pH Correction Cheat Sheet

Lime rates, application timing, and correction targets for Long Island sandy soil

USDA ZONE 7B
Long Island Sandy Loam Soils

pH Ranges: Where You Are vs Where You Need to Be

Strongly acidic | LI native sand (4.5–5.5) | Needs lime | Optimal (6.0–7.0) | Slightly alkaline | Too high

Native LI sandy soil pH	4.5-5.5	LI municipal water pH	7.0-7.8
Maintained/limed residential pH	5.9-6.2	pH drift from irrigation	~0.05/year up
Optimal for cool-season grass	6.0-7.0	Soil test frequency	Annually
Ideal target	6.5	Years to notice drift	~5 years

Water pH and soil pH are different things. LI tap water is alkaline (7.0–7.8 from the aquifer). LI soil is acidic (4.5–5.5 from glacial outwash). Over years, alkaline irrigation water slowly pushes soil pH upward (~0.05 units/year). This is why annual testing matters.

Lime Application Rates for Established Lawns (Surface Application, LI Sandy Soil)

CURRENT PH	TARGET PH	PH CHANGE	CALCITIC LIME (LBS/1,000 SQ FT)	APPLICATIONS NEEDED	TIMELINE TO FULL EFFECT
4.5	6.5	+2.0	50	2 apps (25 lbs each, 6–8 wks apart)	1–2 years for full correction
5.0	6.5	+1.5	38	1 app (if under 50 lbs)	1–2 years
5.5	6.5	+1.0	25	1 app	6–12 months
5.8	6.5	+0.7	18	1 app	6–12 months
6.0	6.5	+0.5	13	1 app	3–6 months initial movement
6.2	6.5	+0.3	8	1 app	3–6 months
6.5+	-	0	0 (none)	No lime needed	You're in the sweet spot

These are established turf rates (surface application, ~50% of incorporation rates). Based on Cornell CCE Suffolk liming tables for sandy loam at CEC 5–12. New lawn installation uses full 6-inch incorporated rates (roughly double). Max 50 lbs per application. Pelletized lime is easiest to apply with a rotary spreader.

Lime always adds calcium. Every liming product is a calcium compound (calcium carbonate or calcium-magnesium carbonate). On LI's acidic sand, which is almost always calcium-deficient, raising pH and adding calcium happen simultaneously. This is a feature, not a bug.

6.0-7.0	6.5 target	25 lbs/1K	50 lbs max	3-6 months
OPTIMAL RANGE	IDEAL PH	PER 1.0 PH UNIT (SAND)	PER APPLICATION	INITIAL MOVEMENT

Rates for LI sandy loam (CEC 5–12). Clay soils need more lime per pH unit. Always soil test before liming.
Get exact correction rates at bladebosshq.com/dashboard/

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Application Calendar + Lime Type Guide

When to apply, what type, and how long to wait

pH Correction Timeline

PHASE	TIMEFRAME	WHAT'S HAPPENING
Application	Fall preferred (Sep-Nov)	Pelletized lime applied with rotary spreader. Water in lightly. Fall freeze/thaw cycles help incorporate into sandy soil.
Initial reaction	1-4 weeks	Surface pH begins changing in the top 0.5 inches. Calcium dissolves into soil solution.
First movement	3-6 months	pH measurably different at 2-inch depth. You'll see improved color and density in grass.
Full effect	1-2 years	Lime fully reacted through the top 3-4 inches. Retest to confirm target reached.
Retest	12 weeks after app	Pull new soil sample at same depth and locations. Compare to baseline. Adjust if needed.
Maintenance	Annually	On LI sand, plan on maintenance liming every 2-3 years. Irrigation with alkaline water (pH 7.0-7.8) partially offsets acidification, but N fertilizer re-acidifies soil over time.

Calcitic vs Dolomitic Lime

Calcitic (calcium carbonate)	Default choice
Contains	Calcium only
Reacts	Faster
Use when	Mg is adequate
Dolomitic (Ca + Mg carbonate)	Only if Mg is low
Contains	Calcium + Magnesium
Reacts	Slower
Use when	Soil test shows low Mg

Decision rule: Use calcitic unless your soil test specifically shows magnesium deficiency. When Mg is proportionally high relative to Ca, calcitic is always preferred. Don't default to dolomitic "just because."

Application Best Practices

Best season	Fall (Sep-Nov)
Second best	Early spring (Mar)
Max per application	50 lbs/1,000 sq ft
Split spacing	6-8 weeks apart
Spreader type	Rotary (pelletized)
Water after applying	Light irrigation
Conflicts with	Fertilizer (wait 2 wks)
Retest interval	12 weeks minimum

Apply in two perpendicular passes (half rate each direction) for even coverage. Don't apply to frozen ground. Don't mix with fertilizer in the same application.

What If pH Is Too High?

Sulfur to lower by 1.0 pH unit (sand)	10-15 lbs/1K
Sulfur to lower by 1.0 pH unit (loam)	20-25 lbs/1K
Max sulfur per application	5 lbs/1K
Retest after sulfur	12 weeks

High pH on Long Island is rare (native soil is acidic). If your test shows pH above 7.0, check: (1) sample near concrete foundation? (2) construction fill soil? (3) over-limed? Before applying sulfur, retest from multiple lawn locations to confirm. Ammonium-based N fertilizers (ammonium sulfate) naturally acidify over time.