

Reef Tank Upgrade & Dinoflagellate Eradication Plan

Prepared for: [Your Name]

Date: [Insert Date]

Executive Summary

Goals:

1. Eradicate **Ostreopsis/SCA dinos** in the 25g tank using biodiversity from TBS live rock.
2. Seed the new 80g clam-centric display tank with TBS live rock, avoiding pests.
3. Minimize costs while maximizing natural ecosystem stability.

Key Strategies:

- Use **TBS Premium Live Rock (15 lbs)** for biodiversity.
- Quarantine rock in a **10g tank** to manage pests.
- Cycle the 80g tank with lights off, leveraging the fuge as a "biodiversity reactor."
- Transition to a reverse-photoperiod fuge post-cycle for nutrient control.

Budget: ~\$225 (15lb TBS rock + shipping).

High-Level Plan

1. TBS Live Rock Quarantine (10g Tank)

Steps:

1. **Setup:**
 - Add all 15 lbs of TBS rock to a 10g tank with heater (78°F), wavemaker, and 40W light (4–6 hrs/day at 50% intensity).
2. **Pest Management:**
 - **Manual removal:** Inspect nightly with a flashlight.
 - **Bottle traps:** Bait with raw shrimp.
 - **No H₂O₂:** Avoid dips to preserve pods/sponges.

3. Feeding:

- **Ghost feed** 1–2 pellets daily to sustain microbes.
- **Weekly water changes:** 10–20%, reuse water in 25g if pest-free.

4. Duration: 3–4 weeks.

2. Dino Eradication in 25g Tank

Steps:

1. **Add 5–6 lbs of cleaned TBS rock** to high-flow areas.
 2. **Pair with:**
 - **UV sterilizer** (9W, 24/7).
 - **Elevated nutrients:** $\text{NO}_3 = 10\text{--}15$ ppm, $\text{PO}_4 = 0.05\text{--}0.1$ ppm.
 - **Manual dino scrubbing** during water changes.
 3. **Monitor:** Dino decline over 4–6 weeks.
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3. 80g Tank Cycling & Seeding

Steps:

1. **Dark Cycle (Weeks 1–6):**
 - **Fuge:** Place 9–10 lbs of TBS rock under **2–4 hrs/day of light** (blue spectrum).
 - **Display:** Marco Rock under ambient light only.
 - **Test parameters:** 2x/week (ammonia, nitrite, nitrate, phosphate).
 2. **Post-Cycle (Week 6+):**
 - **Transfer TBS rock** from fuge to display (embed in Marco Rock).
 - **Add Chaeto** to fuge with **reverse photoperiod** (8–18 hrs/day).
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4. Post-Cycle Management

1. Display Tank:

- Ramp up lights from 2 hrs/day to full schedule over 4 weeks.
- Add fish/clams once stable (0 ammonia/nitrite, <10 ppm nitrate).

2. Fuge:

- Adjust Chaeto lighting based on nutrients:
 - **High bioload:** 12–18 hrs/day.
 - **Low bioload:** 8–12 hrs/day.

Key Assumptions

1. Equipment Available:

- 10g quarantine tank, 40W light, heater, wavemaker.
- UV sterilizer, test kits, RO/DI system.

2. Existing Issues:

- 25g tank has recurring dinos (Ostreopsis/SCA).
- 80g tank is bare-bottom with Marco Rock.

Cost Analysis

Item	Cost	Purpose
15lb TBS Premium Rock	\$150	Core biodiversity for both tanks.
Shipping	\$75	Flat rate for 15lb package.
Quarantine Setup	\$0	Uses existing equipment.
Total	\$225	

Risk Mitigation

Risk	Mitigation
Pest transfer	3–4 week quarantine + manual removal.
Dino recurrence	TBS rock + UV + nutrient control.
Nutrient imbalance	Test weekly; adjust Chaeto photoperiod.

Timeline

Phase	Duration	Actions
Quarantine	Weeks 1–3	Trap pests in 10g tank.
Dino Eradication	Weeks 4–8	Add TBS rock to 25g + UV/nutrients.
80g Cycling	Weeks 1–6	Dark cycle; fuge lights 2–4 hrs/day.
Post-Cycle	Weeks 7–12	Transfer rock, add fish/clams.

Appendices

A. Equipment List

- **10g Quarantine:** Heater, 40W light, wavemaker.
- **25g Tank:** UV sterilizer, powerheads, test kits.
- **80g System:** Fuge light (blue spectrum), return pump, Chaeto.

B. FAQs

Q: Can I skip the 10g quarantine?

A: No—it's critical for pest control.

Q: How do I revive coralline in the display?

A: Transfer TBS rock from the fuge; coralline will spread under ambient light.

C. Contact & Resources

- **TBS Contact:** [Tampa Bay Saltwater](#)
- **Forums:** Reef2Reef, Nano-Reef, PNWMAS.