

Closed Loop Sustainability Program

A Paradigm Shift

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At Stapleton, home builders make a commitment to recycle as much of their construction debris as possible. This commitment helps conserve our forest resources, preserve our diminishing landfill space, and reduce our footprint on the environment. A1 Organics in cooperation with Forest City Stapleton and their builders have developed and implemented a Closed Loop Sustainability Program (CLSP).



BUILT GREEN AND LEED PROGRAMS - Builders participating in Built Green or LEED (Leadership in Energy and Environmental Design) programs will benefit and receive credits through the CLSP. One benchmark for the LEED program is that 50% of the construction waste be recycled. Just recycling the wood waste and cardboard a builder will recycle between 38% to 60% of their construction waste. On the finished side of the project the use of recycled materials containing at least 50% post consumer recycled materials. Mulches and composts produced by A1 Organics are made from 100% post consumer waste and builders will receive credits for use of these materials.

FOUR PHASES FOR THE CLSP - There are four phases in the Closed Loop Sustainable Program:

The first phase starts with the builder. Debris generated by a builder primarily during the framing phase is sorted at the job site. Just the wood waste and cardboard from the construction of a 2,000 square foot house equals 38% to 60% of the total construction waste. All of the organic waste will be recycled in a CLSP.



The second phase starts when the Construction Cleanup Company (Consolidated Construction Services (CCS) as an example) places containers at the job site. Construction crews put waste materials into the appropriate containers. Those containing organic material (sawed lumber, plywood, particle board, engineered woods, etc. and cardboard) are brought to A1 Organics for recycling.



The third phase starts when A1 Organics sorts the organic waste into two types - dimensional/sawed lumber and other wood waste and cardboard. The dimensional material is ground, colored, and made into landscaping mulches. The other wood and cardboard are also ground and made into compost. The photographs to the right show the grinding operation, mulch manufacturing and the composting process.



Landscaping is the fourth and final phase of a CLSP. A landscape architect working for the participating builder or developer specifies the use of recycled materials that are made locally by A1 Organics and contain recycled content of waste materials from the original job site. The compost and mulches are then used to enhance the quality and beauty of the very homes and development where the waste was first generated.



BENEFITS OF COMPOST AND MULCHES - Compost is incorporated into the soil for planting beds, shrubs, trees, and lawns. One of the key benefits of compost is its water holding capacity. As nature's sponge, the organic matter in compost holds up to 10 times its own weight in water. As water passes through the soil, it is absorbed by the organic matter, and then slowly released as plants need it (an effective and natural way to conserve water).

Compost provides the necessary nutrients for health plant growth, without the need for additional "commercial fertilizers". Unlike commercial fertilizers that leach into the ground water, compost holds the nutrients and slowly releases them as the plant needs it. Finally, mulch used to enhance the beauty of the home. As a ground cover it conserves moisture, helps to maintain lower soil temperatures, and control weeds, again an effective way of conserving water.

SUMMARY - The CLSP would not be possible without partners. The developer and builder must be committed to recycling their construction waste. Waste haulers have to bring the organic waste to a recycler instead of going to the landfill. Third, the recycler must make optimal use of the waste products, producing high quality mulches and compost for landscaping. Finally, the Landscape Architect must specify that landscaping materials contain recycled organics that came from the original building site. These mulches and compost will be used by the landscaper as part of the finished landscaping.

The CLSP is a template for new home construction developed, implemented, and managed by A1 Organics and Consolidated Construction Services with support from Forest City Stapleton. It works in Denver, Las Vegas, Dallas and any other city in the world where all four elements can be combined for Closed Loop Sustainability. CLSP requires a shift in thinking (a paradigm shift) about the comfortable ways we do things to what is possible now and in future.