



**SARGASSUM EARLY
ADVISORY SYSTEM**

**Investigation into Neritic Water Conditions as
Primary Driver of Vegetative Fragmentation Rates
of Sargassum Naitans and Sargassum Fluitans**

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Study Area (Path24-Row40)



Surf Zone Pier Measurements

Mid-Pier Measurements

End-of-Pier Measurements

All of these will provide adequate near-shore neritic zone measurement area.

Standard Operating Procedure



- The collection of biomass increase through the use of a rocket suspension unit
 - The weight (oz) of the unit is weighed before a pod of Sargassum is added. It is weighed again to determine the starting weight of the pod.
 - Each hour the unit is raised and manually weight using an electronic hand scale.
 - The fluctuations are recorded for analysis.

Standard Operating Procedure

- A YSI 2030 and 9500 used in order to collect data in regards to the conditions under which the observations occur

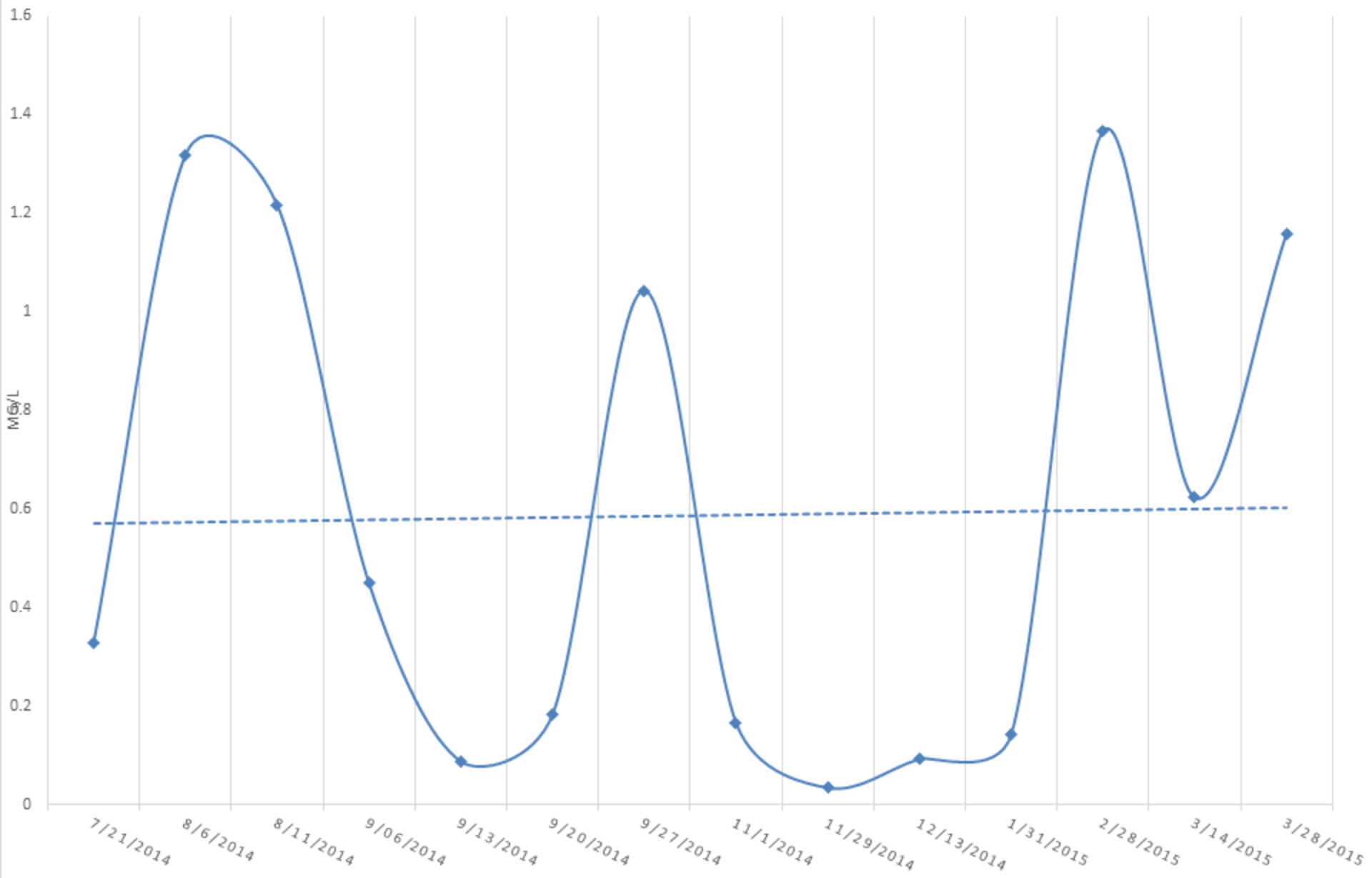
- Iron
- Phosphorous
- Nitrogen
- Ammonia

- Dissolved oxygen
- Temperature
- Salinity
- other parameters the variables that influence Sargassum's growth

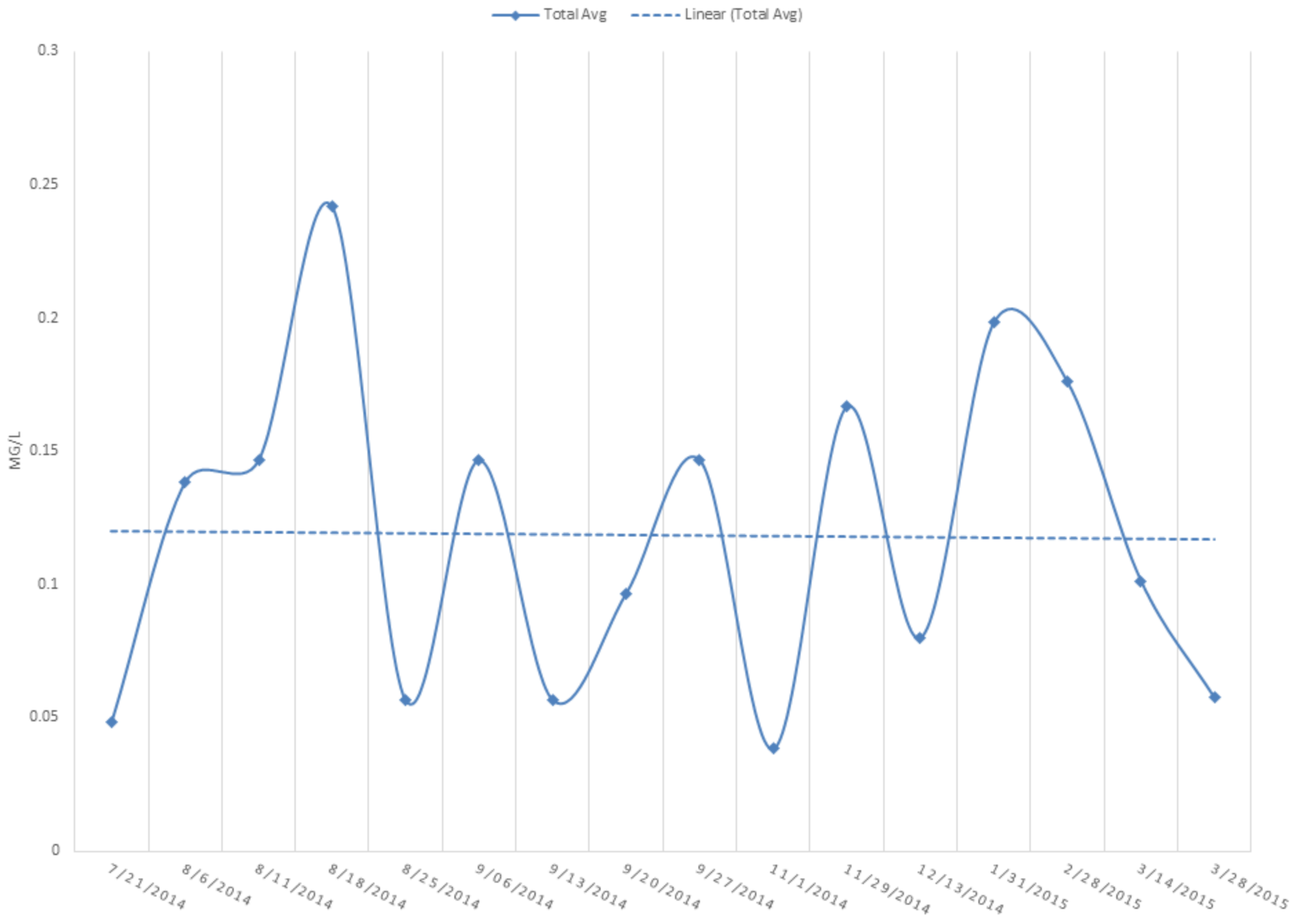


AMMONIA

—◆— Total Avg - - - - Linear (Total Avg)

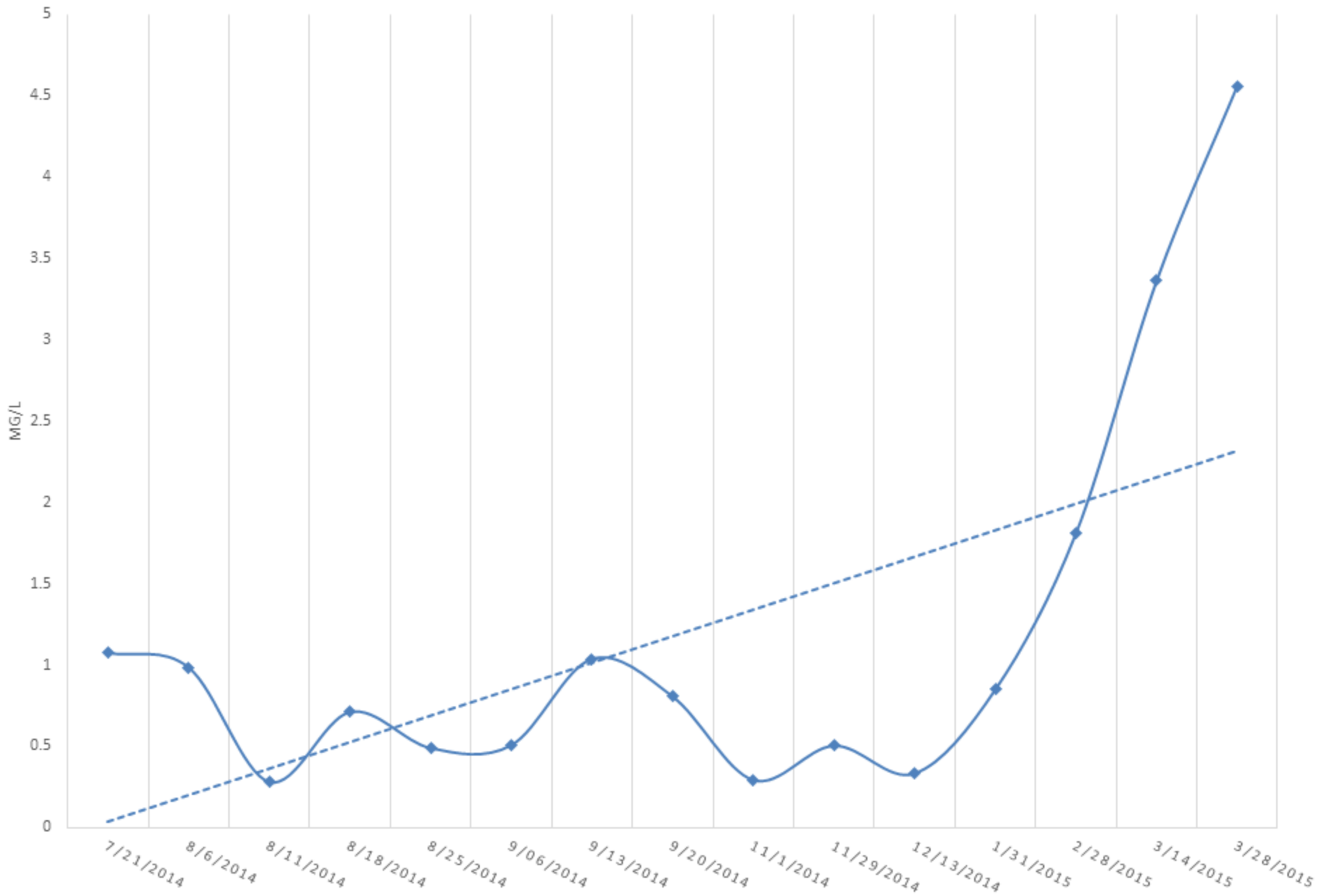


IRON

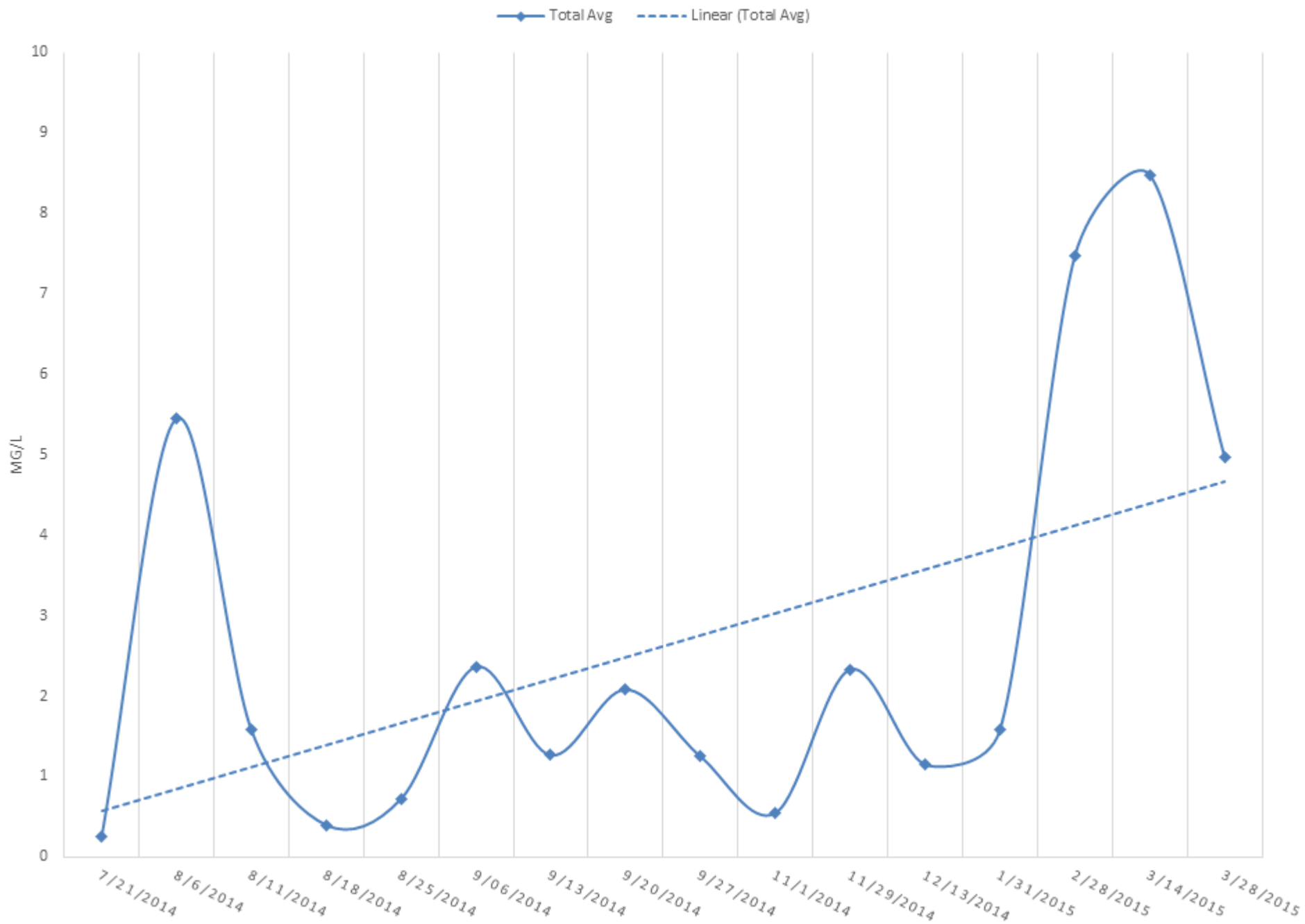


NITRATE

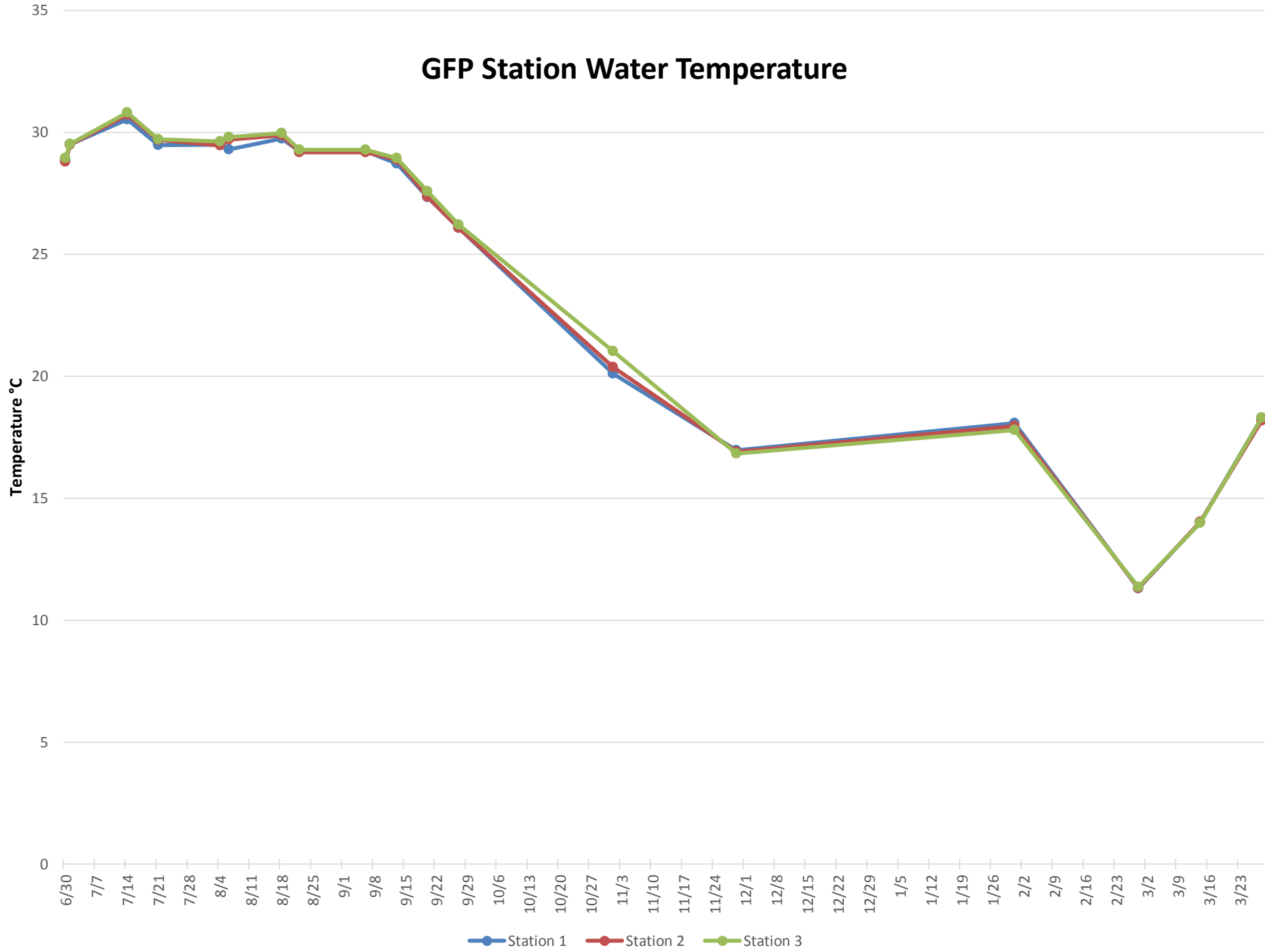
—◆— Total Avg - - - - Linear (Total Avg)



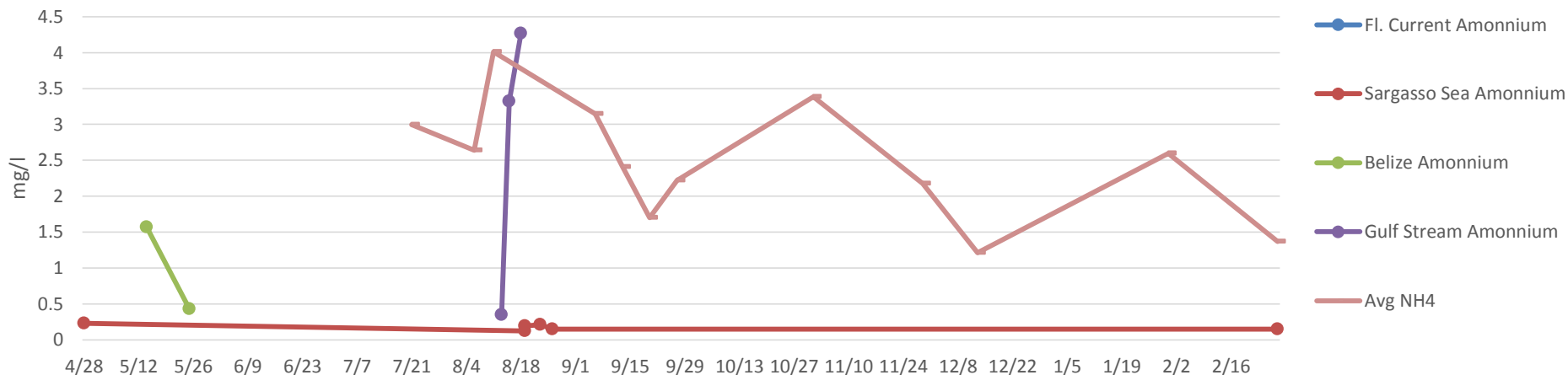
PHOSPHATE



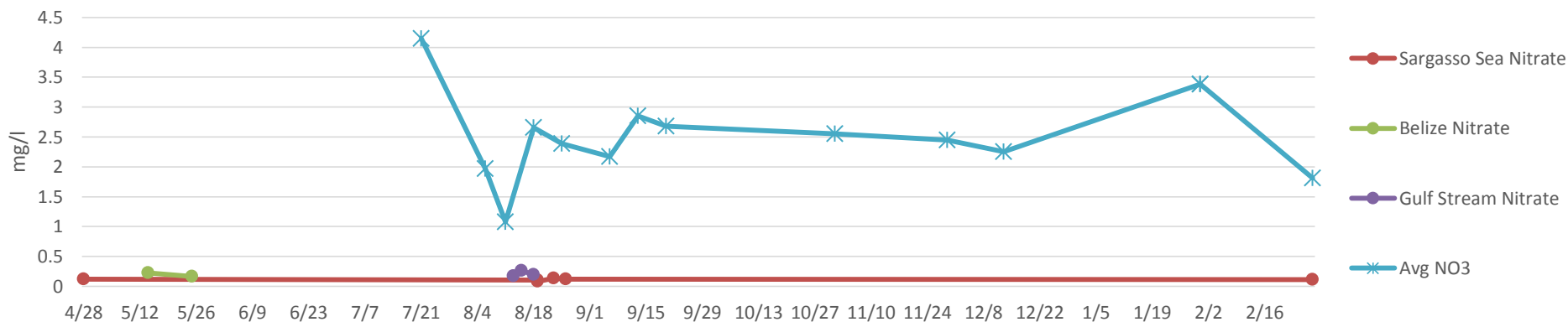
GFP Station Water Temperature



Ammonium



Nitrate



Geographic region	Location	Temp. (°C)	NH ₄ ⁺	NO ₃ ⁻ + NO ₂ ⁻	SRP	N:P	
Neritic							
N1: Carrie Bow Cay, Belize	16°48.5'N, 88°02.0'W	14 May 87	29	1.57±0.52	0.22±0.13	0.14±0.05	12.8
N2: Glovers Reef, Belize	17°10.6'N, 87°53.8'W	25 May 87	29	0.43±0.25	0.16±0.05	0.06±0.03	9.8
N3: Dry Tortugas, Florida	24°30.0'N, 82°27.1'W	25 Mar 86	24	0.34±0.21	0.14±0.06	0.07±0.06	6.9
Current							
N4: Looe Key, Florida Current	24°35.4'N, 81°24.2'W	15 Mar 86	26	0.29±0.22	0.17±0.08	0.05±0.04	9.2
N5: Miami, Gulf Stream	25°50.8'N, 79°45.9'W	13 Aug 86	30	0.35±0.12	0.17±0.08	0.04±0.03	13.3
N6: Charleston, Gulf Stream	32°10.3'N, 79°28.1'W	15 Aug 87	30	3.32±1.30	0.26±0.13	0.30±0.15	11.9
N7: Ocean City, Gulf Stream	39°50.5'N, 70°10.0'W	18 Aug 87	27	4.27±1.62	0.19±0.04	0.42±0.14	10.6
Oceanic							
O1: Northern Sargasso Sea	35°10.5'N, 67°29.5'W	23 Aug 87	27	0.21±0.12	0.13±0.07	0.03±0.01	11.3
O2: Central Sargasso Sea	32°10.0'N, 64°60.0'W	28 Apr 86	23	0.23±0.12	0.12±0.06	0.04±0.03	8.8
O3: Central Sargasso Sea	32°33.5'N, 65°27.7'W	19 Aug 86	29	0.12±0.10	0.10±0.04	0.03±0.02	7.3
O4: Central Sargasso Sea	32°33.5'N, 65°27.7'W	19 Aug 86	29	0.19±0.07	0.08±0.05	0.03±0.02	9.0
O5: Central Sargasso Sea	32°04.0'N, 64°22.0'W	28 Feb 87	18	0.15±0.10	0.11±0.05	0.03±0.02	8.7
O6: Southern Sargasso Sea	28°48.1'N, 65°03.3'W	26 Aug 87	28	0.15±0.14	0.12±0.04	0.04±0.03	6.8