

JEPB Air Quality Branch Briefing

June 2026

Air Committee Meeting

There was no committee meeting last month.

Personnel

The Air Quality Branch currently has the following vacancies: none.

Funding

- DHS grant (BioWatch – known as MDS for COJ) – grant awarded for period of Jan 28 to July 31, 2026. COJ is working on revising the draft contract with Tetra Tech.

Response Group

The following are the service requests received through the MyJax system last month:

Air General complaints = 5

Noise = 42

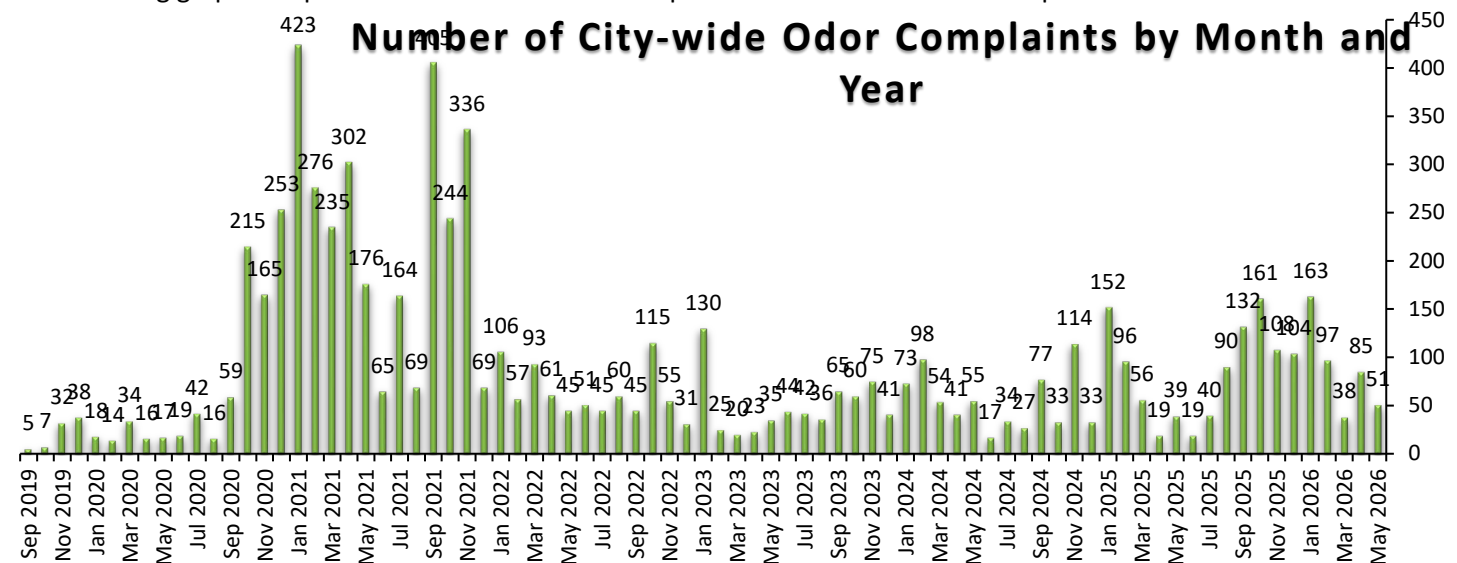
Odor = 51, validated: IFF 2, Symrise 1

Open Burning Complaints = 23

Open Burning Permit Requests = 6

Open Burning Permits issued = 0

The following graph compares the number of odor complaints for each month since September 2019.



Compliance Group

Compliance inspections for last month = 4

Compliance test observations for last month = 0

Compliance test and periodic reports reviewed last month = 11

Asbestos notifications received last month = 31

Asbestos inspections for last month = 16

Ambient Air Monitoring Group

Air monitoring sites:

Mandarin: This site does not meet siting criteria due to the height of trees in the prominent wind direction. This does not invalidate data. Several trees were removed but one that was intended to be removed could not due to a boat in the

way at the adjacent boat storage yard. When one of the trees was removed it revealed trees behind it that now cause the site to not meet siting criteria. One of the trees is on private property in the boat storage yard. We are evaluating next steps.

AQI report (attached):

One day in May reached the AQI rating of unhealthy. That value was 158 and was caused by the South Canal wildfire smoke. An exceedance of the 24-hour National Ambient Air Quality Standard occurred on this day at 3 sites: Kooker Park, Sunny Acres and Sheffield Elementary. Air quality for the rest of the month was in the good or moderate range.

Completeness (attached):

All ozone monitors reported greater than 98% for the month of May. Sheffield PM 2.5 reported 72% completeness and all other monitors in the COJ network reported greater than the 75% requirement for the month. Sheffield Elementary is expected to meet its quarterly requirement of 75%. The SO2 5-minute data at Kooker Park will be uploaded as part of the data validation process and will be consistent with previous months.

Open Variances

FaverGray (Amb Garage)	Variance approved March 2025 and is in place through October 2026	
FaverGray (Gateway Jax N11)	Variance approved March 2025 and is in place through October 2026	
Fansler	Variance approved in January 2025 and is in place through February 2027	
FaverGray (Gateway Jax N4)	Variance approved June 2025 and is in place through July 2027	
JEA	Variance approved in January 2026 and is in place through March 2028	
Brasfield & Gorrie	Variance approved in October 2025 and is in place through November 2028	
Jacksonville Center for Endoscopy	Nighttime Dumpster Permit	expired
Residences at Barnett	Nighttime Dumpster Permit	expired

Mobile Air Monitoring Project

The main mobile air monitoring instrument, a Syft i3 mass spectrometer, was received on 9/30/2025 and installed temporarily in an office pending purchase and buildout of our GMAP van. Since the van purchase and buildout of the van will take months, we plan to operate the i3 in the office to learn the instrument, develop the analytical methods for each type of anticipated mobile survey, and develop some preliminary data. The office lab setup includes a specially engineered exhaust filter to allow exhausting the instrument indoors (received), 208V power to the office (done), purchase of nitrogen (received), instrument rack (received), tubing and fittings (received), analytical standards dilution system pass through exhaust (done). During this interim period, we will collect samples in 6-liter silica-lined canisters that we have from our past air toxics program.

Major tasks left to do to start performing mobile surveys:

- Design the mobile sample collection manifold and test in the office lab. We have a preliminary design that we will build in the lab for testing.
- Have COJ Fleet purchase van – ordered.
- Procure (bid) the buildout of the van – working on specification.
- Submit Quality Assurance Project Plan (QAPP) to EPA for approval. Approval must be received before usable data can be collected (required due to partial funding by EPA grant). We have a draft QAPP and will finalize it once the van sample collection design is complete (part of the QAPP) and how we are going to plan survey routes (might be part of QAPP).

Potential changes to project budget:

- The Syft i3 was purchased (\$246,449.70 including engineered exhaust filter) using EPA grant funds. With the Syft i3 being paid out of the EPA grant, we will be re-evaluating the JEPB funding budget and likely moving funds between categories, such as shifting funds from Specialized Equipment to Part Time Salaries and Professional

Services. Details will follow in subsequent status reports. We are waiting until we have the cost of the van buildout.

- A request was submitted to EPA to allow us to purchase some auxiliary equipment using the remaining EPA grant funds – approved.

[illegible]

Site: L0310098 Parameter: PM10C Interval: 001h

Site: L0310098 Parameter: PM25C 3 Interval: 001h

Site: L0310099 Parameter: PM25C 3 Interval: 001h

Site: L0310100 Parameter: O3 Interval: 001h

Site: L0310100 Parameter: PM25C Interval: 001h

Site: L0310106 Parameter: O3 Interval: 001hSite: L0310108 Parameter: CO Interval: 001hSite: L0310108 Parameter: NO2 Interval: 001h

Site: L0310108 Parameter: PM25C_3 Interval: 001h

[illegible]

PM_{2.5} Air Quality Report for Duval and Baker Counties

May 7, 2026

Summary

On May 7, 2026, there were four monitored exceedances of the daily fine particulate matter (PM_{2.5}) National Ambient Air Quality Standard (NAAQS). Two exceedances were regulatory, occurring at the Kooker Park and Sunny Acres sites in the City of Jacksonville in Duval County. The other two exceedances were detected at non-regulatory monitors: the Sheffield Elementary site in Jacksonville and the Osceola National Forest site in Baker County, west of the other monitors. An exceedance of the PM_{2.5} NAAQS occurs when the daily average PM_{2.5} concentration exceeds 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). **On May 7, the daily average PM_{2.5} concentration reached 64.9 $\mu\text{g}/\text{m}^3$ at the Kooker Park site, 48.3 $\mu\text{g}/\text{m}^3$ at the Sunny Acres site, 42.2 $\mu\text{g}/\text{m}^3$ at the Sheffield Elementary site, and 37.4 $\mu\text{g}/\text{m}^3$ at the Osceola National Forest site. All sites except Kooker Park were in the Unhealthy for Sensitive Groups (USG) Air Quality Index (AQI) category. The AQI at the Kooker Park site exceeded 150, which is in the Unhealthy category. [Table 1](#) provides details on these exceedances. Multiple EnviroFlash air quality alerts were issued for Lake City, Baker County, and Duval County for AQI values ranging from USG to Very Unhealthy during the day on May 7, with the last and highest one being issued around midnight on May 8.**

Likely Causes

These PM_{2.5} exceedances ([Figure 1](#)) were due to smoke from the South Canal wildfire in nearby Lafayette County, which grew to 1,600 acres on May 8. The South Canal wildfire produced extreme smoke plumes, resulting in high concentrations at the exceeding monitors and high levels at other surrounding monitors. The highest one-hour concentration at the Kooker Park site reached nearly 300 mg/m^3 late on May 7 ([Figure 2](#)). Two of these sites have non-regulatory Tapered Element Oscillating Microbalance (TEOM) monitor for PM_{2.5} (a Federal Equivalent Method for PM₁₀.) The TEOM pulls air in the heated inlet to a heated chamber where there is a funneled tapered element with a filter affixed to the top, which oscillates at a speed that is directly proportional to the mass at the end of the element. These TEOM monitors are included in the State Air Quality System (SAQS) Map and the Environmental Protection Agency's (EPA) AirNow Map to provide air quality information on a qualitative basis using an expanded air quality monitoring network. Although the data are useful in conveying air quality status, these monitors are not subject to the same calibration procedures, and the data are not reported to EPA.

[Figure 3](#) shows clouds overhead in the area, but also a significant quantity of smoke across North Central and Northeast Florida – the approximate location of the exceedance. On Thursday, May 7, a cold front was well to the northwest of the monitors at which exceedances were recorded. The winds were south to southwesterly ahead of the front on May 7, which advected the smoke over these monitors. The 24-hour Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) model back trajectories¹ ([Figure 4](#)) show the airflow for May 7. Notably, the paths

¹ For more information about the HYSPLIT model, see Stein, A.F., Draxler, R.R., Rolph, G.D., Stunder, B.J.B., Cohen, M.D., and Ngan, F., (2015). "NOAA's HYSPLIT atmospheric transport and dispersion modeling system," *Bull. Amer. Meteor. Soc.*, 96, 2059-2077, <http://dx.doi.org/10.1175/BAMS-D-14-00110.1>; Rolph, G., Stein, A., and Stunder, B., (2017). "Real-time Environmental Applications and Display sYstem: READY." *Environmental*

for each trajectory passed directly through the area associated with the South Canal wildfire. The surface analysis ([Figure 5](#)) shows the cold front and high pressure farther to the southwest, which would have contributed to west-to-southwesterly flow advecting the wildfire smoke toward the Baker County/Jacksonville area. The high pressure in addition to the low pressure farther to the northeast over South Carolina contributed to the prevailing wind direction.

Exceptional Event Status

Wildfire and prescribed burns are among the specific events addressed in EPA's exceptional events rule. Two of these exceedances were regulatory and therefore may be eligible for consideration as exceptional events. The other two were nonregulatory, and data from nonregulatory monitors is not used in attainment decisions. The purpose of these monitors is to inform the public about air quality in their respective areas. EPA will only review an exceptional events exclusion request if data relevant to the event originates from a regulatory monitor and has the potential to affect a federal attainment decision. Florida does not have any nonattainment areas for any criteria pollutant and is therefore not subject to any EPA attainment decisions. The exceptional events rule would not, therefore, apply.

AQI Forecast Accuracy

The City of Jacksonville and Florida Department of Environmental Protection (FLDEP) forecast were both for an AQI category of Moderate based on PM_{2.5} ([Table 2](#)).

Potential Attainment Issues

The design value for the PM_{2.5} 24-hour NAAQS is calculated by averaging the annual 8th-highest daily average concentration over three years. All PM_{2.5} regulatory monitors in Florida currently have 2023-2025 design values below the NAAQS. The regulatory exceedances from this wildfire smoke event were the first of the year for both the Kooker Park and Sunny Acres monitors and are not therefore expected to cause attainment issues.

Modelling & Software, 95, 210-228, <https://doi.org/10.1016/j.envsoft.2017.06.025>. DARM acknowledges the NOAA Air Resources Laboratory (ARL) for the provision of the HYSPLIT transport and dispersion model and READY website (<https://www.ready.noaa.gov>) used in developing this air quality report.

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Figure 1. Air Quality Index Category and Daily Average PM_{2.5} Concentration Map for May 7, 2026.

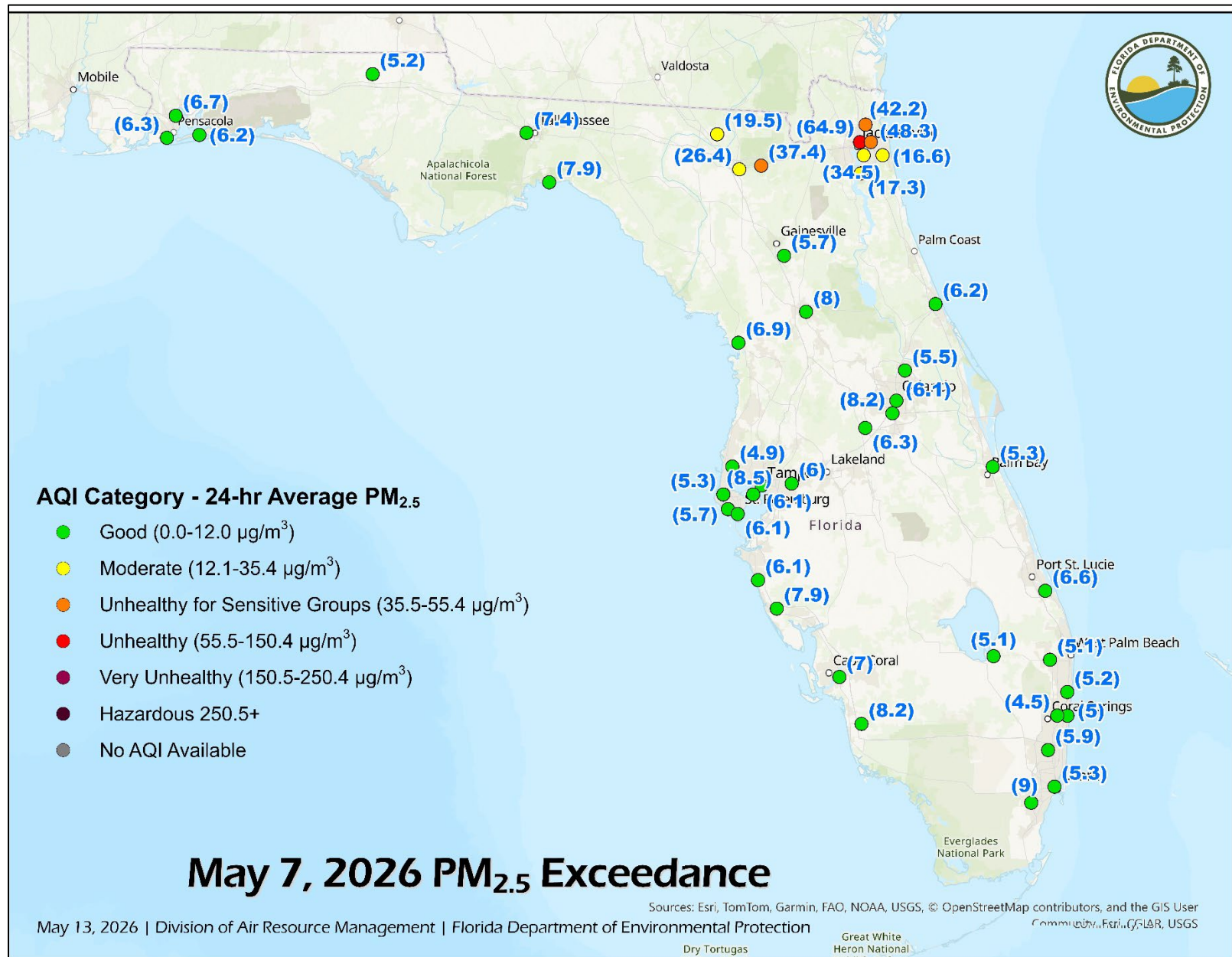


Table 1. May 7, 2026, PM_{2.5} Exceedance Event Summary.

County	Monitor Name	AQS Site ID	Date	Daily Air Quality Index	Air Quality Index Category	Maximum 24-hour Average Concentration (µg/m³)
Duval	Kooker Park	12-031-0032	5-7-2026	158	Unhealthy	64.9
Duval	Sunny Acres	12-031-0099	5-7-2026	133	USG	48.3
Duval	Sheffield Elementary	12-031-0077	5-7-2026	117	USG	42.2
Baker	Osceola National Forest	12-003-0002	5-7-2026	106	USG	37.4

Table 2. May 7, 2026, Forecast Accuracy and Monitor Status Summary.

Monitor/ County	Date	Air Quality Index Category			AirNow Alert Issued	2023-2025 Annual Design Value (µg/m³)	2023-2025 Daily Design Value (µg/m³)	2024-2026 Annual Design Value (µg/m³)	2024-2026 Daily Design Value (µg/m³)	Year-to-Date Exceedances
		Actual	Forecast	Forecast Responsibility						
12-031-0032 Duval	5-7-2026	Unhealthy	Moderate	City of Jacksonville	Yes	8.2*	20*	9.0*	18*	1
12-031-0077 Duval	5-7-2026	USG	Moderate	City of Jacksonville	Yes	8.9	18	8.8*	17*	1
12-031-0098 Duval	5-7-2026	Moderate	Moderate	City of Jacksonville	Yes	6.8	15	6.8*	14*	0
12-031-0099 Duval	5-7-2026	USG	Moderate	City of Jacksonville	Yes	7.1	16	7.6*	15*	1
12-031-0100 Duval	5-7-2026	Moderate	Moderate	City of Jacksonville	Yes	8.5	17	8.4*	15*	0
12-031-0108 Duval	5-7-2026	Moderate	Moderate	City of Jacksonville	Yes	7.5	17	7.6*	16*	0
12-003-0002 Baker	5-7-2026	USG	Moderate	FLDEP	Yes	8.3	16	8.7*	17*	1
*Insufficient data to produce a valid average										

Figure 2. Graph of Hourly PM_{2.5} Concentrations.

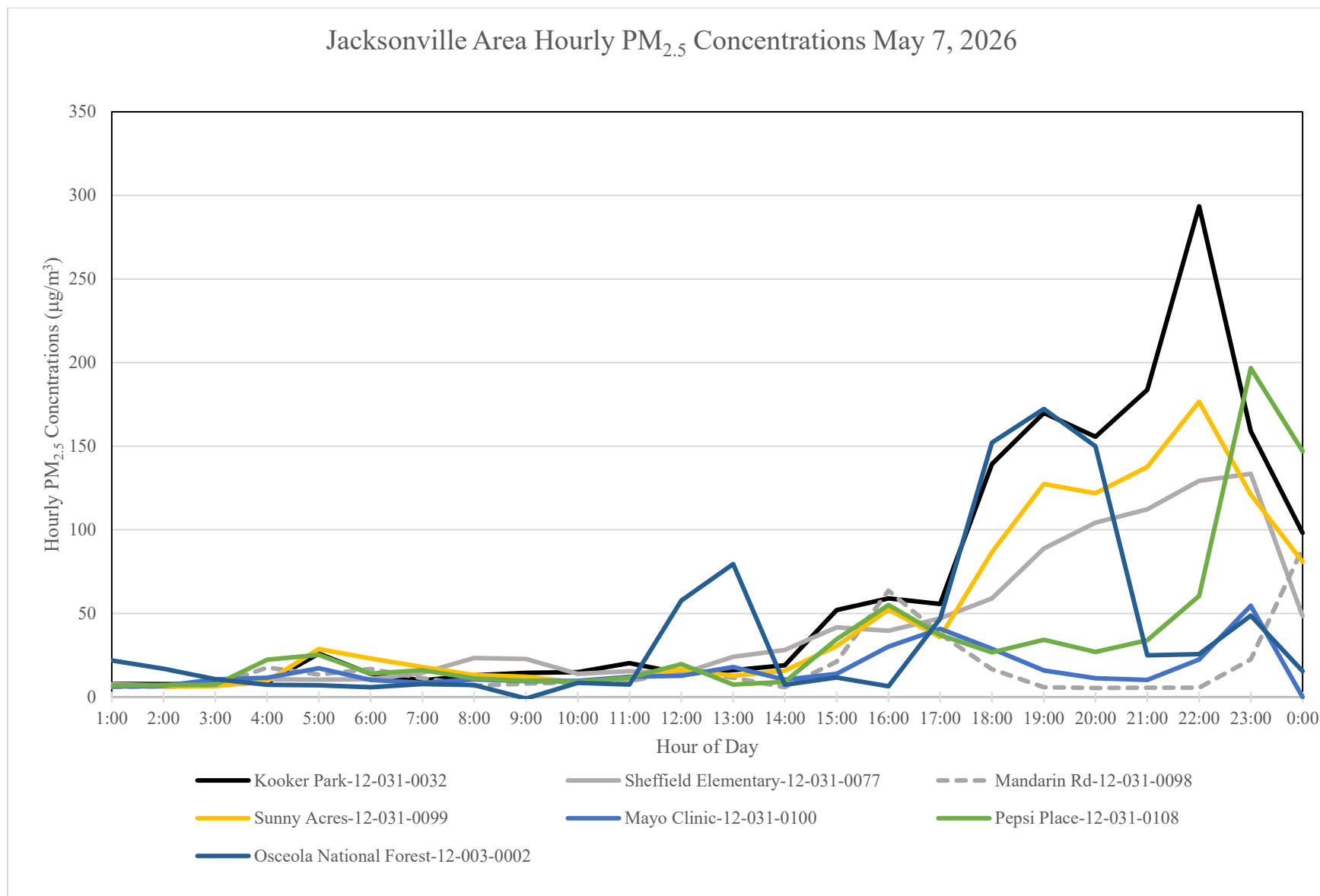


Figure 3. May 7, 2026, Aqua/MODIS 5:04 p.m. EDT.

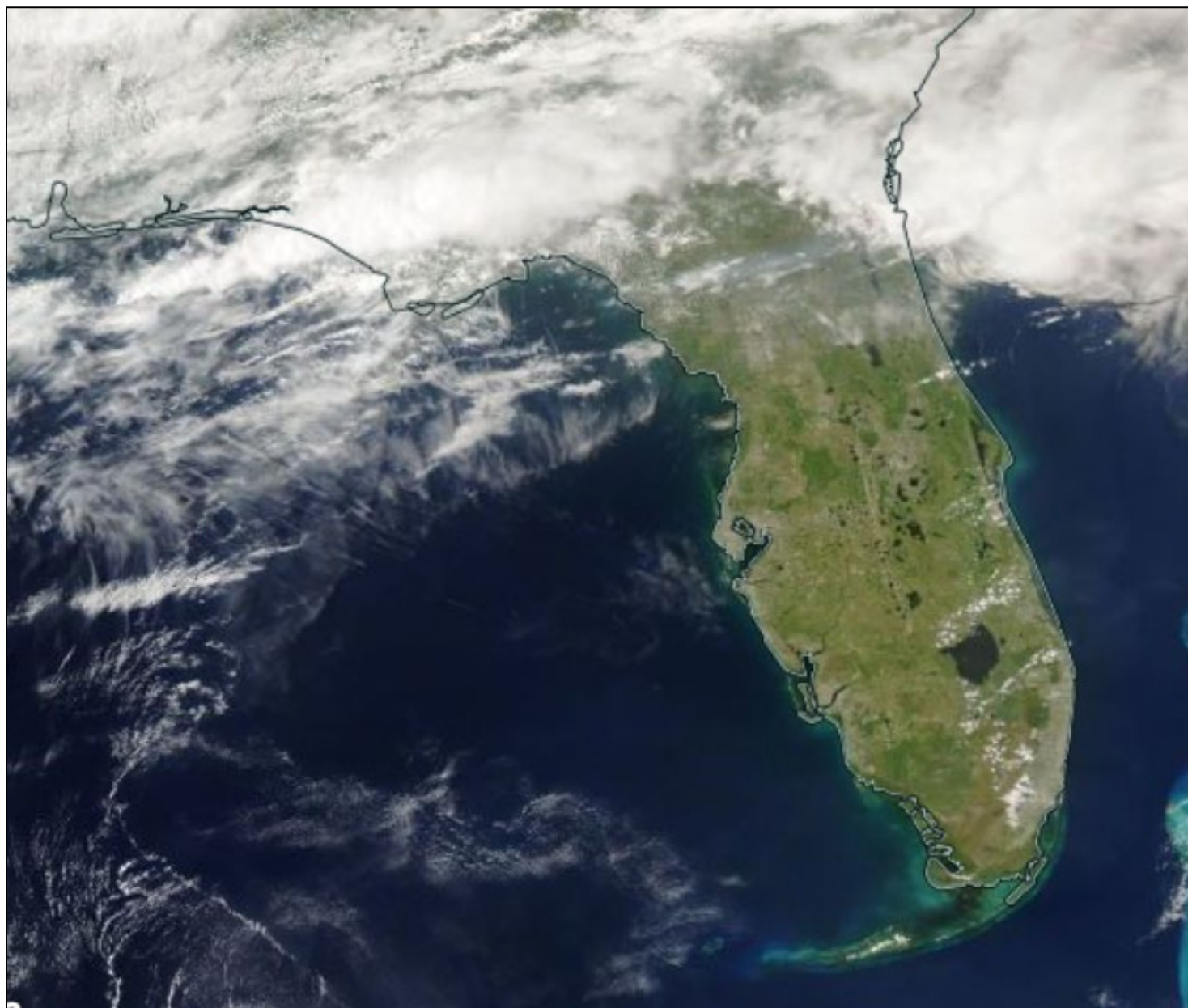


Figure 4. HYSPLIT Model 24-hr 10 to 30(0 to 20 m) meter Back-Trajectories for 12:00 a.m. EDT on May 7, 2026.

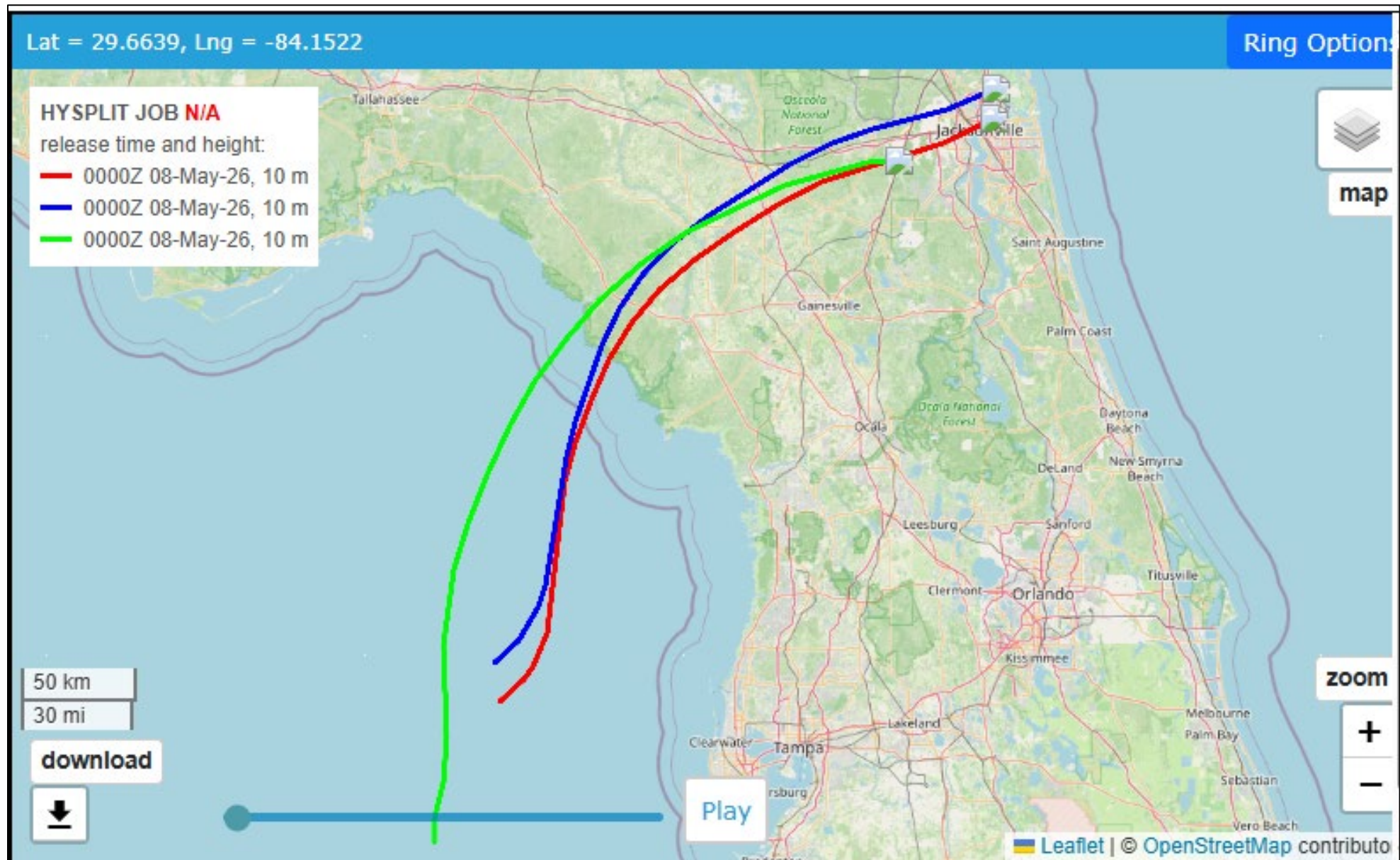


Figure 5. May 7, 2026, 5:00 p.m. EDT Surface Analysis Chart from the National Oceanic and Atmospheric Administration (NOAA) Weather Prediction Center.

