

Five Sustainability Professionals.

One Burning Question.

How are your clients meeting the challenges of sustainability emerging in your market?

We posed this question to five Burns & McDonnell sustainability professionals.



Mark Lichtwardt, PE

Associate Mechanical Engineer
Infrastructure

Addressing Quality and Quantity —

“The sustainability of water supplies relates to both quantity and quality,” says Lichtwardt. “Implementing more efficient technologies that encompass both can be advantageous.” At several water treatment plants throughout the country, Burns & McDonnell is designing membranes and other advanced technologies into the treatment process in addition to secondary recovery systems. This approach can effectively provide a higher level of treatment and yield a higher recovery of water. In traditional designs, for every gallon of raw water, approximately 0.95 gallons of treated water results, while membranes with secondary recovery can return more than 0.99 gallons of treated water.

For more information, contact Mark Lichtwardt, (303) 721-9292.



Karen Stelling, PE, LEED® AP

Associate Vice President
Aviation & Facilities

Multifaceted Strategies — Formulating strategies that fit a client’s business model can amplify long-term savings and temper short-term cost implications. “In addition, an alteration to your industrial process may actually have a much more significant impact than energy efficiency in your office,” says Stelling. “Whether process or office, if you have a more energy-efficient building, you may be able to downsize equipment because of how your system is designed. And if you are pursuing LEED® certification, addressing several LEED® credits with one solution can also lead to financial savings.” A green roof, for example, aids in insulation and stormwater runoff, while a window overhang can allow for productivity-inducing light and diminish excess heat. Stelling finds an initial project charrette with all the stakeholders involved to be beneficial. “Sustainability and the options are evolving rapidly. Successful clients understand it has to be a team approach because no one person can get their arms around everything that’s happening.”

For more information, contact Karen Stelling, (816) 822-3342.



Mark Swanson

Business Development
Food & Consumer Products

Integration — “The challenge for us to incorporate sustainability initiatives is the client’s drive to minimize the project time to market; often they don’t have time to consider new methods,” says Swanson. The consumer products industry often divvies up its design among several firms — one designs processes; another, the building around those processes; and a third designs the wastewater system. “The lack of integration circumvents communication and collaboration that allow for more innovative sustainability initiatives.” Swanson recalls a project where integration resulted in the best sustainable solution. Burns & McDonnell was first contracted to determine how this pork processor could safely discharge its brine while meeting Florida’s increasingly stringent regulations. Because of Burns & McDonnell’s comprehensive services, the team called in additional wastewater experts to aid in regulatory compliance, and a process expert joined to assist in decreasing effluent. “What we did was nothing new,” says Swanson. “Clients in the consumer products industry are beginning to see the benefits that integration of services can bring to their projects and their sustainability initiatives.”

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Robert Healy, PE

Senior Project Manager
Business & Technology Services

Portfolio of Solutions — “Renewable energy resources such as wind and solar are variable, so predicting how much power they will be producing is part art and part science,” says Healy. “Therefore, you have to have other generating assets in place that can accommodate appropriately.” Healy explains how Burns & McDonnell assisted Mesa Power in its early studies for a new wind farm. Burns & McDonnell evaluated the economics as well as the logistics of transferring wind power from what is projected as the world’s largest wind farm — 200,000 acres in the Texas Panhandle producing 4,000 megawatts of energy — to markets where the energy will be consumed. “There’s not a renewable energy panacea out there that’s going to address all of our environmental and operational concerns, so clients are going to need a portfolio of traditional and renewable energy solutions to meet growing energy demands cost-effectively. However, projects like what Mesa Power is considering will go a long way toward reducing our demand for energy from traditional power generation methods.”

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Mark Kohles, LEED® AP

Associate Architect
Healthcare & Research Facilities

Sustainable Mindset — “LEED® is just one factor in a successful building, and when we talk to people about what we can bring to the table, it’s just one of the features,” says Kohles. Often, clients want a facility designed to a certain LEED®-certified standard without incurring the labor-intensive and costly process of record keeping to acquire the certification itself. “We design to LEED® standards anyway, as sustainability has become inherent in how we design. Instead of the exception, it’s the standard.” Kohles notes how sustainable design has become a throwback to the pre-air conditioning days, where building orientation, air flow and view were chief among the principles of architecture. And the growing prominence of green building makes recycled and recyclable products more mainstream, and therefore, more affordable to incorporate. “Sustainability is not an option. It’s our responsibility to do it regardless.”

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