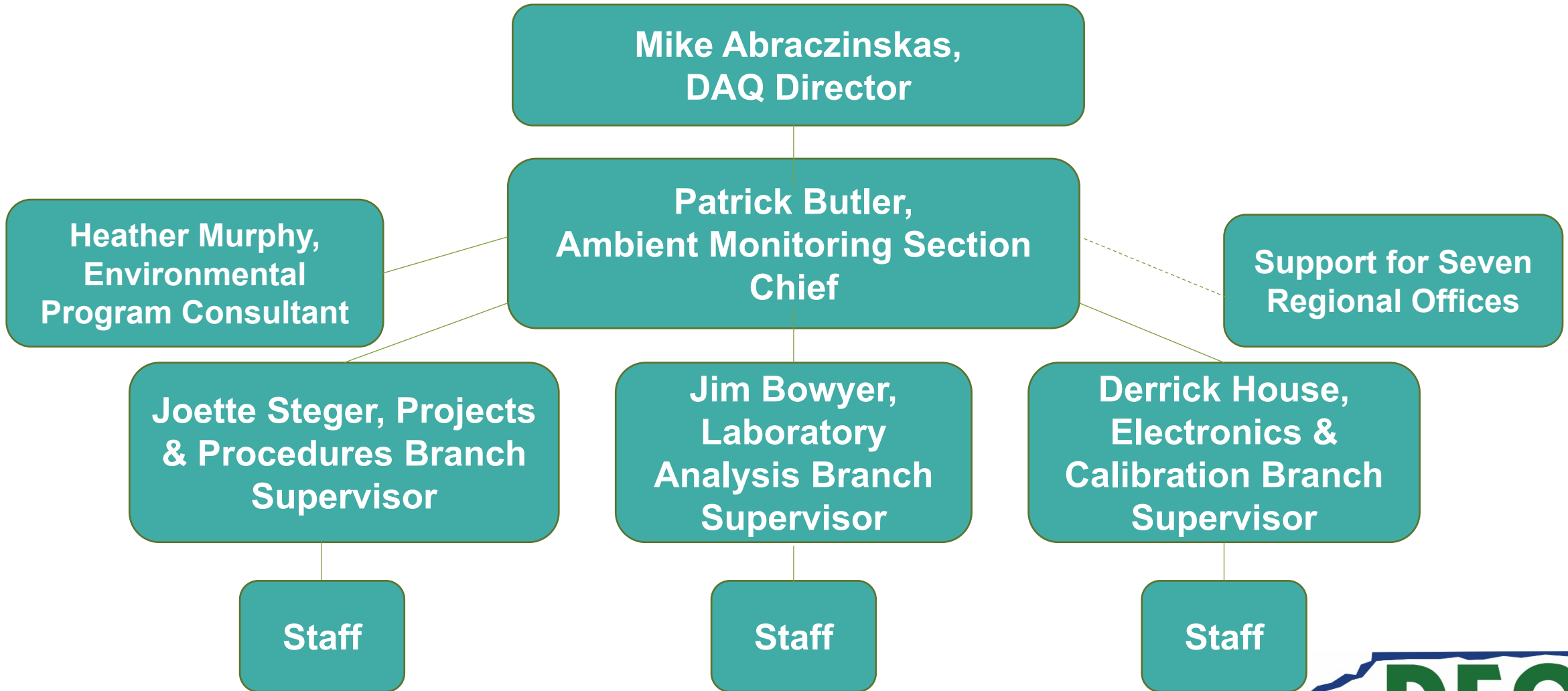




***NC EMC - Air Quality Committee Meeting  
Ambient Monitoring Section Overview  
January 12, 2022***



# *NC DAQ – Ambient Monitoring Section (AMS)*





# *DAQ Operates 38 Monitoring Sites with Shelters, such as:*

**Lenoir Site - Caldwell County**



**Wade Site – Cumberland County**



# *Assorted Topics of Interest*

- Federal Requirements Met in 2021:
  - The CY 2020 NC air monitoring data was certified on April 30<sup>th</sup>.
  - The '21-'22 Annual Network Plan was posted to our website on June 30<sup>th</sup>.
  - The annual DAQ Competency Certification was submitted on August 5<sup>th</sup>.
  - The NC Photochemical Assessment Monitoring Station (PAMS) site was operational before the June 1<sup>st</sup> deadline.
- DAQ shutdown our in-house gravimetric laboratory and contracted with RTI who began weighing our FRM PM2.5 filters in July.
- The Annual 2021 Ambient Monitoring Workshop was held virtually on February 3<sup>rd</sup> and the 2022 Virtual Workshop is scheduled for February 9<sup>th</sup>.
- DAQ continues to collect rainwater at five (5) sites near Chemours and seven (7) regional background sites across the state. The NC Division of Water Resources now conducts the PFAS analysis.

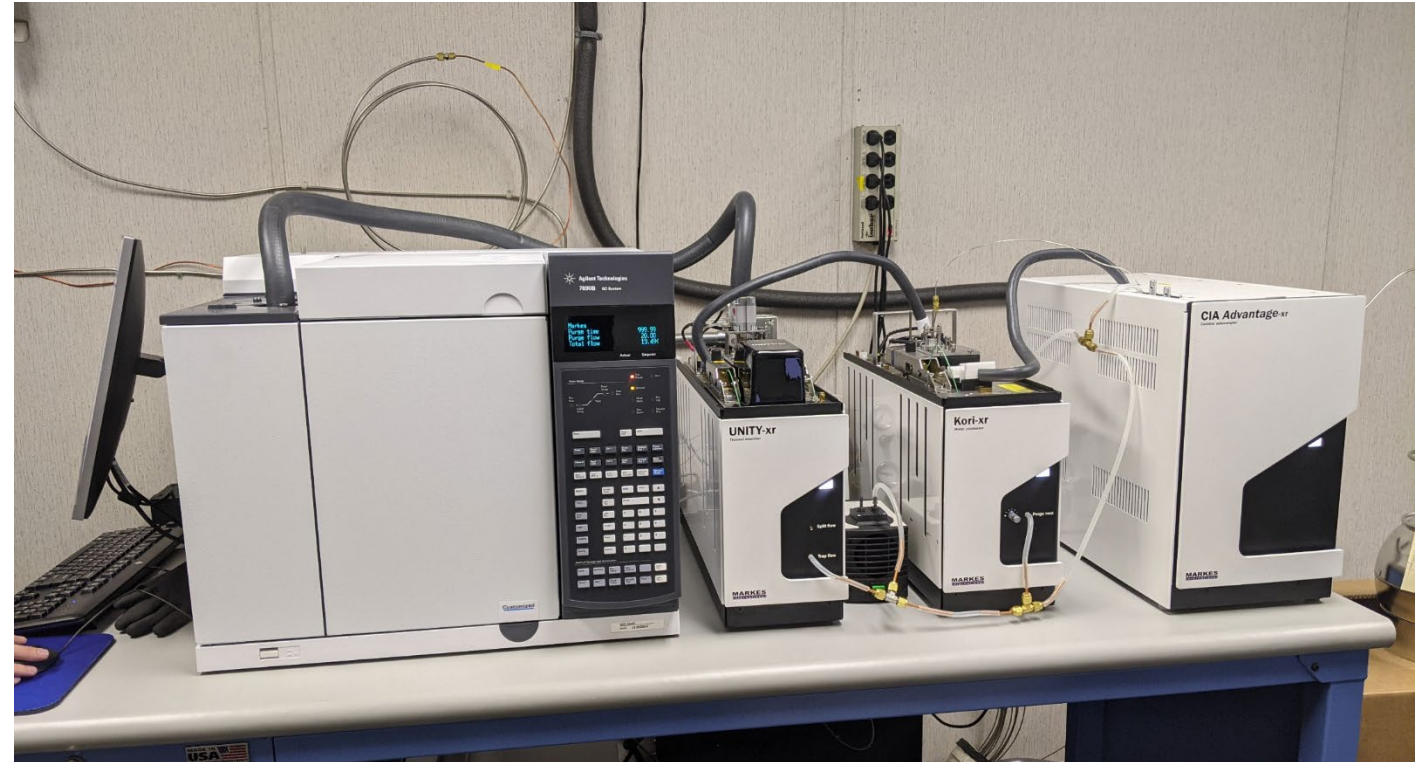


# PAMS Equipment – Millbrook Site

## Vaisala Ceilometer



## Agilent AutoGC





# Wet/Dry Deposition Collection Network Equipment

*ETI NOAH IV Rain Gauge*



*NCON Bucket Sampler*



*Met Tower*



## *Assorted Topics of Interest Continued ...*

- In the past six (6) years NC has been impacted by six (6) named tropical storms: Matthew (2016), Florence and Michael (2018), Dorian (2019), Isaias (2020), and Fred (2021). This doesn't include the remnants of several other named storms. We need a break!
- The DAQ monitors H<sub>2</sub>S at the Waxhaw site in Union County and the Ballantyne site in Mecklenburg County & posts the results on the DEQ website.
- DAQ currently analyzes weekly canister samples from the Huntersville site for MCAQ because of the Colonial Pipeline spill.



# H<sub>2</sub>S Study in Union and Mecklenburg Counties

Waxhaw water tower site



Ballantyne Park site



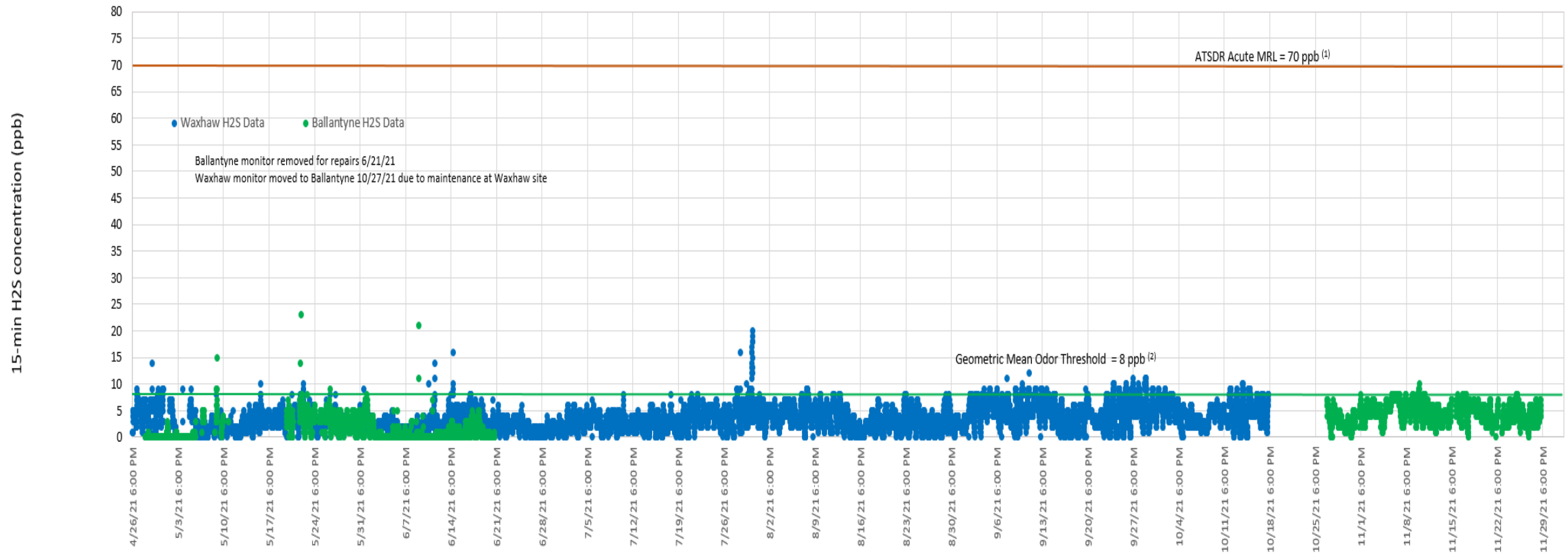
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# New Indy Odor Investigation

H2S Monitoring Data April 26 - Nov 29, 2021



(1) The Center for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry (ATSDR) has established an acute Minimal Risk Level (MRL) for H2S. A MRL is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse health effects over a specified duration of exposure. The H2S Acute MRL for continuous exposure from 1 day to 14 days is 70 parts per billion (ppb).

(2) Concise International Chemical Assessment Document 53, Hydrogen Sulfide: Human Health Aspects, World Health Organization (WHO), Dr. C.H. Selene J. Chou, Agency for Toxic Substances and Disease Registry (ATSDR) (2003)



# Colonial Pipeline Spill – Oehler Nature Preserve



**Huntersville  
site –  
Xontech 911  
canister  
sampler**

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# *Topics of Interest continued ...*

## ➤ On the Horizon:

- The AMS has received approval to purchase the eSIMS system for equipment inventory tracking and QA documentation storage. This will replace the current paper system that we have utilized for decades.
- The EPA has scheduled the NC 2022 TSA the week of May 23<sup>rd</sup>.
- The DAQ received a sensor collocation shelter, and it has been assembled at our Maywood facility. DAQ is working towards testing it out before it gets redeployed to the Millbrook NCore monitoring site.

# Sensor Colocation Structure – ECB Maywood



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# DAQ's Quality Assurance Program

- The DAQ maintains several Quality Assurance Project Plans, or QAPPs, such as Ozone, Particulate Matter, SO<sub>2</sub> & NO<sub>2</sub>, and Urban Air Toxics.
- There are additional QAPPs, such as NCORE, PAMS, Northampton, Near Road and Background.
- They need constant revision as areas of the program change and evolve. We currently have four QAPPs under review at EPA R4.
- Additionally, there are also dozens of supporting SOPs as well.
- These QA documents require tremendous time and effort, but they are essential, so that our data is of the highest quality.
- All approved versions of these QA documents are located on the DEQ/DAQ public website.



*Any Questions? ...*

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