FireFamilyPlus Database Weather Data Import

I. Create the Database File in FireFamilyPlus

- Open FireFamilyPlus version 5
- Create a new database file in FireFamilyPlus (FFP): FFP ➔ File ➔ New
- Name the new database file.
- Save the new database file in a location where it can easily be found later. This step creates an empty database file for use in FFP.
- The user will now learn to populate the database with historical, hourly weather data for their planning area.

II. Weather Data

A. Station Catalog Information

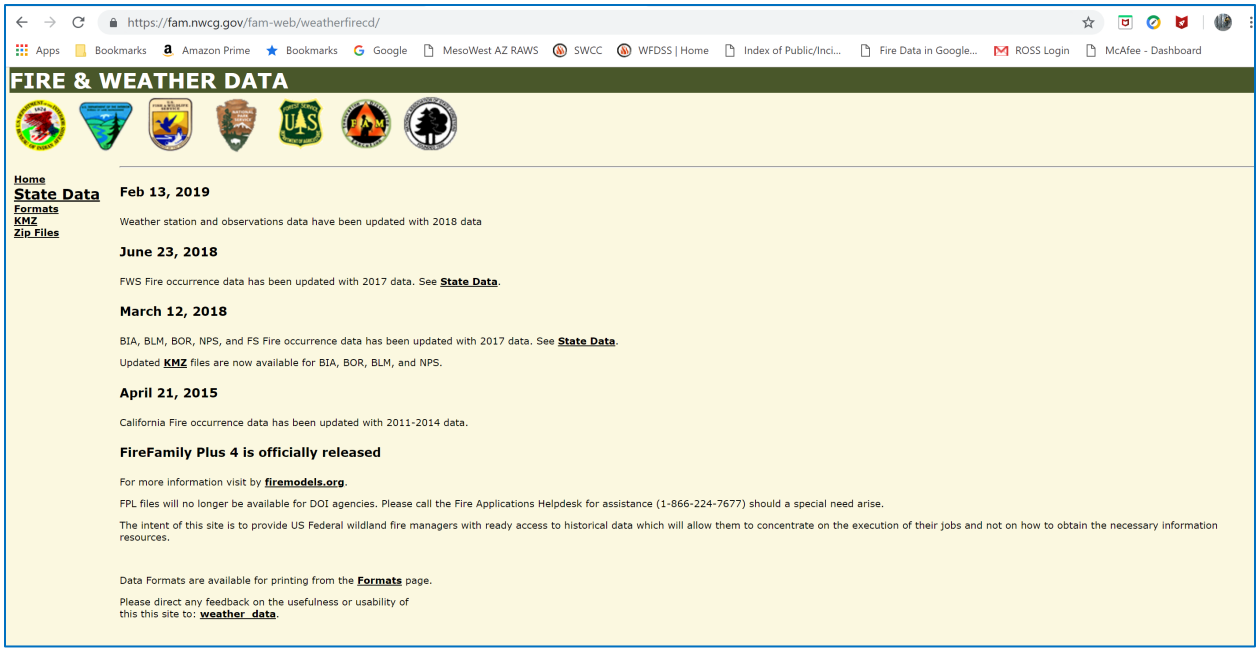
Before hourly weather data can be imported into the FFP database, the user must first identify all of the Remote Automated Weather Stations (RAWS) that will be used for analysis in the planning area. Once the weather stations that are to be used in the analysis process have been identified, the user must then download the weather station catalog information for each RAWS from the internet and then import this information into FFP.

There are two ways the user can access and download station catalog files.

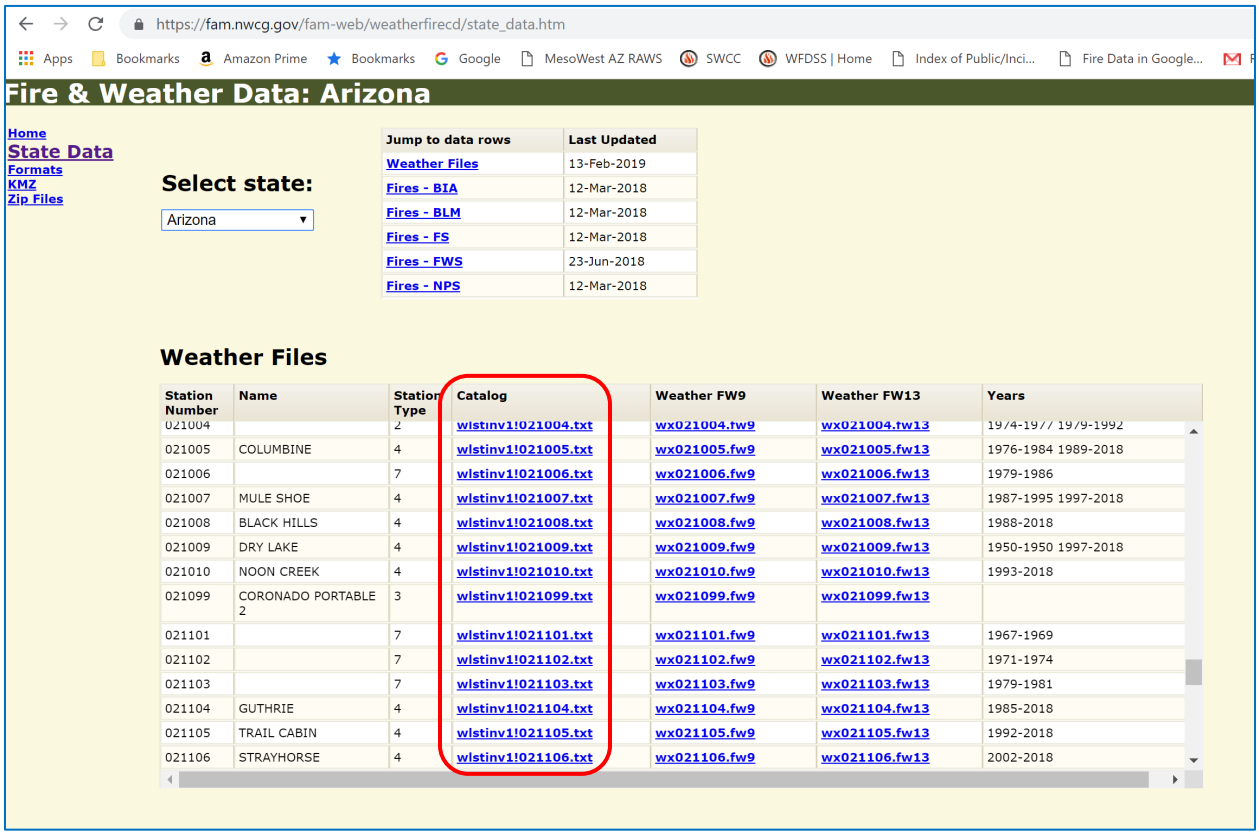
1. Station catalog files can be found on the National Fire and Aviation Management (FAMWEB) website: https://fam.nwcg.gov/fam-web/
2. Station catalog files can also be found on the Kansas City Fire Access SofTware (KCFAST) website: https://fam.nwcg.gov/fam-web/kcfast/mnmenu.htm

1. Downloading Station Catalog Information from FAMWEB:

- Open the FAMWEB website (https://fam.nwcg.gov/fam-web/)
- From the menu items on the left side of the home page select '*Wildland Fire Related Links*'
- Select 'Fire and Weather Data' and a new page will be displayed:



- Click on ‘State Data’
- Select the State and a new page will be displayed:

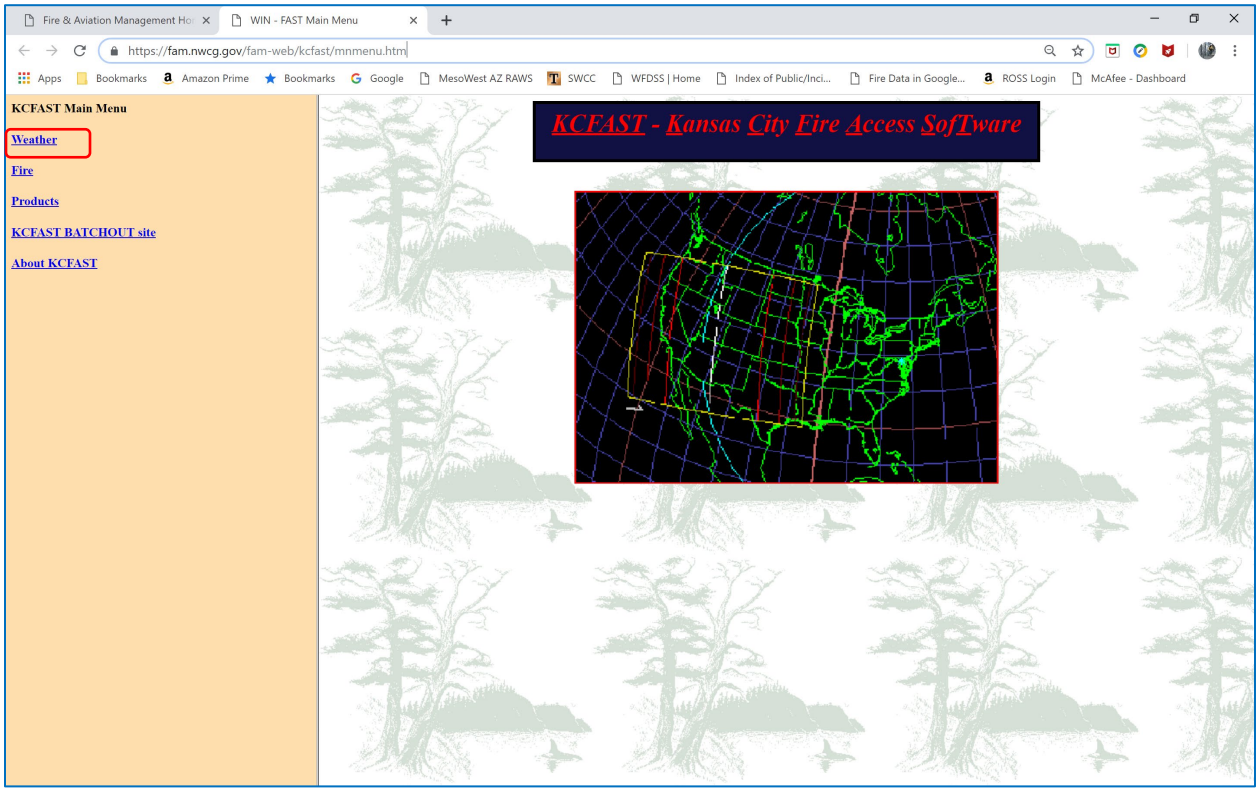


- The station catalog files can be selected for each RAWS in the ‘Catalog’ column.

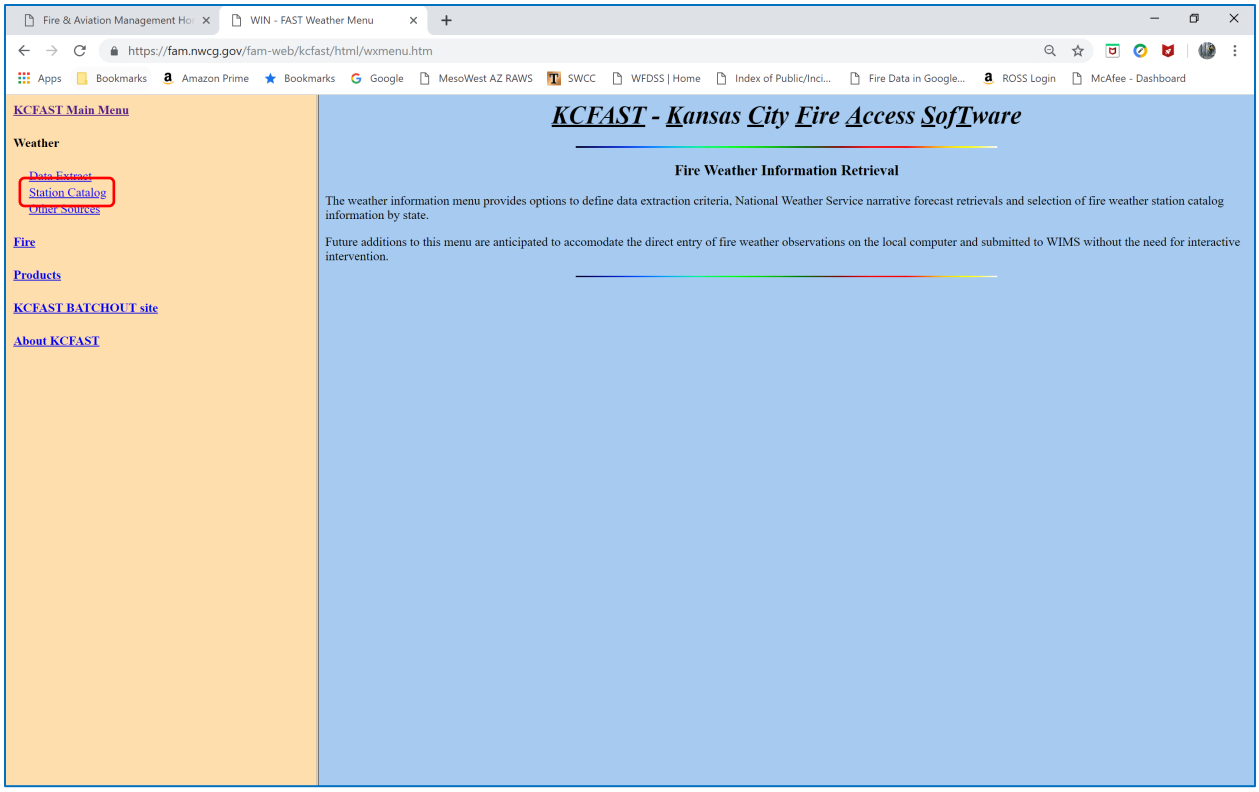
- Station catalog files can only be downloaded individually. Right-click on the station catalog file of interest and select the 'Save link as…' option. Download and save the file to a location on the computer where it can be located later. The user will need to upload the station catalog information into FFP for all of the RAWS the user is working with in their planning area.

2. Downloading Station Catalog Information from KCFAST

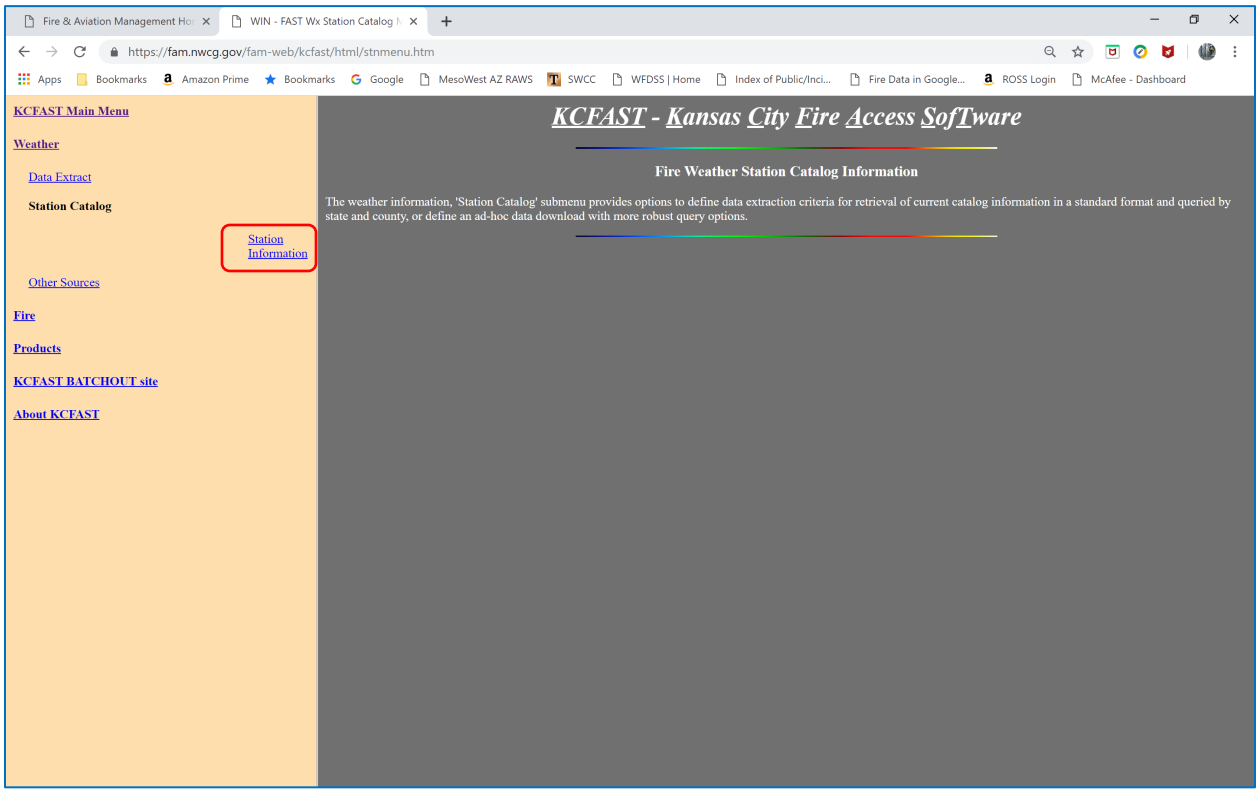
- Open the KCFAST website (https://fam.nwcg.gov/fam-web/kcfast/mnmenu.htm). Note: The KCFAST website can also be accessed through the FAMWEB website. The link is located with the menu items on the left side of the FAMWEB home page. The KCFAST home page will load.
- Select 'Weather' from the menu items on the left side of the home page.



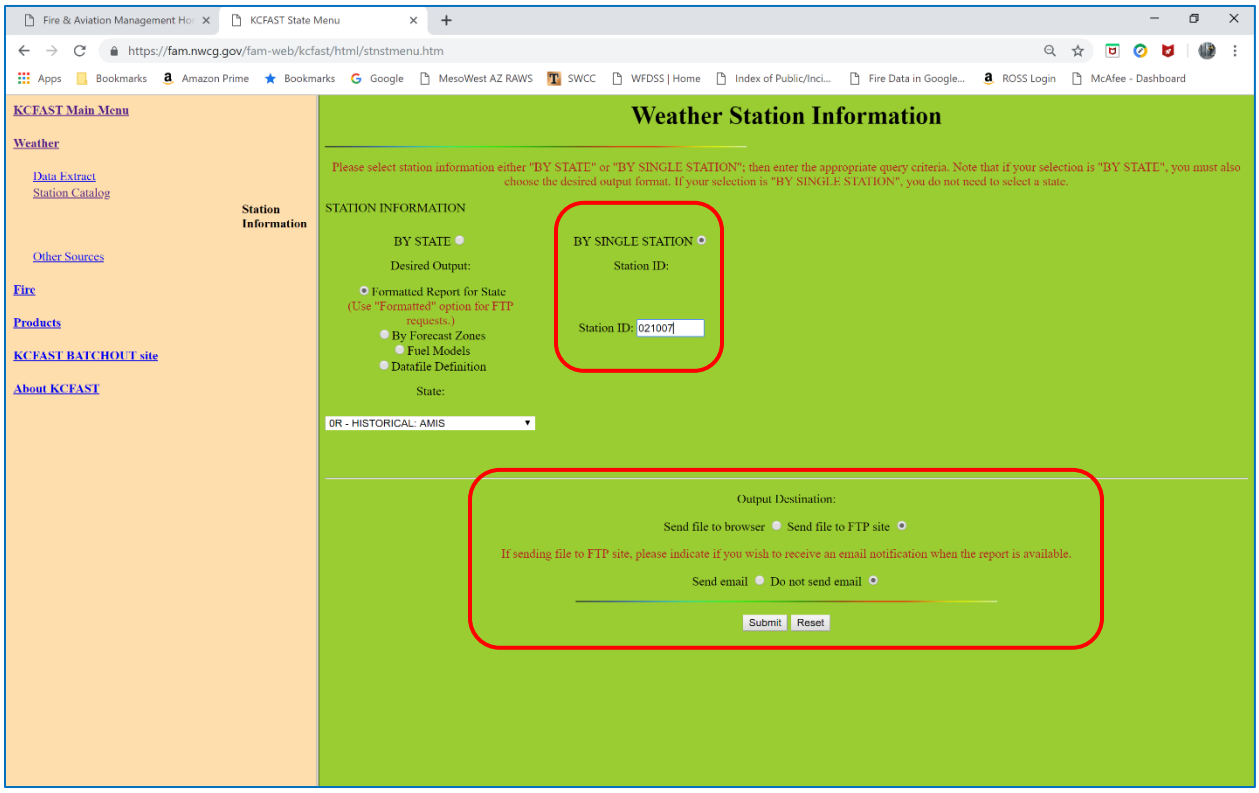
- Select 'Station Catalog' from the menu items on the left side of the page. A new window will open.



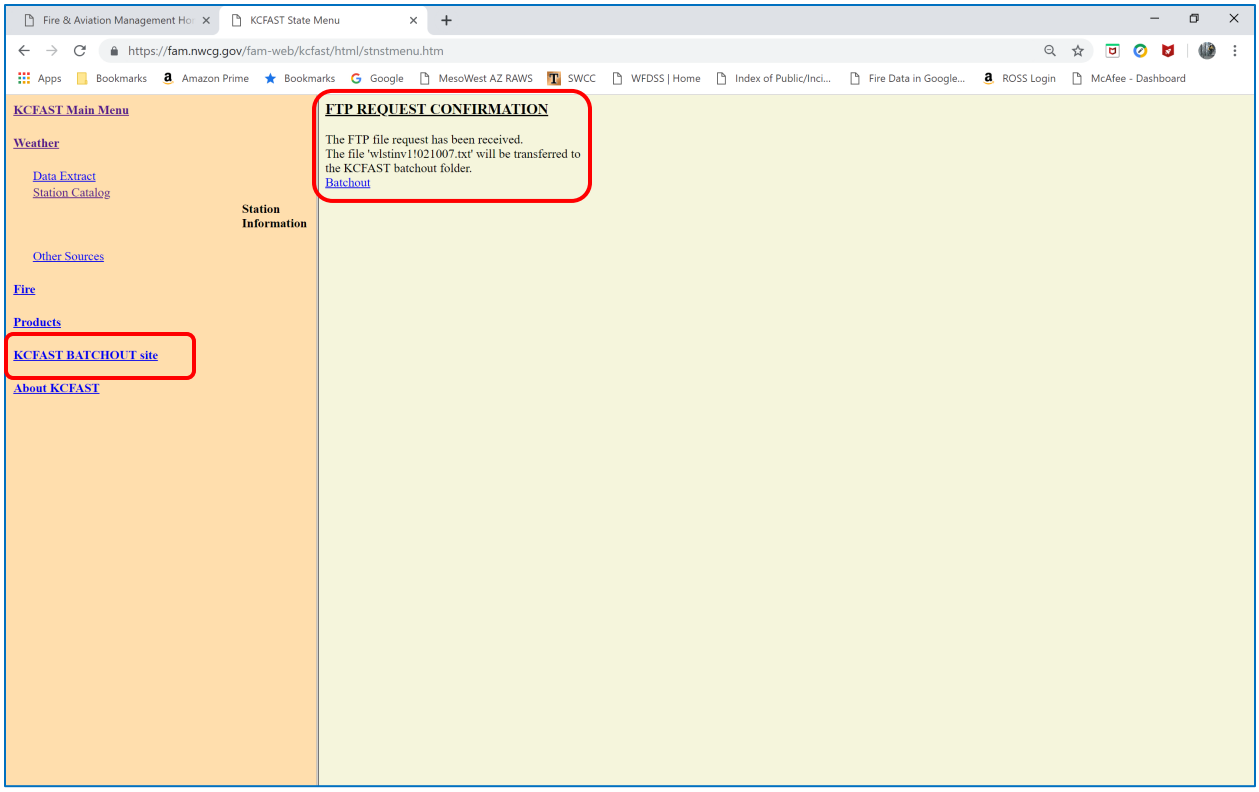
- Select ‘Station Information’ from the menu items on the left side of the page and a new window will open.



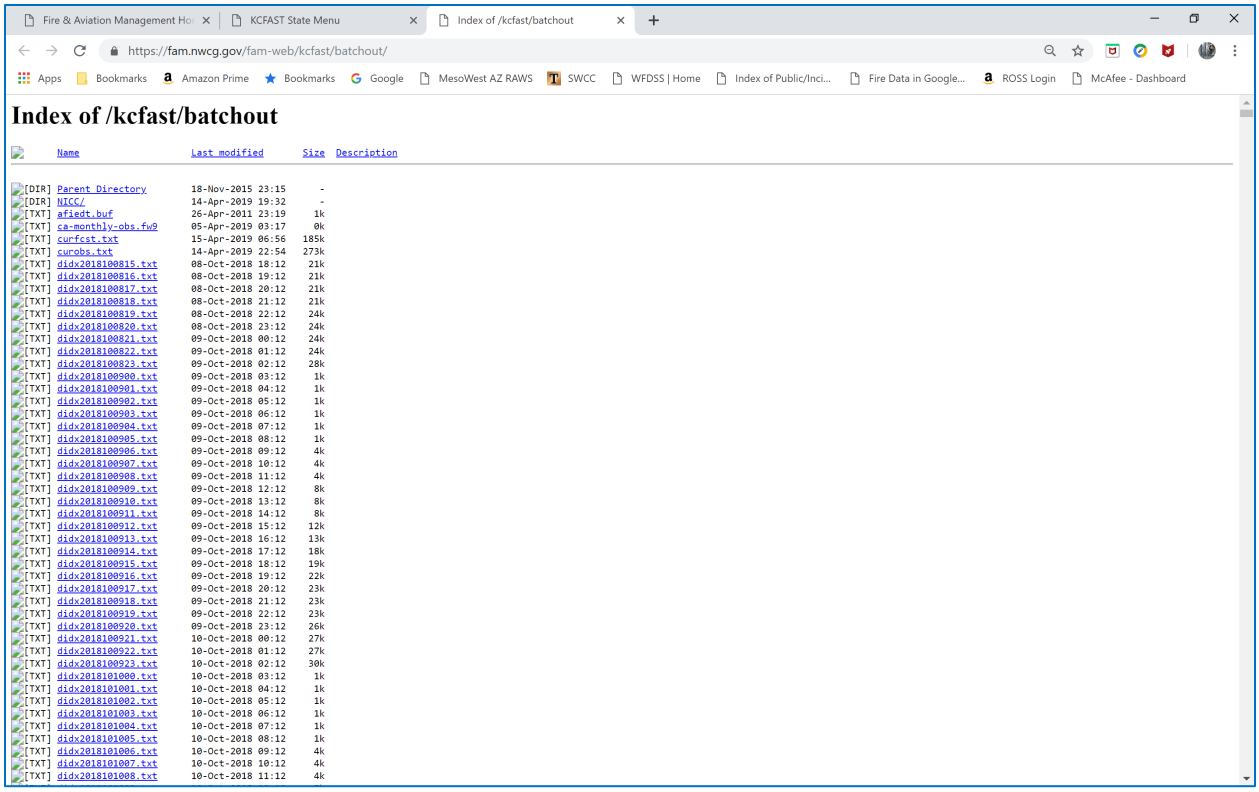
- This window allows the user to select station information either ‘BY STATE’ or ‘BY SINGLE STATION’. This exercise recommends selecting ‘BY SINGLE STATION’.
- Select ‘BY SINGLE STATION’ and enter the Station ID number. This example is requesting station information for station 021007.
- Select ‘Send file to FTP site’.
- When sending the station catalog file to FTP site, the user can indicate if they wish to receive an email notification when the report is available.
- Select ‘Submit’. A new window will appear with a message confirming the information request.



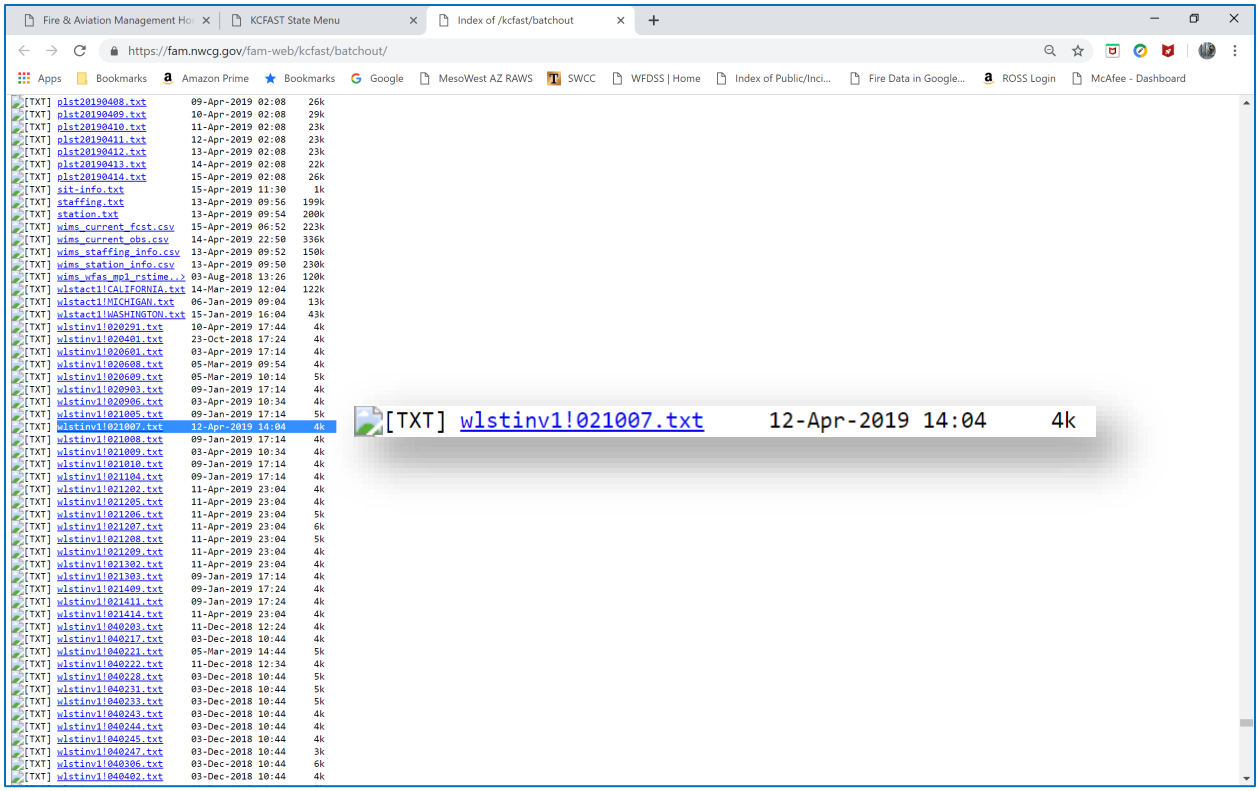
- To access the station information from the FTP site, select ‘KCFAST BATCHOUT site’ from the menu items on the left side of the screen or click on the ‘Batchout’ link in the confirmation message.



- The KCFAST batchout window lists results from all RAWS- and fire data-related information requests made through KCFAST. The requested station information is provided in a .txt file format and uses a specific naming convention. The user will need to scroll down through this extensive list to find their requested information.



- This example requested station catalog information for RAWS 021007. The .txt file is labelled: wlstinv1!021007.txt
- The date, time, and file size are listed to the right of the filename.



- After the user has located the desired file in the list on the batchout site, right-click on the filename and select 'Save link as…'. Save the file to a location where it can be accessed later for import into FFP.
- Follow this process for downloading station catalog information for each RAWS station of interest.

B. Historical Weather Information

NFDRS2016 uses *hourly* weather data versus the legacy NFDRS model which utilizes daily weather data.

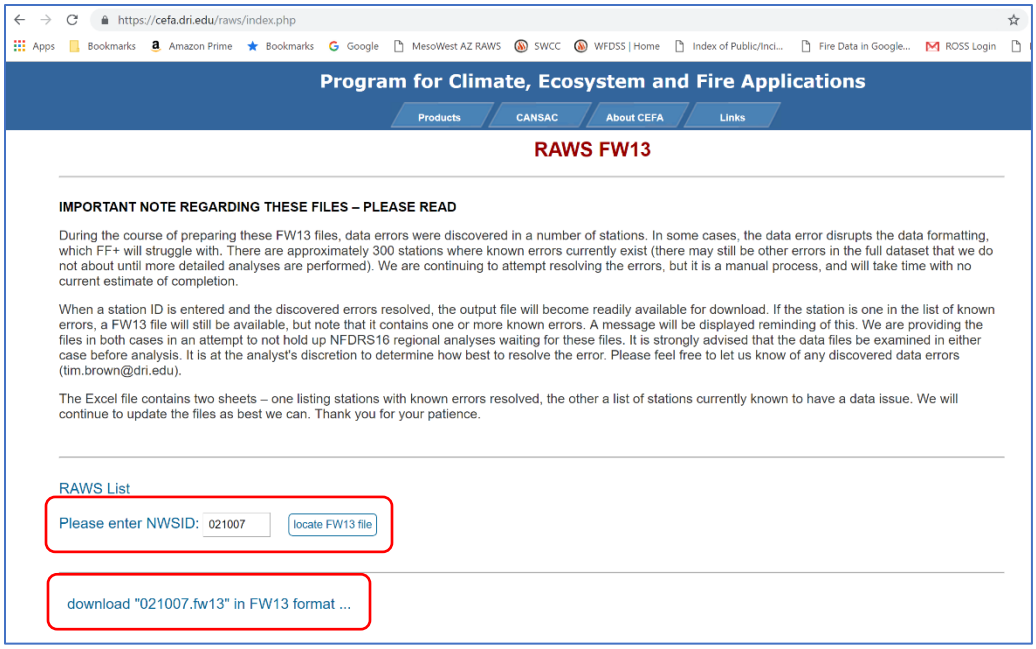
Weather data sources:

3. **Climate, Ecosystem and Fire Applications (CEFA): https://cefa.dri.edu/**

Historical weather data that can be retrieved through the CEFA website is *available for downloading through 2017*. Historical weather data *after* 2017 can be obtained from the KCFAST website. The process for using KCFAST will be presented shortly.

CEFA allows the user to download hourly weather data in two ways:

a) Download FW13 weather data files directly from the CEFA site: https://cefa.dri.edu/➔ Products ➔ CEFA Data ➔ NFDRS2016 RAWS (https://cefa.dri.edu/raws/)



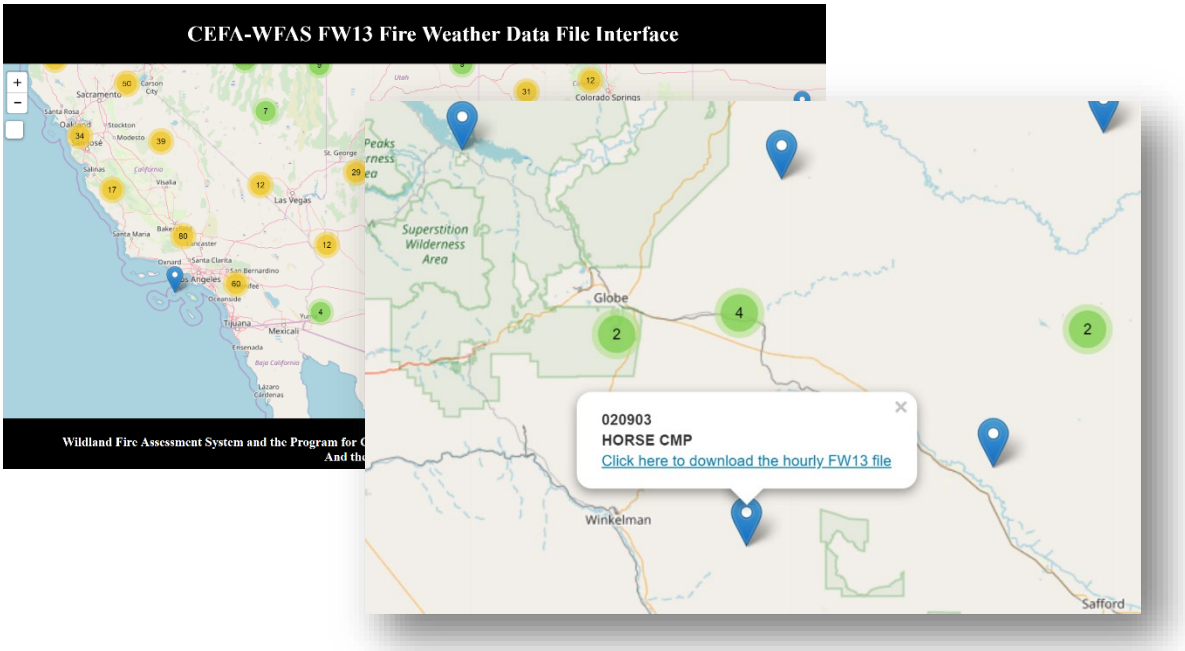
b) Enter the National Weather Service ID (NWSID) – RAWS ID number and click on 'locate FW13 file'

c) Click on 'download "xxxxxx.fw13" in FW13 format…'

1. Store the download file in a location where it can be located later. The user will upload this data into FFP after having collected the hourly data for all of the RAWS associated with the planning area.

4. CEFA-WFAS FW13 Fire Weather Data File Interface (interactive map website): https://www.wfas.net/nfdrs2016/maps/

a) The interactive map allows the user to zoom into their state/planning area, select each RAWS, and download the hourly data.



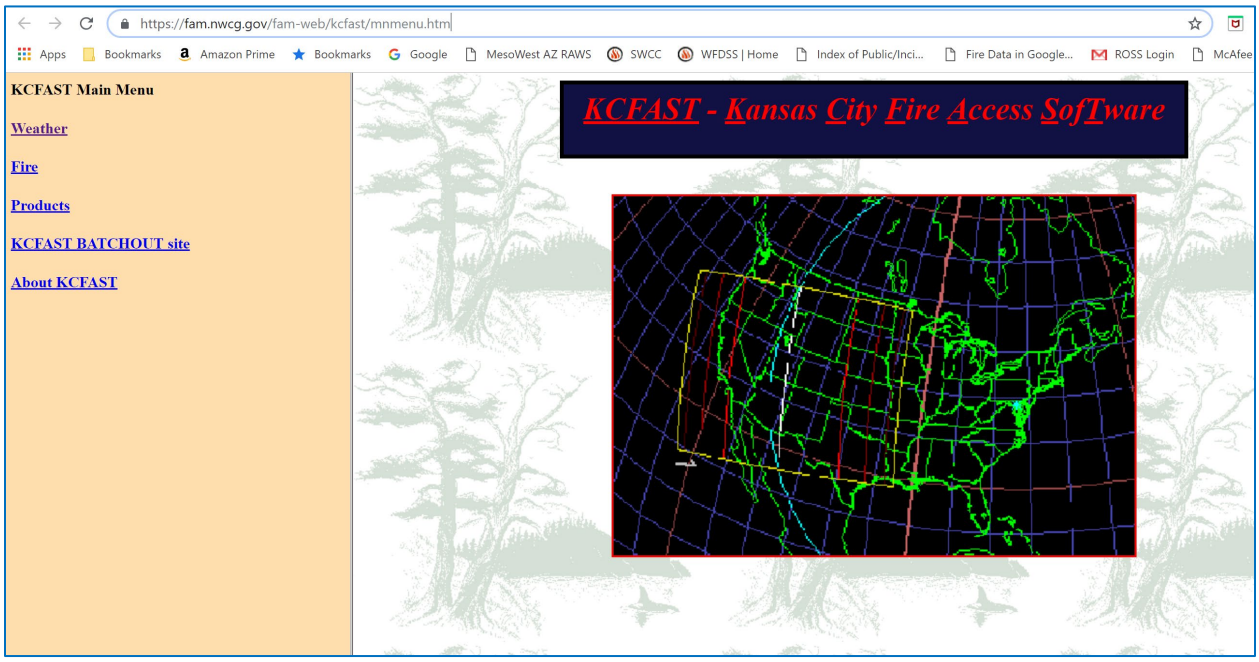
b) Select a RAWS and follow the on-screen instructions to download the hourly fw13 data file. Save the file to a location where it can be found later. The user will upload this data into FFP after having collected the hourly data for all of the RAWS that are associated with the planning area.

5. KCFAST (Kansas City Fire Access SofTware)

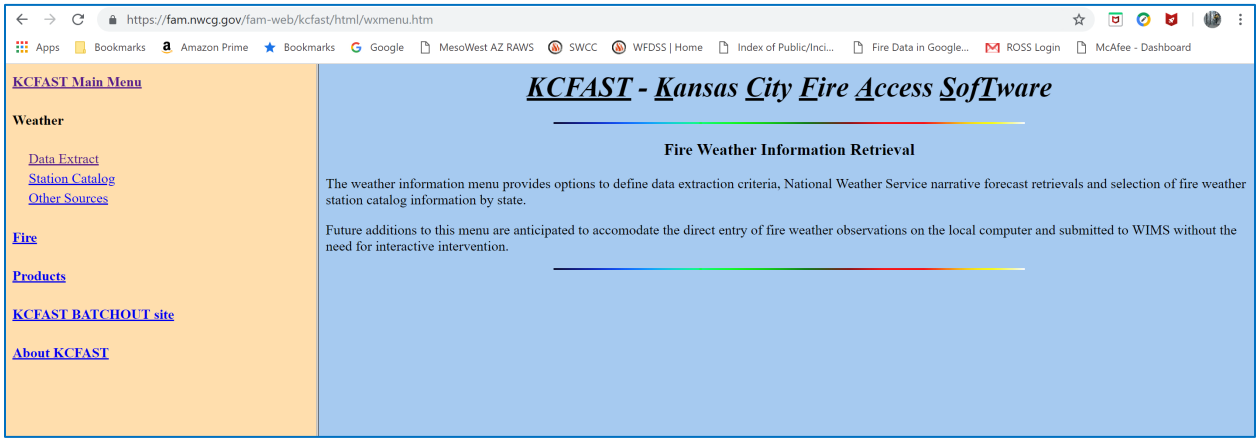
Historical hourly weather data beginning on January 1, 2018 to present can be downloaded through the KCFAST website: https://fam.nwcg.gov/fam-web/kcfast/mnmenu.htm

The KCFAST website can be accessed through FAMWEB (https://fam.nwcg.gov/fam-web/).

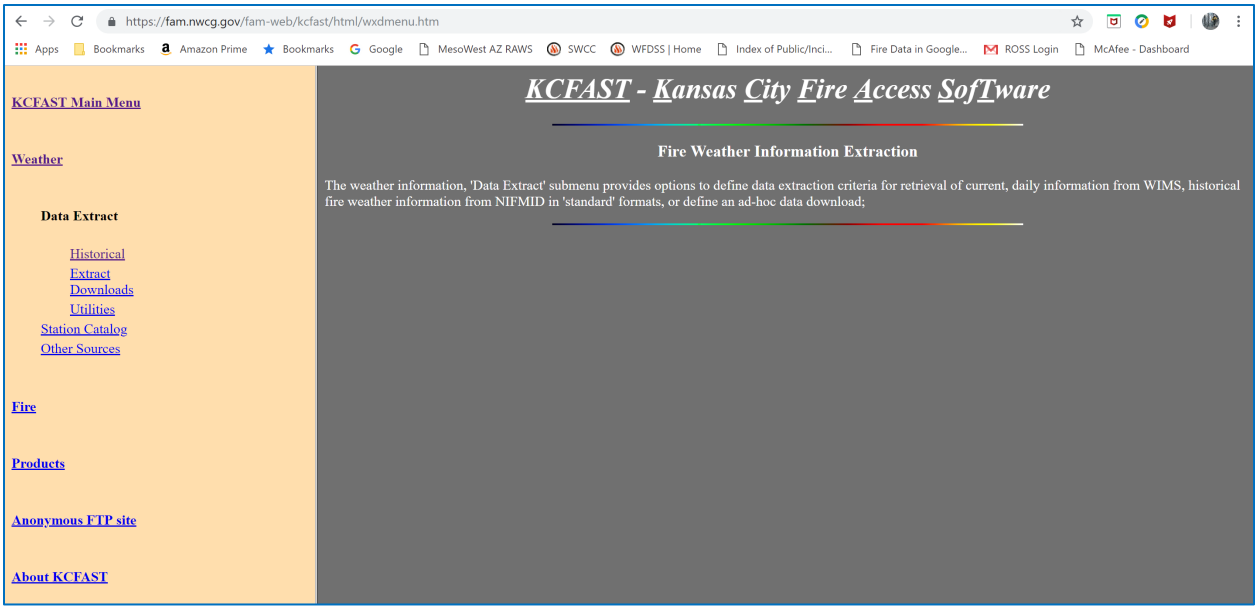
- From the menu items on the left side of the FAMWEB home page select 'KCFAST', a new page will be displayed:



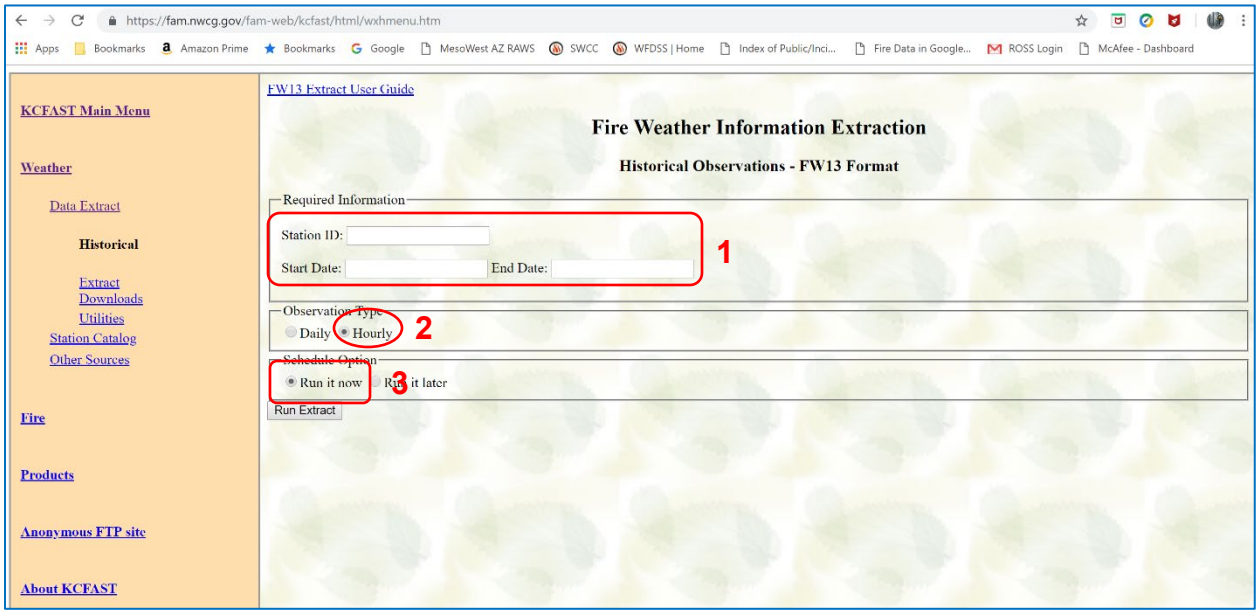
- Select 'Weather' and a new page will be displayed:



- Select 'Data Extract', a new page will be displayed:



- Select ‘Historical’ and a new page will be displayed:



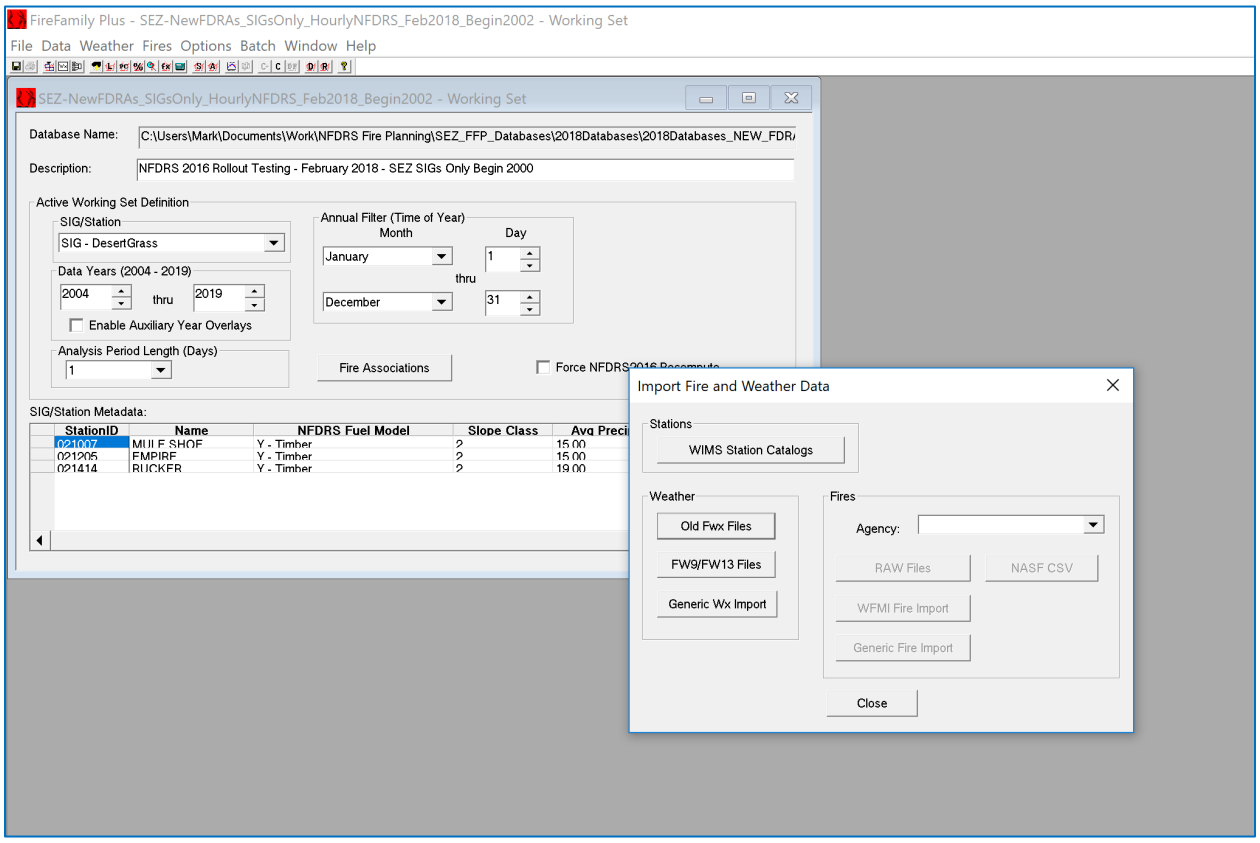
- Enter the applicable Station ID
- Enter the applicable Start and End Dates
- DO NOT FORGET to check the ‘Hourly’ radio button. The default is ‘Daily’…
- Click on ‘Run Extract’
- Save the download file to a location where it can be easily located. The user will upload this data into FFP after having collected the hourly data for all of the RAWS associated with the planning area.

C. Importing Historical Weather Information into FireFamilyPlus

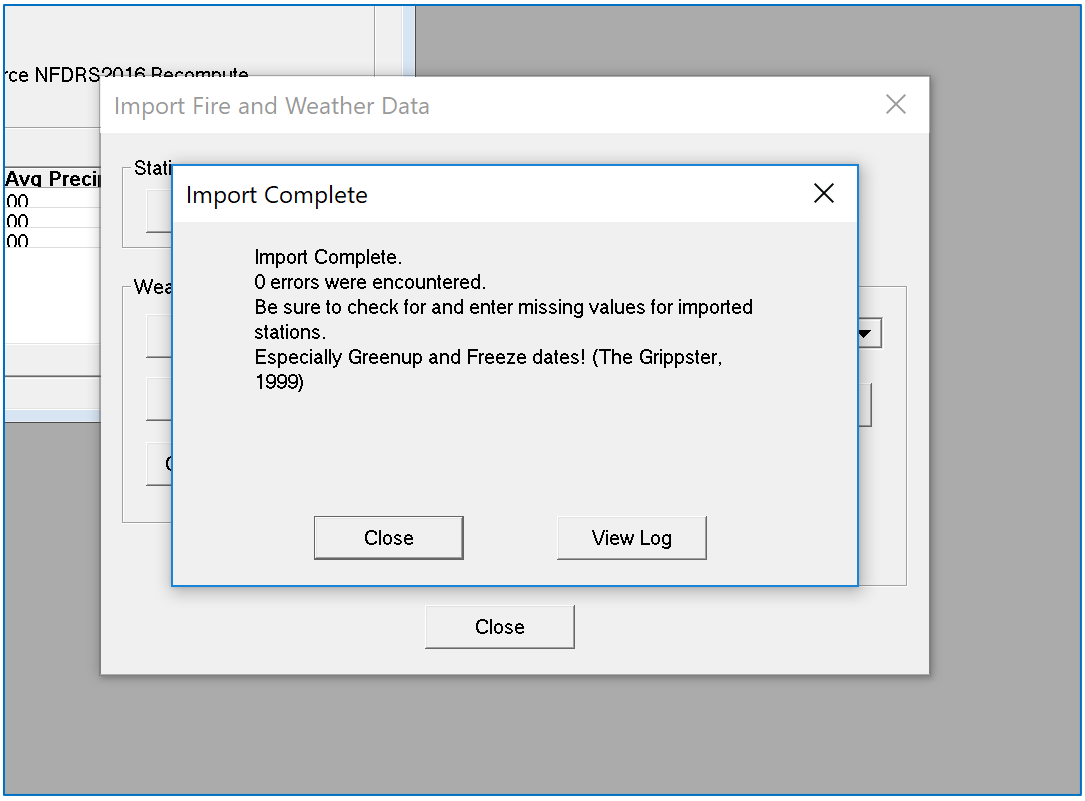
The user should have now downloaded the station catalog, and historical hourly weather data files (.fw13 format) for each RAWS to be used in the analysis process. The next step is to import this weather information into the FFP database.

1. Importing Station Catalog Information into FFP

- Open FFP, make sure to open the new FFP database that was created earlier, and select 'Data' from the menu items at the top of the page. Next, select 'Import…' and the 'Import Fire and Weather Data' window will appear on the screen:

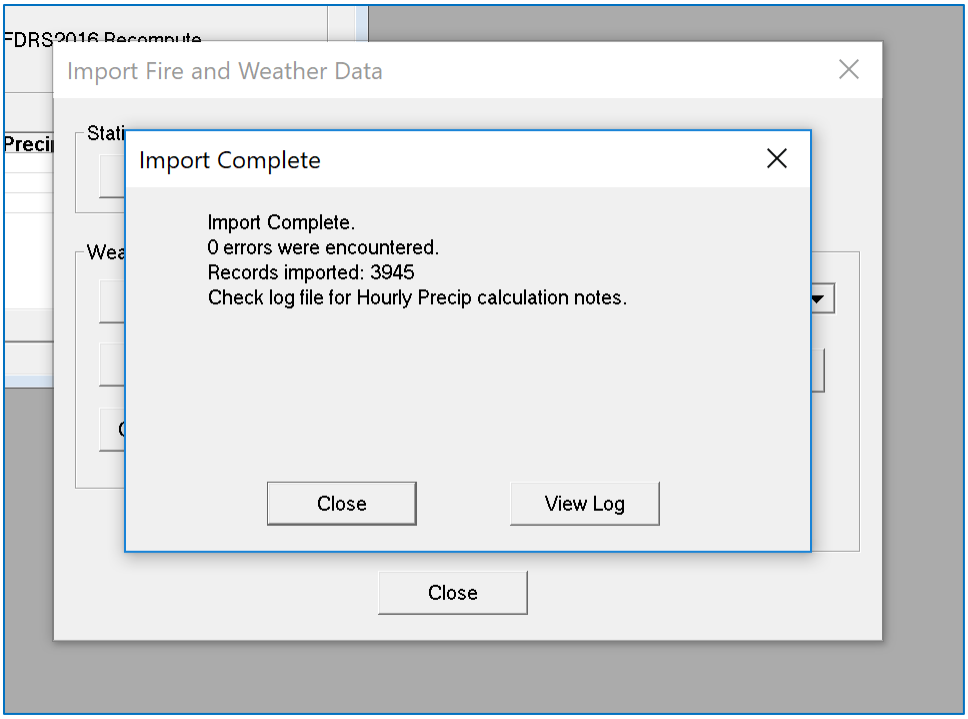


- Click on the 'WIMS Station Catalogs' button. Navigate to the location on the computer where the downloaded station catalog files have been stored. Each file will need to be imported individually. Double-click on a selected station catalog file (e.g. wlstinv1!021007.txt) to import it into the FFP database. A new window will appear letting the user know that the file has finished importing:



2. Importing Historical Hourly Weather Data into FFP

- After importing all of the station catalog files, the FFP database is now ready to accept the hourly weather data for each RAWS.
- Navigate back to the 'Import Fire and Weather Data' window ('Data' ➔ 'Import') and click on the 'FW9/FW13 Files' button.
- Navigate to the location on the computer where the downloaded hourly weather data files (e.g. .fw13 file format) have been stored. Each file for each RAWS will need to be imported individually. Double-click on a selected weather file to import it into the FFP database.
- A new window will appear that states: "*FireFamily Plus can overwrite existing records or disregard import data for existing records. Note: Existing data fields that are NULL will always be updated if import data is not NULL. Should existing records be overwritten?*" Click on the 'Yes' button. A new window will appear after the import is complete:



- Select ‘Close’ if no errors were encountered. If errors were noted, the user can select ‘View Log’ and the program will display any errors found.

Complete the process of importing station catalog and historical hourly weather files for each RAWS that will be considered for analysis in the planning area. Note: RAWS being considered for use in future analysis do not have to be physically located in the study area.