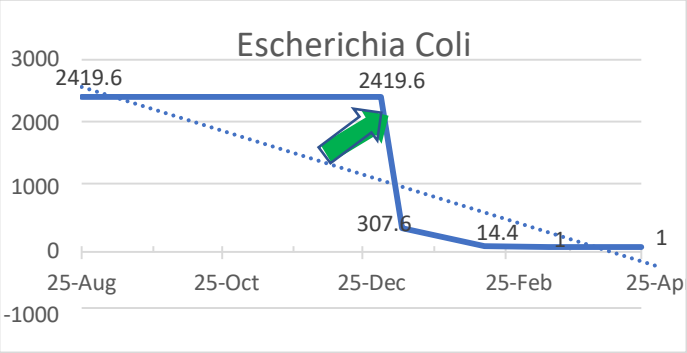
BIO-ORGANIC CATALYST
THE POWER IN NATURE®

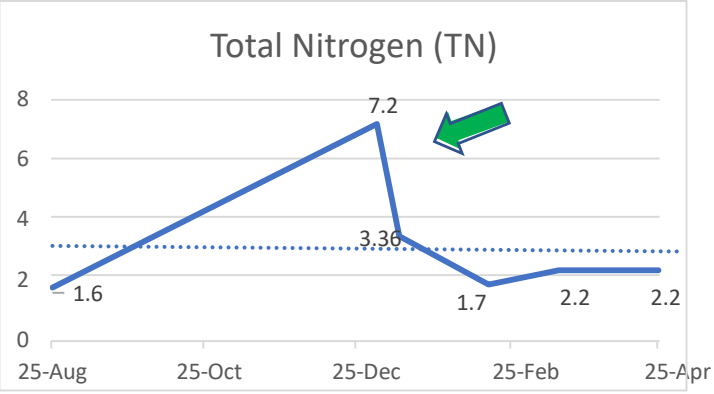
CASE STUDY
bio-organic.com

Lake Dossier

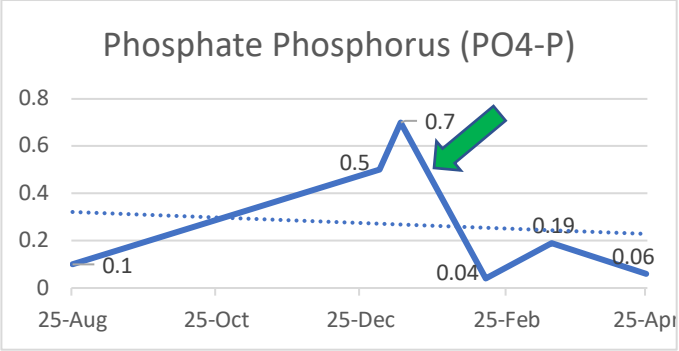
Synopsis: The Dosing of Bio Organic Catalyst has been started in the Lake The automatic Dosing has been ongoing for over four months starting from January 2022 and there is improvement in the water clarity. The aquatic life in the lake is being maintained and no chemicals are added to the water to keep it aesthetically clean. The water at the lake is pumped from various lifting stations across the area. The lifting stations has been strategically located that collects ground water that seeps in the land from Dewatering, irrigation, rain etc. The water being percolated in the area causes it to absorb various contaminants in the form of Pesticides and Fertilizers along with Salts from the natural flora and fauna of the Area. The aquatic life in the lake has trickled over a period of time which came up accidently with the source of the same not being known. The Aquatic life along with the inherent characteristics of the ground water was causing Odor to the water in the lake and resulting with flies and mosquitoes in the vicinity. These factors compounded to the lake being aesthetically looking bad with the ambience of the area being very unenthusiastic. The introduction of BOC has helped to improve the water characteristics and water clarity which is evidenced in the values of the Water Analysis.

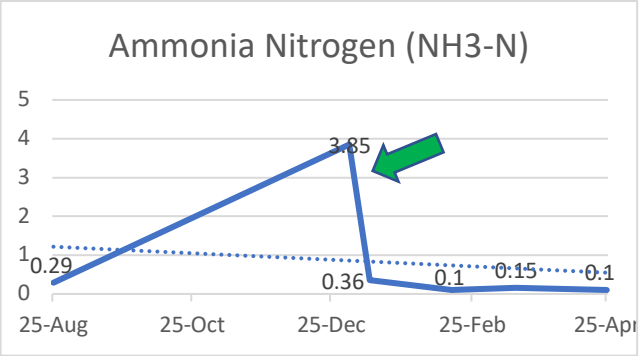


- E-Coli count signifies the Bacterial load
- Bacteria load gives indication of the pathogens
- The Green Arrow Indicates the Starting point of BOC Dosing
- There has been considerable drop in E-Coli
- Within 3 Months the numbers have reduced to less than 1
- The Trend line (Dotted) indicates the drop



- The TN count signifies the nutrients present in water
- Higher numbers indicate the possibility of infestation
- The Green Arrow Indicates the Starting point of BOC Dosing
- The Trend line (Dotted) indicates the drop





- The total Nitrogen & Phosphorus count signifies the nutrients present in water
- The higher value causes Water Quality Problems in the form of decreased Clarity and Foul odor
- Reduction in the values indicates the process of Nitrification (Natural decomposition)
- The Green Arrow Indicates the Starting point of BOC Dosing
- The Trend line (Dotted) indicates the drop and sustained values

Conclusion:

- ✓ The addition of Bio Organic Catalyst (BOC) helps in sustaining the Water Characteristics
- ✓ The Green Chemistry of BOC helps to reduce the Bacterial & Microbial Load in the water
- ✓ There is no requirement of harmful chemicals to maintain water Characteristics
- ✓ The natural process of Nitrification happens at the lake preventing Anaerobic conditions
- ✓ Aquatic life in the lake has not been impacted by the usage of BOC confirming it to be *Non-Toxic and Safe for Human, Animal and Marine Life*

Water Analysis

		Before BOC		After BOC			
Parameters	Units	25/08/2021	02/01/2022	11/01/2022	16/02/2022	16/03/2022	25/04/2022
pH at 25°C		8.16	7.17	8.4	8.15	8.24	7.28
TSS	mg/L	<5	7	<5	<5	<5	<5
TDS	mg/L	9670	7545	8600	11560	10044	11200
BOD	mg/L	<5	5	<5	<5	<5	<5
Ammonia Nitrogen (NH3-N)	mg/L	0.29	3.85	0.36	<0.1	0.15	<0.1
Turbidity	NTU	3.4	2.1	1.8	1.8	1.9	1.8
Aluminium (Al)	mg/L	0.06	0.07	<0.01	0.09	<0.05	<0.05
Copper (Cu)	mg/L	<0.01	0.01	0.03	<0.05	<0.05	<0.05
Zinc (Zn)	mg/L	<0.01	0.03	<0.01	<0.05	<0.05	<0.05
Chromium (Cr)	mg/L	0.03	0.03	<0.02	<0.05	<0.05	<0.05
Cadmium (Cd)	mg/L	<0.01	<0.01	<0.002	<0.01	<0.01	<0.05
Iron (Fe)	mg/L	<0.01	0.1	0.12	0.05	0.11	0.05
Arsenic (As)	mg/L	<0.01	<0.01	<0.001	<0.05	<0.05	<0.05
Mercury (Hg)	mg/L	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001
Escherichia Coli	MPN/100 mL	>2419.6	>2419.6	307.6	14.4	<1	<1
Total Nitrogen (TN)	mg/L	1.6	7.2	3.36	1.7	2.2	2.2
Nitrate Nitrogen (NO3-N)	mg/L	1	0.9	2.5	1.4	1.5	2.1
Phophate Phosphorus (PO4-P)	mg/L	0.1	0.5	0.7	0.04	0.19	0.06
Total Chlorine (Cl)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Oxygen	mg/L	7.31	6.2	6.2	6.5	6.2	6.5
Petroleum Hydrocarbons	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorophyll 'a'	mg/m^3	<1		<1		<1	<1
Surfactants	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Temperature	°C	36.9	24.3	25.1	24.7	28.1	29.9

Case Study Completed By Bio Catalyst Middle East

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