

# POOLS SCIENTIFIC

## Salt Cell Management Checklist

*Elevated Pool Care Through Science and Technology*

Pool Owner / Address <hr/> <hr/>	System Brand / Model <hr/> <hr/>	Date / Technician <hr/> <hr/>
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### SECTION 1 — WATER CHEMISTRY TARGETS

✓	Parameter	Target Range / Action
<input type="checkbox"/>	<b>Salt Level</b> <i>Test with digital meter — not strips</i>	<b>TARGET: 3,000–3,200 ppm   Range: 2,700–3,400 ppm</b>
Last reading: _____ ppm   Adjustment made: _____ <hr/>		
<input type="checkbox"/>	<b>Free Chlorine</b> <i>Verify FC independently — never assume cell output</i>	<b>TARGET: Per 7.5% Rule (FC ≥ CYA × 0.075)</b>
FC reading: _____ ppm   CYA: _____ ppm   Min FC required: _____ ppm <hr/>		
<input type="checkbox"/>	<b>pH</b> <i>Electrolysis drives pH up continuously — monitor closely</i>	<b>TARGET: 7.4–7.6   Test 2×/week minimum</b>
pH reading: _____   Adjustment (acid/soda ash): _____ <hr/>		
<input type="checkbox"/>	<b>Total Alkalinity</b> <i>Lower end improves pH control; reduces scale formation risk</i>	<b>TARGET: 60–80 ppm for salt pools</b>
TA reading: _____ ppm   Adjustment made: _____ <hr/>		
<input type="checkbox"/>	<b>Calcium Hardness</b> <i>Lower end reduces scale formation on cell plates</i>	<b>TARGET: 200–300 ppm for plaster/salt pools</b>
CH reading: _____ ppm   Adjustment made: _____ <hr/>		

✓	Parameter	Target Range / Action
<input type="checkbox"/>	<b>Cyanuric Acid (CYA)</b> <i>Low CYA = more effective chlorine; less cell strain</i>	<b>TARGET: 0 ppm target   0–20 ppm preferred   0–30 ppm acceptable   50 ppm absolute ceiling — never exceeded</b>
<b>CYA reading:</b> _____ ppm   <b>Drain/refill needed?</b> _____		
<input type="checkbox"/>	<b>LSI (Langelier Index)</b> <i>Positive LSI = scale on cell plates; negative LSI = corrosion</i>	<b>TARGET: -0.3 to +0.3   Aim for lower half of range</b>
<b>Calculated LSI:</b> _____   <b>Water status (circle):</b> Corrosive / Balanced / Scale-Forming		

## SECTION 2 — CELL OPERATION CHECK

✓	Check Item	Status / Reading
<input type="checkbox"/>	<b>Cell Output Setting</b> <i>Above 80% consistently = underlying demand problem to solve</i>	<b>TARGET: 50–70% normal operation</b>
<b>Current output setting:</b> _____ %   <b>Adjusted to:</b> _____		
<input type="checkbox"/>	<b>Controller Salt Reading</b> <i>Controller sensors drift — verify independently every 30 days</i>	Compare against independent meter reading
<b>Controller reading:</b> _____ ppm   <b>Independent meter:</b> _____ ppm   <b>Variance acceptable?</b> _____		
<input type="checkbox"/>	<b>Flow Rate / Flow Switch</b> <i>Low flow = reduced electrolysis efficiency + cell stress</i>	Verify adequate flow through cell
<b>Flow switch status (circle):</b> OK / Fault   <b>GPM if measured:</b> _____		
<input type="checkbox"/>	<b>Cell Polarity Reversal</b> <i>Self-cleaning reduces scale but does not replace</i>	Confirm self-cleaning cycle is active (if equipped)

✓	Check Item	Status / Reading
	<i>manual inspection</i>	
<b>Self-clean active: Y / N   Reversal cycle frequency:</b> _____		
<input type="checkbox"/>	<b>System Alarms / Error Codes</b> <i>Low salt, high salt, low flow, cell fault — address before leaving</i>	Check controller display for active alerts
<b>Active alarms (describe):</b> _____		

## SECTION 3 — CELL INSPECTION & CLEANING (EVERY 3 MONTHS)

✓	Step	Procedure / Notes
<input type="checkbox"/>	<b>Remove Cell from Plumbing</b> <i>Allow cell to cool if recently running</i>	Close isolation valves; disconnect unions
<b>Date removed: _____   Technician: _____</b>		
<input type="checkbox"/>	<b>Visual Inspection — Plates</b> <i>Light scale = cleaning needed. Heavy scale or damage = possible end of life</i>	Inspect for scale (white/gray deposits), corrosion, or damage
<b>Scale level (circle): None / Light / Moderate / Heavy   Action taken:</b> _____		
<input type="checkbox"/>	<b>Acid Wash (if scale present)</b> <i>NEVER use metal tools or abrasives on plates. Rinse thoroughly after.</i>	1 part muriatic acid : 10 parts water — soak 5–15 min
<b>Acid wash performed: Y / N   Soak time: _____ min   Scale removed fully: Y / N</b> _____		
<input type="checkbox"/>	<b>Inspect Cell Housing &amp; O-Rings</b> <i>Replace O-rings if compressed, cracked, or leaking</i>	Check for cracks, corrosion, worn O-rings
<b>Housing condition: _____   O-rings replaced: Y / N</b> _____		
<input type="checkbox"/>	<b>Reinstall &amp; Check for Leaks</b>	Reconnect unions; open valves; inspect unions

✓	Step	Procedure / Notes
	<i>Finger-tight unions only — do not over-torque</i>	under pressure
Leaks found: Y / N   Resolved: _____		
<input type="checkbox"/>	<b>Verify Chlorine Output Post-Clean</b> <i>FC should rise measurably within 30–60 min of cell operation</i>	Run cell 30 min; test FC to confirm output restored
FC before:    ppm   FC after 30 min:    ppm   Output restored: Y / N _____		

## SECTION 4 — CORROSION & BONDING CHECK

✓	Check Item	Status / Notes
<input type="checkbox"/>	<b>Equipotential Bonding Wire</b> <i>SAFETY REQUIREMENT — never skip. Higher conductivity in salt water = greater stray voltage risk.</i>	Verify bonding wire is connected to cell, pump, heater, rails
Bonding verified: Y / N   Last full inspection date: _____		
<input type="checkbox"/>	<b>Ladders &amp; Handrails</b> <i>Check hollow sections and end caps for internal corrosion</i>	Inspect for corrosion, pitting, loose connections
Condition:                      Action needed: _____		
<input type="checkbox"/>	<b>Heater Components</b> <i>Verify cupro-nickel heat exchanger not showing external corrosion</i>	Inspect for salt corrosion on housing, fittings, and connections
Condition:                      Action needed: _____		
<input type="checkbox"/>	<b>Pool Light Fixtures</b> <i>Older steel conduit particularly vulnerable in salt water</i>	Inspect conduit, fixture housing, and gasket for corrosion
Condition:                      Action needed: _____		

✓	Check Item	Status / Notes
<input type="checkbox"/>	<b>Pump &amp; Filter Housing</b> <i>Saltwater splash zone increases corrosion risk on equipment pad</i>	Check for surface corrosion, pitting, or staining
<b>Condition:</b> _____   <b>Action needed:</b> _____		
<input type="checkbox"/>	<b>Dissimilar Metal Connections</b> <i>Galvanic corrosion is accelerated by salt water conductivity</i>	Identify any copper-to-aluminum or mixed-metal connections
<b>Dissimilar metals found:</b> Y / N   <b>Isolation/action:</b> _____		

## SECTION 5 — CELL LIFESPAN TRACKER

**Rated Cell Lifespan:** 7,000–10,000 operating hours under correct conditions (typically 5–7 years)

**What shortens cell life:** Scale buildup on plates • Sustained 100% output • Low/high salt • Positive LSI • Low flow

**What extends cell life:** Balanced LSI • 50–70% normal output • Quarterly cleaning • Correct salt level • Regular inspection

✓	Lifespan Record	Entry
<input type="checkbox"/>	<b>Cell Installation Date</b>	Record date and model for lifespan tracking
<b>Date installed:</b> _____   <b>Cell brand/model:</b> _____   <b>Serial #:</b> _____		
<input type="checkbox"/>	<b>Estimated Hours to Date</b>	Track cumulative operating hours if controller logs it
<b>Daily avg run time:</b> _____ hrs × <b>Days in service:</b> _____ = <b>Est. total hours:</b> _____		
<input type="checkbox"/>	<b>Output Trend</b> <i>Rising output requirement = cell approaching end of life</i>	Note if output % is increasing over time to maintain same FC
<b>Output 6 months ago:</b> _____ %   <b>Current output to maintain target FC:</b> _____ %		

✓	<b>Lifespan Record</b>	<b>Entry</b>
<input type="checkbox"/>	<b>Cell Replacement History</b>	Log previous cell replacements and cause of failure
Previous cell replaced: _____		Cause of failure: _____

## SECTION 6 — MAINTENANCE SCHEDULE AT A GLANCE

FREQUENCY	TWICE WEEKLY	MONTHLY	QUARTERLY
<b>Water Tests</b>	pH, Free Chlorine	Full panel: salt, FC, pH, TA, CH, CYA, LSI	Full panel + independent salt meter verification
<b>Cell</b>	Check output setting & controller status	Verify controller salt reading vs. meter	Remove, inspect, acid wash if needed
<b>Equipment</b>	—	Visual check: pump, filter, heater, light fixtures	Inspect bonding wire, metal components, O-rings
<b>Adjustments</b>	pH correction as needed	Full chemistry balance; LSI calculation	Calcium, TA, salt adjustments as indicated

**Salt target:** 3,000–3,200 ppm |  
**FC minimum:** CYA × 0.075 |  
**pH target:** 7.4–7.6 |  
**TA target:** 60–80 ppm |  
**CH target:** 200–300 ppm |  
**LSI target:** –0.3 to +0.3 (aim lower half)

[PoolsScientific.com](https://PoolsScientific.com) | [payhip.com/poolsscscientific](https://payhip.com/poolsscscientific) | Pools Scientific Podcast — Episode 10: Salt Chlorine Generators