



2019 Engineer's Workshop

**ANNUAL
PRECIPITATION
DATA, 2018**

A large, stylized teal brushstroke graphic that sweeps across the left side of the slide, partially overlapping a white-bordered square.

ABOUT OUR MONITORING PROGRAM

**Rainfall event data is collected via
Westmoreland Conservation District stream
and weather monitoring systems.**

Data presented is reflective of precipitation measured at:

**226 Donohoe Road
Greensburg, PA 15601**

**Total precipitation and/or data accumulated varies
by location in county.**

**More information on our Monitoring Program can be found at
wcdpa.com and westmorelandstormwater.org**



ABOUT OUR MONITORING PROGRAM

Our Monitoring Equipment:

- **METERGroup Em50 Data Logger
(originally Decagon Devices)**
- **ECRN-100 Rain Gauge**
- **METERGroup ATMOS 41 Weather Station**
- **CTD-10 Sensor for EC, Temperature + Depth Sensor**
- **GS3 Soil Moisture Sensor**

**More information on our Monitoring Program can be found at
wcdpa.com and westmorelandstormwater.org**

**DECAGON
DEVICES EM50
DATA LOGGER
(METERGroup)**



METER



**DECAGON
DEVICES**



ECRN-100 Rain Gauge



ATMOS-41 All in One Weather Station

DECAGON DEVICES

CTD CONDUCTIVITY • TEMPERATURE • DEPTH

DEPTH READINGS UP TO 5 OR 10 METERS.

PRECISION COMPONENTS PROVIDE CONSTANTLY ACCURATE DATA COLLECTION.

ELECTRICAL CONDUCTIVITY MEASUREMENT WITH FAST, ACCURATE RESULTS.

TEMPERATURE READING WITH LARGE RANGE CAPABILITY.

STAINLESS STEEL COVER IMPROVES DURABILITY.

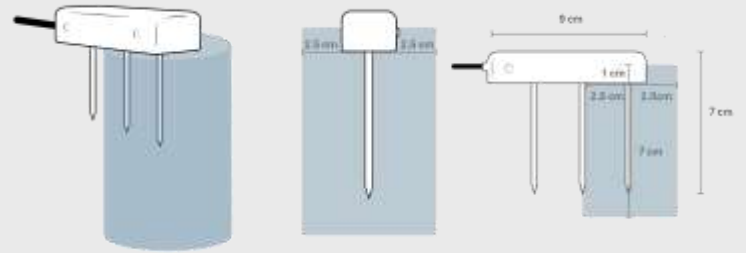
MANUFACTURED IN WASHINGTON STATE.

DESIGNED BY SCIENTISTS.

SENSOR ARRAY CAPABILITIES.

Decagon CTD-10 Sensor

DECAGON DEVICES



GS3 Soil Moisture Sensor



**Significant
Rainfall Events
at 266 Donohoe Rd
Intensity**

“**Heavy Rain**” can be described as any rainfall greater than **0.30 inches per hour**.

July 17 | 7:40-7:50 am
0.74 inches in 10 minutes

October 4 | 5:35-5:40 pm
0.26 inches in 5 minutes

October 6 | 3:25-3:35 pm
0.57 inches in 10 minutes

June 1 | 11:25-11:30 pm
0.21 inches in 5 minutes

August 8 | 3:50-4:00 pm
0.57 inches in 10 minutes

June 20 | 9:25-9:30 am
0.21 inches in 5 minutes

June 3 | 8:35-8:45 pm
0.50 inches in 10 minutes

Aug 1 | 9:35-9:40 am
0.21 inches in 5 minutes



**Significant
Rainfall Events
at 266 Donohoe Rd
Quantity**

In our area, a **2-year, 24-hour** rainfall is measured at **2.5” – 3.0”** in a 24 hour period.

July 17

2.40 inches in 24 hours

June 10

2.38 inches in 24 hours

February 22

1.80 inches in 24 hours

February 15

1.52 inches in 24 hours

February 2018

10.25 inches total

7.61 inches > Historical Avg

June 2018

8.76 inches total

4.31 inches > Historical Avg

August 2018

7.80 inches total

3.94 inches > Historical Avg

Despite no significant storms recorded over the 2-year, 24-hour event boundary, we still saw substantial precipitation (and flooding) in Westmoreland County – with nearly 30 inches above the historical average for our area.

**2018 Total Precipitation
(via *ECRN-100 Rain Gauge*)
= 72.41 inches**

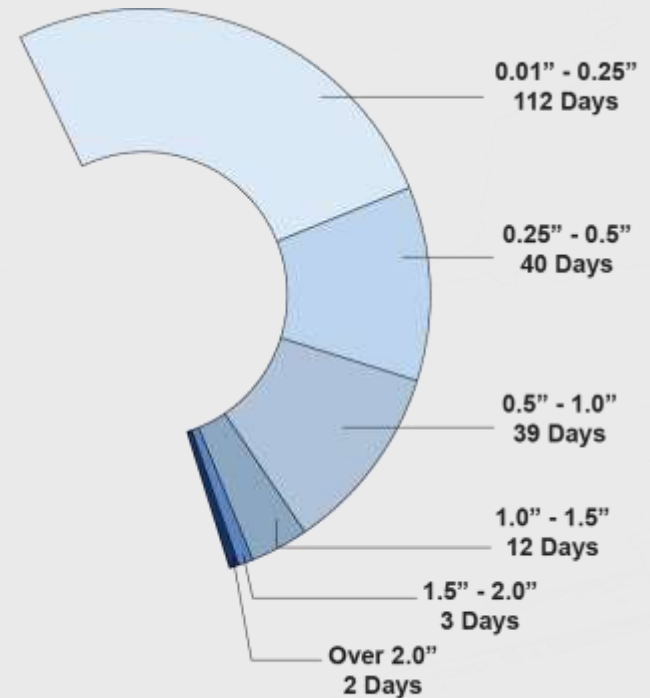
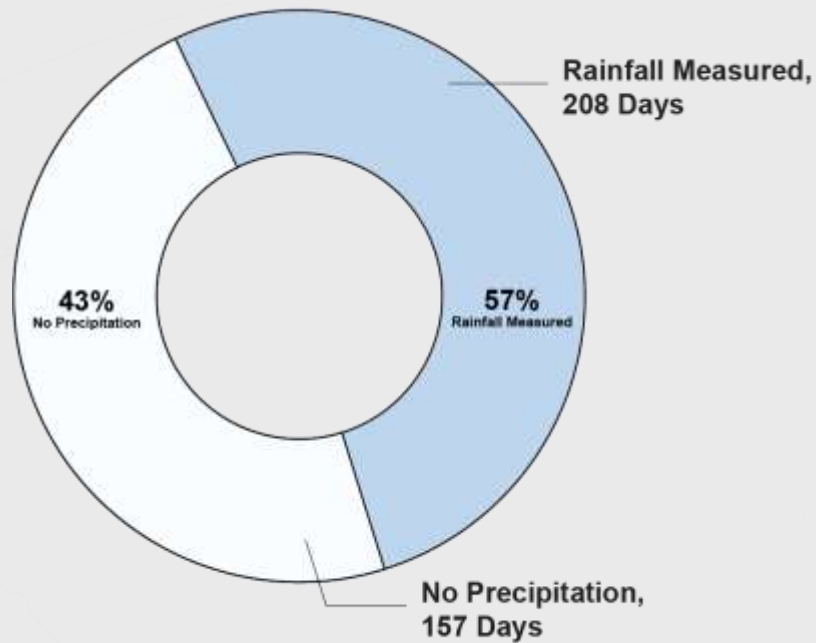


Fig. 1: Percent "Rainy" Days, 2018

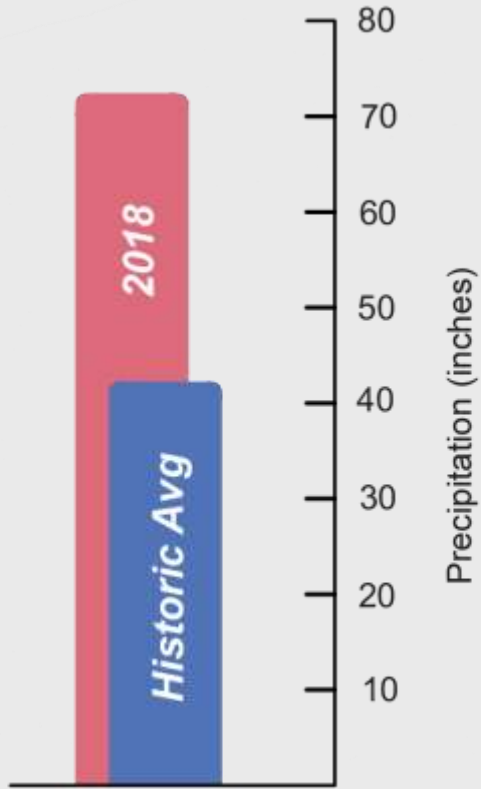


Fig. 2: Total Annual Precipitation compared to annual historical average

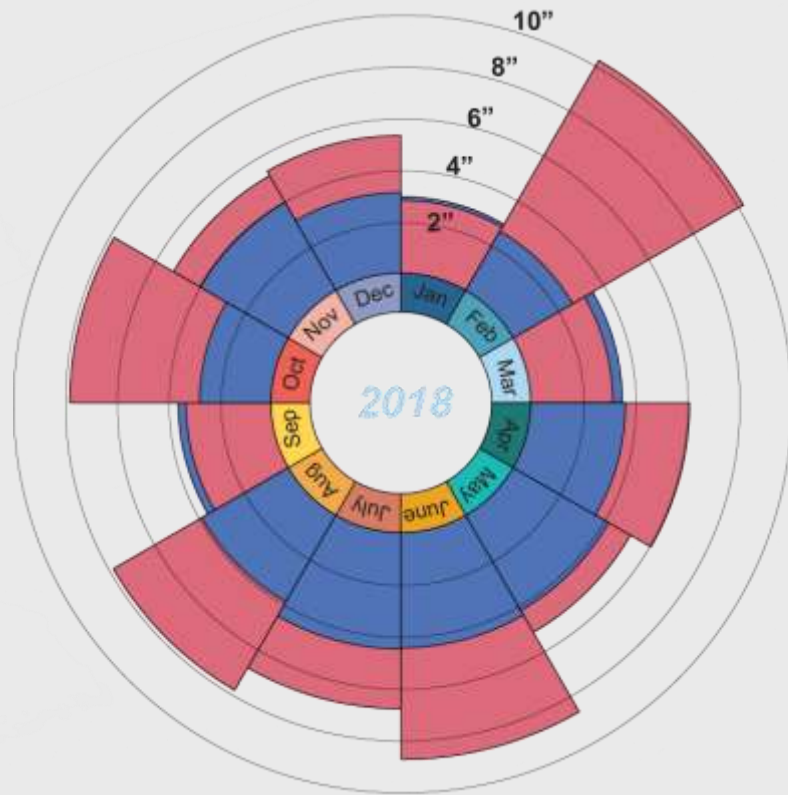


Fig. 3: Total Monthly Precipitation compared to monthly historical average

- Average Historical Precipitation (inches)
- 2018 Measured Precipitation (inches)

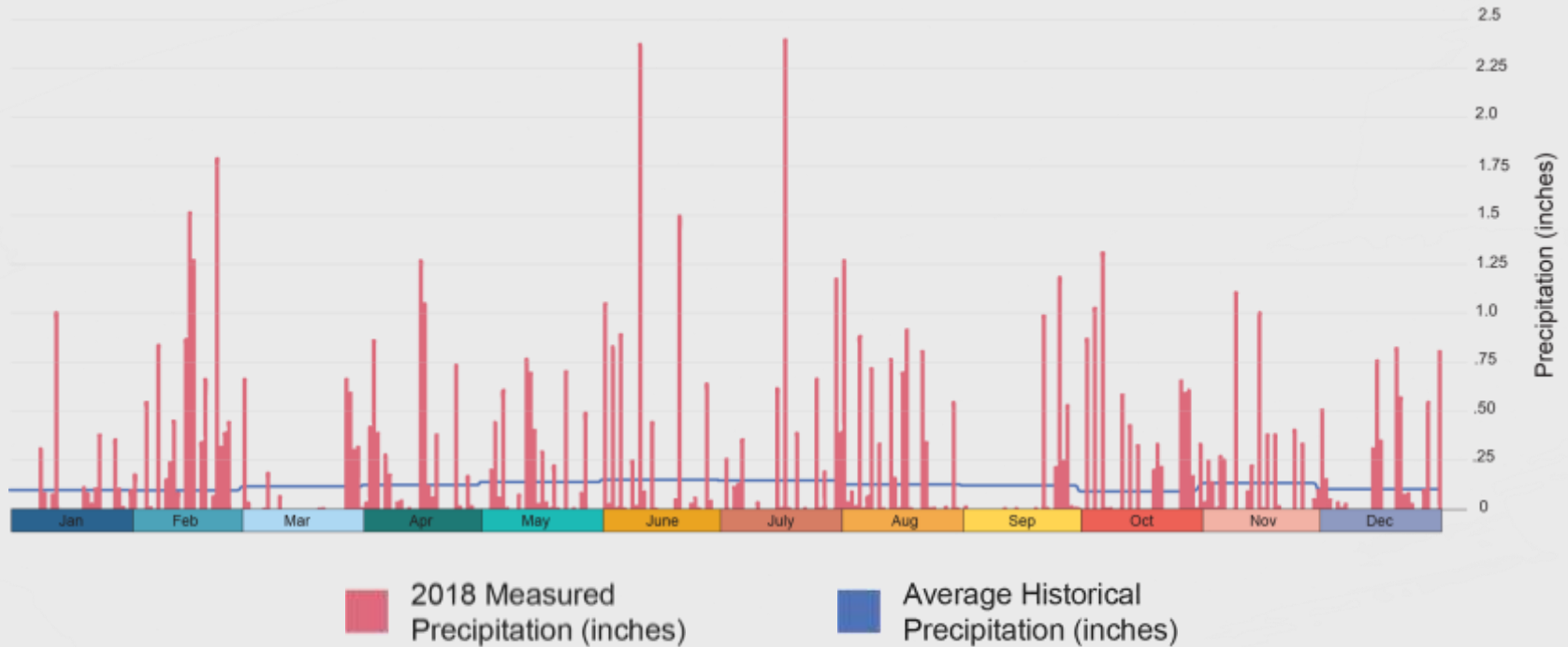


Fig. 4: Total Daily Precipitation, Actual vs. Historical Avg (in)

t h a n k y o u



"A pity. Well, now, if you walk up and down with your umbrella, saying, 'Tut-rut, it looks like rain,' I shall do what I can by singing a little Cloud Song, such as a cloud might sing. . . . Go!"

Justin DeCarlucci
Conservation Programs Technologist
Westmoreland Conservation District
justin@wcdpa.com

