# Wildfire Prediction Project Executive Summary



## Overview

This project seeks to improve the predictability of wildfires which destroys an average of 7.4 million acres annually in the United States.

## The Problem

Wildfires are a major concern for the National Parks Service. Each year millions of acres are destroyed. Firefighting resources are stretched thin. Additionally, recovery and rebuilding efforts cost communities millions of dollars.

- How can we improve the ability to predict wildfires?
- Can we better identify areas as higher risk?

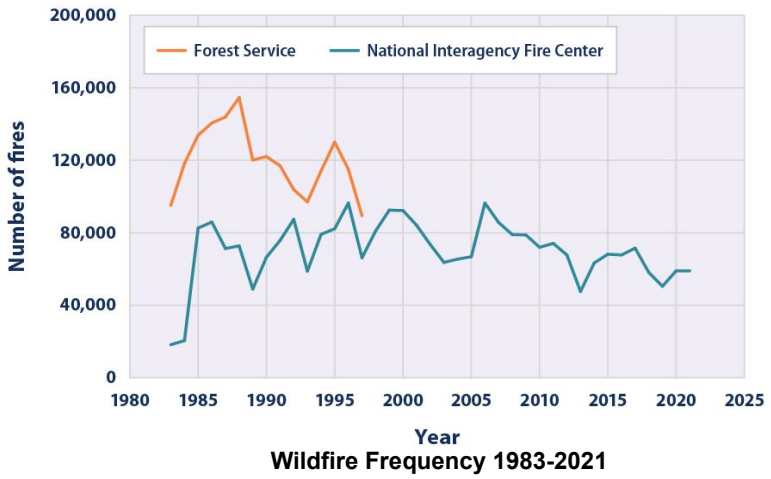
## The Solution

The National Parks Service has created a data team to improve the agency's ability to predict wildfires through data analysis and machine learning.

## Details

### Keys to success

- Data must be acquired in a timely manner from all service providers, regional forestry and governmental agencies.
- The project created a national database of wildfire data that can be accessed and updated in real time by all agencies.
- Project needs ongoing maintenance to improve prediction rates and data analysis.




**Wildfire Frequency 1983-2021**

### Results Summary

The agency has set an internal goal for the wildfire predictive model of at least 90% accuracy. The team's final model consistently met this goal when running data from previous years.

## Reflections/ Next Steps

- As a direct result of the wildfire project, the prior prediction system was improved by 35% in 2022.
- The project is inspiring similar efforts in other parts of the world. The goal is to share prediction modeling and data.
- Numerous courses used to train fire fighters, park rangers and national park employees are referencing the finds of this study.
- Areas for clean up and controlled deforestation efforts are now identified.
- Future results should continue the downward trend in destruction related to wildfires.