



Calculating Green: A Cost-Benefit Guide for Infrastructure

Effective infrastructure planning requires a comprehensive financial evaluation, analyzing not just initial construction costs but also long-term maintenance and the diverse benefits provided, particularly for green infrastructure solutions like stormwater management.

THE FINANCIAL FRAMEWORK



KEY COST CONSIDERATIONS

Evaluate capital costs, long-term operation & maintenance (O&M), and the project's design lifetime.



ADOPT A LONG-TERM PERSPECTIVE

Use metrics like Net Present Value and Life Cycle Cost for a complete financial picture.



USE SPECIALIZED ESTIMATION TOOLS

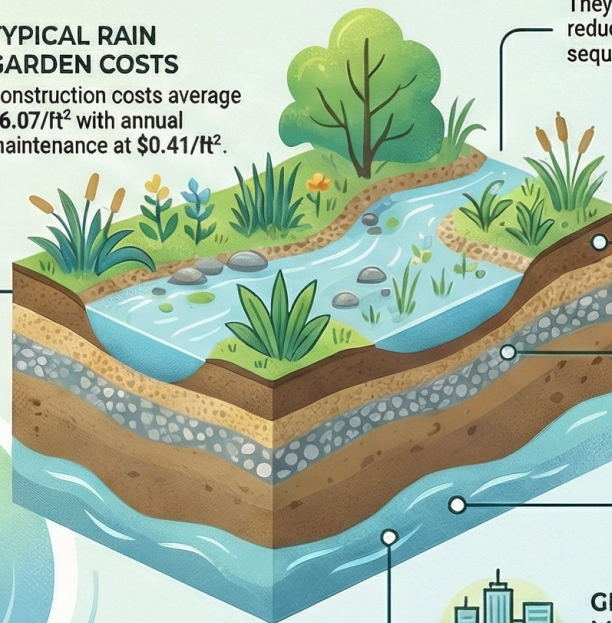
Tools like RSMeans and the Green Values Calculator provide standardized cost and benefit data.

GREEN INFRASTRUCTURE IN PRACTICE: A RAIN GARDEN CASE STUDY



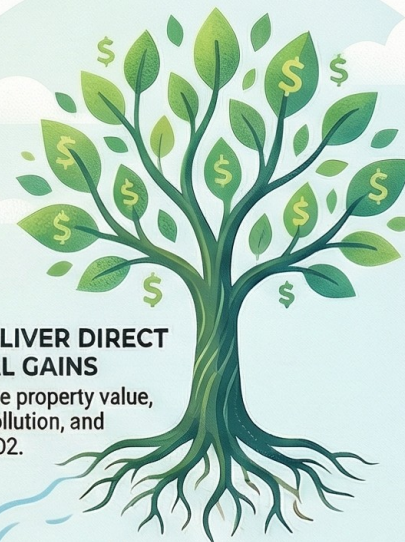
TYPICAL RAIN GARDEN COSTS

Construction costs average \$6.07/ft² with annual maintenance at \$0.41/ft².



TREES DELIVER DIRECT FINANCIAL GAINS

They increase property value, reduce air pollution, and sequester CO₂.



Reduced Energy Use (Trees)

\$36 per tree



Compensatory Value of Trees

\$275 per tree



Groundwater Replenishment

\$86.42 per acre-foot



GREEN SOLUTIONS REDUCE MUNICIPAL COSTS

Reduced runoff lowers water treatment expenses and helps replenish valuable groundwater.