



## **BWSFA Seaweed Farm – Hatchet/Ray Caye – Temperature Data**

3 HOBO Temperature Loggers – 3 Depths

From August 17 – September 19<sup>th</sup> 2025

Prepared by: Maximiliano Caal



BWSFA Seaweed Farm – Hatchet/Ray Caye  
HOBO Temperature Loggers –  
From August 17 – September 19<sup>th</sup> 2025

1/3 of the Day is warm; 10am-6pm

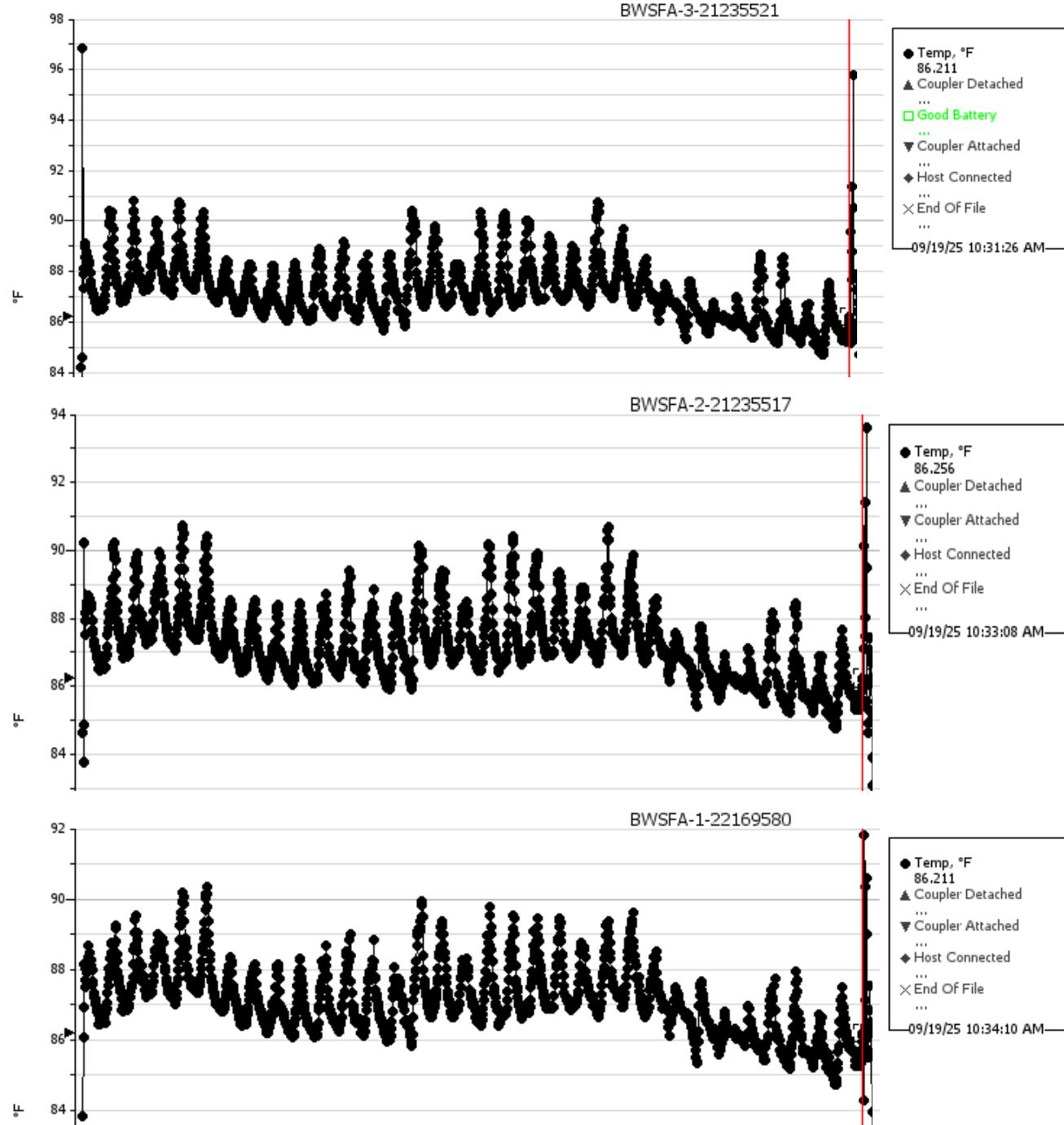
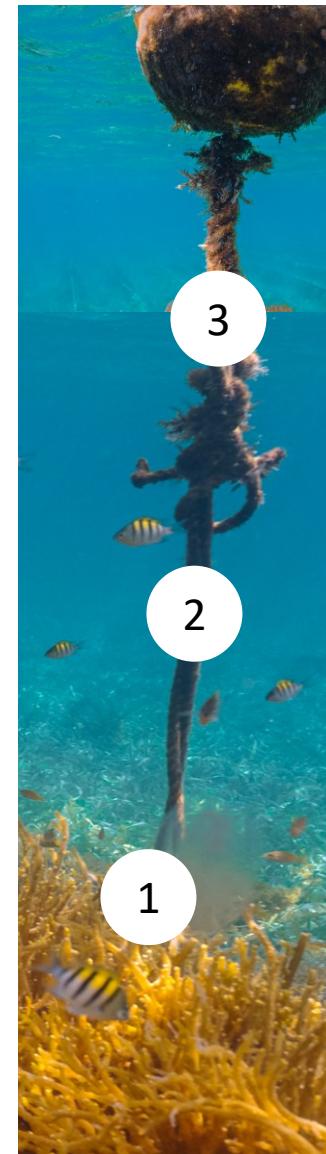
Combined Farhenhei Celcius

Average	87.1925	30.6625
Min	84.677	29.265
Max	90.797	32.665

BWSFA-3-21235521	Farhenhei Celcius
12ft Below Surface	
Average	87.2106 30.6726
Min	84.677 29.265
Max	90.797 32.665

BWSFA-2-21235517	Farhenhei Celcius
15ins In Between	
Average	87.2384 30.688
Min	84.767 29.315
Max	90.703 32.6128

BWSFA-1-22169580	Farhenhei Celcius
2ft Above Sea Floor	
Average	87.1286 30.627
Min	84.722 29.29
Max	90.333 32.4072





## Preliminary Results

- Optimal growth for *Kappaphycus* / *Eucheuma*-type species commonly occurs around ~27–31 °C (80.6-87.8 ° F).
- Short excursions above ~32 °C (89.6 ° F) can cause thermal stress (reduced growth, tissue weakening, increased susceptibility to disease such as “ice-ice”). Prolonged exposure to >31–32 °C (87.8-89.6 ° F). increases stress/disease risk.
- Near-surface logger (BWSFA-1) shows the surface layer regularly reaches or exceeds 32 °C (89.6 ° F) and several days have mean temperatures ≈ 31 °C – i.e., sustained daily heat stress is occurring on those days.
- All depths experience heat stress between ~10am–6pm.
- The mid-depth logger (BWSFA-2) shows the highest *overall proportion* of time above 31 °C, suggesting a thermal layering effect where mid-water may trap more heat.
- Planting ropes closer to the bottom zone (<2 ft above seafloor) where thermal stress is reduced.
- Avoid keeping biomass concentrated at mid-column (BWSFA-2 depth), as this zone shows the highest sustained exposure above 31 °C.



# BWSFA Seaweed Farm – Hatchet/Ray Caye

## HOBO Temperature Loggers –

### From August 17 – September 19<sup>th</sup> 2025

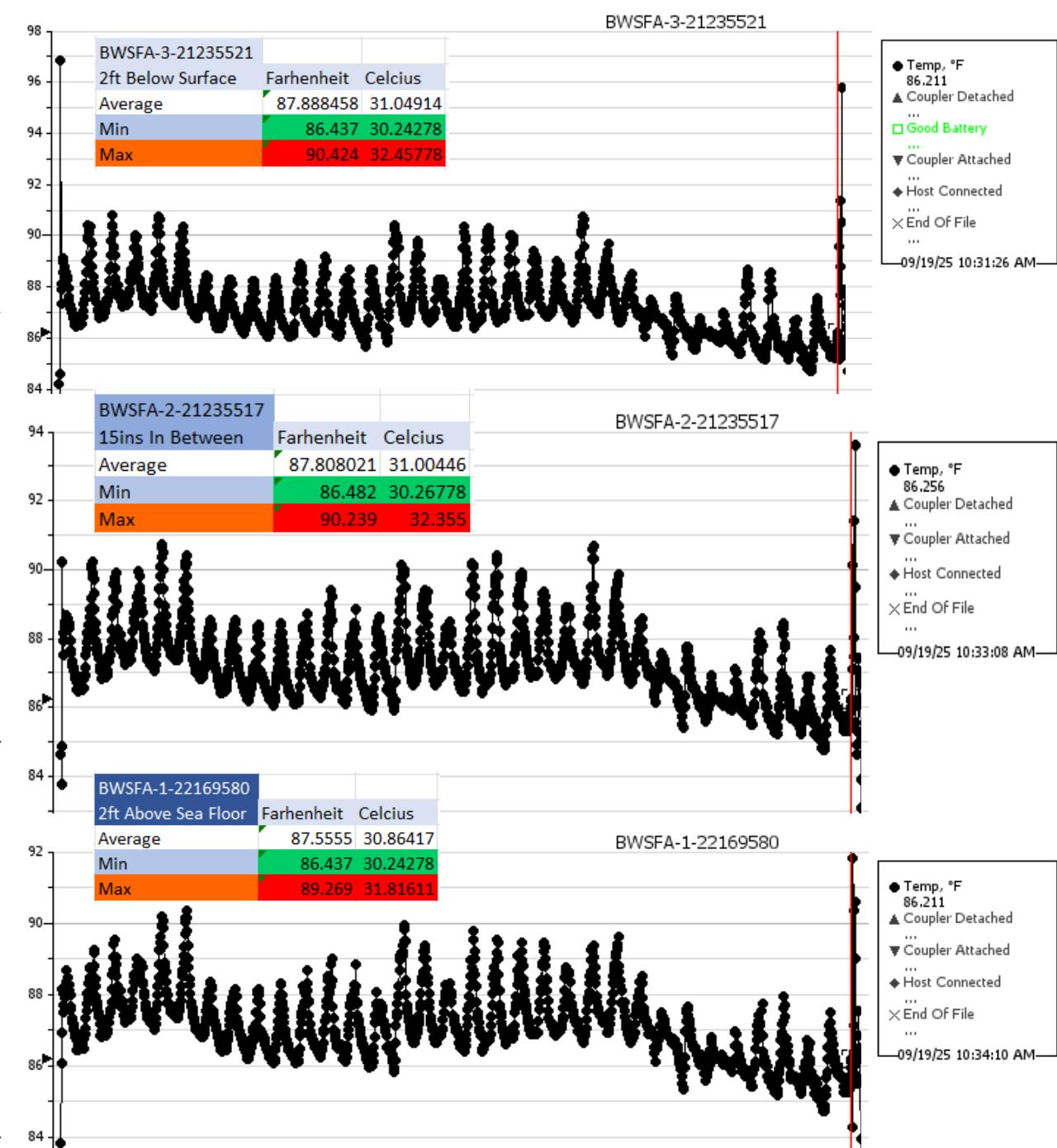
#### HONING IN

Extracted Day: Thursday, August 21<sup>st</sup> 2025

1/3 of the Day is warm; 10am-6pm

	Combined	Farhenheit	Celcius
Average	87.75066	30.97259	
Min	86.437	30.24278	
Max	90.424	32.45778	

177	BWSFA-3-21235521	8/21/2025 0:01	87.436	177	BWSFA-2-2123f	8/21/2025 0:03	87.483	177	BWSFA-1-22169580	8/21/2025 0:04	87.436
178	BWSFA-3-21235521	8/21/2025 0:31	87.346	178	BWSFA-2-2123f	8/21/2025 0:33	87.391	178	BWSFA-1-22169580	8/21/2025 0:34	87.346
179	BWSFA-3-21235521	8/21/2025 1:01	87.3	179	BWSFA-2-2123f	8/21/2025 1:03	87.346	179	BWSFA-1-22169580	8/21/2025 1:04	87.3
180	BWSFA-3-21235521	8/21/2025 1:31	87.21	180	BWSFA-2-2123f	8/21/2025 1:33	87.3	180	BWSFA-1-22169580	8/21/2025 1:34	87.255
181	BWSFA-3-21235521	8/21/2025 2:01	87.21	181	BWSFA-2-2123f	8/21/2025 2:03	87.255	181	BWSFA-1-22169580	8/21/2025 2:04	87.21
182	BWSFA-3-21235521	8/21/2025 2:31	87.21	182	BWSFA-2-2123f	8/21/2025 2:33	87.255	182	BWSFA-1-22169580	8/21/2025 2:34	87.21
183	BWSFA-3-21235521	8/21/2025 3:01	87.163	183	BWSFA-2-2123f	8/21/2025 3:03	87.21	183	BWSFA-1-22169580	8/21/2025 3:04	87.21
184	BWSFA-3-21235521	8/21/2025 3:31	87.163	184	BWSFA-2-2123f	8/21/2025 3:33	87.21	184	BWSFA-1-22169580	8/21/2025 3:34	87.21
185	BWSFA-3-21235521	8/21/2025 4:01	87.21	185	BWSFA-2-2123f	8/21/2025 4:03	87.21	185	BWSFA-1-22169580	8/21/2025 4:04	87.21
186	BWSFA-3-21235521	8/21/2025 4:31	87.118	186	BWSFA-2-2123f	8/21/2025 4:33	87.21	186	BWSFA-1-22169580	8/21/2025 4:34	87.163
187	BWSFA-3-21235521	8/21/2025 5:01	87.118	187	BWSFA-2-2123f	8/21/2025 5:03	87.163	187	BWSFA-1-22169580	8/21/2025 5:04	87.163
188	BWSFA-3-21235521	8/21/2025 5:31	87.118	188	BWSFA-2-2123f	8/21/2025 5:33	87.163	188	BWSFA-1-22169580	8/21/2025 5:34	87.118
189	BWSFA-3-21235521	8/21/2025 6:01	87.073	189	BWSFA-2-2123f	8/21/2025 6:03	87.118	189	BWSFA-1-22169580	8/21/2025 6:04	87.118
190	BWSFA-3-21235521	8/21/2025 6:31	87.073	190	BWSFA-2-2123f	8/21/2025 6:33	87.073	190	BWSFA-1-22169580	8/21/2025 6:34	87.028
191	BWSFA-3-21235521	8/21/2025 7:01	87.21	191	BWSFA-2-2123f	8/21/2025 7:03	87.163	191	BWSFA-1-22169580	8/21/2025 7:04	87.118
192	BWSFA-3-21235521	8/21/2025 7:31	87.3	192	BWSFA-2-2123f	8/21/2025 7:33	87.255	192	BWSFA-1-22169580	8/21/2025 7:34	87.163
193	BWSFA-3-21235521	8/21/2025 8:01	87.665	193	BWSFA-2-2123f	8/21/2025 8:03	87.528	193	BWSFA-1-22169580	8/21/2025 8:04	87.346
194	BWSFA-3-21235521	8/21/2025 8:31	87.939	194	BWSFA-2-2123f	8/21/2025 8:33	87.71	194	BWSFA-1-22169580	8/21/2025 8:34	87.573
195	BWSFA-3-21235521	8/21/2025 9:01	88.075	195	BWSFA-2-2123f	8/21/2025 9:03	87.847	195	BWSFA-1-22169580	8/21/2025 9:04	87.757
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201	BWSFA-3-21235521	8/21/2025 12:01	89.362	201	BWSFA-2-2123f	8/21/2025 12:03	89.454	201	BWSFA-1-22169580	8/21/2025 12:04	89.269
202	BWSFA-3-21235521	8/21/2025 12:31	90.055	202	BWSFA-2-2123f	8/21/2025 12:33	89.823	202	BWSFA-1-22169580	8/21/2025 12:34	89.454
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210	BWSFA-3-21235521	8/21/2025 16:31	88.993	210	BWSFA-2-2123f	8/21/2025 16:33	88.947	210	BWSFA-1-22169580	8/21/2025 16:34	88.902
211	BWSFA-3-21235521	8/21/2025 17:01	88.81	211	BWSFA-2-2123f	8/21/2025 17:03	88.947	211	BWSFA-1-22169580	8/21/2025 17:04	88.763
212	BWSFA-3-21235521	8/21/2025 17:31	88.671	212	BWSFA-2-2123f	8/21/2025 17:33	88.718	212	BWSFA-1-22169580	8/21/2025 17:34	88.671
213	BWSFA-3-21235521	8/21/2025 18:01	88.626	213	BWSFA-2-2123f	8/21/2025 18:03	88.671	213	BWSFA-1-22169580	8/21/2025 18:04	88.626
214	BWSFA-3-21235521	8/21/2025 18:31	88.351	214	BWSFA-2-2123f	8/21/2025 18:33	88.396	214	BWSFA-1-22169580	8/21/2025 18:34	88.351
215	BWSFA-3-21235521	8/21/2025 19:01	88.122	215	BWSFA-2-2123f	8/21/2025 19:03	88.167	215	BWSFA-1-22169580	8/21/2025 19:04	88.122
216	BWSFA-3-21235521	8/21/2025 19:31	87.939	216	BWSFA-2-2123f	8/21/2025 19:33	87.985	216	BWSFA-1-22169580	8/21/2025 19:34	87.995
217	BWSFA-3-21235521	8/21/2025 20:01	87.802	217	BWSFA-2-2123f	8/21/2025 20:03	87.847	217	BWSFA-1-22169580	8/21/2025 20:04	87.802
218	BWSFA-3-21235521	8/21/2025 20:31	87.757	218	BWSFA-2-2123f	8/21/2025 20:33	87.802	218	BWSFA-1-22169580	8/21/2025 20:34	87.757
219	BWSFA-3-21235521	8/21/2025 21:01	87.71	219	BWSFA-2-2123f	8/21/2025 21:03	87.757	219	BWSFA-1-22169580	8/21/2025 21:04	87.757
220	BWSFA-3-21235521	8/21/2025 21:31	87.665	220	BWSFA-2-2123f	8/21/2025 21:33	87.71	220	BWSFA-1-22169580	8/21/2025 21:34	87.71
221	BWSFA-3-21235521	8/21/2025 22:01	87.665	221	BWSFA-2-2123f	8/21/2025 22:03	87.71	221	BWSFA-1-22169580	8/21/2025 22:04	87.71
222	BWSFA-3-21235521	8/21/2025 22:31	87.573	222	BWSFA-2-2123f	8/21/2025 22:33	87.62	222	BWSFA-1-22169580	8/21/2025 22:34	87.62
223	BWSFA-3-21235521	8/21/2025 23:01	87.483	223	BWSFA-2-2123f	8/21/2025 23:03	87.528	223	BWSFA-1-22169580	8/21/2025 23:04	87.483
224	BWSFA-3-21235521	8/21/2025 23:31	87.483	224	BWSFA-2-2123f	8/21/2025 23:33	87.528	224	BWSFA-1-22169580	8/21/2025 23:34	87.483





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## HOBO Temperature Loggers –

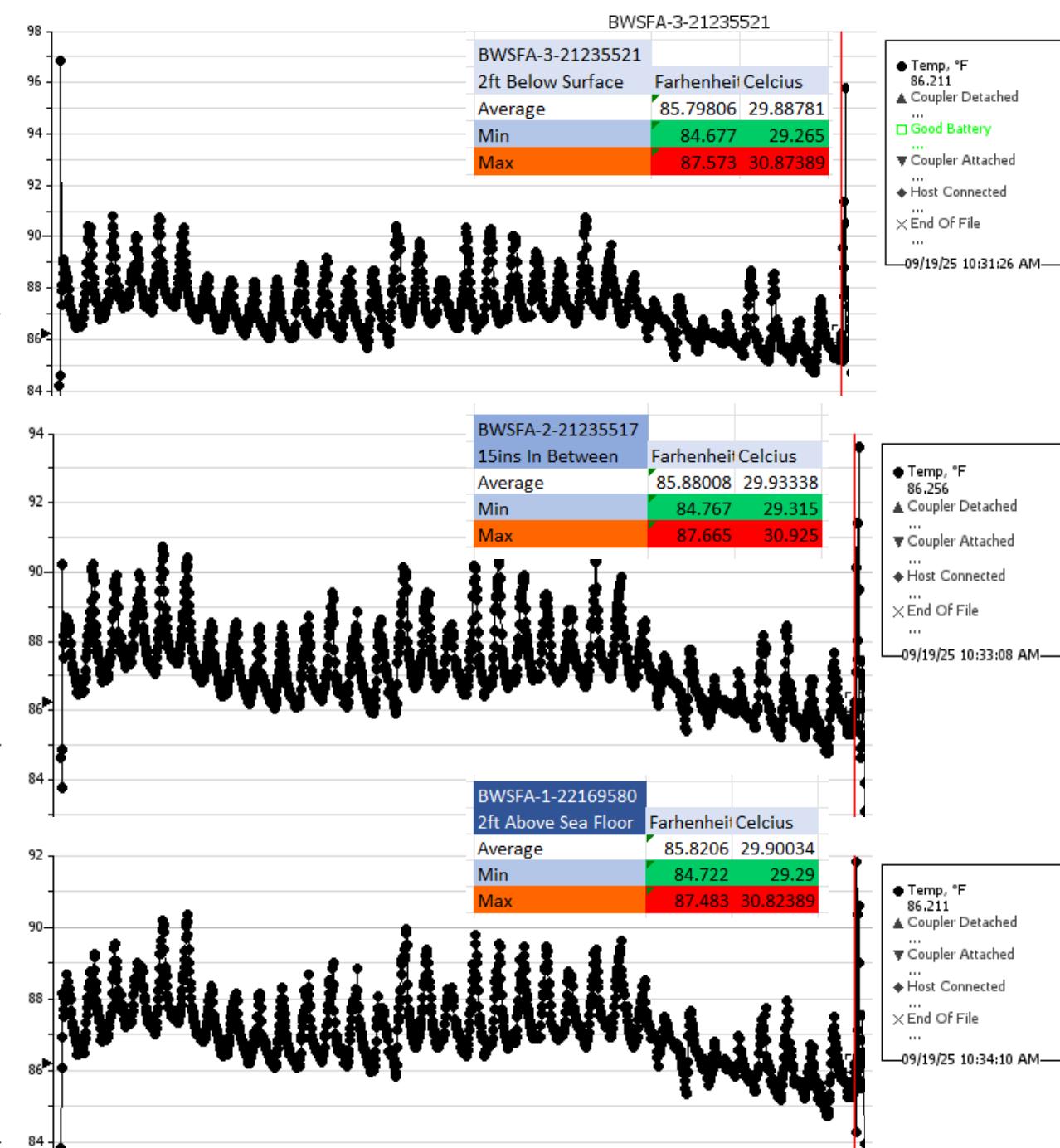
### From August 17 – September 19<sup>th</sup> 2025

HONING IN:

Extracted Day: Thursday, September 18<sup>th</sup> 2025

1/3 of the Day is warm; 10am-6pm					
Combined Farhenheit Celcius					
Average	85.83292	29.90718			
Min	84.677	29.265			
Max	87.665	30.925			

1521	BWSFA-3-21235521	9/18/2025 0:01	85.172		1521	BWSFA-2-2123t	9/18/2025 0:03	85.217		1521	BWSFA-1-22169580	9/18/2025 0:04	85.217	
1522	BWSFA-3-21235521	9/18/2025 0:31	85.035		1522	BWSFA-2-2123t	9/18/2025 0:33	85.127	##	1522	BWSFA-1-22169580	9/18/2025 0:34	85.082	
1523	BWSFA-3-21235521	9/18/2025 1:01	85.035		1523	BWSFA-2-2123t	9/18/2025 1:03	85.127	##	1523	BWSFA-1-22169580	9/18/2025 1:04	85.127	
1524	BWSFA-3-21235521	9/18/2025 1:31	85.127		1524	BWSFA-2-2123t	9/18/2025 1:33	85.217	##	1524	BWSFA-1-22169580	9/18/2025 1:34	85.172	
1525	BWSFA-3-21235521	9/18/2025 2:01	85.217		1525	BWSFA-2-2123t	9/18/2025 2:03	85.307	##	1525	BWSFA-1-22169580	9/18/2025 2:04	85.307	
1526	BWSFA-3-21235521	9/18/2025 2:31	85.172		1526	BWSFA-2-2123t	9/18/2025 2:33	85.217	##	1526	BWSFA-1-22169580	9/18/2025 2:34	85.217	
1527	BWSFA-3-21235521	9/18/2025 3:01	84.945		1527	BWSFA-2-2123t	9/18/2025 3:03	85.082	##	1527	BWSFA-1-22169580	9/18/2025 3:04	85.127	
1528	BWSFA-3-21235521	9/18/2025 3:31	84.812		1528	BWSFA-2-2123t	9/18/2025 3:33	85.217	##	1528	BWSFA-1-22169580	9/18/2025 3:34	85.082	
1529	BWSFA-3-21235521	9/18/2025 4:01	84.9		1529	BWSFA-2-2123t	9/18/2025 4:03	85.035	##	1529	BWSFA-1-22169580	9/18/2025 4:04	85.172	
1530	BWSFA-3-21235521	9/18/2025 4:31	84.857		1530	BWSFA-2-2123t	9/18/2025 4:33	84.812	##	1530	BWSFA-1-22169580	9/18/2025 4:34	84.9	
1531	BWSFA-3-21235521	9/18/2025 5:01	84.9		1531	BWSFA-2-2123t	9/18/2025 5:03	84.939	##	1531	BWSFA-1-22169580	9/18/2025 5:04	84.939	
1532	BWSFA-3-21235521	9/18/2025 5:31	85.035		1532	BWSFA-2-2123t	9/18/2025 5:33	85.082	##	1532	BWSFA-1-22169580	9/18/2025 5:34	85.082	
1533	BWSFA-3-21235521	9/18/2025 6:01	84.722		1533	BWSFA-2-2123t	9/18/2025 6:03	84.767	##	1533	BWSFA-1-22169580	9/18/2025 6:04	84.722	
1534	BWSFA-3-21235521	9/18/2025 6:31	84.722		1534	BWSFA-2-2123t	9/18/2025 6:33	84.767	##	1534	BWSFA-1-22169580	9/18/2025 6:34	84.767	
1535	BWSFA-3-21235521	9/18/2025 7:01	84.767		1535	BWSFA-2-2123t	9/18/2025 7:03	84.812	##	1535	BWSFA-1-22169580	9/18/2025 7:04	84.767	
1536	BWSFA-3-21235521	9/18/2025 7:31	84.677		1536	BWSFA-2-2123t	9/18/2025 7:33	84.767	##	1536	BWSFA-1-22169580	9/18/2025 7:34	84.722	
1537	BWSFA-3-21235521	9/18/2025 8:01	84.857		1537	BWSFA-2-2123t	9/18/2025 8:03	84.945	##	1537	BWSFA-1-22169580	9/18/2025 8:04	84.9	
1538	BWSFA-3-21235521	9/18/2025 8:31	85.127		1538	BWSFA-2-2123t	9/18/2025 8:33	85.217	##	1538	BWSFA-1-22169580	9/18/2025 8:34	85.172	
1539	BWSFA-3-21235521	9/18/2025 9:01	85.352		1539	BWSFA-2-2123t	9/18/2025 9:03	85.442	##	1539	BWSFA-1-22169580	9/18/2025 9:04	85.352	
1540	BWSFA-3-21235521	9/18/2025 9:31	85.667		1540	BWSFA-2-2123t	9/18/2025 9:33	85.757	##	1540	BWSFA-1-22169580	9/18/2025 9:34	85.667	
1541	BWSFA-3-21235521	9/18/2025 10:01	85.894		1541	BWSFA-2-2123t	9/18/2025 10:03	85.984	##	1541	BWSFA-1-22169580	9/18/2025 10:04	85.849	
1542	BWSFA-3-21235521	9/18/2025 10:31	86.211		1542	BWSFA-2-2123t	9/18/2025 10:33	86.301	##	1542	BWSFA-1-22169580	9/18/2025 10:34	86.211	
1543	BWSFA-3-21235521	9/18/2025 11:01	86.527		1543	BWSFA-2-2123t	9/18/2025 11:03	86.617	##	1543	BWSFA-1-22169580	9/18/2025 11:04	86.527	
1544	BWSFA-3-21235521	9/18/2025 11:31	86.844		1544	BWSFA-2-2123t	9/18/2025 11:33	86.981	##	1544	BWSFA-1-22169580	9/18/2025 11:34	86.891	
1545	BWSFA-3-21235521	9/18/2025 12:01	87.073		1545	BWSFA-2-2123t	9/18/2025 12:03	87.21	##	1545	BWSFA-1-22169580	9/18/2025 12:04	87.118	
1546	BWSFA-3-21235521	9/18/2025 12:31	87.21		1546	BWSFA-2-2123t	9/18/2025 12:33	87.255	##	1546	BWSFA-1-22169580	9/18/2025 12:34	87.118	
1547	BWSFA-3-21235521	9/18/2025 13:01	87.391		1547	BWSFA-2-2123t	9/18/2025 13:03	87.331	##	1547	BWSFA-1-22169580	9/18/2025 13:04	87.21	
1548	BWSFA-3-21235521	9/18/2025 13:31	87.573		1548	BWSFA-2-2123t	9/18/2025 13:33	87.665	##	1548	BWSFA-1-22169580	9/18/2025 13:34	87.483	
1549	BWSFA-3-21235521	9/18/2025 14:01	87.255		1549	BWSFA-2-2123t	9/18/2025 14:03	87.21	##	1549	BWSFA-1-22169580	9/18/2025 14:04	87.028	
1550	BWSFA-3-21235521	9/18/2025 14:31	87.028		1550	BWSFA-2-2123t	9/18/2025 14:33	87.118	##	1550	BWSFA-1-22169580	9/18/2025 14:34	86.936	
1551	BWSFA-3-21235521	9/18/2025 15:01	86.799		1551	BWSFA-2-2123t	9/18/2025 15:03	86.844	##	1551	BWSFA-1-22169580	9/18/2025 15:04	86.754	
1552	BWSFA-3-21235521	9/18/2025 15:31	86.617		1552	BWSFA-2-2123t	9/18/2025 15:33	86.799	##	1552	BWSFA-1-22169580	9/18/2025 15:34	86.617	
1553	BWSFA-3-21235521	9/18/2025 16:01	86.617		1553	BWSFA-2-2123t	9/18/2025 16:03	86.891	##	1553	BWSFA-1-22169580	9/18/2025 16:04	86.617	
1554	BWSFA-3-21235521	9/18/2025 16:31	86.527		1554	BWSFA-2-2123t	9/18/2025 16:33	86.664	##	1554	BWSFA-1-22169580	9/18/2025 16:34	86.391	
1555	BWSFA-3-21235521	9/18/2025 17:01	86.346		1555	BWSFA-2-2123t	9/18/2025 17:03	86.391	##	1555	BWSFA-1-22169580	9/18/2025 17:04	86.301	
1556	BWSFA-3-21235521	9/18/2025 17:31	86.211		1556	BWSFA-2-2123t	9/18/2025 17:33	86.301	##	1556	BWSFA-1-22169580	9/18/2025 17:34	86.256	
1557	BWSFA-3-21235521	9/18/2025 18:01	86.074		1557	BWSFA-2-2123t	9/18/2025 18:03	86.119	##	1557	BWSFA-1-22169580	9/18/2025 18:04	86.119	
1558	BWSFA-3-21235521	9/18/2025 18:31	86.029		1558	BWSFA-2-2123t	9/18/2025 18:33	86.074	##	1558	BWSFA-1-22169580	9/18/2025 18:34	86.029	
1559	BWSFA-3-21235521	9/18/2025 19:01	85.984		1559	BWSFA-2-2123t	9/18/2025 19:03	86.029	##	1559	BWSFA-1-22169580	9/18/2025 19:04	86.029	
1560	BWSFA-3-21235521	9/18/2025 19:31	85.939		1560	BWSFA-2-2123t	9/18/2025 19:33	85.984	##	1560	BWSFA-1-22169580	9/18/2025 19:34	85.984	
1561	BWSFA-3-21235521	9/18/2025 20:01	85.894		1561	BWSFA-2-2123t	9/18/2025 20:03	85.939	##	1561	BWSFA-1-22169580	9/18/2025 20:04	85.939	
1562	BWSFA-3-21235521	9/18/2025 20:31	85.849		1562	BWSFA-2-2123t	9/18/2025 20:33	85.939	##	1562	BWSFA-1-22169580	9/18/2025 20:34	85.894	
1563	BWSFA-3-21235521	9/18/2025 21:01	85.802		1563	BWSFA-2-2123t	9/18/2025 21:03	85.849	##	1563	BWSFA-1-22169580	9/18/2025 21:04	85.849	
1564	BWSFA-3-21235521	9/18/2025 21:31	85.757		1564	BWSFA-2-2123t	9/18/2025 21:33	85.802	##	1564	BWSFA-1-22169580	9/18/2025 21:34	85.757	
1565	BWSFA-3-21235521	9/18/2025 22:01	85.712		1565	BWSFA-2-2123t	9/18/2025 22:03	85.757	##	1565	BWSFA-1-22169580	9/18/2025 22:04	85.757	
1566	BWSFA-3-21235521	9/18/2025 22:31	85.667		1566	BWSFA-2-2123t	9/18/2025 22:33	85.712	##	1566	BWSFA-1-22169580	9/18/2025 22:34	85.712	
1567	BWSFA-3-21235521	9/18/2025 23:01	85.667		1567	BWSFA-2-2123t	9/18/2025 23:03	85.757	##	1567	BWSFA-1-22169580	9/18/2025 23:04	85.712	
1568	BWSFA-3-21235521	9/18/2025 23:31	85.712		1568	BWSFA-2-2123t	9/18/2025 23:33	85.757	##	1568	BWSFA-1-22169580	9/18/2025 23:34	85.757	





# BWSFA Seaweed Farm – Hatchet/Ray Caye

## HOBO Temperature Loggers –

### From August 17 – September 19<sup>th</sup> 2025

1/3 of the Day is warm; 10am-6pm		
Combined Farhenheit Celcius		
Average	87.1925	30.6625
Min	84.677	29.265
Max	90.797	32.665

#### VISUAL COMPARISON BETWEEN 2 DAYS

Thursday, August 21<sup>st</sup> 2025

&

Thursday, September 18<sup>th</sup> 2025

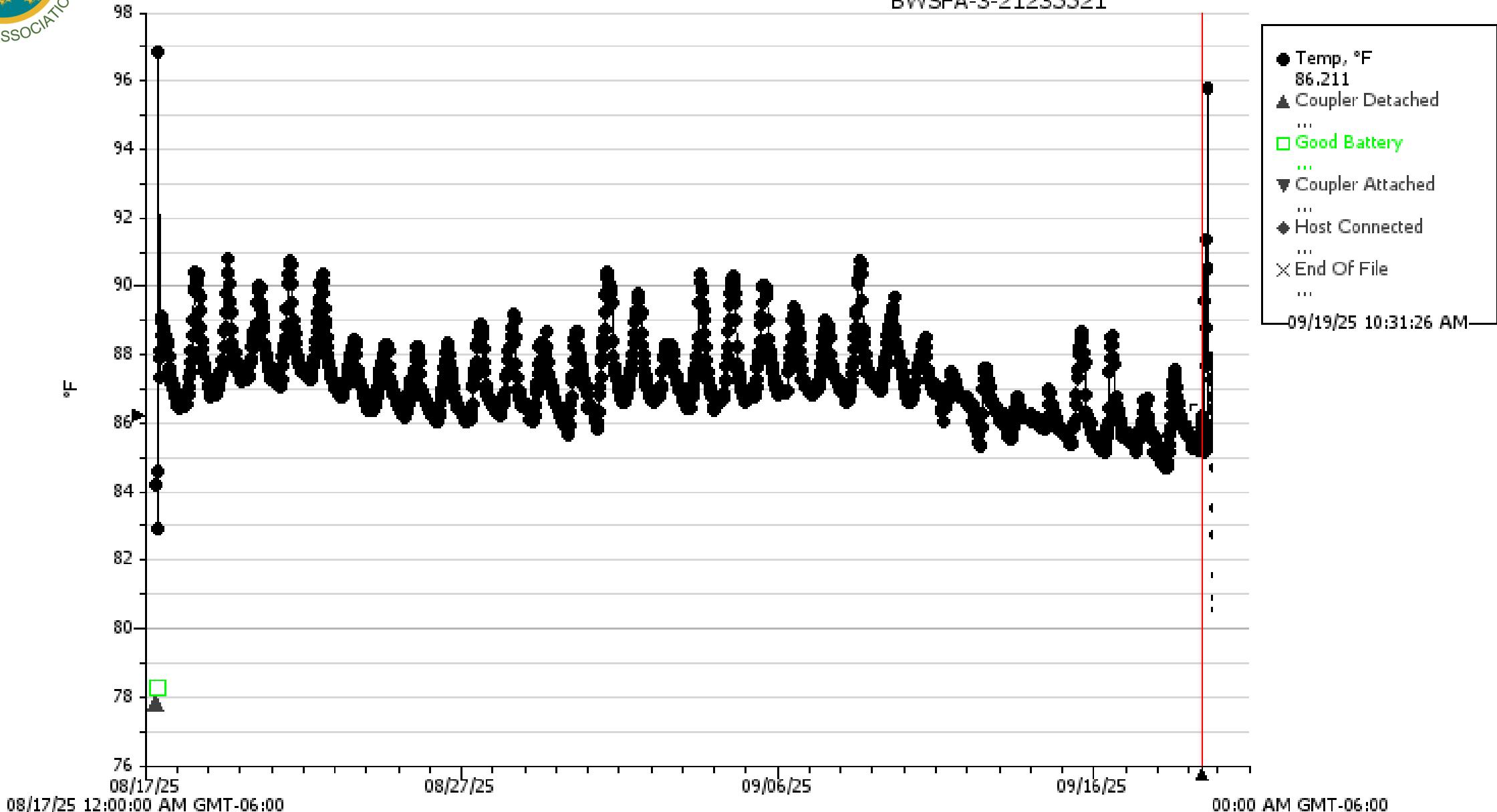
177	BWSFA-3-21235521	8/21/2025 0:01	87.436	177	BWSFA-2-2123	8/21/2025 0:03	87.483	177	BWSFA-1-22169580	8/21/2025 0:04	87.436
178	BWSFA-3-21235521	8/21/2025 0:31	87.346	178	BWSFA-2-2123	8/21/2025 0:33	87.391	178	BWSFA-1-22169580	8/21/2025 0:34	87.346
179	BWSFA-3-21235521	8/21/2025 1:01	87.3	179	BWSFA-2-2123	8/21/2025 1:03	87.346	179	BWSFA-1-22169580	8/21/2025 1:04	87.3
180	BWSFA-3-21235521	8/21/2025 1:31	87.21	180	BWSFA-2-2123	8/21/2025 1:33	87.3	180	BWSFA-1-22169580	8/21/2025 1:34	87.255
181	BWSFA-3-21235521	8/21/2025 2:01	87.21	181	BWSFA-2-2123	8/21/2025 2:03	87.255	181	BWSFA-1-22169580	8/21/2025 2:04	87.21
182	BWSFA-3-21235521	8/21/2025 2:31	87.21	182	BWSFA-2-2123	8/21/2025 2:33	87.255	182	BWSFA-1-22169580	8/21/2025 2:34	87.21
183	BWSFA-3-21235521	8/21/2025 3:01	87.163	183	BWSFA-2-2123	8/21/2025 3:03	87.21	183	BWSFA-1-22169580	8/21/2025 3:04	87.21
184	BWSFA-3-21235521	8/21/2025 3:31	87.163	184	BWSFA-2-2123	8/21/2025 3:33	87.21	184	BWSFA-1-22169580	8/21/2025 3:34	87.21
185	BWSFA-3-21235521	8/21/2025 4:01	87.21	185	BWSFA-2-2123	8/21/2025 4:03	87.21	185	BWSFA-1-22169580	8/21/2025 4:04	87.21
186	BWSFA-3-21235521	8/21/2025 4:31	87.118	186	BWSFA-2-2123	8/21/2025 4:33	87.21	186	BWSFA-1-22169580	8/21/2025 4:34	87.163
187	BWSFA-3-21235521	8/21/2025 5:01	87.118	187	BWSFA-2-2123	8/21/2025 5:03	87.163	187	BWSFA-1-22169580	8/21/2025 5:04	87.163
188	BWSFA-3-21235521	8/21/2025 5:31	87.118	188	BWSFA-2-2123	8/21/2025 5:33	87.163	188	BWSFA-1-22169580	8/21/2025 5:34	87.118
189	BWSFA-3-21235521	8/21/2025 6:01	87.073	189	BWSFA-2-2123	8/21/2025 6:03	87.118	189	BWSFA-1-22169580	8/21/2025 6:04	87.118
190	BWSFA-3-21235521	8/21/2025 6:31	87.073	190	BWSFA-2-2123	8/21/2025 6:33	87.073	190	BWSFA-1-22169580	8/21/2025 6:34	87.028
191	BWSFA-3-21235521	8/21/2025 7:01	87.21	191	BWSFA-2-2123	8/21/2025 7:03	87.163	191	BWSFA-1-22169580	8/21/2025 7:04	87.118
192	BWSFA-3-21235521	8/21/2025 7:31	87.3	192	BWSFA-2-2123	8/21/2025 7:33	87.255	192	BWSFA-1-22169580	8/21/2025 7:34	87.163
193	BWSFA-3-21235521	8/21/2025 8:01	87.665	193	BWSFA-2-2123	8/21/2025 8:03	87.528	193	BWSFA-1-22169580	8/21/2025 8:04	87.346
194	BWSFA-3-21235521	8/21/2025 8:31	87.939	194	BWSFA-2-2123	8/21/2025 8:33	87.71	194	BWSFA-1-22169580	8/21/2025 8:34	87.573
195	BWSFA-3-21235521	8/21/2025 9:01	88.075	195	BWSFA-2-2123	8/21/2025 9:03	87.847	195	BWSFA-1-22169580	8/21/2025 9:04	87.757
196	BWSFA-3-21235521	8/21/2025 9:31	88.167	196	BWSFA-2-2123	8/21/2025 9:33	88.075	196	BWSFA-1-22169580	8/21/2025 9:34	87.985
197	BWSFA-3-21235521	8/21/2025 10:01	88.306	197	BWSFA-2-2123	8/21/2025 10:03	88.306	197	BWSFA-1-22169580	8/21/2025 10:04	88.214
198	BWSFA-3-21235521	8/21/2025 10:31	88.534	198	BWSFA-2-2123	8/21/2025 10:33	88.573	198	BWSFA-1-22169580	8/21/2025 10:34	88.488
199	BWSFA-3-21235521	8/21/2025 11:01	88.855	199	BWSFA-2-2123	8/21/2025 11:03	89.04	199	BWSFA-1-22169580	8/21/2025 11:04	88.855
200	BWSFA-3-21235521	8/21/2025 11:31	89.362	200	BWSFA-2-2123	8/21/2025 11:33	89.454	200	BWSFA-1-22169580	8/21/2025 11:34	89.269
201	BWSFA-3-21235521	8/21/2025 12:01	89.362	201	BWSFA-2-2123	8/21/2025 12:03	89.454	201	BWSFA-1-22169580	8/21/2025 12:04	89.269
202	BWSFA-3-21235521	8/21/2025 12:31	90.055	202	BWSFA-2-2123	8/21/2025 12:33	89.823	202	BWSFA-1-22169580	8/21/2025 12:34	89.454
203	BWSFA-3-21235521	8/21/2025 13:01	90.333	203	BWSFA-2-2123	8/21/2025 13:03	90.1	203	BWSFA-1-22169580	8/21/2025 13:04	89.638
204	BWSFA-3-21235521	8/21/2025 13:31	90.333	204	BWSFA-2-2123	8/21/2025 13:33	90.373	204	BWSFA-1-22169580	8/21/2025 13:34	90.194
205	BWSFA-3-21235521	8/21/2025 14:01	90.75	205	BWSFA-2-2123	8/21/2025 14:03	90.703	205	BWSFA-1-22169580	8/21/2025 14:04	89.915
206	BWSFA-3-21235521	8/21/2025 14:31	90.612	206	BWSFA-2-2123	8/21/2025 14:33	90.612	206	BWSFA-1-22169580	8/21/2025 14:34	89.962
207	BWSFA-3-21235521	8/21/2025 15:01	90.612	207	BWSFA-2-2123	8/21/2025 15:03	90.518	207	BWSFA-1-22169580	8/21/2025 15:04	90.055
208	BWSFA-3-21235521	8/21/2025 15:31	90.1	208	BWSFA-2-2123	8/21/2025 15:33	90.009	208	BWSFA-1-22169580	8/21/2025 15:34	89.87
209	BWSFA-3-21235521	8/21/2025 16:01	89.499	209	BWSFA-2-2123	8/21/2025 16:03	89.454	209	BWSFA-1-22169580	8/21/2025 16:04	89.362
210	BWSFA-3-21235521	8/21/2025 16:31	88.993	210	BWSFA-2-2123	8/21/2025 16:33	88.947	210	BWSFA-1-22169580	8/21/2025 16:34	88.902
211	BWSFA-3-21235521	8/21/2025 17:01	88.81	211	BWSFA-2-2123	8/21/2025 17:03	88.947	211	BWSFA-1-22169580	8/21/2025 17:04	88.763
212	BWSFA-3-21235521	8/21/2025 17:31	88.671	212	BWSFA-2-2123	8/21/2025 17:33	88.718	212	BWSFA-1-22169580	8/21/2025 17:34	88.671
213	BWSFA-3-21235521	8/21/2025 18:01	88.626	213	BWSFA-2-2123	8/21/2025 18:03	88.671	213	BWSFA-1-22169580	8/21/2025 18:04	88.626
214	BWSFA-3-21235521	8/21/2025 18:31	88.351	214	BWSFA-2-2123	8/21/2025 18:33	88.396	214	BWSFA-1-22169580	8/21/2025 18:34	88.351
215	BWSFA-3-21235521	8/21/2025 19:01	88.122	215	BWSFA-2-2123	8/21/2025 19:03	88.167	215	BWSFA-1-22169580	8/21/2025 19:04	88.122
216	BWSFA-3-21235521	8/21/2025 19:31	87.939	216	BWSFA-2-2123	8/21/2025 19:33	87.985	216	BWSFA-1-22169580	8/21/2025 19:34	87.985
217	BWSFA-3-21235521	8/21/2025 20:01	87.802	217	BWSFA-2-2123	8/21/2025 20:03	87.847	217	BWSFA-1-22169580	8/21/2025 20:04	87.802
218	BWSFA-3-21235521	8/21/2025 20:31	87.757	218	BWSFA-2-2123	8/21/2025 20:33	87.802	218	BWSFA-1-22169580	8/21/2025 20:34	87.757
219	BWSFA-3-21235521	8/21/2025 21:01	87.71	219	BWSFA-2-2123	8/21/2025 21:03	87.757	219	BWSFA-1-22169580	8/21/2025 21:04	87.757
220	BWSFA-3-21235521	8/21/2025 21:31	87.685	220	BWSFA-2-2123	8/21/2025 21:33	87.71	220	BWSFA-1-22169580	8/21/2025 21:34	87.71
221	BWSFA-3-21235521	8/21/2025 22:01	87.665	221	BWSFA-2-2123	8/21/2025 22:03	87.71	221	BWSFA-1-22169580	8/21/2025 22:04	87.71
222	BWSFA-3-21235521	8/21/2025 22:31	87.573	222	BWSFA-2-2123	8/21/2025 22:33	87.62	222	BWSFA-1-22169580	8/21/2025 22:34	87.62
223	BWSFA-3-21235521	8/21/2025 23:01	87.483	223	BWSFA-2-2123	8/21/2025 23:03	87.528	223	BWSFA-1-22169580	8/21/2025 23:04	87.483
224	BWSFA-3-21235521	8/21/2025 23:31	87.483	224	BWSFA-2-2123	8/21/2025 23:33	87.528	224	BWSFA-1-22169580	8/21/2025 23:34	87.483

1521	BWSFA-3-21235521	9/18/2025 0:01	85.172	1521	BWSFA-2-2123	9/18/2025 0:03	85.217	1521	BWSFA-1-22169580	9/18/2025 0:04	85.217
1522	BWSFA-3-21235521	9/18/2025 0:31	85.035	1522	BWSFA-2-2123	9/18/2025 0:33	85.127	1522	BWSFA-1-22169580	9/18/2025 0:34	85.127
1523	BWSFA-3-21235521	9/18/2025 1:01	85.035	1523	BWSFA-2-2123	9/18/2025 1:03	85.127	1523	BWSFA-1-22169580	9/18/2025 1:04	85.127
1524	BWSFA-3-21235521	9/18/2025 1:31	85.127	1524	BWSFA-2-2123	9/18/2025 1:33	85.217	1524	BWSFA-1-22169580	9/18/2025 1:34	85.217
1525	BWSFA-3-21235521	9/18/2025 2:01	85.217	1525	BWSFA-2-2123	9/18/2025 2:03	85.307	1525	BWSFA-1-22169580	9/18/2025 2:04	85.307
1526	BWSFA-3-21235521	9/18/2025 2:31	85.172	1526	BWSFA-2-2123	9/18/2025 2:33	85.217	1526	BWSFA-1-22169580	9/18/2025 2:34	85.217
1527	BWSFA-3-21235521	9/18/2025 3:01	84.945	1527	BWSFA-2-2123	9/18/2025 3:03	85.082	1527	BWSFA-1-22169580	9/18/2025 3:04	85.127
1528	BWSFA-3-21235521	9/18/2025 3:31	84.812	1528	BWSFA-2-2123	9/18/2025 3:33	85.217	1528	BWSFA-1-22169580	9/18/2025 3:34	85.082
1529	BWSFA-3-21235521	9/18/2025 4									



## HOBO Logger # 3 – August 17<sup>th</sup> – September 19<sup>th</sup> 2025

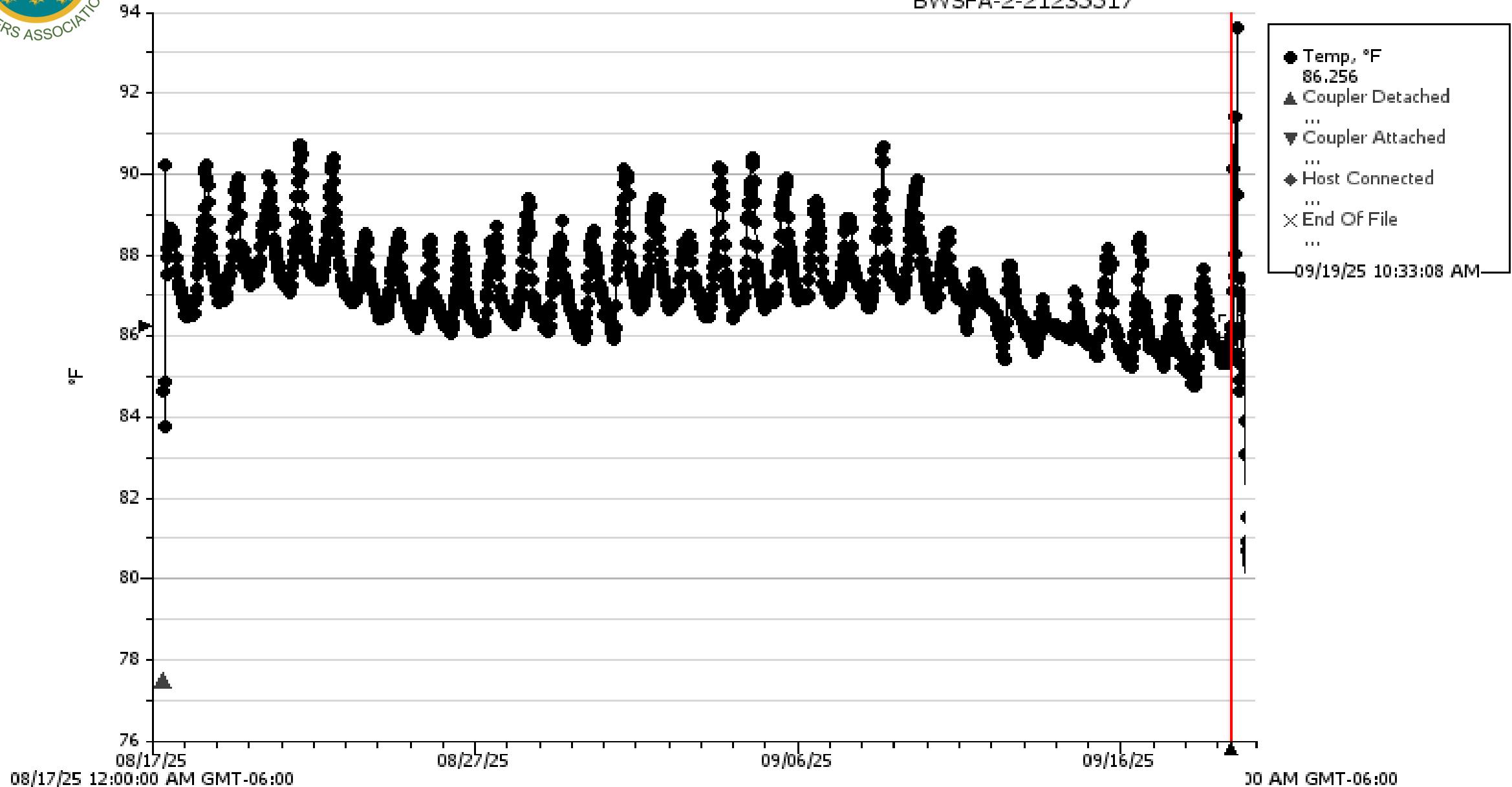
BWSFA-3-21235521





## HOBO Logger # 2 – August 17<sup>th</sup> – September 19<sup>th</sup> 2025

BWSFA-2-21235517





## HOBO Logger # 1 – August 17<sup>th</sup> – September 19<sup>th</sup> 2025

BWSFA-1-22169580

