Cheat Sheet with Links for AIRPACT5 Forecast Guidance:

Questions and resources for addressing them.

Contents

(What other questions should be asked here?)

Q1: What is the regional forecast picture?

A1: See AIRPACT Homepage: AIRPACT5 Homepage

Q2: Are pollutant values forecast to be significant?

A2a: Animations for map views:

AIRPACT5 Map View Animations

LAYERS | ▶ Species & Radio Button=<Pollutant>

> Click on The LAYERS tab to exhibit or to hide sub-menus.
>
> Click on triangle ▶ to open a sub-menu, which then shows ▼ . Then select a Radio Button.
>
> Note: Clicking on ▼ does not close a sub-menu. Click on another ▶ to close one and open another, or Click LAYERS tab to hide all.

A2b: Animations for PM2.5 for Smoke during wildfire season:

AIRPACT5 Map View Smoke Animation

Also see:

- NWCC fire intelligence
- Today's imagery from NASA, GOES, and HMS.

A2c: Animations for PM2.5 for RWC season:

AIRPACT5 Map View Smoke Animation

or

AIRPACT5 Map View Animations

LAYERS | ▸ Species & Radio Button=PM2.5
LAYERS | ▸ Meteorology & Radio Button = Ventilation Index
(computed as VI [m2/s] = (mid-layer_1 winds for grid cell) * PBL HT) .
Or look at WRF Ventilation Index: UW Mesoscale Forecasting and Observations
See WRF-GFS products.

A2d: Animations for Ozone season::
AIRPACT5 Map View Animations
LAYERS | ▸ Species & Radio Button=ozone
LAYERS | ▸ Meteorology & Radio Button=ventilation index.
See Q7 asking "Does transport aloft seem to be a significant?"

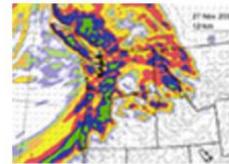## Q3: What are the dominant wind patterns affecting an area of concern?

A3: Animations for map views:
AIRPACT5 Map View Animations
LAYERS | ▸ Meteorology & Radio Button=Surface Wind
Or:
On the LHS, Graphics Products, and
Scroll down to Other Related Graphics and select UW
WRF: UW Mesoscale Forecasting and Observations
See WRF-GFS products.

UW WRF

Q4: Do winds and/or flows suggest area of concern is affected by inflow of boundary conditions?

A4: Boundary Condition Curtain Plots:
BCON Curtains.
Also see imagery of WACCM forecast (used for AIRPACT boundary conditions).
And: See Q7 asking "Does transport aloft seem to be significant?"

Q5: How accurately has AIRPACT been forecasting for local monitoring stations?

A5a: Performance Plots (2020) via AIRNow Reported Monitor Site Pins:
AIRPACT5 Map View Animations
LAYERS | ▸ Species & Radio Button=<Pollutant> for inspection of current forecast.
and

LAYERS | ▸ Misc Overlays & click AIRNow Sites
Click pin for local monitor on Google Earth map
Wait for requested AIRPACT and AIRNow chart.
(Optionally, click in upper right of popup window -- "To open in a new tab, click here."
(Optionally, adjust date range.)
(Optionally, click Download Data button and specify file location and name.)

A5b: Performance Plots (2020) via AIRPACT Performance:
      On the RHS, AIRPACT performance
      Under AIRPACT Hourly Comparisons, select AIRPACT5: 2020.
      In 2020 AIRPACT-5 vs AIRNow Performance specify:
            Pollutant, State or Province, Monitor Station, Date Range.
            (N.B. Loading on green banner during sometimes slow loading.)
      Scroll down to see AIRPACT vs. AIRNow (as available) time series for:
            O3 PM2.5 CO NOx SO2 PM10
      (Optionally, click Download Data button and specify file location and name.)

Q6: How well does AIRPACT forecast for this location at this time of year?

A6: Performance Statistics by Month (2020) per Site:
      On the RHS, AIRPACT performance
      Under AIRPACT Monthly Statistics, select AIRPACT5: 2020.
      (N.B. Loading on green banner during sometimes slow loading.)

Q7: Does transport aloft seem to be a significant feature in this forecast?

A7: Curtain Plots show Animated Transects of Transport Aloft:
On Homepage, in LHS Upper Links, click Graphics Products:
      Then click on Curtain Plots (the 8th item) for Animated Curtain Plots.
                Select: CO OZONE PM2.5
                Select Transect: E-W or S-N, and click submit.

- East to West is along the Washington-Oregon Border and South to North is along the Washington and Oregon Borders with Idaho
- Other curtain plots could be coded up and made available here; requests are welcome!

Q8: (NEW) Kalman Filter Bias Correction for 24-hr PM2.5:
      Kalman Filter Bias, Linear Kiriged, Corrected 24-hr PM2.5.
      (KFBC is not yet available as a link on the AIRPACT5 homepage.
      KFBC results are not yet available in performance charts or statistics.)
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