

Another Shade of Green



By *Keith Lindemulder*

This week is all about Water Efficiency. Like I mentioned several weeks ago, all the green building programs are designed around improving our usage of our resources. Water usage is a perfect example of where major impact can result from careful planning and thinking.

In the US approximately 340 Billion gallons of fresh water are withdrawn from rivers, streams, and other sources PER DAY to support our commercial, industrial, residential, agricultural and recreational activities. About 65% of that water is discharged to rivers, streams and other bodies of water after use and sometimes after treatment. Even more water is withdrawn from underground aquifers. On an annual basis, it's estimated that Americans extract 3700 billion gallons of water per year more than they return to the natural water system. That's about 35 gallons of water per day for every person in the US!

On the positive side, US industries today use 50% less water than they did about 50 years ago and industrial production is significantly higher. Nucor and the rest of the US steel industry are a great example of how conversation makes good business sense and in turn improves our environment. For the US steel industry, more than 95% of all water used to produce steel is recycled. The vast majority of the water used by the steel industry is returned cleaner than it was extracted.

The current version of LEED – NC deals with water efficiency by addressing three major categories – irrigation, innovative wastewater technologies and reducing water use. While there are only 5 LEED points available in the current version that will double to 10 points in the upcoming version currently under review.

For landscaping there are two credits available, one for reducing potable water requirements by 50% and an additional credit for landscaping which requires using no potable water at all. Reducing the need for potable water can come from using plants which require little or no water. Careful landscape design is usually required since the choice and location of trees and other plants used for shade may also have an effect on the amount of energy required to heat and cool the building. Further reductions of potable water use can be from using recycled wastewater and/or collecting rain water. Some municipalities even have separate water systems for non-potable water specifically to be used for irrigation.

Innovative wastewater technologies are another focus point. In some cases, it may be possible to recycle or treat waste water at the building site suitably for use on-site. For example, it may be possible to take rainwater and capture it to use for flushing toilets. Treating waste water on-site and discharging it in a wetland area on-site is another strategy which reduces the load on local sewage treatment facilities.

Obviously the best option is to reduce or eliminate water usage all together. The last two credits in this section are aimed at designers and architects who can source high-efficient plumbing fixtures within the building. Things like low-flow shower heads and toilets and even composting toilets all reduce the amount of water required.

So while cold-formed steel may have no effect water efficiency credits on the Green Building programs directly, water efficiency is an important issue and the US steel industry has taken huge steps towards doing its part in making our own operations as efficient as possible.

Next week something which can be influenced by using cold-formed steel – Energy and Atmosphere. Have a SAFE and Sustainable week!

Reduce!

Reuse!

Recycle!



STEEL
IS THE NEW GREEN.



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