STATE OF OUR AIR

Our Commitment, Our Community.

AUGUST 2019 – AUGUST 2020

The Glades communities have some of the best air quality in the state; a fact that continues to be supported by years of publicly available air quality data and affirmed by countless independent organizations. As members of the community, this is just one of the many reasons we live and raise our families here. As farmers, we thrive only when the water, air, and land are kept healthy and clean.

As U.S. Sugar prepares for its 90th harvest season, we are blessed by the many generations of farmers and families that make a safe and successful harvest possible each year. While the last few months have presented unprecedented challenges as a result of the global COVID-19 pandemic, we are proud to have—and continue to—provided food to the tables of Americans even in the face of so much adversity. The steps and protocols we have implemented as a company were major factors in our ability to provide when our neighbors needed it the most.

Of course, our farming family makes up, in large part, our community. The health, safety, and wellbeing of our community continues to be a foundational commitment in everything that we do at U.S. Sugar. Amidst so much ambiguity today, certainty is often easiest found in the facts.

We are happy to release the inaugural State of the Air report for the 2019 and 2020 harvest and growth seasons, which shows us that the Glades communities' air is good. We hope this report will be a helpful resource for you and your family.

U.S. Sugar, along with hundreds of independent and family farmers, is proud of our partnership and commitment to our community.

Please know, it is a commitment we do not take for granted.

Robert H. Buker, Jr.
U.S. Sugar President and CEO

SUMMARY

» This year, the Florida Department of Environmental Protection (FDEP) announced the **"cleanest air on record" and that Florida meets "all ambient air quality standards."**[1]

» **The data show the air quality in the Glades community is categorized as "good," which is the best air quality classification**; the Glades communities' averages fell well within the required air quality range set by the U.S. Environmental Protection Agency (EPA) and the National Ambient Air Quality Standards (NAAQS).

» **The air in the Glades community is safer, cleaner, and of better quality compared to the West Palm Beach area**; average levels of $PM_{2.5}$ are consistently higher in the West Palm Beach area compared to the Glades communities (Figure 1); the EPA defines particles in the air as particulate matter (PM) and $PM_{2.5}$ describes fine, inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

» **The Robert Wood Johnson Foundation's 2020 report continues to show that air quality in the Glades community is better than other areas of the state**; particularly more densely populated, Northern communities.[2]

» Since the start of 2019-2020 Harvest Season, the Florida Department of Agriculture and Consumer Services has introduced two rounds of improvements to pre-harvest sugarcane burns; the most **recent round included updated local zones based on community population growth and certification of all burn managers to ensure that sugarcane burning remains a safe, controlled procedure for our workers and our community.**

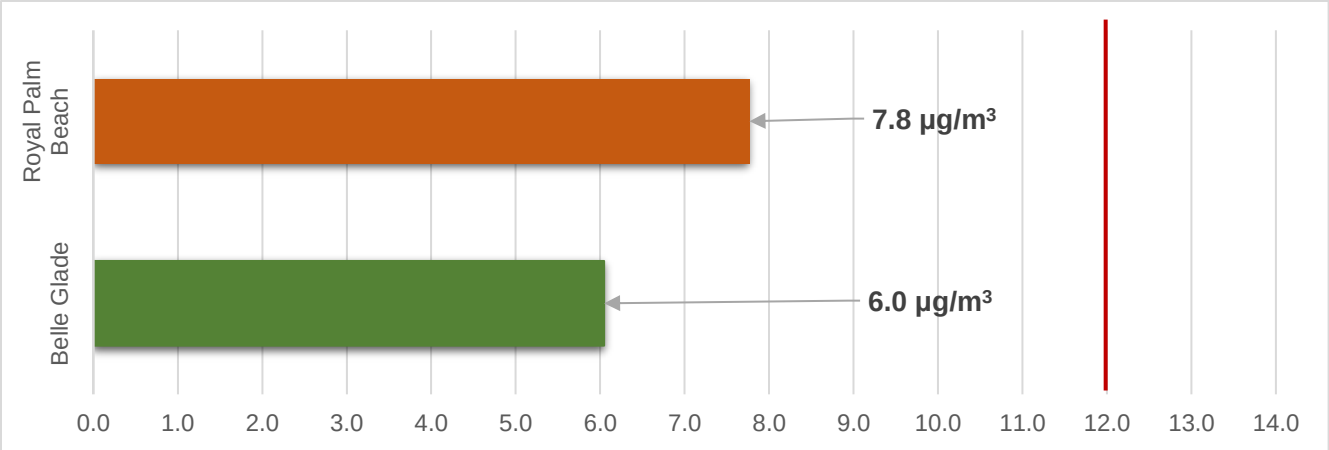

***Figure 1**. Annual average of PM2.5 levels in Belle Glade is lower than the West Palm Beach area, indicating the Glades' communities have cleaner, safer air in comparison to neighboring suburban and urban areas.*

[1] https://floridadep.gov/comm/press-office/news/dep-announces-cleanest-air-record-florida-meets-all-ambient-air-quality
[2] https://www.countyhealthrankings.org/app/florida/2020/measure/factors/125/map

BACKGROUND

The Florida Department of Environmental Protection (FDEP) and its Division of Air Resource Management is charged with the protection and management of the state's air resources, including air monitoring and ensuring compliance of emission sources. According to their website:

> ***"Thanks to a statewide effort, emissions in Florida continue to decrease and are now the lowest they have been on record.***
>
> *The state of Florida has one of the best outdoor air quality monitoring networks in the country, enabling the Florida Department of Environmental Protection to provide accurate and timely data to the state's residents and visitors."*

> *"At U.S. Sugar, **we go above and beyond what is required of us** to protect our environment because we live here. **Our land, water, air, and natural resources are part of our legacy and promise for the future**—one that I am proud to be part of today."*
>
> **Michael Ellis, P.E.**
> *Vice President Strategic Environmental Affairs*

The information is readily accessible online and can be viewed 24/7. In this report, we have consolidated the air quality data for particulate matter smaller than 2.5 microns in size ($PM_{2.5}$) for the Glades communities and the West Palm Beach area—to factually and empirically depict the state of our air, including a comparison to neighboring urban areas.

STANDARDS

Current NAAQS standards were used when generating the comparisons between monitoring locations and NAAQS.[3] The EPA has set the following standards for particulate matter:

Pollutant	Standard	Protection	Limit	Average Time; Form
$PM_{2.5}$	Primary	Public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly	**12 µg/m^3**	1 year; Annual mean, averaged over 3 years
	Secondary	Public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings	**15 µg/m^3**	
	Primary & Secondary	Both primary & secondary protection considerations	**35 µg/m^3**	24-hours; 98th percentile, averaged over 3 years

[3] https://www.epa.gov/criteria-air-pollutants/naaqs-table

AIR QUALITY DATA

The previous year's data show the air quality throughout the Glades communities is safe, meeting all NAAQS and EPA standards for air quality. The comparisons were drawn from the average of the daily values reported by the FDEP to calculate monthly averages. The monthly average levels of $PM_{2.5}$ were always less in Belle Glade than in the West Palm Beach area.

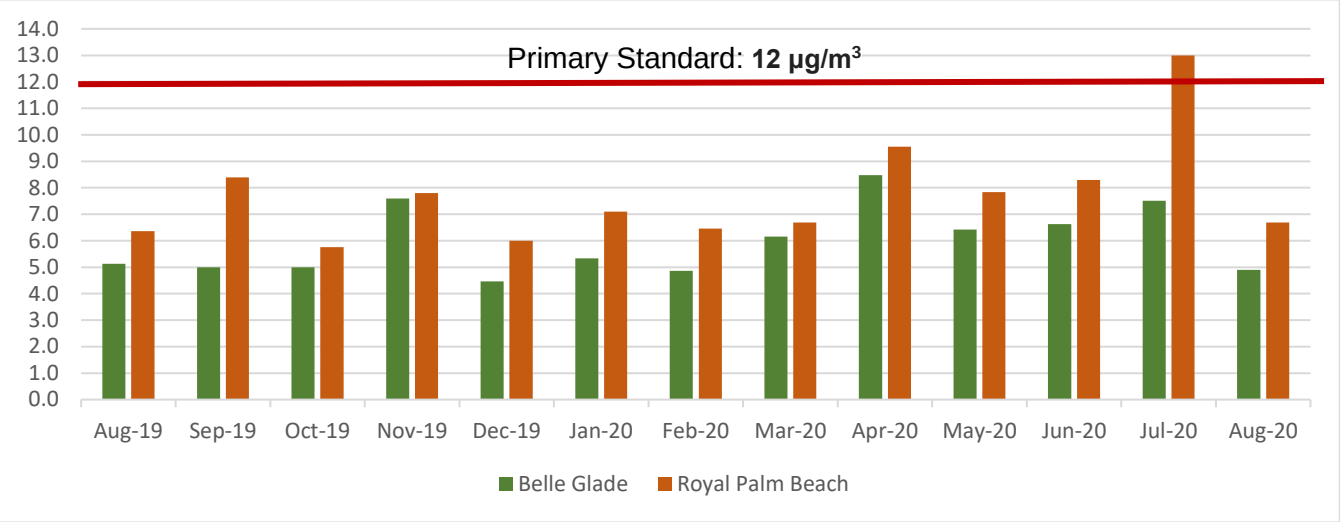

Figure 2*. Monthly averages calculated from daily reporting from FDEP air monitoring.*

In addition to having cleaner air than the West Palm Beach area, the monthly averages in the Glades communities never exceeded the primary standard for $PM_{2.5}$, meaning the air quality was always categorized "good" (Figure 2). This means the Glades' air is consistently safe for sensitive populations (see "Standards" section). Between the two monitoring stations, West Palm Beach area saw the highest spike over the previous calendar year, with the monthly average rising outside of the "good" air quality range.

West Palm Beach area's monthly trends can also be identified in the daily air quality averages. The West Palm Beach area had forty-one (41) days where the $PM_{2.5}$ average rose outside of the "good" air quality range and in to "moderate" air quality

On average, when the West Palm Beach area $PM_{2.5}$ levels rose outside of the "good" AQI range, they did so by an average of 3.7 µg/m^3. West Palm Beach area's July 2020 readings were high relative to the aggregated data – rising to the highest level of $PM_{2.5}$ levels for the year and not considered "good" air quality for over 50% of the month.

Some of the lowest $PM_{2.5}$ levels in the Glades communities were found during the harvest months. Despite claims that harvest season produces higher levels of air pollution, the average monthly $PM_{2.5}$ levels were the same in the Glades during the harvest season compared to overall monthly averages for the entire year (Figure 3).

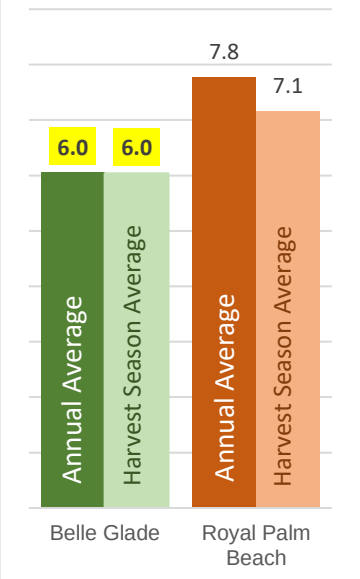

Figure 3. *Annual average of PM2.5 levels for all months (left bar) compared to the average of PM2.5 levels during the harvest season (right bar).*

TECHNICAL SPECIFICATIONS OF MONITORS & SAMPLERS

The Belle Glade and Royal Palm Beach monitoring stations both meet the regulatory standards required for equipment being used to sample and analyze $PM_{2.5}$. Additionally, both stations have passed rigorous field tests to ensure their operation and performance rises to the required regulatory method framework. Both stations utilize a MET One BAM 1020 instrument for its continuous monitoring for $PM_{2.5}$. Both stations' objectives are "POP EXP"—or population exposure. Although it is not required, Palm Beach County maintains the Belle Glade monitoring station to assure the local community that its air quality meets all applicable air quality standards.

> *"Many of the PM2.5 instruments used to report the AQI are not federally approved instruments, but are suited to the climate in Florida and* ***are subjected to the same quality assurance and quality control requirements as those used for designations.****"*
>
> Florida's Annual Ambient Air Monitoring Network Plan, 2014

The Lamstein Lane monitoring station (#099-0022) currently monitors ozone levels and PM2.5 and is located at 151 Lamstein Lane, Royal Palm Beach, Florida 33411[4]; this monitoring station is part of the regulatory monitoring network.

The Belle Glade monitoring station (#L009-0008) currently monitors PM2.5 and is located at 38754 State Road 80, Belle Glade, Florida 33430[5]; this monitoring is a non-regulatory monitor, as its purpose is to report the Air Quality Index (AQI) and the data from the monitor is not needed for NAAQS comparison—the monitor is still subject to the same quality assurance and quality control requirements as NAAQS comparison monitors ("EPA/FRM-approved monitors").[6]

RAW DATA

The raw data used to generate this report can be accessed on the FDEP's website[7] for the Royal Palm Beach monitoring location (Table 1[8]) and the Belle Glade monitoring station (Table 2[9]). The raw data used in this report reflects the daily figures made publicly available by the FDEP at the time of this publication. Cells containing an asterisk ("*") denote the data is not available for that day; those values were not considered in the monthly average computation.

[4] https://fldep.dep.state.fl.us/air/flaqs/SiteDetail.asp?SiteID=120990022

[5] https://fldep.dep.state.fl.us/air/flaqs/sitedetail.asp?SiteID=120990008

[6] 2014 Annual Ambient Air Monitoring Network Plan. DEP OA 14-001. Florida Department of Environmental Protection (2014).

[7] https://floridadep.gov/air/air-monitoring/content/floridas-air-quality

[8] *Supra*, footnote 4.

[9] *Supra*, footnote 5.

TABLE 1.

Royal Palm Beach Monitoring Station													
Date	Aug-2019	Sep-2019	Oct-2019	Nov-2019	Dec-2019	Jan-2020	Feb-2020	Mar-2020	Apr-2020	May-2020	Jun-2020	Jul-2020	Aug-2020
1	7.2	*	8.3	4.7	5.4	20.5	7.3	7.9	7.6	5	7.3	9	*
2	4	*	5.7	*	6.1	8.2	6.5	6.6	6.7	9.2	5.9	15.8	*
3	6.2	*	5.9	12.5	7	5	7.8	8.1	6.8	8.1	4.7	9.7	*
4	5.1	*	3.2	7.2	11.2	5.2	9.2	10.3	7.3	5.2	7.1	20.1	*
5	6.3	*	4.4	14.2	9.1	5.4	5.2	7.2	6.8	*	7	31.8	*
6	5	*	6.1	13.1	14.4	4.6	*	6.2	*	*	6.7	13	*
7	7.7	*	7.3	5.1	14.5	6.8	9.3	4.1	6.4	*	12.2	9.8	7.8
8	8.2	*	4.1	5.6	4.2	5.2	5.2	6.4	7.3	6.2	8.7	11.2	5.5
9	6	*	4.2	*	6.9	8.6	3.4	8.1	12.8	*	5.3	21.5	5.2
10	7.8	*	3.8	5	6.1	*	5.7	7.3	14.3	10.4	7	26.5	3.9
11	9	*	8.1	3.4	2.8	*	*	5.6	8.7	*	4.6	15.5	4.5
12	5.6	*	5.2	6	2.1	*	6.4	5.3	13.1	7.2	7.9	12.8	6.2
13	2.7	9.1	*	8.4	3.3	*	12.7	4.8	21.2	5.2	9.5	*	3.8
14	4	8	5	4.2	4.7	*	7.9	5.5	11.4	8.7	11.9	*	8.3
15	7.8	13.9	4.8	*	5.1	*	5.3	*	14.7	7.9	3.3	*	6.1
16	17.2	7.5	3.8	4.6	5	*	3.1	4.6	10.8	3.1	4.4	9.6	5.7
17	12	10	7.1	2.3	5.2	*	3.2	*	10	8.8	6.3	6.4	4.1
18	5.3	13.4	8.8	6	3.1	*	5.1	5.3	6.9	9.5	5	*	5.6
19	5.9	9.4	7.9	9.7	4.3	*	6.5	6.4	13.1	10.2	8.4	7	4.4
20	4.9	7	6.8	10.7	3.9	*	5.8	3.9	11.8	9.2	5.7	4.6	10.2
21	2.8	6.6	8.1	10.6	5.2	*	*	*	*	14.7	3.4	15.5	13
22	4.7	10.1	6.3	7.5	3.5	5.1	*	*	8.5	5.6	*	5.3	7.6
23	3.5	7.5	6.1	8.3	*	*	*	*	7.6	7.3	10.5	*	6.4
24	3.6	6.2	6.3	5.3	*	6.6	*	*	10.4	4.4	11.2	6.6	11.7
25	*	4.8	6.5	5.1	6.7	7.3	5	9.1	10.2	5.3	13.1	2.8	13.4
26	*	4.7	*	7.4	5.7	7.2	6.4	*	9.8	11.9	*	13.9	5
27	*	6.3	5.2	11.3	3.2	3.7	5.3	13.3	3.5	9.5	7.5	14.4	4.4
28	*	13.5	3.5	17	4	*	7.3	10.1	6.5	11.6	7.2	13.5	8
29	*	5	4.4	9.3	5	7.3	8.9	3.6	7.5	4.9	19.3	15.6	6.3
30	*	8	4.3	6.2	10.2	6.9	*	4.2	5.6	6.7	21	*	3.3
31	*	*	*	*	13.3	6.5	*	7.6	*	5	*	*	6.3
AVG	6.4	8.4	5.8	7.8	6.0	7.1	6.5	6.7	9.5	7.8	8.3	13.0	6.7

	GOOD AIR QUALITY; PM2.5 LEVELS < 12 MG/M^3
	MODERATE AIR QUALITY; PM2.5 LEVELS 12 > 35 MG/M^3
	UNHEALTHY FOR SENSITIVE GROUPS; PM2.5 LEVELS 35 > 55.4 MG/M^3
	UNHEALTHY AIR QUALITY; PM2.5 LEVELS 55.5 > 150.4 MG/M^3
*	**DENOTES THE DAILY VALUE IS NOT AVAILABLE**
SOURCE: HTTPS://FLDEP.DEP.STATE.FL.US/AIR/FLAQS/SITEDETAIL.ASP?SITEID=120990022	

TABLE 2.

Belle Glade Monitoring Station													
Date	Aug-2019	Sep-2019	Oct-2019	Nov-2019	Dec-2019	Jan-2020	Feb-2020	Mar-2020	Apr-2020	May-2020	Jun-2020	Jul-2020	Aug-2020
1	7.1	*	5.3	*	4.1	5.6	4.6	6.2	5.8	5.9	6	12.4	*
2	3.1	*	4.5	*	4.3	6.7	4.1	7.5	7.8	7.9	6.1	9.2	*
3	5.2	*	5.6	*	4.8	4.3	3.9	5.8	10.3	5.7	4.2	11.2	*
4	5.2	*	3.7	*	8.6	4.3	7.5	6.4	8.2	6.9	4.2	10.9	4
5	4.3	*	3.4	*	9.2	3.3	9	6.1	6.7	7.3	3.9	10.2	4.6
6	3.7	*	6.3	4.2	7.7	4	7.2	5.6	4.6	6.2	7.1	6.2	4.1
7	4.9	*	1.8	5	8.1	5.2	7.4	5.1	4.7	6.4	9.2	6.2	4.4
8	4.9	*	1.5	5.7	3.7	5.4	4.4	6.4	6.4	7	7.9	8.6	4.3
9	6.4	*	4.1	4.2	5	5.3	3.9	6.4	*	6.6	6.8	19	2.7
10	7	*	2.1	5.9	6.2	6.4	3.4	4	*	8.2	6.9	14.3	3.3
11	5.1	*	3	6.3	4.4	7.9	4.3	6	*	3.5	5.2	11.8	2.9
12	5.5	4	4.1	5.9	2.6	4.8	5.1	4.9	*	6.3	4.9	8	3.9
13	4.8	2.6	3.6	5.5	2.8	5.1	9.5	5.2	*	7.5	4.2	8.1	4.4
14	3.2	1.9	4.6	6.8	4.1	5.7	7.9	4.2	16.3	7.3	3.9	8	5.3
15	5.4	2.4	4.1	6.4	5.7	5.3	3.3	4.3	16.7	5.4	4.4	5.1	6.1
16	6.7	2.7	5.9	5.7	4.9	6.1	2.9	5.8	12	2.9	5.2	7.8	3.9
17	5	8.3	6.1	5.8	4.8	5.5	4.8	5.6	6.7	7.6	11.4	5.9	3.8
18	10.4	9.5	8.1	8.3	3.3	6.5	2.3	5.3	6.5	7.3	3.7	2.5	3.2
19	11.1	5.9	6.3	10.5	5.4	4.4	3.1	8.2	7.8	8.4	3.8	2.8	2.2
20	5	5.8	5	12.6	3.4	4.2	4.1	7.6	14.6	8.7	3.5	3.7	4.2
21	5.4	5.7	6.6	9.7	3.4	7.1	2.3	7.6	7.6	10.7	3.7	4.1	8.4
22	3.1	5.3	7.9	11.3	3	7.3	4.8	3	9	7	5.2	3.1	6.1
23	2.7	3.6	8.2	12	1.5	4.3	2.6	5.6	10	4.9	5.2	4	7.5
24	3.8	3.6	6.3	8.8	2.5	2.7	3.3	4.5	8.8	3.4	7.9	3.8	10.3
25	3.2	3.3	5.9	11.1	4	3.5	5	8.4	10.5	3.3	10.2	4.1	11.1
26	2.9	6.3	4	11.6	3.4	4.5	5.4	11.2	8.2	5.8	8.9	2.8	4.4
27	3.4	4.7	5.9	12	1.6	7.6	3	9.6	6.7	8.3	6.1	5.1	4.4
28	*	7.4	5.9	6.3	2.4	4.8	5.9	4.6	4	7.7	9.7	9.6	5.2
29	*	4.5	4.9	4.8	4.2	7	5.9	8.3	6.7	3.9	14.1	9.1	4.2
30	*	7.4	3.3	3.4	4.8	5	*	6.1	5.4	5.5	15.1	*	4.1
31	*	*	6.8	*	4.6	5.6	*	5.4	*	5.7	*	*	4
AVG	5.1	5.0	5.0	7.6	4.5	5.3	4.9	6.2	8.5	6.4	6.6	7.5	4.9

	GOOD AIR QUALITY; PM2.5 LEVELS < 12 MG/M^3
	MODERATE AIR QUALITY; PM2.5 LEVELS 12 > 35 MG/M^3
	UNHEALTHY FOR SENSITIVE GROUPS; PM2.5 LEVELS 35 > 55.4 MG/M^3
	UNHEALTHY AIR QUALITY; PM2.5 LEVELS 55.5 > 150.4 MG/M^3
*	**DENOTES THE DAILY VALUE IS NOT AVAILABLE**
SOURCE: HTTPS://FLDEP.DEP.STATE.FL.US/AIR/FLAQS/SITEDETAIL.ASP?SITEID=120990008	