Regional Science Consortium Buoys and Weather

Student Worksheet

Figures 1-3:

- 1. What three variables are being examined in Figures 1, 2, & 3?
- 2. A. What was the highest average air temperature observed in the summer of 2019?
 - B. On what date was this average air temperature observed?
- 3. What was the wind speed on August 27th, 2019?
- 4. A. On what day was the highest wave observed in the summer of 2019?
 - B. What was the wave height on this day in feet? (1 meter = 3.28 feet)

5. Do any of the variables appear to be related? Why or why not?

Figures 4-8:

- 6. What is the independent variable in Figure 4? What is the dependent variable?
- 7. A. R² measures the strength of the relationship between your trendline and the dependent variable. A higher R² value indicates a stronger relationship. Compare Figures 4 & 5. Which variable has the stronger relationship with wave height? Explain your reasoning.

B. How does this compare to your answer from Question 5?

8. Compare and discuss the information contained in Figures 5-8.