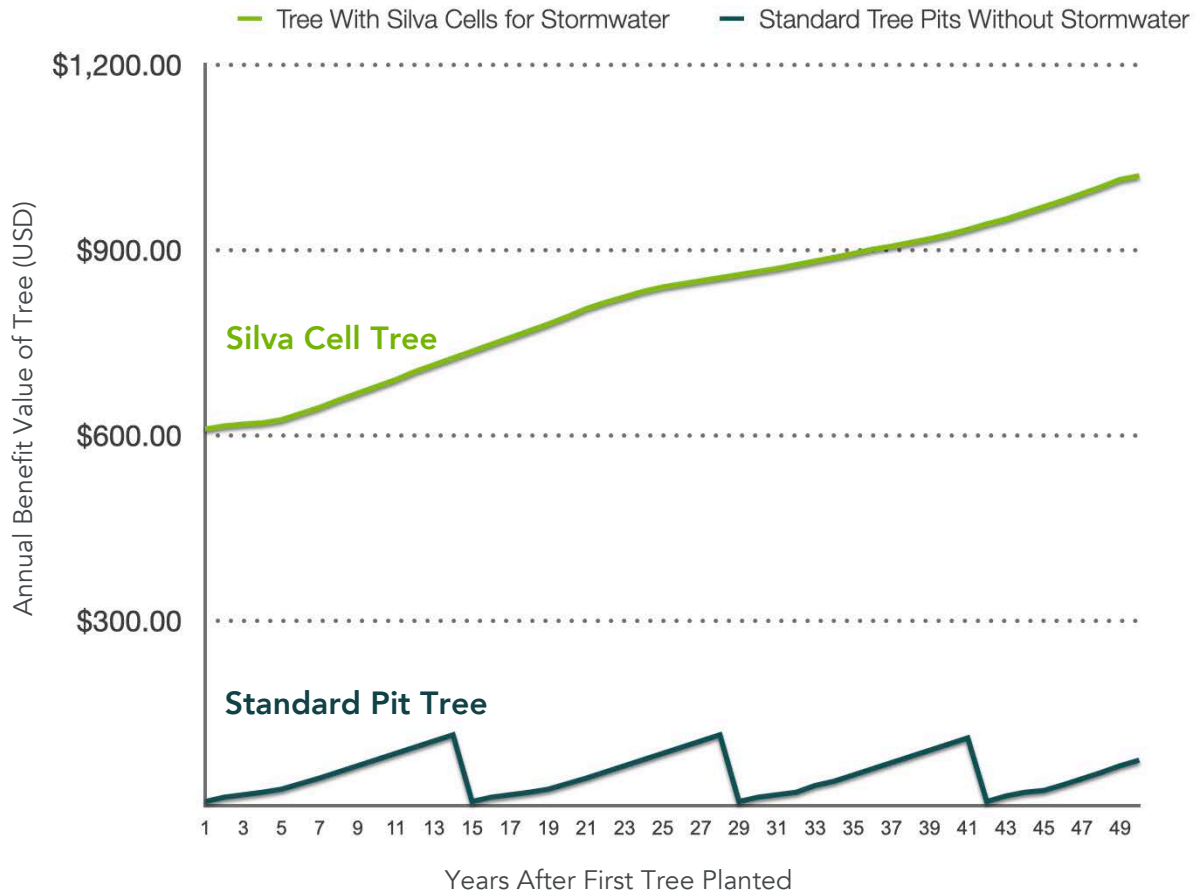


The Lifetime Value of Silva Cells

Silva Cell Stormwater Trees More Than Pay for Themselves

Third-party research study confirms value of Silva Cells over 50-year lifespan



The average **Silva Cell** tree has a 50+ year lifespan, where its yearly benefits only increase as the tree grows larger (starting at \$600/year due to its stormwater treatment). The average **standard pit** tree needs to be replanted every 13 years, preventing it from ever reaching beneficial maturity.

Total Benefits Over 50 Years

Silva Cell Tree **\$41,769** (\$58,236 in 2025 dollars)

Standard Pit Tree **\$2,717** (\$3,788 in 2025 dollars)

*All dollars in USD

*Original Report Prepared in 2013 by: The Kestrel Design Group, Inc. (updated by DeepRoot 2025)

The Lifetime Value of Silva Cells

Growing Large, Healthy Trees

Trees planted with Silva Cells don't just survive, they thrive. Urban environments are challenging spaces for trees to grow and those planted in traditional pits and structural soil often die before reaching maturity. With Silva Cells, trees have the soil volume they need to flourish — and over 15 years of results speak for themselves.



Silva Cell trees (left, Silver Linden) versus structural soil trees (right, Silver Linden) planted at the same time in 2016, from the same nursery. Silva Cells are in 21 2x systems, soil volume is approximately 525 ft³ per tree. Greenwich, Connecticut, 2024.



Silva Cell trees (left, Lacebark Elm, 8 years of growth) versus traditional pit trees (right, Chinese Pistache, 5 years of growth). Silva Cell soil volume is approximately 500 ft³ per tree. Mesquite, Texas, 2024.

The Lifetime Value of Silva Cells

Why Large Trees Matter

The real environmental, social, and economic value of urban trees comes when they reach maturity — when broad canopies begin cooling streets, filtering stormwater, cleaning air, and strengthening communities. Replacing trees every decade resets that progress to zero, keeping cities stuck in a costly cycle of planting without payoff. By giving roots the uncompacted soil volume they need, Silva Cells make it possible for trees to grow large, live long, and deliver their full lifetime of benefits.

Big Trees vs. Small Trees

10x

Air Pollution Removal

Mature trees improve air quality by absorbing pollutants, trapping particles, and cooling the air.

90x

Carbon Sequestration

Large trees help mitigate climate change by sequestering atmospheric carbon.

100x

Canopy Leaf Size

Small trees produce very little leaf canopy versus large trees whose canopies produce significant shade.

Nurturing Trees to Maturity

25° F

Cooler Area Temperature

The temperature beneath a shady tree canopy can be up to 25 degrees cooler than hot, shade-free urban space.

30%

Reduced Energy Costs

By cooling areas in the summer and breaking chilling winds in the winter, large trees significantly reduce energy costs.

12%

Boosted Retail Sales

Studies prove that people spend more time (and money) in comfortable, shady retail spaces than those without.



**Source: City of Toronto Tree Study, EPA, Georgia Forestry Commission, Marshalltown Street Trees Study*