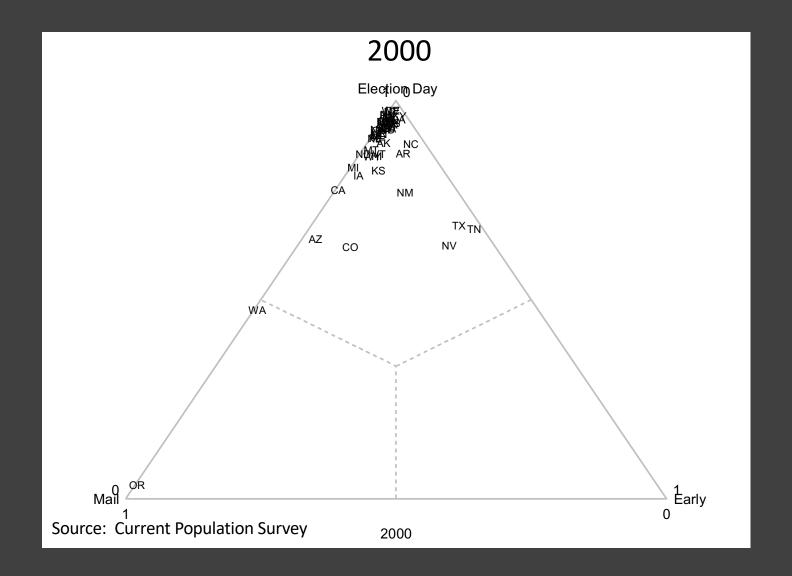
Tammy Patrick
Senior Advisor to the Elections Team

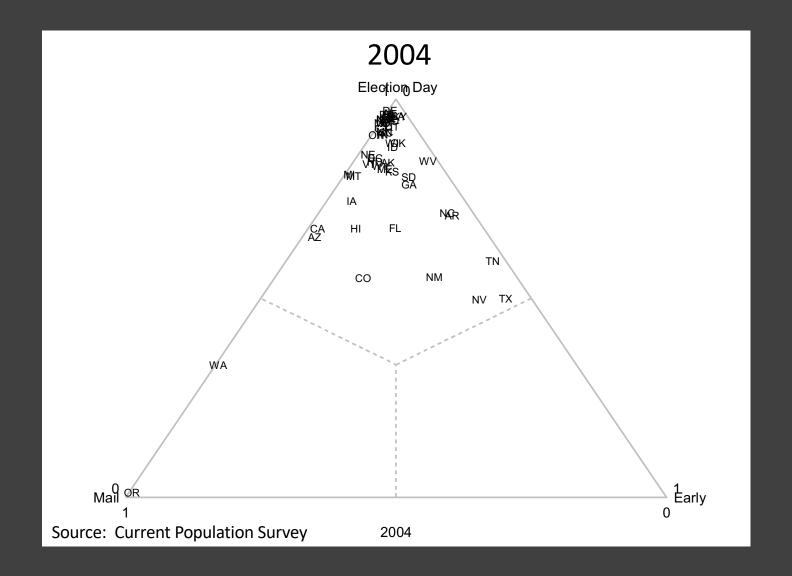


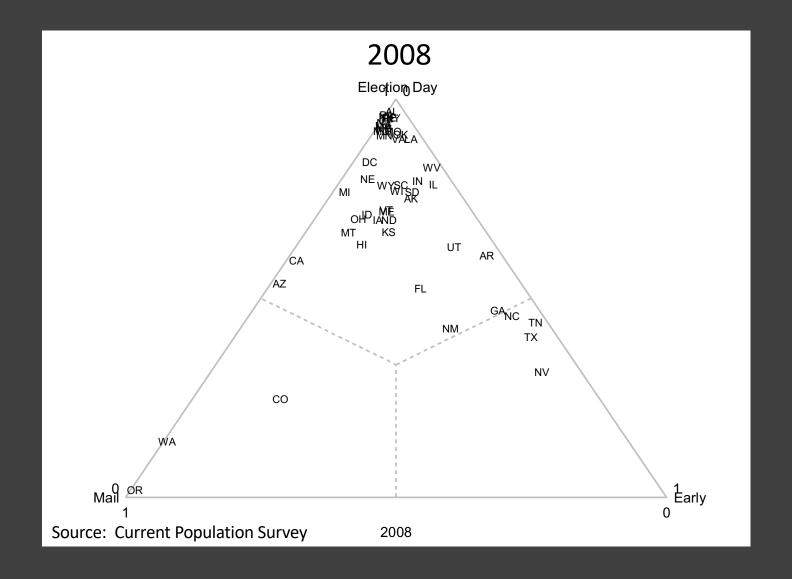
When given options in voting voters move away from Tuesday, Election Day as demonstrated by Charles Stewart, MIT (what I have nick-named the "Snow Globe of Elections").

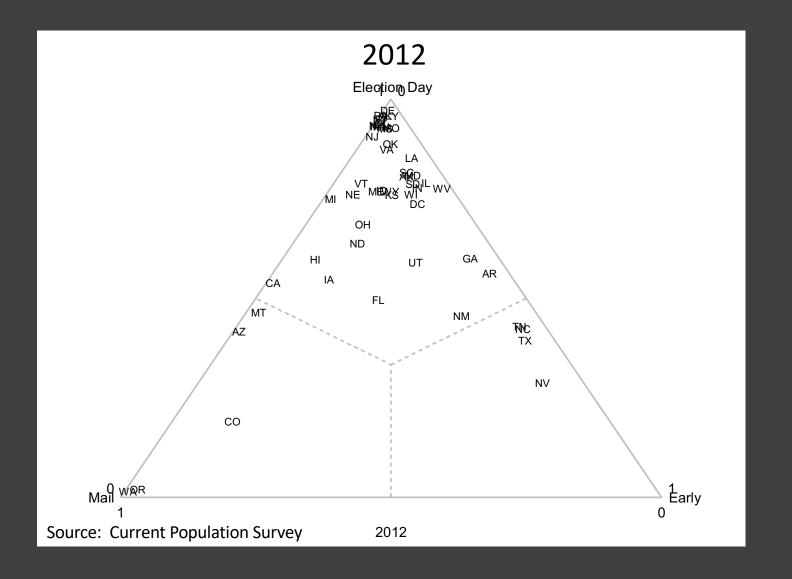


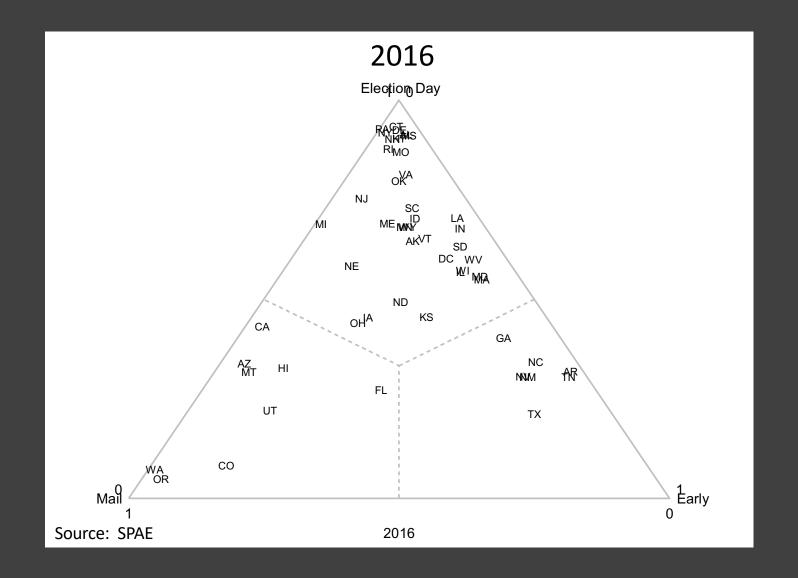




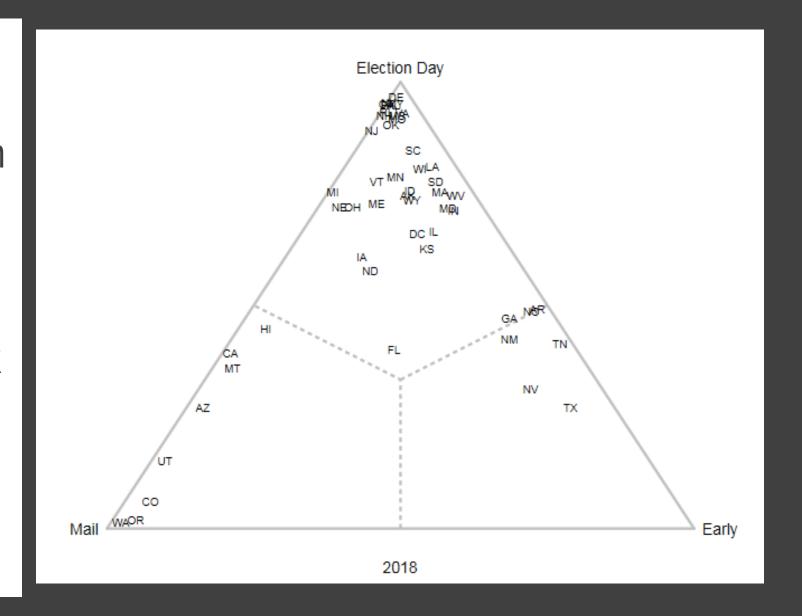


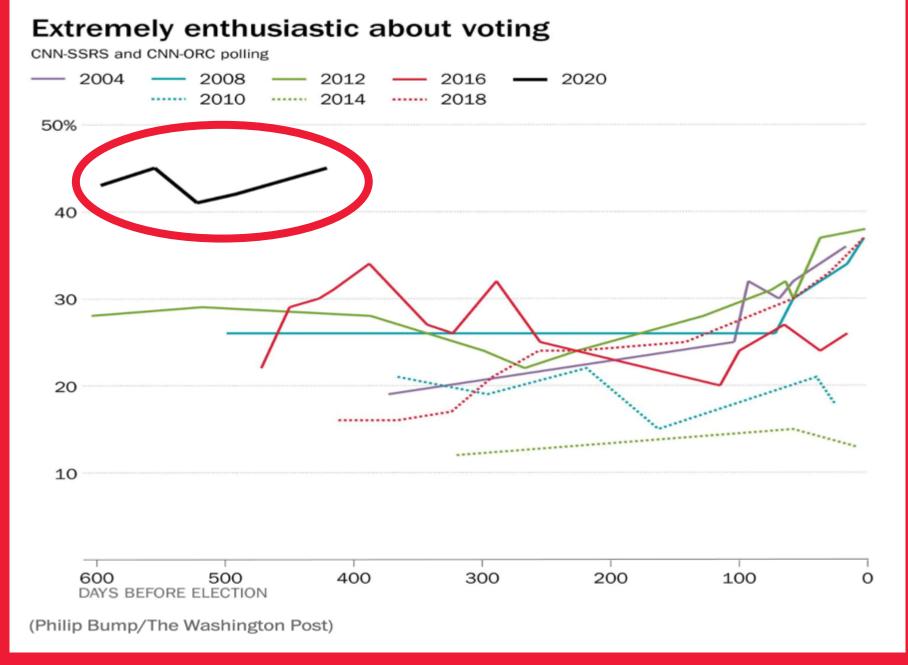






We saw a huge increase nationally from 2014 to 2018 midterms. New voters may only think that Election Day is their only option in voting.





# Consider: How we translate this enthusiasm into effectively cast ballots? Ensure that they know all their options? (& Keep the lines moving...)

### **Cal Tech-MIT**

#### Resource Allocation Tools web.mit.edu/vtp/

#### **Calculators**

#### Line Optimization and Poll Worker Management

Developer: Stephen Graves and Rong Yuan

This tool uses queueing theory to calculate the minimal number of service stations at a process step in a polling place so as to satisfy a service target on maximum waiting times.

#### **Poll Worker and Machine Optimization**

Developer: Aaron Strauss

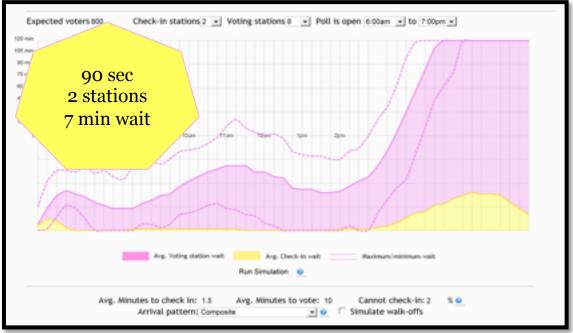
An easy-to-use calculator that takes basic information about a precinct and reports the number of check-in poll books and voting machines needed to keep lines short during a presidential election

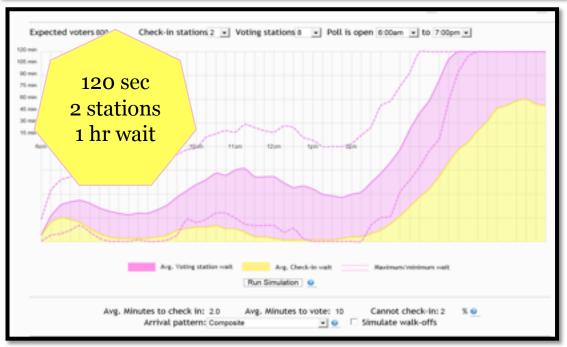
#### **Line Optimization**

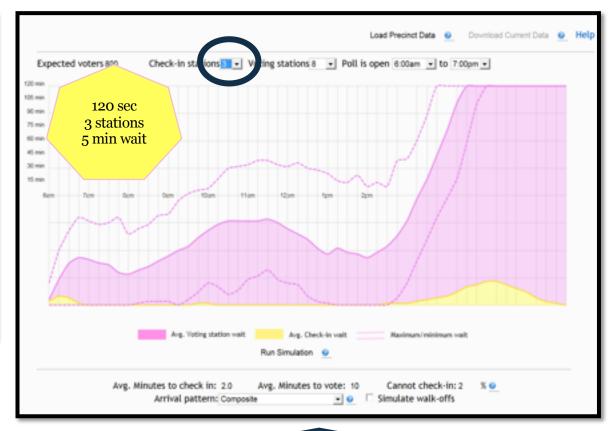
Developer: Mark Pelczarski

This simulation gives an idea of potential voter wait times for if you have estimates of projected turnout, average time to vote with your ballot and equipment, and average time required to check-in each voter.





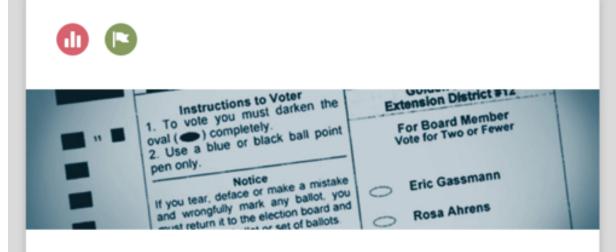




The addition of a single check-in station negates the hour long wait at the end of the day.

#### **CTCL**

Center for Technology in Civic Life
Resource Allocation & Timing Tools
<a href="https://electiontools.org/">https://electiontools.org/</a>



### **Voting time estimator**

An easy tool for estimating the average time needed to vote a ballot



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## **Voting timer app**

A free app to measure the average time voters spend with a ballot



#### Univ of Rhode Island

**URI Votes Project** 

Tools for analyzing & visualizing data

https://web.uri.edu/urivotes/tools/

# 2D Polling Diagrams: User Guide





#### **Engineering for Democracy**

Recommendations that will lead to future sustainable practices and tools utilized to overcome new and future obstacles in voting and election processes.

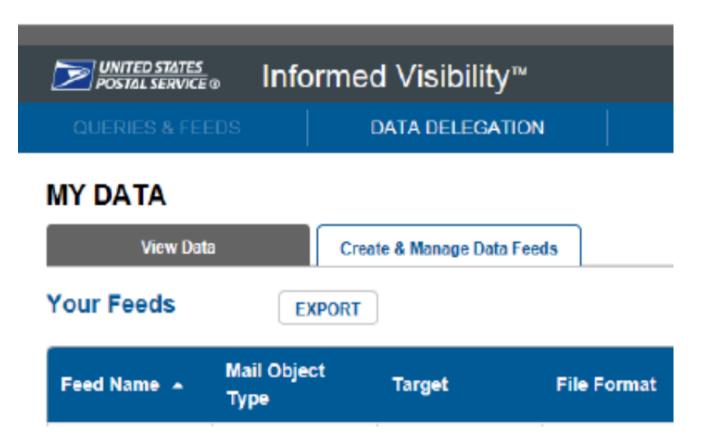
The idea of democracy is simple. Execution is complicated.



#### **USPS**

United States Postal Service Informed Visibility

Forecasting incoming volumes



https://about.usps.com/gov-services/election-mail/



# Consider: What policy/law changes have happened that may impact your standard estimation formula? EDR? AVR?

# Consider: Are there now additional options for voters? How will they know? No Excuse? Permanent VBM/VAH list?