Construction and Demolition Waste/Recycling Study Has Positive Results

EcoStores Nebraska, an initiative of the Joslyn Institute, recently completed a year-long study of construction and demolition (C&D) waste in the Lincoln area. The nation's landfills are being overladen with wood, shingles, metals, plastics, concrete and bricks, and more, with an estimated 170 million tons of C&D waste being added to them each year.

Craig Steward, EcoStores Manager, said, “Looking at the numbers alone, it’s easy to answer the question, ‘Why recycle?’ C&D recycling greatly reduces the burdens on our landfills and is good for the environment.

“Recycling C&D waste promotes sustainable building, saves natural resources, and is the right thing to do,” he said. “Companies that routinely recycle on their job sites find it easy, and they realize savings in reduced disposal costs.”

Building sites that recycle tend to be safer and more efficient, he added. And more cities, counties and states are requiring documentation of C&D recycling on projects. While Nebraska lags behind much of the nation in recycling and zero-waste initiatives, new and increased efforts are being welcomed as a strategy to save resources, increase revenue streams and jobs, and other positive economic, social, environmental and technological benefits.

Reducing and recycling C&D materials conserves landfill space, reduces the environmental impact of producing new materials, creates jobs, and can reduce overall building project expenses through avoided purchase/disposal costs. Changing how we think about these materials will create a more sustainable future.

By identifying C&D materials as commodities that can be utilized in new building projects, the need to mine or harvest virgin materials is also reduced, an important factor; with global population growth and climate change, materials resources are under ever greater pressure and threat.

Reducing the amount of C&D materials disposed of in landfills or combustion facilities provides numerous benefits.

- Less waste can lead to fewer disposal facilities, potentially reducing associated environmental issues including methane gas emissions which contribute to global climate change.
- Reducing, reusing, and recycling C&D materials offsets the need to extract and consume virgin resources, which also reduces greenhouse gas emissions.
Deconstruction and selective demolition methods divert large amounts of materials from disposal and provide business opportunities within the local community.

Recovered materials can be donated to qualified 501(c)(3) charities, resulting in a tax benefit.

The local study, underwritten with a grant from the City of Lincoln Public Works Department, was directed by Eco-Stores and completed with a coalition of partners: Ayars & Ayars Construction, Kingery Construction, Sampson Construction, Speedway Properties/NGC Construction, and special advisor, Dale Gubbels of First Star Fiber.

The project undertaken by EcoStores Nebraska and its partners envisioned a 12-month feasibility/demonstration study for the establishment of public policy and practices for a Lincoln based Construction and Demolition Waste Management System. The goals of this project were as follows:

A) Assemble a Lincoln/Lancaster county Coalition for Construction Waste Management, consisting of several local construction companies as partners.

B) Analyze the existing practices, volumes, diversion destinations, and financial impacts for each member of the consortium.

C) Determine training needs for each member.

D) Define anticipated construction projects, types and scope over a twelve month period. Choose at least one project from each member.

E) Determine training needs for each member.

F) Establish a handbook style of guidelines and directions for contractor management of construction and or demolition waste streams.

G) Establish directions and protocols for on site separation of disposable materials.

H) Develop best practices for management of hauling services to available disposal sites.

I) Develop guidelines for separation / management of materials that can be reused, repurposed and or resold on the public market.

J) Analyze and establish case-study relationships with local and regional centers of private recycling markets for specific materials.

K) Develop hand book style set of recommendations for change of public and private practices, for change to public policies, and improved reporting and communications among stake holders.

Overall the results of this project were congruent with these goals. The basic goal of behavior change is to lay the foundation for Lincoln/Lancaster county to be known as a building development, and construction environment that employs all steps necessary in its C & D waste sector toward diversion and value extraction. A rough estimate based upon national averages of 4.5 lbs of waste per square foot of construction, and a general estimate of 100,000 sq. ft.
Of construction under contract by the consortium companies during the project period, indicates an expectation of at least 200 tons of waste that can be diverted from the Lincoln/LC landfill. In the end this project exceeded these original expectations three fold.

Steward has prepared a report based on the coalition’s findings, Construction & Demolition Waste Management Best Practices Manual. The report is available in PDF form for downloading here.

###

For more information, or to schedule an interview with Craig Steward, please contact one of the three listed above as contacts.