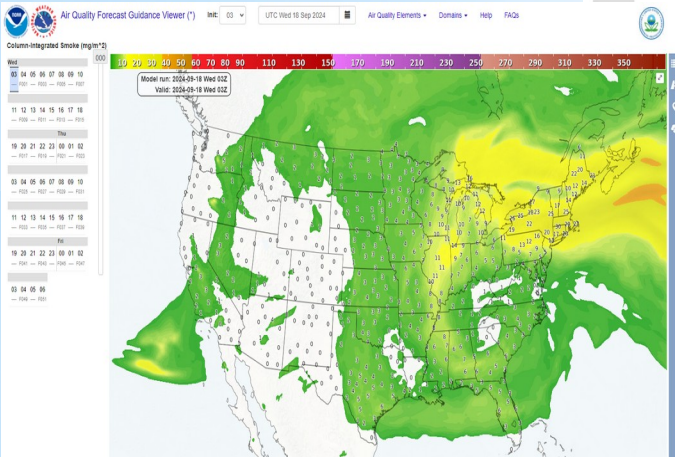
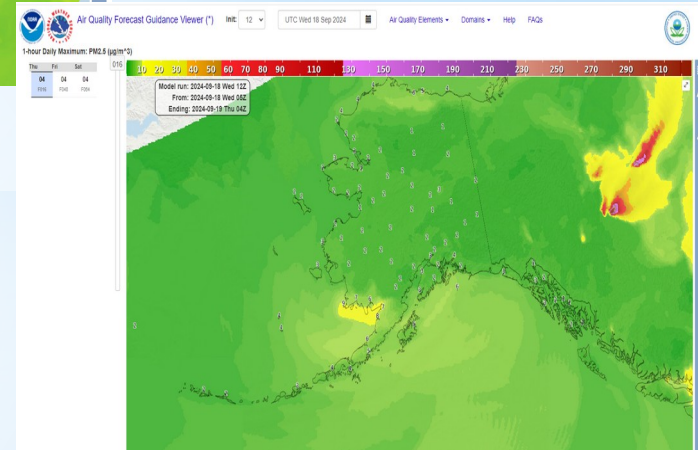
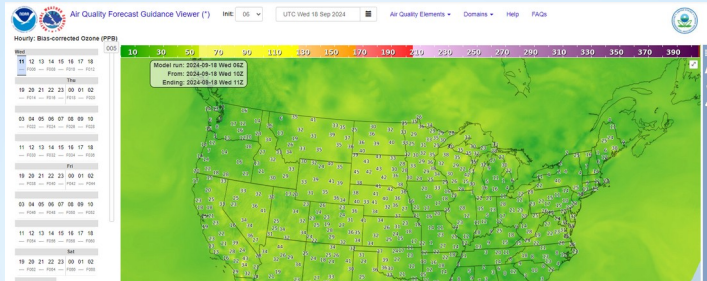


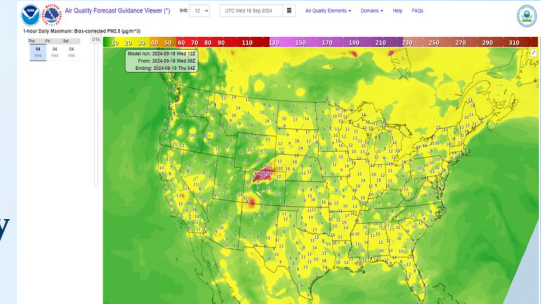
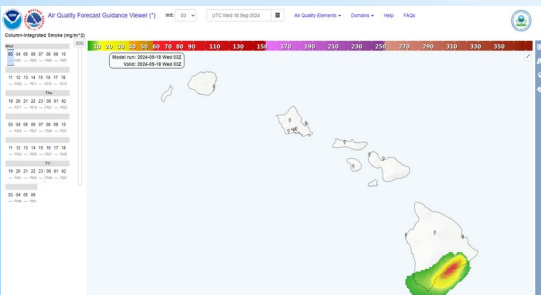
# Display of NOAA's Air Quality Forecast Guidance

<https://airquality.weather.gov/>



**Air Quality Forecaster Focus Group Workshop  
October 2024**

**David Miller  
NWS Meteorological Development Laboratory**



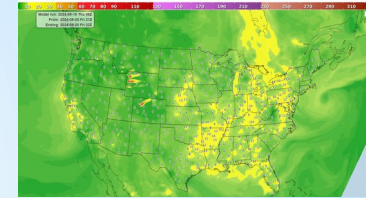
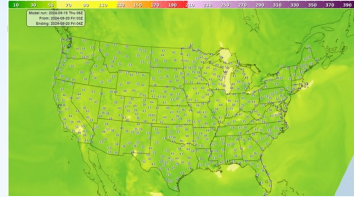
# AQFG Display on the Web via Amazon Web Services (AWS) Moved to Operations

- \* - The prototype version of the Air Quality Forecast Guidance web display on Amazon Web Services (AWS) became operational March 2024 and took the place of the old display at <https://airquality.weather.gov>.
- \* - As listed in previous years, the AQFG web page features:
  - \* -- Zoom, roam, and data value display via mouse over
  - \* -- Faster data refresh
  - \* -- Point information display via mouse click, latitude/longitude entry, or location name
  - \* -- Download AQFG values at select state locations in text table format

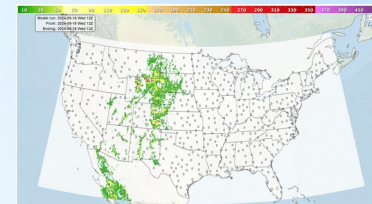
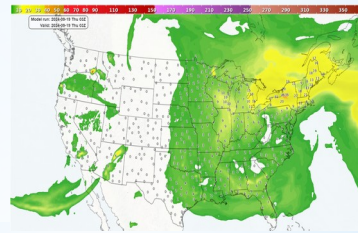
# Air Quality Forecast Guidance Images on the Web

(<https://airquality.weather.gov/>)

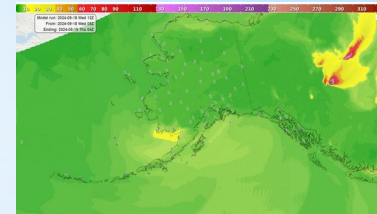
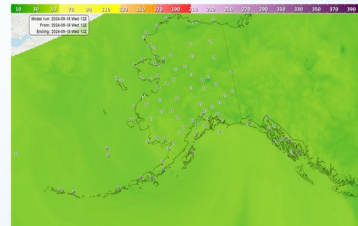
Ozone & PM2.5



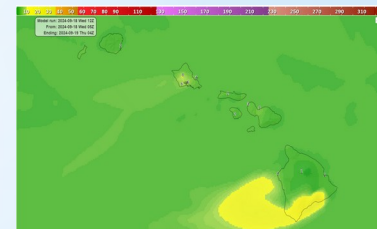
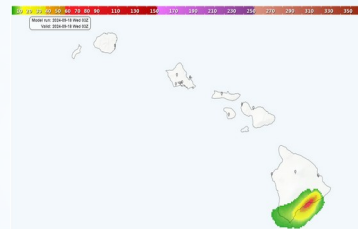
Smoke & Dust



Alaska



Hawaii





# AWS AQFG Display Products:

- \* 1hr/8hr Average Ozone, Raw and Bias-corrected
- \* Daily Maximum 1hr/8hr Ozone, Raw and Bias-corrected
- \* 1hr Average/Daily Max/Daily 24-hour Average PM 2.5, Raw and Bias-corrected
- \* Surface/Lowest 5km Dust Concentration
- \* Near-Surface/Column-Integrated Smoke (from RAP model)
- \* Three domains: CONUS, Alaska, Hawaii
- \* Cycle times 06Z and 12Z, except Smoke 03Z

Note: Bias-corrected and Dust are CONUS only

# Text AQ Forecast Guidance and MDL's "degrib" Program

- \* With the NCEP's supercomputer upgrade back in 2022, EMC was unable to continue producing AQ Forecast Guidance text products at locations for several state AQ agencies
- \* Two solutions:
  - \* MDL's degrib program can provide AQ forecast guidance output in text/csv format from GRIB files for a given latitude/longitude. Training presentation is available.
  - \* Text AQ forecast guidance tables for a few states that had requested such support are available for download via the AWS AQ

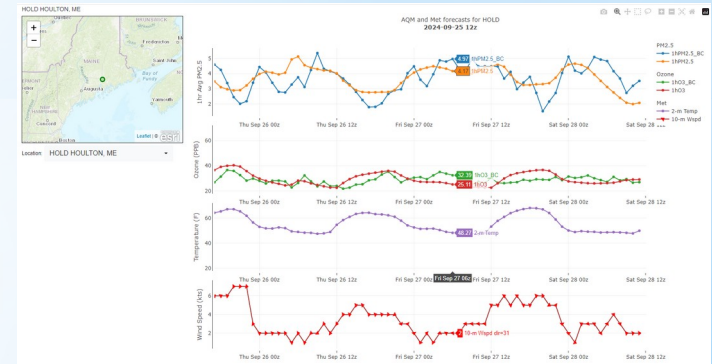
**Demos:**

**<https://airquality.weather.gov/>**

**Contours/Wind barbs on Map Display  
and AQ Point Visualization**

# AWS AQFG Web Page Display Future Changes/Possibilities

- Color curves (feedback needed)
  - Display highlighted contours of additional fields such as NO<sub>2</sub>, NO, Temperature, etc. (Presently prototyping this capability)
  - Display pertinent weather forecast guidance values (overlay or comparison view, could be worked into contouring)
  - Download AQFG grid values at any location (enhancement to table)
  - Image download
  - Highlight AQ guidance point values beyond a threshold or thresholds
- 
- D Point visualizations (prototyping)
- 
- D visualizations (highly dependent on data availability)



# Air Quality Forecast Guidance Data

## ❖ **Access:** Air Quality Forecast Guidance Displays:

<https://airquality.weather.gov/>

## ❖ **GRIB2 Data Download:**

### **Real time:**

<https://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.aq/AR.conuS>

<https://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.aq/AR.alaska>

<https://tgftp.nws.noaa.gov/SL.us008001/ST.opnl/DF.gr2/DC.ndgd/GT.aq/AR.hawaii>

<https://tgftp.nws.noaa.gov/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.aq/AR.conus>

**(when data is available)**

### **Archived:**

<https://www.ncei.noaa.gov/products/weather-climate-models/national-digital-guidance-database>

## ❖ **Web Questions, Suggestions:**