A New Way To Collect Strike Data

The current way the FAA collects data on bird strikes lacks one crucial feature, geographic position. Each strike is simply a line on an excel spread sheet, input by a complex form off the FAA's website. If a researcher wants to do work with the strikes, they must go through the arduous process of counting, finding an airpor t file it can be joined to, and then spatially joining the data. So I set out a way to allow all new data for bird strikes to be input with exact spatial Location. This allows constantly updating maps to be created easily, and also analyzed by the normal non GIS worker.

The New Way

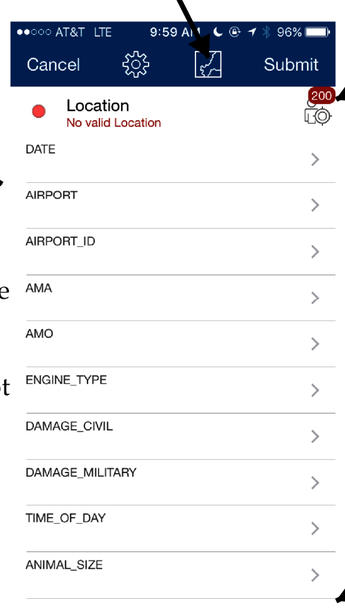
The ability for a strike to be recorded on scene was a priority. Therefore the first app created for collection is made for mobile(IOS, Android). Using ESRI's prebuilt collector i was able to create a form that mimics the old strike report form while also recording location in a seamless and easier fashion.

Main Page

If the user would like to move the point they are at, the map icon at the top is selected and then can reposition the point the data is collected for .

This is the first layout the user sees when entering a strike. Their location will be shown up top.

The list of alterable attributes are stored below.They can be filled out in any order. This allows the data being input while the strike is investigated, because sometimes the data recorded from the investigation will not be uncovered in the order of the form

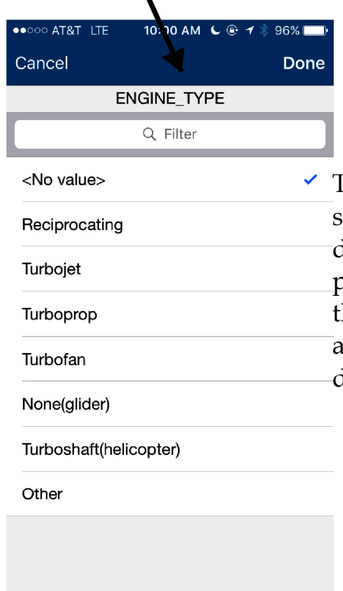


More attributes are available below and can be accessed simply by swiping/ scrolling down.

Preset Options

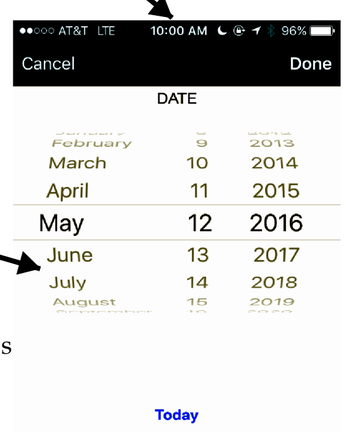
One type of the preset options the form uses is coded values. There are a select number of options that allows in depth data analysis later.

The data variable that is being adjusted is shown on the top of the page.



The preset options are then shown below. If there are options not visible they can be accessed while scrolling.

The date Is aother type of preset option in the form. It forces the user to comply with a certain date format allowing maps to be created based on a seasonal basis.

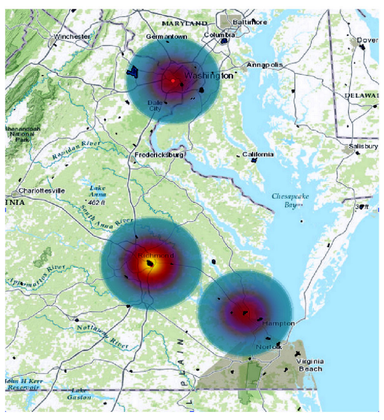


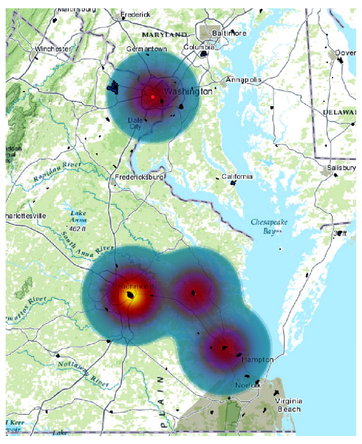
The data can be input by scrolling and selecting the date of the strike, or pressing the blue button that say "today" to automatically enter today's date.

What Can This Do?

Live Updating Hotspot Maps

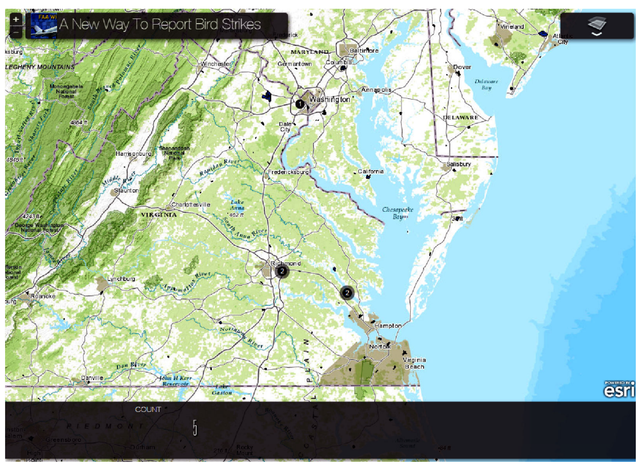
When the strike data is directly input into the Arc GIS Strike database file connected to it update. This allows for live updating maps built in Arc GIS online to immediately refresh and include the new points. Below a Point is added to the strike data base and a hot spot map created out of the database automatically updates.





Simple Map Viewer

Users can use the simple map viewer to view points. A total count is kept at the bottom and constantly counts up with every new point. Other map viewers and GIS users can be created using the database based on their personal needs/ projects needs.

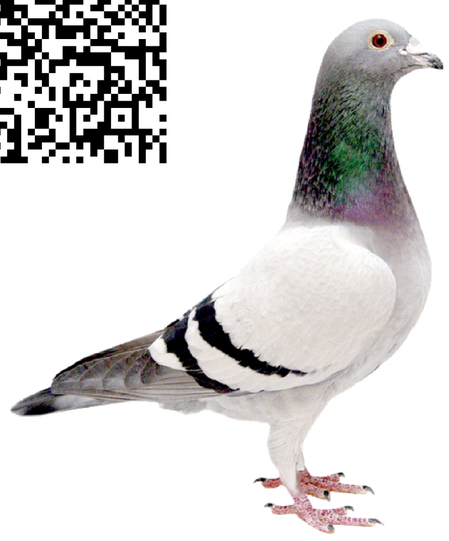


Get Access!

To start using/adding/ or contributing to the new strike database scan either QR code. The first one is for the simple map viewer, the second for access to the file. Using the second QR code and adding the service to your content will allow it to appear on your collector app and any maps you as a user add it to.

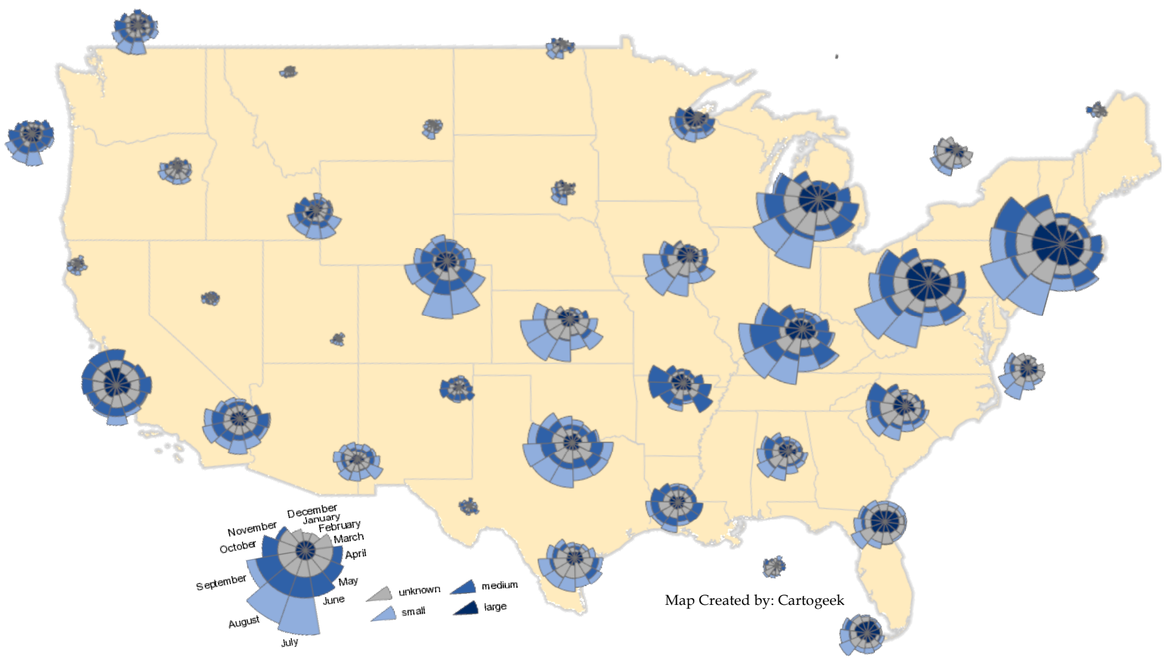
Simple Map Viewer

File Access



Live Updating Complex Maps

Users are also able to use the new strike database on Arcmap or Pro. The database is published as a service meaning any map that is using the data will auto update as long as the refresh settings are on. Coxcombs maps which run through Arcmap desktop are an example of a way to display the Strikes based on month and bird size. The data is totally manipulable for whatever the user needs.



Map Created by: Cartogeek

Sources: FAA Strikedatabase, ESRI's Collector, Cartogeek.
Pictures:
https://www.google.com/search?q=bird+transparent+background&espv=2&biw=1280&bih=899&source=lnms&tbm=isch

https://www.google.com/search?q=plane+transparent&tbm=isch&imgil=fGx8sZBPnPENYM%253A%253BmDDjIv8rPku7cM%253Bhttp%25253A%25252F%25252Fwww.transparentbackground.net%25252Fplane-

Map created by: Eliott Ishak