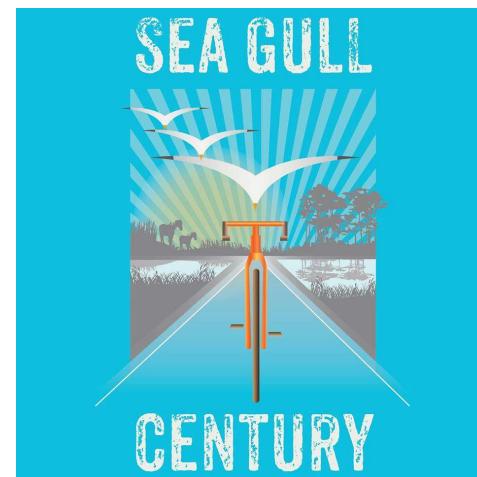


# A Seagull Century Climatology, 1989 – 2020

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# Introduction and Overview

- This study analyzed the weather conditions for each Seagull Century bike ride
  - Salisbury University's biggest event
  - A bike ride for charity (~6,000 riders)
- Study area: Salisbury, MD
- Length of study: 1989 – 2020
  - Only 68 registered riders for the 1<sup>st</sup> Seagull Century

# SEA GULL CENTURY 2019

**\$4.3 Million**

Total Economic Impact

**98%**

of riders had a  
positive experience

**96%**

of riders would participate  
again

4,600+ riders

12,800+ guests

Average stay

**1.57  
nights**

**\$500**

Average Visitor  
Spending

**71% of riders  
stayed locally**

**69% traveled 100 miles or  
more to attend the race**



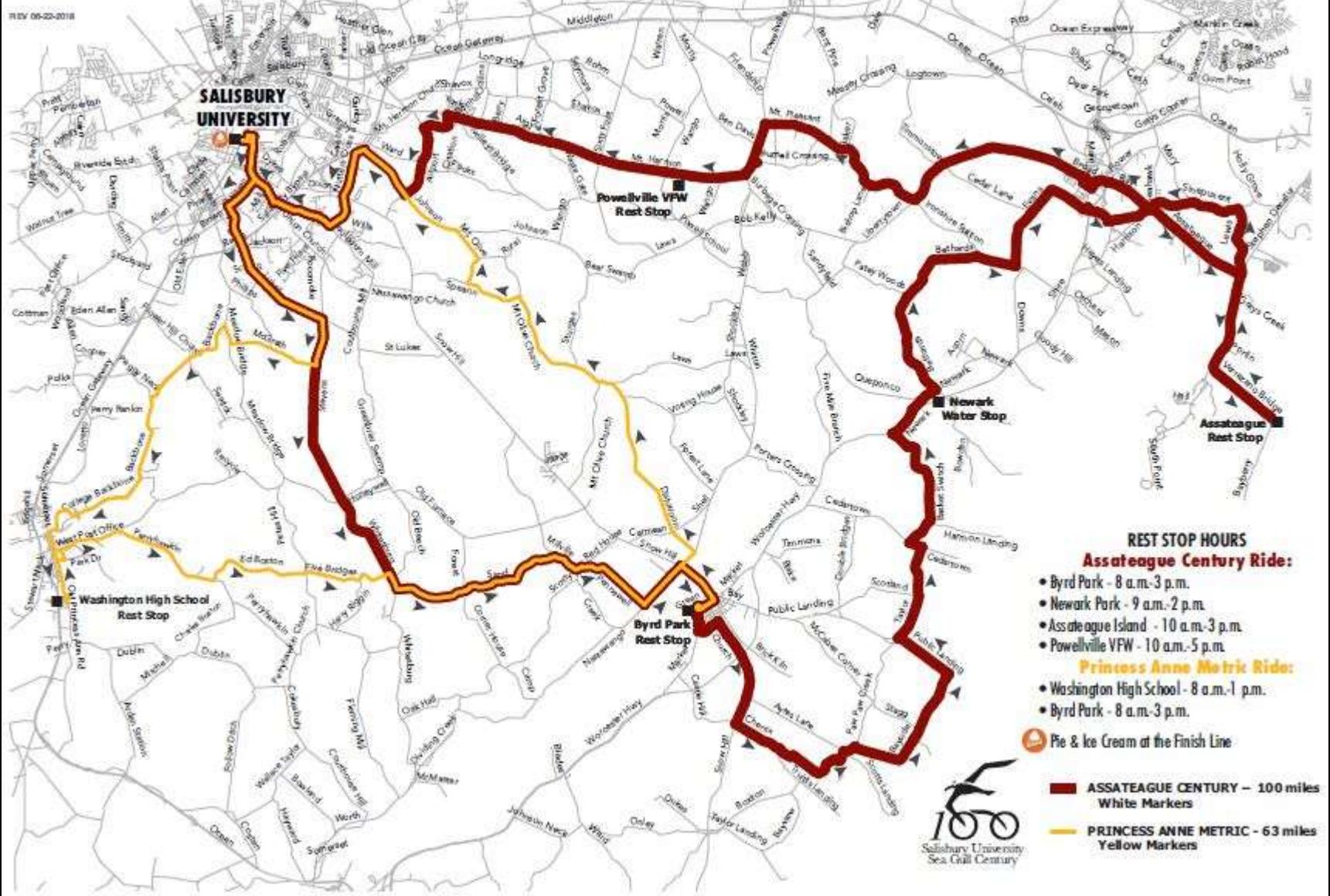
\*Figures based on survey of  
Sea Gull Century Participants  
to which 1,710 people  
responded



# Research Question

- What kind of weather conditions can be expected for the Seagull Century?



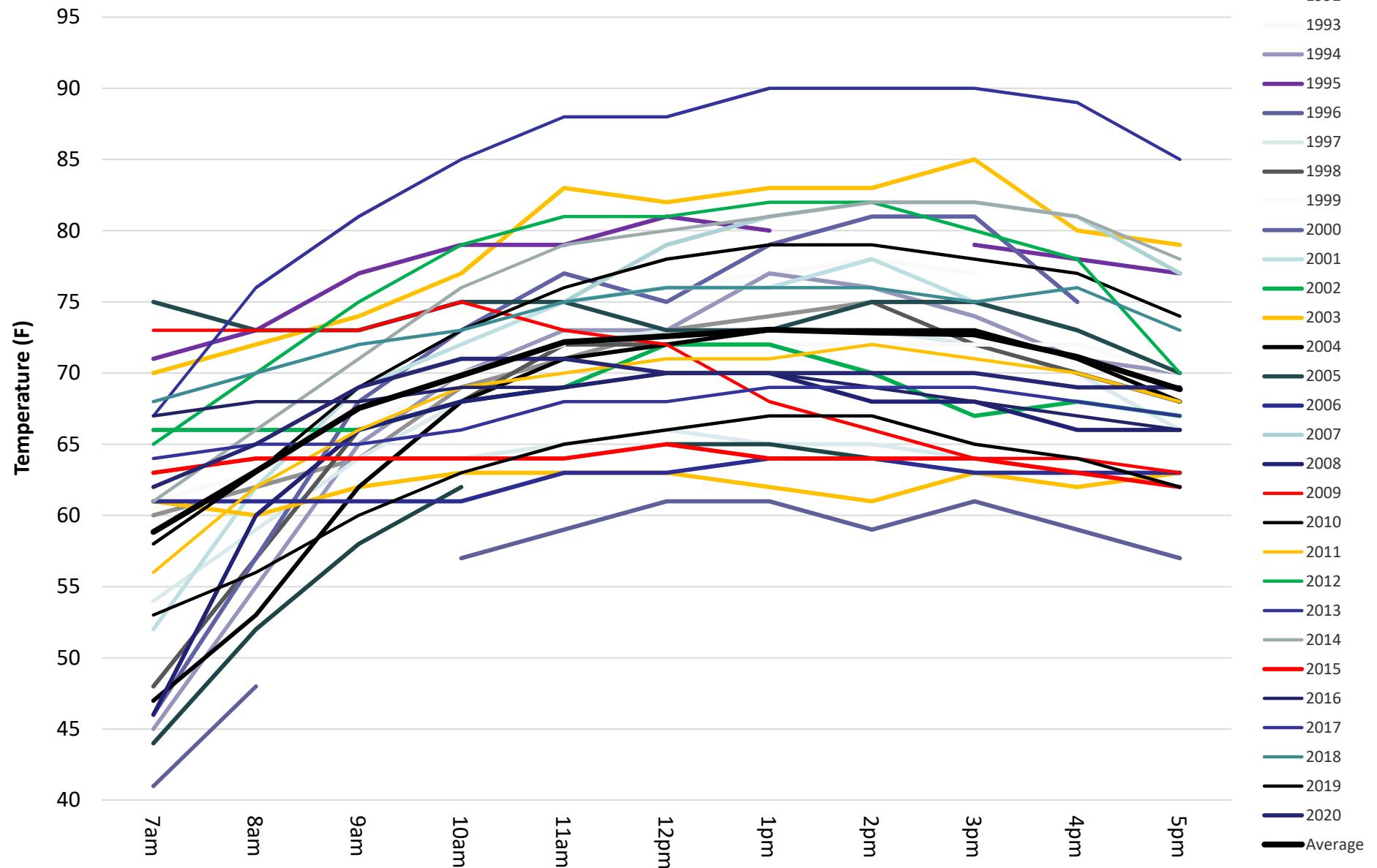


# Data Source

- Local Climate Data (LCD) was obtained from the National Centers for Environmental Information (NCEI)
  - Analyzed hourly weather conditions from 7am – 5pm

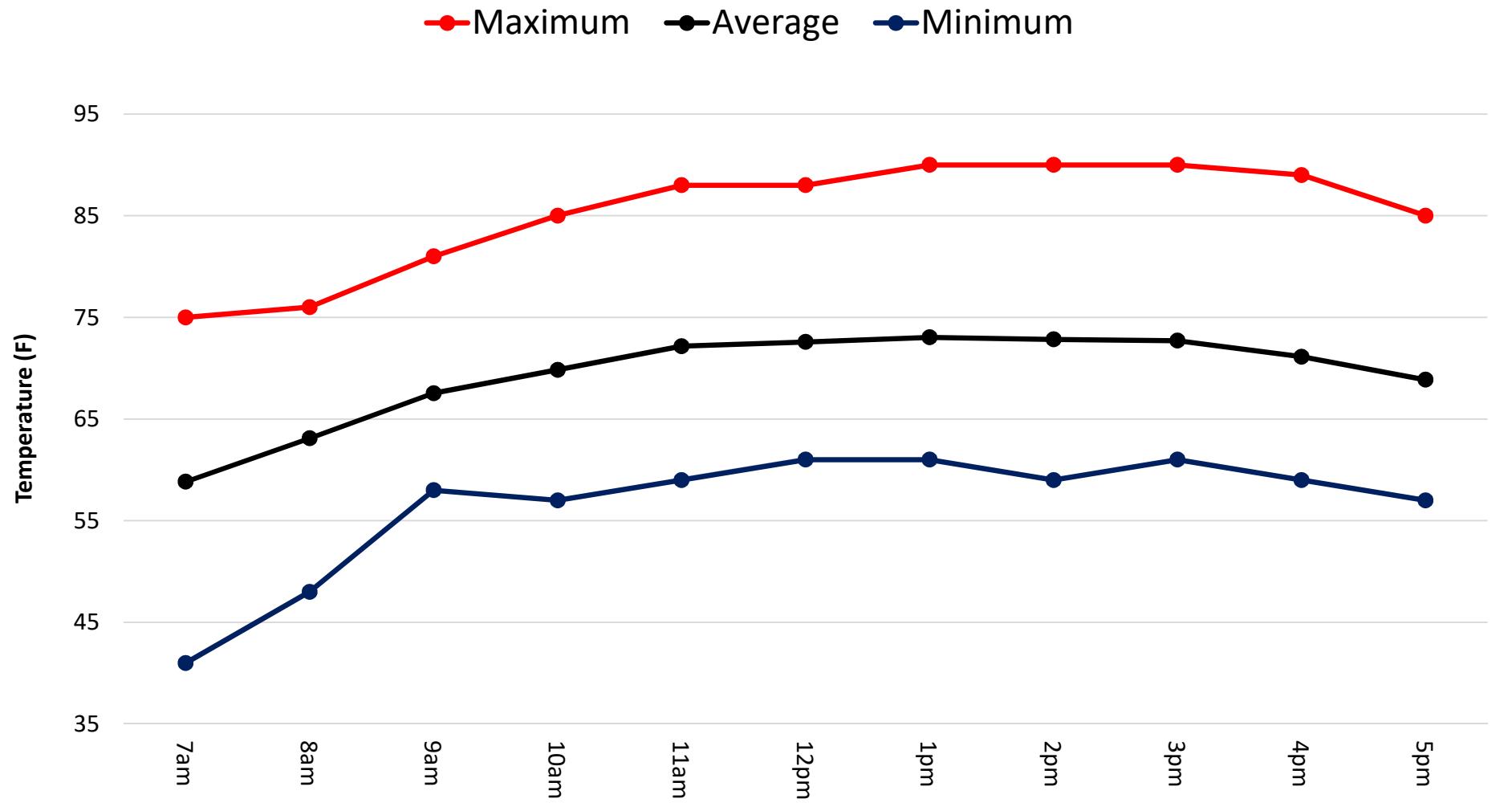
DATE	Dew Point	Temperature	Precipitation	Present Weather	RH (%)	SLP	Sky Conditions	Visibility	Wind Direction	Wind Gusts	Wind Speed
2015-10-03T06:54:00	63	63	0.01		100	30.01	BKN:07 6 OVC:08 11	7	40		15
2015-10-03T07:54:00	64	64	0.01	-RA:02 BR:1   RA	100	30.03	OVC:08 5	2	40	28	14
2015-10-03T08:54:00	63	64	T	-RA:02 BR:1   RA	96	30.04	OVC:08 6	2	50	30	21
2015-10-03T09:54:00	64	64	0.01	-RA:02 BR:1   RA	100	30.04	OVC:08 6	1.5	50	25	15
2015-10-03T10:54:00	64	64	0.02	-RA:02 BR:1   RA	100	30.04	OVC:08 5	1.5	40	28	17
2015-10-03T11:54:00	64	65	0.02	-RA:02 BR:1   RA	97	30.04	OVC:08 4	2	50	33	20
2015-10-03T12:54:00	63	64	0.07	-RA:02 BR:1   RA	96	30.03	OVC:08 9	3	40	29	21
2015-10-03T13:54:00	63	64	0.02	-RA:02 BR:1   RA	96	30.03	OVC:08 6	1	40	32	24
2015-10-03T14:54:00	63	64	0.02	-RA:02 BR:1   RA	96	30.03	OVC:08 8	2.5	50	36	26
2015-10-03T15:54:00	62	63	0.02	-RA:02 BR:1   RA	97	30.06	OVC:08 10	1.75	50	26	23
2015-10-03T16:54:00	62	62	0.02	-RA:02 BR:1   RA	100	30.07	OVC:08 9	1.75	50	37	24

# Seagull Century Climatology, 1989-2010



# Temperature

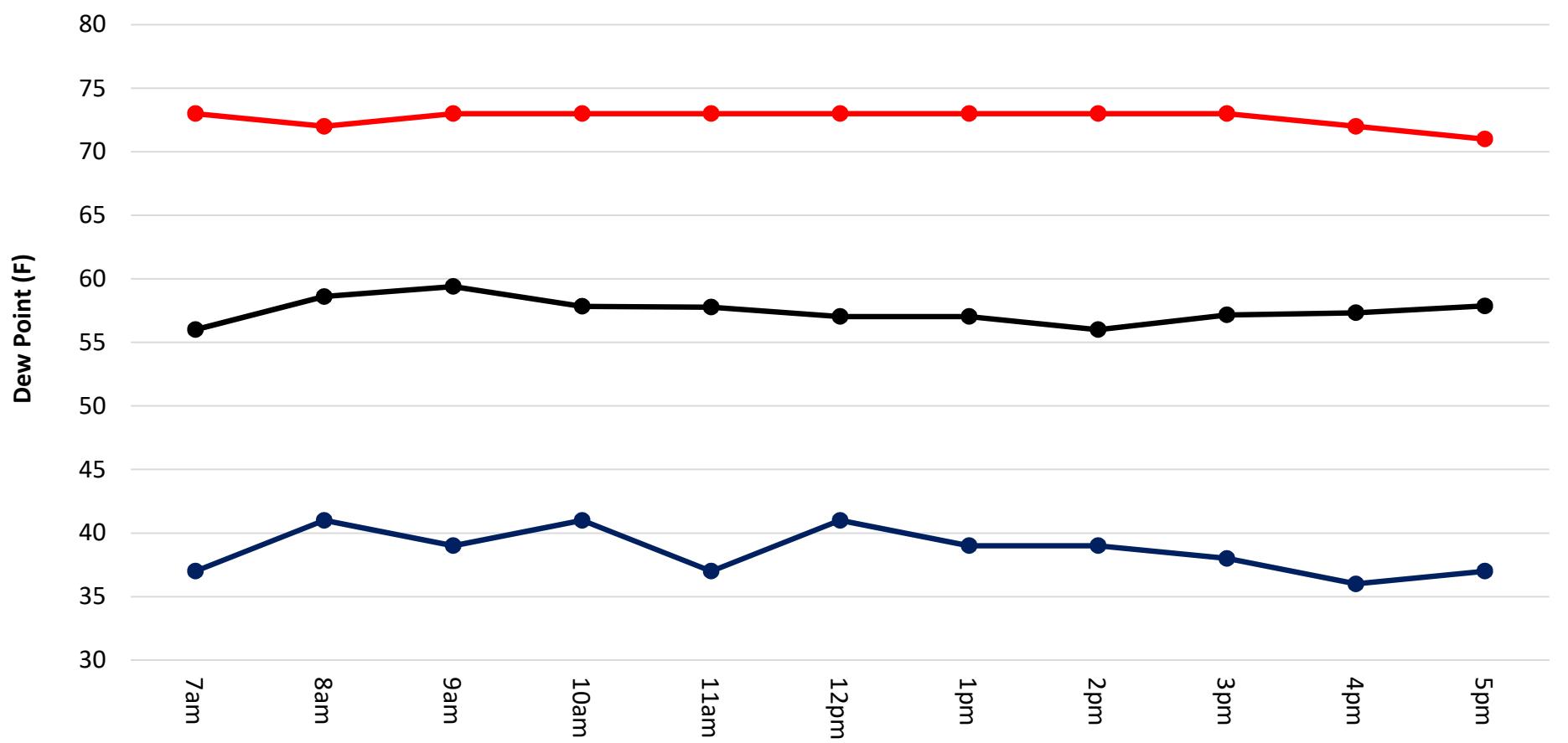
## Seagull Century Climatology, 1989-2020



# Dew Point

## Seagull Century Climatology, 1989-2020

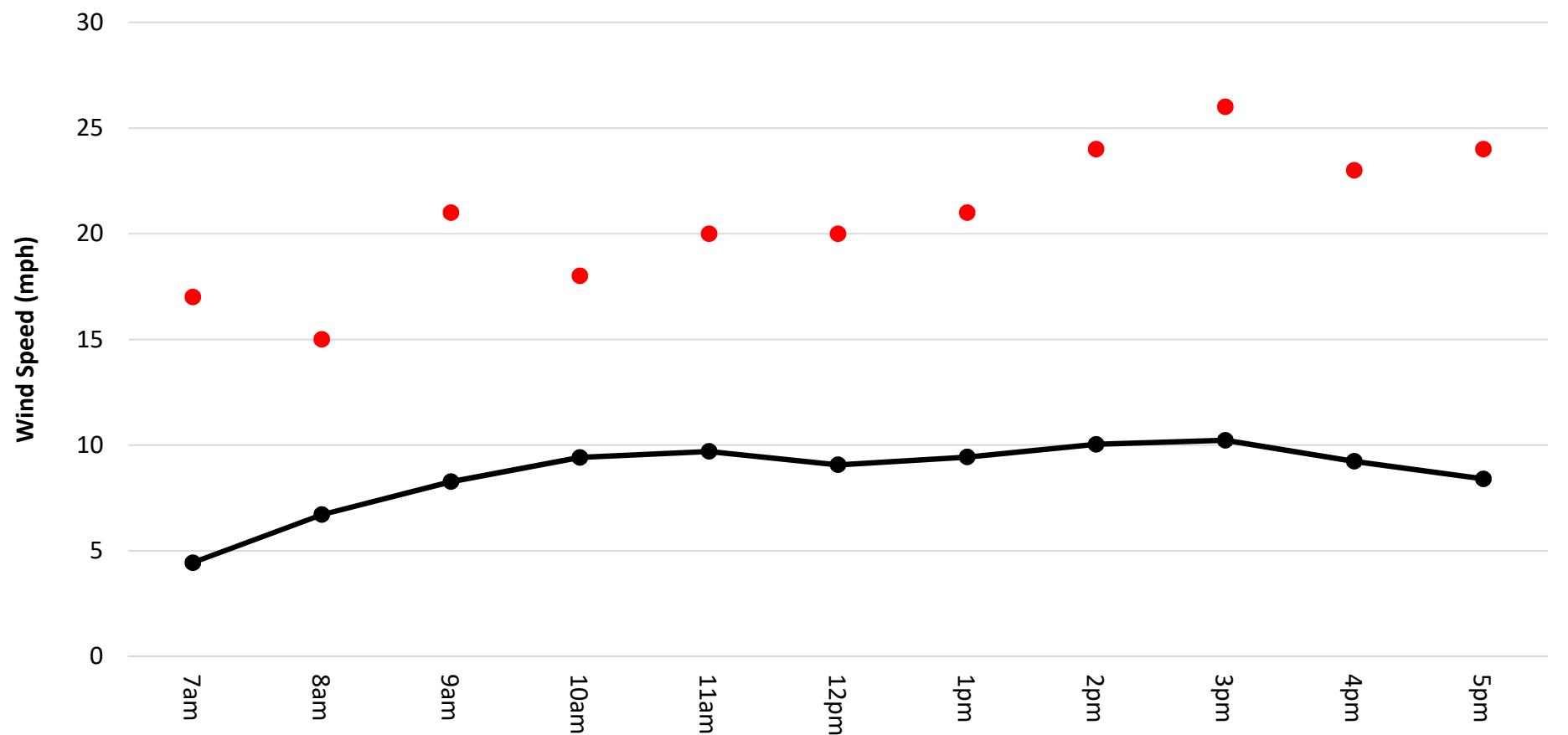
Maximum   Average   Minimum



# Wind Speed

## Seagull Century Climatology, 1989-2020

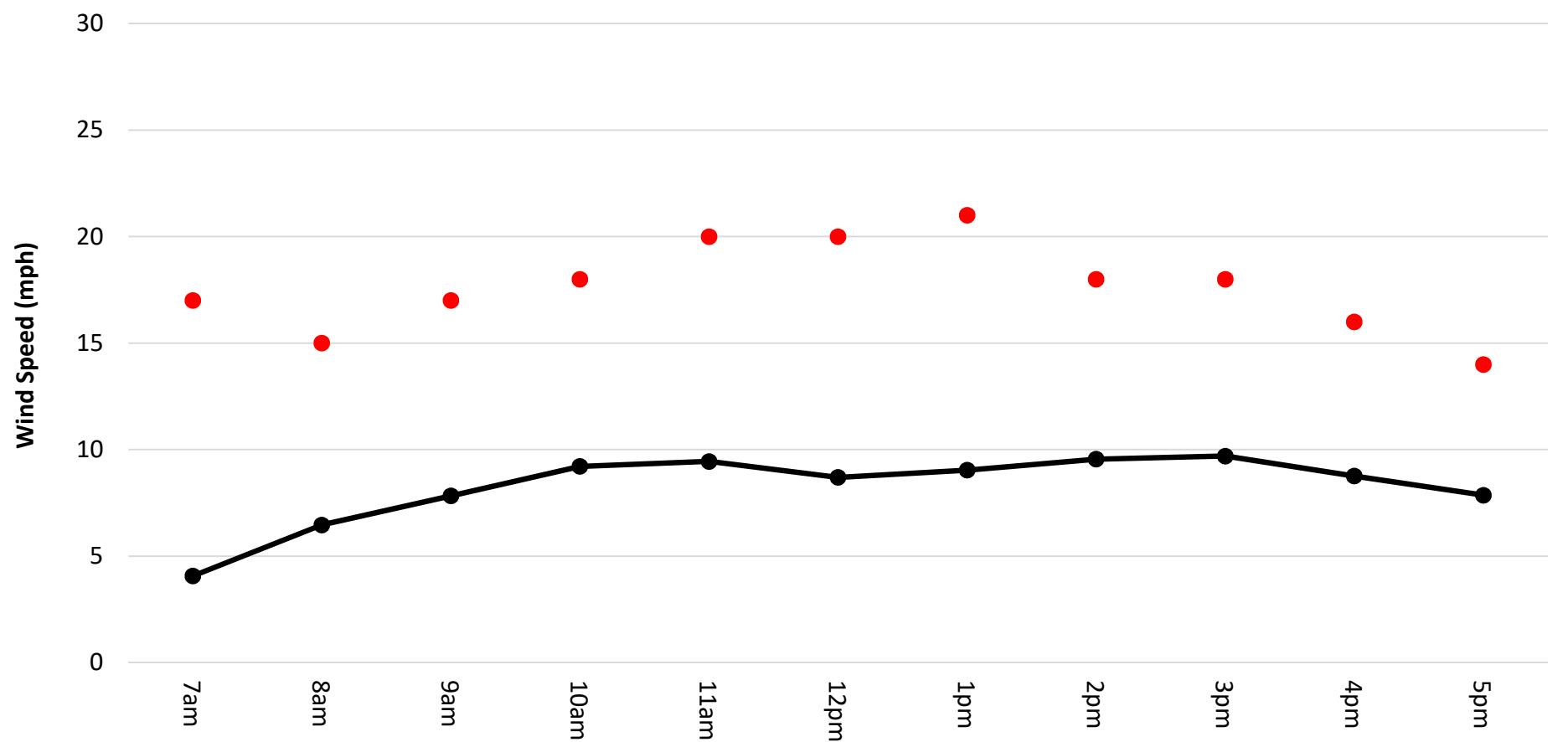
—●— Average    ● Maximum



# Wind Speed (Not Including 2015)

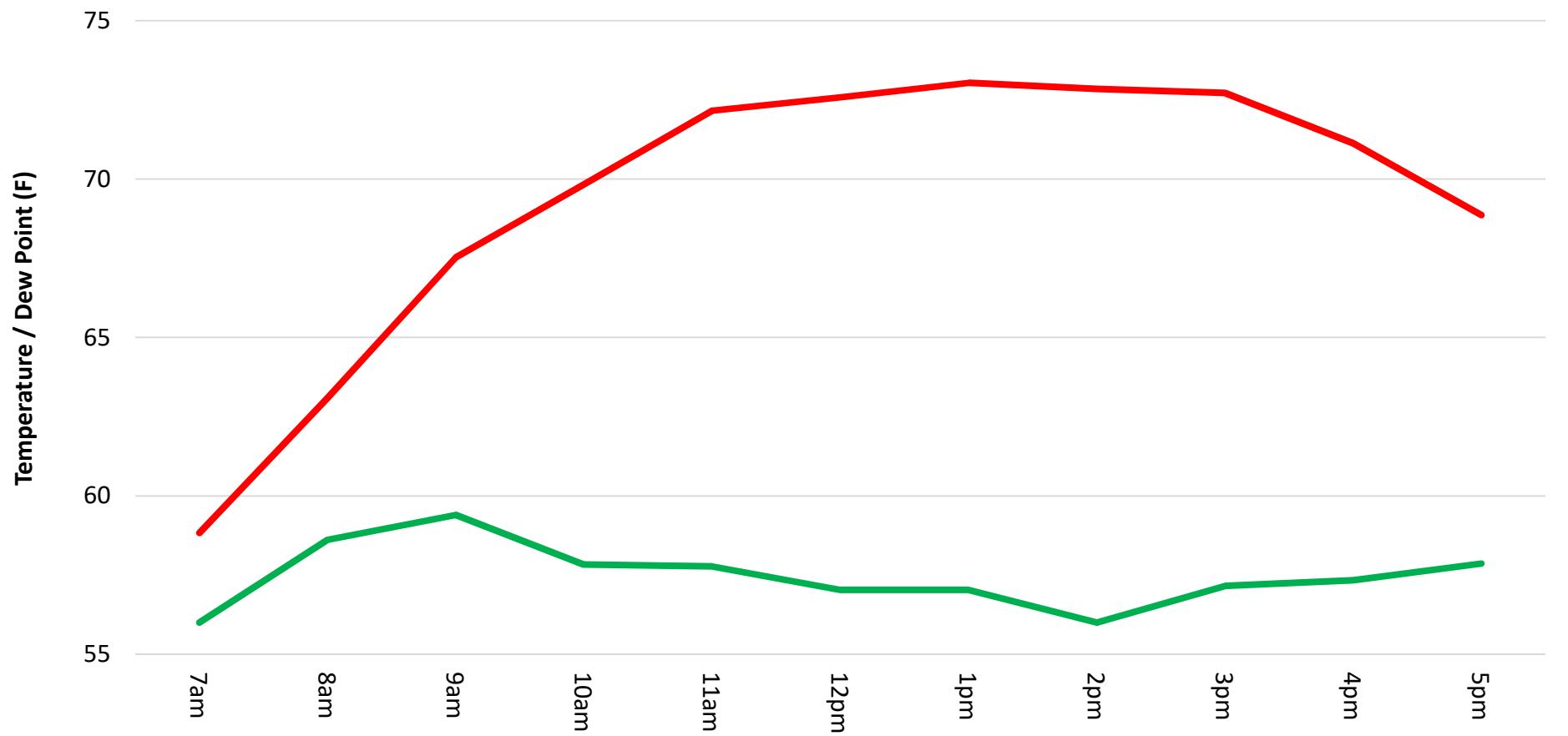
## Seagull Century Climatology, 1989-2020

—●— Average    ● Maximum



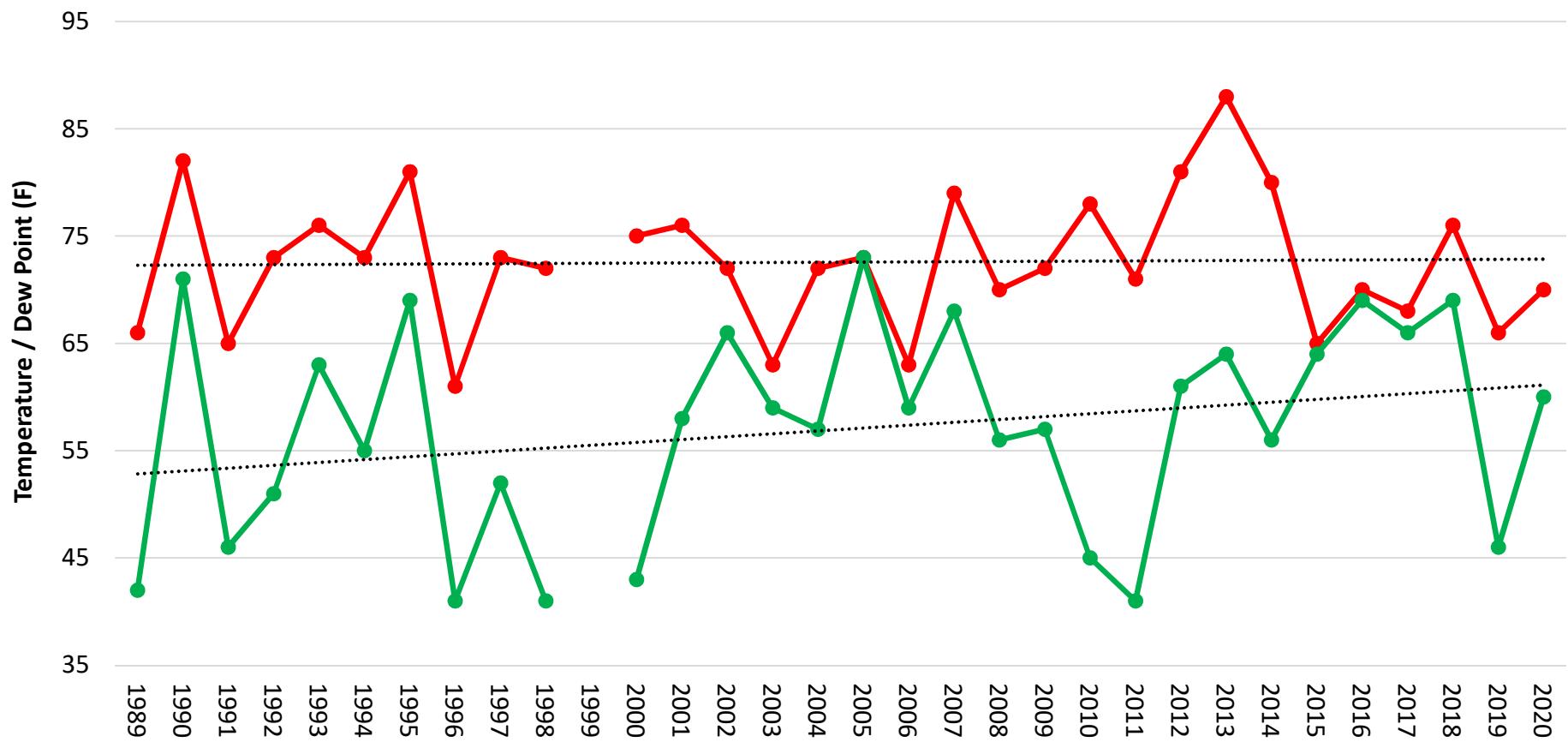
# Seagull Century Climatology, 1989-2020

Temperature Dew Point



# Seagull Century Climatology, 1989-2020

—●— Noon Temperature    —●— Noon Dewpoint



# Summary Table

Year	7am Temp	11am Temp	3pm Temp	Hours of Rain	Total Rainfall	Fog, Mist or Haze from 7-9am	Average Wind Direction	Average Wind Speed
1989	60	65	64			Y	NW	11
1990	70	83	85			Y	ESE	6
1991	44					Y		
1992	60	71	75				NE	9
1993	61	75	77			Y	WSW	9
1994	45	73	74			Y	SE	6
1995	71	79	79	2			SSW	12
1996	41	59	61				ENE	9
1997	54	72	72				NE	7
1998	48	72	72				ESE	8
1999		72	72				SW	10
2000	46	77	81					
2001	52	75	75			Y	SSE	6
2002	66	69	67	4	0.04	Y	SW	8
2003	61	63	63	6	0.07	Y	SW	8
2004	47	71	73			Y	SE	4
2005	75	75	75	11	3.44		S	14
2006	61	63	63	7	0.07		ENE	12
2007		75	82					
2008	46	69	68				ESE	6
2009	73	73	64	4	0.02		NW	10
2010	58	76	78				WNW	8
2011	56	70	71				WSW	16
2012	65	81	80	1	0.03	Y	SW	11
2013	67	88	90			Y	S	5
2014	61	79	82			Y	ENE	5
2015	63	64	64	11	0.22	Y	NE	20
2016	67	69	68	7	0.13		NNE	8
2017	64	68	69	2	0.03	Y	S	5
2018	68	75	75				E	7
2019	53	65	65				E	11
2020	62	71	70				SW	11

# Probabilities

Fog, Mist or Haze from 7-9am	13 / 31	42%
Rain	9 / 31	29%
Rain > 0.10"	2 / 31	6%
Average Wind Speed >10mph	8 / 28	29%
Average Wind Speed <7 mph	8 / 28	29%



# Importance of Research

- Allows Seagull Century participants to plan for the annual event
  - Wear appropriate clothing for the long bike ride
- Provides a 32 year historical summary of weather conditions
  - Riders can reflect on conditions they experienced
  - Many participants have completed the ride several times

# Conclusions

- Seagull Century Climatology (7am-5pm)
  - Temperatures from the mid 50s to lower 70s
    - Temperature range – low 40s to 90°F
  - Dew Point in the mid 50s
    - Dew Point range – upper 30s to low 70s
  - Average wind speeds between 4 and 10mph
    - Wind speeds ranged from calm to 21 mph
  - A foggy start to the ride is common
  - There is about a 30% chance of light rain

# Future Research

- Examine changes in wind direction
  - How does the wind direction change during day?
- Calculate standard deviations
  - Temperature, dew point and wind speed
- Analyze atmospheric circulation
  - Daily surface and 500mb maps (12z)

# Questions?

