Ryan Evans, PE, LEED AP BD+C
Speaker 2016 TPA Sustainability Summit
Water Reclamation Opportunities in Food Markets

Ryan has extensive experience in designing, consulting for, and researching high performance buildings. His portfolio includes a myriad of projects ranging from multi-billion dollar sports structures to commercial office buildings of more than one million square feet to the design of a new LEED certified sustainable city in the Middle East. Ryan's design emphasis focuses on a building's systems and how they interact with the building structure and occupants, leading to designs that increase energy performance, while enhancing building durability, occupant comfort, and indoor air quality. In addition to directing Henderson's sustainable design practice, he is also Director of Henderson Research, an initiative that funds research projects annually.

- **What is water reclamation?**
  Simply put, it is capturing any stream of water that typically goes to drain. This can include rainwater, condensate, Reverse Osmosis (RO) concentrate, even water reclaimed from waste produce!

- **What are some water reclamation opportunities?**
  The best opportunities lie where we can quickly capture water headed to drain, store it for short periods of time, and use it with minimal to no treatment. In our research, we studied three common sources – rain, condensate, and RO concentrate. Each has its advantages, each its disadvantages. When we started applying the economics, we were a bit shocked at the results, some of which defy convention and are tremendously feasible. Water is typically a supermarket's second highest utility cost, but water savings gets almost no attention compared to energy.

- **What are the biggest barriers you see in getting more companies to adopt these strategies?**
  It's really understanding the opportunity. Although we are still researching, the early results seem to make economic and environmental sense. It's just a situation where it hasn't been done before. With utility costs rising and drought conditions across much of the US, it's time we reevaluate our business-as-usual model.

- **What's the role of partnerships in water?**
  Our approach to water has always been to place our sources and uses into silos instead of thinking about it as one big system. Our research team is comprised of a major food market corporation (Kroger), a major university (University of Kansas), our firm, who designs and specifies water systems for buildings, and a water chemist. Together, we helped create a better understanding of the needs and challenges that wouldn't have been possible otherwise. For us, it's about bringing all of the stakeholders to the table. Through this partnership is where we discovered a new way of thinking around water use for grocery stores.

- **What are you hoping attendees will get from your session?**
  It would be very pleasing to the research team if the attendees understand what we are trying to accomplish and it inspires them to try it themselves.