

TIDEWATER LOG CO. | MASTER PARAMETER TARGET CHEAT SHEET

The Clinical Reference Guide for Marine Reef, Planted Aquascapes & Freshwater Systems

1. SALTWATER REEF PARAMETERS (SPS / LPS / MIXED REEF)

PARAMETER	TARGET RANGE	DANGER THRESHOLD	IMMEDIATE CORRECTIVE ACTION
Alkalinity (dKH)	8.0 - 9.0 dKH	< 7.0 or > 10.5 dKH (RTN)	Dose carbonate slowly; max 0.5 dKH / 24h
Calcium (Ca++)	400 - 450 ppm	< 380 or > 500 ppm	Verify Mg first; dose CaCl2 over 48h
Magnesium (Mg++)	1300 - 1400 ppm	< 1200 ppm (Precipitation)	Target 3x Calcium; dose MgCl2/MgSO4
Specific Gravity	1.025 - 1.026 SG	< 1.023 or > 1.028 SG	Top off with 0 TDS pure RO/DI freshwater
Nitrate (NO3)	3.0 - 10.0 ppm	0.00 ppm (Dinoflagellates)	Increase feeding or dose sodium nitrate
Phosphate (PO4)	0.03 - 0.08 ppm	> 0.15 ppm (Nuisance Algae)	Run GFO / Lanthanum Chloride slowly

2. HIGH-TECH PLANTED AQUASCAPES (EI & LEAN DOSING)

PARAMETER	TARGET RANGE	DANGER THRESHOLD	IMMEDIATE CORRECTIVE ACTION
pH Level	6.2 - 6.8 (with CO2)	> 7.5 or < 5.8	Adjust CO2 solenoid 2h before lights on
Carbonate (KH)	2.0 - 4.0 dKH	< 1.0 dKH (pH Crash)	Buffer with potassium bicarbonate
General Hardness	4.0 - 7.0 dGH	< 3.0 dGH (Ca/Mg Deficit)	Remineralize RO/DI with GH booster
Dissolved CO2	25 - 35 ppm (Lime)	> 45 ppm (Fish Gasping)	Increase surface aeration / drop rate
Nitrate (NO3)	10.0 - 20.0 ppm	< 5.0 ppm (Stunted growth)	Dose KNO3; perform 50% weekly water change

3. FRESHWATER COMMUNITY & DISCUS SYSTEMS

PARAMETER	TARGET RANGE	DANGER THRESHOLD	IMMEDIATE CORRECTIVE ACTION
Ammonia (NH3)	0.00 ppm	> 0.25 ppm (Gill Burn)	Dose Seachem Prime 5x + 30% Water Change
Nitrite (NO2)	0.00 ppm	> 0.25 ppm (Hypoxia)	Add 1 tsp aquarium salt/gallon + Prime
Nitrate (NO3)	< 20.0 ppm	> 40.0 ppm (Immune stress)	Perform 25% water change with treated water
Temperature	76 - 82 deg F	< 74 or > 86 deg F	Check dual heater controller & probe

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EMERGENCY TANK RESCUE & 30-DAY BIO-SECURITY PROTOCOL

Standard Operating Procedures for Acute Failures, Ammonia Spikes & Parasite Outbreaks

1. AMMONIA SPIKE / FILTER CRASH EMERGENCY PROTOCOL

Step 1: Immediate Detoxification

Dose Seachem Prime or Fritz Complete at 5x standard dosage directly into display to bind toxic NH_3 into non-toxic ammonium for 24-48 hours.

Step 2: Emergency Water Change

Perform a 30% to 40% water change using temperature-matched and dechlorinated water (or 35 PPT mixed saltwater). Never change 100% of water at once.

Step 3: Cease Feeding Completely

Zero food for 72 hours. Fish will easily survive 7-10 days without food; uneaten proteins fuel further bacterial decomposition.

Step 4: Bio-Filter Inoculation

Dose high-concentration live autotrophic nitrifying bacteria (FritzZyme TurboStart 700 / 900) directly into biological filter media.

2. 30-DAY THERAPEUTIC QUARANTINE PROTOCOL (PATIENT ZERO)

Tank Hardware

20-Gallon bare-bottom glass tank, sponge filter with air pump, 100W heater, and 2-inch PVC elbows for fish shelter (zero sand, zero rocks).

Days 1 - 3 (Acclimation & Feed)

Observe respiration and feeding response. Feed frozen mysis shrimp enriched with garlic and liquid vitamins. Do not add medications yet.

Days 4 - 30 (Chelated Copper)

Slowly raise chelated copper (Copper Power) to 2.50 ppm over 48 hours. Verify copper concentration DAILY with a Hanna High-Range Copper Checker.

Days 10 & 17 (Praziquantel Treatment)

Dose Praziquantel (PraziPro) at 2.5 mg/L on Day 10 and repeat on Day 17 to eliminate internal flukes and gill worms (deactivate UV/carbon).

3. THE FULL PHYSICAL WORKBENCH COMPANION

This cheat sheet is an excerpt from the 'Aquarium Parameter Log' (160-Page & 224-Page Physical Journal Series). Features 50 guided weekly biotope spreads, 10 deep ch

Available on Amazon in Deluxe Hardcover, Workbench Paperback, and Kindle editions.