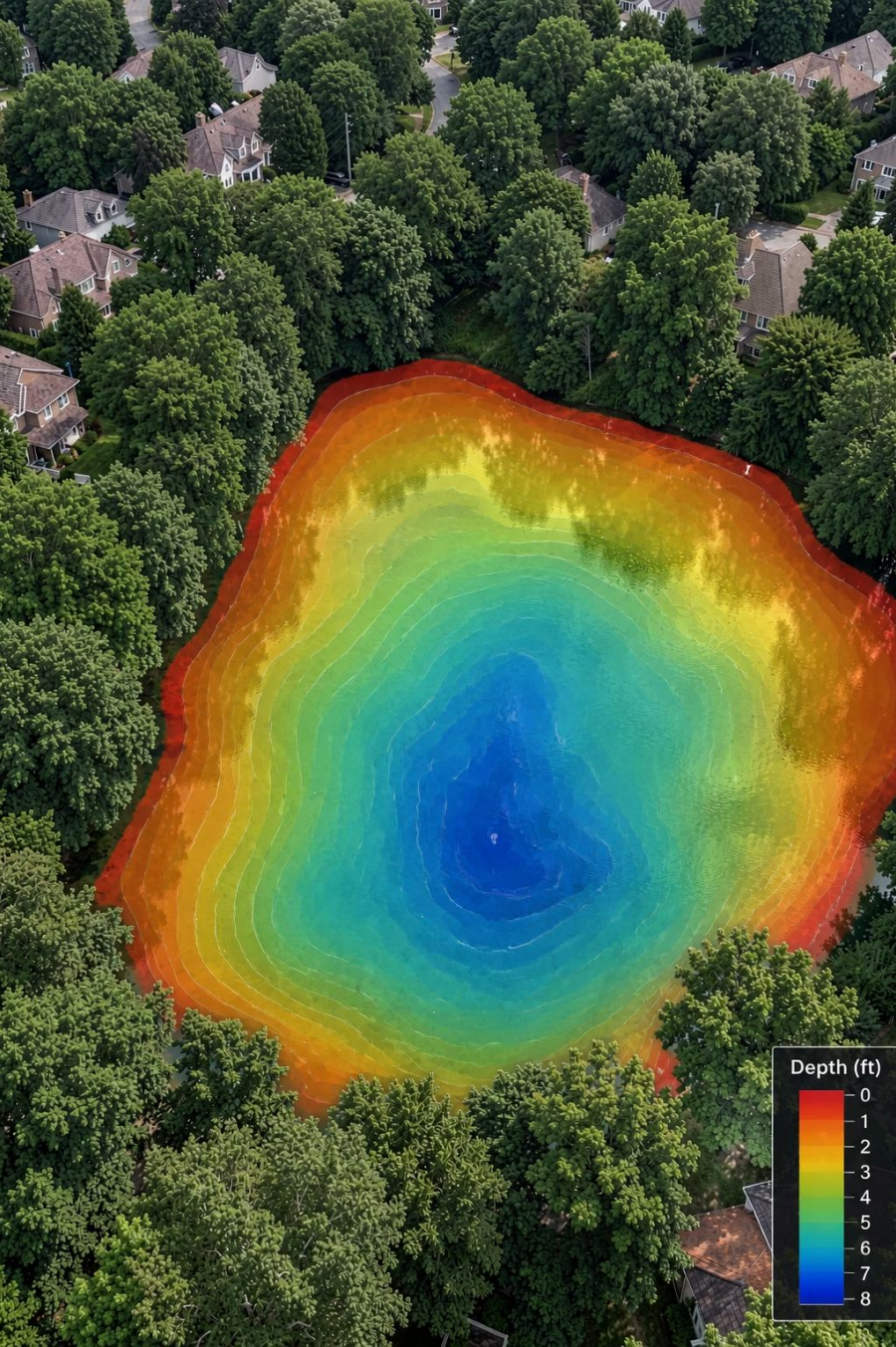




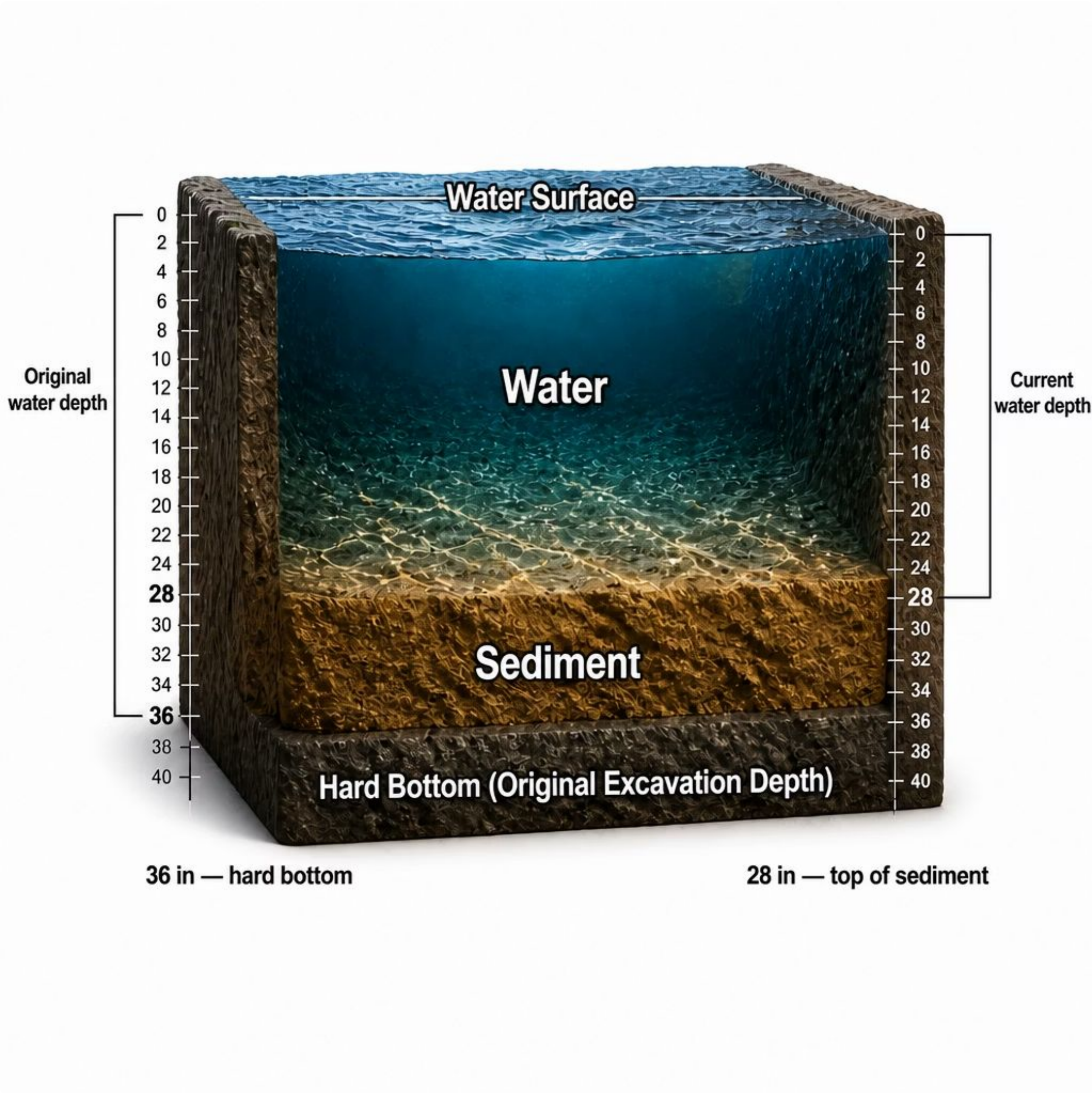
Why a Bathymetric Survey Protects Your Budget Before You Get a Dredging Bid

Would you rather **guess** or **know**? Before your community approves a dredging project, the accuracy of the sediment data behind the bid determines whether your budget is protected — or exposed. A single guess can cost tens of thousands of dollars in unexpected overruns.



The Biggest Cost Driver in Your Project

Sediment volume is the single biggest driver of dredging cost. The thickness of the muck layer between the water surface and the original hard bottom determines how much material must be removed, hauled, and disposed of — and that is what determines your final invoice.



That middle layer is everything. Even a few inches of difference across an entire pond can translate into hundreds of cubic yards of additional material — and thousands of dollars in added cost.

Reading a Bathymetric Map: Sediment Thickness

This is Map 01c from an actual bathymetric survey conducted at Boulevard Park in Lake St. Louis, Missouri (March 2026). The color-coded contour map shows sediment thickness across the entire 0.968-acre pond — with red/orange indicating the deepest accumulation and blue/green indicating minimal sediment.

2,206 cu yds

Total Sediment Volume

1.42 ft

Average Sediment Depth

0.968 acres

Pond Area Surveyed

Notice how sediment is not uniform — the hotspots (red/orange zones) near the southern inflow pipes contain 3–4 feet of accumulated muck, while the center and northern areas show far less. This variability is invisible without a survey — and it's exactly what drives cost.

Before vs. After: What the Survey Reveals

A complete bathymetric survey produces three maps for each pond: Original Water Elevations (what the pond looked like when built), Current Water Elevations (what it looks like today), and Sediment Thickness (the difference). Together, they tell the full story.

Pond 1 — Original Design (Map 01a)

- Maximum Water Depth: 12.50 ft
- Mean Water Depth: 7.15 ft
- Water Volume: 6.92 acre-feet (301,617 cu ft)

Pond 1 — Current Conditions (Map 01b)

- Maximum Water Depth: 10.50 ft
- Mean Water Depth: 5.73 ft
- Water Volume: 5.55 acre-feet (241,596 cu ft)

❏ The pond has lost 1.37 acre-feet of water storage capacity — that's 60,021 cubic feet of volume displaced by sediment. At an average dredging cost of ~\$35–\$65/cubic yard, the 2,206 cubic yards of sediment represents an estimated \$77,000–\$143,000 removal project. Without the survey, that number is a guess. With it, it's a defensible budget.

This is what a survey delivers: not just maps, but the financial clarity to plan, budget, and bid a project with confidence.

How a Bathymetric Survey Protects You

1

Set the Grid

Measurement points are placed every 25–50 feet across the entire pond or lake surface.

2

Take Two Readings

At each point, depth to the sediment surface *and* depth to the original hard bottom are both recorded.

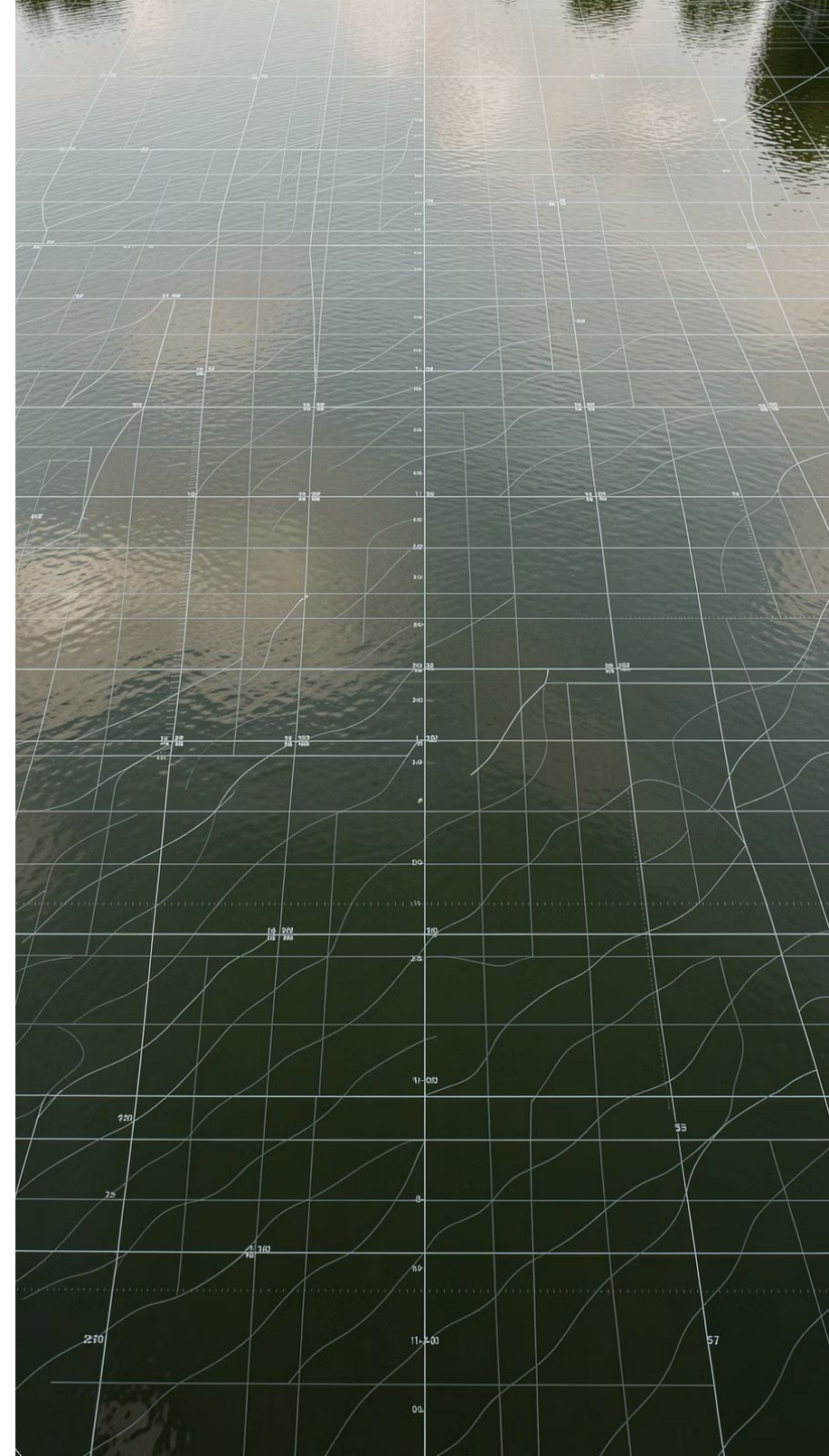
3

Calculate Volume

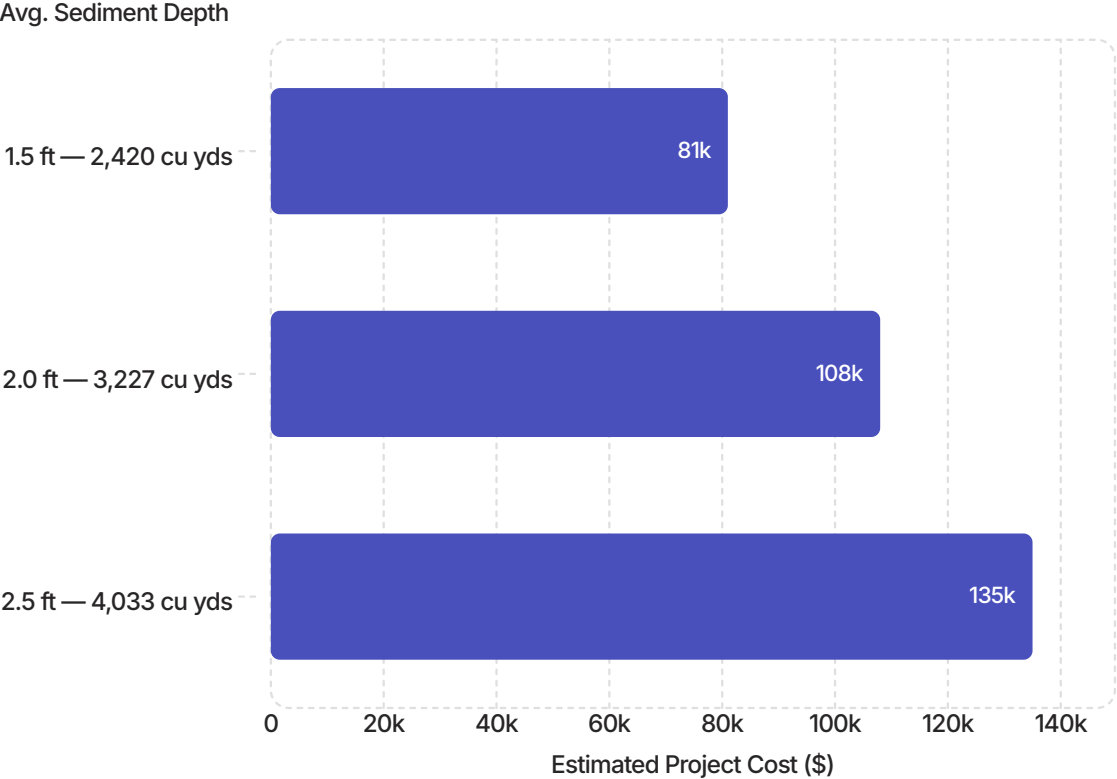
The difference at each point is the sediment thickness. Averaging all points yields a verified total volume.



This is the difference between a contractor **estimating** your cost — and a contractor **knowing** your cost.



What This Means for Your Wallet — A One-Acre Pond Case Study



An \$80,650 Swing — Without Moving a Shovel

Three plausible sediment readings on the **same one-acre pond** produce a cost range of **\$121,000 to \$201,650** at \$50/cubic yard — and that range widens further when market rates of \$35–\$65 per cubic yard are applied.

Without an accurate survey, your board could approve a budget based on the wrong number — triggering mid-project change orders, emergency special assessments, or neighbor disputes over an underestimated cost.

The Bottom Line for Homeowners and HOA Boards

Protect Your Reserve Fund

Verified volume data means the quoted number is the number you actually pay — no budget shock mid-project.

Avoid Special Assessments

Accurate data prevents underfunded projects that stall and force emergency votes to cover cost overruns.

Build Community Trust

Boards that present survey-backed bids earn resident confidence — and protect themselves from disputes.

A modest investment in a proper bathymetric survey is the most effective protection your community has before committing to a six-figure dredging project. **Insist on a survey before you approve any firm bid.**