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# FEMS TechNote-2025-09-16-Get Data Manipulation (URL)

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Fire and Aviation Management Staff

**Date:** September 16, 2025  
**System:** FEMS 3.4  
**Subject:** FEMS Get Data Manipulation – Web Services  
**Purpose:** NEW Get Data Manipulation (URL)  
**Contact:** Incident Applications (IIA) Helpdesk  
**E-Mail:** [IIA-Helpdesk@fs.fed.us](mailto:IIA-Helpdesk@fs.fed.us)  
**Phone:** 866-224-7677 or 616-323-1667

**Scope:** FEMS Web Services

<https://fems.fs2c.usda.gov/api/ext-climatology/>

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## Calling the Web Services directly

Users can construct URL strings to directly call the web services without being logged onto FEMS. The sequencing is broken down and examples are listed here:

## Get Data Scripts – Fire Danger (NFDR)

### Data Subject Area

#### Fire Danger (NFDR)

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr>

#### Fuel Models:

A single fuel model or multiple fuel models may be requested. Fuel models will need to be separated by a comma (,).

Examples: [fuelModels=Y](#) or [fuelModels=Y,X](#)

#### Data Set:

Fire Danger Observations: `dataset=observation`

Fire Danger Forecasts: `dataset=forecast`

Fire Danger Observations and Forecasts: `dataset=all`

### **Data Time Frequency:**

**Daily Observations and Forecasts are only available in CSV using LST.**

**Hourly Observations and Forecasts are only available in CSV.**

Daily Average: `-daily-avg/`

Daily Not Averaged: `-daily-summary/`

### **Data Format**

Hourly: `dataFormat=csv`

### **Date Range:**

Date Range: The same time restrictions apply in developing URL scripts that exist in the FEMS Data Download.

**Only 1 station can be selected for requests greater than one year.**

**Up to 10 stations can be selected for requests between 2 weeks and one year.**

**Unlimited stations can be selected for requests less than 2 weeks.**

Includes both date and time:

For Daily Data Sets – the startDate is listed first:

`startDate=2025-08-10&endDate=2025-09-10`

For Hourly Data Sets – The endDate is listed first and needs to include time in Zulu:

`endDate=2025-09-21T23:29:59Z&startDate=2023-09-13T23:30:00Z`

Previous 5 Days and 7-Day Forecast: `presetDate=-5Days7Day`

**Stations:** Data for a single station or a list of stations may be requested. Stations will be listed by station number with a comma (,) between stations.

Examples: `stationIds=101222` or `stationIds=101222,101708`

### **Examples – Fire Danger**

## Fire Danger Observations

### Daily Observations:

- One station, one fuel model, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=observation&startDate=2025-08-10&endDate=2025-09-10&dataFormat=csv&stationIds=101222&fuelModels=Y>

- One station, one fuel model, daily observations, **not** averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=observation&startDate=2025-08-10&endDate=2025-09-10&dataFormat=csv&stationIds=101222&fuelModels=Y>

- Multiple stations, one fuel model, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=observation&startDate=2025-08-14&endDate=2025-09-14&dataFormat=csv&stationIds=101222,101708&fuelModels=Y>

- Multiple stations, one fuel model, daily observations, **not** averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=observation&startDate=2025-08-14&endDate=2025-09-14&dataFormat=csv&stationIds=101222,101708&fuelModels=Y>

- Multiple stations, multiple fuel models, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=observation&startDate=2025-08-14&endDate=2025-09-14&dataFormat=csv&stationIds=101222,101708&fuelModels=Y,X>

- Multiple stations, multiple fuel models, daily observations, **not** averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=observation&startDate=2025-08-14&endDate=2025-09-14&dataFormat=csv&stationIds=101222,101708&fuelModels=Y,X>

### Hourly Observations:

#### URL for Hourly Observations can only be in CSV (UTC)

- One Station, one fuel model, hourly observations:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-12T23:29:59Z&startDate=2025-08-12T23:30:00Z&dataFormat=csv&dataset=observation&fuelModels=Y&dateTimeFormat=UTC>

- One station, multiple fuel models, hourly observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-14T23:29:59Z&startDate=2025-08-14T23:30:00Z&dataFormat=csv&dataset=observation&fuelModels=Y,X&dateTimeFormat=UTC>

- Multiple Stations, one fuel model, hourly observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101708&endDate=2025-09-14T23:29:59Z&startDate=2025-08-14T23:30:00Z&dataFormat=csv&dataset=observation&fuelModels=Y&dateTimeFormat=UTC>

- Multiple Stations, multiple fuel models, hourly observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222,101708&endDate=2025-09-14T23:29:59Z&startDate=2025-08-14T23:30:00Z&dataFormat=csv&dataset=observation&fuelModels=Y,X&dateTimeFormat=UTC>

## **Fire Danger Forecasts:**

Daily Forecasts – 7-Day Forecast (includes current date):

- One station, one fuel model, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=forecast&startDate=2025-09-18&endDate=2025-09-26&dataFormat=csv&stationIds=101222&fuelModels=Y>

- One station, one fuel model, daily observations, not averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=forecast&startDate=2025-09-13&endDate=2025-09-21&dataFormat=csv&stationIds=101222&fuelModels=Y>

- Multiple stations, one fuel model, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=forecast&startDate=2025-09-13&endDate=2025-09-21&dataFormat=csv&stationIds=101222,101708&fuelModels=Y>

- Multiple stations, one fuel model, daily observations, not averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=forecast&startDate=2025-09-13&endDate=2025-09-21&dataFormat=csv&stationIds=101222,101708&fuelModels=Y>

- Multiple stations, multiple fuel models, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=forecast&startDate=2025-09-13&endDate=2025-09-21&dataFormat=csv&stationIds=101222,101708&fuelModels=Y,X>

- Multiple stations, multiple fuel models, daily observations, not averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=forecast&startDate=2025-09-13&endDate=2025-09-21&dataFormat=csv&stationIds=101222,101708&fuelModels=Y,X>

#### Hourly Forecasts:

URL for Hourly Forecasts can only be in CSV (UTC)

- One Station, one fuel model, hourly observations:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-21T23:29:59Z&startDate=2025-09-13T23:30:00Z&dataFormat=csv&dataset=forecast&fuelModels=Y&dateTimeFormat=UTC>

- One station, multiple fuel models, hourly observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-21T23:29:59Z&startDate=2025-09-13T23:30:00Z&dataFormat=csv&dataset=forecast&fuelModels=Y,X&dateTimeFormat=UTC>

- Multiple Stations, one fuel model, hourly observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222,101708&endDate=2025-09-21T23:29:59Z&startDate=2025-09-13T23:30:00Z&dataFormat=csv&dataset=forecast&fuelModels=Y&dateTimeFormat=UTC>

- Multiple Stations, multiple fuel models, hourly observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222,101708&endDate=2025-09-21T23:29:59Z&startDate=2025-09-13T23:30:00Z&dataFormat=csv&dataset=forecast&fuelModels=Y,X&dateTimeFormat=UTC>

#### Fire Danger Observations and Forecasts:

Daily Observations and Forecasts (7-Day Forecast includes current date):

- One station, one fuel model, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=all&startDate=2025-07-31&endDate=2025-09-21&dataFormat=csv&stationIds=101222&fuelModels=Y>

- One station, one fuel model, daily observations, not averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=all&startDate=2025-07-31&endDate=2025-09-21&dataFormat=csv&stationIds=101222&fuelModels=Y>

- One station, one fuel model, daily observations, averaged, using “Previous 5 Days and 7-Day Forecast”.

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=all&presetDate=-5Days7Days&dataFormat=csv&stationIds=101222&fuelModels=Y>

- Multiple stations, one fuel model, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=all&startDate=2025-07-31&endDate=2025-09-21&dataFormat=csv&stationIds=101708&fuelModels=Y>

- Multiple stations, one fuel model, daily observations, not averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=all&startDate=2025-07-31&endDate=2025-09-21&dataFormat=csv&stationIds=101708&fuelModels=Y>

- Multiple stations, multiple fuel models, daily observations, averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-avg/?dataset=all&startDate=2025-07-31&endDate=2025-09-21&dataFormat=csv&stationIds=101708&fuelModels=Y,X>

- Multiple stations, multiple fuel models, daily observations, not averaged:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily-summary/?dataset=all&startDate=2025-07-31&endDate=2025-09-21&dataFormat=csv&stationIds=101708&fuelModels=Y,X>

Date Range: The same time restrictions apply in developing URL scripts that exist in the FEMS Data Download.

**Only 1 station can be selected for requests greater than one year.**

**Up to 10 stations can be selected for requests between 2 weeks and one year.**

**Unlimited stations can be selected for requests less than 2 weeks.**

- One station, two years, two fuel models, daily observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr-daily->

[summary/?dataset=all&startDate=2023-09-22&endDate=2025-09-23&dataFormat=csv&stationIds=101222&fuelModels=Y,X](https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-23&dataFormat=csv&fuelModels=Y,X)

- Two stations, six weeks, multiple fuel models, daily observations, not averaged:  
<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222,101708&endDate=2025-09-19T23:29:59Z&startDate=2025-08-19T23:30:00Z&dataFormat=csv&dataset=observation&fuelModels=Y,X&dateTimeFormat=UTC>

Hourly Observations and Forecasts:

**URL for Hourly Forecasts can only be in CSV (UTC)**

- One Station, one fuel model, hourly observations and forecasts:  
<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-21T23:29:59Z&startDate=2025-08-30T23:30:00Z&dataFormat=csv&dataset=all&fuelModels=Y&dateTimeFormat=UTC>

- One station, multiple fuel models, hourly observations and forecasts:  
<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-21T23:29:59Z&startDate=2025-08-30T23:30:00Z&dataFormat=csv&dataset=all&fuelModels=Y,X&dateTimeFormat=UTC>

- Multiple Stations, one fuel model, hourly observations and forecasts:  
<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222,101708&endDate=2025-09-21T23:29:59Z&startDate=2025-08-30T23:30:00Z&dataFormat=csv&dataset=all&fuelModels=Y&dateTimeFormat=UTC>

- Multiple Stations, multiple fuel models, hourly observations and forecasts:  
<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222,101708&endDate=2025-09-21T23:29:59Z&startDate=2025-08-30T23:30:00Z&dataFormat=csv&dataset=all&fuelModels=Y,X&dateTimeFormat=UTC>

Date Range: The same time restrictions apply in developing URL scripts that exist in the FEMS Data Download.

**Only 1 station can be selected for requests greater than one year.**

**Up to 10 stations can be selected for requests between 2 weeks and one year.**

**Unlimited stations can be selected for requests less than 2 weeks.**

- One station, two years, two fuel models, hourly observations and forecasts:  
<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-21T23:29:59Z&startDate=2025-08-30T23:30:00Z&dataFormat=csv&dataset=all&fuelModels=Y,X&dateTimeFormat=UTC>

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222&endDate=2025-09-21T23:29:59Z&startDate=2023-09-13T23:30:00Z&dataFormat=csv&dataset=all&fuelModels=Y,X&dateTimeFormat=UTC>

- Two stations, six weeks, two fuel models, hourly observations and forecasts:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-nfdr?stationIds=101222,101708&endDate=2025-09-26T23:29:59Z&startDate=2025-08-07T23:30:00Z&dataFormat=csv&dataset=all&fuelModels=Y,X&dateTimeFormat=UTC>

## Get Data Scripts – Weather

### Data Subject Area

#### Weather Observations

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx>

#### Data Set:

Weather Observation: [dataset=observation](#)

Weather Forecast: [dataset=forecast](#)

Weather Observation and Appended Forecast: [dataset=all](#)

#### Data Time Frequency:

Daily: [daily-summary](#)

Hourly: [dataIncrement=hourly](#)

#### Data Format:

CSV: [dataFormat=csv](#)

FW21: only available for **Single Station**, Hourly Observations: [dataFormat=fw21](#)

#### Date Range:

Date Range: The same time restrictions apply in developing URL scripts that exist in the FEMS Data Download.

**Only 1 station can be selected for requests greater than one year.**

**Up to 10 stations can be selected for requests between 2 weeks and one year.**

**Unlimited stations can be selected for requests less than 2 weeks.**

Daily Data Sets: `startDate=2025-09-02&endDate=2025-09-16`

Hourly Data Sets – Needs to include time in Zulu: `startDate=2025-09-01T23:30:00Z&endDate=2025-09-16T23:29:59Z`

Previous 5 Days and 7-Day Forecast: `presetDate=-5Days7Days`

**Stations:** Data for a single station or a list of stations may be requested. Stations will be listed by station number with a comma (,) between stations.

Examples: `stationIds=102712` or `stationIds=102712,101710`

## Examples – Weather

### Weather Observations

Daily Observations:

- One station, daily observations:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx-daily-summary/?stationIds=102712&startDate=2025-09-02&endDate=2025-09-16&dataset=observation&dataFormat=csv>

- Multiple stations, daily observations:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx-daily-summary/?stationIds=102712,101710&startDate=2025-09-02&endDate=2025-09-16&dataset=observation&dataFormat=csv>

Hourly Observations:

- One station, hourly observations, FW21:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2025-09-01T23:30:00Z&endDate=2025-09-16T23:29:59Z&dataset=observation&dataFormat=fw21&dataIncrement=hourly>

- One station, hourly observations, CSV:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2025-09-01T23:30:00Z&endDate=2025-09-16T23:29:59Z&dataset=observation&dataFormat=csv&dataIncrement=hourly>

- Multiple stations, hourly observations, CSV:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712,101710&startDate=2025-09-01T23:30:00Z&endDate=2025-09-16T23:29:59Z&dataset=observation&dataFormat=csv&dataIncrement=hourly>

Date Range: Date Range: The same time restrictions apply in developing URL scripts that exist in the FEMS Data Download.

**Only 1 station can be selected for requests greater than one year.**

**Up to 10 stations can be selected for requests between 2 weeks and one year.**

**Unlimited stations can be selected for requests less than 2 weeks.**

- One station, two years, hourly observations, FW21:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2023-09-16T23:30:00Z&endDate=2025-09-17T23:29:59Z&dataset=observation&dataFormat=fw21&dataIncrement=hourly>

## Weather Forecasts

Daily Forecasts:

- One station, daily forecasts:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx-daily-summary/?stationIds=102712&startDate=2025-09-16&endDate=2025-09-23&dataset=forecast&dataFormat=csv>

- Multiple stations, daily forecasts:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx-daily-summary/?stationIds=102712,101710&startDate=2025-09-16&endDate=2025-09-23&dataset=forecast&dataFormat=csv>

Hourly Forecasts:

- One station, hourly forecast, FW21:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2025-09-15T23:30:00Z&endDate=2025-09-23T23:29:59Z&dataset=forecast&dataFormat=fw21&dataIncrement=hourly>

- One station, hourly forecast, CSV:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2025-09-15T23:30:00Z&endDate=2025-09-23T23:29:59Z&dataset=forecast&dataFormat=csv&dataIncrement=hourly>

- Multiple stations, hourly forecasts, CSV:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712,101710&startDate=2025-09-15T23:30:00Z&endDate=2025-09-23T23:29:59Z&dataset=forecast&dataFormat=csv&dataIncrement=hourly>

## **Weather Observation and Appended Forecast:**

### Daily Forecasts:

- One station, daily observations and appended forecasts:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx-daily-summary/?stationIds=102712&startDate=2025-09-02&endDate=2025-09-23&dataset=all&dataFormat=csv>

- One station, daily observations and appended forecasts, using “Previous 5 Days and 7-Day Forecast”

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx-daily-summary/?stationIds=102712&presetDate=-5Days7Days&dataset=all&dataFormat=csv>

- Multiple stations, daily observations and appended forecasts:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-wx-daily-summary/?stationIds=102712,101710&startDate=2025-09-02&endDate=2025-09-23&dataset=all&dataFormat=csv>

### Hourly Forecasts:

- One station, hourly observations and appended forecasts, FW21:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2025-09-10T23:30:00Z&endDate=2025-09-23T23:29:59Z&dataset=all&dataFormat=fw21&dataIncrement=hourly>

- One station, hourly observations and appended forecasts, CSV:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2025-09-10T23:30:00Z&endDate=2025-09-23T23:29:59Z&dataset=all&dataFormat=csv&dataIncrement=hourly>

- One station, hourly observations and appended forecasts, CSV, using “Previous 5 Days and 7-Day Forecast:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&presetDate=-5Days7Days&dataset=all&dataFormat=csv&dataIncrement=hourly>

- Multiple stations, hourly observations and appended forecasts, CSV:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712,101710&startDate=2025-09-01T23:30:00Z&endDate=2025-09-23T23:29:59Z&dataset=all&dataFormat=csv&dataIncrement=hourly>

Date Range: Date Range: The same time restrictions apply in developing URL scripts that exist in the FEMS Data Download.

**Only 1 station can be selected for requests greater than one year.**

**Up to 10 stations can be selected for requests between 2 weeks and one year.**

**Unlimited stations can be selected for requests less than 2 weeks.**

- One station, two years, hourly observations and appended forecasts, FW21:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=102712&startDate=2023-09-16T23:30:00Z&endDate=2025-09-24T23:29:59Z&dataset=all&dataFormat=fw21&dataIncrement=hourly>

Multiple stations, six weeks, hourly observations and appended forecasts, CSV:

<https://fems.fs2c.usda.gov/api/ext-climatology/download-weather?stationIds=101222,101708&startDate=2025-08-07T23:30:00Z&endDate=2025-09-26T23:29:59Z&dataset=all&dataFormat=csv&dataIncrement=hourly>