



# May 2022 Experiment Testing the Impact of Loss Aversion Mail

Key findings from a randomized controlled trial testing direct mail with  
“loss aversion” messaging sent to drop-off voters in the May 17, 2022  
Pennsylvania state primary

# 1. Key Findings

- The Environmental Voter Project’s one-piece direct mail campaign during the May 17, 2022 Pennsylvania state primary **increased turnout by +0.8 percentage points (pp)** over our control group.
- The campaign’s “loss aversion” messaging – which targeted environmentalists who typically vote in presidential elections, but not midterms – had a **particularly large impact among male voters, whose turnout increased by +1.4pp** over a male-only control group.

# 2. Introduction

The Environmental Voter Project (EVP) works year-round in hundreds of elections to improve the voting habits of low propensity environmental voters. As part of that work, we run randomized controlled trials to (a) measure our impact on voter turnout and (b) discover which messages work best with certain subgroups of voters. For the May 17, 2022 Pennsylvania state primary, EVP mailed a single 6” x 11” mail piece to a “treatment group” of 267,156 Pennsylvanians whom EVP had identified as having the following characteristics:

- Each recipient was registered to vote
- Each recipient was at least 30 years old
- Each recipient had a high likelihood of listing climate/environment as their top issue priority
- Each recipient had voted in the 2020 General Election
- Despite voting in the 2020 General Election, each recipient otherwise had a poor voting history and was unlikely to vote in the May 17, 2022 Pennsylvania state primary election

101,975 similarly identified voters were randomly set aside in a “control group” that received no mail or other communications from EVP.

We found that EVP’s single mail piece led to +0.8pp higher turnout in EVP’s treatment group than in the control group. The mail piece performed particularly well among men, who voted at a +1.4pp higher rate than men in the control group.

### 3. Message Tested

This particular experiment tested whether we could leverage the psychological concept of “loss aversion” to increase voter turnout. Loss aversion is a cognitive bias, where people tend to fear losing things of value more than they appreciate gaining items of the same value. In short, people really hate losing things.

We wanted to leverage loss aversion to improve voting behavior by targeting so-called “drop-off voters” – people who vote in presidential elections, but not lower-turnout elections – with a message that presented the act of voting in a state primary as a way to avoid loss. First, we heightened our target voters’ sense of potential loss by endowing the voters with something of value – a new good voting record they had begun to establish in 2020 – and then we framed skipping the upcoming primary election as a significant loss that they must avoid: “Thank you for voting in 2020. Don’t ruin your good voting record in 2022.”

Side A of the mail piece:

The image shows a mail piece layout with two columns of text. The left column has a light blue background and contains the text: **Thank you** for voting in 2020. The right column has a white background and contains the text: **Don't ruin** your good voting record in 2022. Below these two columns is a grey bar with the text: Your Next Election → May 17, 2022. At the bottom of the grey bar is a small disclaimer: Paid for by the Environmental Voter Project, a non-partisan nonprofit.

**Thank you**  
for  
voting in  
2020

**Don't ruin**  
your good  
voting record  
in 2022

Your Next Election → May 17, 2022

Paid for by the Environmental Voter Project, a non-partisan nonprofit

Side B of the mail piece:

You want to be a good voter,  
and we want to help you.

Pennsylvania Election Facts

Your Pennsylvania State Primary election is on **May 17**.

Who you vote for is secret, but whether you vote is public record.

Thank you for voting in 2020. Keep your good voting record in 2022  
by voting in this election.

Environmental Voter Project  
PO Box 962002  
Boston, MA 02196

PRST STD  
U.S. POSTAGE  
PAID  
PERMIT NO. 231  
ZIP CODE 02205

All mail ballots must be received by election officials by May 17.

Mail Ballot Info: [www.pavoterservices.pa.gov](http://www.pavoterservices.pa.gov)

May 17 Polling Place Locations: [www.pavoterservices.pa.gov](http://www.pavoterservices.pa.gov)



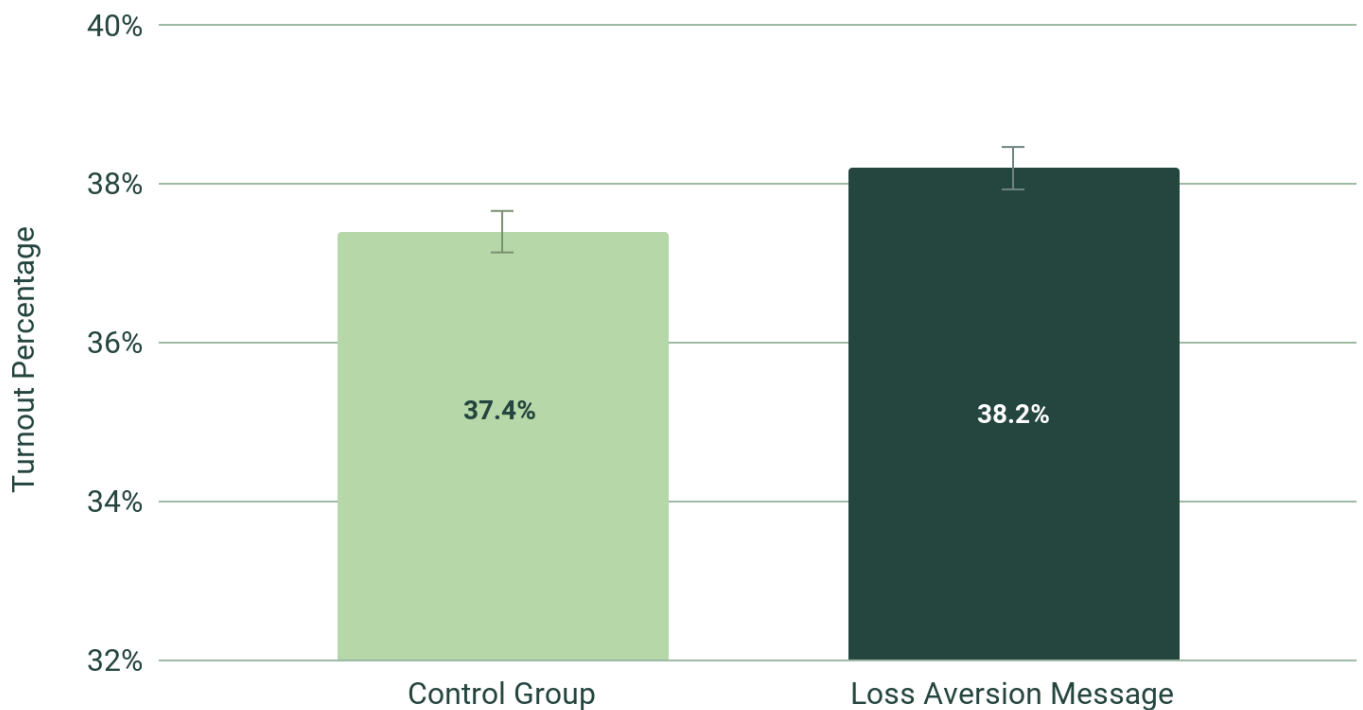
Paid for by the Environmental Voter Project, a non-partisan nonprofit

On the address side, we further emphasized the loss aversion message by stating: “Thank you for voting in 2020. Keep your good voting record in 2022 by voting in this election.” This side of the mail piece also included helpful voting information and some proven “social pressure” messaging notifying voters that their voting history is public record.

## 4. Overall Impact on Turnout

This single loss aversion mail piece led to a statistically significant +0.8pp increase<sup>1</sup> in voter turnout over our control group of similar voters who did not receive any communications. Although we do not anticipate that a single mail piece like this would have a dramatic impact in high-turnout general elections, this result is still instructive in that it highlights the power of loss aversion messaging on drop-off voters in all contexts, whether as part of a larger messaging campaign or as an isolated communications stream.

### Turnout: Treatment vs. Control



<sup>1</sup> Statistically significant at the  $p = 0.05$  level.

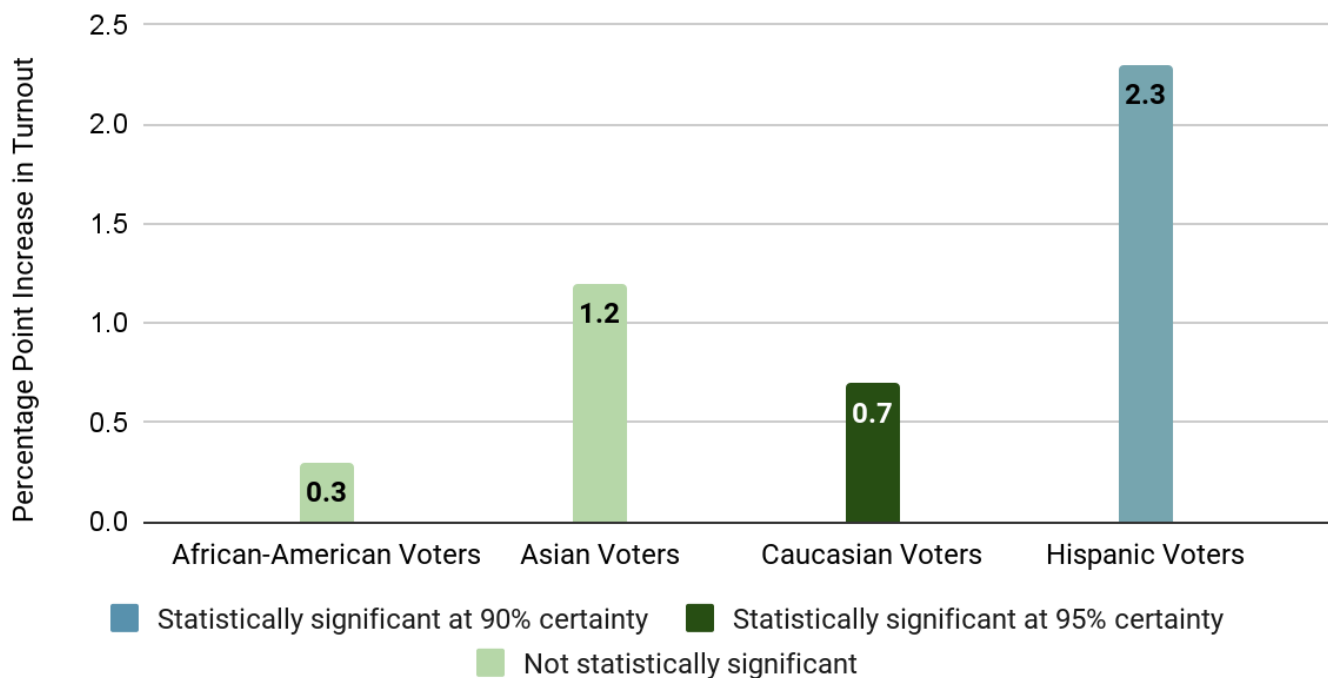
## 5. Differential Treatment Effects

Not only did this loss aversion mail perform well across our full treatment group, but subgroup level data (broken out by race and sex) reveal the message could be particularly impactful with certain types of voters.

### A. Impact on Turnout by Race<sup>2</sup>

Small sample sizes – except among white voters – made it difficult to measure any statistically significant differences our messaging may have had *within* racial subgroups. Even so, we see in the chart below that the mail piece *seemed* to perform particularly well among AAPI and Hispanic voters, albeit without the 95% statistical certainty we typically seek. We did, however, achieve a +2.3pp result among Hispanic voters with 90% statistical certainty, which suggests the importance of further tests with larger subgroup samples.

## Impact on Turnout by Race

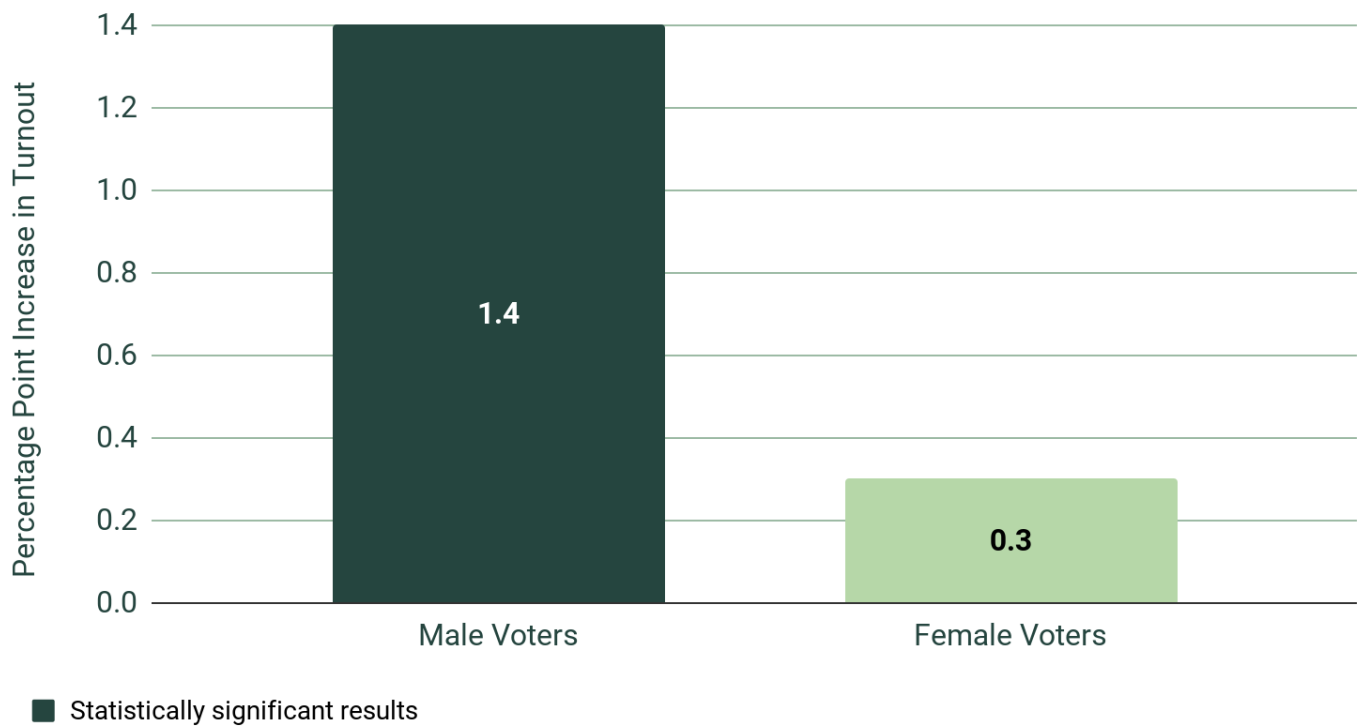


<sup>2</sup> When presenting charts of racial subgroup data in this report, we have chosen to retain the subgroup-identifying nomenclature found in NGP/VAN voter files: African-American, Hispanic, Caucasian, and Asian. In this report’s narrative discussion, we use the more commonly-accepted terminology of AAPI and white. We do not replace African-American with Black or replace Hispanic with Latinx because Black is not completely analogous to African-American, nor is Hispanic completely analogous to Latinx, and we want to avoid misrepresenting any voter file data.

## B. Impact on Turnout: Voter File Identified Male vs. Female<sup>3</sup>

When comparing this mail piece's impact on voter turnout among men and women, we discovered that the message's overall success in this experiment was almost solely due to its resonance with male voters. In fact, we could not find *any* statistically significant impact on turnout when comparing our female treatment group to our female control group, which leads to the conclusion that loss aversion messaging like this could be even more impactful than our full treatment group data suggests were the messaging solely focused on male drop-off voters.

### Impact on Turnout: Male vs. Female



<sup>3</sup> Voter file data includes "sex" – rather than gender – as a demographic category. In some instances this identifier is self-selected by the voter and in others it is state-identified or modeled. Since sex is not analogous to gender, this report presents only the "male" and "female" identifiers categorized as "sex" in NGP/VAN voter files. In our narrative discussion, we use the term men to encompass the group identified as male and the term women for the group identified as female.

## 6. Conclusion

Every election is an important opportunity to improve environmentalists' voting habits, and the Environmental Voter Project is proud to have had a measurable impact on turnout among our targeted voters in the 2022 Pennsylvania primary. This further adds to the long-term impact we have had in Pennsylvania, where from 2017–2021, we helped 165,254 non-voting and seldom-voting environmentalists become consistent super-voters who now vote in every election. We are also pleased to have gained insights into how “loss aversion” messaging may be particularly effective at mobilizing certain demographic groups of voters, including those identified as male, Hispanic, and AAPI. We look forward to more experimentation along these lines.